# Walker Aggregates Inc.

# 2025 Adaptive Management Plan
# Five Year Comprehensive Review Report

## Duntroon Quarry Extension

September 30, 2026

WSP Project No.: CA0064617.8284



# Document Distribution

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## Prepared for

Walker Aggregates Inc.

## Prepared by

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# Executive Summary

The Duntroon Quarry (Site) consists of two licenced aggregate properties. The licensed property of the older Main Quarry operates in accordance with Aggregate Resource Act (ARA) license number 3514. The Extension Quarry is licenced to WAI under ARA licence number 607841, issued August 6, 2014. The Adaptive Management Plan (AMP) is a requirement of the Extension Quarry ARA Licence and includes a comprehensive review report to be completed every five (5) years or at the start of extraction within a new phase. The previous comprehensive review report included monitoring data up to 2020, when extraction within Phase 2A commenced. This comprehensive review report includes monitoring results from 2021 to 2025 as extraction within Phase 2A is still ongoing.

The AMP monitoring components consist of the following categories:

- **Performance Indicator Trigger Monitoring (PITM)**;
- **Long-Term Trend Groundwater and Surface Water Monitoring (LTTWM)**;
- **Long-Term Trend Ecological Monitoring (LTTEM)**; and
- **Ecological Enhancement and Mitigation Monitoring (EEMM)**.

The monitoring components outlined above were successfully completed over the five-year period of Phase 2 extraction included in this comprehensive review report.

Climate conditions during the 2021 to 2025 review period exhibited normal year-to-year variability. Air temperatures were consistent with broader regional trends, while precipitation and net water surplus varied between relatively dry conditions in 2021 and 2022 and wetter conditions during 2023 through 2025. While annual precipitation and net water surplus trends provide valuable context for understanding overall hydrogeologic conditions, shorter-duration dry and wet periods were also observed within individual years and may influence seasonal monitoring results.

The LTTWM monitoring wells closest to the Extension Quarry have experienced localized drawdown effects as the quarry continues to expand within the Phase 2A extraction footprint. As the quarry face has progressed, certain wells have been removed from the program due to their proximity to the advancing quarry face and several off-site monitoring wells and residential wells have become inaccessible, or the owner has opted out of the monitoring program.

During the current reporting period, sporadic PITM trigger exceedances were observed at some locations. A replacement discharge pipe has been installed to help reduce “wet” trigger exceedances within the RR6 wetland. The remaining trigger exceedances observed during the current 5-year reporting period are not attributed to the Extension Quarry due to (a) the sporadic, discontinuous nature of the trigger exceedances and (b) the interpreted drawdown cone from the Extension Quarry did not extend beyond the Licence boundary in the current 5-year reporting period.

The monitoring data obtained to date are consistent with the model predictions included in the 2020 AMP Review Report, although the observed drawdown was slightly less than the modeled drawdown. Based on the results of the current study, the previously established calibration continues to provide a conservative representation of the study area and remains appropriate for the purposes of this assessment.

The Phase 2A and 2B prediction models indicate that the use of the mitigation measures (i.e., recharge trenches and / or injection wells) during these phases is likely not necessary.

A number of changes to the PITM were previously proposed as part of the 2020 AMP Review Report and have been reproduced with minor changes in **Section 6.5**, including summary tables of the proposed long-term PITM trigger levels. The existing updated interim triggers will remain in effect if / until the MNR approves the recommended changes to the PITM.

The LTTEM and EEMM monitoring requirements have been completed successfully during the current reporting period. Amphibian and vegetation monitoring indicates that the wetlands remain consistent in their floristic character and remain as healthy wetland communities. Rob Roy Swamp 6 remains as a diverse wetland feature but will continue to succeed to a more open canopy wetland environment. The American Hart's Tongue Fern baseline monitoring indicates that the colony has a high canopy closure rate with recurring sexual regeneration; although both colonies may benefit from invasive species management. The woodland program monitoring results suggest that the reforestation areas are on a trajectory to becoming self-sustaining components of the woodland landscape. Amphibian monitoring of the new Millar Pond indicates an active pond environment that is anticipated to increase in diversity as it becomes established in the landscape. Finally, butternut tree health re-assessments identified only eleven (11) of the historically identified twenty-seven (27) retainable trees; the remaining trees are inferred to have fallen and decayed between assessments.

A number of LTTEM and EEMM program refinements were previously recommended in the 2020 AMP Review Report and are reproduced within this report. No additional refinements are proposed at this time.

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# 1. Introduction

The Duntroon Quarry (Site) operated by Walker Aggregates Inc., (WAI) is located on County Road 91, west of the village of Duntroon in the Township of Clearview, County of Simcoe, as shown on **Figure 1**. The Duntroon Main Quarry (ARA Licence no. 3514) is located south of County Road 91, while the Extension Quarry (ARA Licence no. 607841) is located north of County Road 91. The Site is located adjacent to the east of Osprey Quarry (ARA Licence no. 608061) operated by St. Marys Cement (formerly referred to as the MAQ Aggregates Inc. (MAQ) Highland Quarry). The locations of these quarry properties and additional lands owned by WAI are shown on **Figure 2**.

The Main Quarry has been in operation on the south side of County Road 91 since the early 1960s. However, extraction from the Site currently occurs within the Extension Quarry licence granted in 2014, and extraction within Phase 1 was initiated in June 2016.

## 1.1 Monitoring and Reporting Requirements

The Adaptive Management Plan (AMP) is a requirement of the Extension Quarry ARA Licence and was finalized on December 6, 2013 (Stantec Consulting Ltd. and Hims GeoEnvironmental, 2013). The AMP provides an in-depth review of the monitoring planned during each operational phase until final rehabilitation of the site.

In addition to annual reports, the AMP requirements include the need for a comprehensive review report to be completed every five (5) years or at the start of extraction within a new phase. The previous comprehensive review report included monitoring data up to 2020, when extraction within Phase 2A commenced. This comprehensive review report includes monitoring results from 2021 to 2025 as extraction within Phase 2A is still ongoing.

The monitoring components, as required by the AMP, consist of the following categories:

- **Performance Indicator Trigger Monitoring (PITM)**: Comparison of annual surface water flow and temperature monitoring data and wetland water levels to historical values / performance triggers to ensure extraction activities are not having an adverse impact on these features.
- **Long-Term Groundwater and Surface Water Monitoring Program (LTTWM)**: Review of groundwater and surface water monitoring results to confirm that the data match forecasted trends.
- **Long-Term Trend Ecological Monitoring (LTTEM)**: Comparison of annual monitoring data for surrounding ecological features to historic observations to confirm that the extraction activities are not causing unacceptable impacts to plants or to wildlife.
- **Ecological Enhancement and Mitigation Monitoring (EEMM)**: Confirmation that ecological enhancements and mitigation measures at the Site will result in an improved ecological condition upon rehabilitation.

The monitoring program completed at the Site during the 5-year period included in this comprehensive review report is outlined in further detail in **Section 2.0**.

## 1.2 Annual Coordinated Monitoring Reports

A data sharing agreement between WAI and the former owner of the Osprey Quarry, located west of the Site, was signed in May 2011, and is included as Appendix D of the AMP document. The 2023 Groundwater and Surface Water Compliance Monitoring Report (Tatham Engineering, 2024) for the Osprey Quarry was provided to WAI as input to this comprehensive 5-year report.

## 1.3 Watershed Aggregate Activities

### 1.3.1 Duntroon Quarry Extension

Currently, extraction is ongoing within the Extension Quarry Phase 2A. Extraction during the initial Phase 1 operations was not expected to result in any negative impacts to off-site water resources or ecological features. AMP monitoring program data obtained during the Phase 1 extraction was used to confirm historical data and establish baseline ranges for hydrogeologic and ecological features in the 2020 Adaptive Management Plan Five Year Comprehensive Review Report (2020 AMP Review Report) (WSP and Stantec, 2021) that will be compared to later phases as the quarry footprint expands.

### 1.3.2 Main Duntroon Quarry

The Main Duntroon Quarry has been fully mined such that bedrock resource is no longer extracted from within that Licence. Rehabilitation slopes have been constructed along the east and south quarry faces, while internal berms have been constructed in the western portion of the quarry to form the Storage Reservoir pond and wash plant ponds, which help mitigate potential dewatering impacts to the Rob Roy Swamp 6 (RR6) wetland to the west.

ARA Site Plan Notes 14 and 15 on the Operation Plan (Sheet 2A of 4) indicate that the processing plant shall be moved from the Main Quarry to the Extension Quarry once the quarry floor reaches a sufficient area (i.e., 18 hectares (ha)), and the tunnel connecting the two quarries shall subsequently be sealed. The AMP document specifies that once the tunnel has been sealed, lake filling in the Main Quarry will commence. The estimated timeframe for this to occur was towards the completion of extraction within Phase 2A. As of 2025, the quarry floor area has surpassed the 18 ha threshold and WAI has begun the Site Plan Amendment process which will allow the tunnel to remain open and operational as resources are extracted from both quarries.

Aggregate processing of the Extension Quarry resources is primarily completed on the floor of the Main Quarry, with limited processing now also occurring in the Extension Quarry. The movement of aggregate resources between the Main Quarry and the Extension Quarry is facilitated by the tunnel under County Road 91.

The current water management system as depicted on **Figure 2A** consists of two sumps in the Main Quarry, Sump 1 and Sump 2, both of which are equipped with submersible pumps. Sump 2 was moved to its current location in 2016 to allow for the addition of the Storage Reservoir. Water that collects in the Extension Quarry flows via gravity from Transient Sump 3 to the Main Quarry, where the water is managed with the existing discharge works.

### 1.3.3 St. Marys Cement Osprey Quarry

It is noted that the former M.A.Q. Aggregates Highland Quarry is now referred to as the Osprey Quarry, owned and operated by St. Marys Cement. As of the end of 2023, extraction at the Osprey Quarry was interpreted to be ongoing within its Phase 1 extraction area. The approximate extent of the working face is illustrated on **Figure 2**. The 2023 Groundwater and Surface Water Compliance Monitoring Report (Tatham Engineering, 2024) provided to WAI indicates that the floor elevation within the extraction area remains at 514 masl. Groundwater level data through 2023 in the excavation corresponds to the Osprey Quarry second bench floor elevation of 502 masl.

Dewatering of the Osprey Quarry is permitted under PTTW number 5571-C7RH3L, issued October 15, 2021. The Osprey Quarry PTTW specifies a maximum dewatering discharge rate of 75 L/s, and a maximum pumping rate of 207 L/s from the wash pond for the purpose of aggregate washing. The total discharge volume reported for 2023 was 823,406 $m^3$/year, an average discharge rate of 26 L/s.

Discharge from the Osprey Quarry is permitted under ECA (Sewage) number 1371-AFQN25, issued January 13, 2017. Discharge from the dewatering sump is directed to an on-site four cell “wet pond” for treatment prior to discharge. The wet pond was commissioned in summer 2020 and discharge off-site commenced shortly thereafter. The wet pond discharge is directed to an on-site ditch running east through Phase 2 of the quarry licence area to County Road 31 (Clearview Townline) where it flows south along an existing roadside ditch to RR6. The Osprey Quarry discharge configuration is shown on **Figure 2A**. It is noted that discharge from both the Site and Osprey Quarry influence surface water flow rates and temperatures at AMP trigger location SW1 within RR6. A continuous recording device was installed along the roadside ditch where Osprey Quarry discharge water is received. The reported flow rates within the roadside ditch in 2023 ranged between 1 L/s and 8 L/s. The disparity between the reported average dewatering rate and flow in the roadside ditch suggests that a significant portion of the dewatering discharge recirculates to the quarry excavation.

# 2. Summary of Phase 2 Monitoring

## 2.1 Climate Data

Historically, climate data from the Thornbury Slama climate station were used to assess annual water budget components as part of the monitoring programs at the Main Quarry (Environment Canada, 2005). Operation of the Thornbury Slama climate station was cancelled in May 2005. The Shanty Bay climate station, located on Lake Simcoe approximately 60 km east of the Site, has historically provided a reasonable correlation with the climate data from the Thornbury Slama climate station (Environment Canada, 2025).

In 2008, WAI established an automatic weather station (WAI station) in the vicinity of the Site to provide the following local climate data:

- Wind speed and direction;
- Average hourly air temperature (°C); and
- Total hourly precipitation (mm).

The station has operated successfully since 2015. Prior to the current five-year period, some data gaps due to equipment failure occurred sporadically. Operations were adjusted as required to limit data loss and no significant data loss has occurred since the 2020 AMP Review Report was completed.

The combination of climate data from the Shanty Bay climate station and WAI station have been used to assess deviation from historic climate norms and evaluate the potential impact on the surrounding local hydrology and ecology. The 30-year climate normal (1971 – 2000) for Thornbury Slama climate station is provided in **Table D-1**, **Appendix D**. Annual water budgets based on the Thornthwaite-Mather method using the available Shanty Bay and WAI climate station data since 2003 are provided in **Tables D-2 to D-22**.

## 2.2 Performance Indicator Trigger Monitoring

The Performance Indicator Trigger Monitoring (PITM) program is the regulatory compliance component of the AMP with respect to water-related issues.

The purpose of the PITM program is to monitor the effects of quarry operations on water resources with respect to surface water flows and temperatures and wetland water levels, and to initiate any actions necessary to adapt quarry operations to maintain these parameters within their baseline ranges. Long-term changes in prevailing climatic conditions are also considered and two surface water flow and temperature control stations located in the Pretty River and Batteaux Creek watersheds have been established for this purpose. These two control stations are situated beyond any possible influence of quarry operations as shown on **Figure 1**.

The PITM is completed to monitor features outside of the limit of extraction that are potentially sensitive to fluctuations in groundwater levels, such as wetlands and fish habitat.

Appropriate actions may be taken to modify routine quarry operations and / or implement contingency mitigation measures to ensure that quarry operations do not negatively impact water resources which directly support these features of interest, namely:

- Springs that discharge at the Niagara Escarpment east of the Site. These springs help to sustain surface water flow and fish habitat below the brow of the Niagara Escarpment in tributary streams of the Pretty River and Batteaux Creek;
- Surface water flows that support fish habitat in the Beaver River west of the Site; and
- Surface water levels and flows and groundwater levels that support wetland features and functions.

In some instances, atypical climate conditions that are not associated with quarry operations have been observed in surface water flow and / or temperatures at some monitoring locations. The PITM is designed to assist in identifying the cause and impacts to surface water flow and temperature and wetland water levels.

For Phase 1 quarry operations, the potential for off-site water-related impacts to any of the wetlands and / or Escarpment springs was considered low. Therefore, Phase 1 monitoring was used as an extended "baseline" period to establish long-term ranges for the trigger parameters. Trigger values were updated as part of the 2020 AMP Review Report.

### 2.2.1 Methods

**Surface Water Flow and Temperature Monitoring**

A description of the PITM surface water trigger stations is included in Table 3.3 of the 2013 AMP document and reproduced in **Table A-2**, **Appendix A-2**. Trigger monitoring locations are highlighted in yellow on **Figure 2**. The surface water catchment areas for the Pretty River, Batteaux Creek, Beaver River and Mad River systems are provided on **Figure 1**.

The PITM surface water monitoring stations are situated in three separate watersheds (bolded and italicized text indicates background / control stations):

- The Pretty River tributary system: SW16, SW17, SW17A, SW18, SW24A, SW77 and ***PR Control***;
- The Batteaux Creek tributary system: SW9, SW10, SW11, SW14, SW15, SW21C and ***BC Control***; and
- The Beaver River tributary system: SW1, SW2, SW0-2 *, SW3, SW6A * and ***SW3B * ('RR3 Karst')***.

* Stations SW0-2, SW6A and SW3B are situated west of Clearview Townline and included in the St. Marys Osprey Quarry monitoring program.

In late 2022, all surface water stations were equipped with automated dataloggers for water level and temperature monitoring. Staff gauges have been installed at PITM stations: SW1, SW2, SW3, SW9,

SW10, SW14, SW15, SW16, SW17, SW18, SW24A, PR Control and BC Control. Monthly manual flow measurements are completed at the PITM and LTTWM surface water stations between May and October to develop preliminary stage-discharge relationships to estimate flow rates from the continuous logger water level data. The preliminary stage-discharge parameters are provided in the station logs (**Appendix A-4**) and the flow rates (calculated from logger water level data) are provided on the hydrographs in **Appendix C**. It is noted that at some stations, the stage-discharge relationship is poorly correlated with the manual flow measurement data. This could be due to a lack of data or due to the nature of the channel itself at these locations (particularly escarpment springs / seeps where flow channels are poorly defined). Future monthly manual flow measurements will continue to be used to refine the stage-discharge relationships.

PITM monitoring of stations SW0-2, SW3B and SW6A has been discontinued as they are included in the St. Marys Osprey Quarry monitoring program; however, monitoring of SW0-2 has continued as per the PTTW Conditions. It was intended that the PR and BC control stations would function as real-time logger to web stations. However, the locations of these stations are remote and when measured by WSP the cellular network signal strength was found to be insufficient for remote telemetry. As an alternative, updated graphs showing precipitation data and surface water flow and temperature data are generated on a monthly basis and uploaded to a publicly available website.

During the months of July and August, bi-weekly monitoring is completed at the surface water Escarpment springs (SW10, SW11, SW11A-E, SW21C, SW24A and SW77). Monthly monitoring is conducted at other times of the year. Monitoring includes temperature measurement and an assessment of flow conditions through either the use of an electromagnetic flow meter, or in some cases by manual measurement or visual assessment. Additional field chemistry parameters (pH, dissolved oxygen and conductivity) are also recorded monthly at selected stations noted in Table 3.4 of the AMP. In addition, hourly logger intervals are required at stations SW1, SW2, SW3, SW9, SW10, SW11E, SW14, SW15, SW16, SW17, SW17A, SW18, SW21C, PR Control and BC Control.

Manual flow measurement data are provided in **Tables C-1 and C-2**, **Appendix C**. Field parameter data are provided in **Table C-3**. Concentration versus time graphs for flow and temperature are provided in **Figures C-1 to C-49**.

Monitoring has been conducted at the prescribed frequency at the monitoring stations in accordance with the AMP. In some cases, measurements have not been available for events due to field conditions (i.e., frozen / buried with snow, inaccessible due to safety or other access concerns, etc.).

**Wetland Drivepoint Water Level Monitoring**

A description of the PITM wetland drivepoint trigger locations is provided in **Table A-1**, **Appendix A-2**. Trigger monitoring locations are highlighted in yellow on **Figure 2**.

The PITM drivepoints are located in the following wetlands:

- ANSI A wetland: DP6 (vernal pool)
- ANSI B wetland: Bridson DP and DP9

- Rob Roy Swamp 2 (RR2) wetland: DP5 (vernal pool) and DP7 (vernal pool)
- Rob Roy Swamp 6 (RR6) wetland: DP2, DP4 * and DP8

* Drivepoint DP4 is situated west of Clearview Townline and included in the St. Marys Osprey Quarry monitoring program.

During the months of May, June and July, drivepoint monitors in the wetlands are monitored bi-weekly and at monthly intervals between March and October. All drivepoints were equipped with dataloggers in late 2022 and were downloaded during each monthly / bi-weekly monitoring event, with the final download in October 2025. Monitoring includes manual measurements of groundwater level, ponded water depth and water temperature. PITM monitoring of drivepoint DP4 has been discontinued as it is included in the St. Marys Osprey Quarry monitoring program; however, monitoring of DP4 has continued as per the PTTW Conditions. Manual water level data are provided in **Table B-7**, temperature data are provided in **Table B-8** and hydrographs are provided in **Figures B-63 to B-74**.

The AMP document specifies that during Phase 1 of quarry extraction, a reference wetland is to be established in the Nottawasaga Lookout Provincial Park or the Pretty River Provincial Park with input from the MNRF and the Nottawasaga Valley Conservation Authority.

From May until late August of 2019, wetlands mapped in the Nottawasaga Lookout Provincial Park Reserve and adjacent public lands were investigated by WAI representatives. Much of the area mapped as wetland was in fact found to be upland forest. The majority of wetlands encountered were on the lower bench of the escarpment and were seepage-dominated without substantial vernal pools. No wetlands that had a similar physiographic location or community composition to the Rob Roy Swamp PSW Complex or ANSI wetlands A and B were encountered. In 2020, the local Conservation Authorities were contacted by WAI for consultation; however, no commitments to revisit these issues were received.

## 2.3 Long-Term Trend Hydrogeology and Surface Water Monitoring

The Long-Term Trend groundwater and surface water monitoring program (LTTWM) is used to track seasonal and year-over-year natural variations in the groundwater and surface water systems, as well as the progressive response of those systems as the Main Quarry was depleted and extraction at the Extension Quarry continues, followed by final rehabilitation to lakes. The LTTWM program data is used to identify short-term and long-term trends. The LTTWM includes selected PITM stations plus additional surface water and groundwater stations as described below.

### 2.3.1 Methods

**Groundwater Monitoring**

LTTWM groundwater monitoring locations are listed in Table 4.1 of the AMP, and reproduced in **Table A-1**, **Appendix A-2**. The monitoring locations are shown on the Site Plan, **Figure 2**. Available borehole logs are provided in **Appendix A-3**. Manual water level data are provided in **Tables B-1 to B-8** while hydrographs are provided in **Figures B-1 to B-73**.

The LTTWM includes groundwater monitoring wells in the following locations:

- Main Quarry monitoring wells: 98-8, 98-9, 98-12 and PW99-1;
- Extension Quarry injection wells: IW1, IW2, IW3 and IW4;
- Extension Quarry monitoring wells: BH02-1 *, BH02-2 *, BH02-3 *, BH02-4 *, BH02-5 nest, BH02-6, BH03-7 nest, BH03-8, BH08-1, BH08-2, BH08-3, NW1-9 *, NW10 nest, BH03-9, TW04-1, TW04-2 and TW04-3; and
- WAI off-site monitoring wells: 101-B, 102-C, 103-D, 104-A, OW1-4, OW5-2 and OW6-3.

* Monitoring at wells BH02-1, BH02-2, BH02-3, BH02-4, NW2, NW3, NW4 and NW5 has been discontinued as these locations are now within the active quarry extraction area.

In late 2022, all of the groundwater monitoring locations were equipped with automated data loggers for continuous water level measurement. Manual measurements and logger downloads are completed in May and October (when accessibility is not an issue). Loggers typically record water levels twice daily; however, an hourly recording frequency is required at selected locations.

Monitoring wells TW04-1, TW04-2 and TW04-3 in close proximity to BH03-9 and BH08-1, BH08-2 and BH08-3 in close proximity to RW16 were installed to complete historic pumping tests. These wells provide redundant information and are unnecessary for monitoring of long-term water level trends at the Site. It is therefore recommended that these six wells be removed from the monitoring program. This recommendation was previously included in the 2020 AMP Review Report but requires regulatory approval to amend the AMP.

There are several private domestic water wells located around the Site (Jagger Hims Limited, 2007). The locations of the private domestic wells are identified on **Figure 2** as 'RW' (residential or domestic wells). Selected domestic wells are monitored as part of the LTTWM:

- East of Site: RW1, RW2, RW5, RW6 *, RW7, RW8, RW16, and RW18 *.
- North of Site: RW3, RW4 * and RW17 *.
- Carmarthen Lake Farms property domestic wells: CLF2 *, CLF3, CLF4 and CLF5.

* Monitoring at wells RW4, RW6, RW17, RW18 and CLF2 has been discontinued due to either the well owner opting out of the program, decommissioning or in the case of CLF2, well casing failure.

All of the domestic wells were equipped with automated data loggers for continuous water level measurement in late 2022, and manual measurements and logger downloads are completed in May and October. Loggers typically record water levels twice daily; however, an hourly recording frequency is required at RW16.

Domestic wells RW1 and RW2 are also sampled annually for general chemistry, major and minor ions, nutrients, total petroleum and hydrocarbons, BTEX, total suspended solids and bacteriological parameters. The results are provided in **Tables B-9 and B-10**, **Appendix B**.

It is noted that RW12 and RW13 are currently voluntarily monitored by WAI but are not part of the LTTWM.

The LTTWM includes the drivepoints listed in the PITM plus these additional locations in the following wetlands:

- RR2 wetland: Staff Gauge 1 and Staff Gauge 2 (BH03-7 SG1 / SG2)
- RR3 wetland: DP11
- RR6 wetland: DP1
- CLF wetland: DP3

It is noted that DP11 in RR3 is monitored as part of the St. Marys Osprey Quarry monitoring program. The groundwater depth, ponded water depth (where available) and surface water temperature at the remaining locations are monitored continuously with loggers, with manual measurements and logger downloads completed in May and October.

**Surface Water Monitoring**

The LTTWM includes the stations listed in the PITM plus these additional locations in the following watersheds:

- The Pretty River tributary system: SW20
- The Batteaux Creek tributary system: SW7, SW8, SW10, SW11 series, SW13, SW19, SW21 series and SW22 series
- The Beaver River tributary system: SW3C ('RR3 Out')
- Main quarry floor: QFSW2 and dewatering sump

A description of each surface water monitoring station is provided in **Table A-2**, **Appendix A-2**. These stations were equipped with automated data loggers in late 2022 for continuous water level and temperature monitoring.

Station SW7 (former Millar Pond outlet) has been removed from the monitoring program as the former Millar Pond has been decommissioned. Also, SW3C (RR3 outlet) is located within the St. Marys Osprey Quarry licence and monitoring is completed by others.

Quarterly water quality sampling is completed for the discharge at the Main Quarry Sumps 1 and 2 and at station QFSW2 while annual water quality sampling is conducted at selected stations. The laboratory analysis includes general chemistry (alkalinity, hardness, colour and ammonia), total suspended solids, major ions, nutrients, metals, total petroleum hydrocarbons and BTEX compounds. The surface water quality data are shown in **Tables C-3 and C-4**. Microbial analyses are completed at selected stations as shown in **Table C-5**.

## 2.4 Ecological Monitoring

### 2.4.1 Long-Term Trend Ecological Monitoring

The Long-term Trend Ecological Monitoring (LTTEM) program component of the AMP for the Extension Quarry is summarized as follows.

The purpose of the LTTEM program is to supplement the information from the LTTWM program with information about the health and functioning of the natural heritage features in the vicinity of the Extension Quarry. The LTTEM program:

- provides regular updates on the current conditions and longer-term trends of the Extension Quarry Environment;
- is used to determine if the key features and functions in the Extension Quarry Environment are experiencing unexpected changes and / or degradation as a result of the quarry operations by making reference to similar features in the Regional Environment; and
- is designed to ensure that changes to the Extension Quarry environment are identified and properly investigated for any possible cause-and-effect relationship with quarry operations.

If negative changes in environmental conditions are detected, the cause of the changes will be investigated and if the quarry is the cause of the change, quarry operations will be adapted and / or contingency mitigation measures will be implemented.

Over time, the Duntroon regional environment will continue to change due to natural and / or anthropogenic processes that are unrelated to the quarry operation. Periodic updating (i.e., every five years) of the baseline is helpful in two ways: (1) as a reference for comparing changes in the Extension Quarry environment; and (2) as a reference point in the unlikely event that a quarry-related impact is suspected beyond the Extension Quarry environment and into the Duntroon regional environment.

The LTTEM program focuses on ecological features and functions of the Extension Quarry environment. These features and functions have been divided into the following categories as shown on **Table 2.1**.

- The components of the environment for which potential effects have been identified, and operational management and contingency mitigation measure options are available:
  - Fish habitat (Beaver River Tributary South and below-Escarpment brow tributaries to Pretty River and Batteaux Creek);
  - Wetlands (Rob Roy Swamp PSW Complex and ANSI wetland A and ANSI wetland B).
- The components of the environment for which no potential effects are anticipated, such that additional routine operational management and contingency mitigation measures are not expected to be required:
  - The occurrence of American Hart's-tongue Fern contained in the protected Northern Peninsula area.

**Table 2.1 Summary of Environmental AMP Monitoring Features**

| Feature | Monitoring Type |
|---|---|
| ***FISHERIES **** | |
| Pretty River Tributary System (below escarpment brow) | Fish habitat monitoring (LTTWM flow and temperature monitoring)<br>Focus on maintaining conditions suitable for Brook Trout |
| Batteaux Creek Tributary System (below escarpment brow) | |
| Beaver River Tributary South | Discontinued fisheries monitoring on Beaver River once St. Marys Osprey Quarry goes below water table; transfer monitoring responsibility from Walker to St. Marys as per Table 7.1, Appendix B of the 2013 AMP document. |
| ***WILDLIFE*** | |
| Rob Roy Swamp PSW Complex | Frog call<br>Calling activity trends compared locally and regionally |
| | Amphibian egg mass<br>Focus on spotted salamander (Ambystoma maculatum) usage |
| ANSI wetland A | Amphibian egg mass<br>Focus on spotted salamander (Ambystoma maculatum) usage |
| ANSI wetland B | Frog call |
| Wetland Reference Station | Further discussion provided in Recommendations |
| ***VEGETATION*** | |
| Northern Peninsula | American Hart's-tongue Fern (AHTF)<br>Habitat conditions |
| Wetland Vegetation | Plant species (includes LTTWM water level analysis, annual photography analysis)<br>Focus on wetland vegetation spp. diversity, characterization of growth |
| Wetland Soils | Soil moisture<br>Focus on wetland soil moisture characterization (i.e.: dry, moist, or wet) |

* As flow conditions allow.

## 2.4.2 Ecological Enhancement and Mitigation Monitoring

In addition, the 2013 AMP document addresses the Ecological Enhancement and Mitigation Monitoring (EEMM) for the Extension Quarry. The interrelationships between the EEMM program for the natural

heritage features and functions and other components are described in the 2013 AMP document, Section 1.2.4. The EEMM program includes:

- reforestation and woodland enhancement;
- the Millar Pond relocation; and
- the Bridson Pond enhancement.

The purpose of the EEMM program is to track the ecological development of the reforested areas and pond enhancements and to compare the ecological characteristics to established targets for ecological form and function. If the monitored conditions differ from the target conditions, modifications to the enhancement plans are implemented.

The objective of the EEMM program is to properly implement mitigation measures (e.g., ensure that an appropriate number and species of trees are planted) and manage the resulting features in adaptation with changing conditions and trends (e.g., replanting for dead trees, controlling pest damage, controlling / allowing public access, etc.).

The EEMM program is ongoing to provide a quantitative measure of the success of the plans over time and includes a mechanism for implementing additional efforts when needed to ensure that the established restoration targets are achieved. The monitoring will be discontinued when the enhancement areas have met the established targets and are functioning as self-sustaining components of the local landscape.

The results of the LTTEM an EEMM through the Phase 2 monitoring period are included in the 2025 AMP Summary Report (WSP, 2026) and are reproduced below.

# 3. Summary of Phase 2 Climate Data

The 30-Year Climate Normal data and a calculated water budget for the historic Thornbury Slama Station are provided in **Table D-1**, **Appendix D**. The Shanty Bay and WAI station climate data since 2003 are provided in **Tables D-2 to D-22**.

## 3.1 Air Temperature

The average annual air temperatures recorded at the WAI station and Shanty Bay climate stations from 2021 to 2025 are provided along the with 30-Year Climate Normal value in **Table 3.1**.

**Table 3.1 Summary of Phase 2 Average Annual Air Temperature**

| 30-Year Climate Normal | 6.8 | | | | |
|---|---|---|---|---|---|
| | 2021 | 2022 | 2023 | 2024 | 2025 |
| WAI Station | 8.41 | 6.41 | 7.25 | 7.81 | 6.35 |
| Shanty Bay Climate Station | 8.60 | 7.37 | 8.48 | 9.09 | 7.57 |

Notes:

1. Values presented are in degrees Celcius.
2. 30-year climate normal from the Thornbury Slama climate station.

Average annual air temperatures recorded at the WAI and Shanty Bay climate stations during the 2021 to 2025 review period exhibited year-to-year variability but were consistent with, or modestly above, the long-term climate normal. The warmest conditions occurred during the latter portion of the review period, particularly in 2023 and 2024, while temperatures during 2021, 2022 and 2025 remained within the range of expected climatic variation. The observed conditions are consistent with broader regional climate trends and provide important context for interpretation of groundwater, surface water, and wetland monitoring results documented throughout the review period.

Temperatures recorded at the WAI station were typically lower than those recorded at the Shanty Bay climate station. This difference is not unexpected given the differing locations and physiographic settings of the two monitoring stations. Notwithstanding these differences, both datasets exhibited similar year-to-year patterns, supporting the conclusion that observed temperature fluctuations reflected regional climatic conditions.

## 3.2 Precipitation

The total annual precipitation recorded at the WAI station and Shanty Bay climate stations from 2021 to 2025 are provided along the with 30-year climate normal in **Table 3.2**.

**Table 3.2 Summary of Phase 2 Total Annual Precipitation**

| 30-Year Climate Normal | 966 | | | | |
|---|---|---|---|---|---|
| | 2021 | 2022 | 2023 | 2024 | 2025 |
| WAI Station | 808 | 577 | 906 | 939 | 990 |
| Shanty Bay Climate Station | 927 | 847 | 970 | 1045 | 1023 |

Notes:

1. Values presented are in millimetres.
2. 30-year climate normal from the Thornbury Slama climate station.

Annual precipitation recorded at the WAI and Shanty Bay climate stations during the 2021 to 2025 review period also exhibited natural year-to-year variability relative to the long-term climate normal. Relatively dry conditions were observed during 2021, particularly during the winter and spring months, while 2022 was the driest year of the review period based on the annual precipitation totals recorded at both stations. In contrast, precipitation totals increased during the latter portion of the review period, with 2023, 2024 and 2025 recording annual precipitation totals that were consistent with or greater than the long-term climate normal. These fluctuations are representative of natural climatic variability and provide important context for interpretation of groundwater levels, wetland water levels and surface water monitoring results during the review period.

Comparison of the WAI station and the Shanty Bay climate station indicates that annual precipitation totals followed similar year-to-year trends throughout the review period. Minor differences in annual precipitation volumes between the two stations are expected given their differing locations and physiographic settings, as previously noted. Notwithstanding these local influences, the overall consistency between the two datasets supports the conclusion that observed hydrologic variations during the review period were primarily driven by regional climatic conditions.

## 3.3 Annual Water Budget

The monthly temperature and precipitation data from the Shanty Bay climate station and WAI station are used to calculate a general water budget for the area that provides a measure of water losses to evapotranspiration. The difference between the monthly precipitation and the monthly evapotranspiration (adjusted for daylight hours) yields the estimated water surplus (or deficit). The estimated evapotranspiration is based on the method developed by Thornthwaite-Mather and incorporates a water holding capacity for the soil and vegetation cover. The net water surplus is a

measure of the amount of water that is available for surface runoff and groundwater recharge. Results of the water balance from 2021 to 2025 are summarized in **Table 3.3**.

**Table 3.3 Summary of Phase 2 Annual Water Balance**

| | | Annual Precipitation | Potential Water Surplus | Net Water Surplus |
|---|---|---|---|---|
| **Thornbury Slama (30-Year Normal)** | | **966** | **385** | **385** |
| **2021** | WAI Station | 808 | 248 | 248 |
| | Shanty Bay | 927 | 292 | 292 |
| **2022** | WAI Station | 577 | 118 | 71 |
| | Shanty Bay | 847 | 236 | 234 |
| **2023** | WAI Station | 906 | 330 | 330 |
| | Shanty Bay | 970 | 356 | 356 |
| **2024** | WAI Station | 939 | 288 | 288 |
| | Shanty Bay | 1045 | 403 | 403 |
| **2025** | WAI Station | 990 | 452 | 409 |
| | Shanty Bay | 1023 | 554 | 403 |

Notes:

1. Values presented are in millimetres.
2. 30-year climate normal from the Thornbury Slama climate station.

Annual net water surplus, calculated using the Thornthwaite-Mather water budget method, exhibited significant year-to-year variability during the 2021 to 2025 review period. The lowest net water surplus values were recorded during 2022, reflecting the driest climatic conditions observed during the review period and reduced potential for groundwater recharge. Net water surplus increased during 2023 and remained elevated through 2024 and 2025, corresponding to higher annual precipitation totals and increased potential for groundwater recharge. These variations are an important consideration in the interpretation of groundwater monitoring results, as annual fluctuations in groundwater levels may be influenced by changes in recharge conditions associated with climatic variability.

Comparison of the WAI station and the Shanty Bay climate station indicates that both datasets exhibited similar year-to-year trends in net water surplus throughout the review period. Both datasets support the conclusion that climatic conditions during the latter portion of the review period were overall more favourable for groundwater recharge than those observed during 2021 and 2022. Shorter-duration dry periods were nevertheless observed during several of the wetter years, demonstrating that seasonal recharge conditions may differ from annual trends.

# 4. Summary of Phase 2 LTTWM Data

## 4.1 Groundwater

### 4.1.1 Seasonal Variation

Typically, groundwater levels achieve seasonal high elevations in the spring following the snow melt and then progressively decline throughout the summer months due to higher evapotranspiration (ET) rates. In the fall, the balance between precipitation rates and lower evapotranspiration rates can result in a rise in groundwater levels. In the winter months, when precipitation is bound up in the snowpack and the shallow ground surface is frozen, groundwater levels tend to decline until the spring snow melt, when the cycle repeats.

The magnitude of seasonal variation is the greatest at the topographically high groundwater recharge areas, with less seasonal variation occurring in the topographically lower lying areas and adjacent to surface water courses and / or lakes that serve as groundwater discharge areas.

### 4.1.2 Long-Term Trends

Localized drawdown due to quarry extraction activities is observed at some locations in the vicinity of Phase 2A, as expected based on the numerical model predictions completed at the time of the Extension Quarry licencing.

A summary of long-term water level trends at each location is presented below.

**Main Quarry Monitoring Wells**

The groundwater hydrographs for the Main Quarry monitoring wells indicate that the groundwater levels along the north boundary of the Main Quarry in proximity to the tunnel, showed signs of local influence from this excavation. The remaining wells show variations consistent with historical data. The operation of the Storage Reservoir and the secondary reservoir on the quarry floor appears to be mitigating drawdown at PW99-1 and 98-8 to the west and southwest of the Main Quarry.

**Table 4.1 Long-Term Water Level Trends at Main Quarry Monitoring Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **MW6** | **B-1** | Approximately 15 m of historical drawdown through 2003 and stable groundwater level variations since that time. Potentially influenced by tunnel construction (began October 2015). |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **98-8** | **B-2** | Groundwater levels gradually increased between 2001 and 2015 with the operation of the Storage Reservoir and have remained stable since that time. |
| **98-9** | **B-3** | Approximately 11 m of historical impact from aggregate extraction through 2003. Stable groundwater variations since 2003 with water levels showing seasonal fluctuations comparable to previous monitoring years. Seasonal high elevations decreased in 2021 and 2022 but have since rebounded to historical ranges. |
| **98-12** | **B-4** | Approximately 14 m of historical impact from aggregate extraction through 2007. Stable groundwater levels with muted seasonal variation observed since 2008. |
| **PW99-1** | **B-5** | Similar to 98-8, operation of the Storage Reservoir caused increase in water levels between 2001 and 2015, with stable groundwater levels since that time. |

**Extension Quarry Monitoring Wells**

The Extension Quarry monitoring wells that are showing influence from quarry dewatering and extraction tend to be close to (i) the active extraction areas located at the north property boundary of the Main Quarry and (ii) the south portion of Phase 1 of the Extension Quarry, near the tunnel construction. Aggregate extraction in Phase 1 of the Extension Quarry began at the end of June 2016.

**Table 4.2 Long-Term Water Level Trends at Extension Quarry Monitoring Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **BH02-1** | **B-6** | Historically this monitor has shown drawdown impacts prior to Extension Quarry extraction. Approximately 2 m of additional decline in groundwater level since 2015. Seasonal variation in water levels slightly above 10 m.<br>*(removed from monitoring program in 2020)* |
| **BH02-2** | **B-7** | Groundwater level shows a drawdown of about 10 m since 2016 as the quarry face moves northeast towards the monitoring location.<br>*(removed from monitoring program in late 2024)* |
| **BH02-3** | **B-8** | Fluctuating water levels with no apparent trend.<br>*(removed from monitoring program in 2019)* |
| **BH02-4** | **B-9** | Seasonal fluctuation of about 7 m. About 8 m drawdown between 2015 and 2019.<br>*(removed from monitoring program in 2019)* |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **BH02-5 (nest)** | **B-10 (a,b,c)** | Groundwater levels within previously recorded seasonal variation of about 2 m in the overburden, shallow Amabel bedrock and deeper Amabel / Fossil Hill bedrock. |
| **BH02-6** | **B-11** | Decline in water level of about 8 m in 2015 due to tunnel construction. Water levels have remained stable since that time. |
| **BH03-7 (nest)** | **B-12 (a,b,c)** | Groundwater levels within previously recorded seasonal variation of about 2 m in the overburden, shallow Amabel bedrock and deeper Amabel / Fossil Hill bedrock. |
| **BH03-8** | **B-13** | Groundwater levels within previously recorded seasonal variation of about 3 m. |
| **BH03-9** | **B-14** | Water levels began showing larger seasonal variations in 2016. New minimum groundwater elevation reported in October 2019 due to dry conditions; however, water levels have recovered to historical ranges since 2020.<br><br>Changes in groundwater levels in the southwest corner of the Extension property at BH03-9 have historically been buffered by the presence of a spring located in this area. After the new minimum water elevation was set in October 2019, groundwater levels rebounded by the end of the year to within seasonal averages. The spring also provides flow to SW2. |
| **TW4-01 TW4-02 TW4-03** | **B-15 B-16 B-17** | Wells are in close proximity to each other and show redundant information. Similar to BH03-9, water levels began showing larger seasonal variations in 2016 with historic lows observed in October 2019 due to dry conditions but have recovered to historical ranges since 2021. |
| **BH08-1 BH08-2 BH08-3** | **B-18 B-19 B-20** | Wells are in close proximity to each other and show redundant information. Historic lows observed in late fall 2022, inferred to be the result of lower-than-normal precipitation. A new low water level was observed in late autumn of 2025, similar to other monitoring wells in close proximity, and also observed during a period of lower-than-normal precipitation. However, these wells are noted to be in the predicted radius of influence of the Extension Quarry. Monitoring of emerging trends will be continued. |
| **NW1** | **B-21** | Groundwater levels declined after July 2016, now stable at about 502 masl, the approximate elevation of the Extension Quarry floor. |
| **NW2** | **B-22** | Monitoring ceased in June 2018 due to extraction progression. |
| **NW3** | **B-23** | Groundwater levels display seasonal variation of about 5 m between 2015 and 2021.<br>*(removed from monitoring program in 2022)* |
| **NW4** | **B-24** | Groundwater levels have shown an overall decline between 2016 and 2019.<br>*(removed from monitoring program in 2019)* |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **NW5** | **B-25** | Groundwater levels show drawdown of about 8 m between 2016 and 2023.<br>*(removed from monitoring program in late 2023)* |
| **NW6** | **B-26** | Groundwater levels show drawdown of about 7 m since 2016. |
| **NW7** | **B-27** | The groundwater levels have been variable. The cause of this is undetermined but may be related to monitor construction / location. Overall drawdown of about 2 m since 2016. |
| **NW8** | **B-28** | Groundwater levels have been consistent and display seasonal variation of about 2 m. |
| **NW9** | **B-29** | Groundwater levels have been consistent and display seasonal variation of about 2 m. Similar to BH03-9 and TW04-1 to TW04-3, minimum water levels were observed in 2019 but the water levels appear to have recovered to the historical range since that time. |
| **NW10 (nest)** | **B-30 (a,b,c)** | Overburden groundwater levels remain stable with about 1 m seasonal variation. Shallow and deep bedrock monitoring well groundwater levels have been consistent and display seasonal variation of about 2 m. |

**Extension Quarry Injection Wells**

**Table 4.3 Long-Term Water Level Trends at Extension Quarry Injection Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **IW1 / IW1a** | **B-31** | Groundwater levels displaying seasonal variations. Approximately 10 m difference between peak and low water levels. |
| **IW2** | **B-32** | Groundwater levels displaying seasonal variation of about 4 m. Historic low observed in late autumn 2022, inferred to be the result of lower-than-normal precipitation. A new low water level was observed in late autumn of 2025, similar to other monitoring wells in close proximity, and also observed during a period of lower-than-normal precipitation. However, this well is noted to be in the predicted radius of influence of the Extension Quarry. Monitoring of emerging trends will be continued. |
| **IW3** | **B-33** | Groundwater levels displaying seasonal variations. About 9 m difference between peak and low groundwater levels. |
| **IW4** | **B-34** | Groundwater levels show fluctuations related to seasonal climate variations of about 4 m. |

## Domestic Wells

Residential water supplies in the area can be grouped into those located above the Niagara Escarpment, and those located below the brow of the Escarpment. Above the Escarpment, potable water supplies are typically obtained by means of drilled wells that are developed in the Amabel Aquifer. Below the brow of the Niagara Escarpment, drilled water supplies can be more difficult to develop due to the nature of the Queenston and the Georgian Bay Formations.

Review of the hydrographs for the domestic wells indicates that groundwater levels have remained within the historical range with no apparent influence from ongoing quarry extraction.

**Table 4.4 Long-Term Water Level Trends at Domestic Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **RW1** | **B-35** | Groundwater levels have fluctuated within a 6 m seasonal variation. In the late autumn of 2022, a new low water level, marginally below the historic range, was observed. A new low water level was observed in late autumn of 2025, similar to monitoring wells in close proximity. Monitoring of emerging trends will be continued. |
| **RW2** | **B-36** | Access not initially granted by new homeowners in 2018, but access restored in 2019. The 2019 to 2022 water levels were observed to vary over a wider range compared to pre-2018 data. The logger data range since late 2022 is similar to the historical logger data range from 2009 to 2017. |
| **RW3** | **B-37** | Groundwater levels within previously recorded seasonal variation of about 4 m. |
| **RW4** | **B-38** | Seasonal variation of about 3 m.<br>*(removed from monitoring program in 2019 at well owner's request)* |
| **RW5** | **B-39** | Groundwater levels have fluctuated within previously recorded seasonal variation of about 2 m. Groundwater level spikes observed in 2020 and 2021 are likely anomalous. A historic low water level was observed in late 2022 but appears to be anomalous. Going forward, the logger data will be used to assess trends at this well. It is noted that RW5 is below the escarpment and baseline water levels (~460 masl) are substantially below the quarry sump elevation (~500 masl) and as such, quarry impacts at this well are not anticipated. |
| **RW6** | **B-40** | Groundwater levels within seasonal variation of about 2 m.<br>*(removed from monitoring program in 2022 at well owner's request)* |
| **RW7** | **B-41** | Groundwater levels within previously recorded seasonal variation of about 2 m. New minimum groundwater levels reported in August and September 2020, but levels returned to historic range since that time. |
| **RW8** | **B-42** | RW8 is located on a local topographical high below the Escarpment brow to the north of the Main and Extension quarries and outside of their |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| | | influence. Groundwater levels within previously recorded seasonal variation of about 3 m. |
| **RW9** | **B-43** | *(removed from monitoring program in 2014, within Osprey Quarry licence boundary)* |
| **RW12**<br>**RW13** | **B-44**<br>**B-45** | Residential wells with the same owner in close proximity. Seasonal variation of about 2 m. |
| **RW16 (owned by WAI)** | **B-46** | Groundwater levels within seasonal variation of about 5 m, with the exception of the late autumn 2022 where a historical low was observed. A new low water level was observed in late autumn of 2025, similar to other monitoring wells in close proximity. Monitoring of emerging trends will be continued. |
| **RW17 (owned by WAI)** | **B-47** | Groundwater levels within previously recorded seasonal variation of about 2 m.<br>*(well decommissioned in 2025)* |
| **RW18 (owned by WAI)** | **B-48** | Historical seasonal variation of about 2 m. Decrease in water level of about 2 m in 2021.<br>*(removed from monitoring program in 2022 as it is within Phase 2A)* |
| **RW19 (owned by WAI)** | **B-49** | Decrease in water level of about 4 m between 2015 and 2020.<br>*(removed from monitoring program in 2020 as it is within Phase 2A)* |

Carmarthen Lake Farms has several domestic wells that are used for livestock watering and for the various residences that are present on the property.

CLF2 is located close to the southern property boundary of the Main Quarry and is approximately 700 m from the southern limit of the extraction face. The water levels at CLF2 have historically shown influences from aggregate extraction. However, since the Storage Reservoir has been used consistently, the groundwater levels at CLF2 have remained relatively stable, showing seasonal fluctuations but no apparent influences from aggregate extraction. Monitoring of CLF2 ceased in 2020 as the well casing has reportedly failed. As noted previously, the well casing at CLF1 also failed and monitoring was discontinued in 2013. Adequate water level monitoring data is provided by the remaining wells CLF3, CLF4 and CLF5.

**Table 4.5 Long-Term Water Level Trends at Carmarthen Lake Farm Domestic Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **CLF3** | **B-52** | Groundwater levels within previously recorded seasonal variation of about 2 m. |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **CLF4** | **B-53** | Groundwater levels within previously recorded seasonal variation of about 2 m. |
| **CLF5** | **B-54** | Groundwater levels within previously recorded seasonal variation of about 1.5 m. |

**Off-Site Monitoring Wells**

**Table 4.6** summarizes the long-term trends at the groundwater monitoring wells on the undeveloped former Osprey Quarry property.

**Table 4.6 Long-Term Water Level Trends at Off-Site Monitoring Wells**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **101-B** | **B-55** | Groundwater levels within previously recorded seasonal variation of about 2 m. |
| **102-C** | **B-56** | Groundwater levels within previously recorded seasonal variation of about 1 m. |
| **103-D** | **B-57** | Groundwater levels within previously recorded seasonal variations. Seasonal variation has decreased from 2 m in 2003 to about 1 m since 2013. |
| **104-A** | **B-58** | Groundwater levels within previously recorded seasonal variation of about 4 m. |
| **OW1-4** | **B-59** | Groundwater levels have increased since 2005, seasonal variation of about 1 m. |
| **OW5-2** | **B-61** | Groundwater levels within previously recorded seasonal variation of about 2 m. |
| **OW6-3** | **B-62** | Groundwater levels within previously recorded seasonal variation of about 1 m. |

**Wetland Drivepoints**

The wetland drivepoints included in the groundwater monitoring program represent the shallow groundwater table near various sensitive features in close proximity to the Site. During the winter and summer months, drivepoint water levels can become unmeasurable when the surrounding water freezes or dries up. These events are noted in **Table B-7** where they were observed during the monitoring event. Trends and observations for drivepoint monitoring stations are summarized in **Table 4.7**.

**Table 4.7 Long-Term Water Level Trends at Wetland Drivepoints**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **DP1** | **B-63** | Groundwater levels have increased by about 1 m since 2015 at this drivepoint situated in Rob Roy Swamp 6. In late 2023, replacement of the discharge pipe (running through Rob Roy Swamp 6) with a new solid pipe was initiated, with completion in February 2024. Operation of the new solid discharge pipe is expected to lower surface water levels in Rob Roy Swamp 6. A modest decrease in water levels was observed in late 2025. Monitoring of emerging trends will be continued. |
| **DP2** | **B-64** | Water levels display a slight increasing trend since 2010-2011. Historical high water levels were observed on several occasions in 2022 which were attributed to field data transcription issues. The electronic logger water level data confirms a historic high water level in March 2023 but water levels have since decreased. Monitoring of emerging trends will be continued. |
| **DP3** | **B-65** | Water levels have fluctuated within the historical seasonal variation of about 1.5 m. |
| **DP4** | **B-66** | Seasonal variation consistent prior to 2011. Since 2011, water levels during drier periods have remained above the historical range and since 2018, water levels have increased by about 0.5 m. These results suggest that the Rob Roy 6 wetland has remained saturated for longer periods of time in comparison to baseline observations.<br><br>In previous reports, an incorrect measuring point elevation was inadvertently used to correct water level data to geodetic elevation since 2018. The historical geodetic elevation data has been corrected as presented in **Figure B-66**. |
| **DP5** | **B-67** | Seasonal variation within historical range of about 1.5 m. |
| **DP6** | **B-68** | Seasonal variation within historical range of about 1.5 m. |
| **DP7** | **B-69** | Seasonal variation within range of about 1 m. Elevated water levels observed in September 2021 and early 2022 were attributed to a field data transcription issue. The manual and logger water level data since late 2022 are consistent with pre-2021 ranges. |
| **DP8** | **B-70** | Muted seasonal variation within a narrow range of less than 0.5 m. Elevated water level in mid-2022 was attributed to field data transcription issue. It appears that water levels at this drivepoint in Rob Roy Swamp 6 have increased by about 0.3 m since 2016. Operation of the new discharge pipe, which corrects historic leaks in the pipe, is expected to lower surface water levels in Rob Roy Swamp 6 over time. A modest decrease in water levels was observed in late 2025. Monitoring of emerging trends will be continued. |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **DP9** | **B-71** | Seasonal variation within a range of about 1 m. Elevated water levels observed in September 2021 and mid 2022 were attributed to a field data transcription issue. The manual and logger water level data since late 2022 are consistent with pre-2021 ranges. |
| **Bridson DP** | **B-72** | Seasonal variation within historical range of about 1.5 m. |

The temperature of the surface water ponded at the drivepoints is recorded when possible. Surface water at these locations is often frozen in the winter months and can dry up in the summer / fall. Temperature values are presented in **Table B-8**, **Appendix B**.

### 4.1.3 Groundwater Quality

Annual sampling at RW1 and RW2 has been conducted since 2016 per the LTTWM.

The analytical results from the groundwater quality sampling are compared to the Ontario Drinking Water Quality Standards, Objectives and Guidelines (ODWQS) (MECP, June 2003 and updates). The groundwater chemistry at these locations has generally met the ODWQS since 2021, with the exception of the following:

- The total coliform counts exceeded the ODWQS health-related guideline in the samples obtained from RW1 in 2023, and 2024 and from the outside tap at RW2 during each annual sampling event since 2021. In addition, E.coli. counts exceeded the ODWQS health-related guideline in the samples obtained from the outside tap at RW2 in 2021, 2022, 2023 and 2025. Both total coliform and E.coli have health-related microbiological standards of 0 CFU/100mL. The water quality at RW2 is inferred to be influenced from a nearby chicken coop and not related to the quarry. Exceedances of these parameters were reported to the well owners shortly after results were received by the laboratory.
- The sodium concentration exceeded the ODWQS reporting threshold but remained below the aesthetic objective in the samples obtained from RW2 during each annual sampling event since 2021. Sodium has an aesthetic objective of 200 mg/L and a suggested maximum concentration of 20 mg/L under the ODWQS. The water quality at RW2 is interpreted to be representative of local groundwater quality, which is naturally hard.
- The hardness exceeded the ODWQS operational guideline for treatment systems in the samples obtained from RW1 and RW2 during each annual sampling event since 2021. Hardness has an operating guideline range of 80-100 mg/L. The water quality at RW2 is interpreted to be representative of local groundwater quality, which is naturally hard.

The ODWQS exceedances for sodium and hardness are not health related. Operational guidelines in the case of hardness exceedances are established for parameters that, if not controlled, may negatively affect the efficient and effective treatment, disinfection and distribution of the water.

## 4.2 Surface Water

### 4.2.1 Stream Flow and Temperature

A summary of the stream flow monitoring results is presented in **Table 4.8**.

**Table 4.8 Stream Flow and Temperature Long-Term Trend Observations**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| ***Beaver River Tributary System*** | | |
| **SW1** | **C-1** | Surface water flows and temperature fluctuating within seasonal ranges. Historic high flow observed in April 2020, but flows have returned to historic range since that time. |
| **SW2** | **C-2** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW0-2** | **C-3** | Surface water flows and temperature fluctuating within seasonal ranges. Historic high flow observed in March 2023, but flows have returned to historical ranges since that time. |
| **QFSW2** | **C-4** | Surface water flows and temperature fluctuating seasonally. Decreasing trend in flows between 2012 and 2021 and historic low flow observed in February 2023, but flows have returned to historical ranges since that time. |
| **SW3** | **C-5** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW4** | **C-7** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW6A** | **C-10** | Surface water flows and temperature fluctuating within seasonal ranges. High flow measured in April 2023 similar to previous highs observed in April 2005 and February 2018. *(monitoring discontinued in 2024 as location is part of Osprey Quarry monitoring program)* |
| ***Batteaux Creek Tributary System*** | | |
| **SW8** | **C-12** | Minimal flow typically observed at this station. |
| **SW9** | **C-13** | Surface water flows fluctuating within seasonal ranges. Elevated temperatures recorded by logger in 2025 inferred to be the result of logger out of water during that period (i.e., dry conditions). |
| **SW13** | **C-23** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW14** | **C-24** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW15** | **C-25** | Surface water flows and temperature fluctuating within seasonal ranges. It is noted that in 2021, the culvert at this station was replaced as part of Concession 10 road re-construction. The new culvert invert appears to |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| | | be at a higher elevation than the previous culvert from which the flow trigger values were developed. |
| **SW19** | **C-31** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW21** | **C-33** | Minimal flow typically observed at this station. |
| **SW21A** | **C-34** | Consistent dry conditions observed since 2021. Upstream station SW21C was modified by property owner in 2019. |
| **SW21B** | **C-35** | Consistent dry conditions observed since 2020. Upstream station SW21C was modified by property owner in 2019. Historic high flow observed in March 2021 likely anomalous. |
| **SW22** | **C-38** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW22A** | **C-39** | Surface water flows and temperature fluctuating within seasonal ranges. Historic high flow in June 2020 likely anomalous. |
| **SW22C** | **C-40** | Surface water temperature fluctuating within seasonal ranges. Higher than normal flow conditions observed on several occasions in 2024. Flow rates measured in 2025 have returned to the historical range. Monitoring of trends will continue. |
| **BC Control** | **C-49** | Surface water flows and temperature fluctuating within seasonal ranges. |
| ***Pretty River Tributary System*** | | |
| **SW16** | **C-26** | Surface water flows and temperature fluctuating within seasonal ranges. Historic high temperature observed in June 2023 is not consistent with logger data and appears to be anomalous. |
| **SW17** | **C-27** | Surface water flows fluctuating within seasonal ranges. Temperature maximum observed in late August 2021 likely associated with high ambient air temperatures / very low flow conditions in the watercourse. New historic high temperature observed in July 2025. Monitoring of trends will continue. |
| **SW17A** | **C-28** | Surface temperature fluctuating within seasonal ranges. Historic high temperature observed in August 2020 appears to be anomalous. Elevated logger water level / flow rate observed in January 2025 appears to be associated with a significant precipitation event. |
| **SW18** | **C-30** | Surface temperature fluctuating within seasonal ranges. Accessibility limited in 2021 due to Concession 10 re-construction. Elevated logger water level / flow rate observed in January 2025 appears to be associated with a significant precipitation event. |
| **SW20** | **C-32** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **PR Control** | **C-48** | Historical high temperature and flow observed in 2024 are not related to the quarry as this control station is outside of the quarry zone of influence. These historical highs may be related to the significant |

| Monitoring Well | Figure | Discussion |
|---|---|---|
| | | precipitation event observed in July 2024. Elevated logger water level / flow rate observed in January 2025 appears to be associated with a significant precipitation event. Continued monitoring of trends will be completed. |

### 4.2.2 Escarpment Springs

A summary of the escarpment springs flow monitoring results is presented in **Table 4.9**.

**Table 4.9 Escarpment Spring Flow and Temperature Long-Term Trend Observations**

| Monitoring Well | Figure | Discussion |
|---|---|---|
| **SW10** | **C-14** | Surface water flows fluctuating within seasonal ranges. Historical high temperatures observed in June and July 2025. |
| **SW11** | **C-15** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW11A** | **C-16** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW11B** | **C-17** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW11C** | **C-18** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW11D** | **C-19** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW11E** | **C-20** | Surface water flows and temperature fluctuating within seasonal ranges. |
| **SW21C** | **C-36** | Surface water flows and temperature fluctuating within seasonal ranges. Elevated temperatures observed in August 2021 and June 2023 likely associated with high ambient air temperatures / very low flow conditions in the watercourse. Watercourse at SW21C was modified by landowner in 2019 and again in autumn of 2025. |
| **SW24A** | **C-42** | Surface water temperature fluctuating within seasonal ranges. Elevated flows observed in 2023 and 2024; however, 2025 flows have returned to pre-2023 range. Landowner significantly altered this tributary in 2021. |
| **SW77** | **C-45** | Surface water flows and temperature fluctuating within seasonal ranges. Higher than normal seasonal flows observed between late 2020 to early 2022 but flows since that time have returned to historical ranges. |

### 4.2.3 Surface Water Quality

**Dewatering Sumps**

Surface water station QFSW2 and the Dewatering Sump (Sump 1 and Sump 2) were sampled quarterly since 2016 for water quality in accordance with the ECA monitoring program. During the current reporting period, water that collects in the Extension Quarry flows via gravity from Transient Sump 3 to the Main Quarry, where the water is managed within the existing discharge works. Therefore, monitoring of the quarry discharge from the Extension Quarry is completed at the existing Main Quarry stations.

The dewatering sump water quality samples obtained since 2021 have typically met the Provincial Water Quality Objectives (PWQO) (MECP, July 1994 and updates) with the exception of sporadic isolated exceedances for general parameters, metals and E.coli. The persistent E.coli exceedances within the dewatering sumps are attributed to biological activity and not related to the quarry.

**Surface Water Stations**

The surface water station samples obtained since 2021 have typically met the PWQO with the exception of sporadic isolated exceedances for general parameters, total phosphorus, metals and E.coli, including at the Pretty River and Batteaux Creek control stations outside of the quarry radius of influence. The PWQO exceedances are therefore inferred to be the result of natural fluctuations and not quarry related.

# 5. Summary of Phase 2 PITM Trigger Exceedances

Updated interim trigger values using available baseline data from 2003 to 2020 were included in the 2020 AMP Review Report following the same methodology for red / yellow trigger designation as outlined in Table 3.2 of the AMP.

Trigger monitoring results and exceedances for the 5-year reporting period are summarized in the following sections. Copies of trigger exceedance correspondence since 2021 were previously provided in the individual annual monitoring reports.

## 5.1 Surface Water Flow

### 5.1.1 Watercourses

The surface water flow trigger exceedances for the January to December stations and June to September stations are summarized in **Tables 5.1 and 5.2** below.

**Table 5.1 Surface Water Flow Trigger Summary – January to December Stations**

| | 2021 | | | | | | | | | | | | 2022 | | | | | | | | | | | | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| **SW1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SW2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

**Table 5.2 Surface Water Flow Trigger Summary – June to September Stations**

| | 2021 | | | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S |
| **SW14** | | | | | | | | | | | | | | | | | | | | |
| **SW15** | | | | | | | | | | | | | | | | | | | | |
| **SW16** | | | | | | | | | | | | | | | | | | | | |
| **SW17** | | | | | | | | | | | | | | | | | | | | |
| **SW17A** | | | | | | | | | | | | | | | | | | | | |
| **SW18** | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

## 5.1.2 Escarpment Springs

The surface water flow trigger exceedances for the June to September escarpment springs stations are summarized in **Table 5.3** below.

**Table 5.3 Escarpment Springs Flow Trigger Summary – June to September Stations**

| | 2021 | | | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S |
| **SW10** | | | | | | | | | | | | | | | | | | | | |
| **SW11** | | | | | | | | | | | | | | | | | | | | |
| **SW21C** | | | | | | | | | | | | | | | | | | | | |
| **SW24A** | | | | | | | | | | | | | | | | | | | | |
| **SW77** | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

## 5.1.3 Summary

The surface water flow trigger exceedances observed during the current 5-year reporting period are not attributed to the Extension Quarry due to (a) the sporadic, discontinuous nature of the trigger exceedances and (b) the interpreted drawdown cone from the Extension Quarry did not extend beyond the Licence boundary during the current 5-year reporting period.

As noted in the 2020 AMP Review Report, SW21C was modified by the property owner in 2019. Therefore, data is no longer representative of baseline conditions and trigger exceedances at this station are not reliable. At downstream trigger station SW15, the culvert was replaced in 2021 as part of Concession 10 road re-construction. The new culvert invert appears to be at a higher elevation than the previous culvert and trigger exceedances at SW15 may therefore also not be reliable.

Stations SW24A and SW24B are situated on private property and were modified by the property owner in summer 2021 and again in autumn of 2025. The SW24A stream channel no longer exists and has been merged into SW24B; therefore, data is no longer representative of baseline conditions and trigger exceedances at this station are not reliable. It is recommended that trigger assessment be continued at downstream stations SW17.

## 5.2 Surface Water Temperature

### 5.2.1 Watercourses

The surface water temperature trigger exceedances for the January to December stations and June to September stations are summarized in **Tables 5.4 and 5.5** below.

**Table 5.4 Surface Water Temperature Trigger Summary – January to December Stations**

| | 2021 | | | | | | | | | | | | 2022 | | | | | | | | | | | | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| **SW1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SW2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

**Table 5.5 Surface Water Temperature Trigger Summary – June to September Stations**

| | 2021 | | | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S |
| **SW3** | | | | | | | | | | | | | | | | | | | | |
| **SW9** | | | | | | | | | | | | | | | | | | | | |
| **SW14** | | | | | | | | | | | | | | | | | | | | |
| **SW15** | | | | | | | | | | | | | | | | | | | | |
| **SW16** | | | | | | | | | | | | | | | | | | | | |
| **SW17** | | | | | | | | | | | | | | | | | | | | |
| **SW17A** | | | | | | | | | | | | | | | | | | | | |
| **SW18** | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

## 5.2.2 Escarpment Springs

The surface water temperature trigger exceedances for the June to September escarpment springs stations are summarized in **Table 5.6** below.

**Table 5.6 Escarpment Springs Temperature Trigger Summary – June to September Stations**

| | 2021 | | | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S | J | J | A | S |
| **SW10** | | | | | | | | | | | | | | | | | | | | |
| **SW11** | | | | | | | | | | | | | | | | | | | | |
| **SW21C** | | | | | | | | | | | | | | | | | | | | |
| **SW24A** | | | | | | | | | | | | | | | | | | | | |
| **SW77** | | | | | | | | | | | | | | | | | | | | |

Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Grey shading indicates no applicable monthly trigger.

### 5.2.3 Summary

It is noted that in 2024 and 2025, temperatures in the tributary of Batteaux Creek northeast of the Extension Quarry (i.e., SW16, SW17, SW17A and SW18) consistently exceeded the yellow triggers during the summer months. There is no evidence of quarry impacts on groundwater levels at the closest groundwater monitoring locations (i.e., the upgradient injection wells). Flow within this tributary occurs over a poorly defined meandering series of rivulets across a fallow field and Nottawasaga Sideroad 26 & 27, with flow paths observed to change seasonally and from year to year. Furthermore, road reconstruction completed in 2025 has altered the flow path. It is possible that the varying nature of flow at these stations had an influence on surface water temperatures at the trigger stations in 2024 and 2025. Continued monitoring will be completed to confirm trends.

The remaining surface water temperature trigger exceedances observed during the current 5-year reporting period are not attributed to the Extension Quarry due to (a) the sporadic, discontinuous nature of the trigger exceedances, (b) elevated surface water temperatures observed during the summer months at the control stations and (c) the interpreted drawdown cone from the Extension Quarry did not extend beyond the Licence boundary during the current 5-year reporting period.

As noted in the 5-Year Comprehensive Review report, SW21C was modified by the property owner in 2019. Therefore, data is no longer representative of baseline conditions and trigger exceedances at this station are not reliable. At downstream trigger station SW15, the culvert was replaced in 2021 as part of Concession 10 road re-construction. The new culvert invert appears to be at a higher elevation than the previous culvert and trigger exceedances at SW15 may also not be reliable.

Stations SW24A and SW24B are situated on private property and were modified by the property owner in summer 2021 and again in autumn of 2025. SW24A stream channel no longer exists and has been merged into SW24B; therefore, data is no longer representative of baseline conditions and trigger exceedances at this station are not reliable. It is recommended that trigger assessment be continued at downstream stations SW17.

## 5.3 Wetland Water Levels

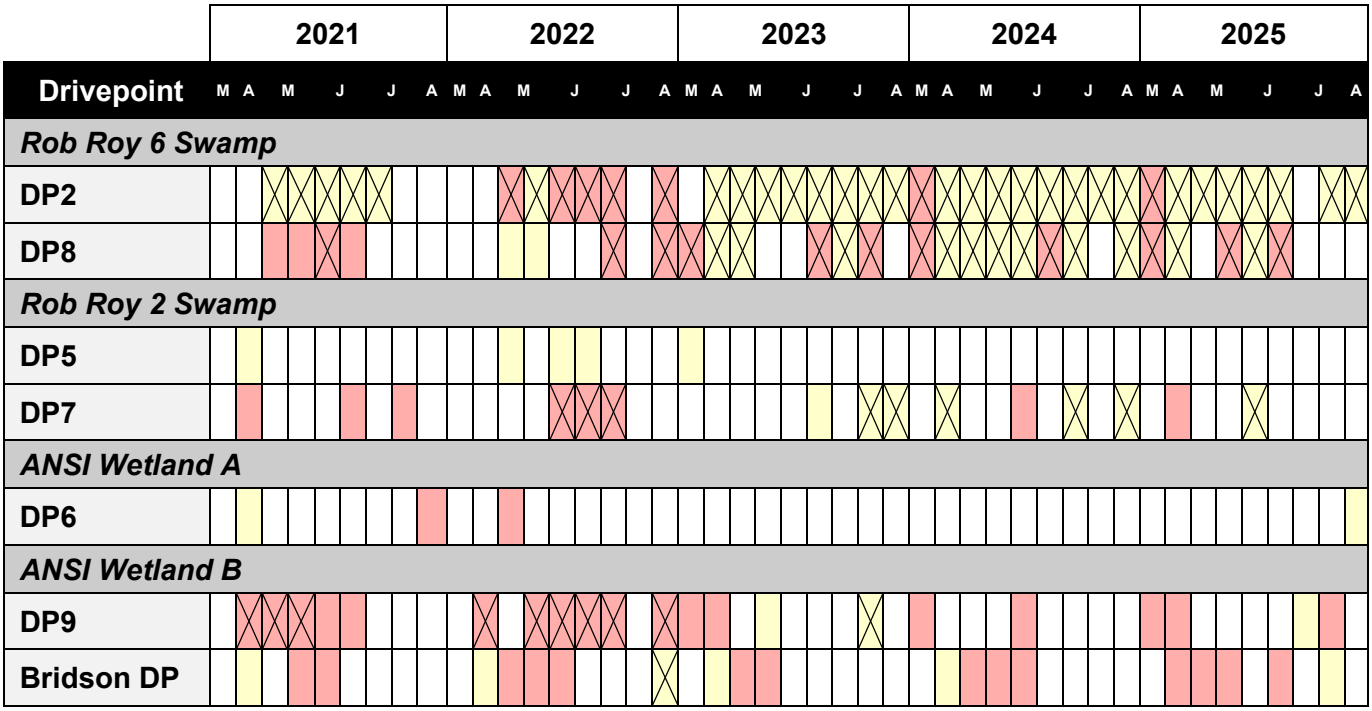
Drivepoints DP2 and DP8 are installed within the RR6 wetland located west of the Main Quarry, where the sump discharge is directed. DP2 is located directly north of the quarry discharge, while DP8 is located south of SW2.

Drivepoints DP5 and DP7 are located north of the Site in vernal pools that are part of the RR2 wetland. Drivepoint DP6 is located in a vernal pool in the ANSI A wetland.

Bridson DP, located on the former Bridson property east of the Site, was installed to monitor the ANSI B wetland. Drivepoint DP9 is located northeast of the Site, in the ANSI B wetland buffer lands owned by WAI.

The wetland drivepoint water level monthly / bi-weekly trigger monitoring results are summarized in **Table 5.7** below.

**Table 5.7 Wetland Water Level Trigger Summary**




Notes:

1. Red and yellow shading indicates exceedance of corresponding trigger.
2. Cross-hatch indicates exceedance of "wet" trigger; no cross-hatch indicates exceedance of "dry" trigger.

## 5.3.1 Summary

Replacement of the discharge pipe (running through RR6 wetland) was initiated in late 2023 and was completed in February 2024. Operation of the new solid discharge pipe is expected to lower surface water levels in RR6 wetland and help reduce "wet" trigger exceedances. Modest decreases in RR6 water levels were observed at some locations in late 2025. Monitoring of water level trends will continue in 2026.

The remaining wetland water level trigger exceedances observed during the current 5-year reporting period are not attributed to the Extension Quarry due to (a) the sporadic, discontinuous nature of the trigger exceedances and (b) the interpreted drawdown cone from the Extension Quarry did not extend beyond the Licence boundary in the current 5-year reporting period.

# 6. Review of the PITM Program

## 6.1 Comparison of Phase 2 Monitoring Results to Model Predictions

Revision and recalibration of the Phase 1 numerical groundwater flow model were completed during the previous 5-year review, as documented in the 2020 AMP Review Report. The re-calibrated Phase 1 model was then used to simulate future extraction within Phase 2A and 2B at the Site. For the updated Phase 2 impact predictions, it was assumed that the Main Quarry would remain dewatered. The re-calibrated Phase 1 model was adapted by simulating the 2025 excavation footprint for comparison for the current 5-year reporting period.

A comparison of the predicted versus observed drawdown at the groundwater monitoring wells within the predicted area of influence during the 2020 to 2025 period is summarized in **Table 6.1**. The observed drawdown between 2020 and 2025 was estimated based on the hydrographs included in **Appendix B**.

**Table 6.1 Summary of Predicted and Observed Drawdown Between 2020 and 2025**

| Monitoring Well | Relative Location | Distance from Quarry Face (m) | 2020 to 2025 Drawdown (m) | |
|---|---|---|---|---|
| | | | Predicted | Observed |
| **BH02-6** | Between quarries | 50 | 0.3 | 0 |
| **NW6** | Northwest of Phase 1 / 2A | 100 | 0.8 | 2.5 |
| **98-12** | Southeast of Phase 1 / 2A | 120 | 1.1 | 0 |
| **RW16** | East of Phase 1 / 2A | 170 | 2.7 | < 1 |
| **BH08-1** | East of Phase 1 / 2A | 200 | 2.3 | < 1 |
| **NW7** | West of Phase 1 / 2A | 200 | 0.8 | < 1 |
| **IW1** | East of Phase 1 / 2A | 230 | 2.1 | 0 |
| **IW2** | East of Phase 1 / 2A | 230 | 1.7 | < 1 |
| **IW3** | Northeast of Phase 1 / 2A | 400 | 0.1 | 0 |

In summary, these results suggest that the model used to predict potential quarry impacts is conservative, as the observed conditions at most monitoring wells during the current monitoring review period are within the model predictions, particularly to the east / northeast of Phase 2A. The exceptions are to the west at NW7 where the observed conditions are comparable to the model predicted drawdown, while a slight underprediction of drawdown is observed at NW6.

Predicted impacts to the escarpment seep baseflows between 2020 and 2025 are summarized in **Table 6.2**.

**Table 6.2 Summary of Predicted Impacts to Escarpment Seeps Between 2020 and 2025**

| Description | Drain Boundary Reach No. | Baseflow ($m^3$/day) | | % Reduction |
|---|---|---|---|---|
| | | 2020 Baseline Model | 2025 Model Prediction | |
| **Pretty River Escarpment Seeps (SW18)** | **16** | 540 | 538 | < 1 |
| **Batteaux Creek N Escarpment Seeps (SW14 and SW15)** | **17** | 252 | 241 | 4 |
| **Batteaux Creek S Escarpment Seeps (SW22 and SW22A)** | **18** | 214 | 209 | 2 |

The 2025 model predicts a slight decrease in the escarpment seep base flows to the Pretty River and Batteaux Creek watersheds, on the order of <1% to 4% relative to 2020 conditions. Such reductions in flow would likely not be measurable given the natural variance in base flow to these features. The flow and temperature monitoring data obtained from these stations between 2020 and 2025 do not show any apparent negative impacts, consistent with the model predictions.

As per Appendix E of the 2025 Annual Summary and Performance Report (WSP, 2026), the total discharge from the quarry was measured as 1.1 $m^3$ during 2025, or approximately 3,100 $m^3$/day. The predicted daily discharge from the modified model is approximately 1,900 $m^3$/day. It is inferred that the model underprediction of the daily discharge is related to an overestimation of the assumed evaporation that occurs within the quarry footprint. Alternatively, a greater degree of recirculation from the on-site storage ponds to the quarry sump may be occurring than is simulated in the model.

## 6.2 Groundwater Model Changes and Recalibration

Based on the results of the current study, the previously established calibration continues to provide a conservative representation of the study area and remains appropriate for the purposes of this assessment.

## 6.3 Phase 2 Impact Predictions

As noted previously, updated Phase 2A and 2B models were constructed as part of the previous 5-year review. Updated Phase 2 impact predictions from the 2020 AMP Review Report are provided below.

### 6.3.1 Phase 2A Model

The predicted radius of influence for complete extraction within Phase 2A relative to the 2020 baseline model is shown in **Figure 3**. The 1 m predicted drawdown contour for full Phase 2A extraction extends off-site to the east by about 400 m and to the north by about 300 m. A drawdown of about 1 m to 2 m is predicted to occur within the bedrock underlying ANSI Wetland A, while 2 m to 5 m of drawdown is predicted under ANSI Wetland B. Residential well RW1 is predicted to experience an additional 1.5 m of drawdown, while RW16 is predicted to experience an additional 3.5 m of drawdown (although it is owned by WAI).

Predicted impacts to the escarpment seep baseflows are summarized in **Table 6.3**.

**Table 6.3 Summary of Predicted Impacts to Escarpment Seeps in Phase 2A**

| Description | Drain Boundary Reach No. | Baseflow ($m^3$/day) | | % Reduction |
|---|---|---|---|---|
| | | 2020 Baseline Model | Phase 2A Model Prediction | |
| **Pretty River Escarpment Seeps (SW18)** | **16** | 540 | 520 | 2 |
| **Batteaux Creek N Escarpment Seeps (SW14 and SW15)** | **17** | 252 | 238 | 6 |
| **Batteaux Creek S Escarpment Seeps (SW22 and SW22A)** | **18** | 214 | 208 | 3 |

The Phase 2A model predicts a slight decrease in the escarpment seep base flows to the Pretty River and Batteaux Creek watersheds, on the order of 2% to 6% relative to 2020 baseline conditions. Such reductions in flow would likely not be measurable given the natural variance in base flow to these features.

### 6.3.2 Phase 2B Model

The predicted radius of influence for complete extraction within Phase 2B relative to the 2020 baseline model is shown in **Figure 3**. The drawdown cone for full Phase 2B extraction starts to notably increase, with the 1 m drawdown contour extending approximately 1,200 m north of the Site and 500 m northwest of the Site. The drawdown cone to the east of the Site remains approximately the same as the Phase 2A extent. A drawdown of about 5 m to 10 m is predicted for ANSI Wetland A, 2 m to 5 m for ANSI Wetland B (about the same as the Phase 2A model prediction) and 5 m to 10 m for RR2 wetland. Additionally, a drawdown of 2 m to 5 m is predicted for RR3 wetland northwest of the Site, while 1 m to 2 m drawdown is predicted for RR1 and RR4 wetlands northwest of the Site. Residential wells RW1 and RW16 to the east of the extraction area are not predicted to experience further drawdown over and

above the Phase 2A model prediction; however, RW3 and RW4 to the north of the extraction area are predicted to experience between 2 m and 3 m of additional drawdown due to the full Phase 2B quarry extraction.

Predicted impacts to the escarpment seep baseflows are summarized in **Table 6.4**.

**Table 6.4 Summary of Predicted Impacts to Escarpment Seeps in Phase 2B**

| Description | Drain Boundary Reach No. | Baseflow ($m^3$/day) | | % Reduction |
|---|---|---|---|---|
| | | 2020 Baseline Model | Phase 2A Model Prediction | |
| **Pretty River Escarpment Seeps (SW18)** | **16** | 540 | 518 | 4 |
| **Batteaux Creek N Escarpment Seeps (SW14 and SW15)** | **17** | 252 | 238 | 6 |
| **Batteaux Creek S Escarpment Seeps (SW22 and SW22A)** | **18** | 214 | 208 | 3 |

The Phase 2B model predicts a slight decrease in the escarpment seep base flows to the Pretty River and Batteaux Creek watersheds, on the order of 3% to 6% relative to 2020 baseline conditions. Such reductions in flow would likely not be measurable given the natural variance in base flow to these features.

## 6.4 Need for Contingency Mitigation Measures

### 6.4.1 Dewatering Discharge Trenches

Site Plan hydrogeology note 7 (Sheet 2B of 4) includes details on the proposed mitigation measures, one of which is the discharge of excess water from the Site to the northeast, north and northwest of Phase 2A and 2B to maintain baseline seasonal water level elevations within the ANSI A and B wetlands and RR2 wetland. A schematic cross section of the proposed surface discharge system is shown in Figure F.2 of the AMP document and the approximate locations are shown on the Operation Plan (Sheet 2A of 4).

A secondary objective to the dewatering discharge trenches is to replace the lost “catchment area” for each of these features due to the increased extraction footprint of the quarry. Appendix F of the AMP document includes initial estimates for the annual volume of discharge required to be directed to each of these features to replace the loss in catchment area, as summarized in **Table 6.5**.

**Table 6.5 Estimated Annual Discharge to Recharge Trenches**

| Description | Discharge ($m^3$/day) ($m^3$/year) | |
|---|---|---|
| | Phase 2A | Phase 2B |
| **ANSI Wetland A** | 121 (44,240 $m^3$/year) | 26 (9,480 $m^3$/year) |
| **ANSI Wetland B** | | 132 (48,190 $m^3$/year) |
| **Rob Roy 2 Swamp** | 40 (14,615 $m^3$/year) | 84 (30,810 $m^3$/year) |

More recently, a "drip irrigation" concept (i.e., essentially an above ground diffuse irrigation system) has been proposed as an alternative to the recharge trenches which involve open channel flow. This alternative approach offers several advantages over recharge trenches:

- It is not as intrusive as the installation of machine excavated recharge trenches through the wetland features;
- It uses readily available and widely used technologies; and
- Both the location and flow rate are more easily adjustable and the potential for channelized flow would be reduced.

While sporadic trigger exceedances were observed during the current reporting period, the water level monitoring data obtained from the wetland drivepoint stations between 2020 and 2025 do not show any sustained or trending negative impacts. Some trigger exceedances are attributed to the statistical methodologies used for trigger development and not related to quarry dewatering. Recurring dry triggers have been observed in ANSI Wetland B; however, corresponding groundwater and ecological monitoring data do not currently demonstrate a sustained adverse trend requiring activation of contingency mitigation measures. It is therefore interpreted that this mitigation measure is not required at this time.

## 6.4.2 Injection Wells

The primary objective of the injection wells is to maintain baseline surface water flows in the escarpment seeps. As noted previously, the predicted impacts to the escarpment seeps under full Phase 2A and 2B extraction is expected to range between a 2% to 6% reduction compared to the baseline. Therefore, the use of injection wells during Phase 2A and 2B extraction is not predicted to be necessary, as the predicted reductions will likely not be distinguishable from natural variation. This is consistent with the seep flow and temperature data obtained during the current monitoring period.

Injection wells IW1 / IW1a, IW2, IW3 and IW4 were installed in 2014, the locations are shown on **Figure 2**. Injection testing was completed at these wells later in 2014, with achievable injection rates of between 130 $m^3$/day and 400 $m^3$/day (20 Igpm to 60 Igpm). These injection wells were previously

included in modified versions of the Phase 2A and 2B predictive models to assess whether the minor reductions in baseflow to the escarpment seeps could be mitigated by the simulated injection wells. As noted in the 2020 AMP Review Report, it was found that injection rates as low as 20 $m^3$/day (3 Igpm) were successful in matching the baseflow rates in the predictive models to those of the 2020 baseline model.

In summary, the Phase 2A and 2B predictive modeling suggests that the activation of the injection wells will likely not be required during Phase 2 of the extraction and this conclusion has been supported by the monitoring data collected to date. However, the existing injection well network remains capable of mitigating the predicted impacts, if deemed necessary.

## 6.5 Recommended Changes to the PITM

A number of proposed changes to the PITM were provided in the 2020 AMP Review Report and are reproduced with minor updates below.

### 6.5.1 Proposed Monitoring Network Changes

- Monitoring has been discontinued at locations which are not included in the PITM or LTTWM. The current monitoring program is shown in **Table 1** and shown in **Figure 6**.
- Development of stage-discharge relationships for surface water stations is on-going. Adequate hydraulic controls do not exist at all locations which has resulted in poorly defined stage-discharge relationships at some locations. Rating curves will therefore only be relied upon at locations where sufficient data demonstrate a stable and repeatable stage-discharge relationship. In cases where rating curves cannot be established, the required monthly monitoring will be continued, as stipulated by the AMP.
- Escarpment seep trigger station SW21C is situated on private property. It is understood that this feature was modified by the property owner in 2019. It is therefore recommended to remove station SW21C from the PITM and continue to assess trigger exceedances at downstream station SW15. However, it is noted that the culvert was replaced at SW15 in 2021 as part of Concession 10 road re-construction. The new culvert invert appears to be at a higher elevation than the previous culvert and trigger exceedances at SW15 may also not be reliable.
- Stations SW24A and SW24B are situated on private property and were modified by the property owner in summer 2021 and again in autumn of 2025. SW24A stream channel no longer exists and has been merged into SW24B; therefore, data is no longer representative of baseline conditions and trigger exceedances at this station are not reliable. It is recommended that trigger assessment be continued at downstream stations SW17.
- As noted previously, a suitable, representative reference wetland within the Nottawasaga Lookout or Pretty River Provincial Parks has not been identified. Now that enough data are available to develop target hydrographs, the use of a reference wetland to assess potential quarry impacts appears redundant. It is therefore recommended to discontinue the search for a reference wetland.

## 6.5.2 Proposed Long-Term Triggers

**Watercourse / Escarpment Springs Flow**

- Applicable between June and September, except at two stations (SW1, SW2) where trigger applies throughout year.
- Monthly average of logger data should be calculated for assessment of monthly trigger exceedance (i.e., an instantaneous logger reading which goes above the trigger level wouldn't be considered an exceedance of a trigger).
- The proposed long-term yellow trigger is the 10$^{th}$ percentile of baseline (2003 – 2020) flow data as shown in **Table 6.6**.

**Table 6.6 Proposed Long-Term Yellow Zone Flow Triggers**

| Station | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SW1** | 12.24 | 15.63 | 10.30 | 17.10 | 7.30 | 2.62 | (nf) | (nf) | (nf) | (nf) | 2.26 | 5.04 |
| **SW2** | 2.05 | 2.88 | 3.86 | 8.30 | 4.05 | 1.98 | 1.29 | 0.62 | 0.42 | 0.37 | 0.68 | 0.61 |
| **SW3** | | | | | | (nf) | (nf) | (nf) | (nf) | | | |
| **SW9** | | | | | | (nf) | (nf) | (nf) | (nf) | | | |
| **SW10** | | | | | | 0.09 | (nf) | (nf) | (nf) | | | |
| **SW11** | | | | | | 2.18 | 0.80 | 0.40 | 0.28 | | | |
| **SW14** | | | | | | 1.70 | 0.92 | 0.89 | 0.52 | | | |
| **SW15** | | | | | | 0.10 | (nf) | 0.02 | (nf) | | | |
| **SW16** | | | | | | 0.55 | 0.17 | (nf) | (nf) | | | |
| **SW17** | | | | | | 0.47 | 0.27 | 0.28 | 0.23 | | | |
| **SW17A** | | | | | | 6.41 | 2.74 | 1.07 | 1.19 | | | |
| **SW18** | | | | | | 11.72 | 5.49 | 3.43 | 2.37 | | | |
| **SW21C** | | | | | | 0.96 | 1.24 | 0.32 | 0.61 | | | |
| **SW24A** | | | | | | 0.16 | 0.20 | 0.10 | 0.10 | | | |
| **SW77** | | | | | | 0.10 | 0.06 | 0.06 | 0.04 | | | |

Notes:

1. Flow rate triggers in litres / second (L/s).
2. (nf) indicates no flow observed during baseline period.

**Watercourse / Escarpment Springs Temperature**

- Applicable between June and September, except at two stations (SW1, SW2) where trigger applies throughout year.
- Monthly average of logger data should be calculated for assessment of monthly trigger exceedance.
- The proposed long-term yellow trigger is the 90$^{th}$ percentile of baseline (2003 – 2020) temperature data as shown in **Table 6.7**.

**Table 6.7 Proposed Long-Term Yellow Zone Temperature Triggers**

| Station | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SW1** | 3.76 | 3.44 | 6.33 | 10.00 | 15.37 | 18.09 | 20.34 | 17.98 | 17.48 | 13.49 | 8.26 | 5.09 |
| **SW2** | 6.53 | 6.19 | 6.71 | 7.21 | 9.00 | 11.21 | 13.03 | 13.08 | 12.68 | 11.90 | 9.69 | 7.90 |
| **SW3** | | | | | | 18.60 | 19.62 | (dry) | (dry) | | | |
| **SW9** | | | | | | 16.25 | 19.19 | (dry) | (dry) | | | |
| **SW10** | | | | | | 14.93 | 19.02 | 18.77 | 18.25 | | | |
| **SW11** | | | | | | 10.96 | 14.00 | 15.24 | 13.82 | | | |
| **SW14** | | | | | | 19.87 | 21.92 | 20.38 | 17.01 | | | |
| **SW15** | | | | | | 21.34 | 21.97 | 19.71 | 16.71 | | | |
| **SW16** | | | | | | 17.60 | 19.97 | 18.17 | 18.03 | | | |
| **SW17** | | | | | | 20.90 | 22.55 | 20.08 | 18.01 | | | |
| **SW17A** | | | | | | 13.62 | 14.51 | 15.25 | 14.36 | | | |
| **SW18** | | | | | | 16.63 | 18.63 | 18.40 | 15.97 | | | |
| **SW21C** | | | | | | 11.62 | 12.06 | 11.67 | 11.19 | | | |
| **SW24A** | | | | | | 12.32 | 13.20 | 14.10 | 12.86 | | | |
| **SW77** | | | | | | 9.40 | 11.92 | 14.55 | 13.40 | | | |

Notes:

1. Temperature triggers in degrees Celcius (°C).
2. (dry) indicates no baseline temperature data due to dry conditions.

## Wetland Water Levels

- Streamline to a single conservative trigger (in place of separate vegetation / amphibian habitat triggers).
- Applicable between March and August.
- Monthly average of logger data should be calculated for assessment of monthly trigger exceedance.

- The proposed long-term yellow trigger is the water level above the 90th percentile or below the 10th percentile of baseline water level ranges as shown in **Table 6.8**.

**Table 6.8 Proposed Long-Term Yellow Zone Wetland Water Level Triggers**

| | March | | April | | May | | June | | July | | August | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Drivepoint** | **10th** | **90th** | **10th** | **90th** | **10th** | **90th** | **10th** | **90th** | **10th** | **90th** | **10th** | **90th** |
| ***Rob Roy 6 Swamp*** | | | | | | | | | | | | |
| **DP2** | 511.24 | 512.06 | 511.84 | 512.28 | 511.66 | 512.30 | 511.33 | 512.24 | 511.62 | 512.25 | 511.23 | 512.26 |
| **DP8** | 511.29 | 511.29 | 511.13 | 511.39 | 511.28 | 511.41 | 511.24 | 511.35 | 511.23 | 511.42 | 511.21 | 511.38 |
| ***Rob Roy 2 Swamp*** | | | | | | | | | | | | |
| **DP5** | 509.92 | 510.11 | 509.99 | 510.11 | 509.98 | 510.12 | 509.90 | 510.11 | 509.47 | 510.08 | 509.07 | 509.96 |
| **DP7** | 509.33 | 509.37 | 509.33 | 509.36 | 509.22 | 509.38 | 509.20 | 509.34 | 508.81 | 509.31 | 508.50 | 509.09 |
| ***ANSI Wetland A*** | | | | | | | | | | | | |
| **DP6** | 511.60 | 511.87 | 511.62 | 511.88 | 511.67 | 511.85 | 511.21 | 511.83 | 510.28 | 511.90 | 510.21 | 511.83 |
| ***ANSI Wetland B*** | | | | | | | | | | | | |
| **DP9** | 507.78 | 507.83 | 507.79 | 507.83 | 507.74 | 507.83 | 507.65 | 507.77 | 507.30 | 507.78 | 506.72 | 507.72 |
| **BRIDSON DP** | 510.29 | 510.51 | 510.43 | 510.53 | 510.39 | 510.50 | 510.12 | 510.46 | 509.33 | 510.40 | 509.52 | 510.32 |

Notes:

1. Wetland water level triggers in metres above sea level (masl).

## 6.5.3 Proposed Trigger Mechanism Changes

- **Green Zone**
  - "Normal" operations (no change from AMP document).
- **Yellow Zone**
  - Notify Regulatory Agencies (MNRF / MECP / CAs / Township) within 72 hours of receipt of data by hydrogeologist.
  - Investigate cause (natural climate variation or quarry impact) and determine appropriate action within 1 week of receipt of data by hydrogeologist. Utilize baseline monthly climate station data and control station data to evaluate climate trends.
  - If hydrogeologist determines Yellow Zone trigger exceedance is not a result of impacts from extraction activities, normal quarry operations can continue without mitigation.
  - If hydrogeologist determines Yellow Zone trigger exceedance is the result of impacts from extraction activities, this would qualify as a Red Zone trigger exceedance.

- Provide summary report to Regulatory Agencies.

- **Red Zone**
  - Notify Regulatory Agencies within 24 hours of determination of cause by hydrogeologist.
  - Cease clearing / stripping / extraction activities at the quarry within 48 hours of determination of cause by hydrogeologist, but processing and shipping may continue.
  - Hydrogeologist to determine appropriate mitigation measures (i.e., re-direct quarry discharge, activate injection wells, move extraction area, etc.)
  - Provide a summary report of cause, mitigation and results to Regulatory Agencies.
  - Extraction may resume when the Hydrogeologist recommended mitigation measures are in place. Mitigation measures may be modified once MNRF has reviewed the Hydrogeologist summary report.

# 7. Review of LTTEM and EEMM Programs

## 7.1 Long-Term Trend Ecological Monitoring (LTTEM)

The LTTEM program was developed to supplement the information from the LTTWM program with information about the health and functioning of the natural heritage features in the vicinity of the Extension Quarry.

The wetland component of the LTTEM focuses on amphibian vernal breeding pools and ensuring hydroperiods are suitable for continued hydrophytic plant growth in the surrounding wetland zones. Wetland water level monitoring is conducted as part of the PITM and the LTTWM programs and is interpreted from a natural heritage perspective. Ecological monitoring to complement the water level monitoring includes two components: amphibian monitoring and wetland vegetation monitoring.

### 7.1.1 Amphibian Monitoring Program

Wildlife monitoring in wetlands is focused on amphibians (Anura: frogs and toads and Urodela: salamanders). Amphibians are excellent indicators of wetland health and water regime trends that could be affecting wetland function.

The 2025 Amphibian Monitoring Program at the Extension Quarry was completed successfully, fulfilling the requirement of the AMP as documented in the 2025 Annual Summary and Performance Report (WSP, 2026). Data of amphibian habitat, egg mass occurrence and breeding calls at each survey station were collected, providing monitoring data for amphibian community and abundance at the Site. Habitat at each survey station was suitable for amphibians and, when comparing 2025 data to previous years' surveys, amphibian communities were similar in diversity and equal to or greater in abundance at each survey station. Due to the effects of an ice storm in April 2025 and drier than normal conditions observed during the year, egg mass abundance decreased during 2025. Continued monitoring will be completed in 2026 to assess any long-term impacts from the conditions observed in 2025.

### 7.1.2 Wetland Vegetation Monitoring

Vegetation monitoring was initiated in 2019 and continued through to 2023 at wetlands within the Rob Roy Swamp PSW Complex (RR2 and RR6) and ANSI wetlands A & B. As per the AMP, the next monitoring event is scheduled for 2026.

Based on the monitoring completed in 2023, the wetlands remain consistent in their floristic character compared to the initial surveys in 2019 and remain as heathy wetland communities. As noted in previous years, RR6 appears to be experiencing inundation over a long period, particularly along Transect 6 (situated near drivepoint DP1). Most trees in this part of the wetland died prior to 2019

leaving the canopy open. The localized water level was lower in RR6 along Transect 5 (situated near drivepoint DP2) in 2023, similar to 2019 conditions. It is possible that the wetland in the vicinity of Transect 5 may also succeed to a more open canopy wetland environment in future years. As noted in previous reports, the RR6 wetland has historically been subject to variable water regimes as result of beaver activity at the County Road culverts and historic and current dewatering set up.

Future years of monitoring will provide greater opportunities to observe any changes in vegetation composition and wetland conditions along the transects.

### 7.1.3 Hart's Tongue Fern Monitoring

The AMP requires annual monitoring of an extensive American Hart's Tongue fern (Asplenium scolopendrium var. americanum) (AHTF) colony within the Extension Quarry starting two (2) years prior to quarry operations commencing in Phase 2B (per the registered Site Plans). The monitoring program is to be implemented annually for three (3) years from the commencement date, at which point the required effort will be re-evaluated. The monitoring completed in 2024 represents the third and final year of the required baseline monitoring. Additional monitoring was completed in 2025 as stripping of Phase 2B was commenced.

The objectives of the AHTF monitoring program are:

- To determine whether the forest buffer is functioning as anticipated to protect the population and / or assess if dust from quarry activity causes a change in habitat conditions in the AHTF colony;
- To identify the cause-and-effect mechanism and implement appropriate mitigation measure(s) if the plants decline as a result of quarry activity; and
- To document natural changes in habitat conditions unrelated to quarry activity which may be causing a change in the AHTF colony.

**Summary of AHTF Baseline Monitoring**

The required three (3) years of baseline AHTF data has been obtained prior to the expansion of the quarry in Phase 2B. The information gathered between 2022 and 2024 is the foundation for ongoing monitoring of the health of the AHTF colony in future years and will allow the detection of any changes in habitat conditions as the quarry progresses. Surveys completed in 2025 demarcate the first monitoring year where extraction (i.e., overburden stripping) in Phase 2B is underway.

Surveys completed in 2025 are documented in the 2025 Annual Summary and Performance Report (WSP, 2026). In 2025, the AHTF assessment was completed on August 21. Dust deposition monitoring was also completed monthly in 2025.

Of note, garlic mustard is an invasive species that was recorded on the north side of the colony. Reductions in the canopy cover above the AHTF colony due to the April 2025 ice storm event could increase light penetration to the ground vegetation layer, potentially creating suitable conditions for garlic mustard proliferation and expansion. Since 2022, the garlic mustard in Plot 1 has increased from 15% to 70% coverage in 2025. Garlic mustard was also newly observed in Plot 2 with 3% coverage in 2024 but

was not observed in 2025. These drastic changes may be due, in part, to difference in survey period (October 2022 versus July 2023 and 2024 and August 2025). However, this may present a threat to the AHTF colony if unchecked. Continued monitoring of invasive species on Site will inform if management is required to maintain the integrity of the habitat for AHTF. If quarry activities (such as tree clearing) are determined to be causing an increase in exotic species abundance, then mitigation measures will be implemented to control the spread of non-native species in the colony.

Overall, the AHTF colony occurs under conditions of high canopy closure, and evidence of ongoing sexual reproduction has been recorded in both plots. Management of invasive species would likely benefit both plots, with particular attention warranted in Plot 2 where garlic mustard is encroaching into the plot. The next monitoring event is scheduled to be completed in 2028.

## 7.2 Ecological Enhancement and Mitigation Monitoring (EEMM)

The EEMM program includes mitigation and enhancement measures not directly related to the day-to-day operation of the quarry. The EEMM program is designed to make sure the ecological mitigation measures are properly implemented (e.g., appropriate number and species of trees are planted, amphibian habitat is self-sustaining) and that the resulting features are managed and adapted with changing conditions and trends (e.g., replanting for dead trees, controlling pest damage, control / allowing public access, etc.).

The EEMM program includes the Woodland Program, the Millar Pond relocation, the Bridson Pond enhancement and Butternut tree health re-assessments incorporated into the Woodland Program.

Woodland program monitoring, Millar Pond monitoring and Butternut tree health assessments were last conducted in 2023.

### 7.2.1 Woodland Program

The Woodland Program was initiated in 2015, with tree planting and other enhancement measures undertaken over three years from 2015 to 2017. Reforestation efforts were divided between areas of active reforestation and areas of natural regeneration, which were delineated in the field based on Site conditions. Active reforestation lands included sodded fields, fallow fields, and worked fields which were treated with techniques including the planting and maintenance of varying sizes and species of trees. Natural regeneration lands consisted of areas of shallow soils, primary succession woodlots and naturalizing disturbed areas. Grading to create variable microtopography was utilized in both natural regeneration areas and at the margins of active regeneration sites where the physical dimensions or Site conditions were not feasible for active regeneration planting techniques. Approximate reforestation areas are shown on **Figure 2**.

The monitoring and maintenance of materials planted in 2016 and 2017 were completed until 2018 and 2019, respectively. The monitoring activities are now focused on canopy closure.

Based on the results of the 2023 monitoring program, the active planting plots and passive regeneration plots have met the 2020-2024 targets established in the Township Agreement. The degree to which the active planting plots meet the reforestation targets is a reasonable indication of woodland succession within the reforested areas. The current results show improvement in key metrics from 2020, including canopy height and closure, basal area, and native tree species diversity, including shade tolerant hardwood species. These results indicate a clear trend toward diverse, self-sustaining forest communities that are adapted to the microenvironments and climates found on this landscape.

Based on the 2023 reforestation surveys, the following observations and recommendations are provided:

- All plots in Zone E and F experience active cattle grazing which negatively affects tree survival rate. Measures should be implemented to eliminate the cattle from the area (i.e., electrical fences) to protect the remaining saplings and reduce the soil compaction to encourage a natural succession of the existing tree communities.
- Some plots show lower survival rate (B-267, C-123, C-142, C-174, C-231, C-213, C-216, C-161, C-176, F-36, F-5, F-16, F-31 and F-37); however, natural regeneration is evident. Natural regeneration is adapted to the existing microclimate conditions and should be allowed to continue. Should concerns be observed in future monitoring, additional enhancement planting may be considered.
- Removing all ties from the sapling stems is required to prevent girdling, which can result in the death of the area above the girdle over time.
- It is recommended that the centre plot stakes and plot corners be surveyed using sub-metre GPS units to maintain plot location and consistent data comparisons for future reporting.

Reassessment of the forest regeneration will be completed again in 2026.

### 7.2.2 Millar Pond Relocation

In the fall of 2019, the new Millar Pond was excavated as per the EEMM Program. The new Millar Pond was intended to provide compensation for the original Millar Pond which provided amphibian breeding habitat in the local landscape that was approved for removal. The first year of monitoring of amphibian activity in the newly created pond was initiated in 2021 and reassessment was completed in 2023.

It was found that the new pond supports three anurans recorded during the 2021 monitoring. The anurans found in the early successional feature included breeding spring peepers (Pseudacris crucifer), gray treefrogs (Hyla versocolor) and American Toad (Anaxyrus americanus). The first year results were indicative of an active pond environment that is anticipated to increase in diversity as the created pond becomes established on the landscape. As noted previously, the amphibian monitoring completed in 2023 indicates that the diversity and abundance of amphibian communities were similar to results from previous years.

Reassessment of the new Millar Pond will be completed in 2026 in tandem with the amphibian monitoring events.

### 7.2.3 Butternut Tree Management

In 2009, a total of twenty-seven (27) Butternut trees located within the approved Extension Quarry extraction area were assessed as retainable. Butternut tree health re-assessments were conducted on August 31, 2023, prior to the clearing of woodlands within the Phase 2B licensed extraction area. Of the previously identified retainable butternut trees, eleven (11) were located and re-assessed in 2023, of which five (5) were determined to be Category 1 and six (6) were Category 2. The remaining butternut trees were not located in 2023 and are presumed to have fallen and decomposed such that their locations could not be identified.

## 7.3 Recommendations for Changes to the LTTEM and EEMM Programs

Proposed AMP refinements related to the LTTEM and EEMM programs were previously included in the 2020 AMP Review Report and are reproduced below. No additional refinements are proposed at this time.

### 7.3.1 Approved Through Correspondence with MNRF (February 2020)

**Item 1 - Minor Adjustment to Millar Pond Relocation Site and Use of Synthetic Pond Liner**

In the AMP document, WAI committed to relocating the existing Millar Pond (a seasonally-dry constructed cow pond) to a partially-wooded area just northeast of the current location (see AMP excerpt and Appendix J of the 2013 AMP document). This location was based upon field investigations completed between 2003 and 2008. During a pre-construction field survey in the fall of 2018, it was observed that the pond would better fit with the existing topography and tree cover if it were moved a further to the east, while remaining outside the ANSI Wetland B boundary. This would increase the likelihood of the pond receiving surface runoff from the surrounding landscape as well as reduce the amount of tree clearing required. The new location would not be substantially outside the boundary shown on Figure 1, Appendix J of the 2013 AMP document, which was intended to be conceptual. The fine-tuning of location and construction is consistent with “adaptive management”.

Furthermore, Site conditions observed in the fall 2018 indicated that the shallow bedrock depth and organic soils would prevent water accumulation in the newly constructed pond. A clay liner was proposed in the original design, and MNRF has indicated this to be preferred to a synthetic liner

**Item 2 - Use of Automated Recording Units to Collect Amphibian Call Data**

Amphibians are considered excellent indicators of wetland health and have been incorporated into the ecological monitoring program in the AMP in order to monitor for potential changes to the wetland due to quarry operations. Baseline surveys of calling amphibians at wetlands in the Extension Quarry study area were conducted in 2005 and 2007 following protocols outlined in the Marsh Monitoring Program (Bird Studies Canada, 2009), which involves a trained observer listening to calling frogs and toads at a

pre-determined station for five minutes. The LTTEM program commits to annual monitoring at six stations adjacent to wetlands.

With new technology in ecological monitoring over the past decades, there is an increase in the use of remote data collection methods – particularly for auditory surveys. An example of this is the use of Automated Recording Units (ARU) for breeding bird surveys or bat acoustic monitoring using ultrasonic microphones.

ARUs are small recording devices that can be programmed to turn on and record at specified times and intervals. ARUs are particularly useful for deployment in inaccessible locations (i.e., wetlands in dense woods) or unsafe conditions (i.e., at night). This method is being used and tested extensively by many researchers and agencies (including Environment Canada) across North America. Advantages include: ability to cover a wider geographic area; ability to collect more data; ability to target poorly detected species; permanent record of the bird community is collected and can be verified by experts. Additionally, it provides a significant increase in the safety of field staff by eliminating the need for night work.

ARU's have been used successfully at the Site in place of an observer for long-term ecological monitoring of calling amphibians, following the same Marsh Monitoring Program protocol used in the collection of baseline data. The use of ARU's provides an opportunity for higher quality data gathering by allowing increased flexibility in selecting the best survey conditions (e.g., temperature, weather) or even the analysis of additional dates, if required, as compared with traditional field methods.

**Item 3 - Adjustment to Butternut Monitoring Frequency**

Based on 2009 field data incorporated into the AMP, a total of 27 retainable Butternut trees are located inside the approved Extension Quarry extraction area. These trees and the required 30 m buffer area are located in quarry Phase 3B of the ARA Site Plan Sheet 2A of 4 (MHBC, 2014). These trees will only be removed if an updated Butternut Health Assessment (BHA) determines the trees to be non-retainable, or if a permit is issued under the Endangered Species Act, 2007, or if the status of Butternut under the ESA changes.

A commitment of the AMP is to complete a BHA of the 27 Butternut trees every three years leading up to Phase 3B. A further commitment was made to conduct an inventory for Butternut trees prior to any clearing activities for any phase. The repetition of health assessments on known Butternut trees every three years does not provide any additional protection to the trees, nor will it change the outcome of the final BHA prior to site clearing for Phase 3B. It was recommended to amend the AMP to state the following with respect to assessment of the 27 retainable Butternut trees:

*"A Butternut health assessment of individual retainable Butternut trees in Phase 3B of the ARA Site Plan Sheet 2A of 4 (MHBC, 2014) will be carried out once prior to initiating Phase 3B and reported in the Annual AMP Summary Report for that year, as well as in the next 5-Year Comprehensive Review Report."*

**Item 4 - Adjustment to Hart's Tongue Fern Monitoring Frequency**

A population of American Hart's Tongue Fern (AHTF) is located outside the Extension Quarry license boundary; however, quarry operations have the potential to impact this population as a result of changes to microclimate due to a reduced forested buffer or dust from quarry activities. A commitment in Section 5.6 of the 2013 AMP document is to conduct annual monitoring of AHTF Colony 1 and two reference sites commencing two years before forest removal associated with Phase 2B.

Frequent monitoring of AHTF Colony 1 poses a risk to the population due to the potential introduction of weed species or other alteration of the physical environment from increased foot traffic. To reduce disturbance to AHTF Colony 1, while still adhering to the intent of the original AMP to monitor this population closely for change, the following revisions are proposed as provided in correspondence to MNRF:

*"After three years of annual monitoring results will be reviewed and the frequency may be altered"*, and,

*"If the condition of the AHTF colony has changed due to natural processes not associated with quarry effects the monitoring program may be revised as necessary."*

### 7.3.2 Additional Program Refinements

**Reforestation Program**

On average, the Active Planting Units and Passive Regeneration Units have met the 2020-2024 targets established in the Township Agreement. The degree to which the Planting Units meet the reforestation targets is a reasonable indication of the ecological function of the reforested areas. The current results suggest that the reforestation areas are contributing to local forest function and on a trajectory to becoming self-sustaining components of the woodland landscape through establishment of a healthy woodlot with enhanced species diversity, a shade-tolerant understorey and wildlife habitat.

Understanding that the rehabilitation is doing very well and successionally advancing, the percentage of canopy cover for the various milestones should be adjusted to reflect the now known rate of canopy expansion. The parameters to be adjusted are provided in **Table 7.1**.

**Table 7.1 Proposed Reforestation Milestone Adjustments**

| | | | |
|---|---|---|---|
| Canopy height | Reflects structural habitat diversity, aesthetics, local climate etc. | Stand and overall species height measurements in metres<br>Target 10 m. | Annually after every planting cycle, then every 5 years, until monitoring discontinued. |
| Presence of tolerant hardwood understory | Reflects habitat diversity, water regulation etc. | Qualitative observation.<br>Lower canopy composition and % cover. | Every 5 years until monitoring discontinued. |
| Presence of coarse woody debris | Reflects soil building, habitat diversity, nutrient cycling etc. | Qualitative observation. | Every 5 years until monitoring discontinued. |
| Presence of snag trees | Reflects habitat diversity, nutrient cycling etc. | Qualitative observation. | Every 5 years, until monitoring discontinued. |

This forest monitoring and assessment is coordinated with requirements under the Agreement with the Township of Clearview dated January 25, 2010.

**Wetland Reference Station**

As noted in correspondence to the MNRF, a significant effort to find a suitable reference wetland within a desirable distance of the Extension Quarry, with similar characteristics to the adjacent Rob Roy wetlands and ANSI wetlands A and B was unsuccessful during the Phase 1 period. The need for a distant offsite wetland reference station is not considered necessary to advance the monitoring and assessment of impacts. As such, the need for a reference station should be removed from the AMP. Baseline conditions and climatic data from onsite and near site weather stations would be used to address weather changes resulting from yearly climate fluctuations and long-term climate change.

# 8. Conclusions and Recommendations

Based on the findings of the five-year comprehensive report, the following conclusions and recommendations are provided.

- The monitoring requirements of the AMP, including the Performance Indicator Trigger Monitoring (PITM), the Long-Term Trend Groundwater and Surface Water Monitoring (LTTWM), the Long-Term Trend Ecological Monitoring (LTTEM) and the Ecological Enhancement and Mitigation Monitoring (EEMM) were successfully completed over the five-year period of Phase 2 extraction included in this comprehensive review report.
- Climate conditions during the 2021 to 2025 review period exhibited normal year-to-year variability. Air temperatures were consistent with broader regional trends, while precipitation and net water surplus varied between relatively dry conditions in 2021 and 2022 and wetter conditions during 2023 through 2025. While annual precipitation and net water surplus trends provide valuable context for understanding overall hydrogeologic conditions, shorter-duration dry and wet periods were also observed within individual years and may influence seasonal monitoring results.
- The LTTWM monitoring wells closest to the excavation within the Extension Quarry have experienced localized drawdown effects as the quarry continues to expand within the Phase 2A extraction footprint.
- During the current reporting period, sporadic trigger exceedances were observed at some locations. A replacement discharge pipe has been installed to help reduce “wet” trigger exceedances within the RR6 wetland. The remaining trigger exceedances observed during the current 5-year reporting period are not attributed to the Extension Quarry due to (a) the sporadic, discontinuous nature of the trigger exceedances and (b) the interpreted drawdown cone from the Extension Quarry did not extend beyond the Licence boundary in the current 5-year reporting period.
- The monitoring data obtained to date are consistent with the model predictions included in the 2020 AMP Review Report, although the observed drawdown was slightly less than the modeled drawdown. Based on the results of the current study, the previously established calibration continues to provide a conservative representation of the study area and remains appropriate for the purposes of this assessment.
- The Phase 2A and 2B prediction models indicate that the use of the mitigation measures (i.e., recharge trenches and / or injection wells) during these phases is likely not necessary.
- A number of changes to the PITM were previously proposed as part of the 2020 AMP Review Report and have been reproduced with minor changes in **Section 6.5**, including summary tables of the

proposed long-term PITM trigger levels. The existing updated interim triggers will remain in effect if / until the MNR approves the recommended changes to the PITM.

- The LTTEM amphibian and wetland vegetation monitoring indicates that the wetlands remain consistent in their floristic character and remain as healthy wetland communities. Rob Roy Swamp 6 remains as a diverse wetland feature but will continue to succeed to a more open canopy wetland environment. The next monitoring event is scheduled for 2026.
- The LTTEM American Hart's Tongue fern (AHTF) baseline monitoring indicates that the colony has a high canopy closure rate with recurring sexual regeneration. Both colonies may benefit from invasive species management. The next monitoring event is scheduled to be completed in 2028.
- The EEMM woodland program monitoring results suggest that the reforestation areas are contributing to local forest function and are on a trajectory to becoming self-sustaining components of the woodland landscape through establishment of a healthy woodlot with enhanced species diversity, a shade-tolerant understorey and wildlife habitat. Reassessment will be completed in 2026.
- The EEMM amphibian monitoring of the new Millar Pond was initiated in 2021, and reassessment was completed in 2023 as part of the LTTEM amphibian monitoring program. The first-year results indicated an active pond environment that is anticipated to increase in diversity as the created pond becomes established on the landscape. The 2023 results were consistent with previous observations. Reassessment of the new Millar Pond will be completed in 2026 in tandem with the amphibian monitoring events.
- The EEMM butternut tree health re-assessments were completed in 2023. Of the twenty-seven (27) retainable trees identified within the licenced extraction area in 2009, only eleven (11) could be located in 2023, with the remainder presumed fallen and decayed.
- LTTEM and EEMM program refinements were previously recommended in the 2020 AMP Review Report, including (i) an adjustment to Millar Pond relocation site, (ii) use of Automated Recording Units to collect amphibian call data, (iii) adjustment to Butternut monitoring frequency, and (iv) adjustment to Hart's Tongue Fern monitoring frequency. No additional refinements are proposed at this time.

# Signature Page

**WSP Canada Inc.**



Kevin Fitzpatrick, P.Eng.
Senior Project Engineer



Leigh Davis, M.A.Sc., P.Eng.
Lead Professional, Environmental Engineering

https://wsponlinecan.sharepoint.com/sites/ca-ca0064617.8284/shared documents/06. deliverables/duntroon quarry - 2025 amp 5-year report_f.docx

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# Tables

## Table 1 Current AMP Monitoring Program



| Activity | Location and Group | Frequency | Analysis / Measurement |
|---|---|---|---|
| **Groundwater Monitoring** | | | |
| **Groundwater Levels** | **All Wells (53):**<br>**Main Quarry Wells (5):** 98-8, 98-9, 98-12, MW6, PW99-1<br>**Extension Quarry Wells (17):** BH02-5, BH02-5-II, BH02-5-III, BH02-6, BH03-7-I, BH03-7-II, BH03-7-III, BH03-8, BH03-9, NW1, NW6, NW7*, NW8*, NW9, NW10-DP, NW10-I, NW10-II<br>**Injection Wells (4):** IW1, IW2, IW3, IW4<br>**Off-Site Wells (7):** 101-B, 102-C, 103-D, 104-A, OW1-4, OW5-2, OW6-3<br>**Carmarthen Lake Farms Wells (3):** CLF3, CLF4, CLF5<br>**Residential Wells (9):** RW1, RW2, RW3, RW5, RW7, RW8, RW12, RW13, RW16 | Semi-Annually<br>(May and October) | Manual water level measurement, logger download and well condition check |
| **Wetland Water Levels** | **Rob Roy Swamp 2 (2):** SG1, SG2<br>**Rob Roy Swamp 6 (1):** DP1<br>**Carmarthen Lake Farms Wetland (1):** DP3 | Semi-Annually<br>(May and October) | |
| | **ANSI Wetland A (1):** DP6<br>**ANSI Wetland B (2):** DP9, BRIDSON DP<br>**Rob Roy Swamp 2 (2):** DP5, DP7<br>**Rob Roy Swamp 6 (2):** DP2, DP8 | Monthly **<br>(March to August and October) | ** *Biweekly monitoring completed in May, June and July.* |
| **Groundwater Sampling** | **Residential Wells (2):** RW1, RW2 | Annually<br>(May) | **Field measurements:** pH, conductivity, temperature, dissolved oxygen<br>**General Parameters:** hardness, colour, ammonia, TSS<br>**Major Ions:** alkalinity, chloride, sulphate, calcium, magnesium, sodium, potassium<br>**Petroleum Hydrocarbons and BTEX**<br>**Bacteriological Count:** E. coli, total coliforms, heterotrophic plate count |

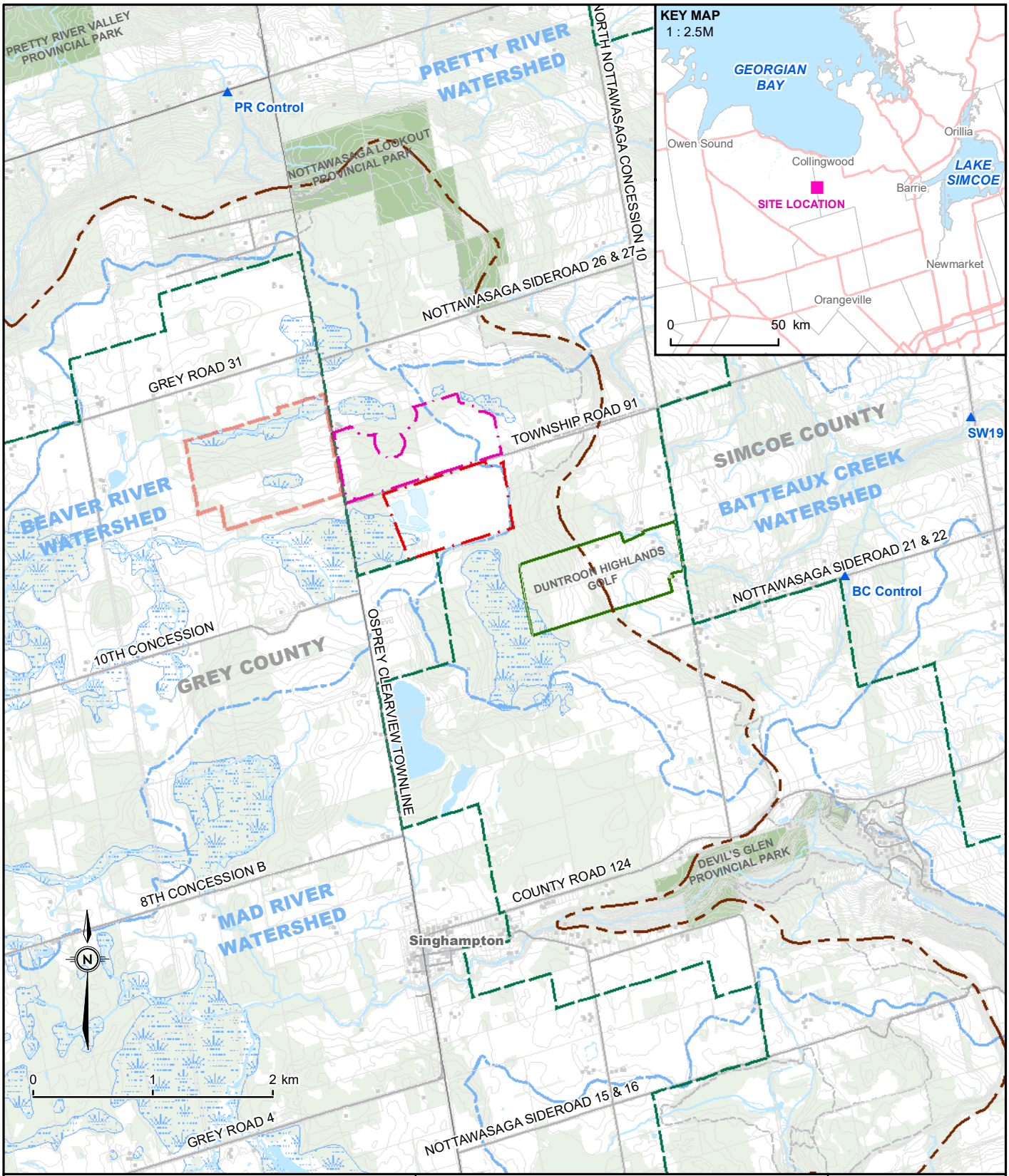
*NOTE: * Well located in Phase 3A (NW7 and NW8) footprint and will be removed as quarry extraction progresses.*

## Table 1 Current AMP Monitoring Program



| Activity | Location | Frequency | Analysis / Measurement |
|---|---|---|---|
| **Surface Water Monitoring** | | | |
| **Surface Water Flow and Temperature** | **Pretty River Tributary (6):** SW16, SW17, SW17A, SW18, SW20, PR Control<br>**Batteaux Creek Tributary (4):** SW9, SW14, SW15, BC Control<br>**Beaver River Tributary (3):** SW1, SW2, SW3 | Monthly<br>(January to December) | Manual water level, flow and temperature measurements, logger download and station condition check |
| | **Pretty River Tributary (6):** SW21, SW21A, SW21B, SW21C†, SW24A†, SW77†<br>**Batteaux Creek Tributary (13):** SW8, SW10†, SW11†, SW11A†, SW11B†, SW11C†, SW11D†, SW11E†, SW13, SW19, SW22, SW22A, SW22C | Monthly<br>(May to October) | † *Biweekly monitoring completed in July and August.* |
| **Surface Water Sampling** | **Pretty River Tributary (8):** SW16, SW17, SW17A, SW18, SW21C, SW24A, SW77, PR Control<br>**Batteaux Creek Tributary (11):** SW9, SW10, SW11, SW11A, SW11B, SW11C, SW11D, SW11E, SW14, SW15, BC Control<br>**Beaver River Tributary (3):** SW1, SW2, SW3 | Annually<br>(May) | **Field measurements:** pH, conductivity, temperature, dissolved oxygen<br>**General Parameters:** hardness, colour, ammonia, TSS<br>**Major Ions:** alkalinity, chloride, sulphate, calcium, magnesium, sodium, potassium<br>**Petroleum Hydrocarbons and BTEX** |
| | **Pretty River Tributary (1):** SW21C<br>**Batteaux Creek Tributary (6):** SW10, SW11A, SW11B, SW11C, SW11D, SW11E | | **Bacteriological Count:** E. coli, total coliforms, heterotrophic plate count |
| | **Pretty River Tributary (6):** SW16, SW17, SW17A, SW18, SW20, PR Control<br>**Batteaux Creek Tributary (4):** SW9, SW14, SW15, BC Control<br>**Beaver River Tributary (3):** SW1, SW2, SW3 | Monthly<br>(January to December) | **Field measurements:** pH, conductivity, dissolved oxygen |
| **Quarry Sump Monitoring** | | | |
| **Quarry Sump Sampling** | QFSW2 (Sump 1), Sump 2 and Sump 3 *(when established in Extension Quarry)* | Quarterly<br>(February, May, August, October) | **Field measurements:** pH, conductivity, temperature, dissolved oxygen<br>**General Parameters:** hardness, colour, ammonia, TSS<br>**Major Ions:** alkalinity, chloride, sulphate, calcium, magnesium, sodium, potassium<br>**Petroleum Hydrocarbons and BTEX**<br>**Bacteriological Count:** E. coli, total coliforms, heterotrophic plate count<br>Manual flow rate measurement |

# Figures




LEGEND

- EXTENSION QUARRY LICENSED AREA
- OLD QUARRY LICENSED AREA
- OSPREY QUARRY (ST. MARY'S CEMENT) LICENSED AREA
- NIAGARA ESCARPMENT COMMISSION POLICY AREA
- APPROX. NIAGARA ESCARPMENT

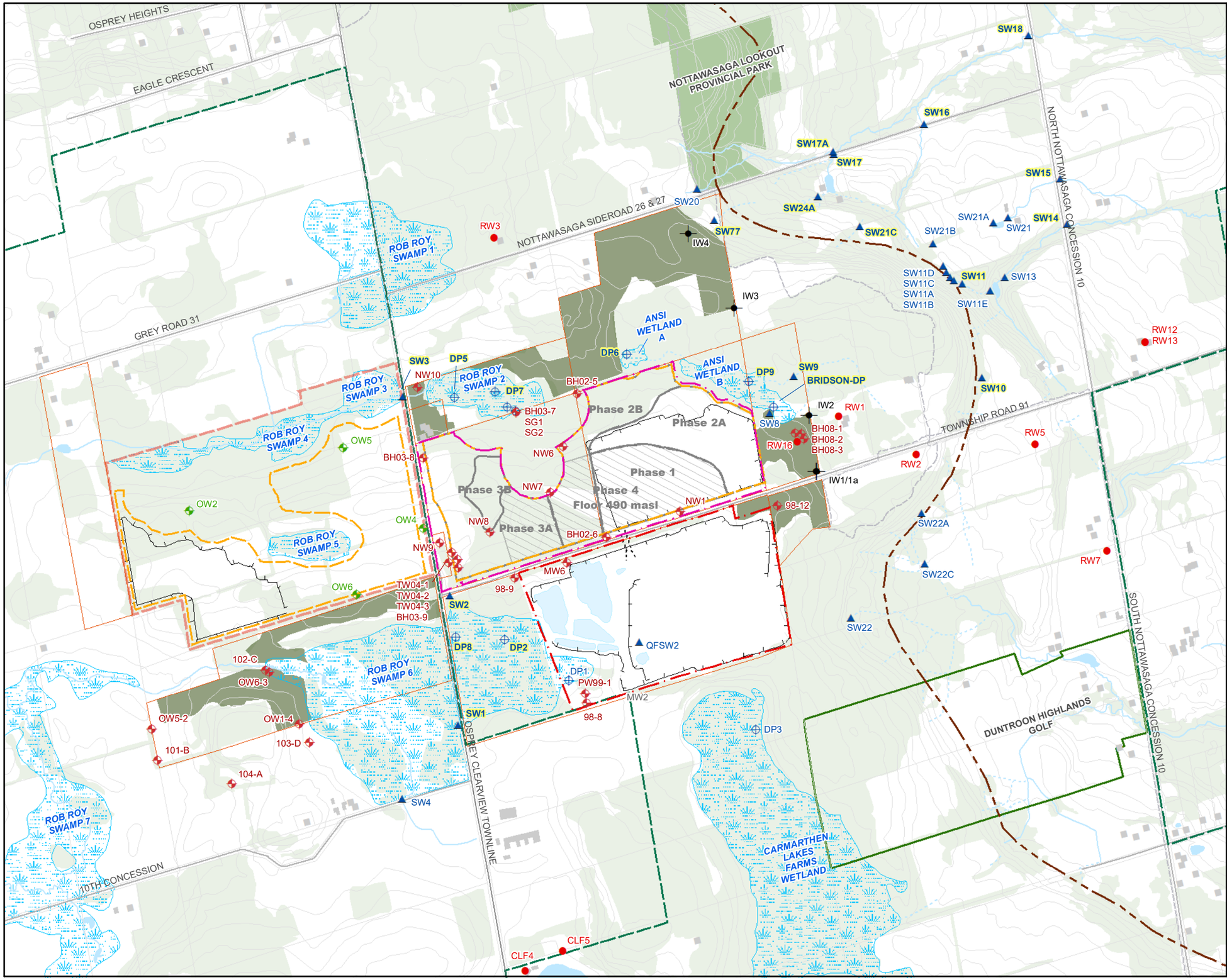
NAD 1983 UTM Zone 17N

# SITE LOCATION MAP

2025 ADAPTIVE MANAGEMENT PLAN
FIVE YEAR COMPREHENSIVE REVIEW REPORT
DUNTROON QUARRY
For Walker Aggregates Inc.

| | |
|---|---|
| SCALE: | 1 : 45,000 |
| DRAWN BY: | JLD |
| DATE: | SEPTEMBER 2026 |
| PROJECT: | CA0064617.8284 |
| FIGURE No: | 1 |

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LEGEND

- EXTENSION QUARRY LICENSED AREA
- LIMIT OF EXTRACTION
- OLD QUARRY LICENSED AREA
- OTHER LANDS OWNED BY WAI
- OSPREY QUARRY LICENSED AREA (ST. MARY'S CEMENT)
- APPROX. WORKING FACE
- NIAGARA ESCARPMENT COMMISSION POLICY AREA
- APPROX. NIAGARA ESCARPMENT
- WATERCOURSE
- EPHEMERAL WATERCOURSE
- WETLAND
- WOODLOT
- APPROX. REFORESTED AREA
- MONITORING WELL
- OSPREY QUARRY MONITORING WELL
- INJECTION WELL
- DRIVEPOINT
- DOMESTIC WELL
- SURFACE WATER STATION

NOTE:
YELLOW HIGHLIGHT INDICATES SURFACE WATER STATION IS ASSOCIATED WITH FLOW / TEMPERATURE TRIGGER, DRIVEPOINT IS ASSOCIATED WITH WATER LEVEL TRIGGER.

N

0 300 600 m

NAD 1983 UTM Zone 17N

# SITE PLAN

2025 ADAPTIVE MANAGEMENT PLAN
FIVE YEAR COMPREHENSIVE REVIEW REPORT
DUNTROON QUARRY
For Walker Aggregates Inc.

| | |
|---|---|
| DATE: SEPTEMBER 2026 | |
| PROJECT: CA0064617.8284 | |
| SCALE: 1 : 15,000 | |
| DRAWN BY: JLD | FIGURE No: 2 |

55 KING STREET, SUITE 600
ST. CATHARINES, ON L7R 3H5
T 905-687-1771 | F 905-687-1773 | www.wsp.com

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LEGEND

- EXTENSION QUARRY LICENSED AREA
- LIMIT OF EXTRACTION
- OLD QUARRY LICENSED AREA
- OTHER LANDS OWNED BY WAI
- OSPREY QUARRY LICENSED AREA (ST. MARY'S CEMENT)
- APPROX. WORKING FACE
- WETLAND
- SURFACE WATER STATION
- MAIN QUARRY DISCHARGE
- EXTENSION QUARRY DISCHARGE
- OSPREY QUARRY DISCHARGE

NOTES:
1. 2020 ORTHOIMAGERY PROVIDED BY GREY COUNTY.
2. 2025 ORTHOIMAGERY PROVIDED BY SIMCOE COUNTY.
3. SITE AERIAL PHOTOGRAPH OBTAINED DURING NOVEMBER 2025 DRONE SURVEY BY WAI.

N

0 120 240 m

NAD 1983 UTM Zone 17N

# 2025 QUARRY CONFIGURATION

2025 ADAPTIVE MANAGEMENT PLAN
FIVE YEAR COMPREHENSIVE REVIEW REPORT
DUNTROON QUARRY
For Walker Aggregates Inc.

| | |
|---|---|
| DATE: SEPTEMBER 2026 | |
| PROJECT: CA0064617.8284 | |
| SCALE: 1 : 6,000 | |
| DRAWN BY: JLD | FIGURE No: **2A** |

55 KING STREET, SUITE 600
ST. CATHARINES, ON L7R 3H5
T 905-687-1771 | F 905-687-1773 | www.wsp.com

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OSPREY HEIGHTS
EAGLE CRESCENT
NOTTAWASAGA LOOKOUT PROVINCIAL PARK
NORTH NOTTAWASAGA CONCESSION 10
NOTTAWASAGA SIDEROAD 26 & 27
GREY ROAD 31
ROB ROY SWAMP 1
ROB ROY SWAMP 2
ROB ROY SWAMP 3
ROB ROY SWAMP 4
ROB ROY SWAMP 5
ROB ROY SWAMP 6
ROB ROY SWAMP 7
ANSI WETLAND A
ANSI WETLAND B
TOWNSHIP ROAD 91
SOUTH NOTTAWASAGA CONCESSION 10
OSPREY CLEARVIEW TOWNLINE
10TH CONCESSION
DUNTROON HIGHLANDS GOLF
CARMARTHEN LAKES FARMS WETLAND

LEGEND

- EXTENSION QUARRY LICENSED AREA
- LIMIT OF EXTRACTION
- OLD QUARRY LICENSED AREA
- OTHER LANDS OWNED BY WAI
- OSPREY QUARRY LICENSED AREA (ST. MARY'S CEMENT)
- APPROX. WORKING FACE
- NIAGARA ESCARPMENT COMMISSION POLICY AREA
- APPROX. NIAGARA ESCARPMENT
- WATERCOURSE
- EPHEMERAL WATERCOURSE
- WETLAND
- WOODLOT
- APPROX. REFORESTED AREA
- PREDICTED PHASE 2A RADIUS OF INFLUENCE
- PREDICTED PHASE 2B RADIUS OF INFLUENCE

N

0 300 600 m

NAD 1983 UTM Zone 17N

# PREDICTED RADIUS OF INFLUENCE FROM PHASE 2A / 2B EXTRACTION

2025 ADAPTIVE MANAGEMENT PLAN
FIVE YEAR COMPREHENSIVE REVIEW REPORT
DUNTROON QUARRY
For Walker Aggregates Inc.

| | |
|---|---|
| DATE: | SEPTEMBER 2026 |
| PROJECT: | CA0064617.8284 |
| SCALE: | 1 : 15,000 |
| DRAWN BY: | JLD |
| FIGURE No: | 3 |

55 KING STREET, SUITE 600
ST. CATHARINES, ON L7R 3H5
T 905-687-1771 | F 905-687-1773 | www.wsp.com

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# A

## Site Data

# A-1

## Permits

Ontario

**Ministry of the Environment and Climate Change**
**Ministère de l'Environnement et de l'Action en matière de changement climatique**

# AMENDED PERMIT TO TAKE WATER

Surface and Ground Water
NUMBER 7725-AACS54

*Pursuant to Section 34.1 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:*

Walker Aggregates Inc.
Post Office Box 100
Thorold, Ontario, L2V 3Y8
Canada

*For the water taking from:* Sump #1

*Located at:* Lot 24, Concession 12, Geographic Township of Nottawasaga
Clearview, County of Simcoe

*For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:*

**DEFINITIONS**

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34.1, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment and Climate Change.

(d) "District Office" means the Barrie District Office.

(e) "Permit" means this Permit to Take Water No. 7725-AACS54 including its Schedules, if any, issued in accordance with Section 34.1 of the OWRA.

(f) "Permit Holder" means Walker Aggregates Inc..

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

*You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:*

## TERMS AND CONDITIONS

### 1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated August 12, 2014 and signed by Kevin Kehl, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

### 2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

## 3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **December 31, 2026**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

**Table A**

| | Source Name / Description: | Source: Type: | Taking Specific Purpose: | Taking Major Category: | Max. Taken per Minute (litres): | Max. Num. of Hrs Taken per Day: | Max. Taken per Day (litres): | Max. Num. of Days Taken per Year: | Zone/ Easting/ Northing: |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Sump #1 | Pond<br>Dugout | Pits and Quarries | Dewatering | 15,000 | 24 | 21,600,000 | 365 | 17<br>559860<br>4914550 |
| | | | | | | **Total Taking:** | 21,600,000 | | |

**Notes:**

- This Permit allows water taking for quarry de-watering purposes at the "existing" quarry located on Lot 24, concession 12, Clearview as well as Phase 1 of the "expansion" quarry located on Lot 25, concession 12, Clearview.

- Dewatering of the quarry is achieved by pumping from Sump # 1. Water management at the site also includes pumping for various **on-site** uses including: aggregate washing, dust suppression and watering of landscaped areas. Water is also pumped from the sump locations to the on-site reservoir for storage. Pumps at the new sump established within Phase 1 of the "expansion" area (Sump 3) are used to transfer water from Phase 1 of the expansion area to the sump locations within the "existing" quarry (Sump 1 and Sump 2). In addition, water collecting in various parts of the quarry may be directed to the sump locations by temporary pumps and/ or via gravity.

- The rate and amount restrictions reflected in Table 1 above apply only to the taking of water from Sump 1 **for off-site discharge** purposes. All other internal uses and transfers of water within the quarry are not considered water takings for purposes of this Permit and are not required to be metered as a condition of this Permit. The rate and amount of water taken and discharged off-site is monitored using a meter installed on the pipe that conveys the dewatering effluent to the off-site discharge location, within the adjacent wetland designated as Rob Roy Wetland 6 (RR6). The outflow from RR6 joins a small headwater tributary to the Beaver River.

3.3 Notwithstanding Table A, the taking of water from Sump 1 for purposes of discharge into the RR6 wetland shall be adjusted as necessary, in accordance with any recommendation resulting from the assessments required under Condition 4.4 of this Permit (below). The adjustment may include lowering of the maximum rate, amount and/ or duration of taking from those shown in Table A. Seasonally adjusted rates and amounts may also be applied, if necessary.

## 4. Monitoring

4.1 The Permit Holder shall, on each day water is taken under the authorization of this Permit, record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter installed on the discharge pipe. The Permit Holder shall keep all records required by this condition current and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The Permit Holder shall submit, on or before March 31st in every year, the daily water taking data collected and recorded for the previous year to the Ministry's Water Taking Reporting System.

4.2 The Permit Holder shall implement the the groundwater monitoring and well interference investigation & mitigation programs as described in Items 2 (i) and 2 (ii) of Schedule A of this Permit.

4.3 The Permit Holder shall monitor stream flows and water levels at appropriate locations, including locations SW1, SW2, SW02 and SW4 (a historical stream flow monitoring location on the tributary stream, located upstream of SW02) and drive point piezometers DP2 and DP4 within the wetland designated as RR6. The monitoring type and frequency shall be consistent with the descriptions provided in Table 3.4 of Item No. 4 of Schedule A of this Permit (i.e. the Adaptive Management Plan or AMP).

4.4 The Permit Holder shall engage relevantly qualified persons to periodically analyse the water taking and discharge, stream flow and groundwater monitoring data, along with any other relevant information/ data, to:

i) evaluate if conditions within the RR6 wetland receiving the discharge and within the Beaver River tributary stream have been altered beyond their historical ranges as a result of the taking and discharge. The assessment shall consider the historical range of flows in the stream as described in Table 3.5 of Item No. 4 of Schedule A of this Permit (the AMP). If values significantly different from those in the AMP are used to describe historical ranges, the rationale shall be provided. A record of the evaluation undertaken by the qualified person(s) shall be maintained; and

ii) determine the significance of any observed changes and make recommendations on necessary adjustments to lower the the rate, amount and/ or duration of the taking and discharge from those shown in Table A. Seasonally adjusted rates and amounts may also be recommended, if necessary.

4.5 The Permit Holder shall prepare an annual monitoring report which includes the following:

i) all monitoring data collected under this Permit. The data shall be presented in

appropriate format (graphical and tabular) along with the historical data. Maps prepared at appropriate scales that clearly identify the various monitoring locations, including historical ones, shall also be included;

ii) details of the periodic evaluations undertaken by qualified persons and the recommendations made as well as details on how the recommendations were implemented;

iii) any proposed changes to the monitoring program or the Permit, along with the justification for the modification;

iv) an evaluation of the quarry operation and analysis and interpretation of all monitoring data collected under this Permit to determine if the operation has resulted in any undesirable environmental impacts. The report shall contain conclusions with respect to any effects of quarry operation on groundwater resources; surface water resources and wells.

The report shall be prepared by qualified individual(s), and submitted to the Director and the District no later than May 31st of the each year.

## 5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their

reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

**6. Director May Amend Permit**

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

*The reasons for the imposition of these terms and conditions are as follows:*

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

*In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*In addition to these legal requirements, the Notice should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

*This notice must be served upon:*

*The Secretary*
*Environmental Review Tribunal*
*655 Bay Street, 15th Floor*
*Toronto ON*
*M5G 1E5*
*Fax: (416) 326-5370*
*Email: ERTTribunalsecretary@ontario.ca*

*AND*

*The Director, Section 34.1, Ministry of the Environment and Climate Change*
*8th Floor*
*5775 Yonge St*
*Toronto ON M2M 4J1*
*Fax: (416) 325-6347*

***Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:***

| by Telephone at | by Fax at | by e-mail at |
|---|---|---|
| (416) 212-6349 | (416) 326-5370 | www.ert.gov.on.ca |
| Toll Free 1(866) 448-2248 | Toll Free 1(844) 213-3474 | |

This Permit cancels and replaces Permit Number 1168-665NHB, issued on 2005/11/21.

Dated at Toronto this 22nd day of September, 2016.



Karoly Tajnay
Director, Section 34.1
*Ontario Water Resources Act* , R.S.O. 1990

## Schedule A

This Schedule “A” forms part of Permit To Take Water 7725-AACS54, dated September 22, 2016.

1. Application for Permit To Take Water, signed signed by Kevin Kehl on August 8, 2014.

2. Report entitled "Permit To Take Water Amendment Application, Duntroon Quarry..." prepared by WSP and dated July 2014. Section of this report have been revised by the following documents:

    i. "Permit To Take Water Amendment Application, CLARIFICATION DOCUMENT, Duntroon Quarry..." prepared by WSP and dated April 2016;
    ii. "Permit To Take Water Amendment Application, CLARIFICATION DOCUMENT, Duntroon Quarry..." prepared by WSP and dated May 2016;

3. E-mail from Sara Watts of WSP to Ted Belayneh of MOECC dated June 16, 2016 and containing responses to questions regarding pumping rates and proposed PTTW conditions.

4. Report entitled: "Adaptive Management Plan (AMP), Duntroon Expansion Quarry...", Prepared for Walker Aggregates Inc., and dated December 6, 2013.

Ontario

**Ministry of the Environment and Climate Change**
**Ministère de l'Environnement et de l'Action en matière de changement climatique**

## ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1521-A4VJ4X
Issue Date: October 17, 2016

Walker Aggregates Inc.
Post Office Box, No. 100
Thorold, Ontario
L2V 3Y8

Site Location: Duntroon Quarry
9881 County Road 91
Township of Clearview, County of Simcoe
L9Y 3Z7

*You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:*

proposed and existing sewage Works for collection, transmission, treatment and disposal of up to 130 L/s of water that accumulates within the confines of existing 47.1 hectares the Duntroon Quarry (a total land area of approximately 57.5 hectares located on Part Lot 24 and Expansion Property located on Lot 25, Concession XII in the Township of Clearview (former Township of Nottawasaga), County of Simcoe) aggregate extraction area from direct precipitation, surface runoff, snow melt and groundwater inflow, discharging to a wetland located at the west side of the property, and then to the twin culverts at Grey Road 31 and ultimately to Beaver River South Tributary, consisting of the following:

Proposed Works

- a future sump no. 3 equipped with a submersible pump, located on the quarry floor within the Phase 1 of the expansion property discharging via a gravity sewer line to sump no.1 and/or sump no.2 as described below.

Existing Works

- sump no. 2 equipped with a submersible pump, located at the western part of the aggregate extraction area (near the water storage reservoir) discharging via a gravity sewer line to sump no.1, or pumped directly to the adjacent water storage reservoir during extreme wet weather events;

- sump no. 1, approximately 17,050 $m^3$ in capacity and located south of the sump no. 2, equipped with a submersible pump and a 300 mm diameter forcemain laid on ground and traversing in a westerly direction, discharging to a wetland located and then to the twin culverts at Grey Road 31 which drains to Beaver River

South Tributary,

all other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage Works.

all in accordance with the supporting documents listed in Schedule 'A'.

*For the purpose of this environmental compliance approval, the following definitions apply:*

"Approval" means this entire document and any schedules attached to it, and the application;

"District Manager" means the District Manager of the Barrie District Office of the Ministry;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"EPA" means the *Environmental Protection Act,* R.S.O. 1990, c.E.19, as amended;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

"Owner" means Walker Aggregates Inc. and its successors and assignees;

"OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;

"Works" means the sewage works described in the Owner's application and this Approval.

*You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:*

**TERMS AND CONDITIONS**

**1. GENERAL PROVISIONS**

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.

(3) Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and

where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in the Schedule A, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

(6) The issuance of, and compliance with the conditions of, this Approval does not:

(a) relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority/MNR or any other agency necessary to construct or operate the sewage Works; or

(b) limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

## 2. CHANGE OF OWNER

(1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within 30 days of the change occurring:

(a) change of Owner;
(b) change of address of the Owner;
(c) change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act* , R.S.O. 1990, c.B17 shall be included in the notification to the District Manager; or
(d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the District Manager.

(2) In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.

(3) The Owner shall ensure that all communications made pursuant to this condition will refer to this Approval's number.

## 3. OPERATION AND MAINTENANCE

(1) The Owner shall ensure that at all times, the Works and related equipment and appurtenances which are installed or used to achieve compliance with this Approval are properly operated and maintained. The Owner shall also ensure that all monitoring programs and maintenance schedules for the Works and related equipment are complied with.

(2) The Owner shall ensure that the maximum discharge rate from these Works does not exceed 250 L/s.

(3) Within three (3) months of the issuance date of this Approval, the Owner shall prepare an operations manual for the operation of the Works that includes, but is not necessarily limited to, the following information:

(a) operating procedures for routine operation of the Works; including reduction or termination of discharge during major rain events, if necessary;
(b) inspection programs, including frequency of inspection for the Works and the methods or tests employed to detect when maintenance is necessary, as well as downstream receiver inspections for the occurrence of erosion and flooding;
(c) repair and maintenance programs, including the frequency of repair and maintenance for the Works;
(e) contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the District Manager; and
(f) complaint procedures for receiving and responding to public complaints.

(4) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the sewage Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

## 4. EFFLUENT LIMITS

(1) The Owner shall design, construct, operate and maintain the Works such that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent discharge from the Works.

**Table 1 Effluent Limits**

| **Effluent Parameter** | **Concentration Limit** (milligrams per litre unless otherwise indicated) |
|---|---|
| Column 1 | Column 2 |
| Oil & Grease | 15 |
| Total Suspended Solid (TSS) | 25 |
| pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times | |

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) For purposes of determining compliance with and enforcing subsection (1), non-compliance with respect to the parameters concentration limit as outlined in Column 1 is deemed to have occurred

when any single sample analyzed for Oil & Grease and Total Suspended Solids, (along with a follow-up confirmation sample collected within 7 days of the receipt of the original sample result that indicated that an exceedance had occurred), is greater than the corresponding maximum concentration set out in Column 2 of subsection (1).

(b) non-compliance with respect to pH is deemed to have occurred when any single measurement is outside of the indicated range.

## 5. EFFLUENT - VISUAL OBSERVATIONS

Notwithstanding any other condition in this Approval, the Owner shall ensure that the treated effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.

## 6. EFFLUENT QUALITY MONITORING AND RECORDING

The Owner shall, upon commencement of operation of the Works, carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) Samples shall be collected and analyzed at the following sampling locations, at the sampling frequencies and using the sample type specified for each parameter listed:

| Table 2 - Effluent Monitoring | |
|---|---|
| **Sampling Location** | The outlet channel discharge point to the wetland |
| **Sampling Frequency** | once each month during periods of effluent discharge |
| **Sampling Type** | Grab |
| **Sampling Parameters** | Total Suspended Solids, Oil and Grease, Nitrite Nitrogen, Nitrate Nitrogen, Total Ammonia Nitrogen, pH (field), Temperature (field), Total Phosphorus, Conductivity (field), Chloride, Sulphate, Sodium, Potassium, Boron, Cadmium, Total Chromium, Cobalt, Copper, Iron, Lead, Nickel, Silicon, Silver, Zinc, Alkalinity, Total Dissolved Solids, Phenols (4AAP), Hardness and Turbidity |

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

(5) Conductivity, Temperature and pH shall be measured and recorded in the field at the time of sampling. The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives (PWQO)" dated July 1994, as amended, for ammonia (un-ionized).

(6) The Owner shall measure, record and calculate the discharge rate and volume of water pumped from the quarry sump on a daily basis during the discharging period and separately water not discharged from the Works but taken for other uses on a daily basis.

(7) The Owner shall undertake monthly inspections of the pumping sump and the outlet channel, and have excess settled material cleaned-out on a regular basis with results recorded in a log book to be made available for review by the Ministry upon request. The log shall include the name of the inspector, date of inspection and description of cleaning and maintenance measures undertaken for the sewage Works.

(8) The measurement frequencies and analytical parameters specified in subsections (2), in respect of any parameter are minimum requirements which may, after twelve (12) months of monitoring in accordance with this Condition, be modified by the District Manager in writing from time to time.

(9) The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

## 7. REPORTING

(1) The Owner shall report to the District Manager or designate, of any exceedence of any parameter specified in Conditions 4 or 5 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence, as defined in Condition 4(2).

(2) In addition to the obligations under Part X of the *Environmental Protection Act,* the Owner shall, within 10 working days of the occurrence of a reportable spill, bypass or loss of any product, by product, intermediate product, oils, solvents, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(3) The Owner shall prepare and submit a performance report to the District Manager on an annual basis within ninety (90) days following the end of the period being reported upon. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data collected pursuant to Condition 6 and a comparison to the effluent limits outlined in Condition 4 and the Provincial Water Quality Objective and/or Ontario Drinking Water Objective for the monitored parameter, including an overview of the success and adequacy of the Works and recommendations of monitoring program changes. The report should provide an interpretation of the data as to the impact of the discharge of treated effluent form the quarry to the receiver with respect to water quality and quantity during periods of low/high flows and periods of discharge/no discharge;
(b) a tabulation of the total daily discharge rate and volume from the quarry sump and the total daily volume of water not discharged from the Works but taken for other uses;
(c) a description of any operating problems encountered and corrective actions taken;
(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and
(f) any other information the District Manager may require from time to time.

Schedule 'A' forms part of this Approval and contains a list of supporting documentation/information received, reviewed and relied upon in the issuance of this Approval.

## SCHEDULE 'A'

1. Environmental Compliance Approval Application submitted by Was Foebel, Environmental Specialist Walker Aggregates Inc. dated June 3, 2013

2. Design Report entitled "Environmental Protection Act (R.S.O. 1990) Environmental Compliance Approval Application (Industrial Sewage Works) Duntroon Quarry, Part of Lot 24, Concession XII, Township of Clearview, County of Simcoe" dated May 2013 submitted under covering letter dated May 29, 2013 signed by Was Foebel, Environmental Specialist, Walker Aggregates Inc. and supporting information.

*The reasons for the imposition of these terms and conditions are as follows:*

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which Approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is imposed to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

3. Condition 3 is imposed to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Work.

4. Conditions 4 and 5 are imposed to ensure that the effluent discharged from the Works meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.

5. Condition 6 is imposed to require the Owner to demonstrate on a continual basis that the quality of the effluent from the approved Works is consistent with the effluent limits specified in the Approval and that the approved Works do not cause any impairment to the receiving watercourse.

6. Condition 7 is imposed to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The Notice should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;

6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

*And the Notice should be signed and dated by the appellant.*

*This Notice must be served upon:*

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment and
Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

*The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.*

DATED AT TORONTO this 17th day of October, 2016

Fariha Pannu.

Fariha Pannu, P.Eng.
Director
appointed for the purposes of Part II.1 of the
*Environmental Protection Act*

HV/
c: District Manager, MOECC Barrie
Jason Murchison, GENIVAR Inc.

# A-2

## Monitoring Network Details

## Table A-1 Monitoring Well Details



| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***Old Quarry Monitoring Wells*** | | | | | | | | | |
| 1. 98-8 | 559,631 | 4,914,368 | O | 102 | 517.25 | 516.50 | Open Hole 35.1 m | Amabel/Fossil Hill | LTTWM |
| 2. 98-9 | 559,354 | 4,914,817 | O | 102 | 526.35 | 525.90 | Open Hole 48.5 m | Amabel/Fossil Hill | LTTWM |
| 98-10 | | | O | 102 | 519.55 | 519.40 | Open Hole 37.9 m | Amabel/Fossil Hill | |
| 98-11 | | | O | 102 | 522.58 | 522.20 | Open Hole 41.2 m | Amabel/Fossil Hill | |
| 3. 98-12 | 560,373 | 4,915,090 | O | 102 | 527.22 | 526.70 | Open Hole 42.4 m | Amabel/Fossil Hill | LTTWM |
| 98-13 | | | O | 102 | 522.44 | 522.30 | Open Hole 38.0 m | Amabel/Fossil Hill | |
| OW99-1 | | | O | 102 | 519.38 | 519.10 | Open Hole 29.5 m | Amabel | |
| OW99-2 | | | O | 102 | 500.78 | 500.60 | Open Hole 19.7 m | Amabel/Fossil Hill | |
| 4. PW99-1 | 559,630 | 4,914,385 | O | 152 | 513.98 | 513.90 | Open Hole 32.9 m | Amabel/Fossil Hill | LTTWM |
| PW99-2 | | | O | 152 | 519.33 | 519.20 | Open Hole 34.4 m | Amabel | |
| PW99-3 | | | O | 152 | 501.13 | 500.90 | Open Hole 21.4m | Amabel/Fossil Hill | |
| MW2 | | | O | 102 | 524.86 | 523.20 | Open Hole 20.8 m | Amabel | |
| MW3 (R) | | | O | 102 | 514.98 | 514.40 | Open Hole 15.4 m | Amabel | |
| MW4 | | | O | 102 | 522.45 | 521.90 | Open Hole 39.9 m | Amabel/Fossil Hill | |
| MW5 | | | O | 102 | 529.43 | 529.40 | Open Hole 46.1 m | Amabel/Fossil Hill | |
| 5. MW6 | 559,545 | 4,914,893 | O | 102 | 534.87 | 533.60 | Open Hole 36.4 m | Amabel | LTTWM |
| E2 | | | O | 203 | 520.97 | 521.00 | Open Hole | Amabel | |
| QUARRY HOUSE | | | O | 102 | 529.38 | 528.72 | Open Hole 14.6m | Amabel | |
| SHOP WELL | | | O | 102 | 523.50 | 522.49 | Not Measured | Amabel | |
| OFFICE WELL | | | O | 152 | 532.52 | 532.40 | Open Hole 24.7m | Amabel/Fossil Hill | |
| OFFICE WELL (NEW) | | | O | 152 | 532.04 | 531.35 | Open Hole 37.2m | Amabel | |

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- Type 'S' indicates Standpipe
- Shading indicates well is decommissioned / no longer monitored.
- (R) indicates Replacement Monitoring Well
- N/A indicates information not available

## Table A-1 Monitoring Well Details



| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***Extension Quarry Monitoring Wells*** | | | | | | | | | |
| BH02-1 | | | O | 102 | 523.30 | 522.64 | Open Hole 39.5 m | Amabel/Fossil Hill | |
| BH02-2 | 559,915 | 4,915,535 | O | 102 | 523.18 | 522.46 | Open Hole 39.5 m | Amabel/Fossil Hill | |
| BH02-3 | | | O | 102 | 530.58 | 529.64 | Open Hole 9.5 m * | Amabel/Fossil Hill | |
| BH02-4 | | | O | 102 | 530.70 | 530.02 | Open Hole 50.1 m | Amabel/Fossil Hill | |
| 1. BH02-5 | 559,587 | 4,915,585 | O | 102 | 513.89 | 513.24 | Open Hole 31.9 m | Amabel/Fossil Hill | LTTWM |
| 2. BH02-5 (mid) | | | O | 102 | 514.20 | 513.24 | Open Hole 12.4 m | Amabel | LTTWM |
| 3. BH02-5 (shallow) | | | O | 102 | 514.17 | | | Overburden | LTTWM |
| 4. BH02-6 | 559,707 | 4,915,008 | O | 102 | 530.25 | 529.50 | Open Hole 48.5 m | Amabel/Fossil Hill | LTTWM |
| 5. BH03-7-I | 559,356 | 4,915,510 | O | 102 | 511.01 | 510.27 | 502.9 - 501.1 | Amabel | LTTWM |
| 6. BH03-7-II | | | O | 102 | 511.03 | 510.27 | 508.7 - 504.8 | Overburden | LTTWM |
| 7. BH03-7-III | | | O | 102 | 511.72 | 510.56 | Open Hole 30.7 m | Amabel/Fossil Hill | LTTWM |
| 8. BH03-8 | 558,971 | 4,915,324 | O | 102 | 520.79 | 520.22 | Open Hole 37.9 m | Amabel/Fossil Hill | LTTWM |
| 9. BH03-9 | 559,106 | 4,914,893 | O | 102 | 518.93 | 518.45 | Open Hole 39.5 m | Amabel/Fossil Hill | LTTWM |
| 10. TW04-1 | 559,080 | 4,914,912 | O | 152 | 517.53 | 517.05 | Open Hole 34.1 m | Amabel/Fossil Hill | LTTWM |
| 11. TW04-2 | 559,084 | 4,914,928 | O | 152 | 518.11 | 517.46 | Open Hole 34.1 m | Amabel/Fossil Hill | LTTWM |
| 12. TW04-3 | 559,096 | 4,914,916 | O | 152 | 518.63 | 517.97 | Open Hole 37.5 m | Amabel/Fossil Hill | LTTWM |
| 13. BH08-1 | 560,485 | 4,915,410 | O | 102 | 512.32 | 511.51 | Open Hole 27.4 m | Amabel/Fossil Hill | LTTWM |
| 14. BH08-2 | 560,500 | 4,915,390 | O | 102 | 512.00 | 511.15 | Open Hole 25.8 m | Amabel/Fossil Hill | LTTWM |
| 15. BH08-3 | 560,462 | 4,915,414 | O | 102 | 513.41 | 512.57 | Open Hole 28.8 m | Amabel/Fossil Hill | LTTWM |
| 16. IW1 | 560,548 | 4,915,270 | O | 152 | 512.12 | 511.52 | Open Hole 27.3 m | Amabel/Fossil Hill | LTTWM |
| 17. IW1a | 560,551 | 4,915,272 | O | 152 | 511.96 | 511.35 | Open Hole 27.3 m | Amabel/Fossil Hill | |
| 18. IW2 | 560,519 | 4,915,490 | O | 152 | 509.22 | 508.66 | Open Hole 24 m | Amabel/Fossil Hill | LTTWM |
| 19. IW3 | 560,210 | 4,915,929 | O | 152 | 519.13 | 518.53 | Open Hole 33.7 m | Amabel/Fossil Hill | LTTWM |
| 20. IW4 | 560,026 | 4,916,230 | O | 152 | 511.02 | 510.36 | Open Hole 25.4 m | Amabel/Fossil Hill | LTTWM |
| 21. NW1 | 560,056 | 4,915,117 | O | 152 | 526.19 | 525.67 | Open Hole 42.7 m | Amabel/Fossil Hill | LTTWM |
| NW2 | | | O | 152 | 531.99 | 531.35 | Open Hole 54.7 m | Amabel/Fossil Hill | |

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- Type 'O' indicates Open Hole
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- (R) indicates Replacement Monitoring Well
- N/A indicates information not available
- Shading indicates well is decommissioned / no longer monitored.

## Table A-1 Monitoring Well Details



| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***Extension Quarry Monitoring Wells (continued)*** | | | | | | | | | |
| NW3 | | | O | 152 | 515.13 | 514.44 | Open Hole 29.6 m | Amabel/Fossil Hill | |
| NW4 | | | O | 152 | 529.86 | 529.00 | Open Hole 48.9 m | Amabel/Fossil Hill | |
| NW5 | | | O | 152 | 521.68 | 520.95 | Open Hole 39.7 m | Amabel/Fossil Hill | |
| 22. NW6 | 559,523 | 4,915,360 | O | 102 | 521.99 | 520.68 | Open Hole 41.2 m | Amabel/Fossil Hill | LTTWM |
| 23. NW7 | 559,474 | 4,915,175 | O | 152 | 523.92 | 523.18 | Open Hole 42.1 m | Amabel/Fossil Hill | LTTWM |
| 24. NW8 | 559,254 | 4,915,016 | O | 152 | 531.87 | 531.07 | Open Hole 43 m | Amabel/Fossil Hill | LTTWM |
| 25. NW9 | 559,032 | 4,914,979 | O | 152 | 521.45 | 520.86 | Open Hole 41.7 m | Amabel/Fossil Hill | LTTWM |
| 26. NW10-DP | 558,939 | 4,915,604 | S | 152 | 511.18 | 509.69 | 509.6 - 509.1 | Overburden | LTTWM |
| 27. NW10-Shallow | | | O | 152 | 510.31 | 509.69 | Open Hole 3.8 m | Amabel | LTTWM |
| 28. NW10-Deep | | | O | 152 | 510.45 | 509.69 | Open Hole 29.5 m | Amabel/Fossil Hill | LTTWM |
| HA1 | | | | | | | | Overburden | |
| HA2 | | | | | | | | Overburden | |
| HA3 | | | | | | | | Overburden | |
| ***Drivepoints*** | | | | | | | | | |
| 1. DP1 | 559,561 | 4,914,433 | S | 51 | 513.05 | 511.80 | 511.3 - 510.8 | Overburden | LTTWM |
| 2. DP2 | 559,302 | 4,914,600 | S | 51 | 512.94 | 512.10 | 511.3 - 510.8 | Overburden | PITM |
| 3. DP3 | 560,307 | 4,914,281 | S | 51 | 514.65 | 513.60 | 511.9 - 511.4 | Overburden | LTTWM |
| 4. DP4 | 559,084 | 4,914,245 | S | 51 | 512.11 | 511.40 | 510.4 - 509.9 | Overburden | |
| 5. DP5 | 559,094 | 4,915,562 | S | 51 | 510.49 | 509.66 | 509.6 - 508.7 | Overburden | PITM |
| 6. DP6 | 559,788 | 4,915,730 | S | 51 | 512.20 | 511.45 | 511.0 - 510.1 | Overburden | PITM |
| 7. DP7 | 559,282 | 4,915,583 | S | 51 | 509.91 | 509.18 | 507.4 - 506.9 | Overburden | PITM |
| 8. DP8 | 559,105 | 4,914,573 | S | 51 | 511.88 | 511.12 | 510.9 - 510.5 | Overburden | PITM |
| 9. DP9 | 560,274 | 4,915,622 | S | 51 | 508.88 | 507.74 | 507.2 - 506.6 | Overburden | PITM |
| DP10 | | | S | 51 | | | | Overburden | |
| DP11 | | | S | 51 | | | | Overburden | |
| 10. BRIDSON DP | 560,371 | 4,915,534 | S | 38 | 511.30 | 510.40 | 509.6 - 508.8 | Overburden | PITM |

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- N/A indicates information not available
- ND indicates Not Determined
- Shading indicates well is decommissioned / no longer monitored.

## Table A-1 Monitoring Well Details



| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***Domestic Wells*** | | | | | | | | | |
| 1. RW1 | 560,654 | 4,915,472 | DW | Drilled 152 | 508.75 | 508.57 | Depth: 16.1 m | Amabel | LTTWM |
| 2. RW2 | 560,955 | 4,915,330 | DW | Drilled 152 | 505.20 | 504.50 | Depth: 29.0 m | Amabel | LTTWM |
| 3. RW3 | 559,271 | 4,916,187 | DW | Drilled 152 | 519.00 | 518.70 | Depth: 16.5 m | Amabel | LTTWM |
| RW4 | | | DW | Drilled 152 | 510.50 | 509.80 | Depth: 55.5 m | Amabel/Fossil Hill/ Cabot Head/Manitoulin | |
| 4. RW5 | 561,414 | 4,915,373 | DW | Drilled 152 | 478.60 | 478.00 | Depth: 35.0 m | Manitoulin/Shale | LTTWM |
| RW6 | | | DW | Dug 800 | 451.00 | 451.00 | Depth: 8.2 m | Overburden | |
| 5. RW7 | 561,701 | 4,914,943 | DW | Drilled 152 | 453.00 | 452.30 | Depth: 10.1 m | Overburden/Shale | LTTWM |
| 6. RW8 | 560,669 | 4,917,079 | DW | Dug 750 | 431.00 | 431.00 | Depth: 3.5 m | Overburden | LTTWM |
| RW9 | | | DW | Drilled 152 | 524.00 | 524.00 | Depth: 27.4 m | Amabel | |
| RW10 | | | DW | Dug 750 | 494.50 | Not surveyed | N/A | N/A | |
| RW11 | | | DW | Drilled 152 | 453.10 | 453.00 | Depth: 48.8 m | Overburden/Shale | |
| RW11 DUG | | | DW | Dug 750 | 453.00 | 453.00 | Depth: 6.0 m | Overburden | |
| 7. RW12 | 561,826 | 4,915,816 | DW | Dug | 425.80 | Not surveyed | Depth 3.7 m | Overburden | |
| 8. RW13 | | | DW | Dug | 425.80 | Not surveyed | Depth 3.7 m | Overburden | |
| RW15 | | | DW | Drilled 152 | 529.74 | 529.19 | Depth: 24.4 m | Amabel | |
| 9. RW16 | 560,474 | 4,915,397 | DW | Drilled 152 | 513.32 | 512.48 | Depth: 16.2 m | Amabel | LTTWM |
| RW17 | | | DW | Drilled 127 | 514.70 | Not surveyed | Depth: 8.5 m | N/A | |
| RW18 | | | DW | Dug 1000 | 513.80 | 513.00 | Depth: 2.7 m | Overburden/Amabel | |
| RW19 | | | DW | Drilled 152 | 523.80 | Not Surveyed | Depth: 36.3 m | Amabel | |

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- (R) indicates Replacement Monitoring Well
- N/A indicates information not available
- ND indicates Not Determined
- Shading indicates well is decommissioned / no longer monitored.

## Table A-1 Monitoring Well Details

| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***Carmarthen Lake Farms Monitoring Wells*** | | | | | | | | | |
| CLF1 | | | DW | 152 | 521.05 | 520.76 | Open Hole 36.6 m | Amabel/Fossil Hill | |
| CLF2 | | | DW | 152 | 519.23 | 519.57 | Open Hole 49.4 m | Amabel/Fossil Hill | |
| 1. CLF3 | 559,156 | 4,913,134 | DW | 152 | 517.62 | 517.11 | Open Hole ND | Amabel | LTTWM |
| 2. CLF4 | 559,380 | 4,913,266 | DW | 152 | 509.96 | 509.48 | Open Hole 15.2 m | Amabel | LTTWM |
| 3. CLF5 | 559,526 | 4,913,347 | DW | 152 | 509.16 | 508.80 | Open Hole ND | Amabel | LTTWM |
| ***Offsite Monitoring Wells*** | | | | | | | | | |
| 1. 101-B | 557,929 | 4,914,109 | O | 152 | 502.98 | 502.51 | Open Hole 6.1 m | Amabel | LTTWM |
| 2. 102-C | 558,319 | 4,914,489 | O | 102 | 511.39 | 510.53 | Open Hole 7.0 m | Amabel | LTTWM |
| 3. 103-D | 558,523 | 4,914,172 | O | 152 | 513.40 | 513.18 | Open Hole 7.9 m | Amabel | LTTWM |
| 4. 104-A | 558,215 | 4,914,020 | O | 152 | 517.67 | 516.89 | Open Hole 9.6 m | Amabel | LTTWM |
| 5. OW1-4 | 558,477 | 4,914,250 | O | 102 | 514.40 | 513.21 | Open Hole 28.6 m | Amabel/Fossil Hill | LTTWM |
| OW1-6 | | | O | 102 | 514.96 | 513.92 | Open Hole 30.0 m | Amabel/Fossil Hill | |
| OW3-1 | | | O | 102 | 508.75 | 508.01 | Open Hole 29.3 m | Amabel/Fossil Hill | |
| 6. OW5-2 | 557,888 | 4,914,245 | O | 102 | 504.21 | 502.84 | Open Hole 27.9 m | Amabel/Fossil Hill | LTTWM |
| 7. OW6-3 | 558,317 | 4,914,465 | O | 102 | 511.12 | 510.63 | Open Hole 5.3 m | Amabel | LTTWM |

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- N/A indicates information not available
- ND indicates Not Determined
- Shading indicates well is decommissioned / no longer monitored.

## Table A-1 Monitoring Well Details

| Well ID | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Type | Well Pipe Diameter mm | Measuring Point Elevation mASL | Ground Elevation mASL | Screened Interval mASL or m | Geologic Formation Monitored | Monitoring Program |
|---|---|---|---|---|---|---|---|---|---|
| ***St. Marys Cement Osprey Quarry Monitoring Wells*** | | | | | | | | | |
| OW1-I | | | | | 513.29 | 512.22 | 507.7 - 506.2 | Amabel | |
| OW1-II | | | | | 513.29 | 512.22 | 503.1 - 501.6 | Amabel | |
| OW1-III | | | | | 513.21 | 512.18 | 487.0 - 485.5 | Amabel | |
| OW1-IV | | | | | 513.21 | 512.18 | 482.8 - 481.3 | Fossil Hill | |
| 1. OW2-I | | | | | 523.42 | 522.24 | 512.2 - 510.7 | Amabel | |
| 2. OW2-II | | | | | 523.42 | 522.24 | 503.1 - 501.6 | Amabel | |
| 3. OW2-III | | | | | 523.18 | 522.14 | 500.3 - 498.8 | Amabel | |
| 4. OW2-IV | | | | | 523.18 | 522.14 | 480.2 - 478.7 | Fossil Hill/Cabot Head | |
| OW3-I | | | | | 516.34 | 515.57 | 511.1 - 509.6 | Amabel | |
| OW3-II | | | | | 516.34 | 515.57 | 500.2 - 498.7 | Amabel | |
| OW3-III | | | | | 516.58 | 515.53 | 494.7 - 493.2 | Amabel | |
| OW3-IV | | | | | 516.58 | 515.53 | 486.5 - 485.0 | Amabel | |
| 5. OW4-I | | | | | 519.76 | 518.87 | 513.4 - 511.9 | Amabel | |
| 6. OW4-II | | | | | 519.76 | 518.87 | 510.8 - 509.3 | Amabel | |
| 7. OW4-III | | | | | 519.72 | 518.85 | 498.3 - 496.8 | Amabel | |
| 8. OW4-IV | | | | | 519.72 | 518.85 | 492.9 - 491.4 | Amabel | |
| 9. OW5-I | | | | | 510.75 | 510.01 | 503.5 - 502.0 | Amabel | |
| 10. OW5-II | | | | | 510.75 | 510.01 | 499.3 - 497.8 | Amabel | |
| 11. OW5-III | | | | | 510.85 | 510.06 | 493.8 - 492.3 | Amabel | |
| 12. OW5-IV | | | | | 510.85 | 510.06 | 481.8 - 480.3 | Fossil Hill/Cabot Head | |
| 13. OW6-I | | | | | 528.51 | 526.28 | 514.6 - 513.1 | Amabel | |
| 14. OW6-II | | | | | 528.51 | 526.28 | 503.1 - 501.6 | Amabel | |
| 15. OW6-III | | | | | 528.08 | 526.21 | 482.4 - 480.9 | Amabel | |
| 16. OW6-IV | | | | | 528.08 | 526.21 | 477.3 - 475.8 | Fossil Hill/Cabot Head | |

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- Type 'S' indicates Standpipe
- Type 'DW' indicates Domestic Well
- (R) indicates Replacement Monitoring Well
- N/A indicates information not available
- ND indicates Not Determined
- Shading indicates well is decommissioned / no longer monitored.

## Table A-2 Surface Water Station Details



| Designation | GPS Coordinates (NAD 83 Zone 17) | | Ground Elevation | Description | Culvert Dimensions | Monitoring Program | Measurement Type |
|---|---|---|---|---|---|---|---|
| | Easting | Northing | mASL | | | | |
| 1. SW1 | 559,117 | 4,914,254 | 513 | Twin culverts located at southwest corner of quarry wetland at Grey County Road 31 (Townline Road) | South culvert dia. 0.62m, North culvert dia. 0.60m | PITM | V, M |
| 2. SW2 | 559,070 | 4,914,769 | 515 | Single culvert located at northwest corner of quarry wetland | Oblong shaped culvert | PITM | V,M |
| SWB-1 | | | 513 | Single culvert located at southwest corner of quarry; outlet into quarry wetland | Oblong shaped culvert | | |
| QFSW1 | | | 500 | Quarry floor influx from west face | Stream Channel Flow | | |
| 3. QFSW2 | 559,825 | 4,914,595 | 499 | Quarry floor surface water flow in channel prior to main sump pond | Stream Channel Flow | LTTWM | V |
| 4. SW0-2 | 558,329 | 4,914,495 | 510 | Stream Channel west of SW1 on Osprey Quarry Property | Stream Channel Flow | | V,M |
| 5. SW3 | 558,890 | 4,915,581 | 510 | Single culvert located across Grey Rd 31 at north edge of proposed quarry property | Oblong shaped culvert | PITM | V,M,E |
| SW3A | | | 511 | Single culvert located under Grey Rd 31, just south of intersection with 26/27 Sideroad | Oblong shaped culvert | | |
| 6. SW4 | 558,893 | 4,913,962 | 515 | Single culvert located on Osprey 10th Line, east of Kenwell farm buildings | Culvert Diameter: 0.57 m | PTTW | E,V |
| SW5 | | | 499 | Single concrete culvert located on Osprey 10th Line | 4.91 m wide square concrete culvert | | |
| SW6 | | | 500 | Single concrete culvert located on Osprey 10th Line | 4.78 m wide square concrete culvert | | |
| SW6A | 555,263 | 4,912,697 | 495 | Double culvert on Osprey Sideroad 30, south of Osprey 10th Line | Stream Channel Flow | | |
| SW7 | | | 512 | Millar pond outlet | Stream Channel Flow | | |
| 7. SW8 | 560,355 | 4,915,502 | 510 | Bridson pond outlet | Bucket Capture of Flow out of partial culvert | LTTWM | V,E |
| 8. SW9 | 560,454 | 4,915,647 | 508 | Channel flow beneath walking path into sinkhole on Bridson property | Stream Channel Flow | PITM | V,M,E |
| 9. SW10 | 561,200 | 4,915,641 | 477 | Seep uphill of B. Franks' well tile catchment | Stream Channel Flow | PITM | V,M,E |

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- Elevations provided in metres above sea level (mASL)
- Ground Elevation data approximated from Ontario Base Map elevation contours
- Shading indicates surface water station is no longer monitored
- V indicates Valeport Electronic Flow Velocity Meter measurement
- M indicates manual velocity measurement
- E indicates visual estimate velocity measurement
- B indicates bucket collection velocity measurement

## Table A-2 Surface Water Station Details



| Designation | GPS Coordinates (NAD 83 Zone 17) | | Ground Elevation | Description | Culvert Dimensions | Monitoring Program | Measurement Type |
|---|---|---|---|---|---|---|---|
| | Easting | Northing | mASL | | | | |
| 10. SW11 | 561,151 | 4,916,011 | 445 | Culmination of B. Franks' seeps into a stream; taken near toe of scarp where stream passes beneath path | Stream Channel Flow | PITM | V,M,E |
| 11. SW11A | 561,128 | 4,916,011 | 446 | B. Franks' seep, located near toe of scarp in rock talus | Stream Channel Flow | PITM | V,M,E |
| 12. SW11B | 561,098 | 4,916,018 | 446 | B. Franks' seep, located near toe of scarp in rock talus | Stream Channel Flow | PITM | V,M,E |
| 13. SW11C | 561,079 | 4,916,034 | 446 | B. Franks' seep, located near toe of scarp in rock talus | Stream Channel Flow | PITM | V,M,E |
| 14. SW11D | 561,052 | 4,916,043 | 446 | B. Franks' seep, located near toe of scarp in rock talus | Stream Channel Flow | PITM | V,M,E |
| 15. SW11E | 561,238 | 4,915,997 | 435 | Stream from B. Franks' seeps into pond; downstream from SW11 and just upstream of pond | Stream Channel Flow | PITM | V,E,B |
| SW12 | | | 435 | Single culvert into B. Franks' pond from south | Bucket capture of flow out of culvert | | |
| SW12A | | | 450 | Single culvert near B. Franks' barn | Stream Channel Flow | | |
| 16. SW13 | 561,288 | 4,916,042 | 427 | B. Franks' pond outlet | Bucket capture of flow out of culvert | LTTWM | V,E,B |
| 17. SW14 | 561,526 | 4,916,249 | 410 | Channel flow east of Conc. 10, from culvert crossing Conc. 10 south of H. Franks' driveway | Stream Channel Flow | PITM | V |
| 18. SW15 | 561,495 | 4,916,432 | 420 | Channel flow east of Conc. 10, from culvert crossing Conc. 10 north of H. Franks' driveway | Stream Channel Flow | PITM | V |
| 19. SW16 | 561,198 | 4,916,724 | 415 | Single culvert under 26/27 Sideroad east of F. Sestito's property | Stream Channel Flow | PITM | E |
| 20. SW17 | 560,607 | 4,916,532 | 431 | Sestito pond outlet channel on south side of 26/27 Sideroad, measured just west Sestito property driveway | Stream Channel Flow | PITM | V,M,E |
| 21. SW17A | 560,603 | 4,916,543 | 430 | Stream channel on north side of 26/27 Sideroad, measured across from Sestito property driveway | Stream Channel Flow | PITM | V |
| SW17B | | | 431 | Stream channel on south side of 26/27 Sideroad, measured west of Sistito property driveway, upstream of where 17/17B join. | Stream Channel Flow | | |
| 22. SW18 | 561,401 | 4,917,002 | 390 | Single culvert on Concession 10, north of 26/27 Sideroad | Stream Channel Flow | PITM | V |
| 23. SW19 | 564,257 | 4,915,492 | 335 | Single large diameter culvert for Batteaux Creek on County Rd. 124 | Stream Channel Flow | LTTWM | V |
| 24. SW20 | 560,066 | 4,916,392 | 495 | Concrete crib north of 26/27 sideroad adjacent to Pretty River Provincial Park/Bruce Trail | Stream Channel Flow | LTTWM | V,E |

*Notes:*
- PITM - Performance Indicator Trigger Monitoring
- LTTWM - Long Term Groundwater and Surface Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Ground Elevation data approximated from Ontario Base Map elevation contours
- Shading indicates surface water station is no longer monitored
- V indicates Valeport Electronic Flow Velocity Meter measurement
- M indicates manual velocity measurement
- E indicates visual estimate velocity measurement
- B indicates bucket collection velocity measurement

## Table A-2 Surface Water Station Details



| Designation | GPS Coordinates (NAD 83 Zone 17) | | Ground Elevation | Description | Culvert Dimensions | Monitoring Program | Measurement Type |
|---|---|---|---|---|---|---|---|
| | Easting | Northing | mASL | | | | |
| 25. SW21 | 560,308 | 4,916,284 | 430 | H. Franks' pond outlet | Bucket capture of flow out of culvert | LTTWM | V,E,B |
| 26. SW21A | 561,246 | 4,916,261 | 433 | H. Franks' pond inlet | Stream Channel Flow | LTTWM | V,E,B |
| 27. SW21B | 561,039 | 4,916,193 | 449 | Cistern overflow channel uphill of H. Franks' pond, feeds pond inlet | Stream Channel Flow | LTTWM | V,M,E |
| 28. SW21C | 560,708 | 4,916,241 | 470 | H. Franks' water supply system cistern inlet/overflow culvert | Stream channel Flow | PITM | V,E |
| SW21D | | | 450 | Single culvert under H. Franks field access trail at base of scarp | Bucket capture of flow out of culvert | | |
| 29. SW22 | 560,686 | 4,914,713 | 492 | Single culvert under ski trail west of Sampson fields | Bucket capture of flow out of culvert | LTTWM | V,B |
| 30. SW22A | 560,952 | 4,915,039 | 485 | Seep feeding small stream in northwest corner of Sampson fields | Stream Channel Flow | LTTWM | B,E |
| SW22B | | | 477 | Swamp/seep area on north side of access trail from Sampson fields to ski trails | Stream Channel Flow | | |
| 31. SW22C | 560,977 | 4,914,876 | 477 | Culvert on south side of access trail from Sampson fields to ski trails. Culvert is infilled with sediment and channel is relatively flat. Treated as stream flow. | Stream Channel Flow just downstream of culvert | LTTWM | V |
| SW23 | | | 410 | Single culvert crossing 26/27 Sideroad west of Concession 10 | Bucket capture of flow out of culvert | | |
| SW24 | | | 445 | F. Sestito's pond inlet from H. Franks' property | Stream Channel Flow | | |
| 32. SW24A | 560,566 | 4,916,379 | 460 | F. Sestito's water supply: barrel overflow and pipe discharges (below Manitoulin formation outcrop) | Bucket capture of flow out of pipes, Valeport measurement of stream channel | PITM | V,B,E |
| SW24B | | | 445 | Seep channel just up from F. Sestito's garden | Bucket capture of flow out of pipes, Valeport measurement of stream channel | | |
| SW24C | | | 442 | Stream just east of where SW24A and SW24B combine and upstream of outlet into Sistito pond. | Stream Channel Flow | | |
| SW25 | | | 507 | Single culvert outlet into swamp southwest of Edward Lake; fed by Edward Lake and open grate in the ditch north of SW25 | Culvert Diameter: 0.62 m | | |
| SW25A | | | 508 | Channel outlet from Edward Lake into a culvert which crosses beneath Grey Road 31. Only monitored when input from open grate/ditch is observed when monitoring SW25. | Stream Channel Flow | | |

*Notes:*
- PITM - Performance Indicator Trigger Monitoring
- LTTWM - Long Term Groundwater and Surface Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Ground Elevation data approximated from Ontario Base Map elevation contours
- Shading indicates surface water station is no longer monitored
- V indicates Valeport Electronic Flow Velocity Meter measurement
- M indicates manual velocity measurement
- E indicates visual estimate velocity measurement
- B indicates bucket collection velocity measurement

## Table A-2 Surface Water Station Details



| Designation | GPS Coordinates (NAD 83 Zone 17) Easting | Northing | Ground Elevation mASL | Description | Culvert Dimensions | Monitoring Program | Measurement Type |
|---|---|---|---|---|---|---|---|
| SW26 | | | 507 | Channel flow upstream of sinkhole on ski trails near unopened road allowance for 21/22 Sideroad | Stream Channel Flow | | |
| SW26A | | | 512 | Two culverts upstream of SW26 sinkhole | East Culvert Diameter: 0.38 m<br>West Culvert: Oblong Shaped | | |
| SW27 | | | 462 | Culmination of SW27A and SW27B | Stream Channel Flow | | |
| SW27A | | | 492 | Groundwater seep, located east of SW28, east of Bruce Trail | Stream Channel Flow | | |
| SW27B | | | 497 | Groundwater seep, located north-west of SW27A, east of Bruce Trail | Stream Channel Flow | | |
| 33. SW77 | 560,150 | 4,916,292 | 494 | Groundwater seep, located south-east of SW20, west of Bruce Trail | Stream Channel Flow | PITM | V |
| SW3B (RR3 KARST) | | | 510 | RR3 Wetland Karst Sink Point Channel, west of Grey County Road 31, downstream of SW3 and SW3C. | Stream Channel Flow | | |
| SW3C (RR3 OUT) | | | 510 | RR3 Wetland outflow from pond that is downstream of SW3. West of Grey County Road 31. | Stream Channel Flow | | |
| 34. PR Control | 558,059 | 4,918,224 | 360 | Pretty River Control Station on 30/31 Sideroad. Flow measured on south side of road, upstream of culvert. | Stream Channel Flow | PITM | V |
| 35. BC Control | 563,251 | 4,914,197 | 405 | Batteaux Creek Control Station on 21/22 Sideroad. Flow measured on north side of road, downstream of culvert. | Stream Channel Flow | PITM | V |
| 36. BH03-7 SG1 | 559,349 | 4,915,519 | 510.5 | Pretty River Control Station on 30/31 Sideroad. Flow measured on south side of road, upstream of culvert. | Stream Channel Flow | PITM | V |
| 37. BH03-7 SG2 | 559,323 | 4,915,530 | | Batteaux Creek Control Station on 21/22 Sideroad. Flow measured on north side of road, downstream of culvert. | Stream Channel Flow | PITM | V |

*Notes:*
- PITM - Performance Indicator Trigger Monitoring
- LTTWM - Long Term Groundwater and Surface Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Ground Elevation data approximated from Ontario Base Map elevation contours
- Shading indicates surface water station is no longer monitored
- V indicates Valeport Electronic Flow Velocity Meter measurement
- M indicates manual velocity measurement
- E indicates visual estimate velocity measurement
- B indicates bucket collection velocity measurement

# A-3

## Borehole Logs

# BOREHOLE LOG EXPLANATION FORM

This explanatory section provides the background to assist in the use of the borehole logs. Each of the headings used on the borehole log, is briefly explained.

## DEPTH

This column gives the depth of interpreted geologic contacts in metres below ground surface.

## STRATIGRAPHIC DESCRIPTION

This column gives a description of the soil based on a tactile examination of the samples and/or laboratory test results. Each stratum is described according to the following classification and terminology.

| Soil Classification * | | Terminology | Proportion |
|---|---|---|---|
| Clay | <0.002 mm | | |
| Silt | 0.002 to 0.06 mm | "trace" (eg. trace sand) | <10% |
| Sand | 0.06 to 2 mm | "some" (eg. some sand) | 10% - 20% |
| Gravel | 2 to 60 mm | adjective (eg. sandy) | 20% - 35% |
| Cobbles | 60 to 200 mm | "and" (eg. and sand) | 35% - 50% |
| Boulders | >200 mm | noun (eg. sand) | >50% |

* Extension of MIT Classification system unless otherwise noted.

The use of the geologic term "till" implies that both disseminated coarser grained (sand, gravel, cobbles or boulders) particles and finer grained (silt and clay) particles may occur within the described matrix.

The compactness of cohesionless soils and the consistency of cohesive soils are defined by the following:

| COHESIONLESS SOIL | | COHESIVE SOIL | |
|---|---|---|---|
| Compactness | Standard Penetration Resistance "N", Blows / 0.3 m | Consistency | Standard Penetration Resistance "N", Blows / 0.3 m |
| Very Loose | 0 to 4 | Very Soft | 0 to 2 |
| Loose | 4 to 10 | Soft | 2 to 4 |
| Compact | 10 to 30 | Firm | 4 to 8 |
| Dense | 30 to 50 | Stiff | 8 to 15 |
| Very Dense | Over 50 | Very Stiff | 15 to 30 |
| | | Hard | Over 30 |

The moisture conditions of cohesionless and cohesive soils are defined as follows.

| COHESIONLESS SOILS | COHESIVE SOILS | | |
|---|---|---|---|
| Dry | DTPL | - | Drier Than Plastic Limit |
| Moist | APL | - | About Plastic Limit |
| Wet | WTPL | - | Wetter Than Plastic Limit |
| Saturated | MWTPL | - | Much Wetter Than Plastic Limit |

## STRATIGRAPHY

Symbols may be used to pictorially identify the interpreted stratigraphy of the soil and rock strata.

## MONITOR DETAILS

This column shows the position and designation of standpipe and/or piezometer ground water monitors installed in the borehole. Also the water level may be shown for the date indicated.


Standpipe and Designation


Piezometer and Designation


Gas Monitor and Designation


Borehole Seal (Peltonite, Bentonite or Hole Plug)


Cement Seal


Granular Pack


Granular Backfill


Native Soil Backfill/Cave

Where monitors are placed in separate boreholes, these are shown individually in the "Monitor Details" column. Otherwise, monitors are in the same borehole. For further data regarding seals, screens, etc., the reader is referred to the summary of monitor details table.

## SAMPLE

These columns describe the sample type and number, the "N" value, the water content, the percentage recovery, and Rock Quality Designation (RQD), of each sample obtained from the borehole where applicable. The information is recorded at the approximate depth at which the sample was obtained. The legend for sample type is explained below.

| | | | |
|---|---|---|---|
| SS = | Split Spoon | GS = | Grab Sample |
| ST = | Thin Walled Shelby Tube | CS = | Channel Sample |
| AS = | Auger Flight Sample | WS = | Wash Sample |
| CC = | Continuous Core | RC = | Rock Core |

$$\%\ \text{Recovery} = \frac{\text{Length of Core Recovered Per Run}}{\text{Total Length of Run}} \times 100$$

Where rock drilling was carried out, the term RQD (Rock Quality Designation) is used. The RQD is an indirect measure of the number of fractures and soundness of the rock mass. It is obtained from the rock cores by summing the length of core recovered, counting only those pieces of sound core that are 100 mm or more in length. The RQD value is expressed as a percentage and is the ratio of the summed core lengths to the total length of core run. The classification based on the RQD value is given below.

| RQD Classification | RQD (%) |
|---|---|
| Very poor quality | < 25 |
| Poor quality | 25 - 50 |
| Fair quality | 50 - 75 |
| Good quality | 75 - 90 |
| Excellent quality | 90 - 100 |

## TEST DATA

The central section of the log provides graphs which are used to plot selected field and laboratory test results at the depth at which they were carried out. The plotting scales are shown at the head of the column.

Dynamic Penetration Resistance - The number of blows required to advance a 51 mm diameter, 60° steel cone fitted to the end of 45 mm OD drill rods, 0.3 m into the subsoil. The cone is driven with a 63.5 kg hammer over a fall of 750 mm.

Standard Penetration Resistance - Standard Penetration Test (SPT) "N" Value - The number of blows required to advance a 51 mm diameter standard split-spoon sampler 300 mm into the subsoil, driven by means of a 63.5 kg hammer falling freely a distance of 750 mm. In cases where the split spoon does not penetrate 300 mm, the number of blows over the distance of actual penetration in millimetres is shown as $\frac{x Blows}{mm}$

Water Content - The ratio of the mass of water to the mass of oven-dry solids in the soil expressed as a percentage.

$W_P$ - Plastic Limit of a fine-grained soil expressed as a percentage as determined from the Atterberg Limit Test.

$W_L$ - Liquid Limit of a fine-grained soil expressed as a percentage as determined from the Atterberg Limit Test.

## REMARKS

The last column describes pertinent drilling details, field observations and/or provides an indication of other field or laboratory tests that were performed.

# BOREHOLE NO. 98-8



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 14,15 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** ESTIMATED 516 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | OVERBURDEN: MEDIUM TO DARK BROWN CLAYEY SILT TILL, BECOMING SANDY BELOW 3.1 m. | OVERBURDEN | 102 mm ID CASING | AS | | | | | ORIGINAL GROUND SURFACE ELEVATION HAS CHANGED DUE TO QUARRY OPERATIONS. LOCATED IN SOUTHWEST CORNER OF EXISTING QUARRY. |
| 2 | – CUTTING RETURNS WET BELOW 1.8 m | | | | | | | | 108 mm ID HOLLOW STEM AUGERS USED IN OVERBURDEN. |
| 4 | | | | | | | | | CASING STICKUP 165 mm. |
| 6 | | | | | | | | | 102 mm CASING SET TO 8.4 m. |
| 7.6 | | | | | | | | | |
| 8 | DOLOSTONE: LIGHT BROWNISH GREY TO VERY LIGHT GREY COLOUR, CHALKY APPEARANCE, MEDIUM GRAINED, FOSSIL REMNANTS. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | RC | 100 | 69 | N/A | | |
| | | | | RC | 100 | 16 | 0.29 | $1.7X10^{-5}$ | |
| 10 | – 230 mm VERTICAL FRACTURE AT 9.1 m. – VUGS 1–2% UNIFORMLY DISTRIBUTED | | | | | | | | |
| | | | | RC | 100 | 88 | 0.28 | | |
| 12 | – HORIZONTAL TO SUBHORIZONTAL BEDDING | | | RC | 100 | 83 | 0.28 | $7.8X10^{-7}$ | |
| 14 | | | | RC | 100 | 100 | 0.29 | | |
| | | | | RC | 100 | 97 | 0.31 | | |
| 16 | | | | | | | | $1.5X10^{-7}$ | |
| | | | | RC | 100 | 100 | 0.31 | | |
| 18 | | | | RC | 100 | 97 | 0.27 | $1.3X10^{-6}$ | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |
| 20 | | | | RC | 100 | 97 | 0.32 | | |

# BOREHOLE NO. 98-8



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 14,15 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** ESTIMATED 516 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec ($E^{-11}$ to $E^{-4}$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE: (CONT)<br>150 mm REEFAL FACIES BED AT 19.9 m | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | | | | | $1.3\times10^{-6}$ | ORIGINAL GROUND SURFACE ELEVATION HAS CHANGED DUE TO QUARRY OPERATIONS. LOCATED IN SOUTHWEST CORNER OF EXISTING QUARRY. |
| 22 | | | | RC | 100 | 95 | 0.28 | | |
| 24 | | | | RC | 100 | 100 | 0.26 | $3.0\times10^{-6}$ | |
| 26 | | | | RC<br>RC | 100<br>100 | 87<br>100 | 0.28<br>N/A | $8.0\times10^{-7}$ | |
| 28 | – GRADATIONAL LOWER CONTACT OVER ±1 m.<br>– FIRST STYLOLITE AT 28.3 m. | | | RC | 100 | 82 | 0.26 | | |
| | 29.1 | | | RC<br>RC | 100<br>100 | 63<br>89 | N/A<br>N/A | $2.6\times10^{-7}$ | |
| 30 | DOLOSTONE: CREAMY GREY TO GREY BROWN COLOURED, FINE TO MEDIUM GRAINED, STYLOLITES AND SHALE 1 mm TO 10 mm THICK INCREASING FREQUENCY WITH DEPTH. | FOSSIL HILL FORMATION | | | | | | | |
| 32 | | | | RC | 100 | 68 | 0.15 | $6.9\times10^{-8}$ | |
| 34 | 34.0 | | | RC<br>RC | 100<br>100 | 83<br>11 | 0.13<br>0.13 | | |
| | SHALE: GREENISH GREY, CALCAREOUS. (CABOT HEAD FORMATION) | CH | | | | | | | |
| | 35.1 | | | | | | | | |
| 36 | BOREHOLE TERMINATED AT 35.1 m IN SHALE. | | | | | | | | |
| 38 | | | | | | | | | |
| 40 | | | | | | | | | NOTE:<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FORMATION<br>CH: CABOT HEAD FORMATION |

# BOREHOLE NO. 98-9



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** DECEMBER 15,16 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE **GEOLOGIST:** KJF

**GROUND ELEVATION:** 525.9 mASL **REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec ($E^{-11}$ – $E^{-4}$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | LOCATED IN NORTHWEST CORNER OF EXISTING QUARRY. |
| 0.6 | OVERBURDEN: MEDIUM BROWN CLAYEY SILT TILL. | | 102 mm ID CASING | RC | 47 | 0 | N/A | | 102 mm CASING SET AT 1.7 m. |
| 2 | DOLOSTONE: LIGHT BROWNISH GREY TO VERY LIGHT GREY, MEDIUM TO COARSE GRAINED WITH A CRAGGY APPEARANCE, IRREGULAR BEDDING. (AMABEL FORMATION, UNIT 1) – FOSSILS THROUGHOUT | AMABEL FORMATION UNIT 1 | | RC | 95 | 65 | 0.26 | | |
| | – IRREGULARLY SHAPED VUGS 2–3% | | | RC | 100 | 55 | 0.23 | | |
| 4 | – OCCASIONAL FLANK FACIES UNITS INTERBEDDED UP TO 300 mm THICK. | | | RC | 100 | 66 | 0.24 | | |
| | – BROWN CLAYEY SILT INFILLING WITH RUSTY STAINING ON FRACTURES AND VUGS | | | | | | | | |
| 6 | | | | RC | 100 | 88 | 0.23 | | |
| | | | | RC | 100 | 88 | 0.24 | | |
| 8 | | | | | | | | $6.7X10^{-6}$ | |
| | | | | RC | 100 | 100 | 0.25 | | |
| 10 | | | | | | | | | |
| | | | | RC | 100 | 93 | 0.28 | | |
| 12 | | | | | | | | $7.8X10^{-6}$ | |
| | | | | RC | 100 | 73 | 0.27 | | |
| | | | | RC | 100 | 88 | 0.28 | | |
| 14 | | | | | | | | $2.2X10^{-6}$ | |
| | | | | RC | 100 | 89 | 0.37 | | |
| 16 | | | | | | | | | |
| | | | | RC | 100 | 79 | 0.23 | | |
| 18 | | | | | | | | $1.0X10^{-6}$ | |
| | | | | RC | 100 | 85 | 0.27 | | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |
| | | | | RC | 100 | 92 | 0.27 | $3.2X10^{-7}$ | |
| 20 | | | OPEN HQ BOREHOLE | | | | | | |

# BOREHOLE NO. 98-9



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 15,16 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 525.9 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec ($E^{-11}$ – $E^{-4}$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| | 20.1 DOLOSTONE: (CONT) | | | | | | | | LOCATED IN NORTHWEST CORNER OF EXISTING QUARRY. |
| | DOLOSTONE: LIGHT GREY, MEDIUM GRAINED WITH A DULL CHALKY APPEARANCE, SLIGHT RUSTY STAINING THROUGHOUT, UNIFORM DISTRIBUTION OF VUGS, 1–2%, HORIZONTAL TO SUBHORIZONTAL BEDDING. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | RC | 100 | 95 | 0.22 | $3.2X10^{-7}$ | |
| 22 | | | | | | | | | |
| | – BECOMING DARKER GREY WITH DEPTH | | | RC | 100 | 95 | 0.25 | | |
| 24 | | | | | | | | $8.5X10^{-8}$ | |
| | | | | RC | 100 | 89 | 0.20 | | |
| | – 0.2 m REEFAL FACIES AT 25.9 m AND 34.7 m. | | | RC | 100 | 100 | 0.28 | | |
| 26 | | | | | | | | | |
| | | | | RC | 100 | 90 | 0.34 | $8.5X10^{-7}$ | |
| 28 | | | | | | | | | |
| | | | | RC | 100 | 92 | 0.29 | | |
| 30 | | | | | | | | | |
| | | | | RC | 100 | 85 | 0.26 | $6.3X10^{-7}$ | |
| 32 | | | | | | | | | |
| | | | | RC | 100 | 90 | 0.29 | | |
| | | | | RC | 100 | 95 | 0.28 | $3.4X10^{-7}$ | |
| 34 | | | | | | | | | |
| | | | | RC | 100 | 93 | 0.31 | | |
| 36 | | | | | | | | | |
| | | | | RC | 100 | 92 | 0.26 | $1.4X10^{-6}$ | |
| 38 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.23 | | |
| | | | | RC | 100 | 95 | N/A | $1.7X10^{-7}$ | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |
| 40 | | | | | | | | | |

# BOREHOLE NO. 98-9



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 15,16 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 525.9 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 40 | DOLOSTONE: (CONT)<br>– GRADATIONAL LOWER CONTACT OVER ±1 m INTERVAL | UNIT 2 | | RC | 100 | 85 | 0.22 | $1.7X10^{-7}$ | LOCATED IN NORTHWEST CORNER OF EXISTING QUARRY.<br>FIRST STYLOLITE AT 40.6 m. |
| 41.8 / 42 | DOLOSTONE: MEDIUM GREY TO BUFF GREY WITH A CREAMY APPEARANCE, FINE GRAINED.<br>– STYLOLITES AND OCCASIONAL THIN SHALE INTERBEDS UP TO 2 mm THICK | FOSSIL HILL FORMATION | OPEN HQ BOREHOLE | RC | 100 | 73 | 0.17 | $3.1X10^{-8}$ | |
| 44 | | | | RC | 100 | 75 | 0.17 | | |
| 46 | | | | RC | 43 | 41 | 0.19 | $4.1X10^{-8}$ | |
| 48 | – 105 mm SHALE BED AT 47.5 m. | | | RC | N/A | N/A | 0.01 | | |
| 48.0 / 48.5 | SHALE: GREENISH GREY, CALCAREOUS. (CABOT HEAD FORMATION)<br>BOREHOLE TERMINATED AT 48.5 m IN SHALE. | CH | | | | | | | |
| 50 | | | | | | | | | |
| 52 | | | | | | | | | |
| 54 | | | | | | | | | |
| 56 | | | | | | | | | |
| 58 | | | | | | | | | |
| 60 | | | | | | | | | |

NOTE:
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FORMATION
CH: CABOT HEAD FORMATION

# BOREHOLE NO. 98-10



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** JANUARY 18,19 1999

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 519.4 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % 10 20 30 (Wp — WL) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | LOCATED IN CENTRAL PART OF EXISTING QUARRY ON QUARRY FLOOR. |
| | OVERBURDEN: MEDIUM BROWN FILL AND SILTY CLAY TILL. | OVERBURDEN | 102 mm ID CASING | AS | | | | | | | 102 mm ID CASING SET TO 3.1 m. |
| 2 | | | | | | | | | | | |
| 2.3 | | | | RC | | | 100 | 0 | N/A | | CASING STICKUP 230 mm. |
| | DOLOSTONE: INTERBEDDED REEFAL AND FLANK FACIES, LIGHT GREY TO BUFF GREY WITH A FAINT RUSTY TINGE, CHALKY APPEARANCE, MEDIUM TO COARSE GRAINED, IRREGULARLY SHAPED VUGS 1–4%, FOSSILS AND FOSSIL REMNANTS. (AMABEL FORMATION, UNIT 2/1) | AMABEL FORMATION UNIT 2/1 | | RC | | | 100 | 58 | N/A | | BROKEN BEDROCK AT SURFACE 1.8 m TO 2.3 m. |
| 4 | | | | RC | | | 100 | 100 | 0.17 | | |
| 6 | | | | RC | | | 100 | 97 | 0.29 | | |
| 8 | | | | RC | | | 100 | 68 | 0.30 | | |
| 10 | | | | RC | | | 100 | 92 | 0.26 | | |
| 11.0 | | | | RC | | | 100 | 90 | 0.37 | | |
| | DOLOSTONE: LIGHT TO MEDIUM GREY, WITH A RUSTY TINGE TO 27.7 m, MEDIUM GRAINED, HORIZONTAL TO SUBHORIZONTAL BEDDING. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | RC | | | 100 | 82 | 0.28 | | |
| 12 | | | | | | | | | | | |
| | – VUGS 1–2%, UNIFORMLY DISTRIBUTED | | | RC | | | 100 | 82 | 0.27 | | |
| 14 | – OCCASIONAL REEFAL FACIES BEDS UP TO 0.1 m THICK FROM 11.0 m TO 16.1 m. | | | | | | | | | | |
| | – FOSSIL REMNANTS | | | RC | | | 100 | 95 | 0.25 | | |
| 16 | | | | | | | | | | | |
| | | | | RC | | | 100 | 88 | 0.34 | | |
| 18 | | | | | | | | | | | |
| | | | | RC | | | 100 | 100 | 0.32 | | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |
| 20 | | | | RC | | | 100 | 81 | 0.31 | | |

# BOREHOLE NO. 98-10



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** JANUARY 18,19, 1999
**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF
**GROUND ELEVATION:** 519.4 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % (10 20 30; $W_P$ $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE: (CONT) | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | | | | | | LOCATED IN CENTRAL PART OF EXISTING QUARRY ON QUARRY FLOOR. |
| 22 | | | | RC | 100 | 100 | 0.29 | | |
| | | | | RC | 100 | 95 | 0.29 | | |
| 24 | | | | RC | 100 | 92 | 0.37 | | |
| 26 | | | | RC | 100 | 98 | 0.27 | | |
| | | | | RC | 100 | 92 | N/A | | |
| 28 | | | | RC | 100 | 94 | 0.22 | | |
| 30 | – FIRST STYLOLITE AT 30.6 m. | | | RC | 100 | 100 | 0.26 | | |
| 32 | GRADATIONAL LOWER CONTACT OVER ±1 m. | | | RC | 100 | 93 | N/A | | |
| 31.9 | DOLOSTONE: LIGHT TO MEDIUM GREY TO CREAMY BUFF GREY, BECOMING DARKER WITH DEPTH, FINE GRAINED. | FOSSIL HILL FORMATION | | | | | | | |
| | – OCCASIONAL STYLOLITES AND THIN SHALE BEDS UP TO 2 mm<br>– ARGILLACEOUS BELOW 37.5 m | | | RC | 100 | 87 | 0.14 | | |
| 34 | | | | | | | | | |
| 36 | | | | RC | 100 | 88 | 0.17 | | |
| | | | | RC | 98 | 55 | 0.26 | | |
| 37.8 | – 110 mm SHALE BED AT 37.3 m. | | | | | | | | |
| 38 | | | | | | | | | |
| 37.9 | SHALE: GREENISH GREY, CALCAREOUS. (CABOT HEAD FORMATION) | CH | | | | | | | NOTE:<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FORMATION<br>CH: CABOT HEAD FORMATION |
| | BOREHOLE TERMINATED AT 37.9 m IN SHALE. | | | | | | | | |
| 40 | | | | | | | | | |

# BOREHOLE NO. 98-11



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 22,23 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 522.2 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % (10 20 30; $W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | |
| | OVERBURDEN: GRAVEL FILL, LIGHT GREY, DRY TO MOIST. (FOUNDATION FOR PLANT) | OVERBURDEN | 102 mm ID CASING | AS | | | | | | | LOCATED IN CENTRAL PART OF EXISTING QUARRY ON QUARRY FLOOR. 102 mm ID CASING SET TO 5.6 m. |
| 2 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 4.9 | | | | RC | | | 73 | 0 | N/A | | |
| 6 | DOLOSTONE: LIGHT GREY BROWN TO BUFF GREY WITH A MOTTLED APPEARANCE, MEDIUM TO COARSE GRAINED. (AMABEL FORMATION, UNIT 1) – IRREGULAR SHAPED VUGS INCREASING TO 5–6% BELOW 17.4 m. | AMABEL FORMATION UNIT 1 | OPEN HQ BOREHOLE | RC | | | 100 | 76 | 0.22 | | BROKEN BEDROCK SURFACE. |
| 8 | – BROWN CLAYEY SILT INFILLING WITH RUSTY STAINING ON FRACTURES AND VUGS. | | | RC | | | 100 | 48 | 0.25 | | |
| 10 | – FOSSILS THROUGHOUT | | | RC | | | 100 | 82 | 0.22 | | |
| 12 | | | | RC | | | 100 | 92 | 0.22 | | |
| 14 | | | | RC | | | 100 | 82 | 0.21 | | |
| 16 | | | | RC | | | 100 | 46 | 0.27 | | |
| 18 | | | | RC | | | 100 | 53 | 0.25 | | |
| 20 | | | | RC | | | 100 | 58 | 0.26 | | |
| | | | | RC | | | 100 | 83 | 0.25 | | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |
| | | | | RC | | | 100 | 65 | 0.26 | | |

# BOREHOLE NO. 98-11



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** DECEMBER 22,23 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE **GEOLOGIST:** KJF

**GROUND ELEVATION:** 522.2 mASL **REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % (10 20 30; $W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE: (CONT) | AMABEL UNIT 1 | OPEN HQ BOREHOLE | | | | | | | | LOCATED IN CENTRAL PART OF EXISTING QUARRY ON QUARRY FLOOR. |
| | | | | RC | | | 100 | 55 | N/A | | |
| 22 | | | | | | | | | | | |
| | 22.9 | | | RC | | | 100 | 68 | N/A | | |
| 24 | DOLOSTONE: LIGHT BUFF GREY TO A MEDIUM GREY WITH A CHALKY APPEARANCE, MEDIUM TO FINE GRAINED, HORIZONTAL TO SUBHORIZONTAL BEDDING. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | | RC | | | 100 | 48 | 0.23 | | |
| | – FAINT RUSTY STAINING THROUGHOUT | | | | | | | | | | |
| 26 | | | | RC | | | 100 | 84 | 0.26 | | |
| | | | | RC | | | 98 | 95 | 0.27 | | |
| 28 | –VUGS 1–2% WITH A UNIFORM DISTRIBUTION | | | | | | | | | | |
| | | | | RC | | | 100 | 93 | 0.23 | | |
| 30 | | | | | | | | | | | |
| | – FOSSIL REMNANTS THROUGHOUT | | | RC | | | 98 | 94 | 0.26 | | |
| 32 | – GRADATIONAL LOWER CONTACT OVER ±1 m | | | RC | | | 98 | 95 | 0.25 | | |
| | – FIRST STYLOLITE AT 32.7 m. | | | | | | | | | | |
| | 33.4 | | | RC | | | 100 | 55 | 0.22 | | |
| 34 | DOLOSTONE: LIGHT GREY TO MEDIUM CREAMY GREY TO BROWN, FINE TO MEDIUM GRAINED. | FOSSIL HILL FORMATION | | | | | | | | | |
| | | | | RC | | | 100 | 100 | 0.20 | | |
| 36 | – OCCASIONAL STYLOLITES AND SHALE INTERBEDS UP TO 2 mm THICK | | | | | | | | | | |
| | | | | RC | | | 100 | 87 | 0.19 | | |
| 38 | | | | | | | | | | | |
| | | | | RC | | | 100 | 98 | 0.29 | | |
| | – PYRITE CRYSTALS AT 39.0 m. | | | | | | | | | | |
| 40 | | | | RC | | | 100 | N/A | 0.20 | | |

NOTE:
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FORMATION
CH: CABOT HEAD FORMATION

# BOREHOLE NO. 98-11



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** DECEMBER 22,23 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE **GEOLOGIST:** KJF

**GROUND ELEVATION:** 522.2 mASL **REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % 10 20 30 ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | | | | | | | | | | | |
| 40.6 | DOLOSTONE: (CONT) – 80 mm SHALE BED AT 40.1 m. | FH | OPEN HQ BOREHOLE | | | | | | | | LOCATED IN CENTRAL PART OF EXISTING QUARRY ON QUARRY FLOOR. |
| 41.2 | SHALE: GREY GREENISH, CALCAREOUS. (CABOT HEAD FORMATION) | CH | | | | | | | | | |
| 42 | BOREHOLE TERMINATED AT 41.2 m IN SHALE. | | | | | | | | | | |
| 44 | | | | | | | | | | | |
| 46 | | | | | | | | | | | |
| 48 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |
| 52 | | | | | | | | | | | |
| 54 | | | | | | | | | | | |
| 56 | | | | | | | | | | | |
| 58 | | | | | | | | | | | |
| 60 | | | | | | | | | | | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |

# BOREHOLE NO. 98-12



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 21, 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 526.7 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % 10 20 30 $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | |
| | OVERBURDEN: CLAYEY SILT, MEDIUM BROWN. | OVERBURDEN | 102 mm ID CASING | AS | | | | | | | LOCATED IN NORTHEAST CORNER OF EXISTING QUARRY. 102 mm ID CASING SET TO 5.6 m. BOREHOLE SET INTO BERM |
| 2 | | | | | | | | | | | |
| 4 | 4.0 | | | RC | | | 77 | 0 | N/A | | |
| | DOLOSTONE: LIGHT GREYISH BROWN TO MOTTLED GREYISH BUFF BROWN APPEARANCE. MEDIUM TO COARSE GRAINED, CRAGGY APPEARANCE, FOSSILS THROUGHOUT. (AMABEL FORMATION, UNIT 1) | AMABEL FORMATION UNIT 1 | OPEN HQ BOREHOLE | RC | | | 100 | 46 | N/A | | |
| 6 | – IRREGULARLY SHAPED VUGS 2–3% | | | RC | | | 100 | 82 | 0.29 | | |
| | – SOME CLAYEY SILT INFILLING AND RUSTY STAINS ON FRACTURES | | | RC | | | 100 | 83 | 0.16 | | |
| 8 | | | | | | | | | | | |
| | | | | RC | | | 100 | 93 | 0.16 | | |
| 10 | | | | | | | | | | | |
| | | | | RC | | | 100 | 80 | 0.30 | | |
| 12 | | | | | | | | | | | |
| | | | | RC | | | 100 | 88 | 0.30 | | |
| | | | | RC | | | 100 | 97 | 0.31 | | |
| 14 | | | | | | | | | | | |
| | | | | RC | | | 100 | 95 | 0.26 | | |
| 16 | | | | | | | | | | | |
| | 16.7 | | | RC | | | 100 | 100 | 0.31 | | |
| | DOLOSTONE: LIGHT TO MEDIUM BROWN GREY WITH FAINT RUSTY STAINING THROUGHOUT, MEDIUM GRAINED, CHALKY APPEARANCE. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | | | | | | | | | |
| 18 | | | | RC | | | 100 | 100 | 0.26 | | |
| | | | | RC | | | 100 | 97 | N/A | | |
| 20 | | | | | | | | | | | |

NOTE:
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FORMATION
CH: CABOT HEAD FORMATION

# BOREHOLE NO. 98-12



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 21, 1998
**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF
**GROUND ELEVATION:** 526.7 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % 10 20 30 $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE: (CONT) | AMABEL FORMATION UNIT 2 | OPEN HQ BOREHOLE | | | | | | | | LOCATED IN NORTHEAST CORNER OF EXISTING QUARRY. |
| | | | | RC | | | 100 | 96 | 0.37 | | |
| 22 | – VUGS 1–2% WITH A UNIFORM DISTRIBUTION<br>– FOSSIL REMNANTS | | | RC | | | 100 | 90 | 0.34 | | |
| 24 | – HORIZONTAL TO SUBHORIZONTAL BEDDING | | | RC | | | 100 | 52 | 0.29 | | |
| | | | | RC | | | 100 | 52 | 0.37 | | |
| 26 | | | | | | | | | | | |
| | | | | RC | | | 100 | 80 | 0.29 | | |
| 28 | | | | | | | | | | | |
| | | | | RC | | | 100 | 95 | 0.32 | | |
| 30 | | | | | | | | | | | |
| | | | | RC | | | 100 | 87 | 0.29 | | |
| | – FIRST STYLOLITE AT 30.9 m. | | | | | | | | | | |
| 32 | | | | RC | | | 100 | 97 | 0.28 | | |
| | – BECOMING FINER GRAINED AND LESS VUGGY BELOW 32.5 m. | | | RC | | | 100 | 92 | 0.25 | | |
| 34 | | | | | | | | | | | |
| | | | | RC | | | 100 | 90 | 0.28 | | |
| | – GRADATIONAL LOWER CONTACT OVER ±2 m INTERVAL | | | | | | | | | | |
| 36 | 36.0 | | | | | | | | | | |
| | DOLOSTONE: MEDIUM GREY TO LIGHT CREAMY GREY, MEDIUM TO FINE GRAINED, OCCASIONAL THIN SHALE LAMINAE OR STYLOLITE UP TO 2 mm THICK. | FOSSIL HILL FORMATION | | RC | | | 100 | 97 | 0.17 | | |
| 38 | – INCREASING SHALE CONTENT BELOW 37.5 m. | | | | | | | | | | |
| | | | | RC | | | 100 | 89 | N/A | | |
| | – MINOR PYRITE MINERALIZATION AT 39.5 m AND 40.8 m. | | | | | | | | | | NOTE:<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FORMATION<br>CH: CABOT HEAD FORMATION |
| | | | | RC | | | 100 | 97 | N/A | | |
| 40 | | | | | | | | | | | |

# BOREHOLE NO. 98-12



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** DECEMBER 21, 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE
**GEOLOGIST:** KJF

**GROUND ELEVATION:** 526.7 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % 10 20 30 $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | | | | | | | | | | | |
| | DOLOSTONE: (CONT) | | | | | | | | | | LOCATED IN NORTHEAST CORNER OF EXISTING QUARRY. |
| | – 50 mm SHALE BED AT 41.6 m. | FH | OPEN HQ BH | RC | | | 97 | 97 | N/A | | |
| 42 | – PYRITE CRYSTALS AT 41.8 m IN 20 mm VUG. | | | | | | | | | | |
| 42.1 | SHALE: GREENISH GREY, CALCAREOUS. (CABOT HEAD FORMATION) | CH | | RC | | | 100 | 0 | 0.17 | | |
| 42.4 | BOREHOLE TERMINATED AT 42.4 m IN SHALE. | | | | | | | | | | |
| 44 | | | | | | | | | | | |
| 46 | | | | | | | | | | | |
| 48 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |
| 52 | | | | | | | | | | | |
| 54 | | | | | | | | | | | |
| 56 | | | | | | | | | | | |
| 58 | | | | | | | | | | | |
| 60 | | | | | | | | | | | NOTE: AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FORMATION CH: CABOT HEAD FORMATION |

# BOREHOLE NO. 98-13



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** DECEMBER 17,18,19 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE **GEOLOGIST:** KJF

**GROUND ELEVATION:** 522.3 mASL **REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION m/min | WATER CONTENT % (10 20 30) $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | OVERBURDEN: MEDIUM BROWN SILTY CLAY TILL, OCCASIONAL BOULDERS. | OVERBURDEN | 102 mm ID CASING | AS | | | | | LOCATED ON EAST SIDE OF EXISTING QUARRY. 102 mm ID CASING SET TO 9.7 m. |
| 8.6 | BOULDERS ENCOUNTERED 0.5 m ABOVE BEDROCK. | | | | | | | | |
| 8.6 | DOLOSTONE: LIGHT GREY TO VERY LIGHT GREY, MEDIUM TO COARSE GRAINED. (AMABEL FORMATION, UNIT 1) | AMABEL FORMATION UNIT 1 | OPEN HQ BOREHOLE | RC | 66 | 41 | N/A | | |
| 10 | – IRREGULAR BEDDING WITH AN OVERALL CRAGGY AND WEATHERED APPEARANCE<br>– FOSSILS AND FOSSIL REMNANTS | | | RC | 96 | 50 | 0.22 | | |
| 12 | | | | RC | 80 | 100 | N/A | | |
| 12 | – RUST STAINED FRACTURES WITH CLAYEY SILT INFILLING | | | RC | 100 | 88 | 0.20 | | |
| 14 | – IRREGULARLY SHAPED VUGS 3–5% WITH LOCAL ZONES TO 10%<br>– 250 mm VOID AT 14.3 m. | | | RC | 83 | 61 | N/A | | |
| 16 | | | | RC | 100 | 92 | N/A | | |
| 16 | – SOME FLANK FACIES INTERBEDDED, 0.6 m BED AT 13.7 m AND 1.2 m BED AT 17.1 m, LIGHT GREY WITH A CHALKY APPEARANCE | | | RC | 100 | 35 | 0.16 | | |
| 18 | | | | RC | 100 | 78 | 0.20 | | NOTE:<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FORMATION<br>CH: CABOT HEAD FORMATION |
| 20 | | | | RC | 100 | 100 | 0.29 | | |

# BOREHOLE NO. 98-13



**PROJECT NAME:** ROCK QUALITY INVESTIGATION - DUNTROON QUARRY **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** DECEMBER 17,18,19 1998

**BOREHOLE TYPE:** HQ SIZED (64 mm) ROCK CORE **GEOLOGIST:** KJF

**GROUND ELEVATION:** 522.3 mASL **REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | DRILL PENETRATION mm/sec | WATER CONTENT % (10 20 30) $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE: (CONT) | UNIT 1 | OPEN HQ BOREHOLE | | | | | | | | LOCATED ON EAST SIDE OF EXISTING QUARRY. |
| | | | | RC | | | 93 | 43 | 0.18 | | |
| 22 | 22.1 | | | | | | | | | | |
| | DOLOSTONE: LIGHT TO MEDIUM GREY, MEDIUM GRAINED, CHALKY APPEARANCE, FAINT RUSTY TINGE. (AMABEL FORMATION, UNIT 2) | AMABEL FORMATION UNIT 2 | | RC | | | 100 | 78 | 0.23 | | |
| | – VUGS 2–3% WITH A UNIFORM DISTRIBUTION | | | | | | | | | | |
| 24 | – HORIZONTAL TO SUBHORIZONTAL BEDDING | | | RC | | | 100 | 45 | 0.27 | | |
| | – 0.7 m SILT INFILLED VERTICAL FRACTURE AT 25.6 m. | | | RC | | | 100 | 68 | 0.30 | | |
| 26 | | | | | | | | | | | |
| | | | | RC | | | 100 | 62 | 0.19 | | |
| | – OCCASIONAL REEFAL FACIES INTERBEDS ±1 m BED AT 28.0 m | | | | | | | | | | |
| 28 | | | | | | | | | | | TWO 100 mm ZONES OF BROKEN RECOVERY AT 28.7 m AND 30.2 m. |
| | | | | RC | | | 100 | 53 | 0.30 | | |
| 30 | | | | | | | | | | | |
| | | | | RC | | | 100 | 75 | 0.26 | | |
| | – FIRST STYLOLITE AT 31.0 m. | | | | | | | | | | |
| 32 | – GRADATIONAL LOWER CONTACT OVER ±2 m INTERVAL | | | RC | | | 100 | 85 | 0.28 | | |
| | 32.8 | | | | | | | | | | |
| | DOLOSTONE: LIGHT TO MEDIUM BUFF GREY TO CREAM COLOURED, FINE GRAINED. | FOSSIL HILL FORMATION | | RC | | | 100 | 76 | 0.28 | | |
| 34 | – STYLOLYTES AND OCCASIONAL THIN SHALE INTERBEDS UP TO 2 mm INCREASING WITH DEPTH. | | | | | | | | | | |
| | | | | RC | | | 100 | 98 | 0.23 | | |
| 36 | | | | | | | | | | | |
| | | | | RC | | | 100 | 65 | N/A | | |
| | – 35 mm SHALE BED AT 37.6 m.<br>– PYRITE CRYSTALS AT 37.7 m. | | | | | | | | | | |
| 38 | 37.9 | | | | | | | | | | |
| | 38.0 SHALE: GREENISH GREY, CALCAREOUS. (CABOT HEAD FORMATION) | CH | | | | | | | | | NOTE: |
| | BOREHOLE TERMINATED AT 38.0 m IN SHALE. | | | | | | | | | | AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FORMATION<br>CH: CABOT HEAD FORMATION |
| 40 | | | | | | | | | | | |

# BOREHOLE NO. OW99-1

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** MAY, 1999

**BOREHOLE TYPE:** 150 mm AIRTRACK HOLE | **GEOLOGIST:**

**GROUND ELEVATION:** 519.0 mASL | **CONTRACTOR:** GEORGIAN AGGREGATES

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | DOLOSTONE BEDROCK | | | | | | | | | | 100 mm ø PVC PROTECTIVE CASING |
| 5 | | | | | | | | | | | |
| 10 | | | | | | | | | | | 100 mm ø OPEN HOLE |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 29.5 / 30 | HOLE TERMINATED AT 29.5 m BELOW GRADE | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |

# BOREHOLE NO. OW99-2

**PROJECT NAME:** DUNTROON QUARRY
**PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** MAY, 1999

**BOREHOLE TYPE:** 100 mm AIRTRACK HOLE
**GEOLOGIST:**

**GROUND ELEVATION:** 500.6 mASL
**CONTRACTOR:** GEORGIAN AGGREGATES

| DEPTH (m) | | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | DOLOSTONE BEDROCK | | | | | | | | | | 100 mm ø PROTECTIVE CASING |
| 5 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | 100 mm ø OPEN HOLE |
| 15 | | | | | | | | | | | | |
| 20 | 19.7 | | | | | | | | | | | |
| | | HOLE TERMINATED AT 19.7 m BELOW GRADE | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | |

# BOREHOLE NO. PW99-1

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** JULY 09, 1999

**BOREHOLE TYPE:** 150 mm ROTARY WATER WELL | **GEOLOGIST:**

**GROUND ELEVATION:** 513.9 mASL | **CONTRACTOR:** HIGHLAND WATERWELLS

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | WELL DRILLERS LOG | | | | | | | | | | |
| | BROWN SANDY CLAY WITH GRAVEL | | | | | | | | | | 150 mm ø STEEL CASING |
| 4.3 | | | | | | | | | | | BENSEAL PLUG |
| 5 | LIGHT BROWN BROKEN LIMESTONE (OVERBURDEN) | | | | | | | | | | 150 mm ø OPEN HOLE WELL |
| 9.4 | | | | | | | | | | | |
| 10 | LIGHT BROWN LIMESTONE, HARD | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 29.0 | | | | | | | | | | | |
| 30 | GREY LIMESTONE | | | | | | | | | | |
| 31.4 | | | | | | | | | | | |
| | BROWN LIMESTONE | | | | | | | | | | |
| 32.9 | | | | | | | | | | | |
| | WELL TERMINATED AT 32.9 m BELOW GRADE | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |

# BOREHOLE NO. PW99-2

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** MAY, 1999

**BOREHOLE TYPE:** 150 mm AIRTRACK HOLE | **GEOLOGIST:**

**GROUND ELEVATION:** 519.2 mASL | **CONTRACTOR:** GEORGIAN AGGREGATES

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | DOLOSTONE BEDROCK | | | | | | | | | | 150 mm ø PROTECTIVE CASING |
| 5 | | | | | | | | | | | 150 mm ø OPEN HOLE |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 34.4 | | | | | | | | | | | |
| 35 | HOLE TERMINATED AT 34.4 m BELOW GRADE | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |

# BOREHOLE NO. PW99-3

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** MAY, 1999

**BOREHOLE TYPE:** 150 mm AIRTRACK HOLE | **GEOLOGIST:**

**GROUND ELEVATION:** 500.9 mASL | **CONTRACTOR:** GEORGIAN AGGREGATES

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | DOLOSTONE BEDROCK | | | | | | | | | | 150 mm ø PROTECTIVE CASING |
| 5 | | | | | | | | | | | 150 mm ø OPEN HOLE |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 20.8 | | | | | | | | | | | |
| 21.4 | SHALE BEDROCK | | | | | | | | | | SHALE INTERPOLATED FROM BH98-1 |
| 25 | HOLE TERMINATED AT 21.4 m BELOW GRADE IN SHALE | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |

# BOREHOLE NO. BH02-1



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 4, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 522.6 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | E⁻¹¹ E⁻⁴ | |
| 2 | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVERBURDEN | H.Q. CASING | | | | | | LOCATED IN S.E. CORNER OF EXPANSION PROPERTY |
| 3.6 | | | | | | | | | |
| 4 | DOLOSTONE:<br>WHITE TO CREAMY, UNIFORM MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE. WEAKLY BEDDED. 2%–5% VUGS UP TO 16 mm IN SIZE.<br>– 5.5 m TO 5.7 m LIGHT GREY TO CREAMY, CHAOTIC BEDDED MEDIUM TO COARSE GRAINED DOLOSTONE WITH CHRINOIDAL FOSSIL FRAGMENTS UP TO 4 cm. | AMABEL FORMATION UNIT 2 | 5.2 m | RC | 98 | 98 | 0.15 | | |
| 6 | | | | RC | 98 | 73 | 0.15 | | |
| 8 | | | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.13 | | |
| 8.2 | | | | | | | | | |
| 10 | DOLOSTONE:<br>LIGHT GREY, WITH WHITE "SPECKLED" APPEARANCE, MEDIUM TO COARSE TEXTURE. WEAKLY BEDDED CRINOIDAL FOSSIL FRAGMENTS UP TO 3 cm.<br>– 9.0 m TO 9.9 m IRREGULAR VERTICAL FRACTURE WITH SLIGHT RUST STAINING | AMABEL FORMATION UNIT 1 | | RC | 98 | 76 | 0.18 | | |
| | | | | RC | 98 | 90 | 0.22 | 4.3E–6 | |
| 12 | –BELOW 10.7 m<br>LIGHT GREY TO CREAMY WHITE, CHAOTIC BEDDING, FOSSILIFEROUS, 2%–3% VUGS UP TO 3 cm WITH CRYSTALLINE CALCITE INFILL. | | | RC | 100 | 100 | 0.27 | 2.5E–6 | |
| 12.6 | | | | | | | | | |
| 14 | DOLOSTONE:<br>MOTTLED LIGHT/ MEDIUM GREY, UNIFORM MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE. WEAKLY DEVELOPED BEDDING. 3%–5% VUGS UP TO 9 mm WITH BROWN SEDIMENT INFILL. BECOMING FINE GRAINED WITH DEPTH.<br>FRACTURES HAVE BROWN SEDIMENT ON FACES. | AMABEL FORMATION UNIT 2 | | RC | 98 | 100 | 0.24 | 5.1E–08 | |
| | | | | RC | 100 | 100 | 0.23 | 7.0E–08 | |
| 16 | | | | RC | 100 | 100 | 0.19 | 2.4E–07 | |
| 18 | –BELOW 17.4 m<br>UNIFORM FINE TO MEDIUM GRAINED, AND OCCASIONAL POORLY DEVELOPED BROWN STYLOLITE. | | | RC | 100 | 100 | 0.23 | 5.8E–08 | |
| | | | | RC | 100 | 97 | 0.17 | 7.6E–08 | |
| 20 | | | | | | | | | |

NOTE
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FM
CH: CABOT HEAD FM

# BOREHOLE NO. BH02-1



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 4, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 522.6 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE CONTINUED | AMABEL FORMATION UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.25 | 1.1E-07 | LOCATED IN S.E. CORNER OF EXPANSION PROPERTY |
| 22 | −21.9 m GREY, UNIFORM MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE AND "SPECKLED" APPEARANCE. UP TO 5% CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. | | | RC | 97 | 95 | 0.25 | 4.0E-7 | |
| 24 | − 24.0 TO 24.8 m VERTICAL FRACTURES WITH WEAK RUSTY ORANGE STAINING, PARTIALLY RESEALED WITH CARBONATE. FRACTURES OCCUR DOMINANTLY PARALLEL TO BEDDING. | | | RC | 100 | 78 | 0.30 | 5.8E-7 | |
| 26 | | | | RC | 100 | 100 | 0.27 | 7.9E-7 | |
| 28 | | | | RC | 98 | 100 | 0.25 | 6.9E-08 | |
| 30 | − 30.4 m TO 31.1 m MOTTLED MEDIUM GREY TO BROWN FINE GRAINED DOLOSTONE | | | RC | 100 | 100 | 0.13 | 8.1E-08 | |
| 32 | | | | RC | 97 | 100 | 0.19 | 1.3E-07 | |
| 33.4 | | | | RC | 98 | 100 | 0.22 | | |
| 34 | DOLOSTONE: MOTTLED BLUE−GREY/ GREY FINE GRAINED WITH SACCHAROIDAL TEXTURE. INCREASING STYLOLITES, BECOMING GREY IN COLOUR WITH DEPTH. OCCASIONAL PARTING OF PALE GREEN TO GREY SHALE UP TO 2 mm THICK. OCCASIONAL PINCH−AND−SWELL TYPE BEDS AND NODULES OF WHITE TO LIGHT GREY CHERT. BECOMING PINKISH−BROWN BELOW 35.7 m WITH UP TO 2% PATCHY MASSIVE PYRITE. | FOSSIL HILL FM | | RC | 100 | 100 | 0.19 | | |
| 36 | FRACTURES OCCUR DOMINANTLY AT STYLOLITES/ PARTINGS. | | | RC | 100 | 100 | 0.15 | 2.9E-09 | |
| 37.4 | | | | RC | 100 | 100 | 0.12 | | |
| 38 | SHALE: GREENISH−GREY SHALE, VARIABLE SOFT TO HARD, FISSILE. | CH | | RC | 100 | 100 | 0.12 | 9.0E-09 | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 39.5 | BOREHOLE TERMINATED AT 39.5 m IN SHALE. | | | RC | 100 | 100 | 0.15 | 4.8E-08 | CIRCULATION MAINTAINED FOR ENTIRE BOREHOLE. |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH02-2



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 10, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 522.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E⁻¹¹ – E⁻⁴) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVERBURDEN | H.Q. CASING | | | | | | LOCATED IN NE QUADRANT OF PROPERTY |
| 6.2 | DOLOSTONE:<br>MOTTLED LIGHT GREY/ LIGHT BROWN, MEDIUM GRAINED UNIFORM TEXTURE, WEAKLY BEDDED. | UNIT 2 | 7.0 m | RC | 92 | 96 | 0.78 | | |
| 7.0 | DOLOSTONE:<br>PATCHY LIGHT GREY/ LIGHT BROWN, MEDIUM GRAINED WITH "SPECKLED" APPEARANCE. CRINOIDAL FOSSIL FRAGMENTS UP TO 5%, WEAKLY DEVELOPED BEDDING.<br>FRACTURES MAINLY PARALLEL TO BEDDING. | AMABEL FORMATION UNIT 1 | OPEN H.Q. BOREHOLE | RC | 93 | 100 | 0.28 | | |
| | | | | RC | 98 | 100 | 0.20 | | |
| | | | | RC | 100 | 100 | 0.27 | 1.1E−7 | |
| | | | | RC | 100 | 98 | 0.28 | 3.1E−7 | |
| | | | | RC | 100 | 100 | 0.23 | | |
| 14.7 | DOLOSTONE:<br>MOTTLED LIGHT GREY/ MEDIUM GREY, MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE. NUMEROUS CRINOIDAL FOSSIL FRAGMENTS WITH WEAKLY DEVELOPED BEDDING. | UNIT 2 | | RC | 100 | 97 | 0.22 | 1.1E−6 | |
| 16.6 | DOLOSTONE:<br>MOTTLED LIGHT GREY/ MEDIUM GREY, MEDIUM TO COARSE GRAINED WITH CHAOTIC APPEARANCE AND FOSSIL FRAGMENTS. OVERALL "ROUGH" APPEARANCE, BRITTLE. OCCASIONAL BROWN STYLOLITE. | AMABEL UNIT 1 | | RC | 98 | 92 | 0.24 | 4.7E−7 | |
| | | | | RC | 100 | 100 | 0.26 | 2.7E−7 | |
| | | | | RC | 100 | 100 | 0.25 | 1.2E−7 | |

NOTE
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FM
CH: CABOT HEAD FM

# BOREHOLE NO. BH02-2



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 10, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 522.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E⁻¹¹ – E⁻⁴) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE CONTINUED | UNIT 1 | OPEN H.Q. BOREHOLE | | | | | 1.2E-7 | LOCATED IN NE QUADRANT OF PROPERTY |
| 21.2 | DOLOSTONE: PATCHY LIGHT GREY/ LIGHT BROWN MEDIUM TO FINE GRAINED, WITH SACCHAROIDAL TEXTURE. MODERATE TO WEAKLY DEVELOPED BEDDING WITH 1–2 mm CRINOIDAL FOSSIL FRAGMENTS PRODUCING LOCAL "SPECKLED" TEXTURE. OCCASIONAL BROWN MODERATE TO WELL DEVELOPED STYLOLITE, INCREASING WITH DEPTH. | AMABEL FORMATION UNIT 2 | | RC | 98 | 100 | 0.24 | 4.7E-7 | |
| 22 | | | | | | | | | |
| | | | | RC | 100 | 95 | 0.30 | | |
| 24 | | | | | | | | 5.0E-7 | |
| | | | | RC | 100 | 100 | 0.24 | | |
| 26 | | | | RC | 100 | 100 | 0.31 | 2.4E-7 | |
| | | | | RC | 98 | 100 | 0.29 | 5.8E-7 | |
| 28 | | | | | | | | | |
| | | | | RC | 98 | 100 | 0.26 | | |
| 30 | | | | | | | | 2.7E-7 | |
| | | | | RC | 100 | 100 | 0.21 | | |
| 32 | | | | RC | 100 | 100 | 0.20 | 3.7E-7 | |
| 32.6 | DOLOSTONE: MOTTLED BLUE–GREY TO GREY FINE TO MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE. OCCASIONAL STYLOLITE, BECOMING GREY IN COLOUR. OCCASIONAL 10 mm–SCALE PINCH–AND–SWELL TYPE BEDS/ NODULES OF LIGHT GREY CHERT. – AT 34.9 m BECOMING PINKISH–BROWN, FINE GRAINED WITH OCCASIONAL FAINT PARTINGS/ LAMINAE OF SHALE UP TO 3 mm THICK WITH UP TO 5 mm AGGLOMERATIONS OF PATCHY MASSIVE PYRITE. FRACTURES OCCUR MAINLY ALONG STYLOLITES/ LAMINAE. – 37.6 m TO 37.9 m SHALE INTERBED | FOSSIL HILL FORMATION | | RC | 100 | 100 | 0.18 | 1.8E-07 | |
| 34 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.14 | 5.9E-09 | |
| 36 | | | | | | | | | |
| | | | | | | | | 1.2E-07 | |
| 38 | | | | | | | | | CIRCULATION MAINTAINED FOR ENTIRE BOREHOLE. |
| 38.4 | SHALE: GREENISH–GREY, SOFT TO HARD, FISSILE. | CH | | | | | | | NOTE AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FM CH: CABOT HEAD FM |
| 39.5 | BOREHOLE TERMINATED AT 39.5 m IN SHALE. | | | | | | | | |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH02-3



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 12, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 529.7 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE | SAMPLE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | WATER CONTENT % 10 20 30 ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | |
| | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVERBURDEN | H.Q. CASING | | | | | | | | LOCATED NEAR CENTRE OF PROPERTY. |
| 2 | | | | | | | | | | | |
| 3.1 | | | | | | | | | | | |
| | DOLOSTONE:<br>LIGHT GREY MEDIUM TO COARSE GRAINED DOLOSTONE, CHAOTIC APPEARANCE WITH UP TO 10% WHITE FOSSIL FRAGMENTS, "HONEYCOMB" TEXTURE (CORAL) UP TO 30 mm. 2%–3% VUGS UP TO 13 mm. | AMABEL FORMATION UNIT 1 | | RC | | | 88 | 96 | 0.24 | | |
| 4 | | | 4.6 m | | | | | | | | |
| | | | OPEN H.Q. BOREHOLE (64 mm) | RC | | | 98 | 86 | 0.30 | | |
| 6 | – 5.8 m TO 6.7 m IRREGULAR VERTICAL FRACTURE WITH MODERATE ORANGE RUSTY STAINING ON FACES. | | | | | | | | | | |
| | | | | RC | | | 100 | 93 | 0.33 | | |
| 8 | | | | RC | | | 100 | 88 | 0.35 | | |
| | | | | | | | | | | | |
| | | | | RC | | | 56 | 76 | 0.41 | | |
| 10 | | | | | | | | | | | |
| | | | | RC | | | 0 | N/A | 0.53 | | |
| 12 | | | | | | | | | | | |
| 12.0 | | | | | | | | | | | |
| | BOREHOLE TERMINATED AT 12.0 m IN DOLOSTONE. | | DRY | | | | | | | | NO CORE RECOVERY IN LAST RUN. LOST CIRCULATION AT 9.5 m BELOW GROUND SURFACE. |
| 14 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| | | | | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 20 | | | | | | | | | | | |

# BOREHOLE NO. BH02-4



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 13, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 530.0 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | |
| | SILT: BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVER-BURDEN | H.Q. CASING | | | | | | LOCATED NEAR CENTRE OF PROPERTY |
| 1.3 | | | 3.0 m | | | | | | |
| | DOLOSTONE: LIGHT GREY, MEDIUM TO COARSE GRAINED DOLOSTONE, CHAOTIC BEDDING WITH LOCALLY UP TO 7% WHITE FOSSIL FRAGMENTS (POSSIBLY CORAL) WITH "HONEYCOMB" TEXTURE, UP TO 30 mm. 3%–5% VUGS UP TO 30 mm. | AMABEL FORMATION UNIT 1 | | RC | 100 | 67 | 0.22 | | |
| 2 | | | | | | | | | |
| | FRACTURES DOMINANTLY SUBHORIZONTAL, IRREGULAR. | | | RC | 100 | 100 | 0.25 | | |
| 4 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.31 | | |
| 6 | | | | | | | | | |
| | | | | RC | 100 | 90 | 0.26 | | |
| | | | | | | | | | |
| 8 | | | | RC | 98 | 100 | 0.30 | | |
| | | | OPEN H.Q. BOREHOLE | | | | | | |
| | | | | RC | 97 | 100 | 0.31 | | |
| 10 | | | | | | | | | |
| | | | | RC | 94 | 98 | 0.30 | | AT 11.0 m TEMPORARY LOSS OF CIRCULATION. (RECOVERED) |
| 12 | | | | | | | | | |
| | | | | RC | 94 | 100 | 0.30 | 2.5E–06 | |
| 13.1 | | | | | | | | | |
| | DOLOSTONE: MOTTLED LIGHT GREY/ LIGHT BROWN, WITH OCCASIONAL CREAM COLOURED BANDS, UNIFORM, MEDIUM GRAINED. OCCASIONAL CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. 1%–2% VUGS UP TO 20 mm WITH CRYSTALLINE CALCITE INFILLING. | AMABEL FORMATION UNIT 2 | | RC | 100 | 100 | 0.31 | 5.3E–07 | |
| 14 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.28 | | |
| 16 | | | | | | | | 4.5E–07 | |
| | | | | RC | 100 | 100 | 0.30 | | |
| 18 | | | | | | | | 2.2E–06 | |
| | | | | RC | 100 | 35 | 0.30 | | NOTE |
| | – 19.0 m TO 20.0 m IRREGULAR VERTICAL FRACTURE WITH MODERATE TO STRONG RUST STAINING. | | | | | | | | AMABEL FORMATION: UNIT 1: REEFAL FACIES UNIT 2: FLANK FACIES FH: FOSSIL HILL FM CH: CABOT HEAD FM |
| | | | | RC | 100 | 100 | 0.30 | 4.8E–07 | |
| 20 | | | | | | | | | |

# BOREHOLE NO. BH02-4



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 13, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 530.0 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | DOLOSTONE CONTINUED | AMABEL FORMATION UNIT 2 | OPEN H.Q. BOREHOLE | | | | | 4.8E−07 | LOCATED NEAR CENTRE OF PROPERTY |
| | FRACTURES BECOMING DOMINANTLY PARALLEL TO SUB−HORIZONTAL BEDDING. | | | RC | 100 | 62 | 0.35 | 8.5E−06 | |
| 22 | – 22.4 m TO 22.6 m GREY FINE GRAINED DOLOSTONE WITH WEAKLY DEVELOPED, CREAMY "STRIPED" APPEARANCE, BRITTLE. | | | RC | 98 | 100 | 0.30 | | |
| | – AT 23.2 m BECOMING UNIFORM WITH SACCHAROIDAL TEXTURE. | | | RC | 100 | 100 | 0.30 | 1.2E−05 | |
| 24 | | | | | | | | | |
| | | | | RC | 100 | 97 | 0.31 | 1.3E−06 | |
| 26 | | | | | | | | | |
| | | | | RC | 98 | 100 | 0.30 | 9.0E−08 | |
| 28 | – 27.5 m TO 27.6 m DIAGONAL FRACTURE WITH WEAK RUSTY STAINING. | | | RC | 100 | 100 | 0.30 | | |
| | | | | | | | | 1.5E−06 | |
| 30 | | | | RC | 100 | 100 | 0.21 | | |
| | – 30.1 m TO 31.0 m GREY FINE GRAINED DOLOSTONE WITH POORLY DEVELOPED, DISCONTINUOUS CREAMY "STRIPES". BRITTLE, CRUMBLY. LOCALLY UP TO 10% PATCHY VUGS WITH CALCITE CRYSTALS UP TO 2 mm. | | | RC | 100 | 95 | 0.23 | 7.4E−06 | |
| 32 | | | | | | | | | |
| | | | | RC | 98 | 100 | 0.23 | 1.2E−05 | |
| | – 33.1 m TO 35.3 m MOTTLED BROWN/ LIGHT BROWN FINE GRAINED DOLOSTONE WITH OCCASIONAL WISPY PARTING OF DULL GREEN SHALE. OCCASIONAL POORLY DEVELOPED BROWN STYLOLITE. INCREASING FREQUENCY WITH DEPTH. | | | RC | 100 | 100 | 0.26 | | |
| 34 | | | | | | | | 9.3E−06 | |
| 36 | | | | RC | 98 | 100 | 0.29 | | |
| | | | | RC | 100 | 100 | 0.30 | 8.1E−07 | |
| | – 35.3 TO 37.0 m GREY, UNIFORM, MEDIUM GRAINED DOLOSTONE WITH "SPECKLED" APPEARANCE. OCCASIONAL CRINOID FOSSIL FRAGMENTS, WEAKLY BEDDED. | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 38 | | | | RC | 100 | 100 | 0.24 | 9.9E−07 | |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH02-4



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 13, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 530.0 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E⁻¹¹ – E⁻⁴) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 40 | DOLOSTONE CONTINUED | AMABEL UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.31 | | LOCATED NEAR CENTRE OF PROPERTY |
| | FRACTURES OCCUR DOMINANTLY AT PARTINGS/LAMINAE. | | | RC | 100 | 85 | 0.24 | 7.6E−08 | |
| 42 | | | | | | | | | |
| | – 43.2 m TO 44.0 m MOTTLED BROWN/ GREY–BROWN FINE GRAINED DOLOSTONE. OCCASIONAL GREY SHALE PARTINGS UP TO 2 mm THICK. | | | RC | 98 | 100 | 0.21 | 5.4E−08 | |
| 44 | 44.0 | | | | | | | | |
| | DOLOSTONE: MOTTLED BLUE–GREY/GREY FINE GRAINED DOLOSTONE, OCCASIONAL GREY SHALE PARTINGS UP TO 3 mm THICK INCREASING WITH DEPTH. OCCASIONAL PINCH–AND–SWELL TYPE BEDS UP TO 3 cm THICK, OCCASIONAL NODULES OF LIGHT GREY CHERT TO 30 mm. | FOSSIL HILL FM | | RC | 100 | 100 | 0.18 | 6.1E−09 | |
| 46 | – AT 46.3 m BECOMING PINKISH–BROWN DOLOSTONE WITH 1%–2% PATCHY PYRITE. | | | RC | 100 | 100 | 0.20 | 8.0E−09 | |
| | | | | RC | 100 | 100 | 0.11 | 2.8E−08 | |
| 48 | | | | | | | | | |
| | 48.8 | | | | | | | | |
| | SHALE: GREENISH–GREY, SOFT TO HARD, FISSILE. | CH | | | | | | | |
| 50 | 50.1 | | | | | | | | |
| | BOREHOLE TERMINATED AT 50.1 m IN SHALE. | | | | | | | | |
| 52 | | | | | | | | | |
| | | | | | | | | | CIRCULATION MAINTAINED FOR ENTIRE BOREHOLE. |
| 54 | | | | | | | | | |
| | | | | | | | | | |
| 56 | | | | | | | | | |
| | | | | | | | | | |
| 58 | | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 60 | | | | | | | | | |

# LOG OF BOREHOLE BH02-5 (deep)

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | CME 75, track-mounted | **date started** \| | 2014/10/09 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | BTC |
| **position** \| | E: 559585 N: 4915584 (17T, Geodetic) | **coring** \| | HQ core, OD=96mm, ID=64mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 513.3 | **GROUND SURFACE**<br>**OVERBURDEN** | | | | | 513 | Dynamic Cone: 10 20 30 40<br>Unconfined / Pocket Penetrometer / Field Vane / Lab Vane: 40 80 120 160 | PL MC LL: 10 20 30 | | | GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL |
| 1 | | | | | | | 512 | | | | | |
| 2 | | | | | | | 511 | | | | | |
| 3 | | | | | | | 510 | | | | | |
| 4 | | | | | | | 509 | | | | | |
| 5 | | | | | | | 508 | | | | | |
| 6 | | | | | | | 507 | | | | | |
| 7 | | | | | | | 506 | | | | | |
| 8 | | | | | | | 505 | | | | | |
| 9 | 504.3<br>9.0 | **DOLOSTONE (Amabel Formation)**<br>Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture, thickly bedded, scratched by a knife; slightly weathered with muddy reddish brown staining on fracture surfaces, ~5%, vugs typically 1 mm to 3 mm, poor to fair RQD. (Flank facies) | | R1 | | TCR = **100**%<br>RQD = **63**% | 504 | | | | | |
| 10 | | | | R2 | | TCR = **96**%<br>RQD = **80**% | 503 | | | | | |
| 11 | 502.6 | | | | | | 502 | | | | | 10 cm void at 10.7 m depth. |
| 12 | 500.9<br>12.4 | | | R3 | | TCR = **92**%<br>RQD = **34**% | 501 | | | | | |

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 9.24 m depth.



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE BH02-5 (mid)

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project \|** | Duntroon Quarry | | | **project no. \|** | 111-53312-00 |
| **client \|** | Walker Aggregates Inc. | **rig type \|** | CME 75, track-mounted | **date started \|** | 2014/10/09 |
| **location \|** | Duntroon, Ontario | **method \|** | Rock coring | **supervisor \|** | BTC |
| **position \|** | E: 559585 N: 4915584 (17T, Geodetic) | **coring \|** | HQ core, OD=96mm, ID=64mm | **reviewer \|** | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 513.3 | **GROUND SURFACE** | | | | | 513 | Dynamic Cone 10 20 30 40; Unconfined / Pocket Penetrometer / Field Vane / Lab Vane 40 80 120 160 | PL MC LL 10 20 30 | | | GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL |
| | | **OVERBURDEN** | | | | | | | | | | |
| 1 | | | | | | | 512 | | | | | |
| 2 | | | | | | | 511 | | | | | |
| 3 | | | | | | | 510 | | | | | |
| 4 | | | | | | | 509 | | | | | |
| 5 | | | | | | | 508 | | | | | |
| 6 | | | | | | | 507 | | | | | |
| 7 | | | | | | | 506 | | | | | |
| 8 | | | | | | | 505 | | | | | |
| 9 | 504.3 / 9.0 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture, thickly bedded, scratched by a knife; slightly weathered with muddy reddish brown staining on fracture surfaces, ~5%, vugs typically 1 mm to 3 mm, poor to fair RQD. (Flank facies) | | R1 | | TCR = **100%** RQD = **63%** | 504 | | | | | |
| 10 | | | | R2 | | TCR = **96%** RQD = **80%** | 503 | | | | | |
| 11 | 502.6 | | | R3 | | TCR = **92%** RQD = **34%** | 502 | | | | | 10 cm void at 10.7 m depth. |
| 12 | 500.9 / 12.4 | | | | | | 501 | | | | | |

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 9.24 m depth.



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# BOREHOLE NO. BH02-5



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 18, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 513.2 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVERBURDEN | H.Q. CASING | | | | | | LOCATED IN NORTH–CENTRAL PART OF PROPERTY |
| 9.3 | DOLOSTONE:<br>LIGHT GREY, MEDIUM TO COARSE GRAINED DOLOSTONE, CHAOTIC BEDDING, OCCASIONAL WHITE FOSSIL FRAGMENTS WITH "HONEYCOMB" TEXTURE UP TO 30 mm. 2%–5% VUGS UP TO 20 mm. | AMABEL UNIT 1 | | RC | 100 | 93 | 0.23 | | |
| | 11.6 TO 12.2 m<br>SUBHORIZONTAL FRACTURES, IRREGULAR WITH WEAK ORANGE RUSTY STAINING. | | | RC | 100 | 44 | 0.27 | | LOST CIRCULATION AT 11.2 m AND 12.8 m, ADVANCED CASING TO 13.4 m. CIRCULATION RECOVERED |
| | | | 13.4 m | RC | 100 | 100 | 0.27 | | |
| 13.9 | DOLOSTONE:<br>PATCHY LIGHT GREY/LIGHT BROWN, UNIFORM, MEDIUM GRAINED DOLOSTONE WITH SACCHAROIDAL TEXTURE. OCCASIONAL CRINOIDAL FOSSIL FRAGMENT, WEAKLY BEDDED. 1%–2% VUGS UP TO 2 cm. OCCASIONAL BROWN STYLOLITE, INCREASING FREQUENCY WITH DEPTH. | AMABEL UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 92 | 0.29 | 2.9E–06 | |
| | | | | | | | | 2.9E–06 | |
| | | | | RC | 100 | 100 | 0.29 | 3.6E–07 | |
| | | | | RC | 98 | 100 | 0.28 | 2.8E–07 | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| | – 19.5 m TO 20.7 m WHITE "SPECKLED" APPEARANCE WITH INCREASING CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. | | | RC | 100 | 97 | 0.28 | 4.5E–07 | |

# BOREHOLE NO. BH02-5



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 18, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 513.2 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E-11 to E-4) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| | DOLOSTONE CONTINUED | AMABEL UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.31 | 3.7E-07 | LOCATED IN NORTH-CENTRAL PART OF PROPERTY |
| 22 | | | | RC | 100 | 100 | 0.38 | 1.3E-06 | |
| | | | | RC | 100 | 100 | 0.32 | | |
| 24 | 24.0 | | | | | | | | |
| | DOLOSTONE:<br>MOTTLED BLUE-GREY/ GREY FINE GRAINED DOLOSTONE. STYLOLITES BECOMING GREY IN COLOUR. OCCASIONAL WISPY PARTING OF GREY SHALE UP TO 2 mm THICK, INCREASING FREQUENCY WITH DEPTH. | FOSSIL HILL FORMATION | | | | | | 5.1E-08 | |
| 26 | - AT 24.9 m DISCOLORED BROWN HALO AT FRACTURE. | | | RC | 100 | 100 | 0.31 | | |
| | | | | RC | 100 | 95 | 0.28 | 4.1E-08 | |
| | FRACTURES OCCUR DOMINANTLY AT SHALE PARTINGS WITH GREY SEDIMENT ON FACES. | | | | | | | | |
| 28 | | | | RC | 100 | 73 | 0.24 | 6.8E-08 | |
| | | | | RC | 100 | 88 | 0.26 | | |
| 30 | - AT 29.6 m BECOMING PINKISH-BROWN WITH 2%-3% PATCHY MASSIVE PYRITE. LOCALLY UP TO 15% WHITE FOSSIL FRAGMENTS AT UPPER CONTACT. | | | | | | | 3.8E-06 | |
| | 30.9 | | | | | | | | |
| | - 30.4 m TO 30.5 m GREEN SHALE INTERBED. | CH | | RC | 100 | 76 | 0.16 | | |
| 32 | 31.9 | | | | | | | | |
| | SHALE:<br>GREENISH-GREY, SOFT TO HARD, FISSILE. | | | | | | | | |
| | BOREHOLE TERMINATED AT 31.9 m IN SHALE. | | | | | | | | |
| 34 | | | | | | | | | |
| 36 | | | | | | | | | |
| 38 | | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH02-6



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 20, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 529.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | |
| 2.0 | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. | OVERBURDEN | H.Q. CASING | | | | | | LOCATED SOUTH CENTRAL PROTION OF PROPERTY |
| | DOLOSTONE:<br>GREY, MEDIUM TO COARSE GRAINED WITH WHITE FOSSIL FRAGMENTS, "HONEYCOMB" TEXTURE AND CHAOTIC BEDDING. 2%–3% VUGS WITH WHITE CHALKY APPEARANCE. | AMABEL FORMATION UNIT 1 | | RC | 100 | 88 | 0.29 | | |
| 4 | | | | RC | 98 | 98 | 0.30 | | |
| | – 3.3 m TO 4.2 m CREAMY WHITE, UNIFORM, MEDIUM GRAINED DOLOSTONE WITH OCCASIONAL CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. | | | | | | | | |
| 6 | WEAK BROWN SEDIMENT STAIN ON FRACTURE FACES. | | | RC | 98 | 80 | 0.30 | | |
| | | | | RC | 100 | 100 | 0.38 | | |
| 8 | | | | | | | | | LOST CIRCULATION AT 7.0 m. ADVANCE CASING TO 8.2 m. |
| | | | 8.2 m | RC | 98 | 49 | 0.25 | | |
| 8.8 | – 8.7 m TO 9.1 m VERTICAL UNDULATING FRACTURE WITH WEAK RUSTY STAINING AND BROWN SEDIMENT ON FACES. | | | | | | | | |
| 10 | DOLOSTONE:<br>MOTTLED GREY/ LIGHT GREY, UNIFORM, MEDIUM GRAINED WITH UP TO 10% WHITE CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. "SPECKLED" APPEARANCE. 3%–5% VUGS UP TO 9 mm. | UNIT 2 | | RC | 100 | 82 | 0.29 | | |
| | | | | RC | 98 | 100 | 0.26 | | |
| 12 | | | OPEN H.Q. BOREHOLE | | | | | | |
| 13.1 | | | | RC | 100 | 83 | 0.33 | | |
| | DOLOSTONE:<br>GREY, FINE GRAINED DOLOSTONE. HARD, BRITTLE WITH PATCHY VUGS UP TO 11 mm WITH FINE GRAINED CALCITE ± DOLOMITE INFILL. | AMABEL FORMATION UNIT 1 | | | | | | | |
| 14 | – 13.6 m TO 17.9 m BECOMING MOTTLED LIGHT BROWN/ LIGHT GREY. | | | RC | 100 | 100 | 0.31 | 1.0E–06 | |
| | | | | RC | 98 | 56 | 0.31 | | |
| 16 | | | | | | | | 1.7E–06 | |
| | | | | RC | 100 | 100 | 0.34 | | |
| 18 | | | | | | | | 1.3E–06 | |
| | | | | RC | 100 | 100 | 0.34 | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 20 | | | | RC | 100 | 100 | 0.35 | 1.0E–06 | |

# BOREHOLE NO. BH02-6



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 20, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 529.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E⁻¹¹ – E⁻⁴) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| | DOLOSTONE CONTINUED | UNIT 1 | | | | | | 1.0E−06 | LOCATED SOUTH CENTRAL PROTION OF PROPERTY |
| 20.7 | | | | | | | | | |
| | DOLOSTONE:<br>MOTTLED LIGHT BROWN/ LIGHT GREY DOLOSTONE, UNIFORM, FINE GRAINED WITH SACCHAROIDAL TEXTURE. OCCASIONAL CRINOIDAL FOSSIL FRAGMENTS, WEAKLY BEDDED. <2% VUGS UP TO 20 mm. OCCASIONAL POORLY DEVELOPED BROWN STYLOLITE, INCREASING FREQUENCY WITH DEPTH. | AMABEL FORMATION UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 84 | 0.27 | 7.3E−07 | |
| 22 | | | | | | | | | |
| | – 23.4 m TO 23.7 m IRREGULAR VERTICAL, FRACTURE WITH BROWN RUSTY STAINING ON FACES. | | | RC | 100 | 76 | 0.37 | 1.5E−06 | |
| 24 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.35 | 2.0E−06 | |
| 26 | | | | RC | 100 | 100 | 0.28 | | |
| | FRACTURES DOMINANTLY PARALLEL TO SUB−HORIZONTAL BEDDING. | | | RC | 100 | 100 | 0.24 | 5.8E−07 | |
| 28 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.28 | 4.1E−07 | |
| 30 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.31 | 1.3E−06 | |
| 32 | | | | RC | 100 | 73 | 0.32 | | |
| | – 32.1 m TO 32.7 m MOTTLED LIGHT GREY/ GREY FINE GRAINED, HARD, BRITTLE. | | | RC | 100 | 100 | 0.37 | 2.7E−06 | |
| 34 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.30 | 2.0E−06 | |
| 36 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.29 | 1.2E−06 | |
| 38 | | | | RC | 100 | 100 | 0.31 | | |
| | | | | RC | 100 | 100 | 0.29 | 7.8E−07 | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH02-6



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** DECEMBER 20, 2002
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 529.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 40 | DOLOSTONE CONTINUED | UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.26 | 6.4E−07 | LOCATED SOUTH CENTRAL PROTION OF PROPERTY |
| 41.8 | | | | RC | 100 | 100 | 0.22 | | |
| 42 | DOLOSTONE:<br>MOTTLED BLUE−GREY/ GREY, FINE GRAINED DOLOSTONE. OCCASIONAL WISPY GREY SHALE PARTINGS INCREASING WITH DEPTH, UP TO 3 mm THICK. OCCASIONAL PINCH−AND−SWELL TYPE BEDS, NODULES OF LIGHT GREY CHERT UP TO 30 mm THICK.<br>FRACTURES OCCUR DOMINANTLY AT STYLOLITE/ PARTINGS WITH GREY SHALE.<br>− 43.7 m TO 44.2 m LIGHT BROWN DISCOLORATION, WITH WEAKLY DEVELOPED HALO. | FOSSIL HILL FORMATION | | | | | | 2.7E−09 | |
| 44 | | | | RC | 100 | 100 | 0.17 | | |
| 46 | | | | RC | 100 | 100 | 0.17 | 1.7E−08 | |
| | | | | RC | 100 | 100 | 0.16 | 9.0E−09 | |
| 47.3 | | | | | | | | | |
| 48 | SHALE:<br>GREENISH−GREY, SOFT TO HARD, FISSILE. | CH | | | | | | | |
| 48.5 | BOREHOLE TERMINATED AT 48.5 m IN SHALE. | | | | | | | | |
| 50 | | | | | | | | | |
| 52 | | | | | | | | | |
| 54 | | | | | | | | | |
| 56 | | | | | | | | | |
| 58 | | | | | | | | | |
| 60 | | | | | | | | | |

NOTE
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FM
CH: CABOT HEAD FM

# LOG OF BOREHOLE BH03-7 (deep)

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | CME 75, track-mounted | **date started** \| | 2014/10/03 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | BTC |
| **position** \| | E: 559353 N: 4915510 (17T, Geodetic) | **coring** \| | HQ core, OD=96mm, ID=64mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | SAMPLE Number | SAMPLE Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 510.6 | **GROUND SURFACE** | | | | | 510 | Dynamic Cone 10 20 30 40; Unconfined, Pocket Penetrometer, Field Vane, Lab Vane 40 80 120 160 | PL MC LL 10 20 30 | | ▼ | GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL |
| | | **OVERBURDEN** | | | | | | | | | | |
| 1 | | | | | | | 509 | | | | | |
| 2 | | | | | | | 508 | | | | | |
| 3 | | | | | | | 507 | | | | | |
| 4 | | | | | | | 506 | | | | | |
| 5 | | | | | | | 505 | | | | | |
| 6 | 504.0 | | | | | | 504 | | | | | |
| 7 | 6.6 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; thickly bedded; fossiliferous (fossil debris); strong core with a rough cut texture, scratched with a knife; slightly weathered appearance with minor rusy staining on fracture surfaces; vugs up to 5%, typically 1 mm to 2 mm. Poor to very poor RQD to 10.1 m depth, then good RQD. (Flank facies) | | | R1 | TCR = **100**% RQD = **11**% | 503 | | | | | |
| 8 | 502.6 | | | | R2 | TCR = **100**% RQD = **16**% | 502 | | | | | |
| 9 | 501.2 | Reefal facies with an open vuggy appearance from 6.4 m to 10.1 m depth, broken core recovered as fragments and numerous vertical fractures. Reddish brown muddy infilling to 13.1 m depth. | | | | | | | | | | |
| 10 | | | | | R3 | TCR = **95**% RQD = **52**% | 501 | | | | | |
| 11 | 499.6 | Core becoming darker bluish grey with a decrease in vugs below 16.2 m and finer textured. | | | | | 500 | | | | | |
| 12 | | | | | R4 | TCR = **100**% RQD = **78**% | 499 | | | | | |
| | 498.1 | Thin stylolytes (<1 mm) below 22.9 m depth, 2 to 3 per 0.3 m. | | | | | | | | | | |
| 13 | | White chert bed 25 mm thick at 24.6 m depth and 50 mm nodule at 25.3 m depth. | | | R5 | TCR = **100**% RQD = **63**% | 498 | | | | | |
| | | Gradational lower contact at 25.6 m depth at change in colour and texture. | | | | | | | | | | |
| 14 | 496.6 | | | | R6 | TCR = **100**% RQD = **78**% | 497 | | | | | |
| 15 | 495.1 | | | | | | 496 | | | | | |
| 16 | | | | | R7 | TCR = **100**% RQD = **98**% | 495 | | | | | |
| | 493.6 | | | | | | 494 | | | | | |

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE BH03-7 (deep)

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |** CME 75, track-mounted
**date started |** 2014/10/03
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** BTC
**position |** E: 559353 N: 4915510 (17T, Geodetic)
**coring |** HQ core, OD=96mm, ID=64mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 17 | | | | | | | 493 |
| 18 | 492.0 | | | | R8 | TCR = 98% RQD = 86% | 492 |
| 19 | | | | | R9 | TCR = 98% RQD = 98% | 491 |
| 20 | 490.5 | | | | R10 | TCR = 98% RQD = 98% | 490 |
| 21 | | | | | | | |
| 22 | 489.0 | | | | R11 | TCR = 100% RQD = 100% | 489 |
| 23 | 487.4 | | | | R12 | TCR = 100% RQD = 95% | 488 |
| 24 | 486.0 | | | | R13 | TCR = 100% RQD = 88% | 487 |
| 25 | 485.0 | | | | | | 486 |
| | 25.6 | **DOLOSTONE (Fossil Hill Formation)** Light pinkish brown to greyish brown; fine grained, stylolytes 10 to 12 per 0.3 m, 1 mm thick. Sharp lower contact on change in texture. | | | R14 | TCR = 50% RQD = 97% | 485 |
| 26 | 484.5 | | | | | | 484 |
| 27 | 482.9 | | | | | | 483 |
| 28 | 482.2 | | | | R15 | TCR = * RQD = * | 482 |
| | 28.4 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale; completely weathered, plastic texture. Some reddish coloured beds up to 0.3 m thick, very poor RQD. | | | | | |
| 29 | 481.4 | | | | R16 | TCR = * RQD = * | 481 |
| 30 | 479.9 | | | | | | 480 |
| | 30.7 | **END OF BOREHOLE** Borehole was open upon completion. Open hole well installed in borehole. Casing cemented in bedrock at 10.51 m depth. | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Dark coloured fine grained dolostone bed from 28.6 m to 28.9 m depth.

* Core barrel not catching core.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Oct 8, 2014 | 0.7 | 509.9 |



library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# BOREHOLE NO. BH03-7



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** APRIL 10, 2003
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 510.3 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS I | MONITOR DETAILS II | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | WATER CONTENT % 10 20 30 ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | |
| | CLAYEY SILT: LIGHT BROWN, MOTTLED BROWN, TRACE SAND, TRACE GRAVEL. OCCASIONAL LAMINAE OF FINE TO MEDIUM SAND. | | | | SS | 3 | | 50 | | | | LOCATED NEAR WETLAND NORTHWEST QUADRANT OF PROPERTY |
| | | | | | SS | 6 | | 42 | | | | |
| 1.4 | | | | | | | | | | | | |
| 2 | SILTY SAND: LIGHT BROWN, TRACE GRAVEL, TRACE CLAY. WET, COMPACT. OCCASIONAL LAMINAE OF FINE TO MEDIUM SAND. | OVERBURDEN | | | SS | 10 | | 54 | | | | |
| | | | | | SS | 23 | | 58 | | | | |
| 4 | | | | | SS | 19 | | 75 | | | | |
| | | | | | SS | 27 | | 71 | | | | |
| 5.5 | | | | | SS | 11 | | 75 | | | | |
| 6 | SANDY SILT TILL: GREY SANDY SILT, TRACE CLAY. VERY STIFF TO HARD. | | | | SS | 35 | | 54 | | | | |
| 6.6 | | | | | | | | | | | | |
| | DOLOSTONE: LIGHT BROWN TO LIGHT GREY, MEDIUM GRAINED WITH SACCHAROIDAL TEXTURE, WEAKLY BEDDED, 3–5% VUGS UP TO 20 mm, BROKEN. | UNIT 2 | | | SS | 24 | | 79 | | | | |
| 7.5 | | | | | RC | – | | 100 | 90 | 0.21 | | |
| 8 | DOLOSTONE: PATCHY GREY TO LIGHT GREY, FINE GRAINED DOLOSTONE, UNIFORM TEXTURE, BROKEN TO BLOCKY. – AT 8.0 m FRACTURE WITH 5 mm THICK RED–BROWN SEDIMENT INFILL. | UNIT 1 | | | RC | – | | 81 | 77 | 0.15 | | |
| 9.2 | | | | | | | | | | | | |
| 10 | BOREHOLE TERMINATED AT 9.2 m IN DOLOSTONE. | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 20 | | | | | | | | | | | | |

# BOREHOLE NO. BH03-8



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** APRIL 11, 2003
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 520.2 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec (E-11 to E-4) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | SILT TILL: DARK BROWN, SILT SOME SAND, SOME GRAVEL, TRACE CLAY, OCCASIONAL COBBLE/BOULDER, VERY STIFF, DTPL. | OVERBURDEN | H.Q. CASING | SS | 41 | | | | LOCATED ON WEST SIDE OF PROPERTY |
| 2 | | | | SS | | | | | |
| 4 | | | | SS | | | | | |
| 6 | | | | SS | | | | | |
| 6.2 | DOLOSTONE: PATCHY GREY/LIGHT GREY, MEDIUM TO COARSE GRAINED DOLOSTONE, CHAOTIC TEXTURE, 3–5% VUGS UP TO 40 mm. | AMABEL FM. UNIT 1 | 7.3 m | RC | 84 | 75 | 0.29 | | |
| 8 | | | | RC | 95 | 51 | 0.14 | 1.7E–06 | |
| 10 | | | | RC | 98 | 81 | 0.16 | 2.0E–07 | |
| | – BELOW 10.5 m BECOMING FINE GRAINED, 1–2% VUGS UP TO 20 mm. | | | RC | 82 | 87 | 0.18 | | |
| 11.8 | DOLOSTONE: MOTTLED LIGHT BROWN/LIGHT GREY, UNIFORM MEDIUM GRAINED DOLOSTONE WITH SACCHAROIDAL TEXTURE, MODERATE TO WELL DEVELOPED BEDDING. | AMABEL FM. UNIT 2 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.29 | 2.5E–07 | |
| 12 | | | | | | | | | |
| 14 | | | | RC | 100 | 83 | 0.25 | 3.4E–07 | |
| 16 | | | | RC | 98 | 92 | 0.30 | 9.0E–07 | |
| 16.3 | DOLOSTONE: PATCHY GREY/LIGHT GREY, FINE GRAINED DOLOSTONE, CHAOTIC TEXTURE, 1–2% VUGS UP TO 50 mm. | AMABEL FM. UNIT 1 | | RC | 100 | 100 | 0.15 | 1.9E–07 | |
| 18 | | | | RC | 100 | 93 | 0.21 | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 20 | | | | RC | 100 | 100 | 0.18 | 2.2E–06 | |

# BOREHOLE NO. BH03-8



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** APRIL 11, 2003
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 520.2 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec ($E^{-11}$ – $E^{-4}$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| | DOLOSTONE: CONTINUED. | AMABEL FM. UNIT 1 | OPEN H.Q. BOREHOLE | RC | 98 | 100 | 0.25 | 3.9E−07 | LOCATED ON WEST SIDE OF PROPERTY |
| 22 | | | | RC | 97 | 100 | 0.22 | | |
| | | | | RC | 100 | 97 | 0.26 | 1.3E−06 | |
| 24 | | | | | | | | | |
| | | | | RC | 100 | 97 | 0.29 | 9.1E−07 | |
| 26 | 25.8 | | | | | | | | |
| | DOLOSTONE: LIGHT GREY, UNIFORM, MEDIUM GRAINED DOLOSTONE WITH "SPECKLED" APPEARANCE, WEAKLY BEDDED, 3–5% WHITE CRINOIDAL FOSSIL FRAGMENTS, BROKEN TO MASSIVE, RARE BROWN STYOLITES, OCCASIONAL GREY SHALE LAMINAE/PARTING UP TO 2 mm. | | | RC | 100 | 100 | 0.31 | 4.0E−07 | |
| 28 | | | | RC | 100 | 89 | 0.31 | | |
| | – BELOW 31.4 m INCREASING BROWN STYLOLITES. | AMABEL FM. UNIT 2 | | | | | | 3.1E−07 | |
| | | | | RC | 100 | 95 | – | | |
| 30 | | | | | | | | | |
| | | | | RC | 98 | 88 | 0.29 | 1.7E−06 | |
| 32 | | | | RC | 100 | 100 | 0.22 | | |
| | | | | | | | | 1.5E−06 | |
| | 33.2 | | | | | | | | |
| | DOLOSTONE: BLUE–GREY, FINE GRAINED WITH SACCHAROIDAL TEXTURE, INCREASING STYLOLITES, BECOMING GREY IN COLOUR. | | | RC | 93 | 100 | 0.22 | | |
| 34 | | | | | | | | 3.6E−07 | |
| | – AT 34.1 m BECOMING PINKISH–BROWN WITH OCCASIONAL cm SCALE PINCH–AND –SWELL TYPE BEDS AND NODULES OF GREY CHERT, OCCASIONAL PYRITE | FOSSIL HILL FM | | RC | 93 | 100 | – | | |
| 36 | – AT 34.7 m FRACTURE WITH LIGHT BROWN HALO ± 30 mm. | | | | | | | 6.2E−10 | |
| | 37.4 | | | | | | | | |
| | 37.9 SHALE: GREENISH–GREY, SOFT TO HARD, FISSILE. | CH | | | | | | | CIRCULATION MAINTAINED FOR ENTIRE HOLE. |
| 38 | BOREHOLE TERMINATED AT 37.9 m IN SHALE. | | | | | | | | NOTE<br>AMABEL FORMATION:<br>UNIT 1: REEFAL FACIES<br>UNIT 2: FLANK FACIES<br>FH: FOSSIL HILL FM<br>CH: CABOT HEAD FM |
| 40 | | | | | | | | | |

# BOREHOLE NO. BH03-9



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** APRIL 14, 2003
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 518.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / min | HYDRAULIC CONDUCTIVITY m / sec | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | |
| | SILT TILL: DARK BROWN, SILT, SOME SAND, SOME GRAVEL, TRACE CLAY, OCCASIONAL BOULDER/COBBLE. | OVER-BURDEN | H.Q. CASING | SS | 90 | | | | LOCATED IN SOUTHEAST PART OF PROPERTY. |
| 1.6 | | | | | | | | | |
| | DOLOSTONE: PATCHY LIGHT BROWN/LIGHT GREY, MEDIUM TO COARSE GRAINED DOLOSTONE WITH CHAOTIC TEXTURE, FREQUENT FOSSIL FRAGMENTS UP TO 60 mm, 3–5% VUGS UP TO 30 mm WITH OCCASIONAL CALCITE INFILL. | AMABEL FORMATION UNIT 1 | | RC | 85 | 76 | 0.24 | | TEMPORARILY LOST CIRCULATION AT 1.8 m mBGS. LOST CIRCULATION AT 7.9 mBGS. |
| 2 | | | | | | | | | |
| | | | | RC | 45 | 19 | 0.16 | | |
| 4 | | | 4.0 m | | | | | | |
| | | | | RC | 100 | 76 | 0.14 | | |
| 6 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.12 | | |
| | | | | | | | | 9.9E−07 | |
| 8 | | | | RC | 95 | 96 | 0.18 | | |
| | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.17 | | |
| | | | | | | | | 4.1E−05 | |
| 10 | | | | | | | | | |
| | | | | RC | 100 | 95 | 0.15 | | |
| | | | | | | | | 9.2E−07 | |
| 12 | | | | | | | | | |
| | | | | RC | 100 | 88 | 0.18 | | |
| | | | OPEN H.Q. BOREHOLE | | | | | | |
| 14 | | | | RC | 93 | 85 | 0.21 | 2.3E−06 | |
| | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.22 | | |
| | | | | | | | | 8.6E−06 | |
| 16 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.21 | | |
| | | | | | | | | 8.9E−07 | |
| 18 | | | | | | | | | |
| | | | | RC | 98 | 92 | 0.19 | | NOTE |
| | | | | | | | | | AMABEL FORMATION: |
| | | | | | | | | | UNIT 1: REEFAL FACIES |
| | | | | | | | | | UNIT 2: FLANK FACIES |
| | | | | RC | 95 | 100 | 0.19 | 4.3E−06 | FH: FOSSIL HILL FM |
| 20 | | | | | | | | | CH: CABOT HEAD FM |

# BOREHOLE NO. BH03-9



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50
**CLIENT:** GEORGIAN AGGREGATES LIMITED
**DATE:** APRIL 14, 2003
**BOREHOLE TYPE:** H.Q. (64 mm) ROCK CORE
**SUPERVISOR:** PFR
**GROUND ELEVATION:** 518.5 mASL
**REVIEWER:** AJC

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE % RECOVERY | SAMPLE RQD (%) | RATE OF DRILL PENETRATION m / mIn | HYDRAULIC CONDUCTIVITY m / sec (E-11 to E-4) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| | DOLOSTONE: CONTINUED.<br>– 21.0 TO 21.3 m VERTICAL FRACTURE WITH MODERATE ORANGE STAINING. | UNIT 1 | OPEN H.Q. BOREHOLE | RC | 100 | 100 | 0.21 | 4.3E–07 | LOCATED IN SOUTHEAST PART OF PROPERTY. |
| 22 | | | | | | | | | |
| | 22.3 | | | | | | | | |
| | DOLOSTONE: LIGHT GREY, MEDIUM GRAINED DOLOSTONE, UNIFORM WITH "SPECKLED" TEXTURE. WEAKLY BEDDED, 3–5% CRINOIDAL FOSSIL FRAGMENTS (CRINOIDS), RARE BROWN STYLOLITES.<br>– BREAKS DOMINANTLY PARALLEL TO BEDDING, MODERATE ORANGE STAINING, 23.8 m AND 26.5 m. | AMABEL FORMATION UNIT 2 | | RC | 100 | 95 | 0.19 | 5.3E–06 | |
| 24 | | | | RC | 100 | 95 | 0.18 | 5.2E–06 | |
| | | | | RC | 100 | 100 | 0.19 | 1.7E–06 | |
| 26 | | | | | | | | | |
| | | | | RC | 100 | 88 | 0.18 | 7.3E–07 | |
| 28 | | | | | | | | | |
| | | | | RC | 100 | 100 | 0.20 | 1.5E–05 | |
| 30 | | | | | | | | | |
| | | | | RC | 100 | 97 | 0.20 | 1.3E–06 | |
| 32 | | | | | | | | | |
| | 33.0 | | | RC | 100 | 95 | 0.16 | 5.2E–07 | |
| | DOLOSTONE: BLUE–GREY, FINE TO MEDIUM GRAINED DOLOSTONE WITH SACCHAROIDAL TEXTURE, INCREASING STYLOLITES, BECOMING GREY.<br>– AT 33.7 m FRACTURE WITH LIGHT BROWN HALO ±100 mm.<br>– AT 34.6 m PINKISH–BROWN, FINE GRAINED DOLOSTONE WITH SACCHAROIDAL TEXTURE, OCCASIONAL SHALE LAMINAE UP TO 3 mm THICK, OCCASIONAL PINCH–AND–SWELL TYPE BED OR NODULE OF GREY CHERT, OCCASIONAL PYRITE.<br>– AT 33.7 m FRACTURE WITH LIGHT BROWN HALO ±100 mm. | FOSSIL HILL FORMATION | | RC | 100 | 100 | 0.16 | 7.9E–09 | |
| 34 | | | | | | | | | |
| | | | | RC | 95 | 100 | 0.13 | 4.9E–09 | |
| 36 | | | | | | | | | |
| | | | | | | | | | |
| 38 | | | | | | | | | |
| | 38.9 | | | | | | | | |
| | SHALE: GREENISH–GREY, SOFT TO HARD, FISSILE. | CH | | | | | | | |
| 40 | 39.5 BOREHOLE TERMINATED AT 39.5 m IN SHALE | | | | | | | | |

NOTE
AMABEL FORMATION:
UNIT 1: REEFAL FACIES
UNIT 2: FLANK FACIES
FH: FOSSIL HILL FM
CH: CABOT HEAD FM

# BOREHOLE NO. BH08-1



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 02, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 511.5 mASL
**REVIEWER:** AGH

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 27
Easting: 560471
Northing: 4915197

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT:<br>BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST. 50 mm SEAM OF COARSE GRAVEL AT 1.8 m. | | | SS1 | 29 | | 54 | | | | |
| | | | | SS2 | 18 | | 46 | | | | |
| | | | | SS3 | 63 | | 54 | | 63 | | |
| 2.1 | DOLOSTONE:<br>LIGHT GREY TO WHITE DOLOSTONE BANDED IN DARK GREY, MEDIUM HARD, FRACTURED TO VERY BROKEN, WEATHERED.<br>- VUGGY<br>- FOSSILIFEROUS | | | RC4 | | | 75 | 0 | | | AUGER REFUSAL AT 2.1 m.<br>ASSUMED BEDROCK.<br>CASING SEATED TO 2.6 m. OPEN HOLE INSTALLATION. |
| | | | | RC5 | | | 100 | 54 | | | |
| 4.3 | DOLOSTONE:<br>GREY DOLOSTONE, BECOMING YELLOW TINGED WITH DEPTH, MEDIUM HARD, FRACTURED TO MASSIVE, SOME WEATHERING AND SEDIMENT INFILLING IN FRACTURES.<br>- VUGGY<br>- FOSSILIFEROUS | | | RC6 | | | 100 | 92 | | | |
| | | | | RC7 | | | 100 | 97 | | | |
| 7.4 | DOLOSTONE:<br>LIGHT GREY TO WHITE DOLOSTONE WITH DARK GREY MOTTLING, MEDIUM HARD, FRACTURED TO MASSIVE, SLIGHT WEATHERING.<br>- NUMEROUS SMALL VUGS<br>- FEW FOSSILS | | | RC8 | | | 100 | 79 | | | |
| | | | | RC9 | | | 97 | 95 | | | |
| | | | | RC10 | | | 98 | 99 | | | |
| | | | | RC11 | | | 100 | 95 | | | |
| 13.7 | DOLOSTONE:<br>GREY DOLOSTONE WITH INCREASING DARK GREY BANDING AND MOTTLING WITH DEPTH. BRONZE COLOURED, INCLUSIONS BEGINNING AT 18 m. MEDIUM HARD, FRACTURED TO MASSIVE, SOME STAINING AND WEATHERING IN FRACTURES.<br>- VUGGY | | | RC12 | | | 100 | 88 | | | |
| | | | | RC13 | | | 100 | 82 | | | |
| | | | | RC14 | | | 100 | 90 | | | |
| | | | | RC15 | | | 100 | 92 | | | |
| 20.0 | | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# BOREHOLE NO. BH08-1



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 02, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 511.5 mASL
**REVIEWER:** AGH

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.0 | | | | | | | | | | | UTM Zone: 17 NAD: 27<br>Easting: 560471<br>Northing: 4915197 |
| 20.4 | DOLOSTONE: CONTINUED. | | | | | | | | | | |
| | DOLOSTONE:<br>BLUE-GREEN MOTTLED DOLOSTONE, WHITE INCLUSIONS, MEDIUM HARD, TEXTURE IS SMOOTH, FRACTURED TO MASSIVE. (FOSSIL HILL FORMATION)<br>- VUGS (MINOR) | | | RC16 | | | 100 | 93 | | | |
| 21.0 | | | | | | | | | | | |
| 22.0 | | | | RC17 | | | 100 | 92 | | | |
| 23.0 | | | | | | | | | | | |
| | | | | RC18 | | | 100 | 89 | | | |
| 24.0 | | | | | | | | | | | |
| 24.8 | | | | | | | | | | | |
| 24.9 | SHALE:<br>BLUE-GREEN GREY SHALE, VARIABLE SOFT TO HARD. | | | RC19 | | | 100 | 70 | | | |
| 25.0 | | | | | | | | | | | |
| 25.8 | DOLOSTONE:<br>BLUE-GREEN MOTTLED DOLOSTONE, MEDIUM HARD, FRACTURED TO MASSIVE. | | | | | | | | | | |
| 26.0 | | | | | | | | | | | |
| | SHALE:<br>BLUE-GREEN GREY SHALE, VARIABLE SOFT TO HARD. (CABOT HEAD FORMATION) | | | RC20 | | | 100 | 20 | | | |
| 27.0 | | | | | | | | | | | |
| 27.4 | BOREHOLE TERMINATED AT 27.4 m IN SHALE. | | | | | | | | | | BOREHOLE TERMINATED AT 27.4 m IN BLUE-GREEN SHALE.<br><br>WATER LEVEL 2.49 mBGL MEASURED ON DEC. 5, 2008.<br><br>FINAL STICK-UP 1.83 m ABOVE GROUND LEVEL. |
| 28.0 | | | | | | | | | | | |
| 29.0 | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | |
| 31.0 | | | | | | | | | | | |
| 32.0 | | | | | | | | | | | |
| 33.0 | | | | | | | | | | | |
| 34.0 | | | | | | | | | | | |
| 35.0 | | | | | | | | | | | |
| 36.0 | | | | | | | | | | | |
| 37.0 | | | | | | | | | | | |
| 38.0 | | | | | | | | | | | |
| 39.0 | | | | | | | | | | | |
| 40.0 | | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# BOREHOLE NO. BH08-2



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 03, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 511.2 mASL
**REVIEWER:** AGH

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 27
Easting: 560484
Northing: 4915175

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT:<br>DARK BROWN TO BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST, DENSE. ORGANIC MATTER AT GROUND SURFACE. | | | SS1 | 33 | | 38 | | 43 | | |
| 1.0 | | | | SS2 | 43 | | 21 | | | | |
| | | | | SS3 | 50 | | 100 | | | | |
| 1.8 | | | | | | | | | | | |
| 2.0 | DOLOSTONE:<br>CREAMY WHITE DOLOSTONE, MOTTLED WITH LIGHT AND DARK GREY, MEDIUM HARD, BROKEN BECOMING MASSIVE WITH DEPTH, WEATHERED FRACTURES.<br>- FOSSILIFEROUS<br>- VUGGY<br>- SOME CALCITE INFILL WITHIN LARGER VUGS | | | RC4 | | | 100 | 0 | | | AUGER REFUSAL AT 1.8 m. ASSUMED BEDROCK. |
| | | | | RC5 | | | 100 | 0 | | | CASING SEATED TO 2.7 m. OPEN HOLE INSTALLATION. |
| 3.0 | | | | | | | | | | | |
| | | | | RC6 | | | 100 | 52 | | | |
| 4.0 | | | | | | | | | | | |
| 5.0 | | | | RC7 | | | 100 | 60 | | | |
| 6.0 | | | | | | | | | | | |
| | | | | RC8 | | | 100 | 84 | | | |
| 7.0 | | | | | | | | | | | |
| 7.5 | | | | | | | | | | | |
| 8.0 | DOLOSTONE:<br>LIGHT GREY DOLOSTONE BANDED AND MOTTLED WITH DARK GREY, SOME RUST COLOURED MOTTLING, MEDIUM HARD, FRACTURED TO MASSIVE. FRACTURES SHOWING RUST STAINING WITH DEPTH.<br>- NUMEROUS SMALL VUGS<br>- FEW FOSSILS | | | RC9 | | | 100 | 89 | | | |
| 9.0 | | | | | | | | | | | |
| | | | | RC10 | | | 100 | 79 | | | |
| 10.0 | | | | | | | | | | | |
| 10.5 | | | | | | | | | | | |
| 11.0 | DOLOSTONE:<br>LIGHT GREY DOLOSTONE MOTTLED WITH DARK GREY, BROWN SPOTS, MEDIUM HARD, SMOOTH TEXTURE, MASSIVE.<br>- VUGS (MINOR) | | | RC11 | | | 100 | 100 | | | |
| 12.0 | | | | | | | | | | | |
| 12.3 | | | | | | | | | | | |
| 13.0 | DOLOSTONE:<br>LIGHT GREY DOLOSTONE, VERY DARK GREY MOTTLING AND BANDING, MEDIUM HARD, MASSIVE.<br>- VUGGY | | | RC12 | | | 100 | 98 | | | |
| 14.0 | | | | | | | | | | | |
| | | | | RC13 | | | 100 | 92 | | | |
| 15.0 | | | | | | | | | | | |
| 16.0 | | | | RC14 | | | 100 | 97 | | | |
| 16.6 | | | | | | | | | | | |
| 17.0 | DOLOSTONE:<br>LIGHT GREY TO MEDIUM GREY DOLOSTONE, DARK GREY MOTTLING, RUST COLOURED THIN BANDING, MEDIUM HARD, MASSIVE TO FRACTURED.<br>- VUGGY | | | RC15 | | | 100 | 98 | | | |
| 18.0 | | | | | | | | | | | |
| 19.0 | | | | RC16 | | | 100 | 98 | | | |
| 19.7 | | | | | | | | | | | |
| 20.0 | DOLOSTONE: | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# BOREHOLE NO. BH08-2



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 03, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 511.2 mASL
**REVIEWER:** AGH

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.0 | | | | | | | | | | | UTM Zone: 17 NAD: 27<br>Easting: 560484<br>Northing: 4915175 |
| 21.0 | DOLOSTONE: CONTINUED.<br>BLUE GREEN MOTTLED GREY DOLOSTONE, DARKER BLUE-GREEN THIN BANDING, BROWN SPOTS AND MOTTLING, WHITE INCLUSIONS, SMOOTH TEXTURE, MEDIUM HARD, MASSIVE TO FRACTURED. (FOSSIL HILL FORMATION)<br>- VUGS (MINOR) | | | RC17 | | | 100 | 83 | | | |
| 22.0 | | | | RC18 | | | 100 | 80 | | | |
| 23.0 | | | | | | | | | | | |
| 24.0 | | | | RC19 | | | 100 | 78 | | | |
| 25.0 | | | | | | | | | | | |
| 25.0 | SHALE:<br>BLUE GREEN SHALE, SOFT, VERY BROKEN.<br>(CABOT HEAD FORMATION) | | | RC20 | | | 100 | 40 | | | |
| 25.8 | BOREHOLE TERMINATED AT 25.8 m IN SHALE. | | | | | | | | | | BOREHOLE TERMINATED AT 25.8 m IN BLUE-GREEN SHALE.<br><br>WATER LEVEL 2.26 mBGL MEASURED ON DEC. 5, 2008.<br><br>FINAL STICK-UP 1.82 m ABOVE GROUND LEVEL. |
| 26.0 | | | | | | | | | | | |
| 27.0 | | | | | | | | | | | |
| 28.0 | | | | | | | | | | | |
| 29.0 | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | |
| 31.0 | | | | | | | | | | | |
| 32.0 | | | | | | | | | | | |
| 33.0 | | | | | | | | | | | |
| 34.0 | | | | | | | | | | | |
| 35.0 | | | | | | | | | | | |
| 36.0 | | | | | | | | | | | |
| 37.0 | | | | | | | | | | | |
| 38.0 | | | | | | | | | | | |
| 39.0 | | | | | | | | | | | |
| 40.0 | | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# BOREHOLE NO. BH08-3



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 04, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 512.6 mASL
**REVIEWER:** AGH

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 27
Easting: 560447
Northing: 4915198

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT:<br>DARK BROWN TO BROWN SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, MOIST, DENSE. ORGANIC MATTER AT GROUND SURFACE. | | | SS1 | 18 | | 42 | | | | |
| 1.0 | | | | SS2 | 27 | | 50 | | | | |
| 2.0 | | | | SS3 | 44 | | 58 | | 44 | | |
| 3.0 | | | | SS4 | 27 | | 58 | | | | |
| 3.0 | DOLOSTONE:<br>CREAMY WHITE DOLOSTONE, MOTTLED WITH LIGHT AND DARK BLUE-GREY, MEDIUM HARD, BROKEN BECOMING MASSIVE WITH DEPTH, WEATHERING OF FRACTURES DECREASING WITH DEPTH.<br>- VUGGY<br>- FOSSILIFEROUS<br>- SOME CALCITE INFILL WITHIN LARGER VUGS | | | RC5 | | | 100 | 84 | | | AUGER REFUSAL AT 3.0 m. ASSUMED BEDROCK. CASING SEATED TO 3.2 m. OPEN HOLE INSTALLATION. |
| 4.0 | | | | | | | | | | | |
| 5.0 | | | | RC6 | | | 100 | 78 | | | |
| 6.0 | | | | | | | | | | | |
| 7.0 | | | | RC7 | | | 100 | 83 | | | |
| 8.0 | | | | | | | | | | | |
| 9.0 | | | | RC8 | | | 95 | 91 | | | |
| 9.0 | DOLOSTONE:<br>LIGHT GREY DOLOSTONE BANDED AND MOTTLED WITH DARK GREY, MEDIUM HARD, FRACTURED TO MASSIVE. FRACTURES SHOWING STAINING AND SILTY INFILLING WITH DEPTH.<br>- NUMEROUS SMALL VUGS<br>- FEW FOSSILS | | | RC9 | | | 98 | 84 | | | |
| 10.0 | | | | | | | | | | | |
| 11.0 | | | | RC10 | | | 100 | 86 | | | |
| 12.0 | | | | | | | | | | | |
| 12.5 | DOLOSTONE:<br>LIGHT GREY DOLOSTONE MOTTLED WITH DARK GREY, BROWN SPOTS, MEDIUM HARD, SMOOTH TEXTURE, MASSIVE.<br>- FEW VUGS | | | RC11 | | | 100 | 95 | | | |
| 13.0 | | | | | | | | | | | |
| 14.0 | | | | RC12 | | | 100 | 93 | | | |
| 14.0 | DOLOSTONE:<br>LIGHT TO MEDIUM GREY DOLOSTONE WITH DEPTH, DARK GREY BANDING, MEDIUM HARD, MASSIVE. | | | | | | | | | | |
| 15.0 | | | | | | | | | | | |
| 15.1 | DOLOSTONE:<br>MEDIUM GREY DOLOSTONE BECOMING LIGHT GREY WITH DEPTH. DARK GREY MOTTLING, RUST COLOURED THIN BANDING, MEDIUM HARD, MASSIVE.<br>- NUMEROUS SMALL VUGS | | | RC13 | | | 100 | 98 | | | |
| 16.0 | | | | | | | | | | | |
| 17.0 | | | | RC14 | | | 100 | 92 | | | |
| 18.0 | | | | | | | | | | | |
| 19.0 | | | | RC15 | | | 100 | 93 | | | |
| 19.7 | DOLOSTONE: | | | | | | | | | | |
| 20.0 | | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# BOREHOLE NO. BH08-3



**PROJECT NAME:** DUNTROON EXPANSION - BRIDSON MONITORS
**PROJECT NO.:** 04-930521.52

**CLIENT:** WALKER INDUSTRIES HOLDINGS
**DATE COMPLETED:** Dec 04, 2008

**BOREHOLE TYPE:** HQ CORE
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 512.6 mASL
**REVIEWER:** AGH

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 27
Easting: 560447
Northing: 4915198

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.0 | | | | | | | | | | | |
| | DOLOSTONE: CONTINUED.<br>LIGHT GREY DOLOSTONE WITH INCREASING LIGHT/DARK BANDING WITH DEPTH, RUST COLOURED THIN BANDING, MEDIUM HARD, MASSIVE.<br>- NUMEROUS SMALL VUGS | | | RC16 | | | 100 | 91 | | | |
| 21.0 | | | | | | | | | | | |
| 22.0 | | | | RC17 | | | 100 | 93 | | | |
| 22.1 | DOLOSTONE:<br>BLUE GREEN MOTTLED GREY DOLOSTONE, DARKER BLUE-GREEN THIN BANDING, INCREASING WHITE BANDING WITH DEPTH. WHITE INCLUSIONS AND BROWN SPOTTING WITH DEPTH. SMOOTH TEXTURE, MEDIUM HARD, MASSIVE TO FRACTURED. (FOSSIL HILL FORMATION)<br>- VUGS (MINOR) | | | | | | | | | | |
| 23.0 | | | | RC18 | | | 100 | 88 | | | |
| 24.0 | | | | | | | | | | | |
| 25.0 | | | | RC19 | | | 100 | 90 | | | |
| 26.0 | | | | | | | | | | | |
| 27.0 | | | | RC20 | | | 100 | 84 | | | |
| 27.5 | SHALE:<br>BLUE GREEN SHALE, SOFT, VERY BROKEN.<br>(CABOT HEAD FORMATION) | | | | | | | | | | |
| 28.0 | | | | RC21 | | | 100 | 11 | | | |
| 28.8 | BOREHOLE TERMINATED AT 28.8 m IN SHALE. | | | | | | | | | | BOREHOLE TERMINATED AT 28.8 m IN BLUE-GREEN SHALE.<br><br>WATER LEVEL 3.53 mBGL MEASURED ON DEC. 5, 2008.<br><br>FINAL STICK-UP 1.55 m ABOVE GROUND LEVEL. |
| 29.0 | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | |
| 31.0 | | | | | | | | | | | |
| 32.0 | | | | | | | | | | | |
| 33.0 | | | | | | | | | | | |
| 34.0 | | | | | | | | | | | |
| 35.0 | | | | | | | | | | | |
| 36.0 | | | | | | | | | | | |
| 37.0 | | | | | | | | | | | |
| 38.0 | | | | | | | | | | | |
| 39.0 | | | | | | | | | | | |
| 40.0 | | | | | | | | | | | |

GENIVAR GEOLOGIC B/W (M) WITH UTM 4-93052152 BRIDSON MONITORS.GPJ JAGGER HIMS BASIC.GDT 3/10/10

# LOG OF BOREHOLE NW1

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/08/26 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 560059 N: 4915125 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 525.7 | **GROUND SURFACE** | | | | | 525 |
| | | **OVERBURDEN** | | | | | |
| 1 | 524.5 | | | | | | 524 |
| | 1.2 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough texture, scratched by a knife, slightly weathered with rusty orange staining on fracture surfaces; thickly bedded, good to excellent RQD, vugs <5%, 2 to 4 mm. (Flank facies) | | | R1 | TCR = **73**% RQD = **47**% | 523 |
| 2 | | | | | | | 522 |
| 3 | | | | | | | 521 |
| 4 | 521.4 | Reefal facies texture with more open cavities and increased fossil content from 1.2 m to 5.1 m, 11.0 m to 12.8 m and from 17.0 m to 18.2 m depth. | | | R2 | TCR = **64**% RQD = **31**% | 520 |
| 5 | | | | | | | 519 |
| 6 | 519.3 | Core becoming darker bluish grey in colour below 17.1 m. Mottled grey and white appearance from 25.9 m to 37.0 m depth. | | | R3 | TCR = **99**% RQD = **85**% | 518 |
| 7 | | | | | | | 517 |
| 8 | | | | | | | 516 |
| 9 | 516.3 | Gradational lower contact at change in texture at 37.0 m depth. | | | R4 | TCR = **100**% RQD = **99**% | 515 |
| 10 | | | | | | | 514 |
| 11 | | | | | | | 513 |
| 12 | 513.2 | | | | R5 | TCR = **98**% RQD = **96**% | 512 |
| 13 | | | | | | | 511 |
| 14 | | | | | | | 510 |
| 15 | 510.2 | | | | R6 | TCR = **77**% RQD = **74**% | 509 |
| 16 | | | | | | | 508 |
| 17 | | | | | | | 507 |
| 18 | 507.1 | | | | R7 | TCR = **98**% RQD = **94**% | 506 |
| 19 | | | | | | | 505 |
| 20 | | | | | | | 504 |
| 21 | 504.1 | | | | R8 | TCR = **100**% RQD = **70**% | 503 |
| 22 | | | | | | | 502 |
| 23 | 501.0 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Vertical fracture from 22.0 m to 22.6 m depth.

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW1

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/08/26 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | KMT |
| **position** \| | E: 560059 N: 4915125 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Number | Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 24 | 501.0 | | | | R8 | | 501 |
| 25 | | | | | R9 | TCR = **100**% RQD = **100**% | 500 |
| 26 | | | | | | | 499 |
| 27 | 498.0 | | | | R10 | TCR = **94**% RQD = **89**% | 498 |
| 28 | | | | | | | 497 |
| 29 | | | | | | | 496 |
| 30 | 494.9 | | | | R11 | TCR = **100**% RQD = **93**% | 495 |
| 31 | | | | | | | 494 |
| 32 | | | | | | | 493 |
| 33 | 491.9 | | | | R12 | TCR = **1**% RQD = **1**% | 492 |
| 34 | 491.0 | | | | R13 | TCR = **1**% RQD = **1**% | 491 |
| 35 | | | | | | | 490 |
| 36 | 488.8 | | | | | | 489 |
| 37 | 488.7 / 37.0 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey fine grained stycolytic typically 3 to 5 per 0.3 m. Cherty lenses, 25 mm thick, 2 per 0.3 m from 37.8 m to 39.0 m depth. Sharp lower contact at change in texture. | | | R14 | TCR = **100**% RQD = **96**% | 488 |
| 38 | | | | | | | 487 |
| 39 | 485.8 | | | | | | 486 |
| 40 | 484.6 / 41.2 | **SHALE (Cabot Head Formation)** Greenish grey shale, calcareous, weathered, plastic texture. 0.6 m thick dolostone bed at 41.3 m. | | | R15 | TCR = **100**% RQD = **100**% | 485 |
| 41 | | | | | | | 484 |
| 42 | 483.0 / 42.7 | **END OF BOREHOLE** Borehole was open upon completion. Open hole well installed in borehole. Casing cemented in bedrock at 2.24 m depth. | | | | | 483 |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Red mud filled vertical fracture, with enhanced weathering from 33.6 m to 36.8 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 17, 2014 | 13.2 | 512.5 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW2

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project \|** | Duntroon Quarry | | | **project no. \|** | 111-53312-00 |
| **client \|** | Walker Aggregates Inc. | **rig type \|** | | **date started \|** | 2014/08/12 |
| **location \|** | Duntroon, Ontario | **method \|** | Rock coring | **supervisor \|** | TKC |
| **position \|** | E: 560108 N: 4915311 (17T, Geodetic) | **coring \|** | PQ core, OD=123mm, ID=85mm | **reviewer \|** | KJF |

| Depth Scale (m) | Elev Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 531.4 | **GROUND SURFACE** | | | | | 531 |
| | | **OVERBURDEN** | | | | | |
| 3 | 527.7 | | | | | | 528 |
| 4 | 3.7 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough cut texture, scratched by a knife; slightly weathered with rusty orange staining on fractures, vuggy typically 5%, thickly bedded, overall good to excellent RQD. (Flank facies) | | | R1 | TCR = **99%** RQD = **90%** | 527 |
| 6 | 524.8 | Reefal facies texture with vugs and cavities up to 10 cm and increased fossil content from 12.2 m to 13.4 m and 36.7 m to 37.4 m. | | | R2 | TCR = **100%** RQD = **95%** | 525 |
| 8 | 522.4 | Core becoming darker bluish grey below 24.2 m. Mottled grey and white to light pinkish brown below 42.1 m. | | | R3 | TCR = **100%** RQD = **100%** | 523 |
| 10 | 519.7 | Gradational lower contact on change in texture. | | | R4 | TCR = **98%** RQD = **79%** | 521 |
| 12 | 516.9 | | | | R5 | TCR = **99%** RQD = **72%** | 519 |
| 14 | 513.7 | | | | R6 | TCR = **95%** RQD = **71%** | 517 |
| 16 | 510.3 | | | | R7 | TCR = **95%** RQD = **90%** | 515 |
| 18 | 507.1 | | | | R8 | TCR = **97%** RQD = **87%** | 513 |
| 20 | 503.8 | | | | R9 | TCR = **100%** RQD = **97%** | 511 |
| 22 | 500.7 | | | | | | 509 |
| 24 | | | | | | | 507 |
| 26 | | | | | | | 505 |
| 28 | | | | | | | 503 |
| 29 | | | | | | | 502 |

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone
10 20 30 40

Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

Water Content (%) & Plasticity
PL MC LL
10 20 30

PID Readings

Well Details

Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT)
GR SA SI CL

Some reddish mud infilling on vertical fracture from 18.1 m to 18.3 m.

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW2

**project |** Duntroon Quarry | **project no. |** 111-53312-00

**client |** Walker Aggregates Inc. | **rig type |** | **date started |** 2014/08/12

**location |** Duntroon, Ontario | **method |** Rock coring | **supervisor |** TKC

**position |** E: 560108 N: 4915311 (17T, Geodetic) | **coring |** PQ core, OD=123mm, ID=85mm | **reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 30 | 500.7 | | | | R9 | | 501 |
| 31 | | | | | | | 500 |
| 32 | | | | | R10 | TCR = 98% RQD = 74% | 499 |
| 33 | 497.5 | | | | | | 498 |
| 34 | | | | | | | 497 |
| 35 | | | | | R11 | TCR = 89% RQD = 76% | 496 |
| 36 | | | | | | | 495 |
| 37 | 494.0 | | | | | | 494 |
| 38 | | | | | R12 | TCR = 96% RQD = 93% | 493 |
| 39 | | | | | | | 492 |
| 40 | 490.8 | | | | | | 491 |
| 41 | | | | | R13 | TCR = 89% RQD = 85% | 490 |
| 42 | | | | | | | 489 |
| 43 | 487.6 | | | | | | 488 |
| 44 | | | | | R14 | TCR = 100% RQD = 70% | 487 |
| 45 | | | | | | | 486 |
| 46 | 484.8 / 484.8 / 46.6 | **DOLOSTONE (Fossil Hill Formation)** Dark pinkish brown fine grained, stylolytes typically 3 to 5 per 0.3 m, typically 3 mm thick, stylolytes increasing with depth. 10 cm coral fossil at lower contact. Sharp lower contact at first shale bed. | | | R15 | TCR = 100% RQD = 90% | 485 |
| 47 | | | | | | | 484 |
| 48 | | | | | | | 483 |
| 49 | 481.5 | | | | | | 482 |
| 50 | | | | | R16 | TCR = 100% RQD = 89% | 481 |
| 51 | 479.9 | | | | | | 480 |
| 52 | 51.5 | **SHALE (Cabot Head Formation)** Greenish grey calcareous, weathered, plastic texture. 10 cm thick at contact overlying 0.33 m thick dolostone bed. Reddish fossiliferous sandstone beds 25 mm to 100 mm thick comprise 20% of recovered core. | | | | | 479 |
| 53 | 478.4 | | | | R17 | TCR = 100% RQD = 82% | 478 |
| 54 | 476.7 | | | | | | 477 |
| | 54.7 | **END OF BOREHOLE** Borehole was open upon completion. Open hole well installed in borehole. Casing cemented in bedrock at 3.66 m depth. | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Broken core recovery from 32.3 m to 33.1 m.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 2, 2014 | 25.9 | 505.5 |



library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE NW3

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/09/12 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | TKC/SLW |
| **position** \| | E: 560217 N: 4915465 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 514.4 | **GROUND SURFACE** | | | | | 514 | | | | | |
| | | **OVERBURDEN** | | | | | | | | | | |
| 1 | | | | | | | 513 | | | | | |
| 2 | | | | | | | 512 | | | | | |
| 3 | | | | | | | 511 | | | | ▼ | |
| 4 | 510.4 | | | | | | 510 | | | | | |
| | 4.0 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture, scratched by a knife; porous to vuggy with vugs representing 10% to 20% of recovered core. Reddish muddy infilling to 11.4 m. Minor weathering with rusty stained fracture surfaces, thickly bedded, overall fair to good RQD. | | | R1 | TCR = **97**% RQD = **46**% | | | | | | |
| 5 | | | | | | | 509 | | | | | |
| 6 | | Reefal facies appearance from 4.0 m to 13.6 m and from 14.9 m to 15.0 m with a more open vuggy texture and significant fossil debris, lower RQD values. | | | | | | | | | | |
| 7 | 507.8 | | | | R2 | TCR = **99**% RQD = **76**% | 508 | | | | | |
| | | Core darker in colour below 12.2 m. Core becoming mottled grey/white below 23.8 m with a wispy stylolytic texture. | | | | | | | | | | |
| 8 | | | | | | | 507 | | | | | |
| | | Gradational lower contact on change in texture. | | | | | | | | | | |
| 9 | 505.6 | | | | | | 506 | | | | | |
| 10 | | | | | R3 | TCR = **97**% RQD = **55**% | 505 | | | | | Vertical fractures from 10.1 m to 11.5 m, 16.0 m to 16.3 m and 18.3 m to 18.8 m depth. |
| 11 | | | | | | | 504 | | | | | |
| 12 | 502.4 | | | | | | 503 | | | | | |
| 13 | | | | | R4 | TCR = **98**% RQD = **86**% | 502 | | | | | |
| 14 | | | | | | | 501 | | | | | |
| 15 | 499.2 | | | | | | 500 | | | | | |
| | 496.1 | | | | R5 | TCR = **88**% RQD = **69**% | 499 | | | | | |

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW3

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 2014/09/12
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** TKC/SLW
**position |** E: 560217 N: 4915465 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 16 | | | | | | | 498 |
| 17 | | | | | R5 | TCR = **88%** RQD = **69%** | 497 |
| 18 | 496.1 | | | | | | 496 |
| 19 | | | | | R6 | TCR = **98%** RQD = **78%** | 495 |
| 20 | | | | | | | 494 |
| 21 | 493.2 | | | | | | 493 |
| 22 | | | | | R7 | TCR = **98%** RQD = **86%** | 492 |
| 23 | | | | | | | 491 |
| 24 | 489.9 | | | | | | 490 |
| | 489.6 | | | | | | |
| 25 | 24.8 | **DOLOSTONE (Fossil Hill Formation)** Light greyish brown to pinkish brown, fine grained with stylolytic to shaley partings 2 to 5 mm thick, typically 5 per 0.3 m. Sharp lower contact on first shale bed. | | | | | 489 |
| 26 | | | | | R8 | TCR = **92%** RQD = **80%** | 488 |
| 27 | 486.7 | | | | | | 487 |
| 28 | 486.1 | | | | | | 486 |
| | 28.4 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, thin reddish coloured fossiliferous sandstone beds from 28.7 m to 29.4 m depth. | | | R9 | TCR = **100%** RQD = **57%** | |
| 29 | 484.8 | | | | | | 485 |
| | 29.6 | **END OF BOREHOLE** | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in at least 1 m of competent bedrock.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 17, 2014 | 3.4 | 511.0 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW4

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/08/28 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559674 N: 4915228 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 529.0 | **GROUND SURFACE** | | | | | 529 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 528 |
| 2 | 526.3 | | | | | | 527 |
| 3 | 2.7 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, slightly brittle rock core with a rough cut texture, scratched by a knife; porous texture with interconnected vugs up to 50 mm. Reefal facies appearance (fossil debris) with a poorer RQD from contact to 28.5 m. Flank facies appearance below 28.5 m with less vugs and higher RQD. Minor weathering with mud infilling to 13.1 m, thickly bedded, fair to good RQD. (Flank facies) | | | | | 526 |
| 4 | | | | | | | 525 |
| 5 | | | | R1 | | TCR = **97%** RQD = **89%** | 524 |
| 6 | | | | | | | 523 |
| 7 | 522.1 | Core becoming darker bluish grey in colour below 14.9 m. Mottled grey/white appearance below 34.1 m, shaley to wispy stylolytes (typically 5 per 0.3 m) below 41.5 m. | | R2 | | TCR = **98%** RQD = **90%** | 522 |
| 8 | | | | | | | 521 |
| 9 | 520.1 | Gradational lower contact on change in texture at 43.2 m. | | R3 | | TCR = **100%** RQD = **87%** | 520 |
| 10 | | | | | | | 519 |
| 11 | | | | | | | 518 |
| 12 | 517.1 | | | R4 | | TCR = **100%** RQD = **92%** | 517 |
| 13 | | | | | | | 516 |
| 14 | | | | | | | 515 |
| 15 | 514.0 | | | R5 | | TCR = **98%** RQD = **98%** | 514 |
| 16 | | | | | | | 513 |
| 17 | | | | | | | 512 |
| 18 | 510.8 | | | R6 | | TCR = **99%** RQD = **87%** | 511 |
| 19 | | | | | | | 510 |
| 20 | | | | | | | 509 |
| 21 | 507.7 | | | R7 | | TCR = **100%** RQD = **94%** | 508 |
| 22 | | | | | | | 507 |
| 23 | | | | | | | 506 |
| 24 | 504.5 | | | R8 | | TCR = **98%** RQD = **95%** | 505 |
| 25 | | | | | | | 504 |
| 26 | | | | | | | 503 |
| 27 | 501.4 | | | R9 | | TCR = **100%** RQD = **100%** | 502 |
| 28 | | | | | | | 501 |
| 29 | | | | | | | 500 |
| | 498.4 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW4

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/08/28 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559674 N: 4915228 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Number | Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 30 | 498.4 | | | | R9 | | 499 |
| 31 | | | | | | | 498 |
| 32 | | | | | R10 | TCR = **99**% RQD = **96**% | 497 |
| 33 | 495.2 | | | | | | 496 |
| 34 | | | | | | | 495 |
| 35 | | | | | R11 | TCR = **98**% RQD = **98**% | 494 |
| 36 | 492.3 | | | | | | 493 |
| 37 | | | | | | | 492 |
| 38 | | | | | R12 | TCR = **98**% RQD = **98**% | 491 |
| 39 | 489.1 | | | | | | 490 |
| 40 | | | | | | | 489 |
| 41 | | | | | R13 | TCR = **100**% RQD = **84**% | 488 |
| 42 | 486.1 | | | | | | 487 |
| 43 | 485.8 | | | | | | 486 |
| 44 | 43.2 | **DOLOSTONE (Fossil Hill Formation)** Light pinkish grey to greenish grey, fine grained, stylolytic to shaley minor pyrite mineralization. | | | R14 | TCR = **100**% RQD = **94**% | 485 |
| 45 | | Sharp lower contact on first appearance of shale. | | | | | 484 |
| 46 | 483.2 | | | | | | 483 |
| 47 | 481.9 | | | | R15 | TCR = **100**% RQD = **49**% | 482 |
| 48 | 47.1 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, thin reddish coloured fossiliferous sandstone beds below 48.6 m. | | | | | 481 |
| | 480.1 | | | | | | |
| | 48.9 | **END OF BOREHOLE** | | | | | |

Penetration Test Values (Blows / 0.3m): Dynamic Cone 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane — 40 80 120 160

Water Content (%) & Plasticity: PL MC LL — 10 20 30

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Vertical fracture from 45.8 m to 47.1 m depth.

Dolostone bed from 47.1 m to 47.5 m depth.

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 3.66 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 5, 2014 | 10.6 | 518.4 |

library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE NW5

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/08/27 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559641 N: 4915406 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 521.0 | **GROUND SURFACE** | | | | | 520 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 519 |
| 2 | | | | | | | |
| 3 | | | | | | | 518 |
| 4 | | | | | | | |
| 5 | | | | | | | 517 |
| 6 | | | | | | | |
| 7 | | | | | | | 516 |
| 8 | | | | | | | |
| 9 | | | | | | | 515 |
| 10 | 510.6 | | | | | | |
| | 10.4 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough texture, scratched by a knife; slightly weathered with light rusty orange staining on fractures and some reddish mud staining to 27.1 m, thickly bedded, good to excellent RQD. Vugs <5%, typically 2 to 4 mm. (Flank facies) | | | R1 | TCR = **99**% RQD = **94**% | 514 |
| 11 | | | | | | | |
| 12 | | | | | | | 513 |
| 13 | 507.6 | Reefal texture with more open cavities and increased fossil content from 15.0 m to 18.0 m and 18.8 m to 19.6 m. | | | | | |
| | | | | | R2 | TCR = **100**% RQD = **94**% | 512 |
| 14 | | Core becoming darker grey below 17.7 m. | | | | | |
| 15 | 505.5 | Mottled apeparance below 25.9 m with increasing vugs (15%). Less vuggy below 30.8 m. | | | | | 511 |
| | | | | | R3 | TCR = **100**% RQD = **97**% | |
| 16 | | Gradational lower contact on change in texture at 34.1 m. | | | | | 510 |
| 17 | | | | | | | |
| 18 | 502.4 | | | | | | 509 |
| 19 | | | | | R4 | TCR = **100**% RQD = **75**% | |
| 20 | | | | | | | 508 |
| 21 | 499.4 | | | | | | |
| | 496.8 | | | | R5 | | 507 |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Vertical fracture with red mud infilling from 20.7 m to 23.3 m and 24.0 m 24.6 m.

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW5

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/08/27 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | KMT |
| **position** \| | E: 559641 N: 4915406 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 22 | | | | | | | 498 |
| 23 | | | | | R5 | TCR = **100**% RQD = **29**% | 497 |
| 24 | 496.8 | | | | | | 496 |
| 25 | | | | | R6 | TCR = **100**% RQD = **86**% | 495 |
| 26 | | | | | | | 494 |
| 27 | 493.7 | | | | | | 493 |
| 28 | | | | | R7 | TCR = **99**% RQD = **94**% | 492 |
| 29 | | | | | | | 491 |
| 30 | 490.6 | | | | | | 490 |
| 31 | | | | | R8 | TCR = **98**% RQD = **89**% | 489 |
| 32 | | | | | | | 488 |
| 33 | 487.5 | | | | | | 487 |
| 34 | 486.9 / 34.1 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey, fine grained, stylolytes typically 1 to 2 per metre. Rare shale partings up to 1 cm thick. Sharp lower contact at first shale bed. | | | R9 | TCR = **98**% RQD = **91**% | 486 |
| 35 | | | | | | | 485 |
| 36 | 484.3 | | | | | | 484 |
| 37 | 483.5 / 37.5 | **SHALE (Cabot Head Formation)** Greenish grey calcareous, weathered plastic shale, thin reddish coloured fossiliferous sandstone bed below 39.2 m depth. | | | R10 | TCR = **99**% RQD = **88**% | 483 |
| 38 | | | | | | | 482 |
| 39 | 481.3 / 39.7 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 10.36 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 8, 2014 | 5.4 | 515.5 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW6

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | CME 75, track-mounted | **date started** \| | 2014/09/29 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | BTC |
| **position** \| | E: 559515 N: 4915354 (17T, Geodetic) | **coring** \| | HQ core, OD=96mm, ID=64mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 520.7 | **GROUND SURFACE** | | | | | 520 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 519 |
| 2 | | | | | | | |
| | 517.9 | | | | | | 518 |
| 3 | 2.8 | **DOLOSTONE (Amabel Formation)** Creamy white with a chalky dull appearance; uniform; fine to medium grained; strong core with a rough texture, scratched by a knife; slightly weathered with red mud infilling to 12.5 m then light rusty orange staining on fractures, thickly bedded, overall good to excellent RQD, vugs <5% with cavities up to 20 mm, vugs are poorly interconnected. (Flank facies) | | R1 | | TCR = **81**% RQD = **44**% | 517 |
| 4 | 516.4 | | | R2 | | TCR = **100**% RQD = **100**% | |
| | | | | R3 | | TCR = **95**% RQD = **73**% | 516 |
| 5 | | | | | | | |
| 6 | 514.5 | Minor reefal texture 20.7 m to 21.6 m with a more open, fossiliferous appearance. | | R4 | | TCR = **100**% RQD = **82**% | 515 |
| 7 | 513.1 | Core becoming darker blue grey with a mottled appearance below 12.2 m. Less vuggy below 23.3 m. Core has mottled grey/white appearance below 23.3 m. | | R5 | | TCR = **98**% RQD = **80**% | 514 |
| 8 | | | | | | | |
| 9 | 511.5 | Gradational lower contact at change in texture at 35.1 m. | | R6 | | TCR = **100**% RQD = **85**% | 513 |
| 10 | 510.0 | | | R7 | | TCR = **100**% RQD = **72**% | 512 |
| 11 | | | | | | | |
| 12 | 508.5 | | | R8 | | TCR = **100**% RQD = **50**% | 511 |
| 13 | 507.0 | | | R9 | | TCR = **100**% RQD = **87**% | 510 |
| 14 | | | | | | | |
| 15 | 505.4 | | | R10 | | TCR = **100**% RQD = **100**% | 509 |
| 16 | 503.9 | | | R11 | | TCR = **100**% RQD = **0**% | 508 |
| 17 | | | | | | | |
| 18 | 502.5 | | | R12 | | TCR = **100**% RQD = **0**% | 507 |
| 19 | 500.9 | | | R13 | | TCR = **100**% RQD = **83**% | 506 |
| 20 | | | | | | | |
| 21 | 499.4 | | | | | | 505 |
| | 497.8 | | | R14 | | TCR = **100**% RQD = | 504 |
| | | | | | | | 503 |
| | | | | | | | 502 |
| | | | | | | | 501 |
| | | | | | | | 500 |
| | | | | | | | 499 |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW6

WSP

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |** CME 75, track-mounted
**date started |** 2014/09/29
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** BTC
**position |** E: 559515 N: 4915354 (17T, Geodetic)
**coring |** HQ core, OD=96mm, ID=64mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery |
|---|---|---|---|---|---|---|
| 22 | | | | | | 92% |
| | 497.8 | | | | R14 | TCR = 100% RQD = 92% |
| 23 | | | | | R15 | TCR = 100% RQD = 96% |
| 24 | 496.5 | | | | | |
| | | | | | R16 | TCR = 98% RQD = 98% |
| 25 | 494.9 | | | | | |
| 26 | | | | | R17 | TCR = 100% RQD = 88% |
| 27 | 493.4 | | | | | |
| | | | | | R18 | TCR = 100% RQD = 94% |
| 28 | 491.9 | | | | | |
| 29 | | | | | R19 | TCR = 100% RQD = 96% |
| 30 | 490.1 | | | | | |
| | | | | | R20 | TCR = 100% RQD = 93% |
| 31 | | | | | | |
| 32 | 488.6 | | | | R21 | TCR = 100% RQD = 0% |
| 33 | 487.1 | | | | | |
| | | | | | R22 | TCR = 100% RQD = 95% |
| 34 | | | | | | |
| 35 | 485.6 / 35.1 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey, fine grained, stylolytic typically 4 to 5 per 0.3 m up to 3 mm thick, chert as 1 cm thick veins 35.6 m to 36.1 m depth. Sharp lower contact at first shale bed appearance. | | | R23 | TCR = 100% RQD = 72% |
| 36 | 484.0 | | | | | |
| 37 | | | | | R24 | TCR = 100% RQD = 83% |
| 38 | 482.5 | | | | | |
| | 482.0 / 38.7 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, thin reddish coloured fossiliferous sandstone beds from 40.2 m to 40.8 m depth. | | | R25 | TCR = 35% RQD = 27% |
| 39 | 481.0 | | | | | |
| 40 | | | | | R26 | TCR = 93% RQD = 0% |
| 41 | 479.6 / 41.2 | | | | | |

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 4.88 m depth.

Elevation Scale (mASL): 498, 497, 496, 495, 494, 493, 492, 491, 490, 489, 488, 487, 486, 485, 484, 483, 482, 481, 480

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL, MC, LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Oct 1, 2014 | 5.5 | 515.2 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW7

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/04 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559466 N: 4915175 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 523.2 | **GROUND SURFACE** | | | | | 523 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 522 |
| 2 | | | | | | | 521 |
| 3 | | | | | | | 520 |
| 4 | | | | | | | 519 |
| 5 | | | | | | | 518 |
| 6 | 516.5 | | | | | | 517 |
| 7 | 6.7 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough cut texture, scratched by a knife; slightly weathered with rusty orange staining on fracture surfaces, thickly bedded, good to excellent RQD, vugs typically 5%, 2 to 5 mm. (Flank facies) | | | R1 | TCR = **76**% RQD = **43**% | 516 |
| 8 | | | | | | | 515 |
| 9 | 513.9 | Reefal facies texture with open porous structure slumped biohorns and abundant fossils from 12.5 m to 18.7 m depth. | | | R2 | TCR = **100**% RQD = **100**% | 514 |
| 10 | | | | | | | 513 |
| 11 | | Core becoming darker bluish grey below 12.5 m. Mottled blue/grey and white below 27.1 m. | | | | | 512 |
| 12 | 510.9 | Gradational lower contact on change in texture. | | | R3 | TCR = **100**% RQD = **91**% | 511 |
| 13 | | | | | | | 510 |
| 14 | | | | | | | 509 |
| 15 | 507.9 | | | | R4 | TCR = **100**% RQD = **96**% | 508 |
| 16 | | | | | | | 507 |
| 17 | | | | | | | 506 |
| 18 | 504.8 | | | | R5 | TCR = **88**% RQD = **74**% | 505 |
| 19 | | | | | | | 504 |
| 20 | | | | | | | 503 |
| 21 | 502.1 | | | | R6 | TCR = **98**% RQD = **94**% | 502 |
| | 499.0 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW7

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/04 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559466 N: 4915175 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 22 | | | | | | | 501 |
| 23 | | | | | R6 | TCR = **98%** RQD = **94%** | 500 |
| 24 | 499.0 | | | | | | 499 |
| 25 | | | | | R7 | TCR = **90%** RQD = **52%** | 498 |
| 26 | | | | | | | 497 |
| 27 | 495.6 | | | | | | 496 |
| 28 | | | | | R8 | TCR = **100%** RQD = **95%** | 495 |
| 29 | | | | | | | 494 |
| 30 | 492.4 | | | | | | 493 |
| 31 | | | | | R9 | TCR = **100%** RQD = **88%** | 492 |
| 32 | | | | | | | 491 |
| 33 | 489.5 | | | | | | 490 |
| 34 | | | | | R10 | TCR = **100%** RQD = **91%** | 489 |
| 35 | | | | | | | 488 |
| 36 | 486.5 | | | | | | 487 |
| 37 | 485.4 | | | | R11 | TCR = **98%** RQD = **85%** | 486 |
| 38 | 37.8 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey fine grained dolostone, stylolytes 2 to 3 per 0.3 m, 2 mm thick. Chert as 50 mm nodules from 38.3 m to 38.6 m. Sharp lower contact at first shale bed. | | | | | 485 |
| 39 | | | | | | | 484 |
| 40 | 483.4 | | | | | | 483 |
| 41 | 481.7 | | | | R12 | TCR = **98%** RQD = **80%** | 482 |
| 42 | 41.5 / 481.1 / 42.1 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, rare thin redish fossiliferous sandstone beds up to 20 mm thick. | | | | | |

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 6.71 m depth.

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone
10 20 30 40

Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

Water Content (%) & Plasticity
PL MC LL
10 20 30

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)
GR SA SI CL

Vertical fracture from 26.0 m to 27.2 m with minor orange staining.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 19, 2014 | 5.6 | 517.6 |



library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE NW8

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/15 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| BTC |
| **position** \| E: 559244 N: 4915009 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | SAMPLE: Number | SAMPLE: Type | SAMPLE: SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 531.1 | **GROUND SURFACE** | | | | | 531 | Dynamic Cone: 10 20 30 40 | | | | GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL |
| 1 | | **OVERBURDEN** | | | | | 530 | Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160 | PL MC LL; 10 20 30 | | | |
| 2 | | | | | | | 529 | | | | | |
| 3 | | | | | | | 528 | | | | ▼ | |
| 4 | 527.0 / 4.1 | | | | | | 527 | | | | | |
| 5 | | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture, scratched by a knife; slightly weathered with minor rusty orange staining and pitting, and vugs ~5% with vugs up to 1 cm, but locally greater 15% to 20% from 27.9 m to 33.2 m, 3 mm to 5 mm, thickly bedded, good to excellent RQD, except 37.0 m to 38.7 m where recovered core pieces are smaller. (Flank facies) | | | R1 | TCR = **95%** RQD = **60%** | 526 | | | | | |
| 6 | | | | | | | 525 | | | | | |
| 7 | 524.0 | | | | | | 524 | | | | | |
| 8 | | | | | R2 | TCR = **100%** RQD = **100%** | 523 | | | | | |
| 9 | 521.7 | Reefal facies texture with higher porosity and more fossiliferous from 7.6 m to 9.4 m, 11.3 m to 11.4 m, 13.9 m to 14.3 m and 18.3 m to 20.6 m. | | | | | 522 | | | | | |
| 10 | | Core becoming darker bluish grey below 13.4 m. Becoming less vuggy and mottled grey-white below 27.7 m. | | | R3 | TCR = **98%** RQD = **88%** | 521 | | | | | |
| 11 | | | | | | | 520 | | | | | |
| 12 | 518.6 | Gradational lower contact on change in texture at 37.8 m. | | | | | 519 | | | | | |
| 13 | | | | | | | 518 | | | | | |
| 14 | | | | | R4 | TCR = **100%** RQD = **90%** | 517 | | | | | |
| 15 | 515.6 | | | | | | 516 | | | | | |
| 16 | | | | | | | 515 | | | | | |
| 17 | | | | | R5 | TCR = **94%** RQD = **92%** | 514 | | | | | |
| 18 | 512.5 | | | | | | 513 | | | | | |
| 19 | | | | | | | 512 | | | | | |
| 20 | | | | | R6 | TCR = **100%** RQD = **84%** | 511 | | | | | |
| 21 | 509.5 | | | | | | 510 | | | | | |
| 22 | | | | | | | 509 | | | | | |
| 23 | | | | | R7 | TCR = **95%** RQD = **87%** | 508 | | | | | |
| | 506.4 | | | | | | | | | | | |

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW8

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/15 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| BTC |
| **position** \| E: 559244 N: 4915009 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 24 | 506.4 | | | | R7 | | 507 |
| 25 | | | | | | | 506 |
| 26 | | | | | R8 | TCR = **100**% RQD = **97**% | 505 |
| 27 | 503.4 | | | | | | 504 |
| 28 | | | | | R9 | TCR = **100**% RQD = **98**% | 503 |
| 29 | | | | | | | 502 |
| 30 | 500.3 | | | | | | 501 |
| 31 | | | | | R10 | TCR = **100**% RQD = **100**% | 500 |
| 32 | | | | | | | 499 |
| 33 | 497.3 | | | | | | 498 |
| 34 | | | | | R11 | TCR = **95**% RQD = **90**% | 497 |
| 35 | | | | | | | 496 |
| 36 | 494.2 | | | | | | 495 |
| 37 | 493.3 | | | | R12 | TCR = **100**% RQD = **62**% | 494 |
| 38 | 37.8 | **DOLOSTONE (Fossil Hill Formation)** Pinkish grey to greenish grey, fine grained, stylolytes 3 to 5 per 0.3 m, up to 3 mm thick, glauconite "blebs" associated wtih stylolytes below 41.0 m. | | | | | 493 |
| 39 | | | | | | | 492 |
| 40 | 491.2 | Sharp lower contact at first shale bed. | | | | | 491 |
| 41 | 489.6 | | | | R13 | TCR = **81**% RQD = **42**% | 490 |
| 42 | 41.5 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, thin typically 5 to 10 cm reddish coloured fossiliferous sandstone beds below 41.9 m. | | | | | 489 |
| | 488.1 | | | | | | |
| | 43.0 | **END OF BOREHOLE** | | | | | |

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone
10 20 30 40

Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

Water Content (%) & Plasticity
PL MC LL
10 20 30

PID Readings

Well Details

Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT)
GR SA SI CL

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 3.96 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 25, 2014 | 3.5 | 527.6 |

library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE NW9

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/11 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 559031 N: 4914966 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 520.9 | **GROUND SURFACE** | | | | | 520 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 519 |
| 2 | | | | | | | 518 |
| 3 | | | | | | | 517 |
| 4 | | | | | | | 516 |
| 5 | | | | | | | 515 |
| 6 | | | | | | | 514 |
| 7 | | | | | | | 513 |
| 8 | 513.0 / 7.9 | **DOLOSTONE (Amabel Formation)** Creamy white with a chalky dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture (drilling method artifact), scratched by a knife; slightly weathered, vugs (5%) typically 2 mm to 5 mm but up to 32 mm, vugs are interconnected, overall good to excellent RQD. (Flank facies) | | | R1 | TCR = **98**% RQD = **80**% | 512 |
| 9 | | | | | | | 511 |
| 10 | | | | | | | 510 |
| 11 | 509.9 | Reefal facies texture, with higher porosity, lower RQD and more fossiliferous 9.1 m to 9.4 m, 11.6 m, to 14.3 m, 15.8 m to 20.4 m and 23.5 m to 23.8 m. | | | R2 | TCR = **91**% RQD = **68**% | 509 |
| 12 | | | | | | | 508 |
| 13 | | | | | | | 507 |
| 14 | 506.7 | Core becoming darker bluish grey in colour below 14.9 m and less vuggy below 23.8 m. Becoming mottled gery/white below 32.3 m. | | | R3 | TCR = **100**% RQD = **98**% | 506 |
| 15 | 505.7 | Gradational lower contact at 26.6 m at change in colour and texture. | | | R4 | TCR = **100**% RQD = **99**% | 505 |
| 16 | | | | | | | 504 |
| 17 | | | | | | | 503 |
| 18 | 502.9 | | | | R5 | TCR = **99**% RQD = **83**% | 502 |
| 19 | | | | | | | 501 |
| 20 | | | | | | | 500 |
| 21 | 499.8 | | | | R6 | TCR = **100**% RQD = **78**% | 499 |
| 22 | | | | | | | 498 |
| 23 | 496.9 | | | | | | 497 |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

(continued next page)



library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE NW9

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/09/11 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | KMT |
| **position** \| | E: 559031 N: 4914966 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 24 | | | | | | | 496 |
| 25 | | | | | R7 | TCR = **100**% RQD = **97**% | 495 |
| 26 | | | | | | | 494 |
| 27 | 493.8 | | | | | | 493 |
| 28 | | | | | R8 | TCR = **101**% RQD = **94**% | 492 |
| 29 | | | | | | | 491 |
| 30 | 490.7 | | | | | | 490 |
| 31 | | | | | R9 | TCR = **100**% RQD = **98**% | 489 |
| 32 | 488.3 | | | | | | 488 |
| 33 | | | | | | | 487 |
| 34 | | | | | R10 | TCR = **99**% RQD = **98**% | 486 |
| 35 | 485.4 | | | | | | 485 |
| 36 | 484.3 | | | | | | 484 |
| 37 | 36.6 | **DOLOSTONE (Fossil Hill Formation)** Light bluish grey, fine grained, stylolytic to shaley partings 1 to 5 per 0.3 m up to 3 mm thick. | | | R11 | TCR = **101**% RQD = **92**% | 483 |
| 38 | 482.3 | Sharp lower contact at first shale bed. | | | | | 482 |
| 39 | | | | | | | 481 |
| 40 | 480.4 | | | | R12 | TCR = **99**% RQD = **90**% | 480 |
| 41 | 40.5 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture, thin reddish coloured fossiliferous sandstone beds from 41.2 m to 41.7 m depth. | | | | | |
| | 479.2 | | | | | | |
| | 41.7 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 8.28 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 23, 2014 | 4.5 | 516.3 |

**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW10

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 0214/09/09 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | KMT |
| **position** \| | E: 558938 N: 4915593 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 509.7 | **GROUND SURFACE** | | | | | 509 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 508 |
| | 507.7 | | | | | | |
| 2 | 2.0 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; fossiliferous, strong core with a rough cut texture, scratched by a knife; vugs 2% to 3% typically 1 mm to 4 mm, slightly weathered (noticably less weathered than adjacent boreholes), thickly bedded, overall good to excellent RQD. (Flank facies) | | | R1 | TCR = **90**% RQD = **53**% | 507 |
| 3 | | Reefal texture with large vugs and fossiliferous from 4.3 m to 8.8 m. | | | | | 506 |
| 4 | | | | | | | |
| 5 | 504.6 | Core becoming darker grey in colour below 14.6 m, becoming mottled grey-white below 20.4 m. | | | | | 505 |
| | | | | | R2 | TCR = **100**% RQD = **94**% | 504 |
| 6 | | Gradational lower contact at change in texture at 25.6 m. | | | | | |
| 7 | | | | | | | 503 |
| 8 | 501.4 | | | | | | 502 |
| | | | | | R3 | TCR = **96**% RQD = **74**% | |
| 9 | 500.4 | | | | | | 501 |
| 10 | | | | | | | 500 |
| | | | | | R4 | TCR = **100**% RQD = **89**% | |
| 11 | | | | | | | 499 |
| 12 | 497.2 | | | | | | 498 |
| | | | | | R5 | TCR = **100**% RQD = **97**% | 497 |
| 13 | | | | | | | |
| 14 | | | | | | | 496 |
| | 494.2 | | | | | | 495 |
| 15 | 491.2 | | | | R6 | TCR = **100**% RQD = | 494 |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE NW10

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 0214/09/09
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** KMT
**position |** E: 558938 N: 4915593 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 16 | | *(continued)* | | | | 97% | |
| 17 | | | | | R6 | TCR = **100**% RQD = **97**% | 493 |
| 18 | 491.2 | | | | | | 492 |
| 19 | | | | | R7 | TCR = **98**% RQD = **97**% | 491 |
| 20 | | | | | | | 490 |
| 21 | 488.3 | | | | | | 489 |
| 22 | | | | | R8 | TCR = **100**% RQD = **95**% | 488 |
| 23 | | | | | | | 487 |
| 24 | 485.2 | | | | | | 486 |
| 25 | 484.1 | | | | | | 485 |
| 26 | 25.6 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey, fine grained, stylolytic 3 to 5 per 0.3 m up to 3 mm thick, dark shaley partings 5 mm thick at 25 mm to 50 mm intervals below 28.0 m. | | | R9 | TCR = **100**% RQD = **100**% | 484 |
| 27 | 482.4 | Sharp lower contact at first appearance of a shale bed. | | | | | 483 |
| 28 | | | | | R10 | TCR = **100**% RQD = **54**% | 482 |
| 29 | 480.3 | | | | | | 481 |
| | 480.2 29.5 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture. | | | | | |

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 2.59 m depth.

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings | Well Details | Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Glauconite as 1 cm blebs at 26.7 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 24, 2014 | 0.7 | 509.0 |

**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# BOREHOLE NO. NW10 Shallow



**PROJECT NAME:** DUNTROON EXPANSION
**PROJECT NO.:** 111-53312-00 52.1
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Sep 18, 2014
**BOREHOLE TYPE:** 123 mm OD PQ CORE
**SUPERVISOR:** BTC
**GROUND ELEVATION:** 509.7 mASL
**REVIEWER:** SLW

| DEPTH (m) | ELEV (mASL) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 509.7 | OVERBURDEN | | | | | | | | | | |
| 2.0 | 507.7 | DOLOSTONE (AMABEL FORMATION): CREAMY WHITE WITH A DULL APPEARANCE; UNIFORM; FINE TO MEDIUM GRAINED; FOSSILIFEROUS; STRONG CORE WITH A ROUGH CUT TEXTURE. | | | | | | | | | | |
| 3.8 | 505.9 | MONITOR TERMINATED AT 3.82 m IN DOLOSTONE. | | | | | | | | | | |

UTM CO-ORDINATES
UTM Zone: 17 NAD: 83
Easting: 558940
Northing: 4915376

REMARKS

# BOREHOLE NO. NW10-DP



**PROJECT NAME:** DUNTROON EXPANSION
**PROJECT NO.:** 111-53312-00 52.1
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Sep 18, 2014
**BOREHOLE TYPE:** 1 1/4" HAND AUGER
**SUPERVISOR:** BTC
**GROUND ELEVATION:** 509.7 mASL
**REVIEWER:** SLW

| DEPTH (m) | ELEV (mASL) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 509.7 | TOP SOIL | | | | | | | | | | |
| 0.2 | 509.5 | BROWN SILT AND SAND, TRACE GRAVEL. MOIST. | | | | | | | | | | |
| 0.8 | 508.9 | DRIVEPOINT TERMINATED AT 0.8 m. | | | | | | | | | | |

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 83
Easting: 558940
Northing: 4915376

REMARKS

# LOG OF BOREHOLE IW1

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/08/05 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | BTC/TKC |
| **position** \| | E: 560551 N: 4915269 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) & Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 511.5 | **GROUND SURFACE** | | | | | 511 | | | | | |
| | | **OVERBURDEN** | | | | | | | | | | |
| 1 | | | | | | | 510 | | | | | |
| 2 | | | | | | | 509 | | | | | |
| 3 | | | | | | | 508 | | | | | |
| 4 | 507.1 | | | | | | | | | | | |
| | 4.4 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough cut texture, scratched by a knife; slightly weathered with rusty orange staining on fracture surfaces, thickly bedded, good RQD, vugs typically 5%, 2 to 6 mm. (Flank facies) | | | R1 | TCR = **100**% RQD = **32**% | 507 | | | | | |
| 5 | | Reefal facies texture with open cavities and increased and mounded fossil content from 4.6 m to 6.1 m and 10.1 m to 11.9 m. | | | | | 506 | | | | | |
| 6 | | | | | | | 505 | | | | | |
| 7 | 504.2 | Core becoming darker bluish grey below 7.6 m. Mottled pinkish grey appearance below 17.1 m. | | | | | | | | | | Broken core recovery from 7.0 m to 7.5 m depth. |
| | | Gradational lower contact on change in texture. | | | R2 | TCR = **99**% RQD = **64**% | 504 | | | | | |
| 8 | | | | | | | 503 | | | | | |
| 9 | 502.4 | | | | | | | | | | ▼ | |
| | | | | | R3 | TCR = **98**% RQD = **78**% | 502 | | | | | |
| 10 | | | | | | | 501 | | | | | |
| 11 | | | | | | | 500 | | | | | |
| 12 | 499.4 | | | | | | | | | | | Broken core recovery from 11.8 m to 13.3 m depth with minor red mud infilling. |
| | | | | | R4 | TCR = **98**% RQD = **80**% | 499 | | | | | |
| 13 | | | | | | | 498 | | | | | |
| 14 | | | | | | | 497 | | | | | |
| | 496.3 | | | | | | | | | | | |

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW1

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 2014/08/05
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** BTC/TKC
**position |** E: 560551 N: 4915269 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 15 | | | | | R4 | | |
| 16 | | | | | | | 496 |
| 17 | | | | | R5 | TCR = 100% RQD = 72% | 495 |
| 18 | 493.3 | | | | | | 494 |
| 19 | | | | | | | 493 |
| 20 | | | | | R6 | TCR = 100% RQD = 80% | 492 |
| | 491.1 | | | | | | |
| | 20.4 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey fine grained dolostone, stylolytes 2 to 3 per 0.3 m, 2 to 3 mm thick, 12 mm chert nodule at 23.9 m. | | | | | 491 |
| 21 | 490.2 | Sharp lower contact at first appearance of shale. | | | | | |
| 22 | | | | | | | 490 |
| 23 | | | | | R7 | TCR = 100% RQD = 73% | 489 |
| 24 | 487.2 | | | | | | 488 |
| | 24.3 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale, weathered, plastic texture. 0.3 m dolostone bed at 24.4 m. | | | | | 487 |
| 25 | | | | | | | |
| 26 | | | | | R8 | TCR = 100% RQD = 9% | 486 |
| 27 | 484.2 | | | | | | 485 |
| | 27.3 | **END OF BOREHOLE** | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in 3 m of competent bedrock.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Aug 6, 2014 | 8.8 | 502.8 |

library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE IW1a

WSP

| | | | | | |
|---|---|---|---|---|---|
| **project** \| | Duntroon Quarry | | | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | | **date started** \| | 2014/08/06 |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring | **supervisor** \| | BTC/TKC |
| **position** \| | E: 560554 N: 4915269 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm | **reviewer** \| | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | SAMPLE: Number | SAMPLE: Type | SAMPLE: SPT N-Value / Core Recovery |
|---|---|---|---|---|---|---|
| 0 | 511.4 | **GROUND SURFACE** | | | | |
| | | **OVERBURDEN** | | | | |
| 4 | 507.0 / 4.4 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough cut texture, scratched by a knife; slightly weathered with rusty orange staining on fracture surfaces, thickly bedded, good RQD, vugs typically 5%, 2 to 6 mm. (Flank facies)<br><br>Reefal facies texture with open cavities and increased and mounded fossil content from 4.6 m to 6.1 m and 10.1 m to 11.9 m.<br><br>Core becoming darker bluish grey below 7.6 m. Mottled pinkish grey appearance below 17.1 m.<br><br>Gradational lower contact on change in texture. | | | | |

Elevation Scale (mASL): 511, 510, 509, 508, 507, 506, 505, 504, 503, 502, 501, 500, 499, 498, 497

Penetration Test Values (Blows / 0.3m) × Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160

Water Content (%) & Plasticity: PL MC LL 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

(continued next page)



library: genivar - library.glb report: gen log v1 file: bh logs.gpj

# LOG OF BOREHOLE IW1a

| | | | |
|---|---|---|---|
| **project** \| | Duntroon Quarry | **project no.** \| | 111-53312-00 |
| **client** \| | Walker Aggregates Inc. | **rig type** \| | |
| **location** \| | Duntroon, Ontario | **method** \| | Rock coring |
| **position** \| | E: 560554 N: 4915269 (17T, Geodetic) | **coring** \| | PQ core, OD=123mm, ID=85mm |
| **date started** \| | 2014/08/06 | | |
| **supervisor** \| | BTC/TKC | | |
| **reviewer** \| | KJF | | |

SUBSURFACE PROFILE | SAMPLE

Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Number | Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) × Dynamic Cone 10 20 30 40 | Undrained Shear Strength (kPa) ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane 40 80 120 160 | Water Content (%) & Plasticity PL MC LL 10 20 30 | PID Readings | Well Details | Lab Data and Comments / GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

491.0 / 20.4 — **DOLOSTONE (Fossil Hill Formation)**
Bluish grey fine grained dolostone, stylolytes 2 to 3 per 0.3 m, 2 to 3 mm thick, 12 mm chert nodule at 23.9 m.

Sharp lower contact at first appearance of shale.

487.1 / 24.3 — **SHALE (Cabot Head Formation)**
Greenish grey calcareous shale, weathered, plastic texture. 0.3 m dolostone bed at 24.4 m.

484.1 / 27.3

**END OF BOREHOLE**

Borehole was open upon completion.

No samples collected. Stratigraphy inferred from adjacent borehole IW1.

Open hole well installed in borehole. Casing cemented in 3 m of competent bedrock.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 15, 2014 | 8.8 | 502.6 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW2

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/08/11 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| SLW/TKC |
| **position** \| E: 560521 N: 4915489 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 0 | 508.7 | **GROUND SURFACE** | | | | | 508 |
| | | **OVERBURDEN** | | | | | |
| 1 | | | | | | | 507 |
| 2 | | | | | | | 506 |
| 3 | | | | | | | 505 |
| 4 | 504.0 | | | | | | 504 |
| 5 | 4.7 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform; fine to medium grained; strong core with a rough texture, scratched by a knife, slightly weathered with minor light rusty orange staining on fracture surfaces; thickly bedded, good to excellent RQD, vugs <5%, typically 2 to 4 mm. (Flank facies) | | | R1 | TCR = **100**% RQD = **84**% | 503 |
| 6 | | Rare thin reefal facies beds 50 mm thick with open, fossiliferous appearance. | | | | | 502 |
| 7 | | Core becoming darker bluish grey in colour below 7.3 m. Becoming mottled grey white below 15.5 m. | | | | | 501 |
| 8 | 500.8 | Gradational lower contact at change in texture. | | | R2 | TCR = **100**% RQD = **100**% | 500 |
| 9 | | | | | | | 499 |
| 10 | 498.9 | | | | R3 | TCR = **100**% RQD = **98**% | 498 |
| 11 | | | | | | | 497 |
| 12 | | | | | | | 496 |
| 13 | 495.9 | | | | R4 | TCR = **97**% RQD = **78**% | 495 |
| 14 | | | | | | | 494 |
| | 492.7 | | | | | | |

Penetration Test Values (Blows / 0.3m) — × Dynamic Cone — 10 20 30 40

Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane — 40 80 120 160

Water Content (%) & Plasticity — PL MC LL — 10 20 30

PID Readings

Well Details

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW2

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 2014/08/11
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** SLW/TKC
**position |** E: 560521 N: 4915489 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 15 | | | | | R4 | TCR = **97%** RQD = **78%** | |
| | 492.7 | | | | | | 493 |
| 16 | | | | | | | |
| | | | | | | | 492 |
| 17 | | | | | R5 | TCR = **97%** RQD = **87%** | |
| | | | | | | | 491 |
| 18 | | | | | | | |
| | 489.8 | | | | | | 490 |
| 19 | | | | | | | |
| | 488.9 | | | | | | 489 |
| | 19.8 | **DOLOSTONE (Fossil Hill Formation)** Bluish grey fine grained stycolytic typically 6 per 0.3 m. Sharp lower contact on first appearance of shale. | | | R6 | TCR = **97%** RQD = **56%** | |
| 20 | | | | | | | 488 |
| 21 | | | | | | | |
| | 486.6 | | | | | | 487 |
| 22 | 486.3 | | | | | | |
| | 22.4 | **SHALE (Cabot Head Formation)** Greenish grey calcareous, weathered, plastic shale bed 25 mm thick. Dolostone bed from 22.4 m to 23.2 m depth. Three 25 m reddish coloured fossiliferous sandstone beds below 23.5 m depth. | | | R7 | TCR = **97%** RQD = **61%** | 486 |
| 23 | | | | | | | |
| | 484.7 | | | | | | 485 |
| 24 | 24.0 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Broken core recovery from 20.4 m to 20.4 m depth.

Vertical fracture from 21.5 m to 21.7 m depth.

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 4.27 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 16, 2014 | 1.7 | 507.0 |

**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW3

WSP

| | | | |
|---|---|---|---|
| **project** \| Duntroon Quarry | | **project no.** \| 111-53312-00 |
| **client** \| Walker Aggregates Inc. | **rig type** \| | **date started** \| 2014/09/05 |
| **location** \| Duntroon, Ontario | **method** \| Rock coring | **supervisor** \| KMT |
| **position** \| E: 560214 N: 4915919 (17T, Geodetic) | **coring** \| PQ core, OD=123mm, ID=85mm | **reviewer** \| KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments / GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 518.5 | **GROUND SURFACE** | | | | | 518 | Dynamic Cone: 10 20 30 40 | | | | |
| | | **OVERBURDEN** | | | | | | Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane; 40 80 120 160 | PL MC LL; 10 20 30 | | | |
| 1 | | | | | | | 517 | | | | | |
| 2 | | | | | | | 516 | | | | | |
| 3 | | | | | | | 515 | | | | | |
| | 514.7 | | | | | | | | | | | |
| 4 | 3.8 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform fine to medium grained; fossiliferous; strong core with rough texture; scratched with a knife; thickly bedded; slightly weathered with minor rusty staining on fracture surfaces; vugs throughout (~5%), 2 to 4 mm; fair to good RQD. (Flank facies) | | | R1 | TCR = **99**% RQD = **65**% | 514 | | | | | |
| 5 | | | | | | | 513 | | | | | |
| 6 | | | | | | | 512 | | | | | |
| | 511.9 | Reefal facies with an open vuggy appearance up to 30% vugs, and a chalky texture, minor reddish muddy infilling with poor RQD from 3.8 m to 8.5 m and from 15.6 m to 16.8 m depth. | | | R2 | TCR = **100**% RQD = **55**% | | | | | | |
| 7 | | Core becoming darker greyish brown in colour below 24.4 m, finer grained texture with wispy stylolytic contacts and a decrease in vugs (~1%). | | | | | 511 | | | | | |
| 8 | | | | | | | 510 | | | | | |
| | 509.6 | Gradational lower contact at change in colour and texture. | | | | | | | | | | |
| 9 | | | | | | | 509 | | | | | |
| 10 | | | | | R3 | TCR = **99**% RQD = **89**% | 508 | | | | | |
| 11 | | | | | | | 507 | | | | | |
| | 506.5 | | | | | | | | | | | |
| 12 | | | | | | | 506 | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | R4 | TCR = **99**% RQD = **82**% | 505 | | | | | |
| | 503.4 | | | | | | 504 | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | 503 | | | | ▼ | |
| | | | | | R5 | TCR = **100**% RQD = **85**% | 502 | | | | | |
| 17 | | | | | | | | | | | | |
| | 500.3 | | | | | | 501 | | | | | |

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW3

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 2014/09/05
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** KMT
**position |** E: 560214 N: 4915919 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Number | Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) |
|---|---|---|---|---|---|---|---|
| 18 | | | | | R5 | | 500 |
| 19 | | | | | | | 499 |
| 20 | | | | | R6 | TCR = **100**% RQD = **67**% | 498 |
| 21 | 497.3 | | | | | | 497 |
| 22 | | | | | R7 | TCR = **100**% RQD = **87**% | 496 |
| 23 | | | | | | | 495 |
| 24 | 494.3 | | | | | | 494 |
| 25 | | | | | R8 | TCR = **99**% RQD = **96**% | 493 |
| 26 | 492.1 | | | | | | 492 |
| | 26.4 | **DOLOSTONE (Fossil Hill Formation)** Light greyish brown to pinkish brown; fine grained with wispy to wavy stylolytes (2 to 5 per 0.3 m), up to 2 mm thick, minor pyrite mineralization. | | | | | |
| 27 | 491.2 | | | | | | 491 |
| 28 | | | | | R9 | TCR = **100**% RQD = **72**% | 490 |
| 29 | | | | | | | 489 |
| 30 | 488.1 | | | | | | 488 |
| 31 | | | | | | | 487 |
| 32 | | | | | R10 | TCR = **56**% RQD = **44**% | 486 |
| 33 | 484.8 | | | | | | 485 |
| | 33.7 | | | | | | |

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40
Undrained Shear Strength (kPa) — ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane: 40 80 120 160
Water Content (%) & Plasticity — PL MC LL: 10 20 30
PID Readings
Well Details
Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Lower 1.8 m of core lost to drilling. Cabot Head Shale not recovered, but confirmed by return water fragments.

**END OF BOREHOLE**

Borehole was open upon completion.

Open hole well installed in borehole. Casing cemented in bedrock at 6.86 m depth.

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 29, 2014 | 15.7 | 502.9 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW4

WSP

| | | | |
|---|---|---|---|
| **project \|** | Duntroon Quarry | **project no. \|** | 111-53312-00 |
| **client \|** | Walker Aggregates Inc. | **rig type \|** | | **date started \|** | 2014/09/08 |
| **location \|** | Duntroon, Ontario | **method \|** | Rock coring | **supervisor \|** | KMT |
| **position \|** | E: 560023 N: 4916216 (17T, Geodetic) | **coring \|** | PQ core, OD=123mm, ID=85mm | **reviewer \|** | KJF |

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery |
|---|---|---|---|---|---|---|
| 0 | 510.4 | **GROUND SURFACE** | | | | |
| | | **OVERBURDEN** | | | | |
| | 500.5 | | | | | |
| 10 | 9.9 | **DOLOSTONE (Amabel Formation)** Creamy white with a dull appearance; uniform fine to medium grained; fossiliferous; strong core with rough texture; scratched with a knife; thickly bedded; slightly weathered with minor rusty staining on fracture surfaces; vugs throughout (~5%) up to 1 cm but typically 2 mm to 4 mm. Overall fair to good RQD. (Flank facies) | | | R1 | TCR = * RQD = * |
| 11 | 499.0 | Slight reefal facies appearance (11.0 m - 13.9 m depth) with poor recovery, vuggy, reddish mud staining and poor RQD. | | | R2 | TCR = * RQD = * |
| 12 | | Core becoming darker bluish in colour below 18.1 m depth with shaley stylolytes (2 mm to 3 mm) and wispy stylolytic contacts typically 1 per 0.3 m. | | | | |
| 13 | 496.5 | Gradational lower contact at 20.7 m depth at change in colour and texture. | | | R3 | TCR = **77**% RQD = **33**% |
| 14 | 495.3 | | | | | |

Elevation Scale (mASL): 510, 509, 508, 507, 506, 505, 504, 503, 502, 501, 500, 499, 498, 497, 496

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10 20 30 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40 80 120 160

Water Content (%) & Plasticity — PL MC LL: 10 20 30

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

* Core barrel not catching core.

*(continued next page)*



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# LOG OF BOREHOLE IW4

**project |** Duntroon Quarry
**project no. |** 111-53312-00
**client |** Walker Aggregates Inc.
**rig type |**
**date started |** 2014/09/08
**location |** Duntroon, Ontario
**method |** Rock coring
**supervisor |** KMT
**position |** E: 560023 N: 4916216 (17T, Geodetic)
**coring |** PQ core, OD=123mm, ID=85mm
**reviewer |** KJF

| Depth Scale (m) | Elev / Depth (m) | STRATIGRAPHY (continued) | Graphic Plot | Sample Number | Sample Type | SPT N-Value / Core Recovery | Elevation Scale (mASL) | Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa) | Water Content (%) & Plasticity | PID Readings | Well Details | Lab Data and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | | | | | | | 495 | | | | | |
| 16 | | | | | | | 494 | | | | | Vertical fracture 16.3 m to 16.9 m. |
| 17 | | | | | R4 | TCR = 100% RQD = 66% | 493 | | | | ▼ | |
| 18 | 492.3 | | | | | | 492 | | | | | |
| 19 | | | | | R5 | TCR = 100% RQD = 93% | 491 | | | | | |
| 20 | 489.7 | | | | | | 490 | | | | | Pyrite mineralization for 5 cm at 20.4 m. |
| 21 | 489.4 20.7 | **DOLOSTONE (Fossil Hill Formation)** Light greyish brown to pinkish brown; fine grained with wispy blue stylolytes typically 3 mm to 5 mm thick; minor pyrite mineralization; occasional chert as white crystals 2 mm to 3 mm. 30 mm reddish calcareous sandstone bed at 21.9 m depth. Sharp lower contact on change in texture. | | | R6 | TCR = 90% RQD = 76% | 489 | | | | | |
| 22 | | | | | | | 488 | | | | | |
| 23 | | | | | | | 487 | | | | | |
| 24 | 486.2 | | | | | | 486 | | | | | |
| 25 | 485.7 24.7 | **SHALE (Cabot Head Formation)** Greenish grey calcareous shale; soft, muddy appearance. | | | R7 | TCR = 97% RQD = 77% | 485 | | | | | |
| | 485.0 25.4 | **END OF BOREHOLE** Borehole was open upon completion. Open hole well installed in borehole. Casing cemented in bedrock at 6.86 m depth. | | | | | | | | | | |

Penetration Test Values (Blows / 0.3m): Dynamic Cone 10 20 30 40
Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane 40 80 120 160
Water Content (%) & Plasticity: PL MC LL 10 20 30
Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

WATER LEVEL MONITORING

| Date | Depth (m) | Elevation (m) |
|---|---|---|
| Sep 30, 2014 | 17.4 | 493.0 |



**library:** genivar - library.glb **report:** gen log v1 **file:** bh logs.gpj

# BOREHOLE NO. DP99-1

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** JUNE 29, 1999

**BOREHOLE TYPE:** 60 mm ID HAND AUGER | **GEOLOGIST:** WDN

**GROUND ELEVATION:** 511.8 mASL | **REVIEWER:** AGH

| DEPTH (m) | | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | |
| | | ORGANICS<br>BLACK SILTY, FIBROUS ORGANICS, SATURATED | | | | | | | | | | |
| | 0.4 | | | | | | | | | | | |
| 0.5 | | SILT, SOME CLAY<br>BROWN, MOTTLED WITH ORANGE, RED, AND GREEN SILT, SOME CLAY, STONY, WET | | | | | | | | | | |
| 1.0 | 1.0 | | | | | | | | | | | 0.45 m SLOT 10 SCREEN<br>0.50 m SAND PACK |
| | | AUGER REFUSAL AT 1.0 m ON ASSUMED BEDROCK | | | | | | | | | | |
| 1.5 | | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | | |
| 2.5 | | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | | |
| 3.5 | | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | | |
| 4.5 | | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | | |

# BOREHOLE NO. DP99-2

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** JUNE 29, 1999

**BOREHOLE TYPE:** 60 mm ID HAND AUGER | **GEOLOGIST:** WDN

**GROUND ELEVATION:** 512.1 mASL | **REVIEWER:** AGH

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | ORGANICS<br>DARK BROWN TO BLACK SILTY FIBROUS ORGANICS, BECOMES PEATY WITH DEPTH, SATURATED | | | | | | | | | | |
| 0.5 | | | | | | | | | | | |
| 1.0 | | | | | | | | | | | 0.45 m SLOT 10 SCREEN<br>0.50 m SAND PACK |
| 1.3 | CALCAREOUS AUGER CUTTINGS | | | | | | | | | | |
| 1.5 | AUGER REFUSAL AT 1.0 m ON ASSUMED BEDROCK | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |
| 2.5 | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | |
| 3.5 | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | |
| 4.5 | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | |

# BOREHOLE NO. DP99-3

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** JULY 21, 1999

**BOREHOLE TYPE:** 60 mm ID HAND AUGER | **GEOLOGIST:** AGH

**GROUND ELEVATION:** 513.6 mASL | **REVIEWER:**

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | ORGANICS<br>DARK BROWN TO BLACK SILTY FIBROUS ORGANICS, SOME ORGANIC SILT, ROOTLETS AND WOOD VEGETATION, SOFT, MOIST TO WET, BECOMING SATURATED AT ABOUT 1.5 m | | | | | | | | | | |
| 0.5 | | | | | | | | | | | |
| 1.0 | | | | | | | | | | | 0.45 m SLOT 10 SCREEN<br>0.50 m SAND PACK |
| 1.5 | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |
| 2.14 / 2.20 | GREY SILTY SAND, SATURATED | | | | | | | | | | |
| | HOLE TERMINATED AT 2.20 m IN GREY SILTY SAND | | | | | | | | | | |
| 2.5 | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | |
| 3.5 | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | |
| 4.5 | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | |

# BOREHOLE NO. DP99-4

**PROJECT NAME:** DUNTROON QUARRY | **PROJECT NO.:** 930521.08

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** JUNE 30, 1999

**BOREHOLE TYPE:** 60 mm ID HAND AUGER | **GEOLOGIST:** WDN

**GROUND ELEVATION:** 511.4 mASL | **REVIEWER:** AGH

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | ORGANICS<br>BLACK FIBROUS ORGANICS, PEAT, SATURATED | | | | | | | | | | |
| 0.5 | | | | | | | | | | | |
| 1.0 | | | | | | | | | | | 0.45 m SLOT 10 SCREEN<br>0.50 m SAND PACK |
| 1.35 | SILT, SOME FINE SAND:<br>GREENISH GREY SILT, SOME FINE SAND, RANDOM PEBBLES, SATURATED | | | | | | | | | | |
| 1.5 | 1.50 AUGER REFUSAL AT 1.5 m ON ASSUMED BEDROCK | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |
| 2.5 | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | |
| 3.5 | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | |
| 4.5 | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | |

# BOREHOLE NO. DP5



**PROJECT NAME:** PROPOSED DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 04 930521.52

**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Jul 03, 2007

**BOREHOLE TYPE:** HAND AUGER
**SUPERVISOR:** SLW

**GROUND ELEVATION:** 509.5 NOT DETERMINED
**REVIEWER:** MJL

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | | | UTM Zone: 17 NAD: 83<br>Easting: 559086<br>Northing: 4915559 |
| 0.0 – 0.2 | ORGANIC SILT:<br>DARK BROWN ORGANIC SILT, TRACE CLAY, ORGANICS, WET TO SATURATED. | | | AS1 | | | 100 | | | | ROB ROY PSW WETLAND COMPLEX UNIT 2 |
| 0.2 – 0.4 | CLAYEY SILT:<br>LIGHT BROWN CLAYEY SILT, TRACE SAND, WTPL. | | | AS2 | | | 100 | | | | |
| 0.4 – 1.0 | SAND:<br>LIGHT BROWN FINE SAND, TRACE TO SOME SILT TO FINE TO MEDIUM SAND, TRACE TO SOME SILT WITH DEPTH, SATURATED. | | | AS3<br>AS4<br>AS5 | | | 100<br>100<br>100 | | | | |
| 1.0 | HAND AUGER HOLE TERMINATED AT 1.0 m DUE TO REFUSAL. | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | |

JHL GEOLOGIC B/W (METRIC) WITH UTM 4-93052152 DRIVE POINTS.GPJ JAGGER HIMS BASIC.GDT 9/7/07

# BOREHOLE NO. DP6



**PROJECT NAME:** PROPOSED DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 04 930521.52
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Jul 03, 2007
**BOREHOLE TYPE:** HAND AUGER
**SUPERVISOR:** SLW
**GROUND ELEVATION:** 511.3 NOT DETERMINED
**REVIEWER:** MJL

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | | | UTM Zone: 17 NAD: 27<br>Easting: 559774<br>Northing: 4915513 |
| 0.1 | ORGANIC SILT:<br>DARK BROWN ORGANIC SILT, ORGANICS, MOIST. | | | AS1 | | | 100 | | | | EXPANSION LANDS ESCARPMENT<br>ANSI A WETLAND |
| | SILT:<br>LIGHT BROWN SILT, SOME TO TRACE FINE SAND, TRACE CLAY, DTPL TO APL AT 0.6 m. | | | AS2 | | | 100 | | | | |
| | | | | AS3 | | | 100 | | | | |
| | | | | AS4 | | | 100 | | | | |
| | | | | AS5 | | | 100 | | | | |
| | | | | AS6 | | | 100 | | | | |
| | | | | AS7 | | | 100 | | | | |
| 1.0 | | | | | | | | | | | |
| | | | | AS8 | | | 100 | | | | |
| 1.4 | HAND AUGER HOLE TERMINATED AT 1.4 m DUE TO REFUSAL. | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | |
| 4.0 | | | | | | | | | | | |
| 5.0 | | | | | | | | | | | |

JHL GEOLOGIC B/W (METRIC) WITH UTM 4-93052152 DRIVE POINTS.GPJ JAGGER HIMS BASIC.GDT 9/7/07

# BOREHOLE NO. DP7



**PROJECT NAME:** DUNTROON EXPANSION
**PROJECT NO.:** 111-53312-00 52.1
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Jul 10, 2014
**BOREHOLE TYPE:** 1 1/4" HAND AUGER
**SUPERVISOR:** TKC
**GROUND ELEVATION:** 509.2 mASL
**REVIEWER:** SLW

| DEPTH (m) | ELEV (mASL) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 509.2 | TOPSOIL | | | | | | | | | | UTM Zone: 17 NAD: 83<br>Easting: 559345<br>Northing: 4915351 |
| 0.2 | 509.0 | FINE SAND, SOME SILT | | | | | | | | | | |
| 0.8 | 508.4 | SILTY TILL, TRACE SAND | | | | | | | | | | |
| 2.5 | 506.7 | DRIVEPOINT TERMINATED AT 2.5 m. | | | | | | | | | | |

# BOREHOLE NO. DP8



**PROJECT NAME:** DUNTROON EXPANSION
**PROJECT NO.:** 111-53312-00 52.1
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Jul 10, 2014
**BOREHOLE TYPE:** 1 1/4" HAND AUGER
**SUPERVISOR:** BTC
**GROUND ELEVATION:** 511.1 mASL
**REVIEWER:** SLW

| DEPTH (m) | ELEV (mASL) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | UTM CO-ORDINATES / REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 511.1 | TOPSOIL | | | | | | | | | | UTM Zone: 17 NAD: 83<br>Easting: 559094<br>Northing: 4914360 |
| 0.5 | 510.6 | DARK BROWN SOIL | | | | | | | | | | |
| 0.9 | 510.2 | DRIVEPOINT TERMINATED AT 0.9 m. | | | | | | | | | | |

WSP GEOLOGIC (METRIC) WITH MASL 111-53312-00 DRIVEPOINTS.GPJ WSP_ENV_V1.GDT 7/19/16

# BOREHOLE NO. DP9



**PROJECT NAME:** DUNTROON EXPANSION
**PROJECT NO.:** 111-53312-00 52.1
**CLIENT:** WALKER AGGREGATES INC.
**DATE COMPLETED:** Sep 10, 2014
**BOREHOLE TYPE:** 1 1/4" HAND AUGER
**SUPERVISOR:** KMT
**GROUND ELEVATION:** 507.7 mASL
**REVIEWER:** KJF

| DEPTH (m) | ELEV (mASL) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE N VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 507.7 | BROWN SATURATED TOPSOIL | | | | | | | | | | |
| 0.1 | 507.6 | BROWN AND GREYISH CLAYEY SILT, SATURATED. RUST STAINING. | | | | | | | | | | WATER PONDED AT 0.12 m ABOVE GROUND. |
| 0.5 | 507.2 | BROWN CLAYEY SILT TO SILTY CLAY. TRACE GRAVEL. | | | | | | | | | | |
| 1.3 | 506.4 | DRIVEPOINT TERMINATED AT 1.33 m. | | | | | | | | | | |

**UTM CO-ORDINATES**
UTM Zone: 17 NAD: 83
Easting: 560273
Northing: 4915407

# BOREHOLE NO. DP-5 (BRIDSON PROPERTY)



**PROJECT NAME:** DUNTROON QUARRY EXPANSION **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. **DATE:** SEPTEMBER 26, 2003

**BOREHOLE TYPE:** HAND AUGER **SUPERVISOR:** AGH

**GROUND ELEVATION:** ESTIMATED 510 mASL **REVIEWER:**

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | SILT: DARK BROWN ORGANIC SILT, TOPSOIL, ROOTLETS, APL TO WTPL. | | | AS | | | | | | | LOCATED ON BRIDSON PROPERTY |
| 0.2 | | | | AS | | | | | | | |
| 0.26 | SILT: LIGHT BROWN/MOTTLED GREYISH BROWN SILT, TRACE TO SOME SAND, TRACE CLAY, TRACE GRAVEL, MOIST. | | | AS | | | | | | | |
| 0.4 | | | | | | | | | | | |
| 0.6 | | | | AS | | | | | | | |
| 0.67 | SILTY FINE SAND: LIGHT BROWN /MOTTLED GREYSIH BROWN SILTY FINE SAND TO FINE SANDY SILT, TRACE CLAY, MOIST | | | AS | | | | | | | |
| 0.8 | | | | AS | | | | | | | |
| 1.0 | | | | AS | | | | | | | |
| 1.06 | SILT: LIGHT BROWN TO GREYISH BROWN SILT, SOME SAND, TRACE CLAY, APL TO WTPL. | | | AS | | | | | | | |
| 1.2 | | | | AS | | | | | | | |
| 1.4 | | | | AS | | | | | | | |
| 1.6 | | | | AS | | | | | | | |
| 1.72 | HAND AUGER HOLE TERMINATED AT 1.72 m IN SILT. | | | AS | | | | | | | |
| 1.8 | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |

# BOREHOLE NO. HA1



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** SEPTEMBER 11, 2003

**BOREHOLE TYPE:** HAND AUGER
**SUPERVISOR:** MJL

**GROUND ELEVATION:** ESTIMATED 510 mASL
**REVIEWER:** AGH

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | SILT: DARK BROWN ORGANIC SILT, TOPSOIL, ROOTLETS, DTPL TO APL. | | | AS | | | | | | | LOCATED ON BRIDSON PROPERTY |
| 0.2 | | | | | | | | | | | |
| 0.23 | SILT: LIGHT BROWN MOTTLED SILT, SOME SAND, TRACE CLAY BECOMING SANDY SILT WITH DEPTH, MOIST. | | | AS | | | | | | | |
| 0.4 | | | | AS | | | | | | | |
| 0.6 | | | | AS | | | | | | | |
| 0.76 | | | | AS | | | | | | | |
| 0.8 | HAND AUGER HOLE TERMINATED AT 0.76 m IN SILT. | | | | | | | | | | |
| 1.0 | | | | | | | | | | | |
| 1.2 | | | | | | | | | | | |
| 1.4 | | | | | | | | | | | |
| 1.6 | | | | | | | | | | | |
| 1.8 | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |

# BOREHOLE NO. HA2



**PROJECT NAME:** DUNTROON QUARRY EXPANSION | **PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC. | **DATE:** SEPTEMBER 26, 2003

**BOREHOLE TYPE:** HAND AUGER | **SUPERVISOR:** AGH

**GROUND ELEVATION:** ESTIMATED 511 mASL | **REVIEWER:**

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE / SHEAR STRENGTH | WATER CONTENT % ($W_P$ – $W_L$) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | 10 20 30 | 10 20 30 | |
| | SILT:<br>DARK BROWN TO BROWN ORGANIC SILT (PEATY), MOIST BECOMING APL. | | | AS | | | | | | | LOCATED IN WETLAND, NORTHWEST CORNER OF EXPANSION LANDS |
| 0.15 | | | | AS | | | | | | | |
| 0.2 | SILT:<br>BROWN/MOTTLED BROWN–GREY ORGANIC SILT, TRACE CLAY BECOMING SILT, TRACE TO SOME CLAY, APL TO WTPL.<br><br>–GRADES TO FINE SANDY SILT, TRACE TO SOME CLAY | | | AS | | | | | | | |
| 0.4 | | | | AS | | | | | | | |
| 0.50 | | | | | | | | | | | |
| | SILTY SAND:<br>BROWN SILTY SAND, TRACE CLAY, WET TO SATURATED.<br><br>THIN LAYER OF CLAYEY SILT AT BASE. | | | | | | | | | | |
| 0.6 | | | | AS | | | | | | | |
| 0.8 | | | | AS | | | | | | | |
| 0.90 | REFUSAL ON BOULDER OR BEDROCK | | | AS | | | | | | | |
| | HAND AUGER HOLE TERMINATED AT 0.90 m DUE TO AUGER REFUSAL ON BOULDER OR BEDROCK. | | | | | | | | | | |
| 1.0 | | | | | | | | | | | |
| 1.2 | | | | | | | | | | | |
| 1.4 | | | | | | | | | | | |
| 1.6 | | | | | | | | | | | |
| 1.8 | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |

# BOREHOLE NO. HA3



**PROJECT NAME:** DUNTROON QUARRY EXPANSION
**PROJECT NO.:** 930521.50

**CLIENT:** GEORGIAN AGGREGATES AND CONSTRUCTION INC.
**DATE:** SEPTEMBER 26, 2003

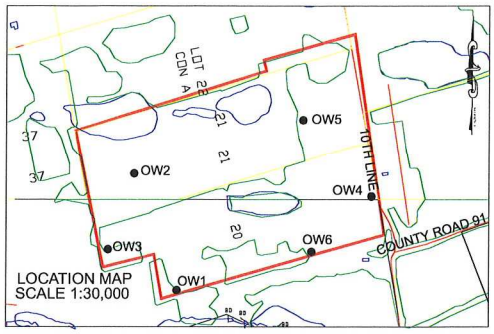
**BOREHOLE TYPE:** HAND AUGER
**SUPERVISOR:** AGH

**GROUND ELEVATION:** ESTIMATED 511 mASL
**REVIEWER:**

| DEPTH (m) | STRATIGRAPHIC DESCRIPTION | STRATIGRAPHY | MONITOR DETAILS | SAMPLE TYPE | SAMPLE 'N' VALUE | SAMPLE % WATER | SAMPLE % RECOVERY | SAMPLE RQD (%) | CONE PENETRATION "N" VALUE 10 20 30 / SHEAR STRENGTH | WATER CONTENT % 10 20 30 / $W_P$ $W_L$ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | |
| | SILT: DARK BROWN ORGANIC SILT (PEATY), BECOMING BROWN–GREY ORGANIC SILT (LESS PEATY), MOIST. | | | AS | | | | | | | LOCATED IN WETLAND, NORTHWEST CORNER OF EXPANSION LANDS |
| | 0.15 | | | AS | | | | | | | |
| 0.2 | SILT: BROWN GREY SILT, SOME CLAY, TRACE SAND, APL TO WTPL. | | | AS | | | | | | | |
| | 0.35 | | | AS | | | | | | | |
| 0.4 | SILTY SAND: MOTTLED BROWN TO BROWN SILTY SAND, TRACE TO SOME CLAY, TRACE GRAVEL AT BASE, APL TO WTPL, WET TO SATURATED. | | | | | | | | | | |
| | | | | AS | | | | | | | |
| 0.6 | | | | AS | | | | | | | |
| 0.8 | | | | AS | | | | | | | GRAIN SIZE SAMPLE MIT CLASSIFICATION<br>GRAVEL 11 %<br>SAND 61 %<br>SILT 23 %<br>CLAY 5 %<br><br>FINE SAND 31 %<br>MED. SAND 18.5 %<br>COARSE SAND 11.5 % |
| | | | | AS | | | | | | | |
| 1.0 | | | | | | | | | | | |
| | | | | AS | | | | | | | |
| 1.2 | 1.20 SILT LAYERS AT DEPTH. | | | | | | | | | | |
| | HAND AUGER HOLE TERMINATED AT 1.20 m IN BROWN SILTY SAND. | | | | | | | | | | |
| 1.4 | | | | | | | | | | | |
| 1.6 | | | | | | | | | | | |
| 1.8 | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | |

## OW1 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 512.2 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| | | | | **Overburden** |
| 4 | | Amabel Formation | | **Dolostone**<br>Light grey to beige, fine crystalline, occasional fossils (brachiopods), low porosity, vuggy (vugs lined with fine calcite crystals) |
| 8 | | | | Massive dolostone between 8 and 12.2 m, mottled, fossiliferous (crinoids, bivalves, brachiopods) |
| 12 | | | | Less dense dolostone between 12.2 and 20.7 m<br>Below 12.2 m - iron staining in vugs |
| 16 | | | | |
| 20 | | | | Between 18 and 19 m - blue / white mottling |
| 24 | | | | Massive dolostone<br>Blue / white mottling from 20.7 m to bottom of hole<br>Vug frequency decreasing with depth<br>Stylolites between 22 and 29 m |
| 28 | | | Lions Head | **Dolostone**<br>Massive, light to dark grey, occasional tan beds, aphanitic, low fossil content |
| 32 | | Fossil Hill | | **Dolostone,** mottled blue-grey, low fossil content occasional shale interbeds |

Transmissivity Profile ($m^2/s$): $10^{-6}$, $10^{-5}$, $10^{-4}$

Monitoring Well: I, II, III, IV

Bottom of Borehole = 31.93 m

**NOTES:**
Borehole OW1-04 was logged by John Emery Geotechnical Engineering Limited
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

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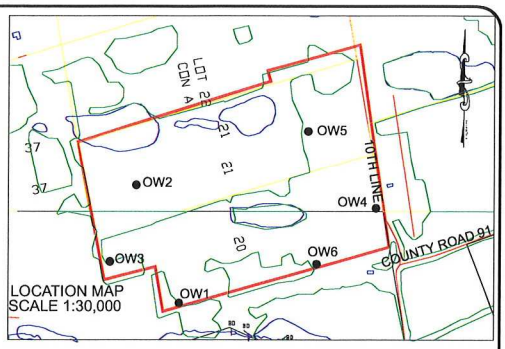
# Observation Well Nest 1

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW1-page 1.cdr |

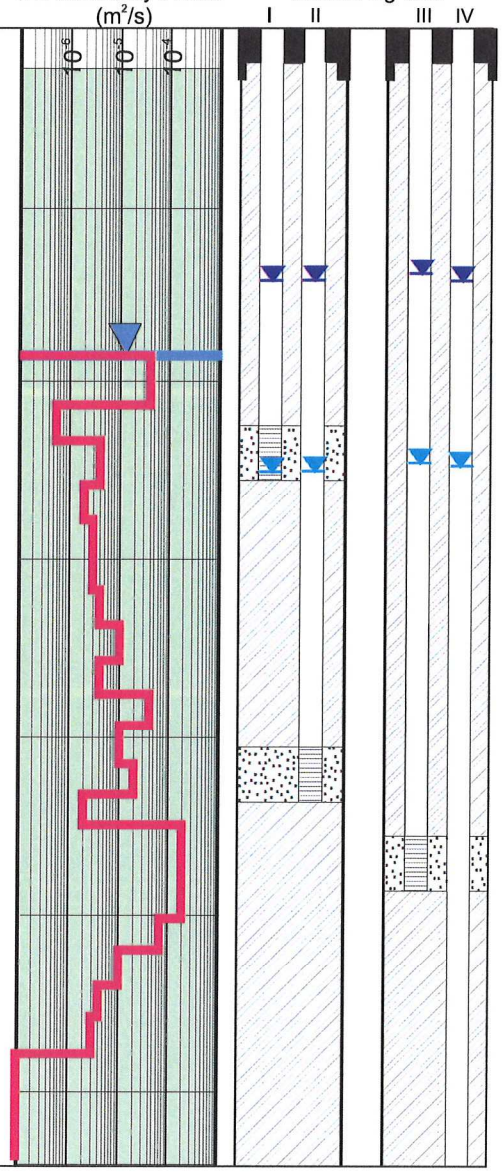
**Highland Quarry**
**Hydrogeological Assessment**

## OW2 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 522.2 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| 0 | | | | **Overburden**<br>Brown, silty sand, occasional gravel |
| 4 | | Amabel Formation | | **Dolostone**<br>Light grey to beige, slightly mottled, fine crystalline fossiliferous (brachiopods), medium bedded, vuggy<br>fractures between 1.6 and 3.7 m are weathered |
| 8 | | | | At 8.5 m - highly fractured for 0.4 m, weathered (iron staining) |
| 12 | | | | |
| 16 | | | | |
| 20 | | | | |
| 24 | | | | Light grey to bluish grey, iron staining in vugs<br>Weathered fractures between 24 and 27 m |
| 28 | | | | **Dolostone**<br>Light grey, massive, fine crystalline with aphanitic sections |
| 32 | | | | |




**NOTES:**
Borehole OW2-04 was logged by John Emery Geotechnical Engineering Limited
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

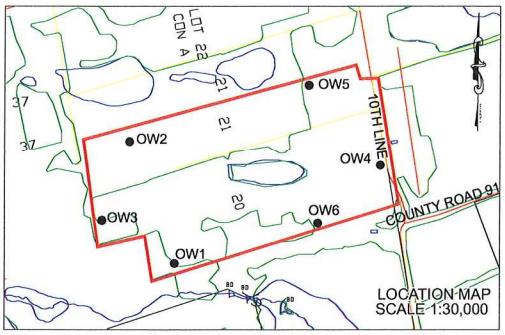
# Observation Well Nest 2

| | |
|---|---|
| **Date Issued:** | December 2005 |
| **Geologist:** | TLW |
| **Project No.** | 04-015 |
| **File Name:** | OW2-page 1.cdr |

**Highland Quarry**
**Hydrogeological Assessment**

## OW2 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 522.2 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| | | Amabel Formation | | (Continued from previous page) |
| 36 | | | Lions Head | **Dolostone** Light grey, stylolites, occasional pyrite, filled fracture and tan beds |
| 40 | | Fossil Hill | | **Dolostone** Mottled blue-grey, low fossil content, occasional shale interbed |
| 44 | | Cabot Head | | **Shale** Dark green, thin bedded, massive to brittle |
| | | | | Bottom of Borehole = 44.46 mbgl |
| 48 | | | | |
| 52 | | | | |
| 56 | | | | |
| 60 | | | | |
| 64 | | | | |

Transmissivity Profile ($m^2/s$): $10^{-6}$ $10^{-5}$ $10^{-4}$

Monitoring Well: III IV

**NOTES:**
Borehole OW2-04 was logged by John Emery Geotechnical Engineering Limited
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

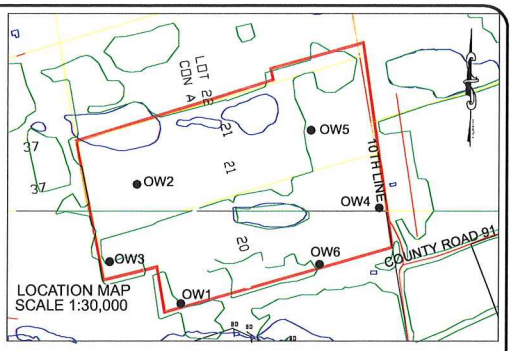
# Observation Well Nest 2

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW2-page 2.cdr |

**Highland Quarry**
**Hydrogeological Assessment**

## OW3 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 515.5 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| 0 | | Amabel Formation | | **Overburden** |
| | | | | **Dolostone**<br>Light grey to beige, fine crystalline, occasional fossils (brachiopods), massive bedded, vugs with iron staining to 7.3 m |
| 4 | | | | |
| | | | | Between 7.3 and 20.1 m mottled light grey to grey |
| 8 | | | | Weathered fracture at 9 m (iron staining) |
| 12 | | | | |
| | | | | Stylolites between 15 and 16 m |
| 16 | | | | Between 17 and 18 m - large weather fracture with crystallization |
| 20 | | | | |
| | | | | Vuggy between 23.5 and 26.3 m |
| 24 | | | | |
| 28 | | | | |
| | | | Lions Head | **Dolostone**<br>Massive, light to dark grey, occasional tan bed |
| 32 | | | | |

Transmissivity Profile ($m^2/s$): $10^{-6}$, $10^{-5}$, $10^{-4}$

Monitoring Well: I, II, III, IV

Bottom of Borehole = 31.57 m

**NOTES:**
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

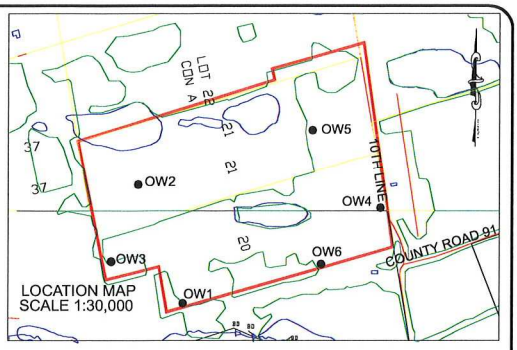
# Observation Well Nest 3

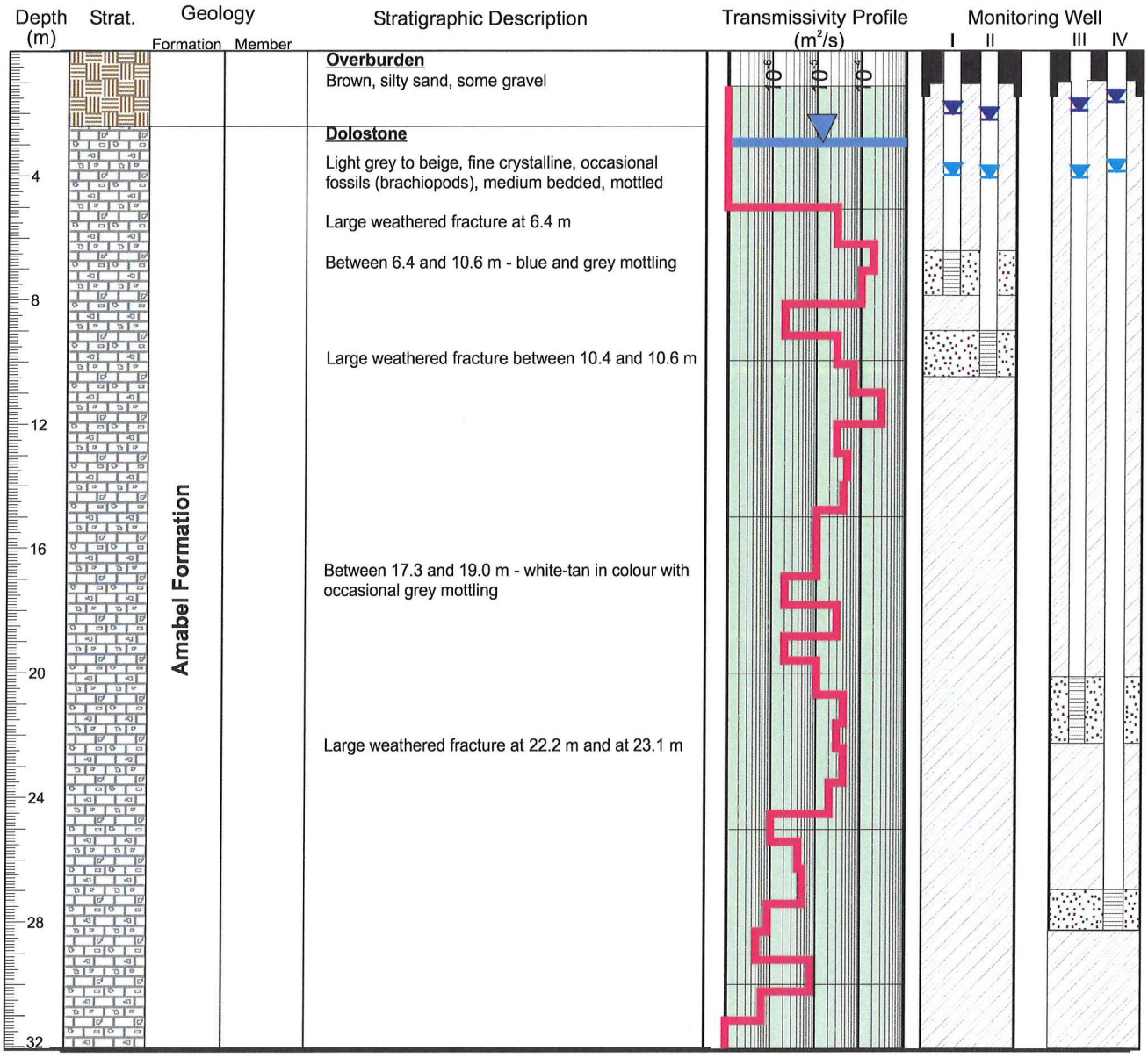
| | |
|---|---|
| **Date Issued:** | December 2005 |
| **Geologist:** | TLW |
| **Project No.** | 04-015 |
| **File Name:** | OW3-page 1.cdr |

**Highland Quarry**
**Hydrogeological Assessment**

## OW4 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 518.8 masl




Bottom of Borehole = 32.9 m

**NOTES:**
Borehole OW4-04 was logged by John Emery Geotechnical Engineering Limited
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

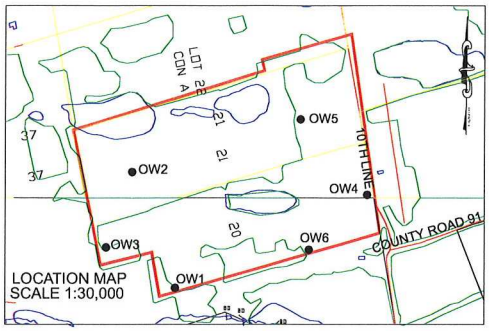
# Observation Well Nest 4

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW4-page 1.cdr |

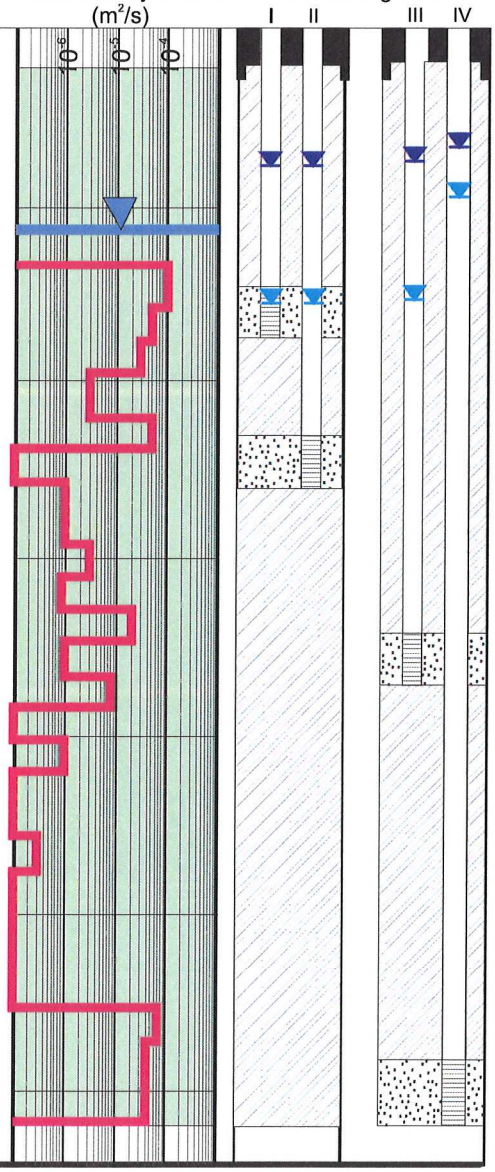
**Highland Quarry**
**Hydrogeological Assessment**

## OW5 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 510.8 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| 0 | | | | **Overburden** Brown, silty sand, some gravel |
| 4 | | Amabel Formation | | **Dolostone** Light grey to beige, fine crystalline, occasional fossils (brachiopods), medium bedded, mottled, vuggy, alternating dense to less dense |
| 8 | | | | Weathered fracture at 7.6 m |
| 12 | | | | Whitish to light grey, massive<br>Weathered fracture at 12.1 m |
| 16 | | | | Between 14.5 and 20.5 iron staining in vugs and fractures |
| 20 | | | | Light to medium grey, massive |
| 24 | | | | |
| 28 | | | Lions Head | **Dolostone** Distinct change in lithology - blue/white mottling massive |
| | | Fossil Hill | | **Dolostone**, greenish grey, low fossil content, occasional shale seam |
| | | Cabot Head | | **Shale** Dark green, thin bedded, massive to brittle |
| 32 | | | | Bottom of Borehole = 31.0 m |




**NOTES:**
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data

Water levels measured on:
- April 13,2005
- November 15,2005

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

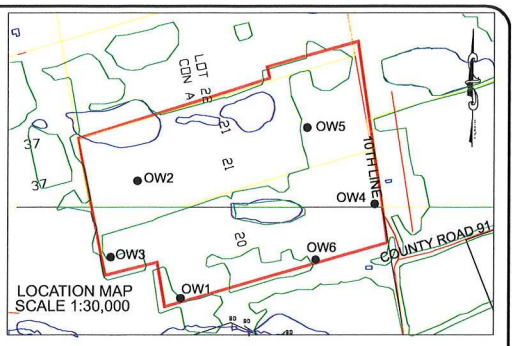
# Observation Well Nest 5

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW5-page 1.cdr |

**Highland Quarry**
**Hydrogeological Assessment**

## OW6 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 526.2 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| 0 | | | | **Overburden**<br>Brown, silty sand, occasional gravel |
| 4 | | Amabel Formation | | **Dolostone**<br>Light grey to beige, slightly mottled, fine crystalline fossiliferous (brachiopods), medium bedded, vuggy, dense<br>fractures between 1.6 and 3.7 m are weathered |
| 8 | | | | |
| 12 | | | | Weathered fractures at 11.5, 12.8, 13.4, 14.2 m<br>(fracture at 14.2 is on a 45 degree angle) |
| 16 | | | | Light grey, less dense, vuggy, weathered fracture at 18.2 m |
| 20 | | | | Highly fractured and weathered between 23.5 and 27.0 m (drill rods dropped between 24.5 - 25.5 m) |
| 24 | | | | |
| 28 | | | | Whitish-grey, dense |
| 32 | | | | |

Transmissivity Profile ($m^2/s$): $10^{-6}$, $10^{-5}$, $10^{-4}$

Monitoring Well: I, II, III, IV

**NOTES:**
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data
Water levels measured on:
April 13,2005
November 15,2005
*Represents zone of packer communication t
no analysis possible

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

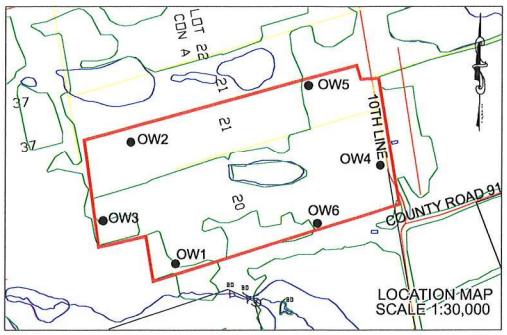
# Observation Well Nest 6

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW6-page 1.cdr |

**Highland Quarry**
**Hydrogeological Assessment**

## OW6 NEST

Drill Date: August 2004
Drilling Method: Continuous Core
Driller: Lantech Drilling
Geologist: TLW
Ground Surface Elevation: 526.2 masl




| Depth (m) | Strat. | Geology Formation | Geology Member | Stratigraphic Description |
|---|---|---|---|---|
| 36 | | Amabel Formation | | (Continued from previous page) |
| 40 | | | | |
| 44 | | | | |
| 48 | | | Lions Head | **Dolostone** Light grey, mottled, occasional tan bed, low fossil content |
| 52 | | Fossil Hill | | **Dolostone** Greenish grey, shale seams, thin bedded, low fossil content |
| | | Cabot Head | | **Shale** Dark green, thin bedded, massive to fissile |
| | | | | Bottom of Borehole = 51.19 mbgl |
| 56 | | | | |
| 60 | | | | |
| 64 | | | | |

Transmissivity Profile ($m^2/s$): $10^{-6}$, $10^{-5}$, $10^{-4}$ *

Monitoring Well: III IV

**NOTES:**
For a detailed description of the geological units refer to Section 5.0 of the report
Information on well construction details refer to Appendix A: Methodology
Information on stratigraphic contacts refer to Appendix D: Borehole Geophysics
Information on transmissivity profiles refer to Appendix F: Packer Testing Data
Water levels measured on:
- April 13,2005
- November 15,2005

*Represents zone of packer communication t no analysis possible

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

# Observation Well Nest 6

| | |
|---|---|
| Date Issued: | December 2005 |
| Geologist: | TLW |
| Project No. | 04-015 |
| File Name: | OW6-page 2.cdr |

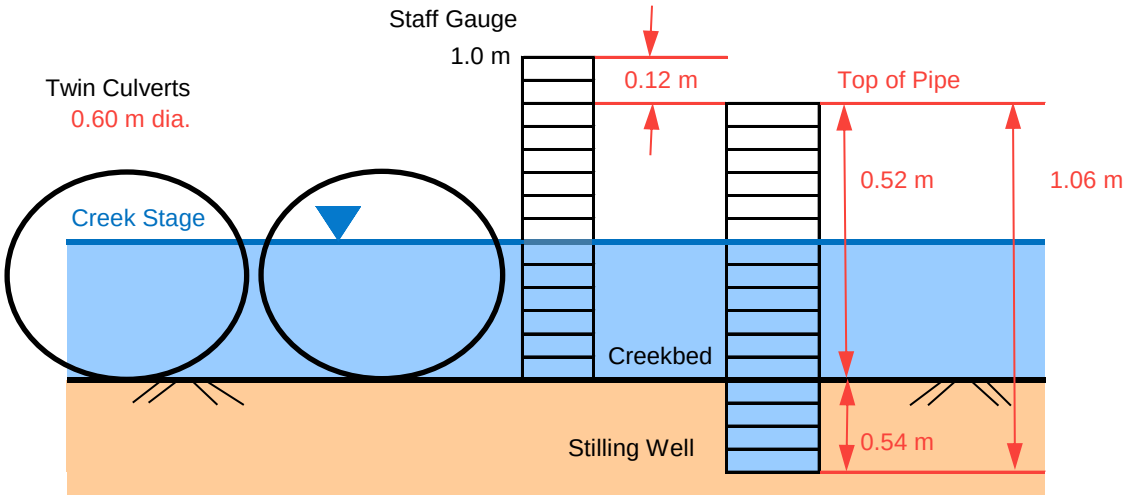
**Highland Quarry**
**Hydrogeological Assessment**

# A-4

## Surface Water Station Instrumentation Details

# Station SW1

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 30, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |



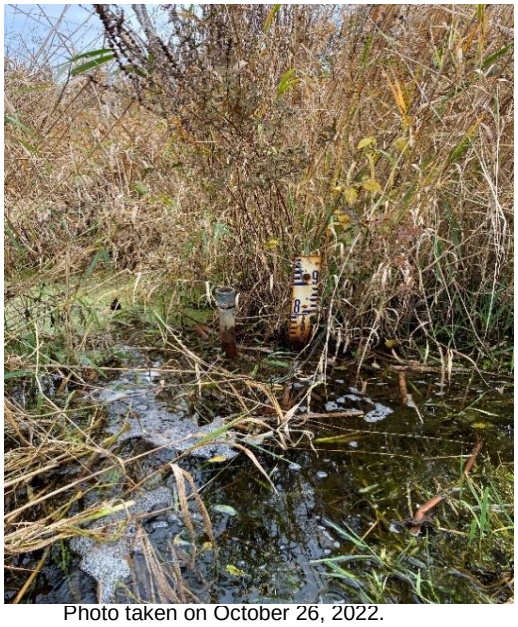
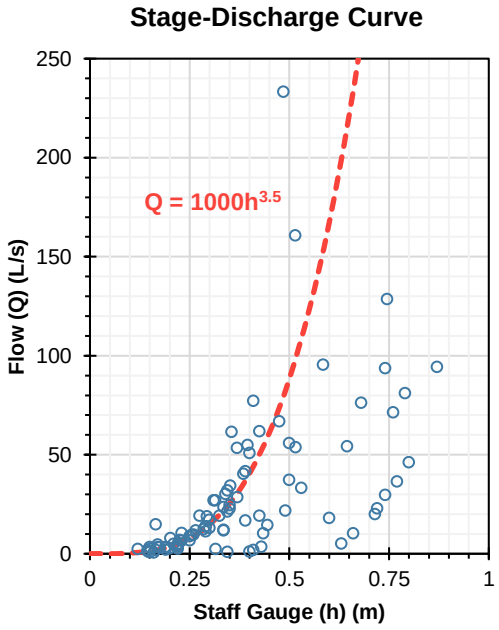



Photo taken on October 26, 2022.




**Notes:**

Twin culverts outflow from RR6 west of Main Quarry west of Grey County Road 31.

GPS Coordinates 559,117 E 4,914,254 N (NAD 83 Zone 17).

Approximate ground elevation is 513 masl (estimated from Ontario Base Mapping).

# Station SW2

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 30, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

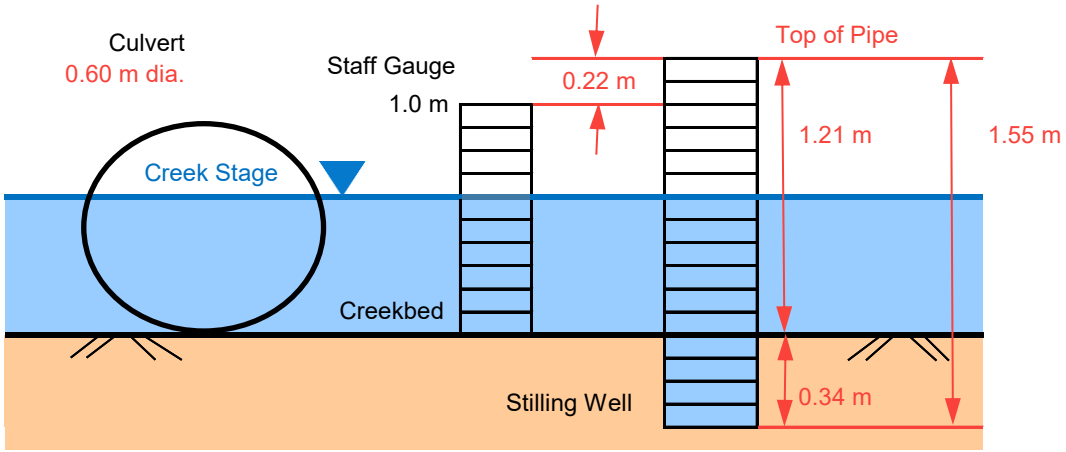
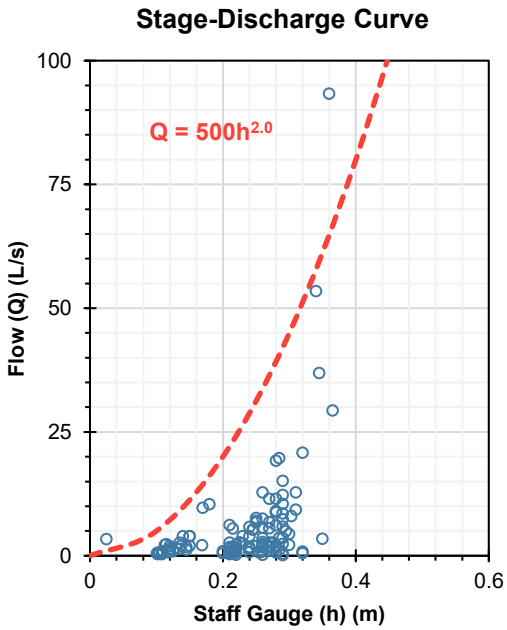





Photo taken on October 26, 2022.




**Notes:**

Upstream flow to RR6 west of Main Quarry south of Grey County Road 91.

GPS Coordinates 559,070 E 4,914,769 N (NAD 83 Zone 17).

Approximate ground elevation is 515 masl (estimated from Ontario Base Mapping).

# Station SW0-2

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 12, 2023 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

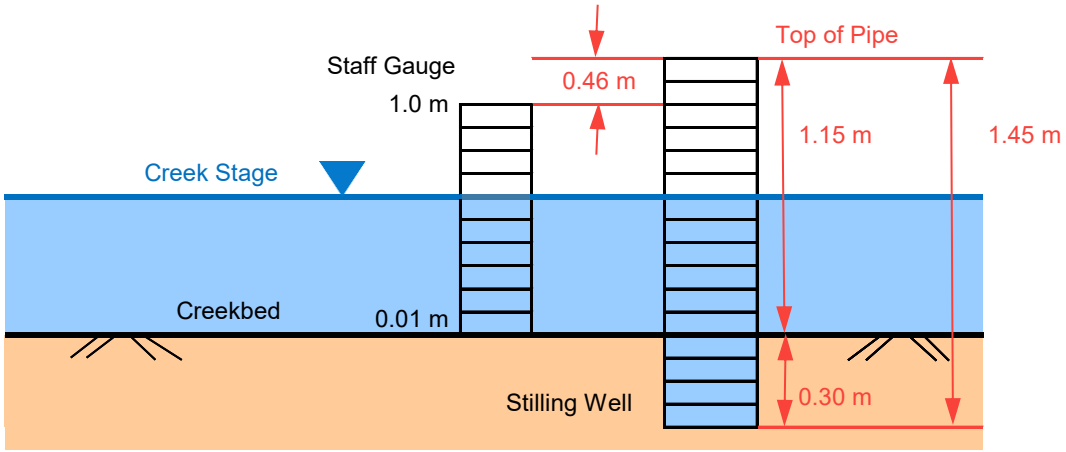
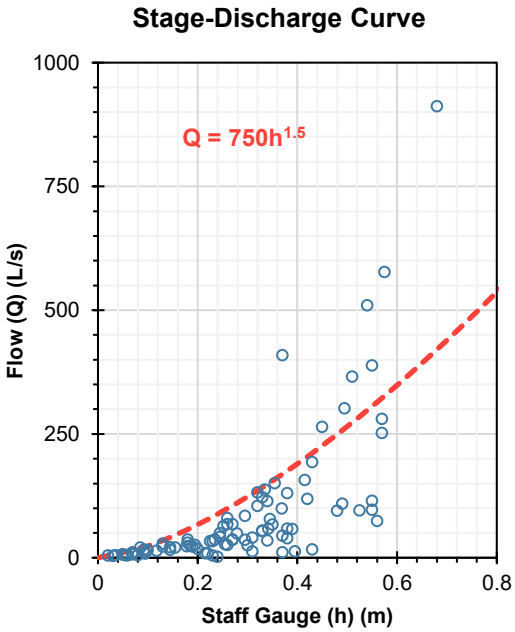





Photo taken on July 12, 2023.




**Notes:**

Outflow from RR6 west of Main Quarry west of Grey County Rd 31

GPS Coordinates 558,329 E 4,914,495 N (NAD 83 Zone 17).

Approximate ground elevation is 510 masl (estimated from Ontario Base Mapping).

# Station SW3

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 31, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

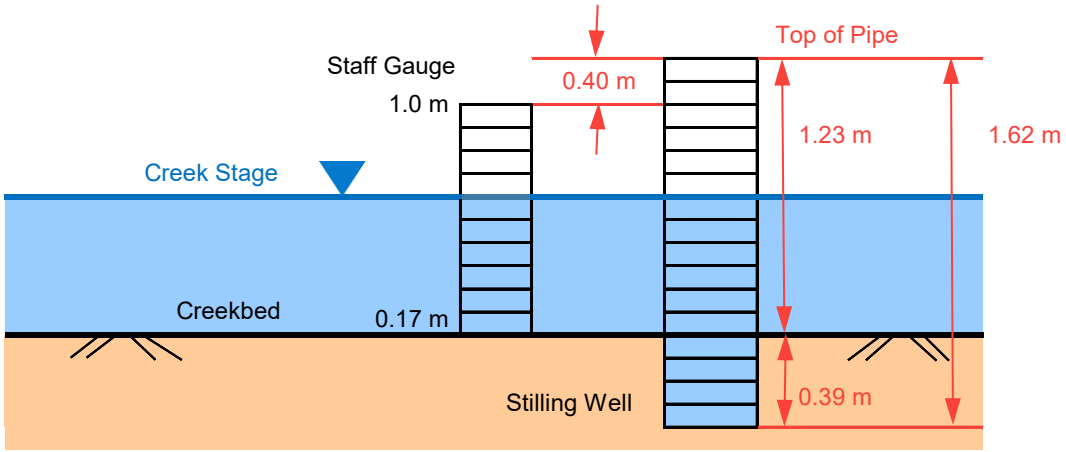
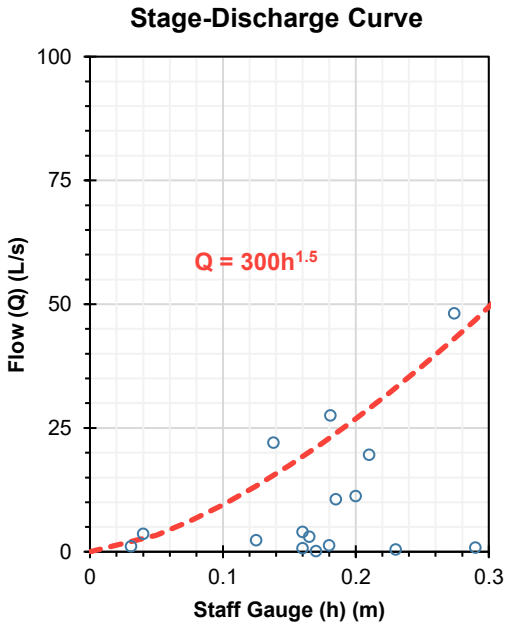





Photo taken on September 29, 2022.




**Notes:**

Outflow from RR2 northwest of Extension Quarry west of Grey County Rd 31

GPS Coordinates 558,890 E 4,915,581 N (NAD 83 Zone 17).

Approximate ground elevation is 510 masl (estimated from Ontario Base Mapping).

# Station SW4

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 21, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

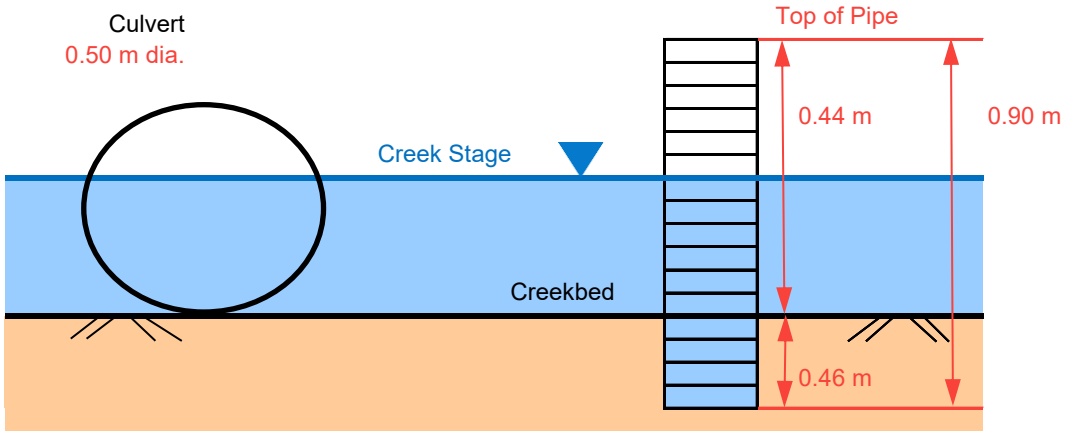
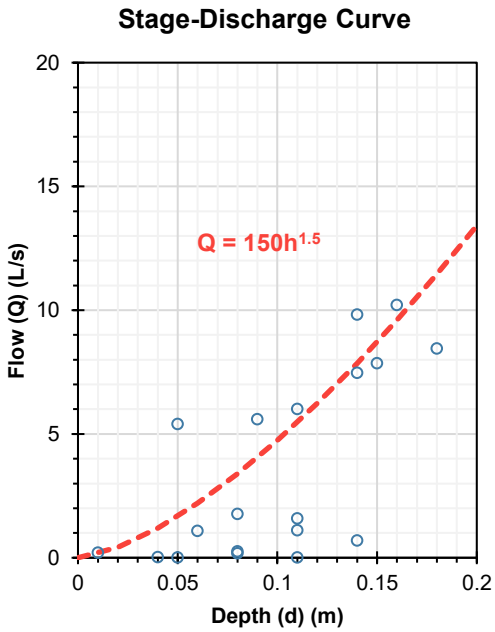





Photo taken on November 21, 2022.




**Notes:**

RR6 inlet at southwest along north of 10th Conc.

GPS Coordinates 558,893 E 4,913,962 N (NAD 83 Zone 17).

Approximate ground elevation is 515 masl (estimated from Ontario Base Mapping).

# Station SW6A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 16, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

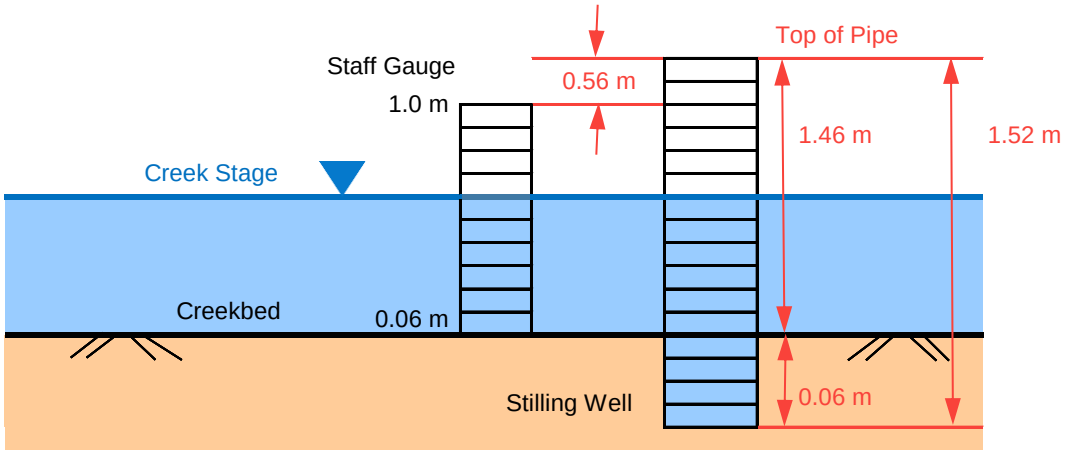
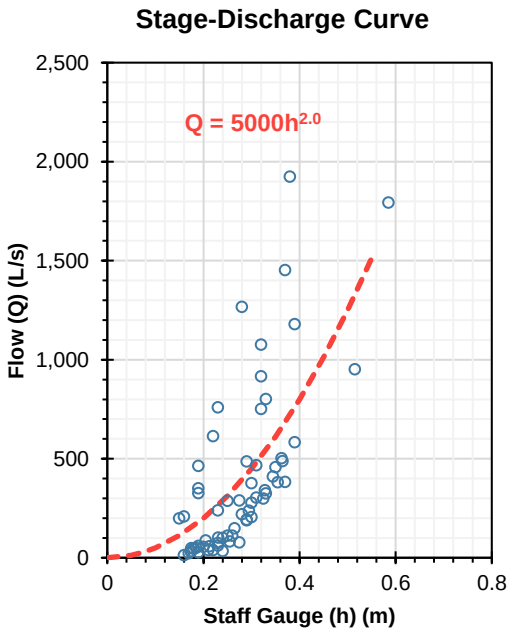





Photo taken on September 27, 2022.




**Notes:**

Beaver River southwest of Main Quarry west of Osprey Sideroad 30.

GPS Coordinates 555,263 E 4,912,697 N (NAD 83 Zone 17).

Approximate ground elevation is 495 masl (estimated from Ontario Base Mapping).

# Station SW8

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

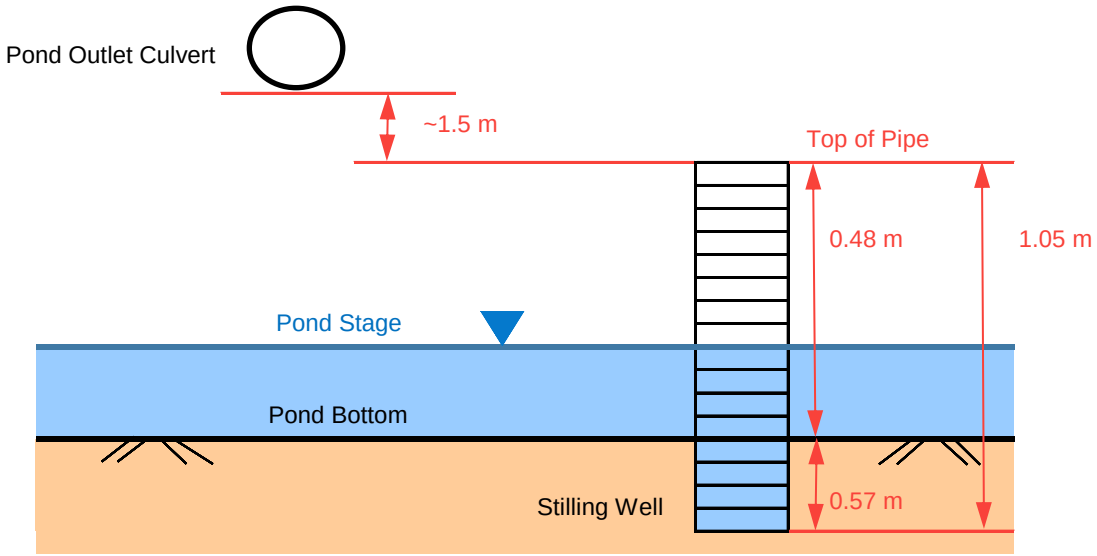





Photo taken on November 23, 2022.

**Notes:**

Bridson Pond outlet culvert.

GPS Coordinates 560,355 E 4,915,502 N (NAD 83 Zone 17).

Approximate ground elevation is 510 masl (estimated from Ontario Base Mapping).

# Station SW9

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 31, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

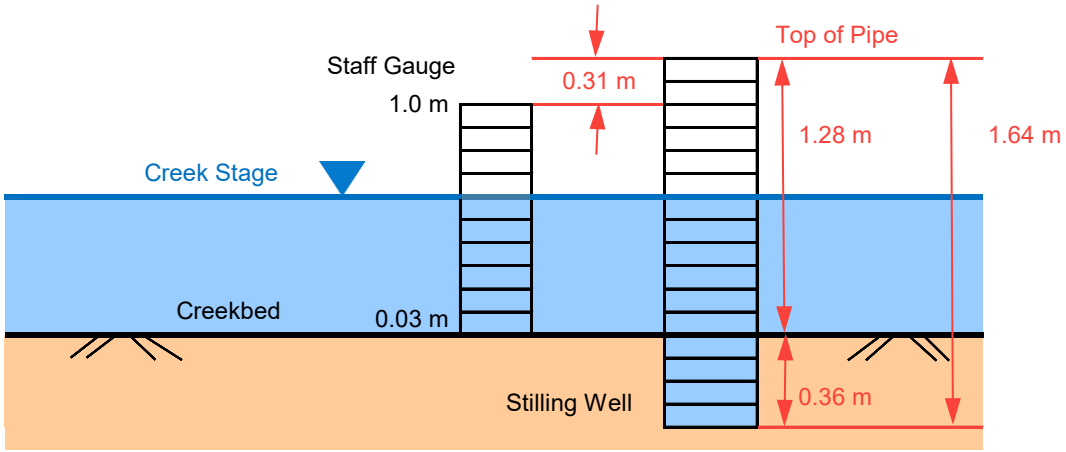
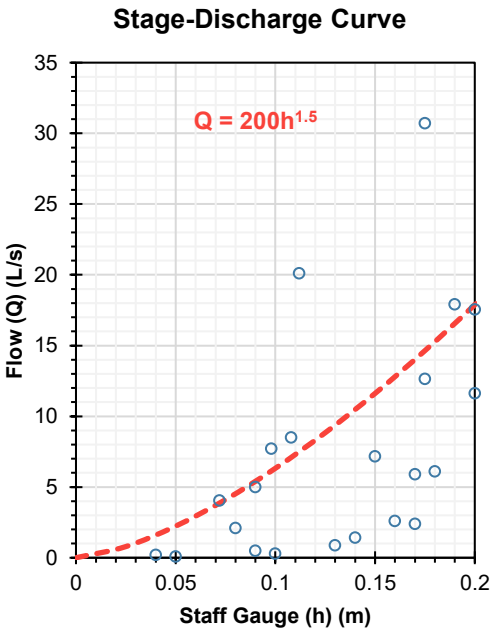





Photo taken on October 28, 2022.




**Notes:**

Outflow from ANSI Wetland B east of Extension Quarry to sinkhole area.

GPS Coordinates 560,454 E 4,915,647 N (NAD 83 Zone 17).

Approximate ground elevation is 508 masl (estimated from Ontario Base Mapping).

# Station SW10

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | October 27, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC / SRF / BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

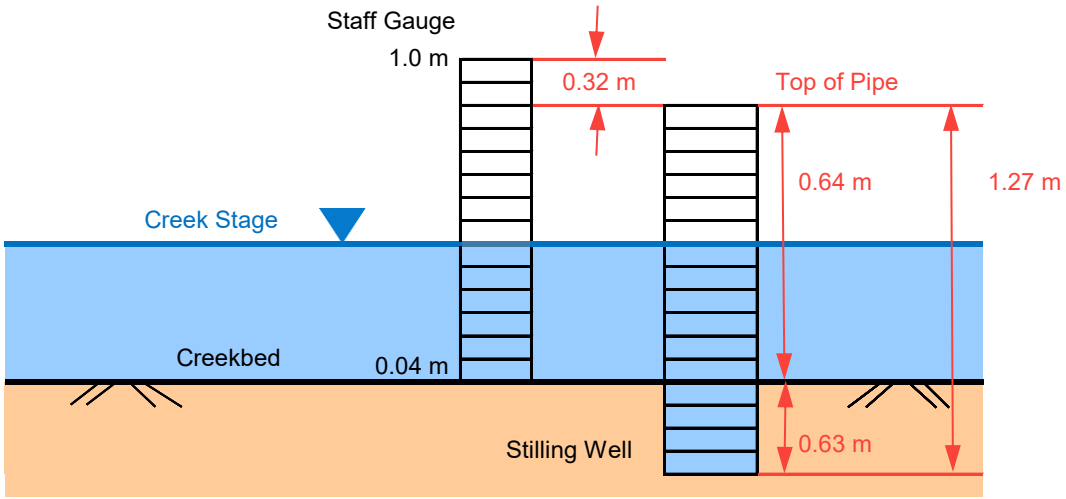
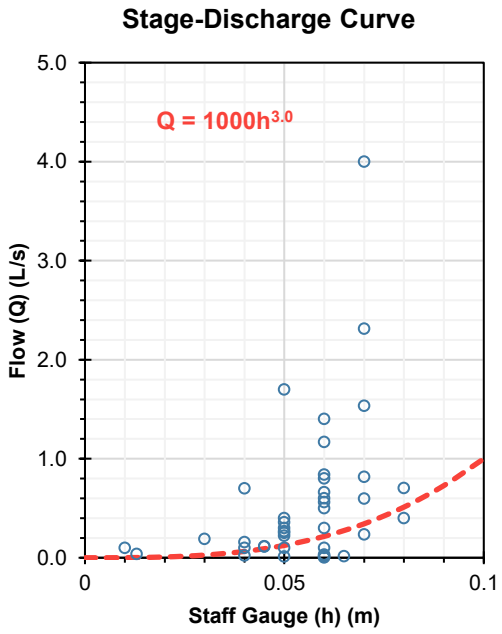





Photo taken on October 27, 2022.




**Notes:**

Escarpment seep east of Extension Quarry, upgradient of farm well tile collection system.

GPS Coordinates 561,200 E 4,915,641 N (NAD 83 Zone 17).

Approximate ground elevation is 477 masl (estimated from Ontario Base Mapping).

# Station SW11

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

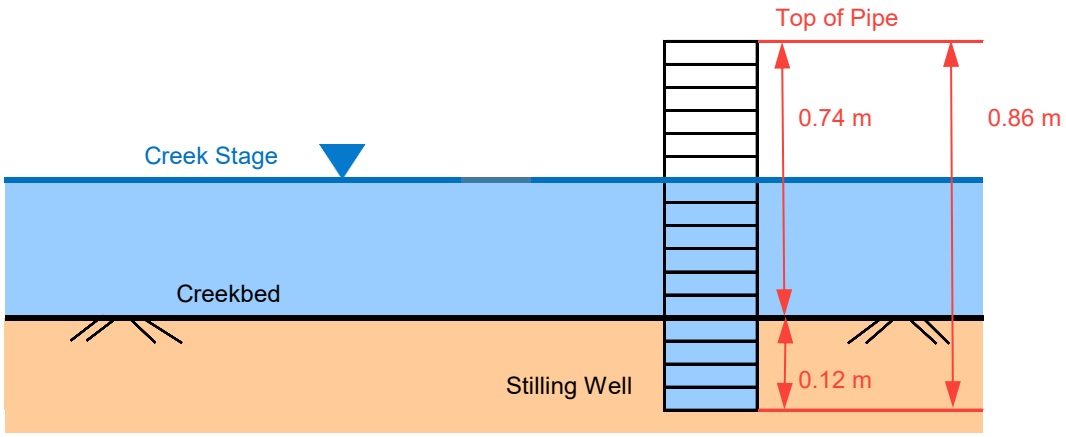
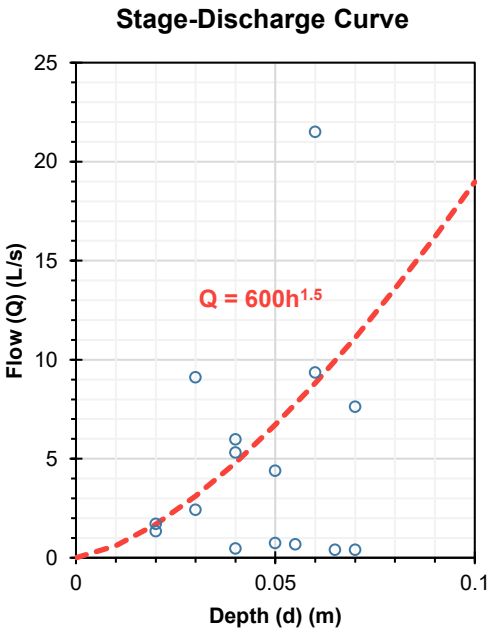





Photo taken on November 22, 2022.




**Notes:**

Culmination of escarpment seeps SW11A-D on Franks property east of Extension Quarry.

GPS Coordinates 561,151 E 4,916,011 N (NAD 83 Zone 17).

Approximate ground elevation is 445 masl (estimated from Ontario Base Mapping).

# Station SW11A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

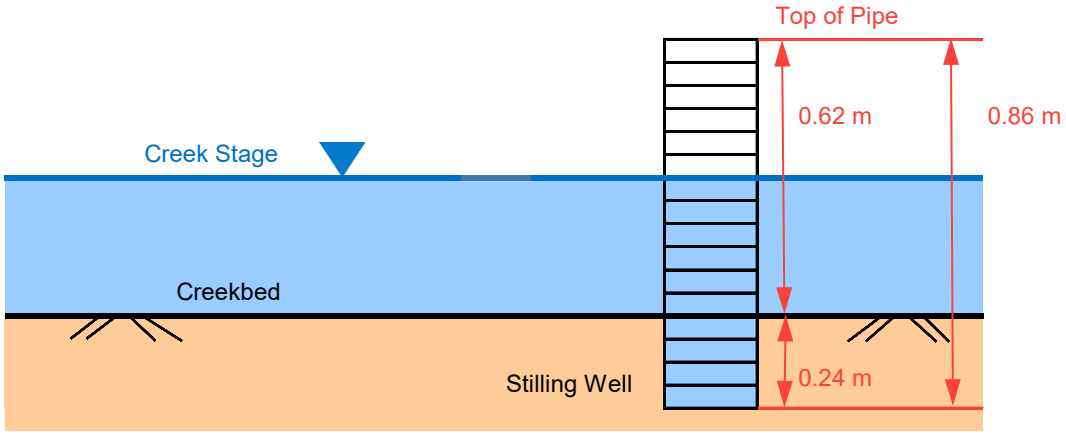
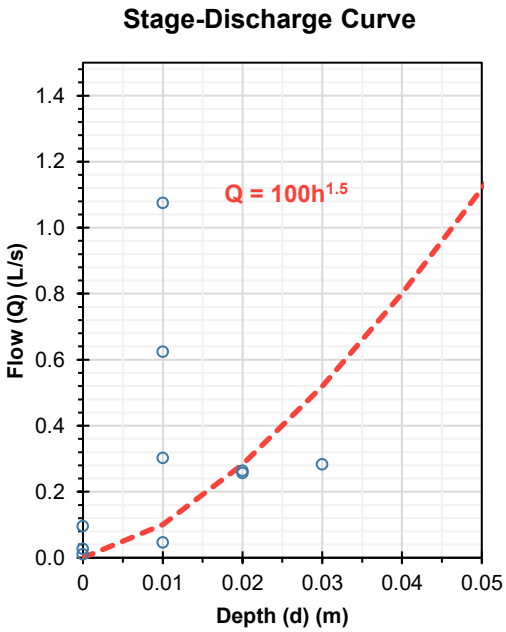





Photo taken on November 22, 2022.




**Notes:**

Escarpment seep on Franks property east of Extension Quarry.

GPS Coordinates 561,128 E 4,916,011 N (NAD 83 Zone 17).

Approximate ground elevation is 446 masl (estimated from Ontario Base Mapping).

# Station SW11B

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

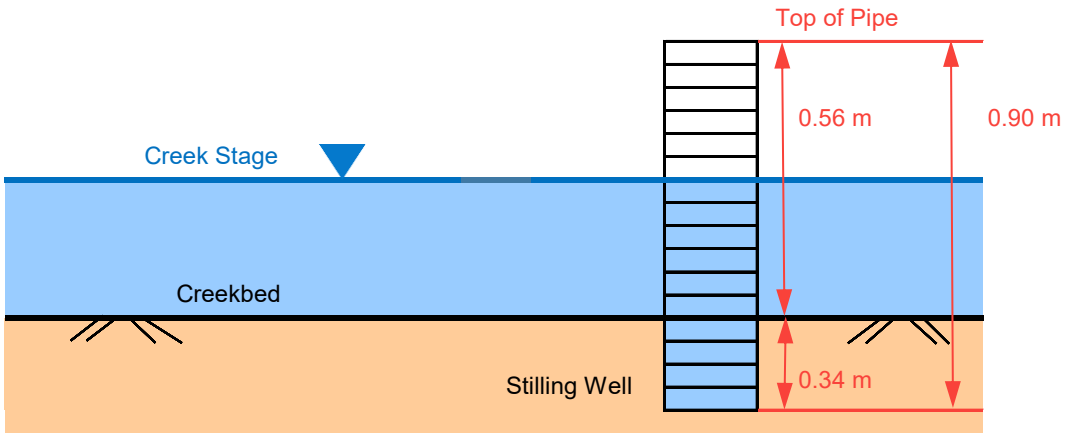
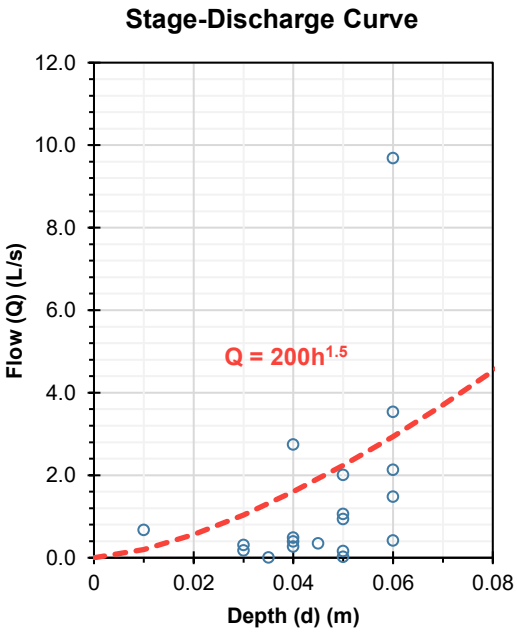





Photo taken on November 22, 2022.




**Notes:**

Escarpment seep on Franks property east of Extension Quarry.

GPS Coordinates 561,098 E 4,916,018 N (NAD 83 Zone 17).

Approximate ground elevation is 446 masl (estimated from Ontario Base Mapping).

# Station SW11C

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

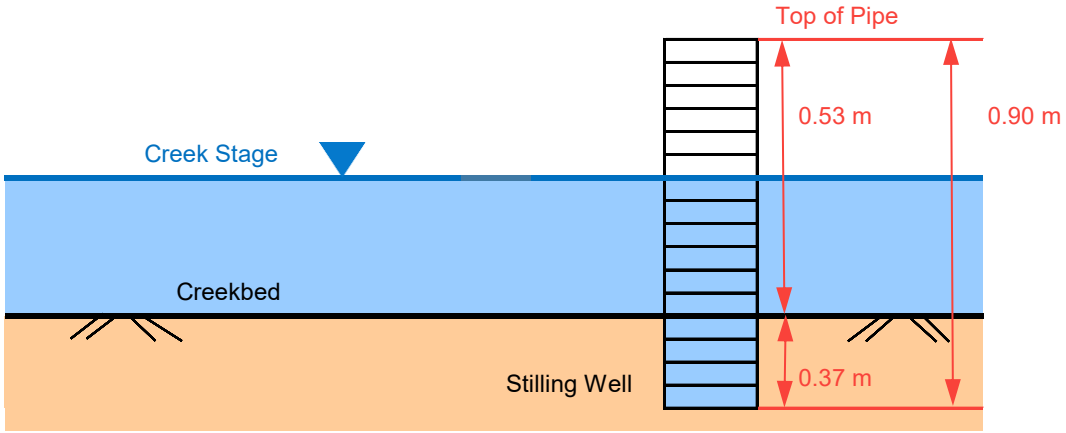
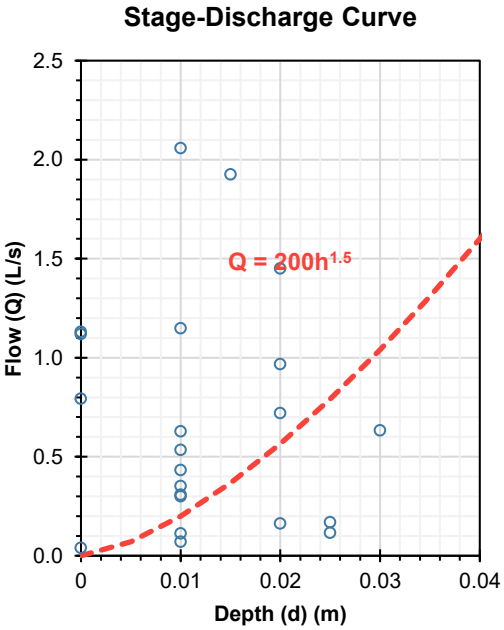





Photo taken on November 22, 2022.




**Notes:**

Escarpment seep on Franks property east of Extension Quarry.

GPS Coordinates 561,079 E 4,916,034 N (NAD 83 Zone 17).

Approximate ground elevation is 446 masl (estimated from Ontario Base Mapping).

# Station SW11D

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

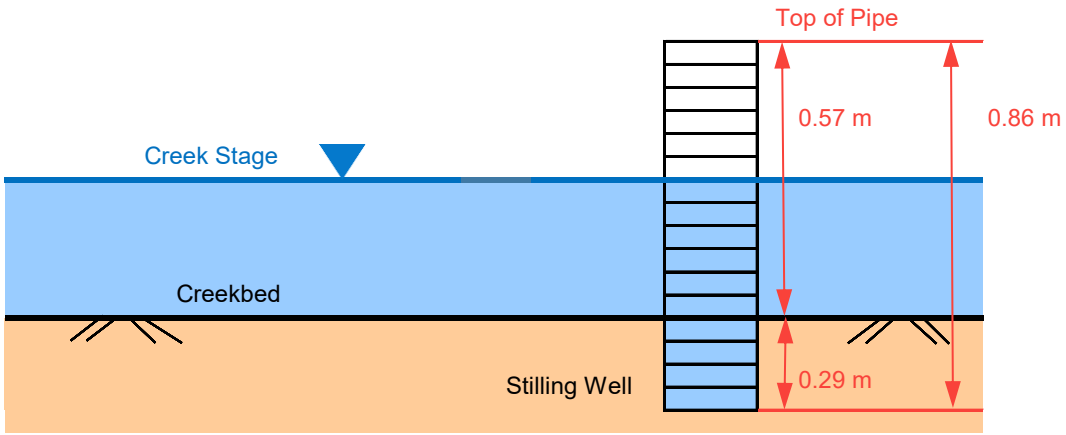
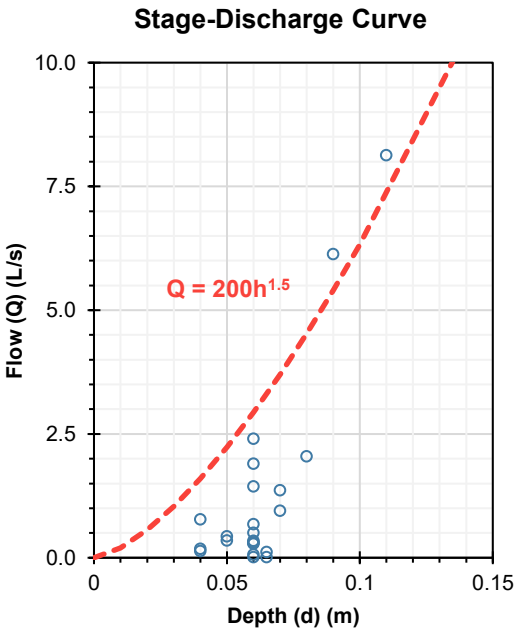





Photo taken on November 22, 2022.




**Notes:**

Escarpment seep on Franks property east of Extension Quarry.

GPS Coordinates 561,052 E 4,916,043 N (NAD 83 Zone 17).

Approximate ground elevation is 446 masl (estimated from Ontario Base Mapping).

# Station SW11E

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | October 27, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC / SRF / BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

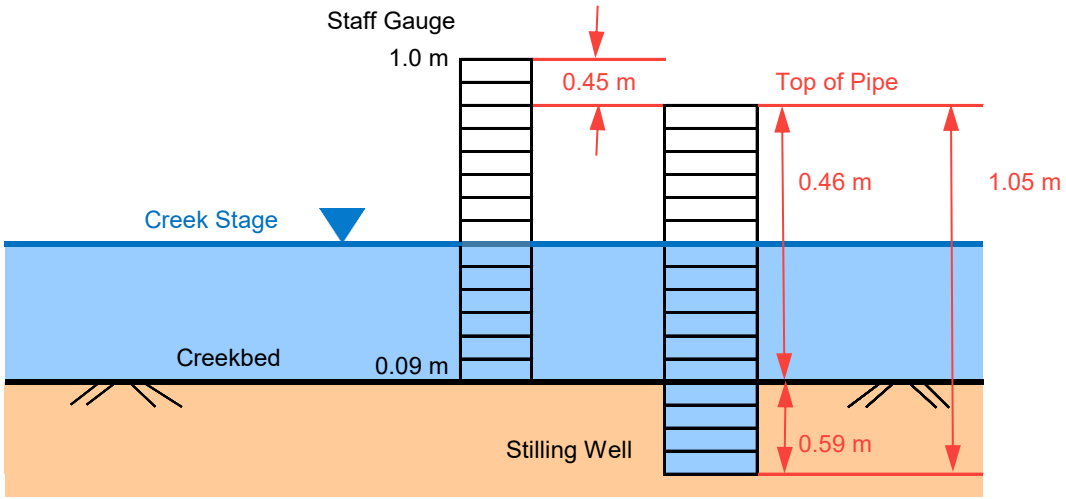
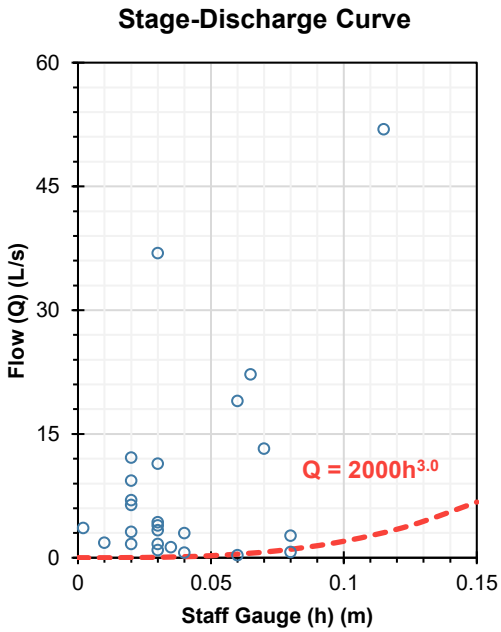





Photo taken on October 27, 2022.




**Notes:**

Escarpment seep northeast of Extension Quarry, upstream of in-line pond.

GPS Coordinates 561,238 E 4,915,997 N (NAD 83 Zone 17).

Approximate ground elevation is 435 masl (estimated from Ontario Base Mapping).

# Station SW13

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

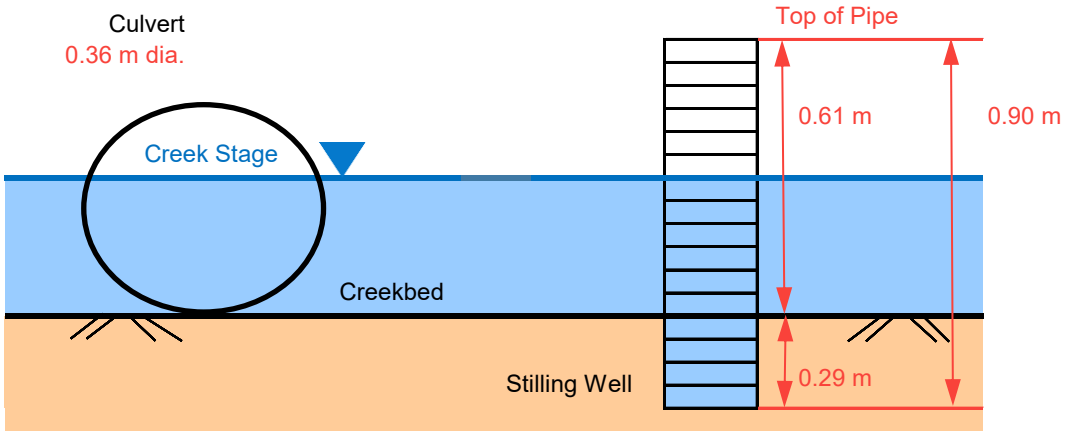
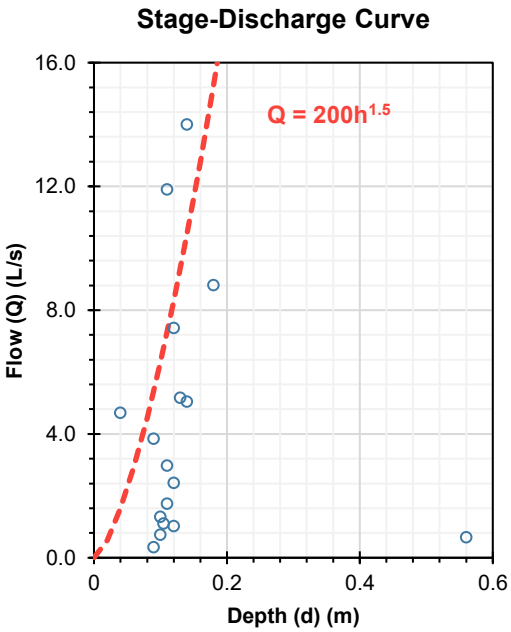





Photo taken on November 22, 2022.




**Notes:**

Franks Pond outlet culvert east of Extension Quarry.

GPS Coordinates 561,288 E 4,916,042 N (NAD 83 Zone 17).

Approximate ground elevation is 427 masl (estimated from Ontario Base Mapping).

# Station SW14

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | October 27, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC / SRF / BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

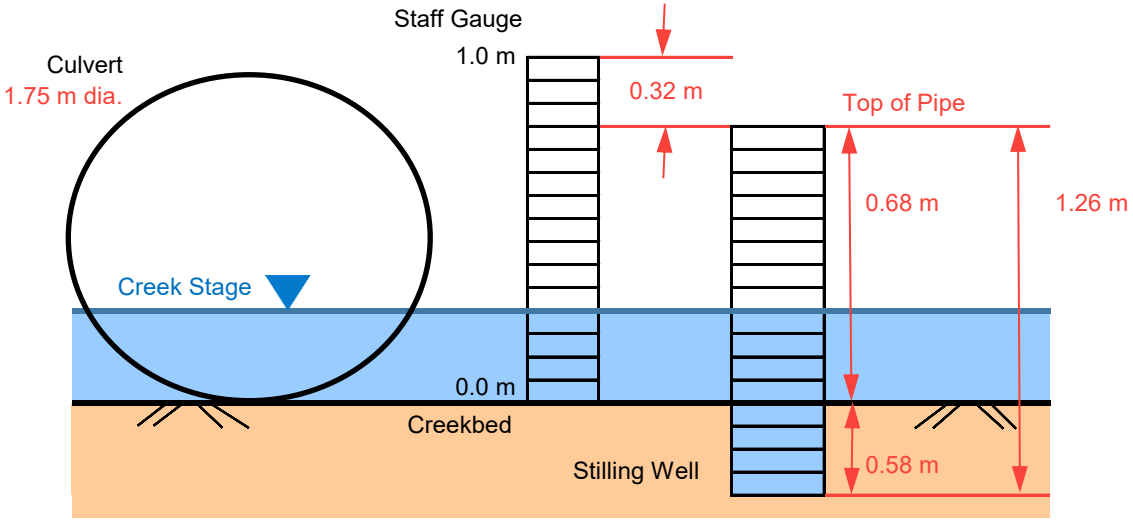
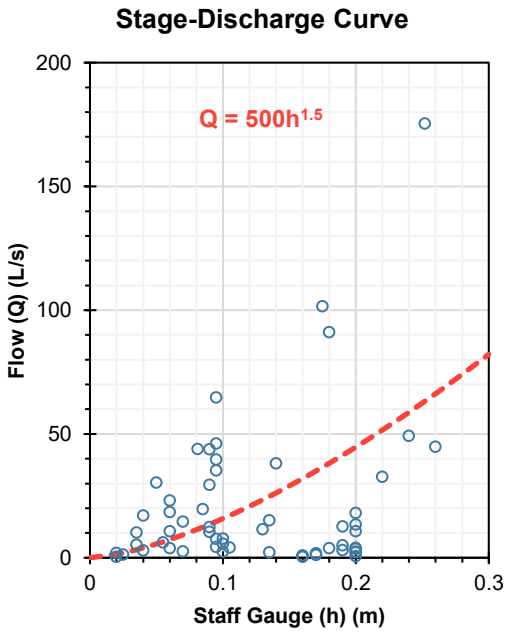





Photo taken on October 27, 2022.




**Notes:**

Batteaux Creek northeast of Extension Quarry east of Conc 10.

GPS Coordinates 561,526 E 4,916,249 N (NAD 83 Zone 17).

Approximate ground elevation is 410 masl (estimated from Ontario Base Mapping).

# Station SW15

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | May 16, 2023 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

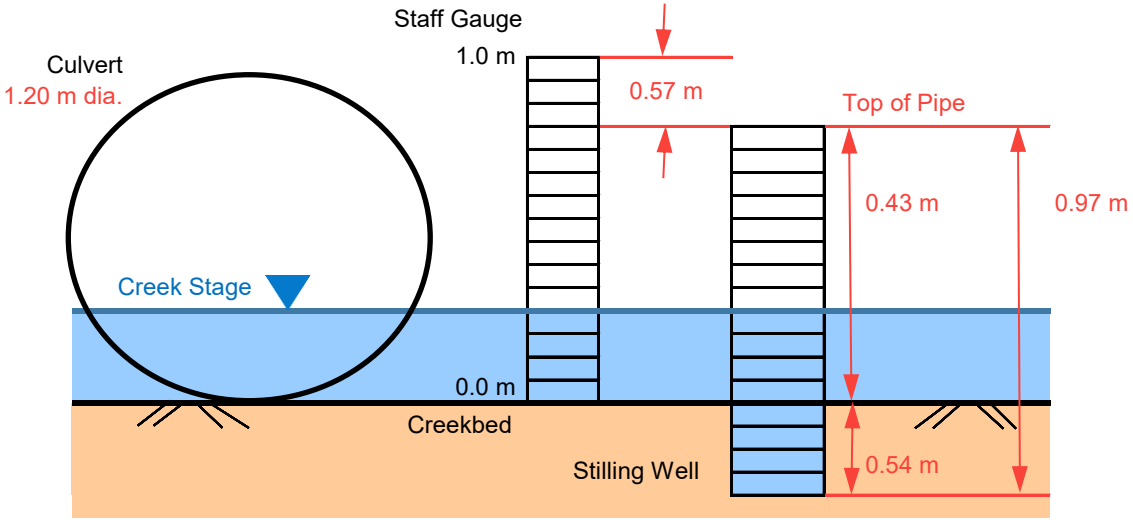
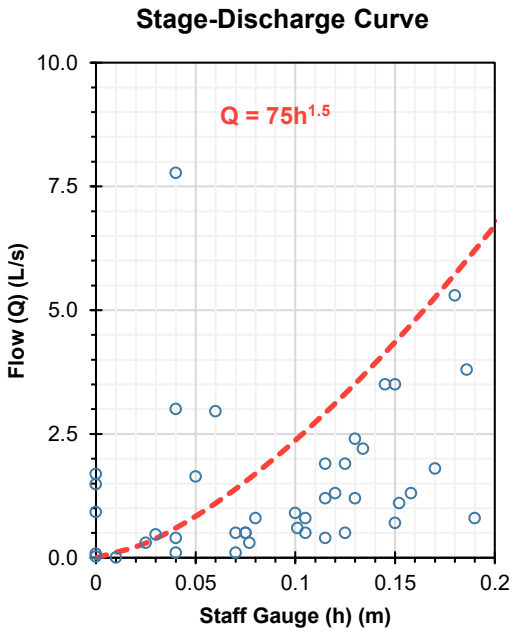





Photo taken on May 16, 2023.




**Notes:**

Batteaux Creek northeast of Extension Quarry east of Conc 10.

GPS Coordinates 561,495 E 4,916,432 N (NAD 83 Zone 17).

Approximate ground elevation is 420 masl (estimated from Ontario Base Mapping).

# Station SW16

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | August 12, 2025 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | SRF |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

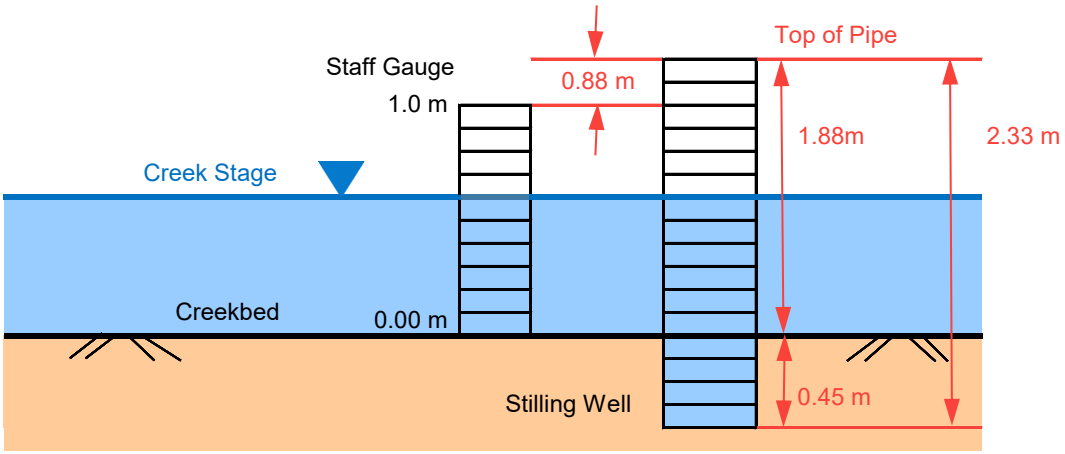
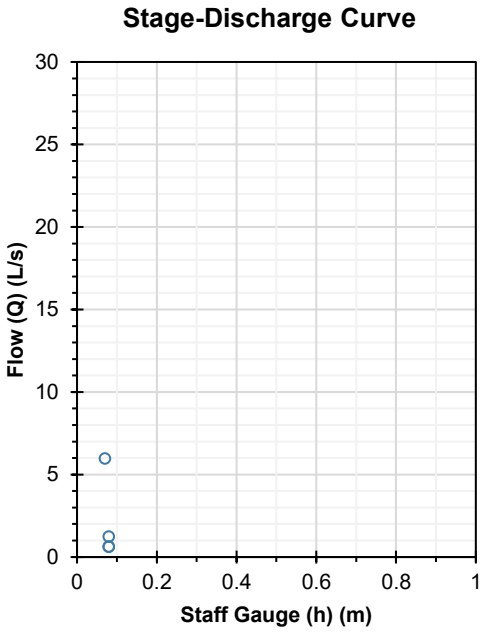





Photo taken on August 12, 2025.




**Notes:**

Pretty River tributary northeast of Extension Quarry at 26/27 Sideroad.

GPS Coordinates 561,198 E 4,916,724 N (NAD 83 Zone 17).

Approximate ground elevation is 415 masl (estimated from Ontario Base Mapping).

# Station SW17

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 31, 2015 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | JHL |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

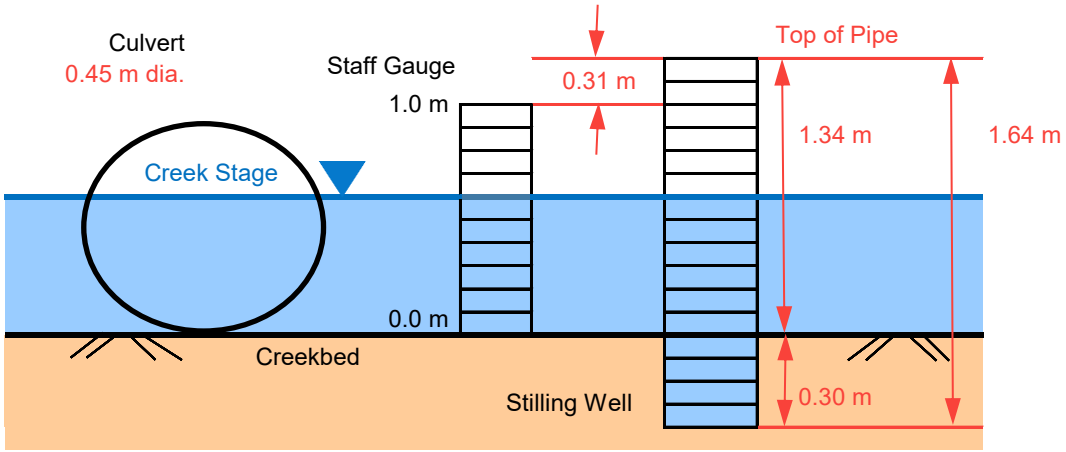
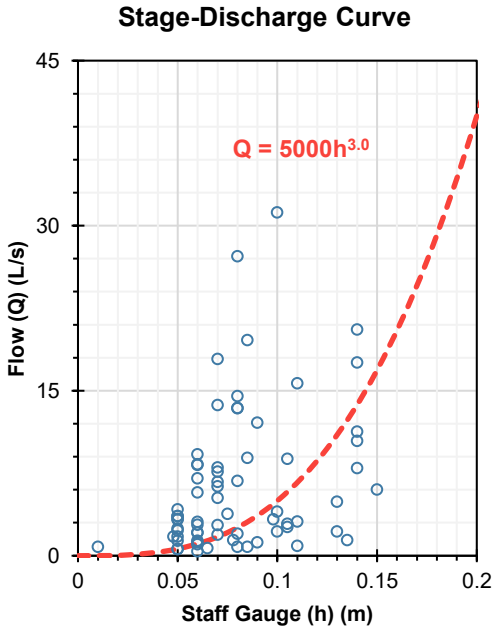





Photo taken on September 29, 2022.




**Notes:**

Pretty River in-line pond outlet northeast of Extension Quarry south of 26/27 Sideroad.

GPS Coordinates 560,607 E 4,916,532 N (NAD 83 Zone 17).

Approximate ground elevation is 431 masl (estimated from Ontario Base Mapping).

# Station SW17A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

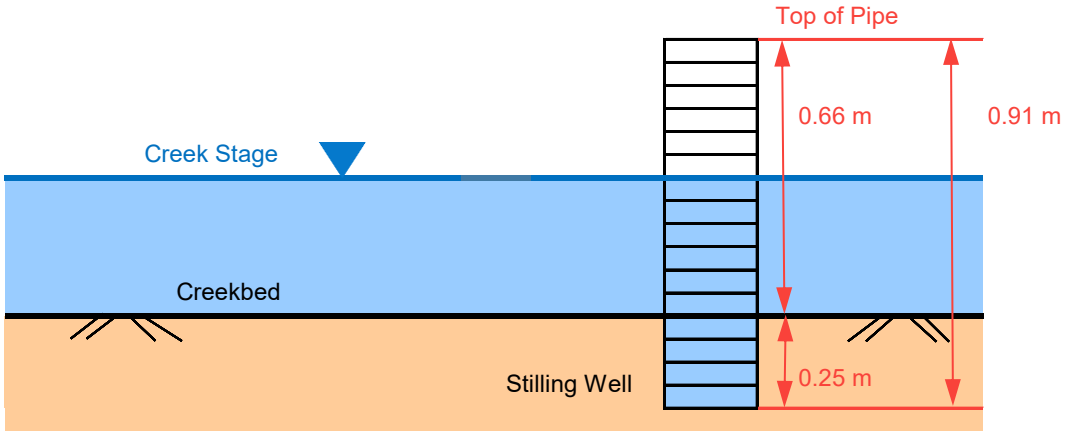
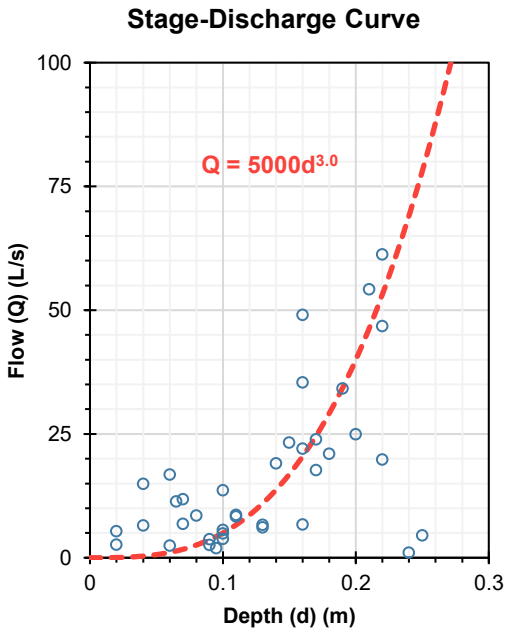





Photo taken on November 23, 2022.




**Notes:**

Pretty River tributary northeast of Extension Quarry north of 26/27 Sideroad.

GPS Coordinates 560,603 E 4,916,543 N (NAD 83 Zone 17).

Approximate ground elevation is 430 masl (estimated from Ontario Base Mapping).

# Station SW18

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

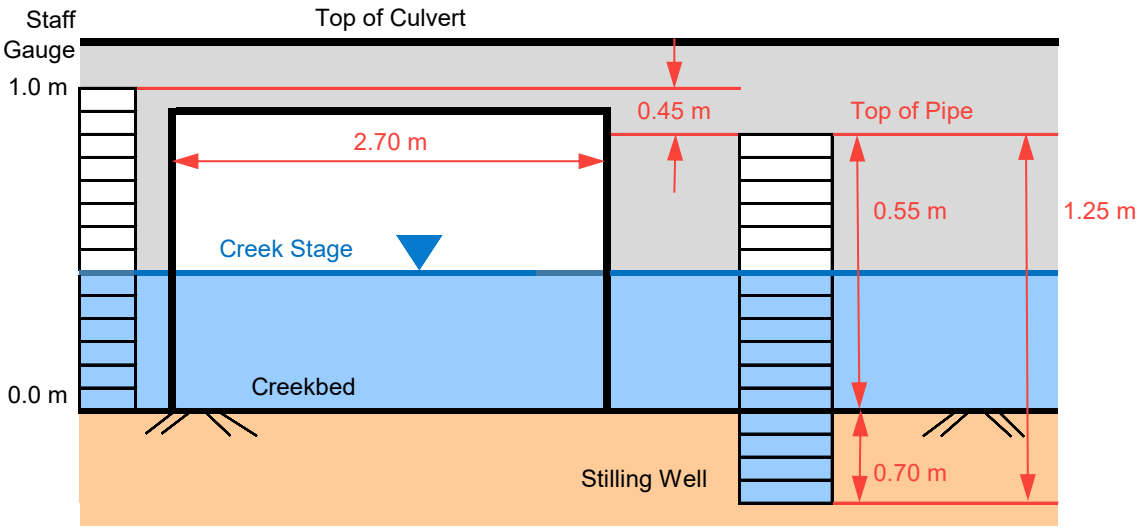
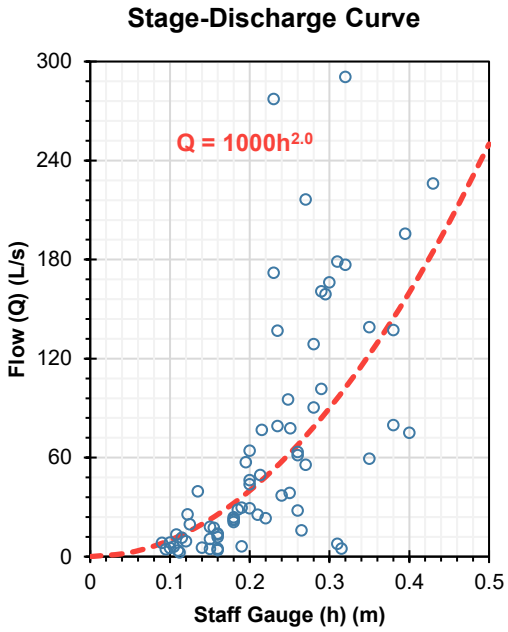





Photo taken on November 22, 2022.




**Notes:**

Pretty River tributary northeast of Extension Quarry west of Conc 10.

GPS Coordinates 561,401 E 4,917,002 N (NAD 83 Zone 17).

Approximate ground elevation is 390 masl (estimated from Ontario Base Mapping).

# Station SW19

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | July 12, 2023 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

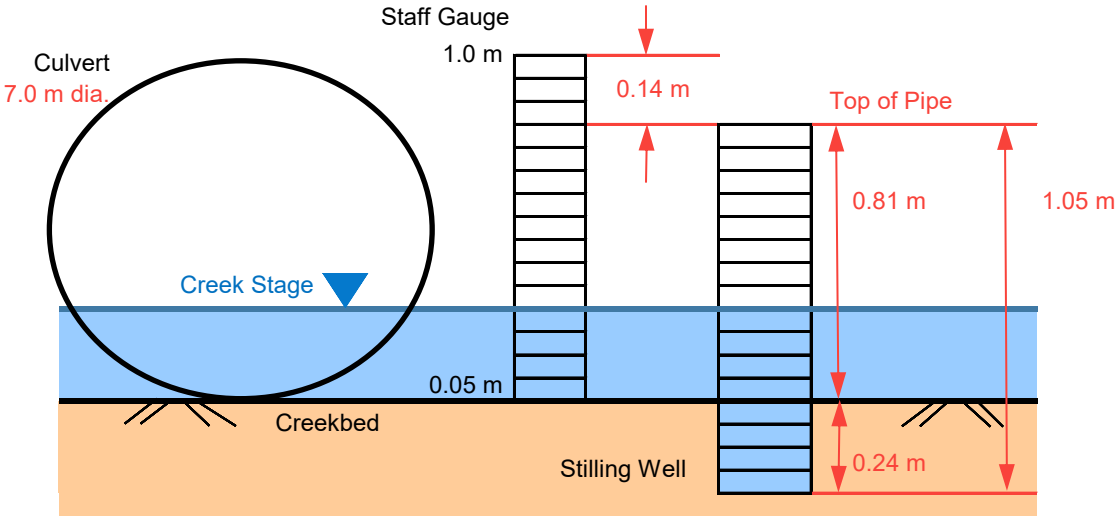
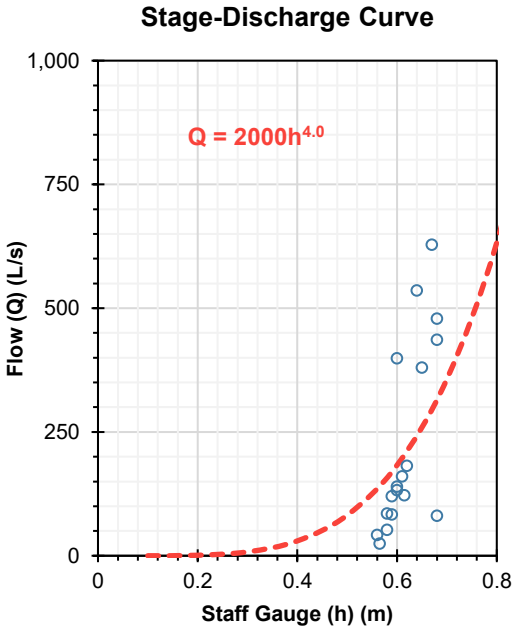





Photo taken on July 12, 2023.




**Notes:**

Batteaux Creek east of Extension Quarry at County Road 124.

GPS Coordinates 564,257 E 4,915,492 N (NAD 83 Zone 17).

Approximate ground elevation is 335 masl (estimated from Ontario Base Mapping).

# Station SW20

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | May 16, 2023 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

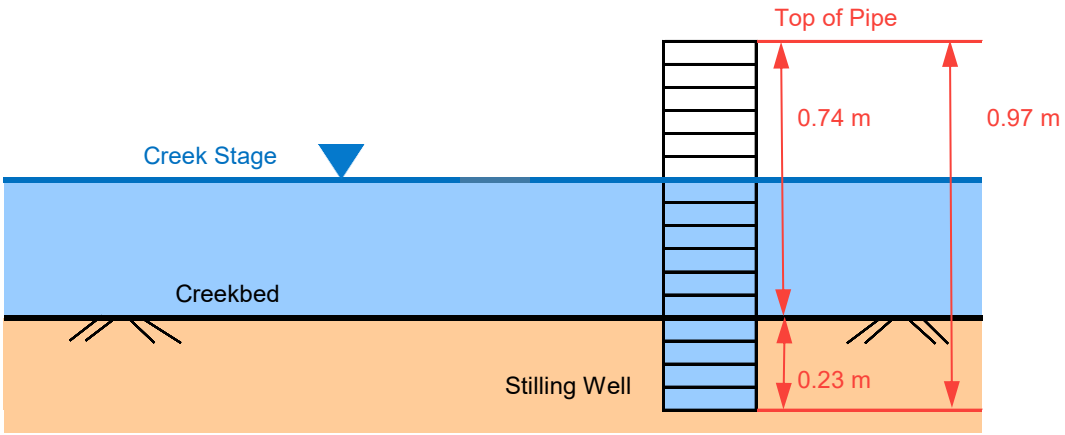
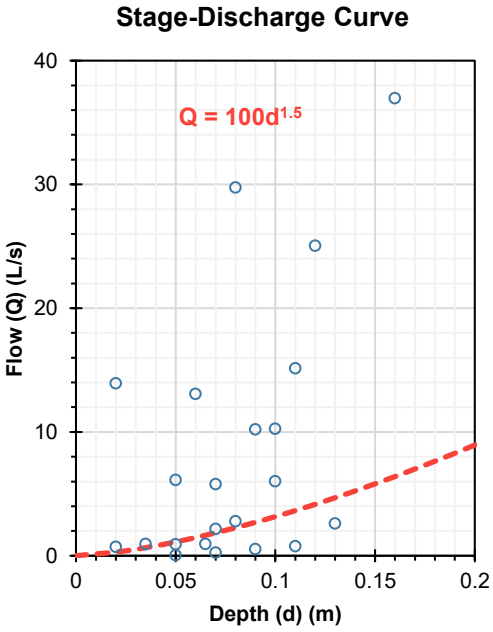





Photo taken on May 16, 2023.




**Notes:**

Escarpment seep to Pretty River northeast of Extension Quarry.

GPS Coordinates 560,066 E 4,916,392 N (NAD 83 Zone 17).

Approximate ground elevation is 495 masl (estimated from Ontario Base Mapping).

# Station SW21

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

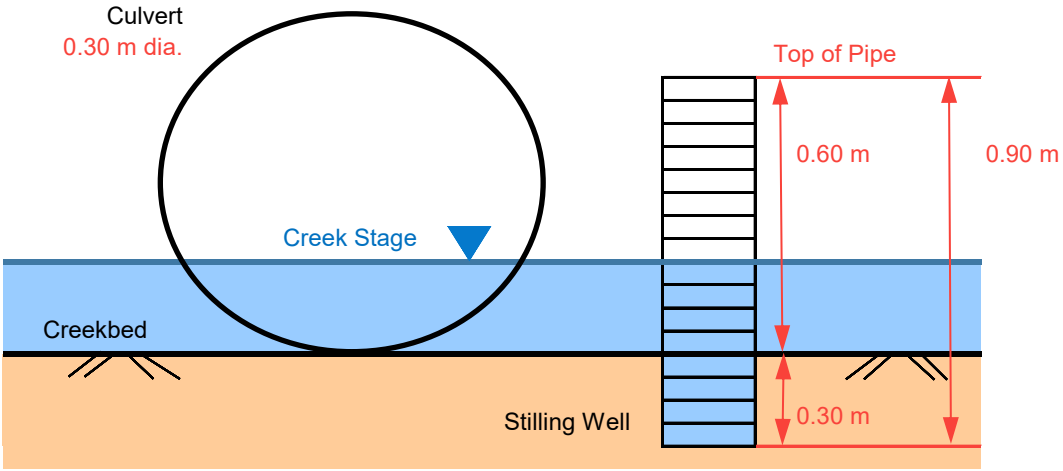
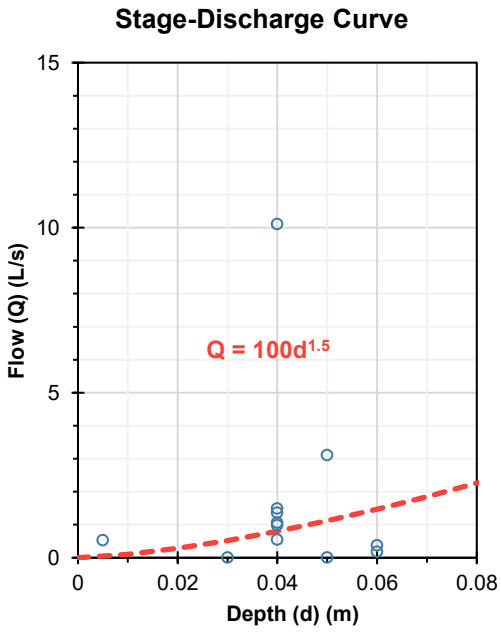





Photo taken on November 22, 2022.




**Notes:**

In-line pond discharge below escarpment east of Extension Quarry.

GPS Coordinates 560,308 E 4,916,284 N (NAD 83 Zone 17).

Approximate ground elevation is 430 masl (estimated from Ontario Base Mapping).

# Station SW21A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

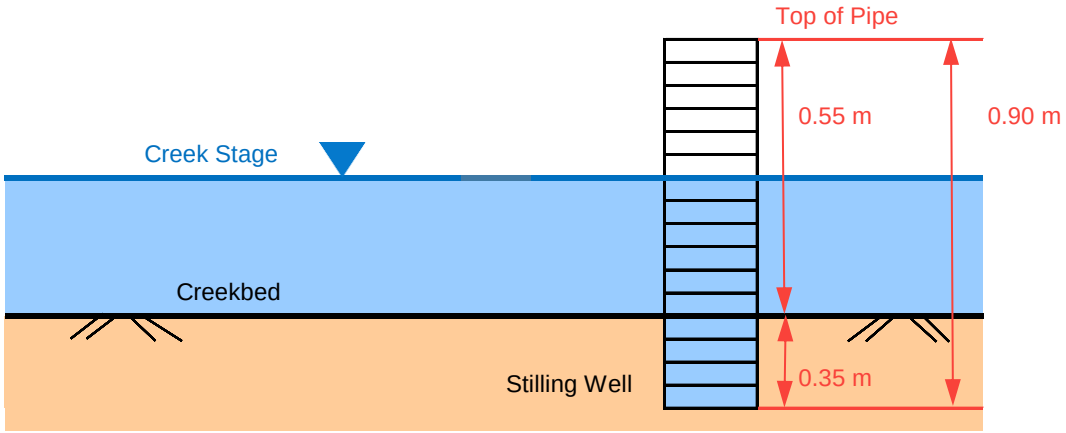





Photo taken on November 22, 2022.

**Notes:**

In-line pond inlet below escarpment east of Extension Quarry.

GPS Coordinates 561,246 E 4,916,261 N (NAD 83 Zone 17).

Approximate ground elevation is 433 masl (estimated from Ontario Base Mapping).

# Station SW21B

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 22, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

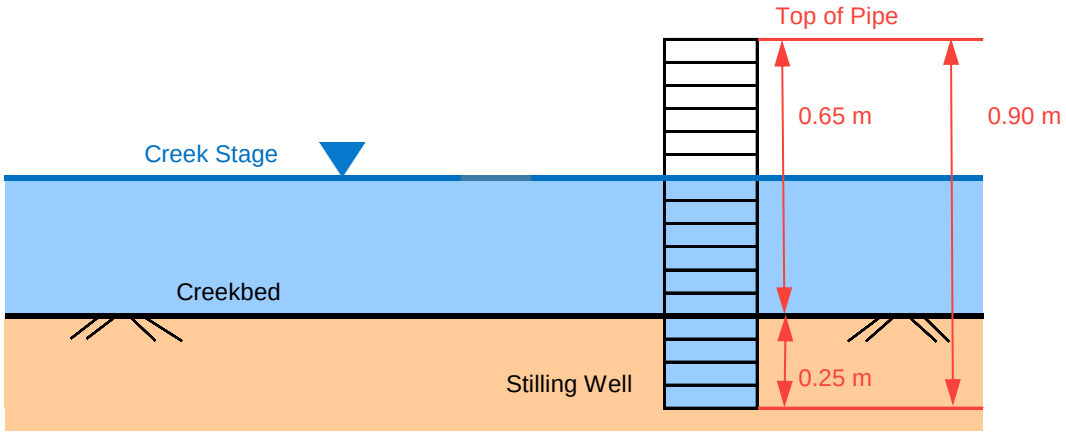





Photo taken on September 29, 2022.

**Notes:**

Residential cistern overflow outlet below escarpment east of Extension Quarry.

GPS Coordinates 561,039 E 4,916,193 N (NAD 83 Zone 17).

Approximate ground elevation is 449 masl (estimated from Ontario Base Mapping).

# Station SW21C

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | October 27, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC / SRF / BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

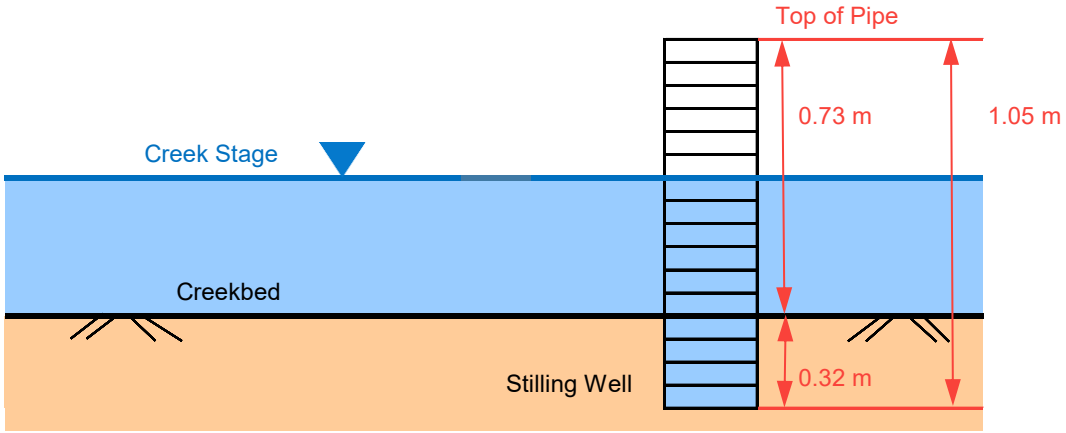
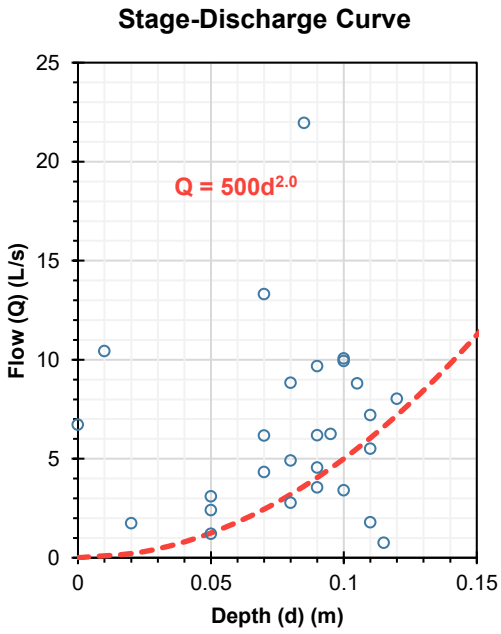





Photo taken on October 27, 2022.




**Notes:**

Escarpment seep northeast of Extension Quarry, upgradient of cistern inlet pipe.

GPS Coordinates 560,708 E 4,916,241 N (NAD 83 Zone 17).

Approximate ground elevation is 470 masl (estimated from Ontario Base Mapping).

# Station SW22

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

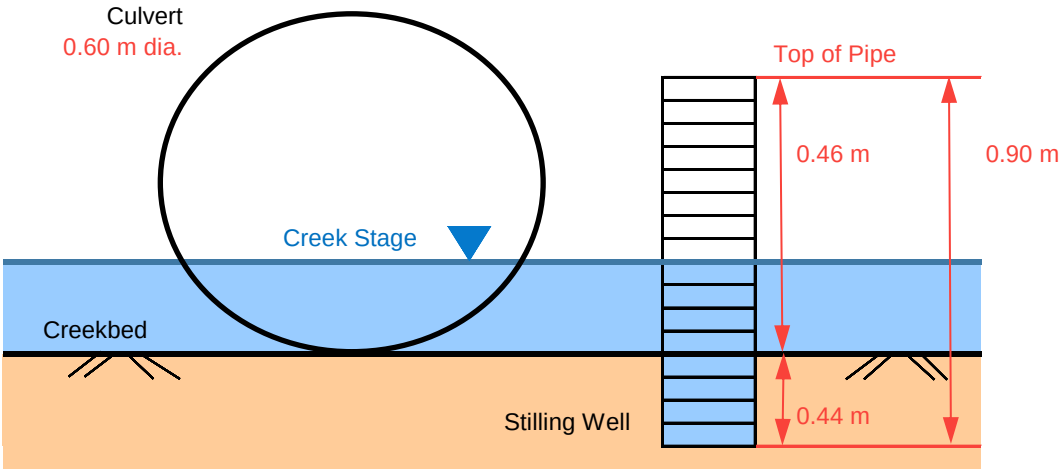
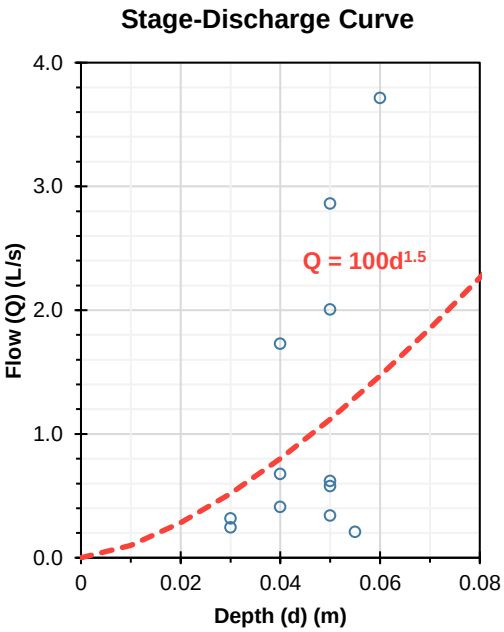





Photo taken on November 23, 2022.




**Notes:**

Escarpment seep culvert beneath ski trail east of Main Quarry.

GPS Coordinates 560,686 E 4,914,713 N (NAD 83 Zone 17).

Approximate ground elevation is 492 masl (estimated from Ontario Base Mapping).

# Station SW22A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

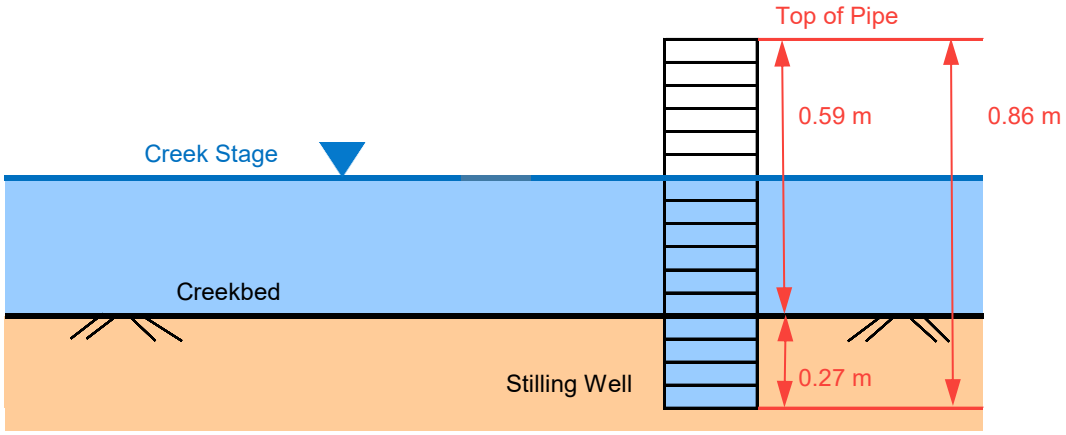
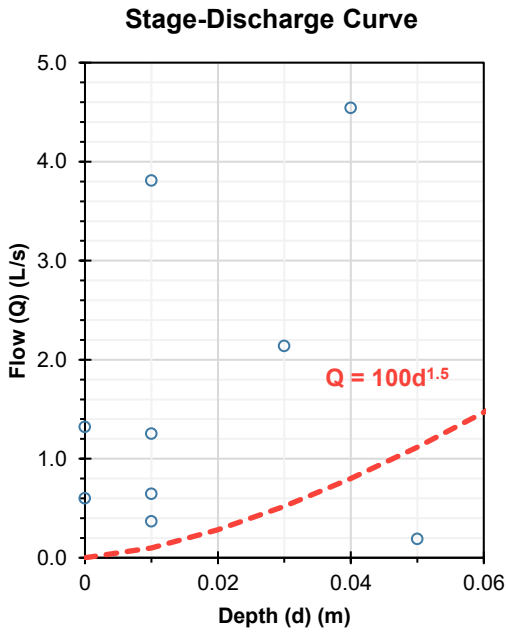





Photo taken on November 23, 2022.




**Notes:**

Escarpment seep east of Main Quarry.

GPS Coordinates 560,952 E 4,915,039 N (NAD 83 Zone 17).

Approximate ground elevation is 485 masl (estimated from Ontario Base Mapping).

# Station SW22C

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

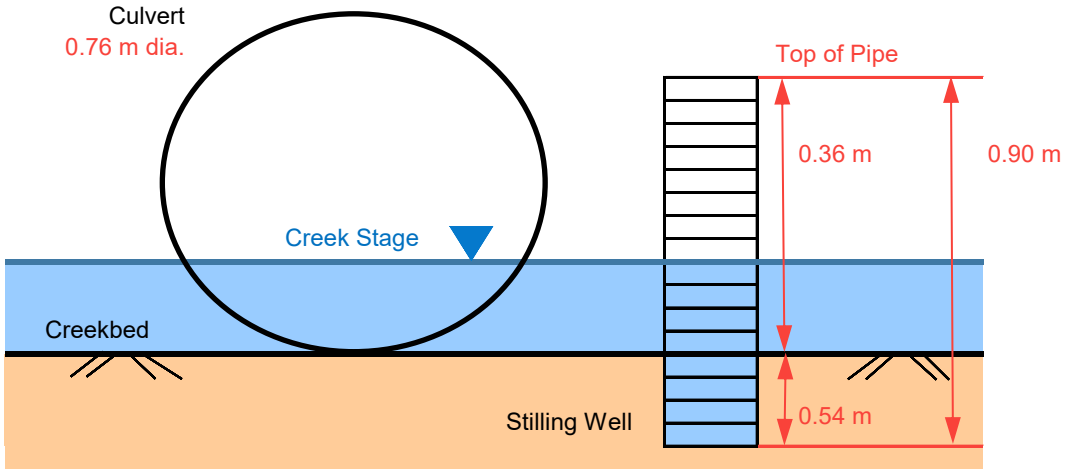
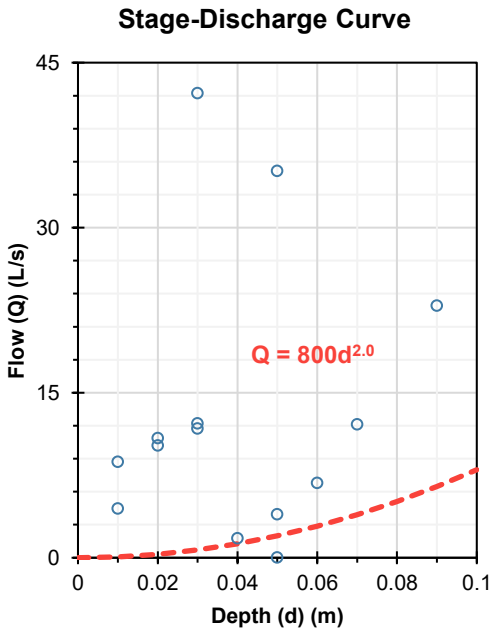





Photo taken on November 23, 2022.




**Notes:**

Escarpment seep flow channel culvert east of Main Quarry.

GPS Coordinates 560,977 E 4,914,876 N (NAD 83 Zone 17).

Approximate ground elevation is 477 masl (estimated from Ontario Base Mapping).

# Station SW24A

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

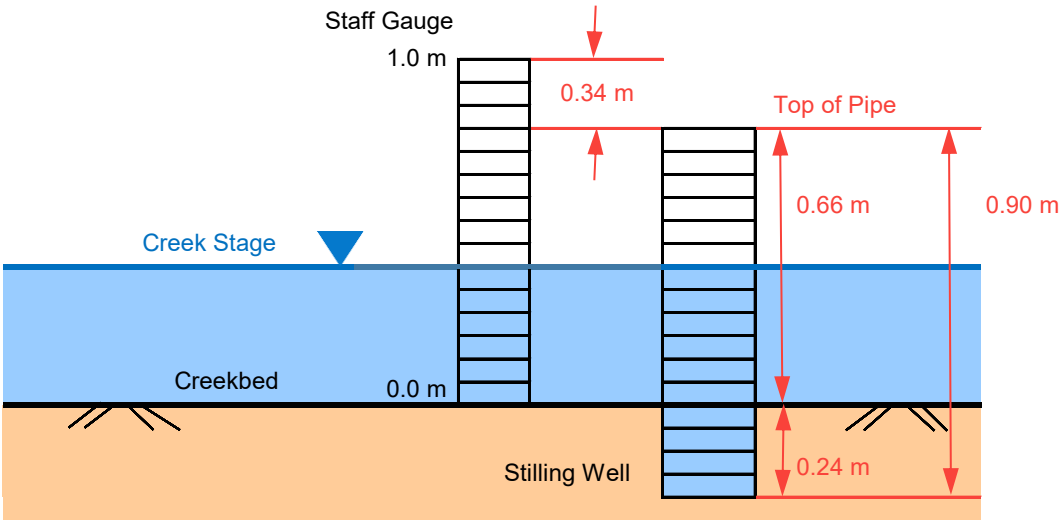
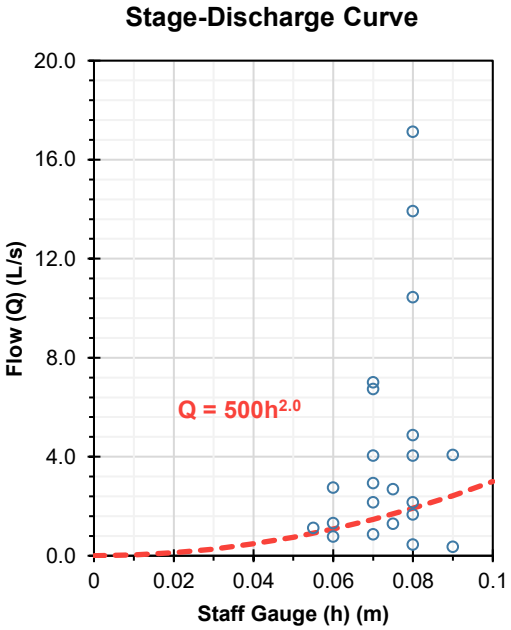





Photo taken on November 23, 2022.




**Notes:**

Escarpment seep channel at water supply collection system northeast of Extension Quarry.

GPS Coordinates 560,566 E 4,916,379 N (NAD 83 Zone 17).

Approximate ground elevation is 460 masl (estimated from Ontario Base Mapping).

# Station SW77

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 21, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

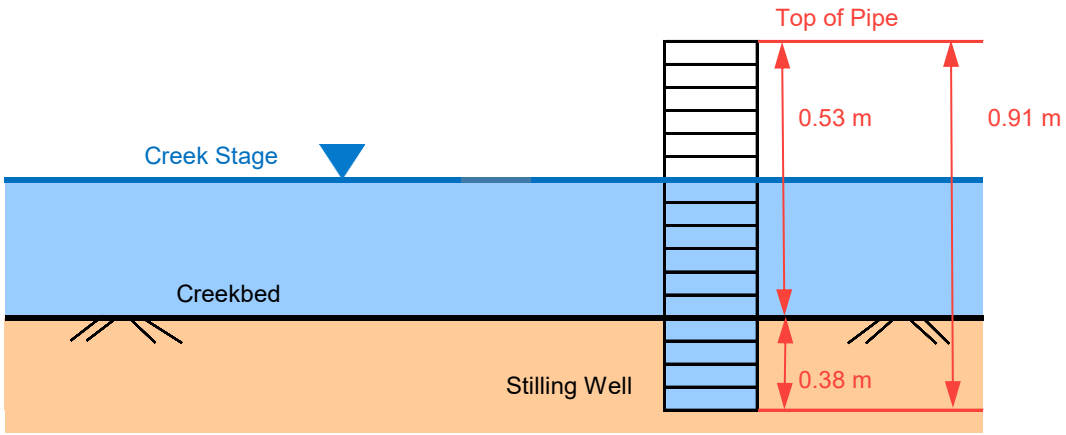
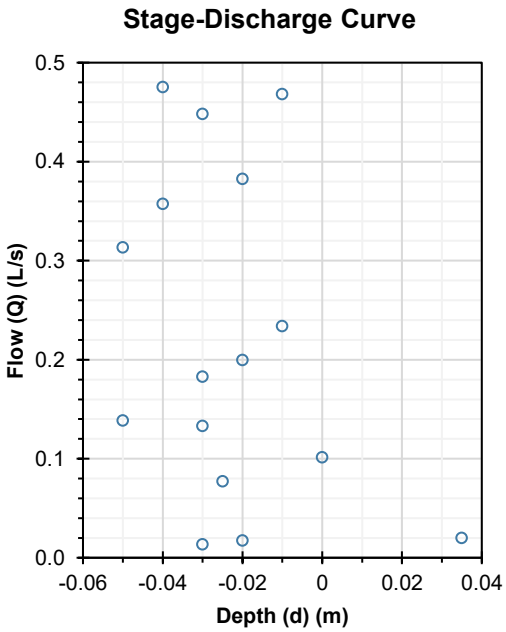





Photo taken on November 21, 2022.




**Notes:**

Escarpment seep northeast of Extension Quarry.

GPS Coordinates 560,150 E 4,916,292 N (NAD 83 Zone 17).

Approximate ground elevation is 494 masl (estimated from Ontario Base Mapping).

# Station PR Control

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | October 28, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC / SRF / BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

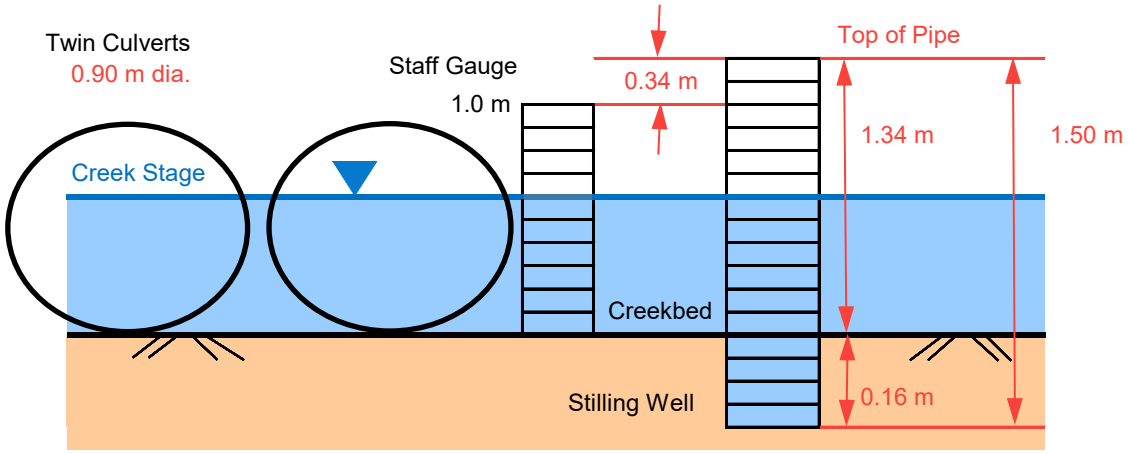
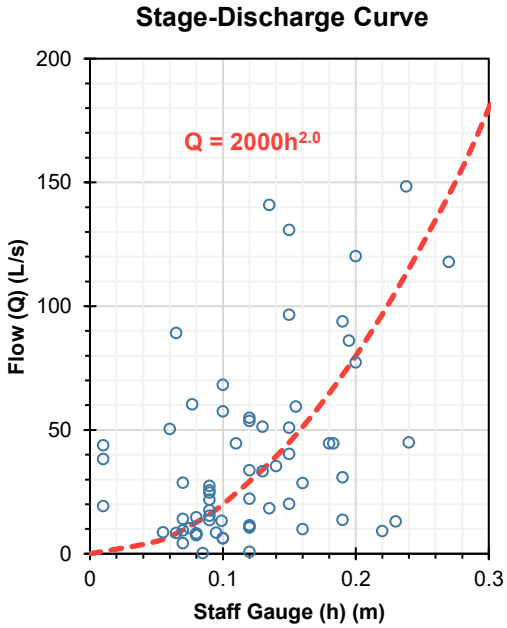





Photo taken on October 28, 2022.




**Notes:**

Pretty River Control Station identified with NVCA north of Quarry on 30/31 Sideroad.

GPS Coordinates 558,059 E 4,918,224 N (NAD 83 Zone 17).

Approximate ground elevation is 360 masl (estimated from Ontario Base Mapping).

# Station BC Control

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | August 12, 2025 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | SRF |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

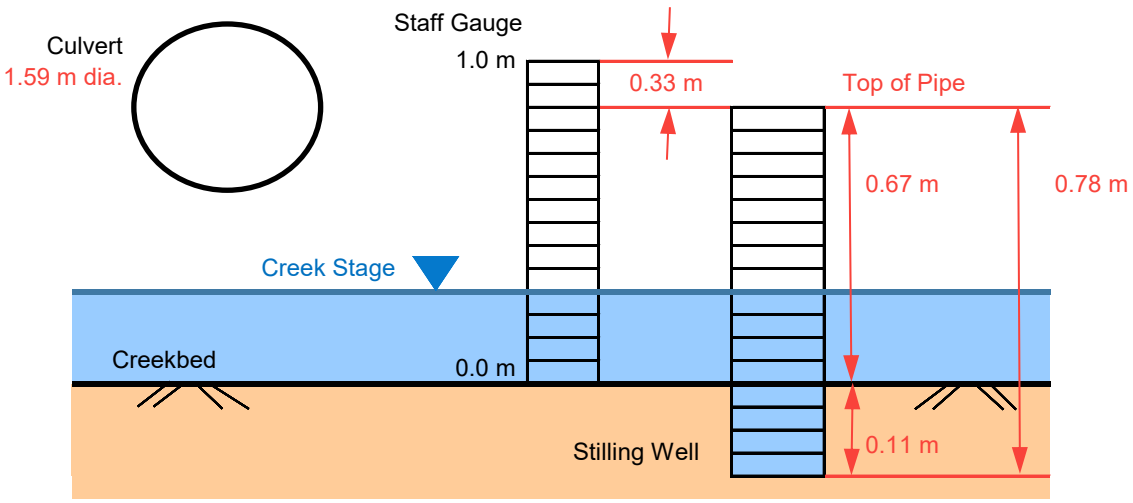
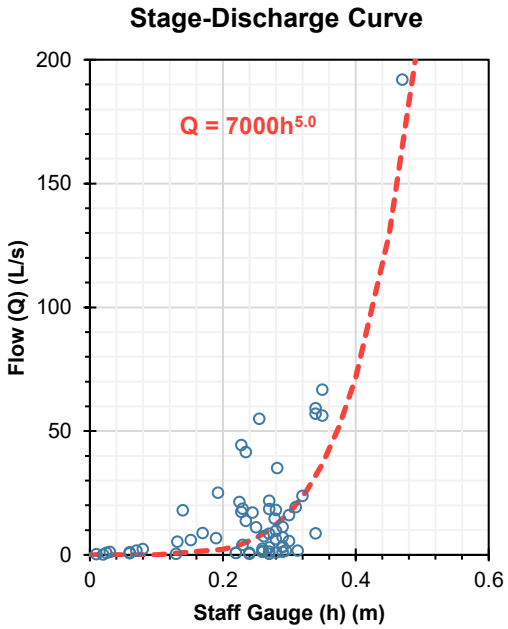





Photo taken on August 12, 2025.




**Notes:**

Batteaux Creek Control Station identified with NVCA southeast of Quarry on 21/22 Sideroad

GPS Coordinates 563,251 E 4,914,197 N (NAD 83 Zone 17).

Approximate ground elevation is 405 masl (estimated from Ontario Base Mapping).

# BH03-7 SG1

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

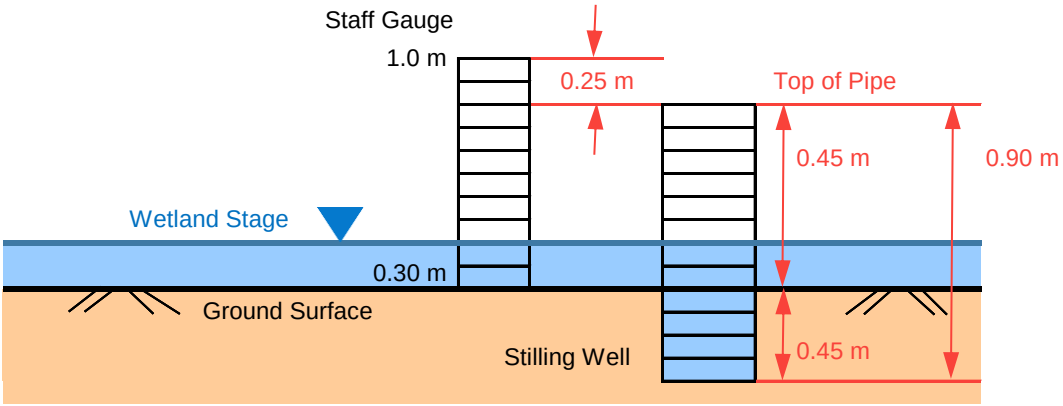





Photo taken on November 23, 2022.

**Notes:**

RR2 north of BH03-7 well nest

GPS Coordinates 559,349 E 4,915,519 N (NAD 83 Zone 17).

Approximate ground elevation is 510.5 masl (estimated from April 2022 LIDAR survey).

# BH03-7 SG2

| | | | |
|---|---|---|---|
| **Project Name:** | Duntroon Quarry | **Date:** | November 23, 2022 |
| **Client:** | Walker Aggregates Inc. | **Supervisor:** | BC |
| **Project Number:** | 111-53312-05 | **Scale:** | NTS |

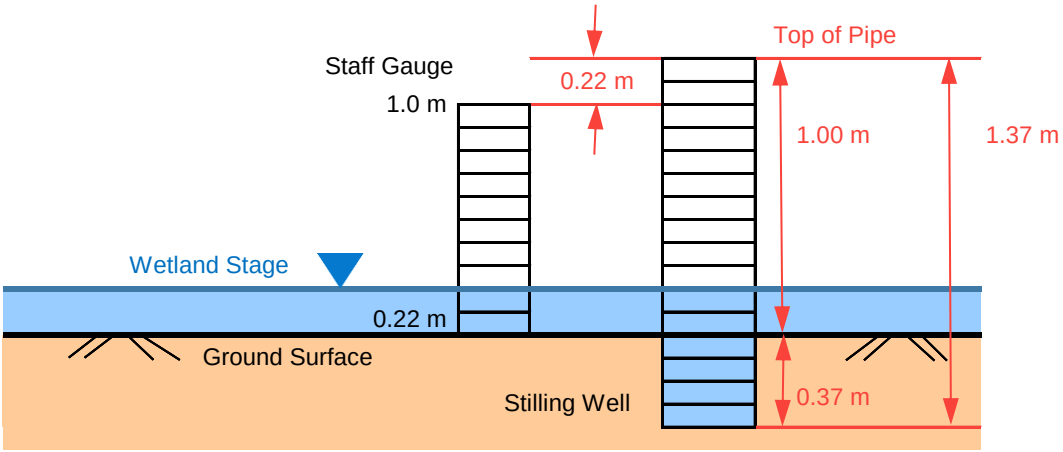





Photo taken on November 23, 2022.

**Notes:**

RR2 northwest of BH03-7 well nest

GPS Coordinates 559,323 E 4,915,530 N (NAD 83 Zone 17).

Approximate ground elevation is 510.5 masl (estimated from April 2022 LIDAR survey).

# B

## Groundwater Data

**Figure B-1 Groundwater Hydrograph**

**MW6**

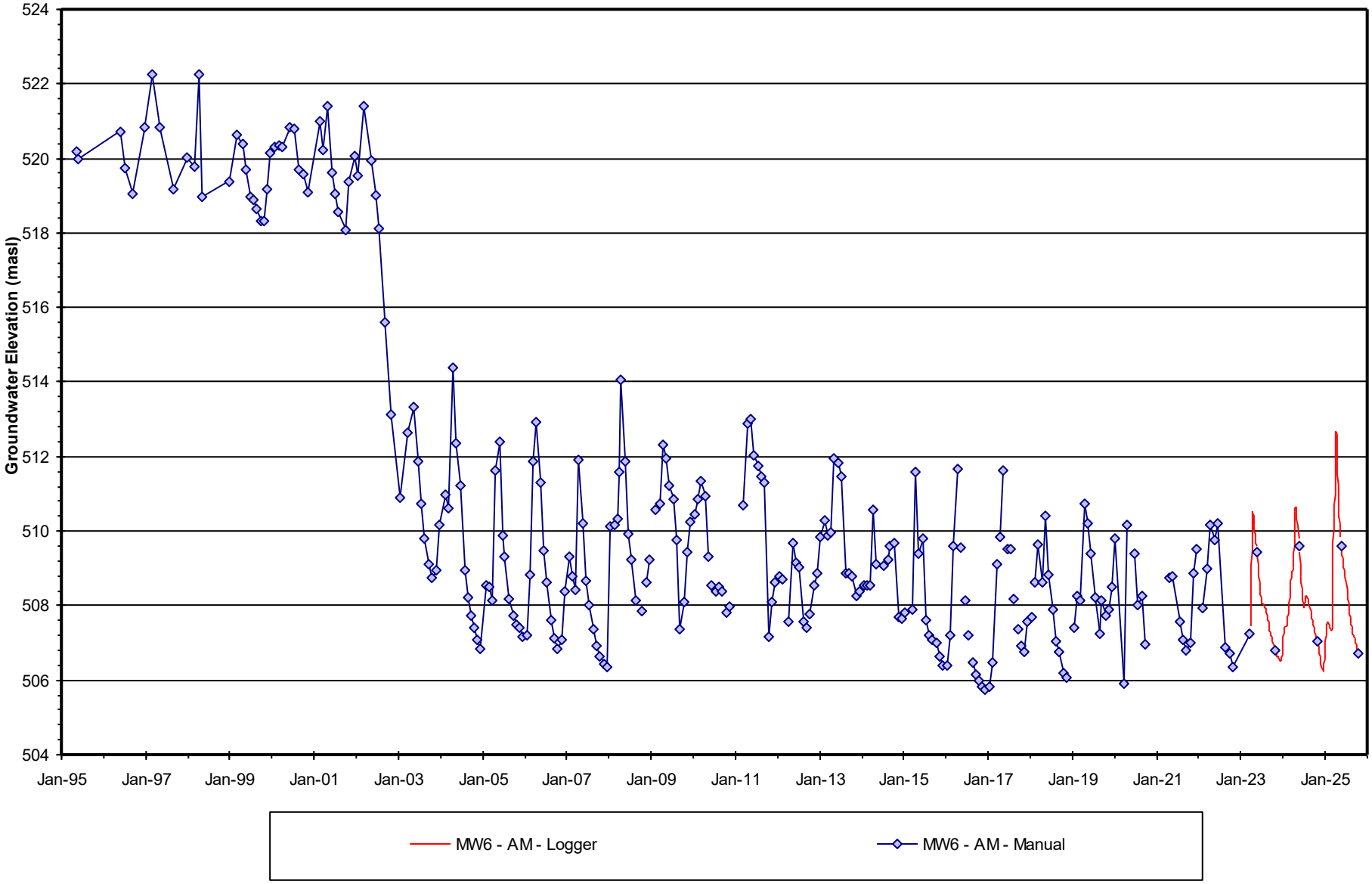


**Figure B-2 Groundwater Hydrograph**

**BH98-8**

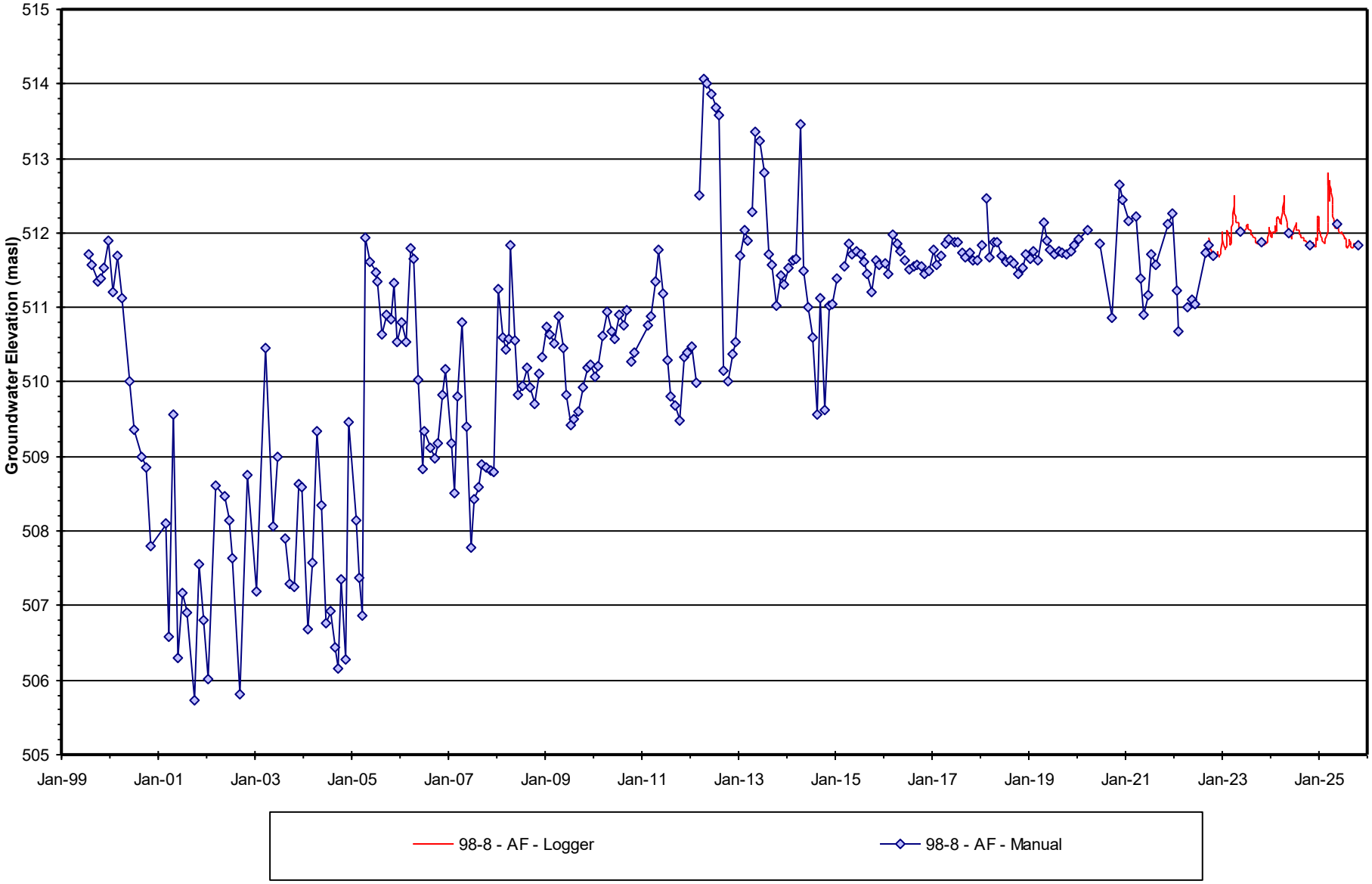


**Figure B-3 Groundwater Hydrograph**

**BH98-9**

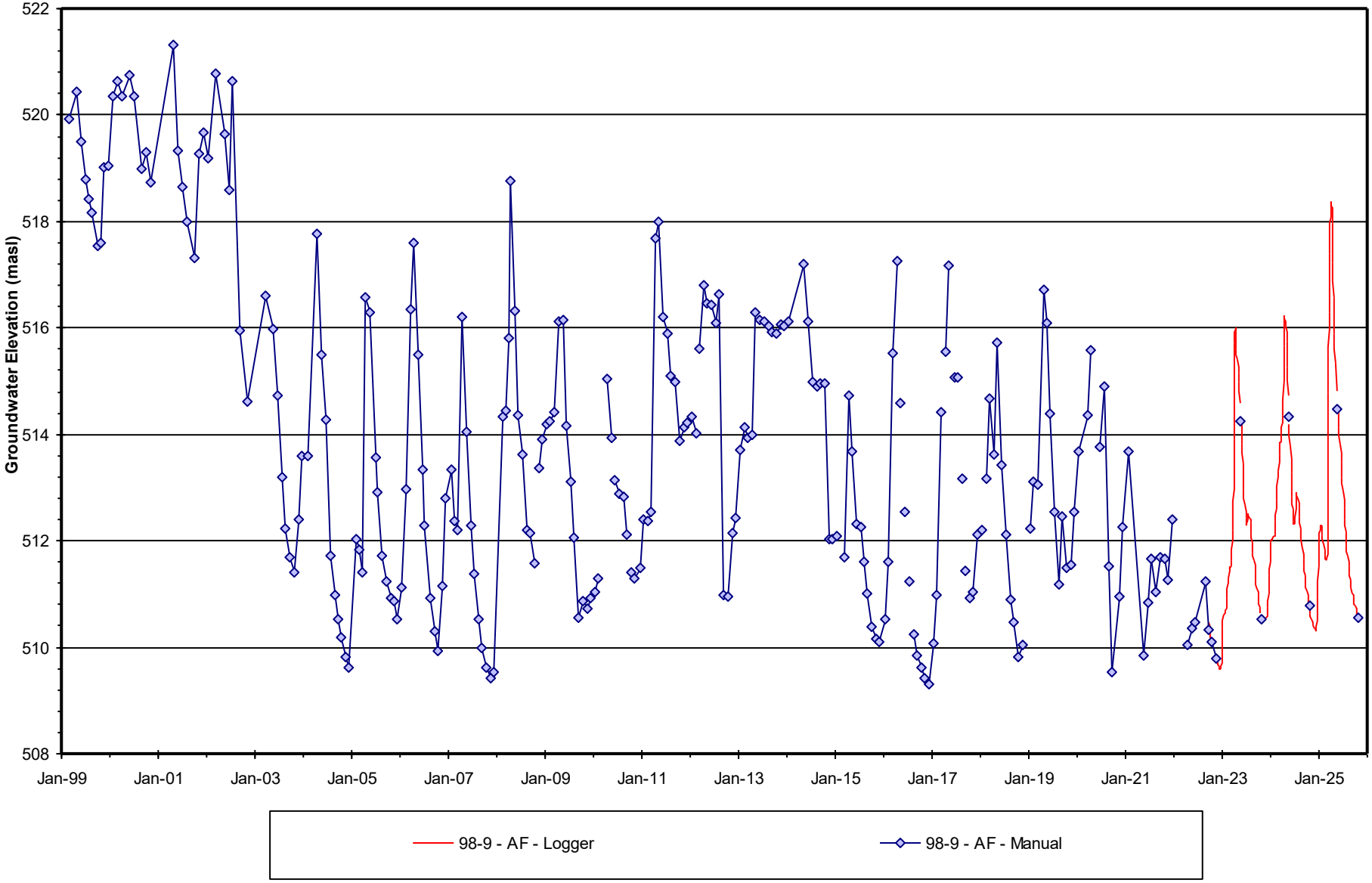


**Figure B-4 Groundwater Hydrograph**

**BH98-12**

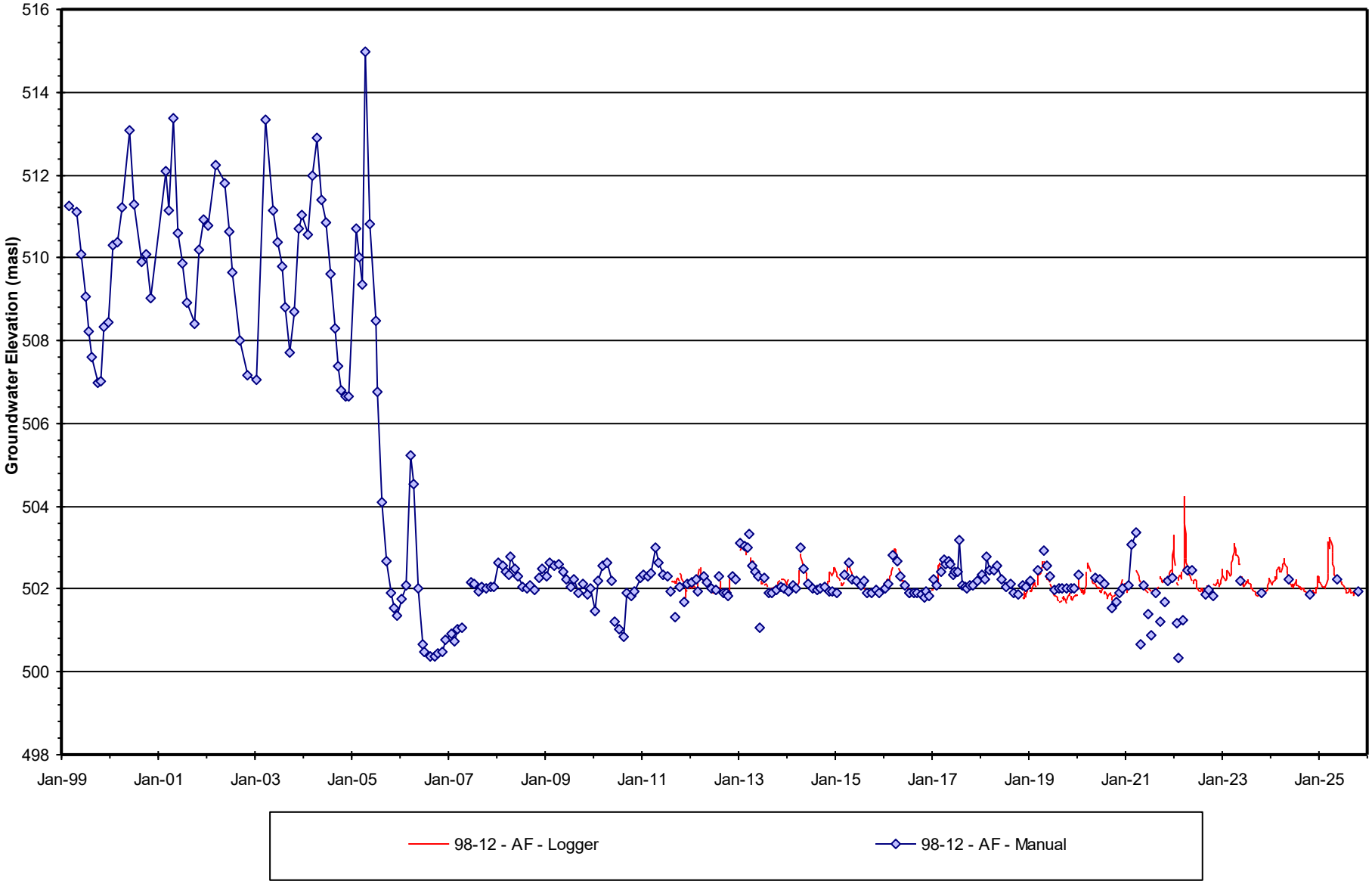


**Figure B-5 Groundwater Hydrograph**

**PW99-1**

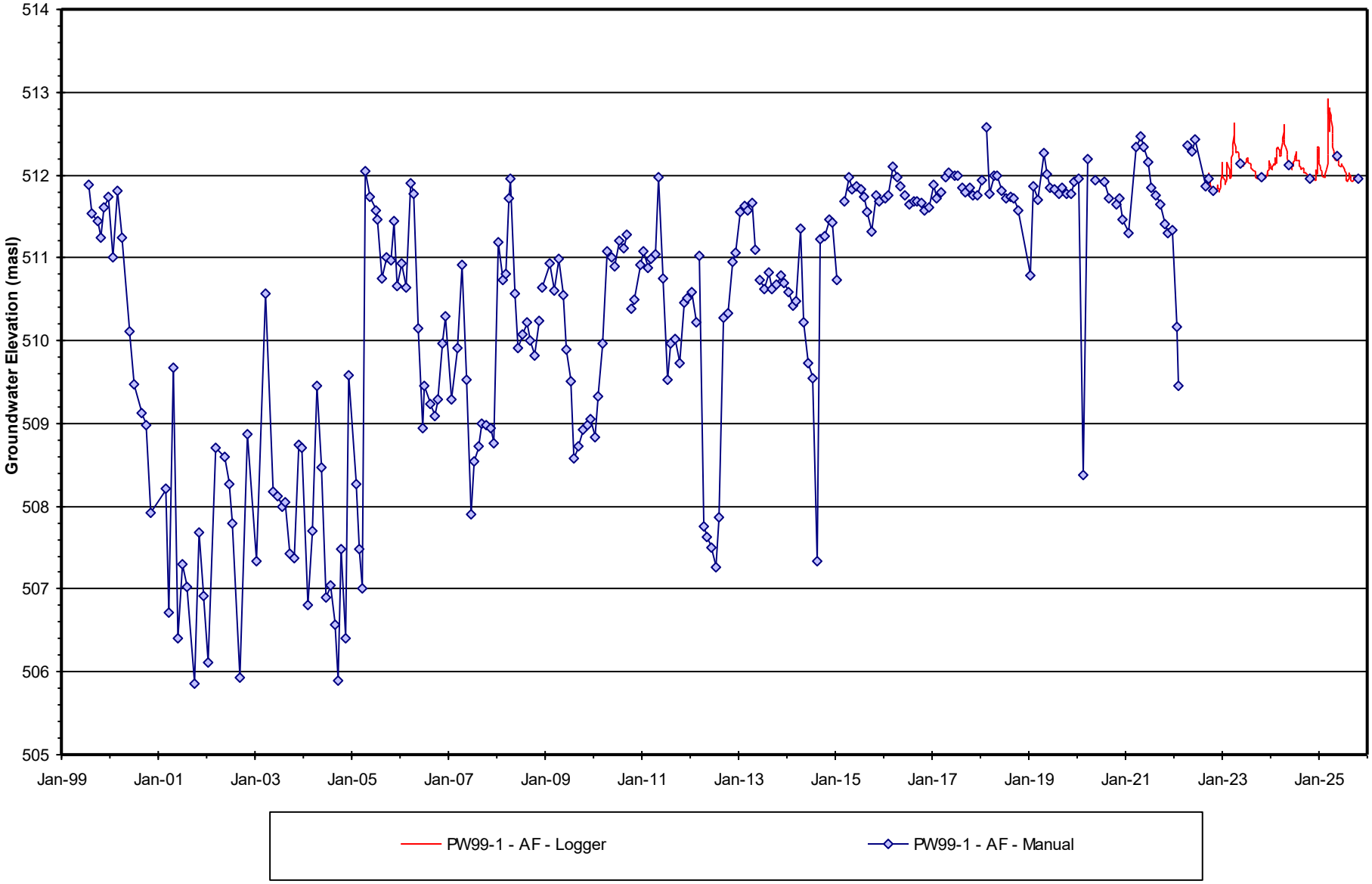


**Figure B-6 Groundwater Hydrograph**

**BH02-1**

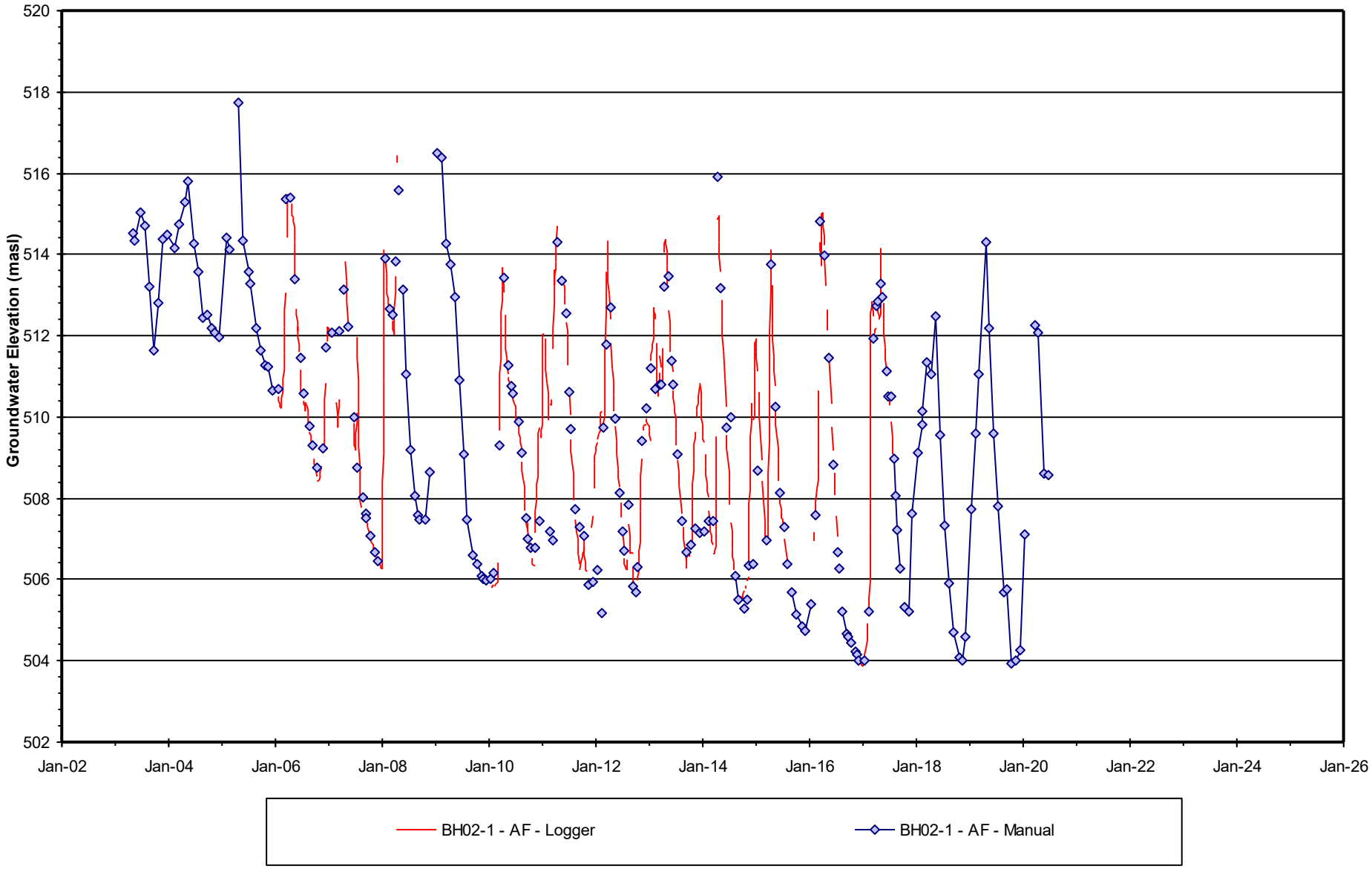


**Figure B-7 Groundwater Hydrograph**

**BH02-2**

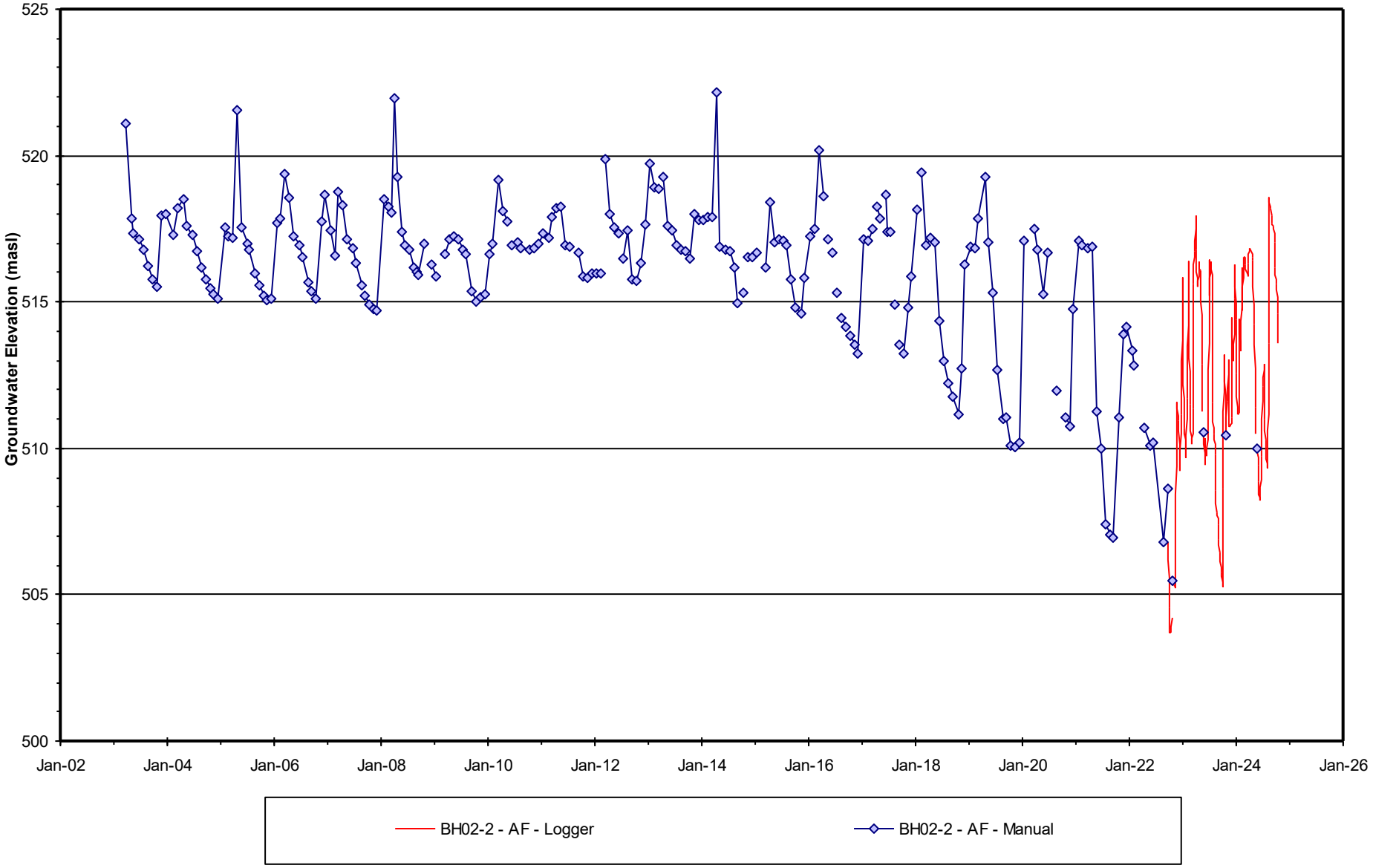


**Figure B-8 Groundwater Hydrograph**

**BH02-3**

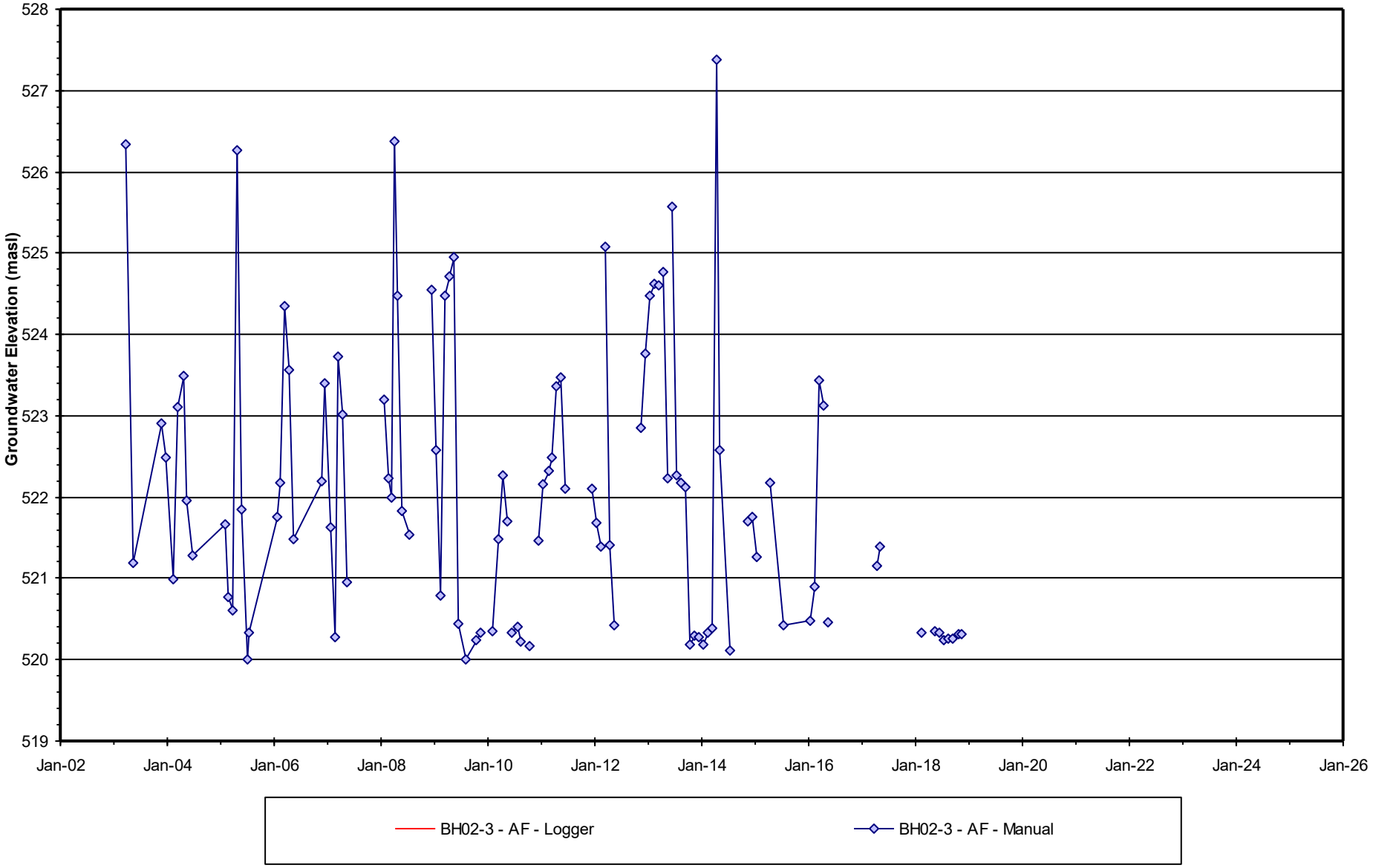


**Figure B-9 Groundwater Hydrograph**

**BH02-4**

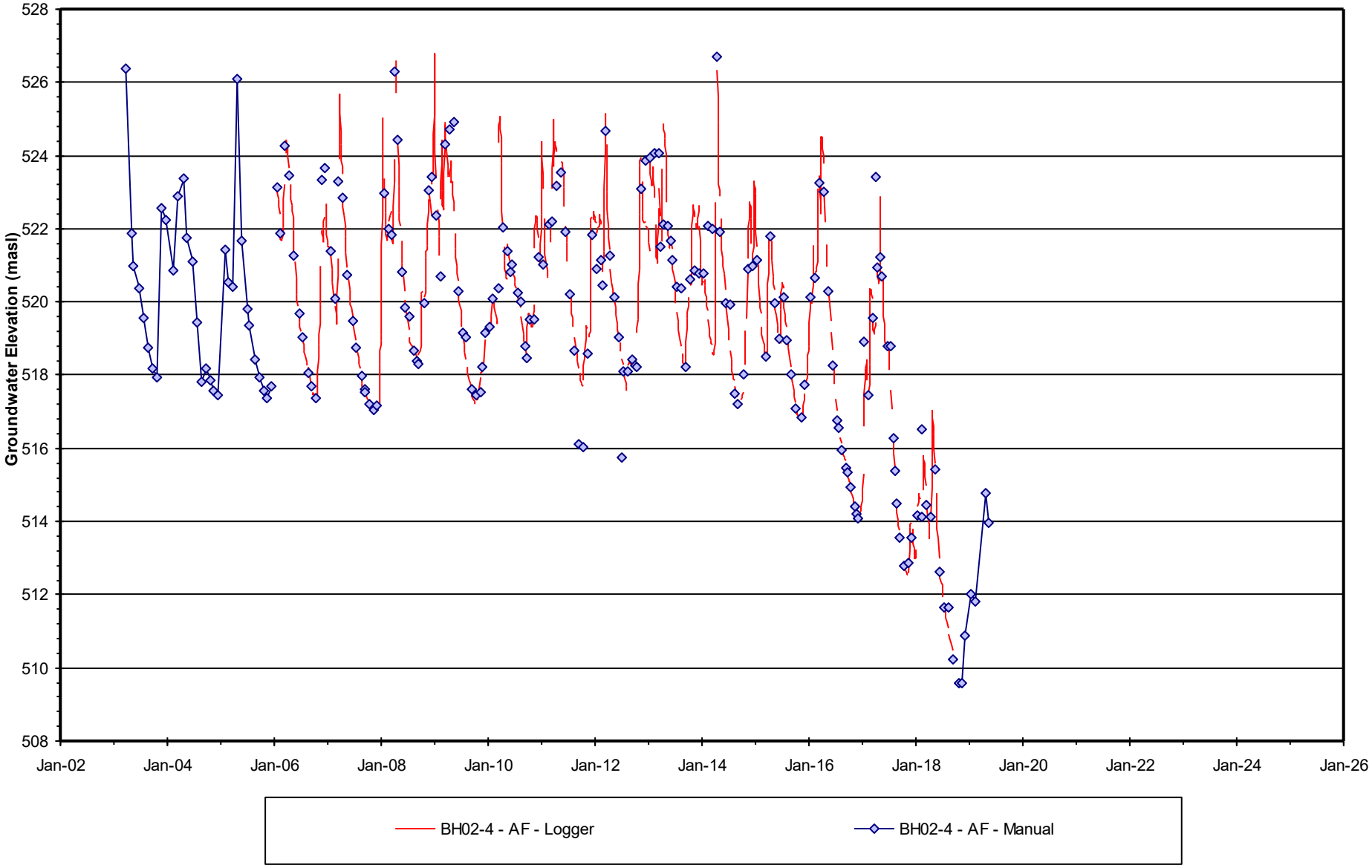


**Figure B-10a Groundwater Hydrograph**

**Nest BH02-5 - Overburden**

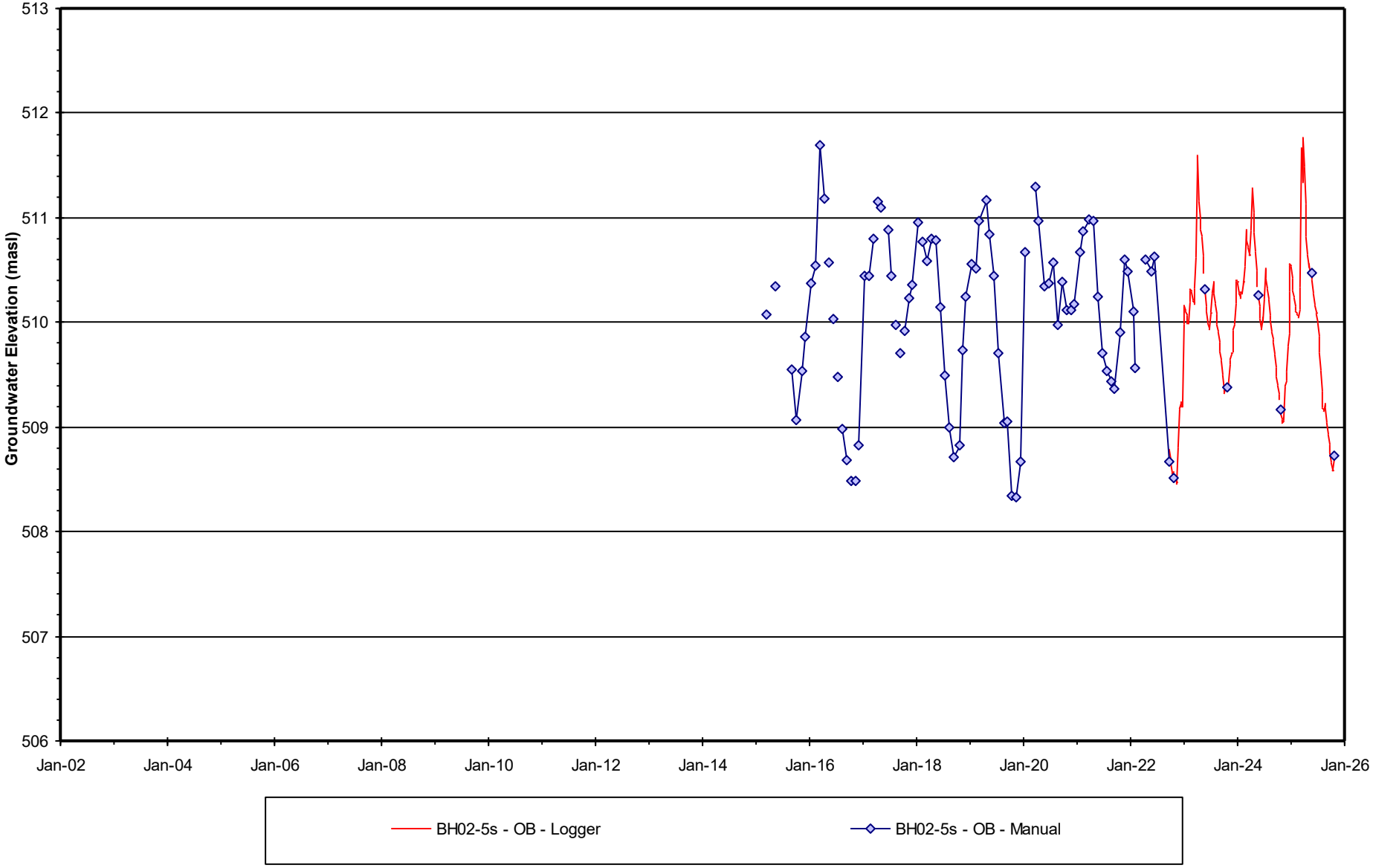


**Figure B-10b Groundwater Hydrograph**

**Nest BH02-5 - Shallow Amabel Bedrock**

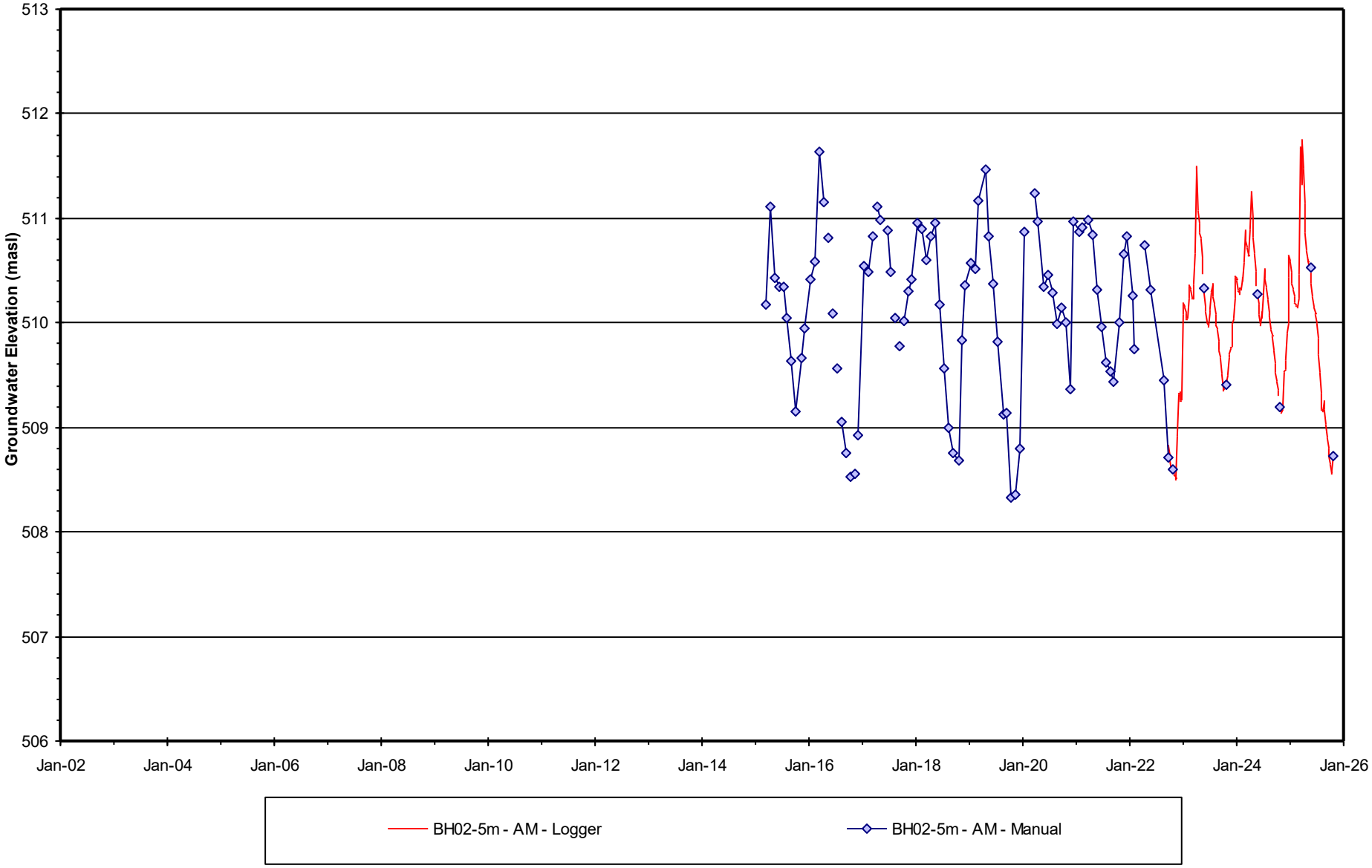


**Figure B-10c Groundwater Hydrograph**

**Nest BH02-5 - Deep Amabel / Fossil Hill Bedrock**

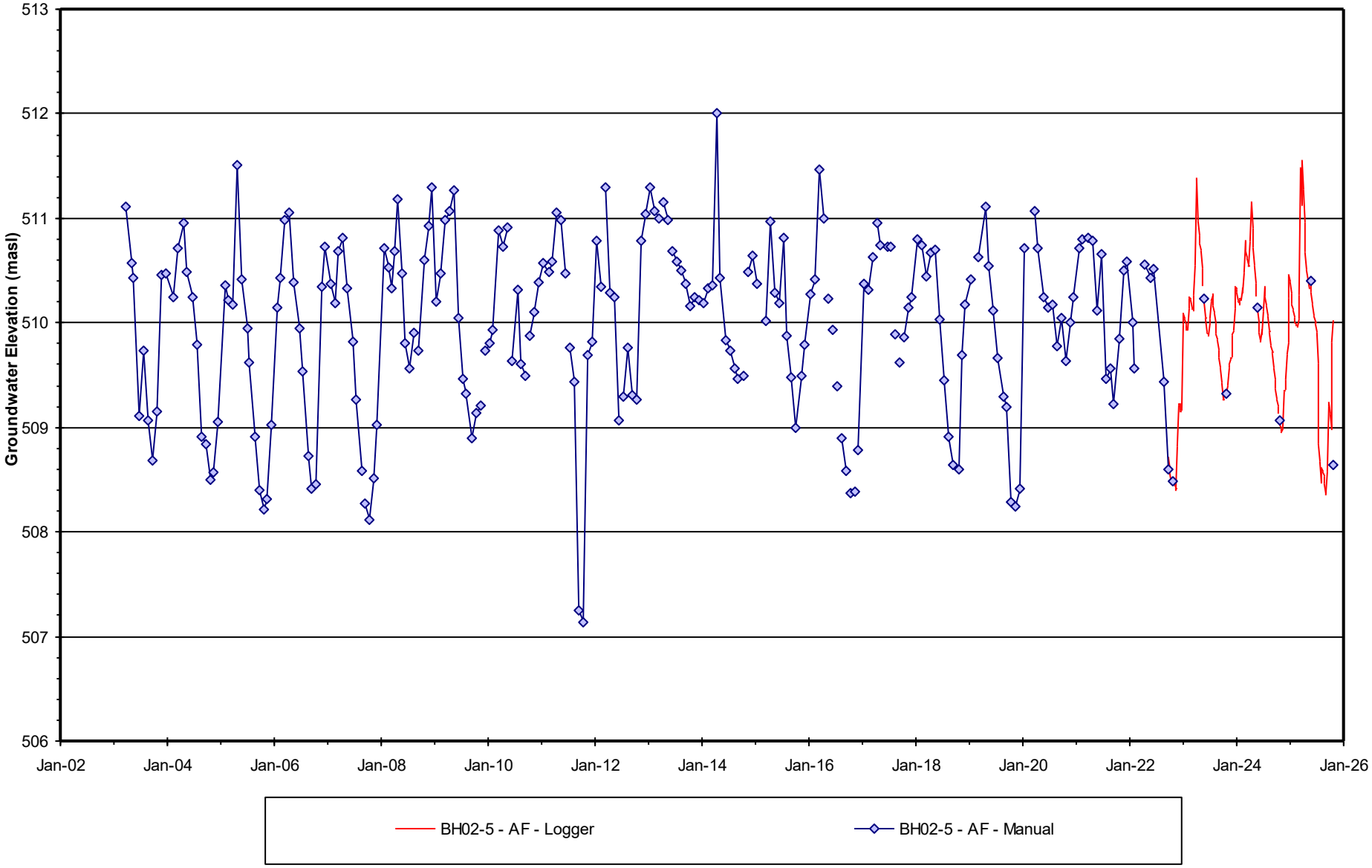
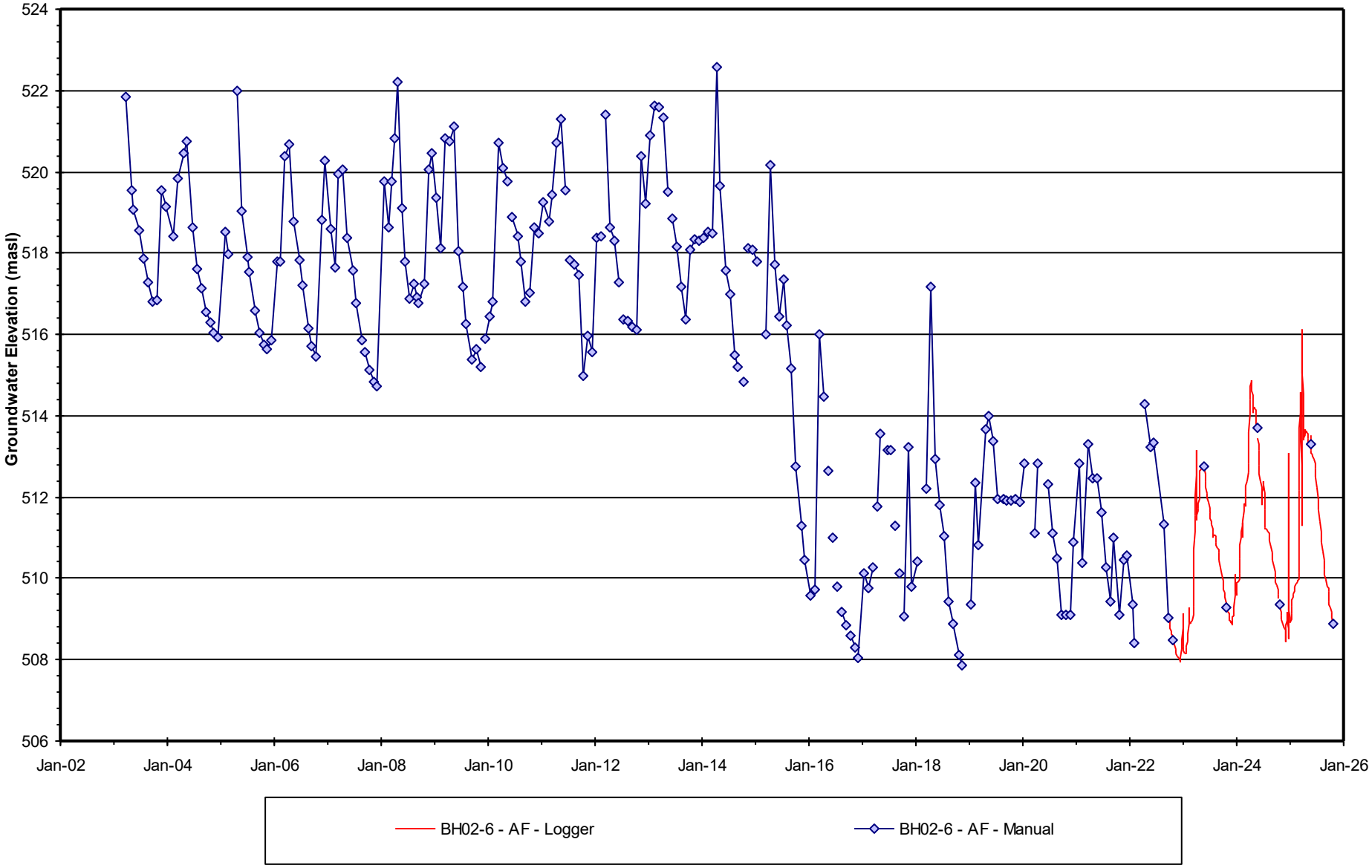


**Figure B-11 Groundwater Hydrograph**

**BH02-6**



## Figure B-12a Groundwater Hydrograph

### Nest BH03-7 - Overburden

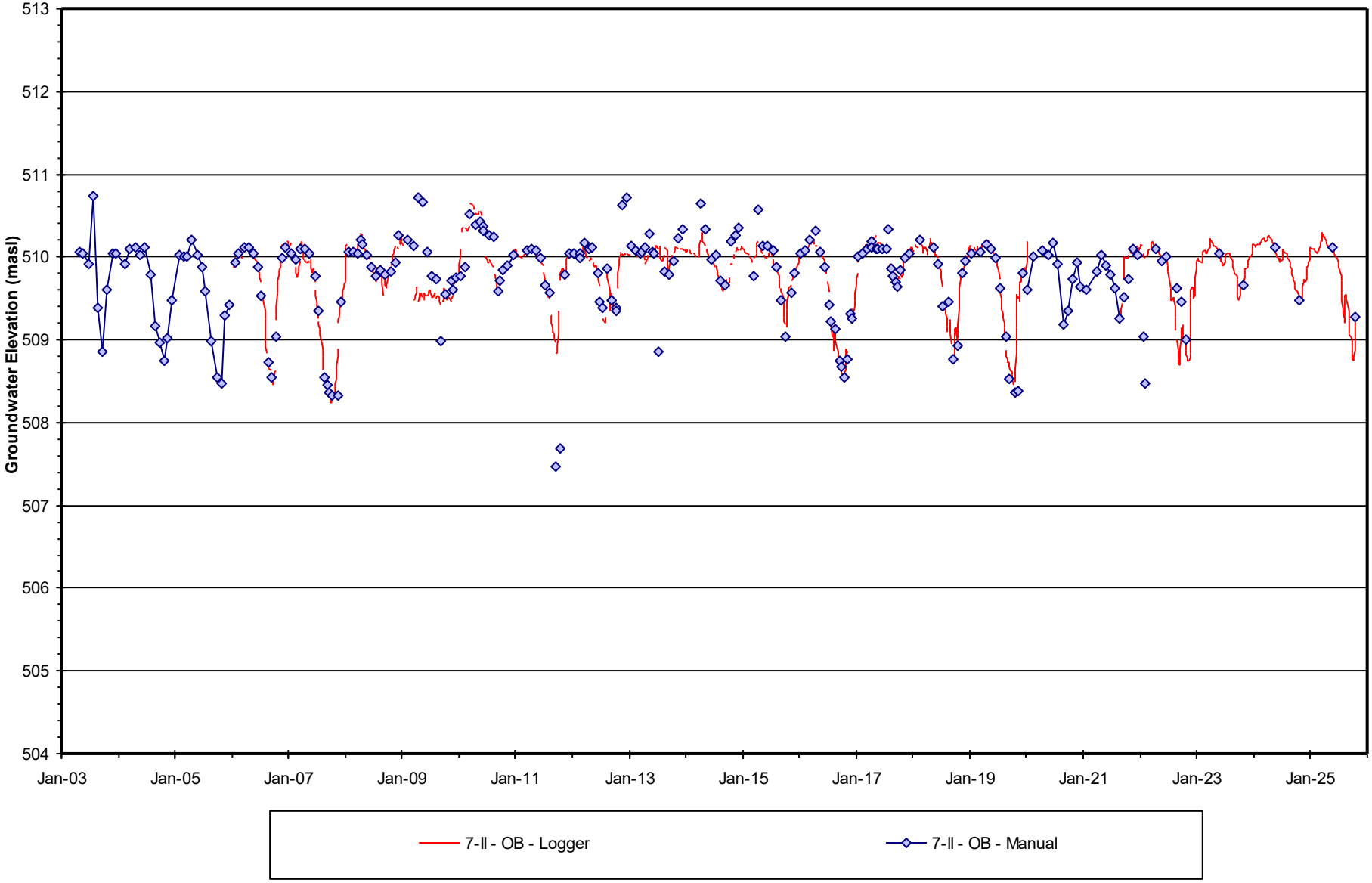


**Figure B-12b Groundwater Hydrograph**

**Nest BH03-7 - Shallow Amabel Bedrock**

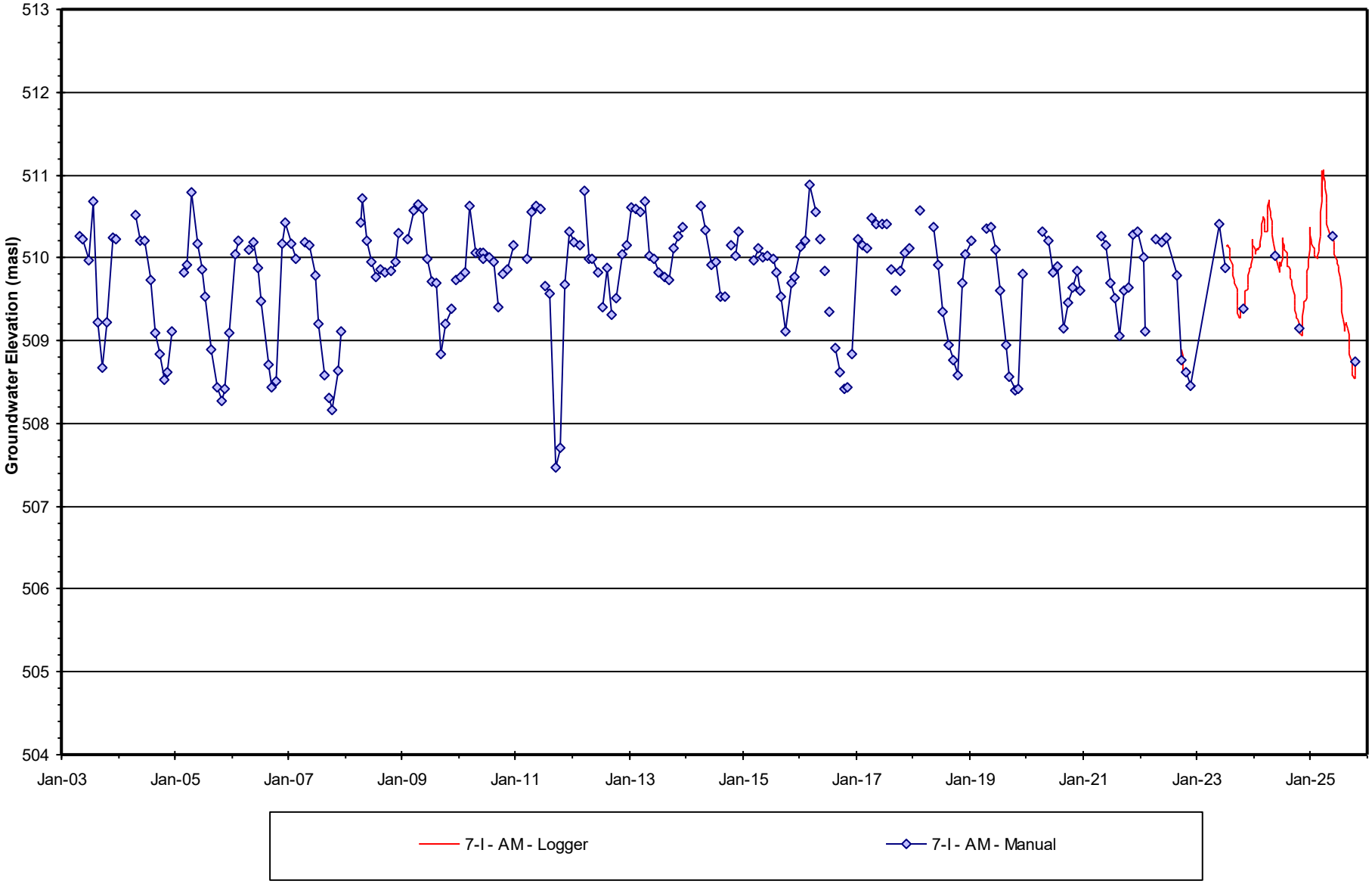


**Figure B-12c Groundwater Hydrograph**

**Nest BH03-7 - Deep Amabel / Fossil Hill Bedrock**

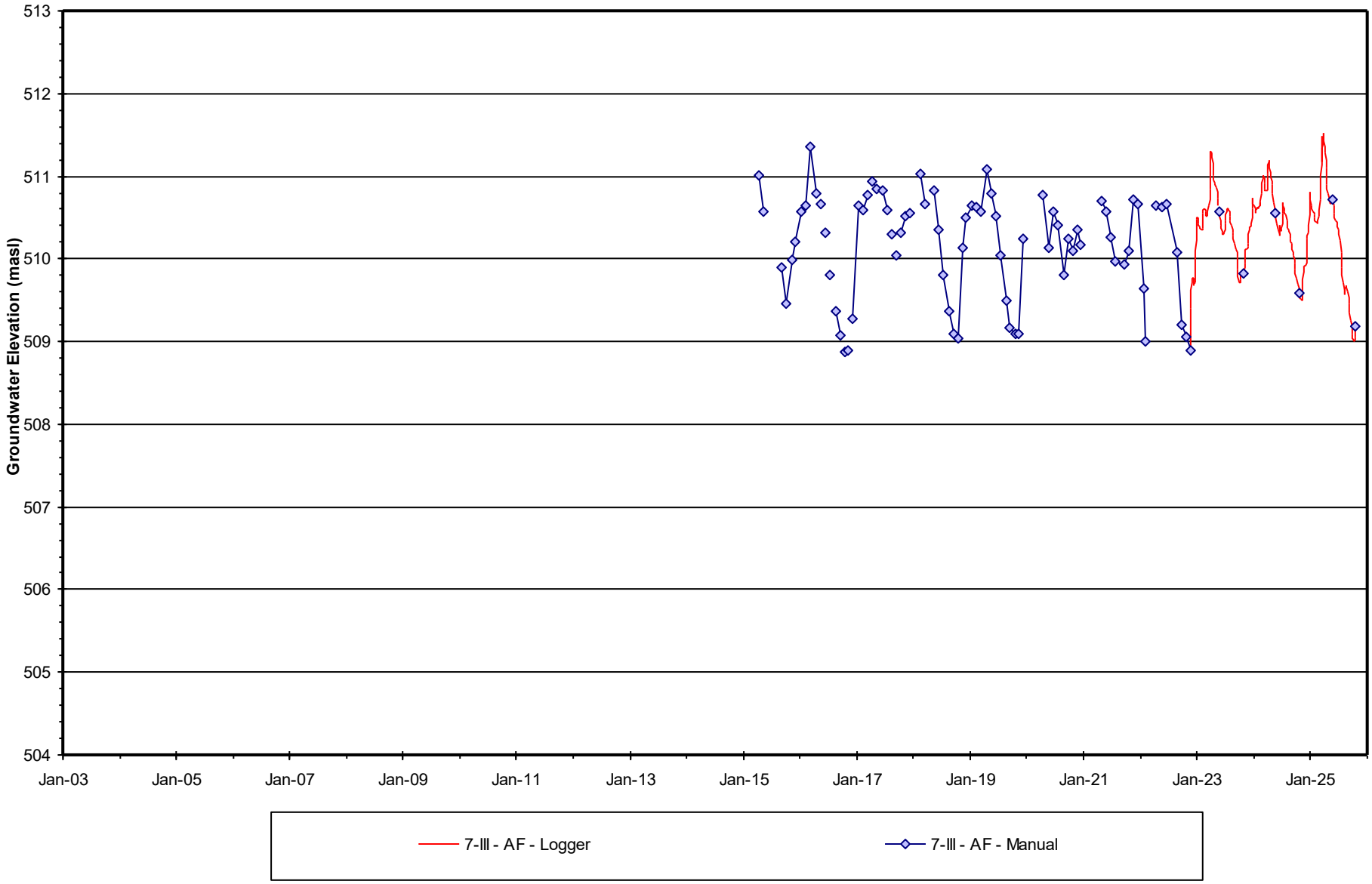


**Figure B-13 Groundwater Hydrograph**

**BH03-8**

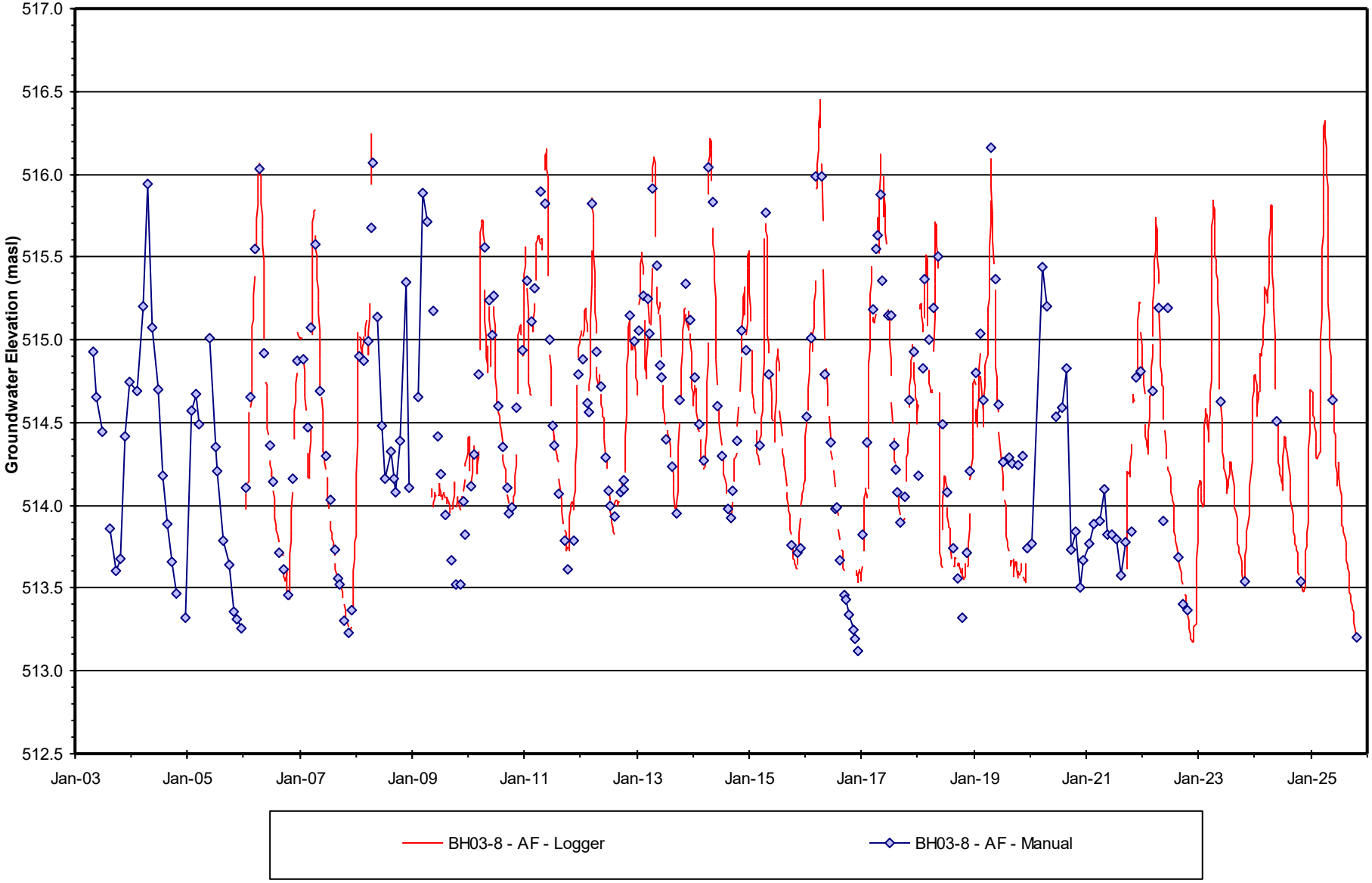


**Figure B-14 Groundwater Hydrograph**

**BH03-9**

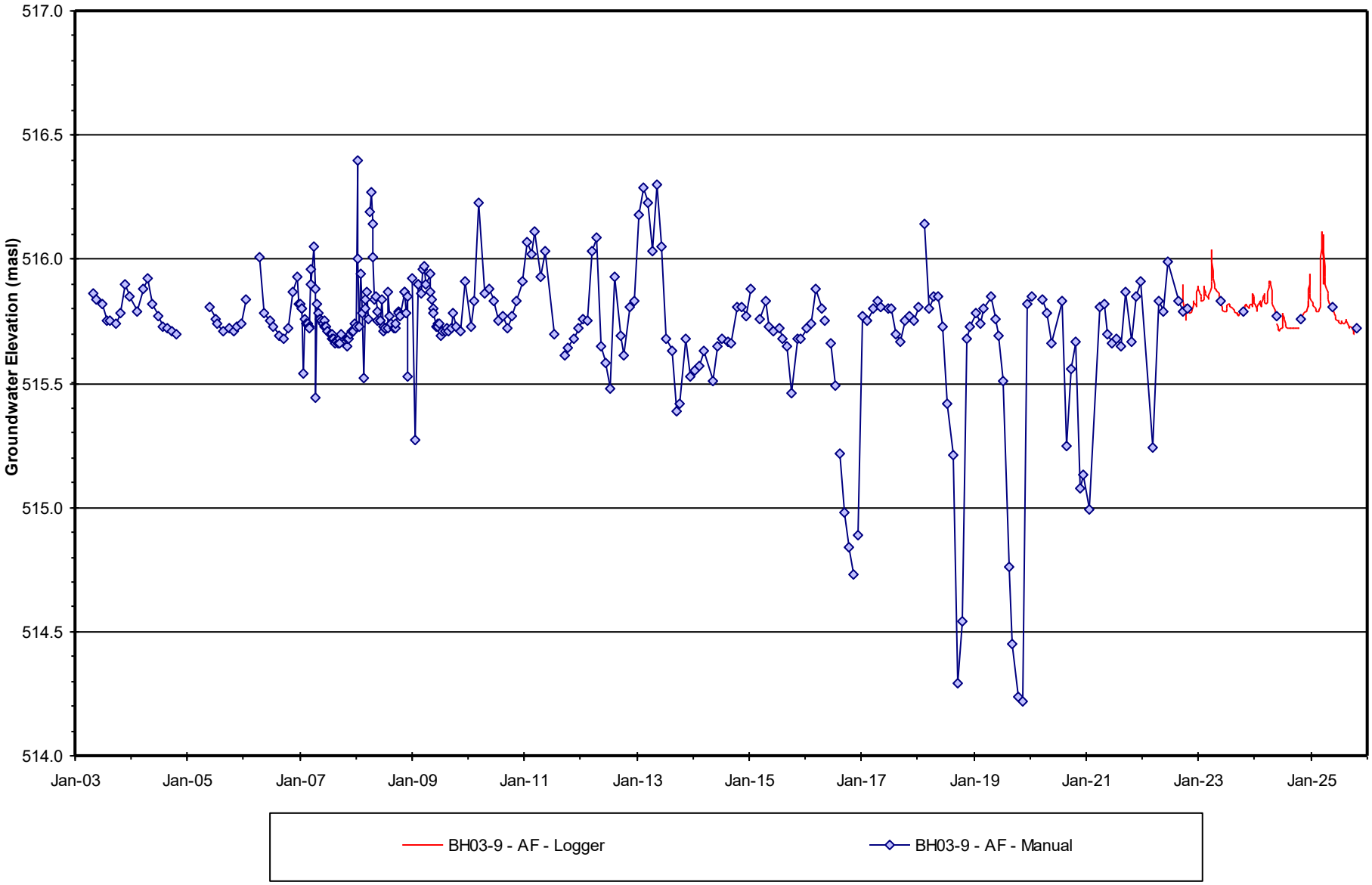


**Figure B-15 Groundwater Hydrograph**

**TW04-1**

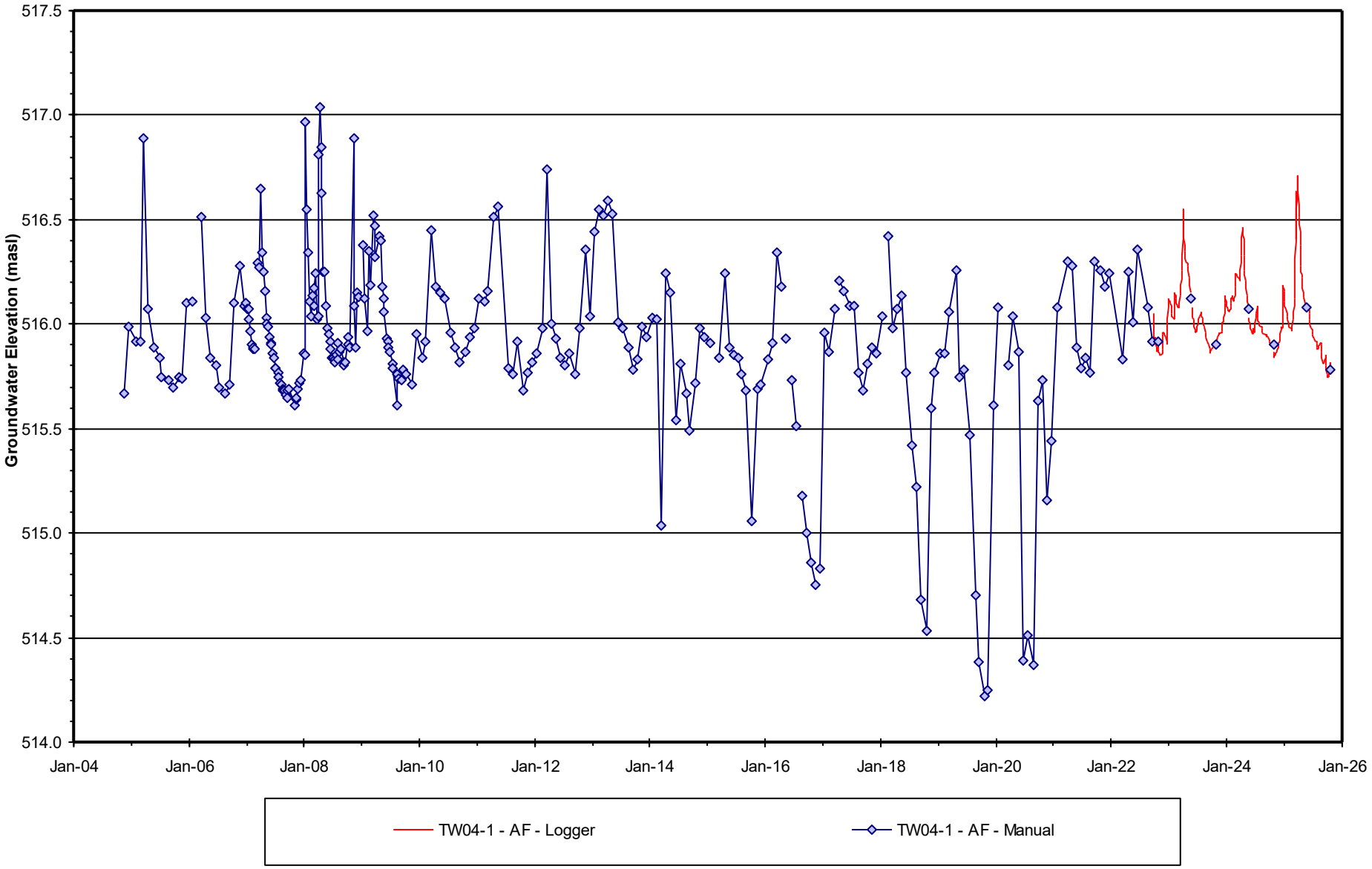


**Figure B-16 Groundwater Hydrograph**

**TW04-2**

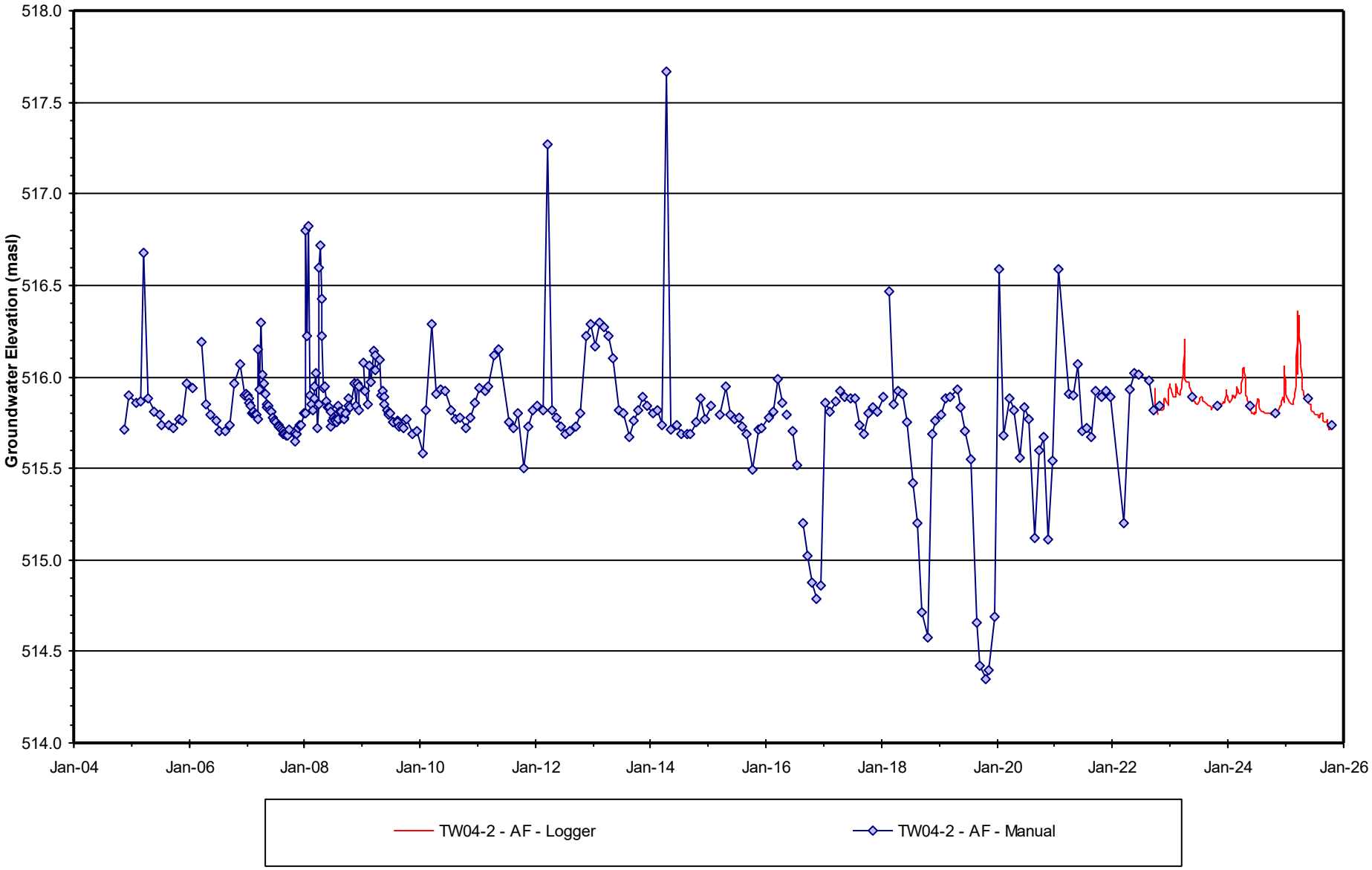


**Figure B-17 Groundwater Hydrograph**

**TW04-3**

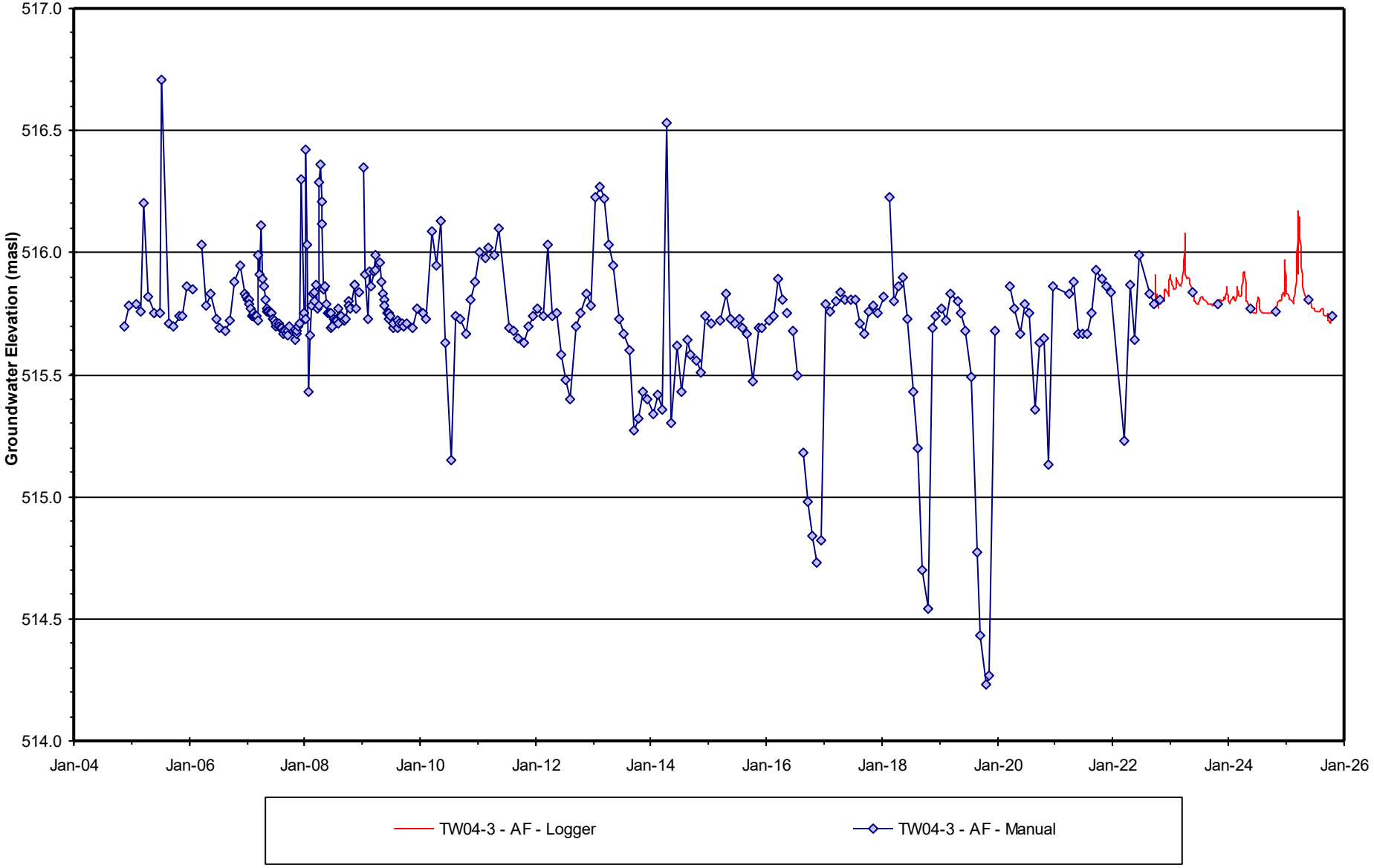


**Figure B-18 Groundwater Hydrograph**

**BH08-1**

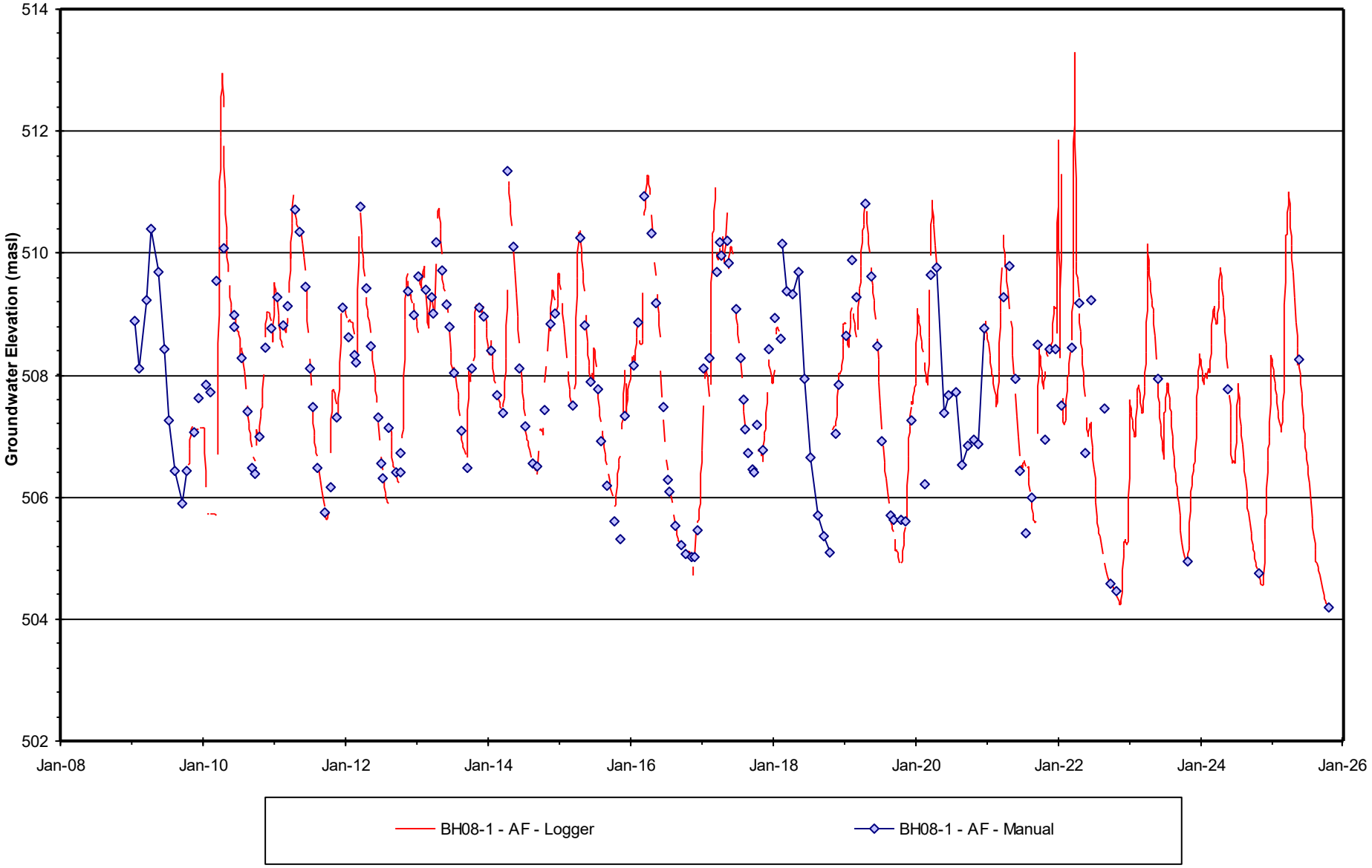


**Figure B-19 Groundwater Hydrograph**

**BH08-2**

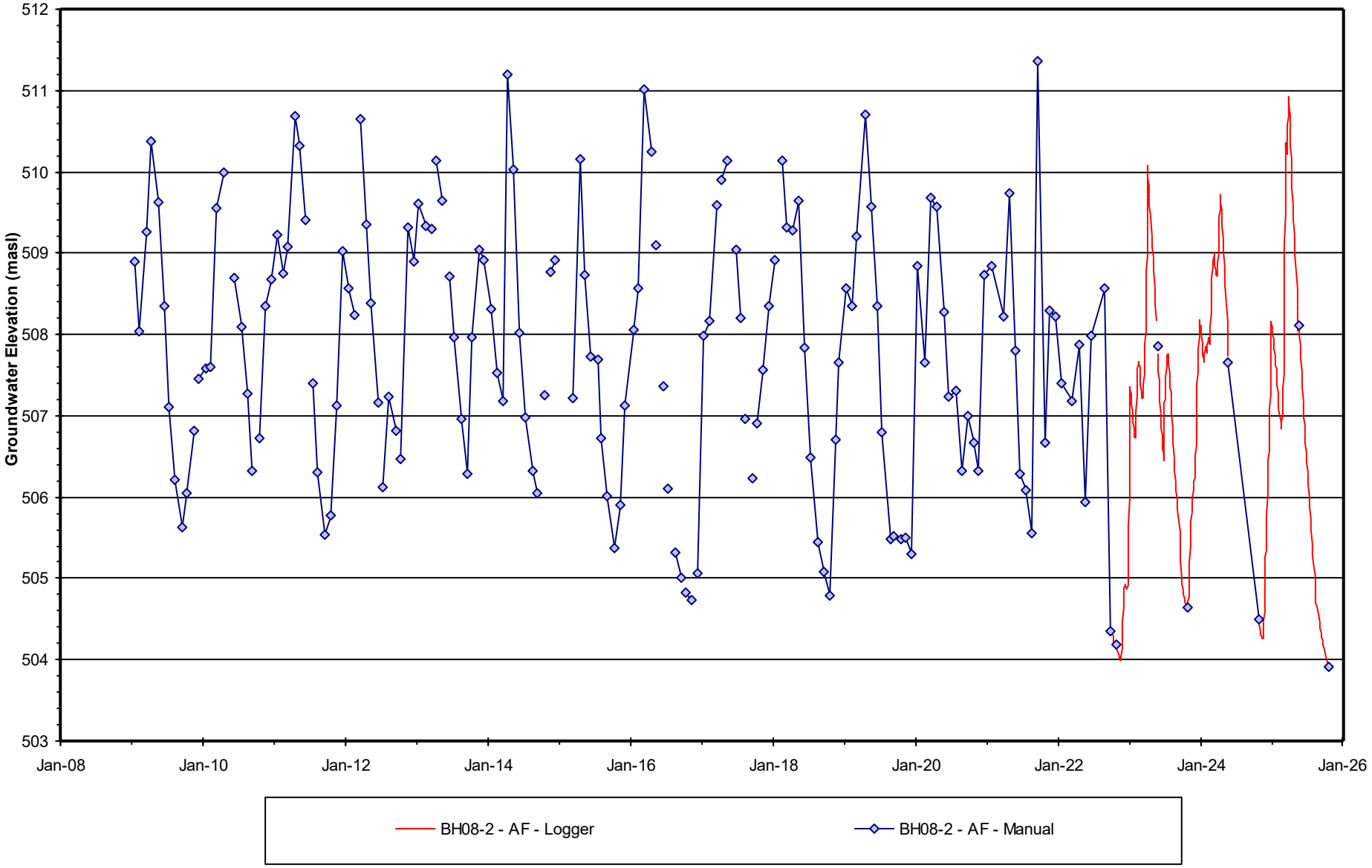


**Figure B-20 Groundwater Hydrograph**

**BH08-3**

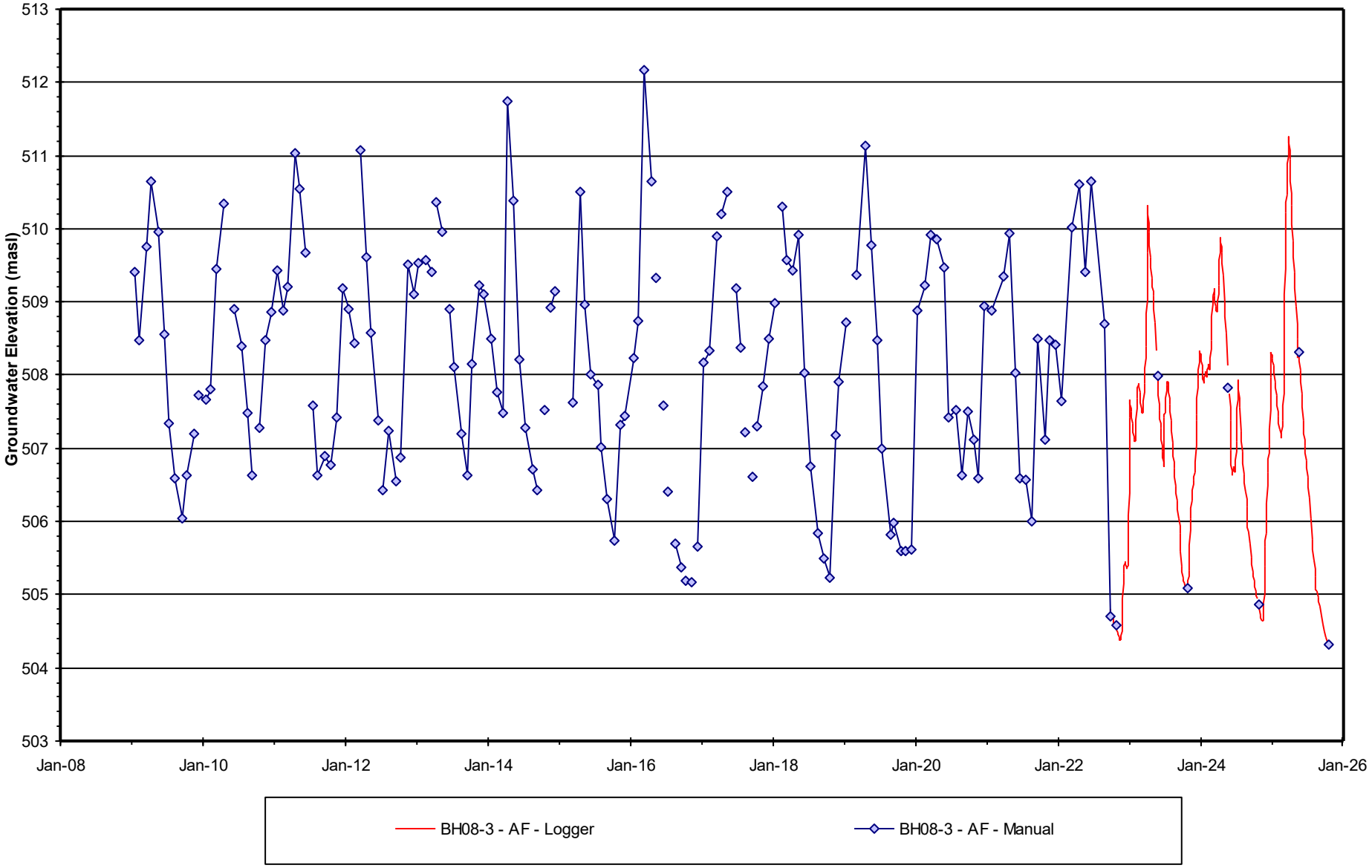


**Figure B-21 Groundwater Hydrograph**

**NW1**

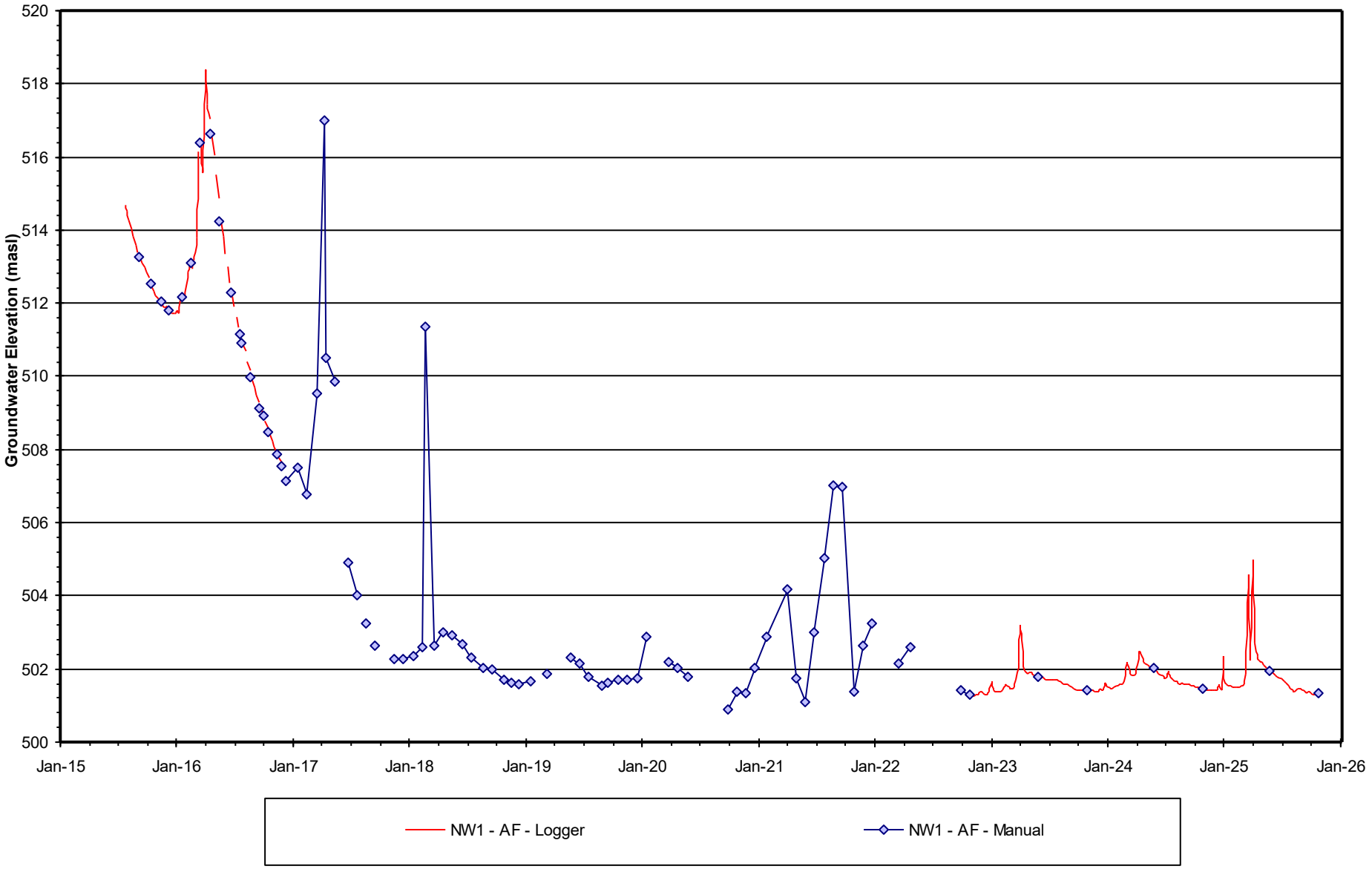


**Figure B-22 Groundwater Hydrograph**

**NW2**

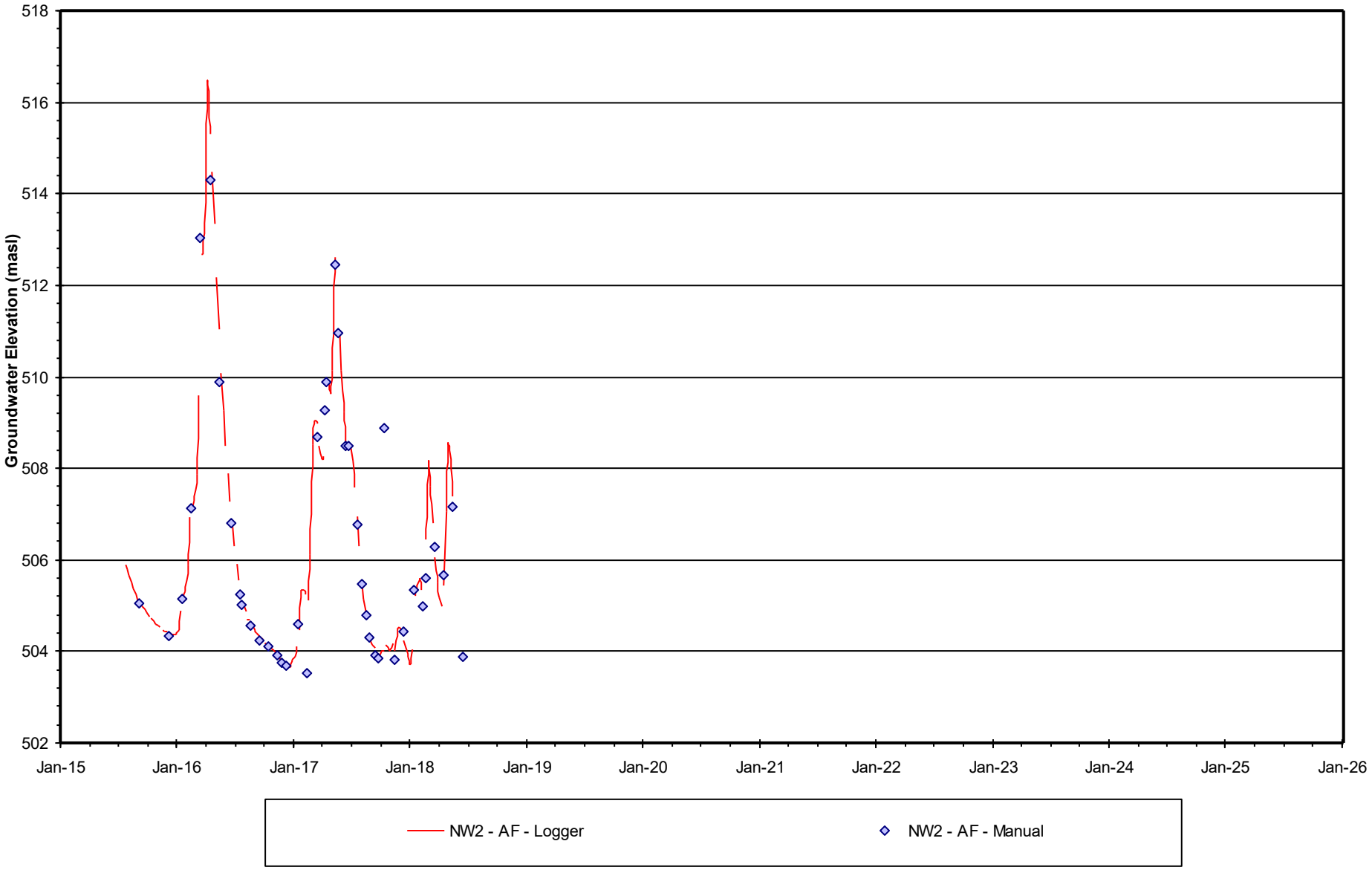


**Figure B-23 Groundwater Hydrograph**

**NW3**

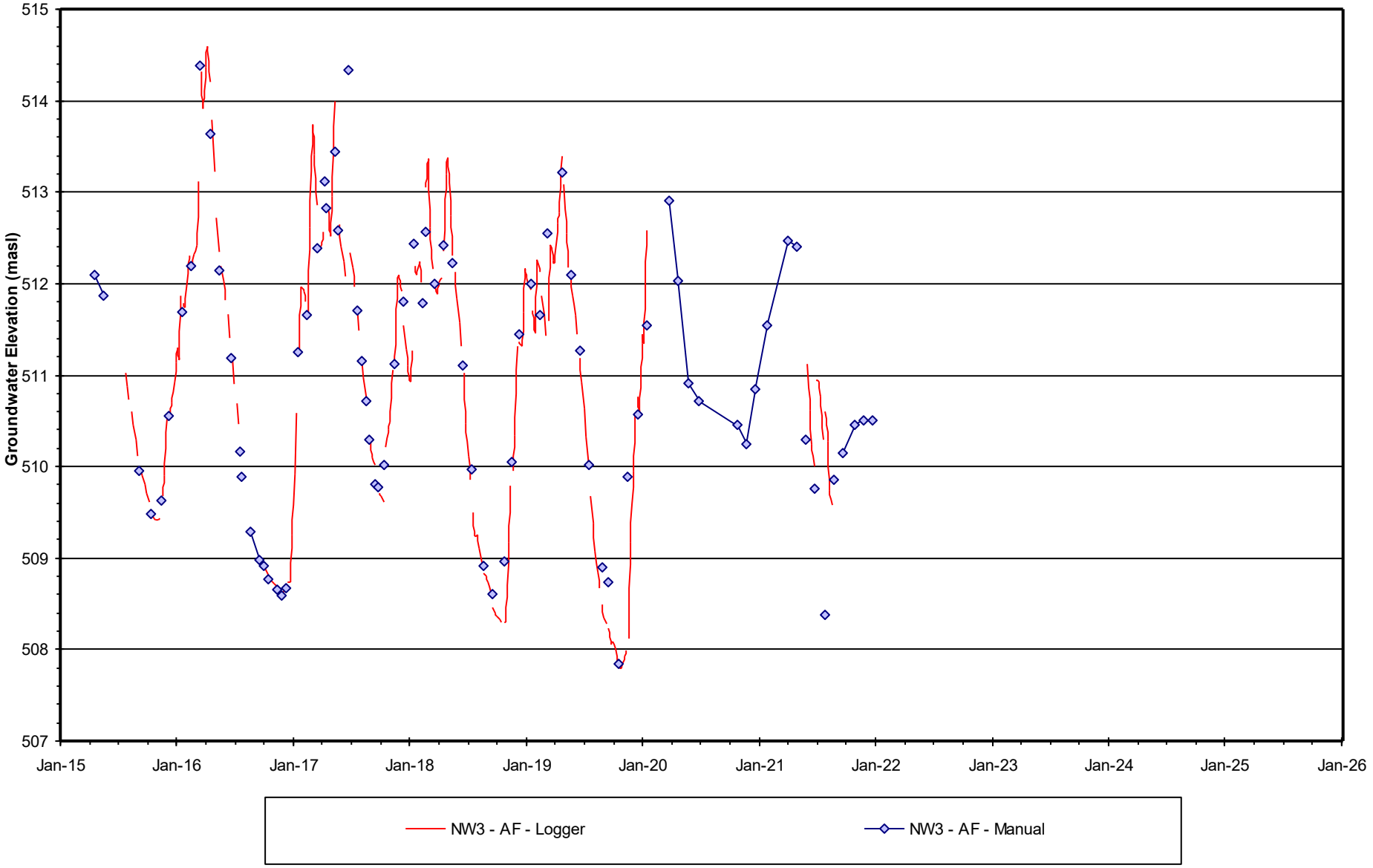


**Figure B-24 Groundwater Hydrograph**

**NW4**

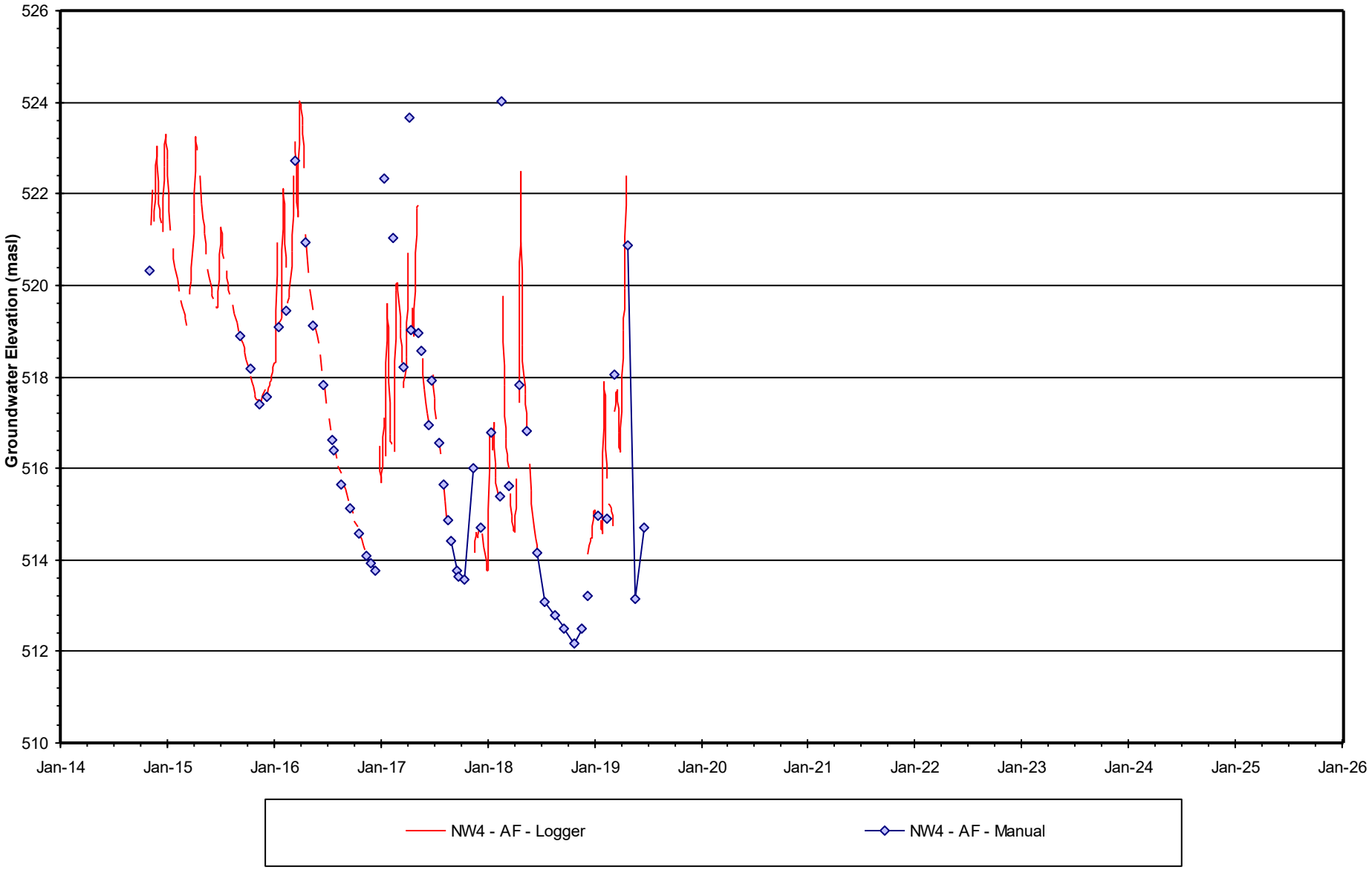


**Figure B-25 Groundwater Hydrograph**

**NW5**

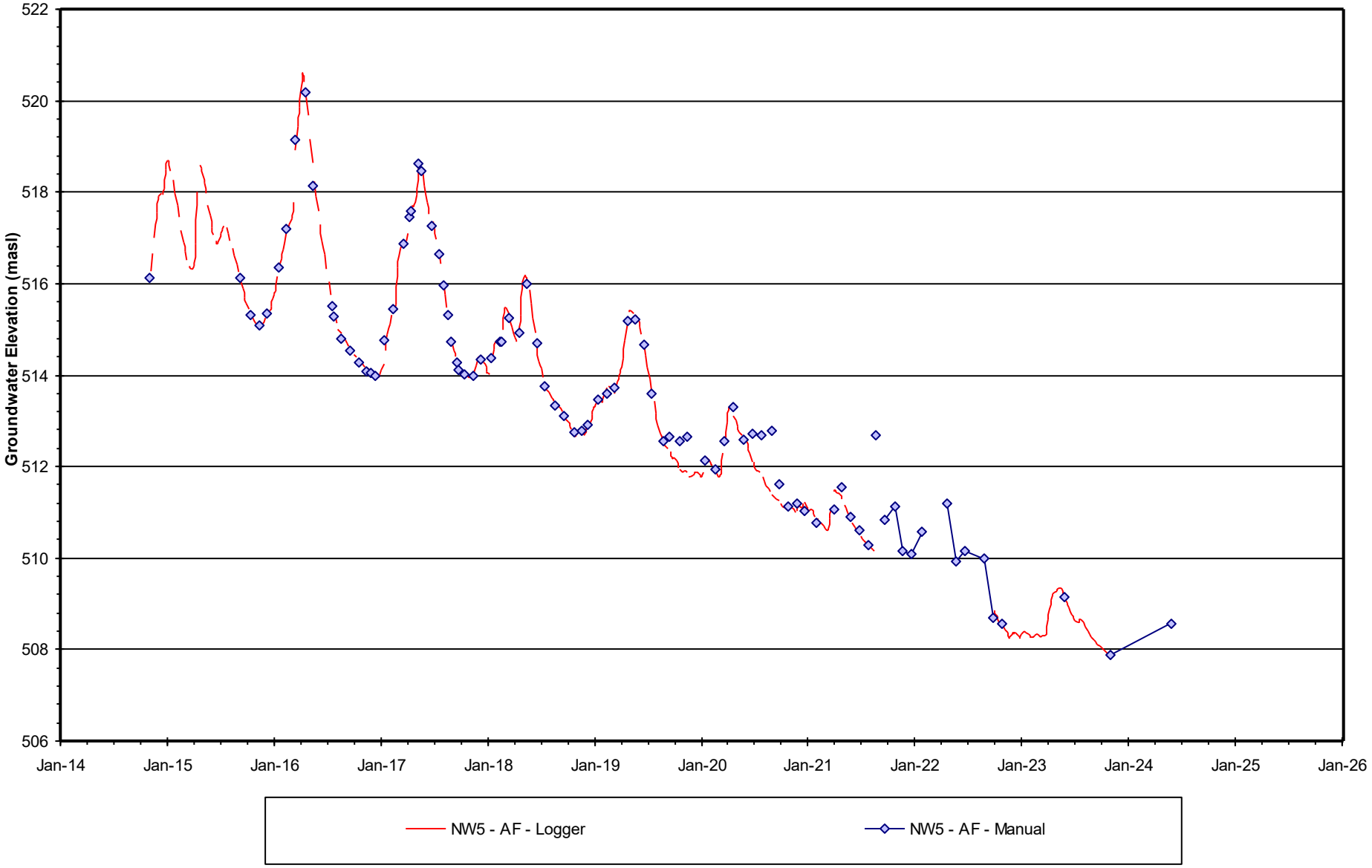


**Figure B-26 Groundwater Hydrograph**

**NW6**

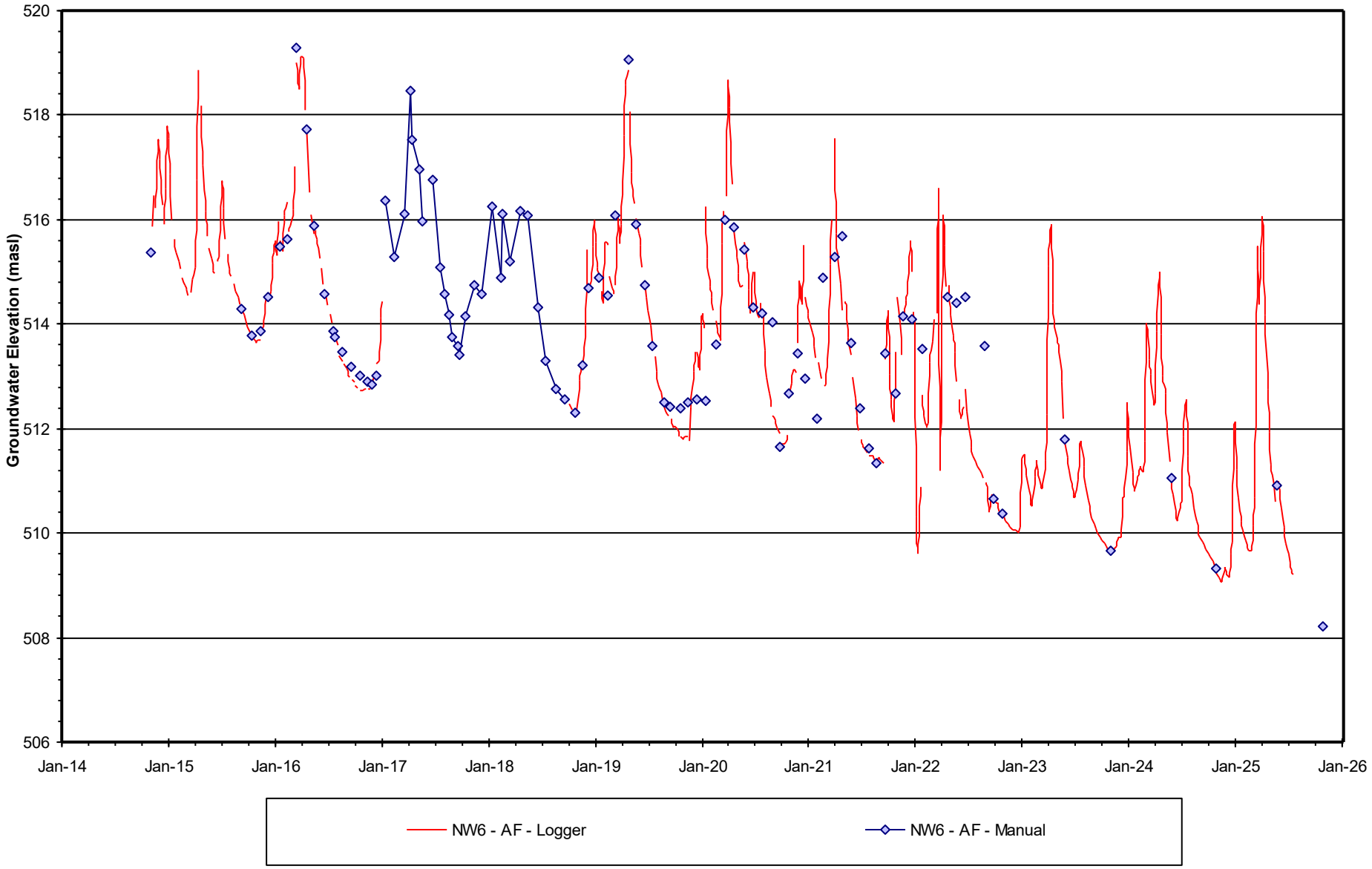


**Figure B-27 Groundwater Hydrograph**

**NW7**

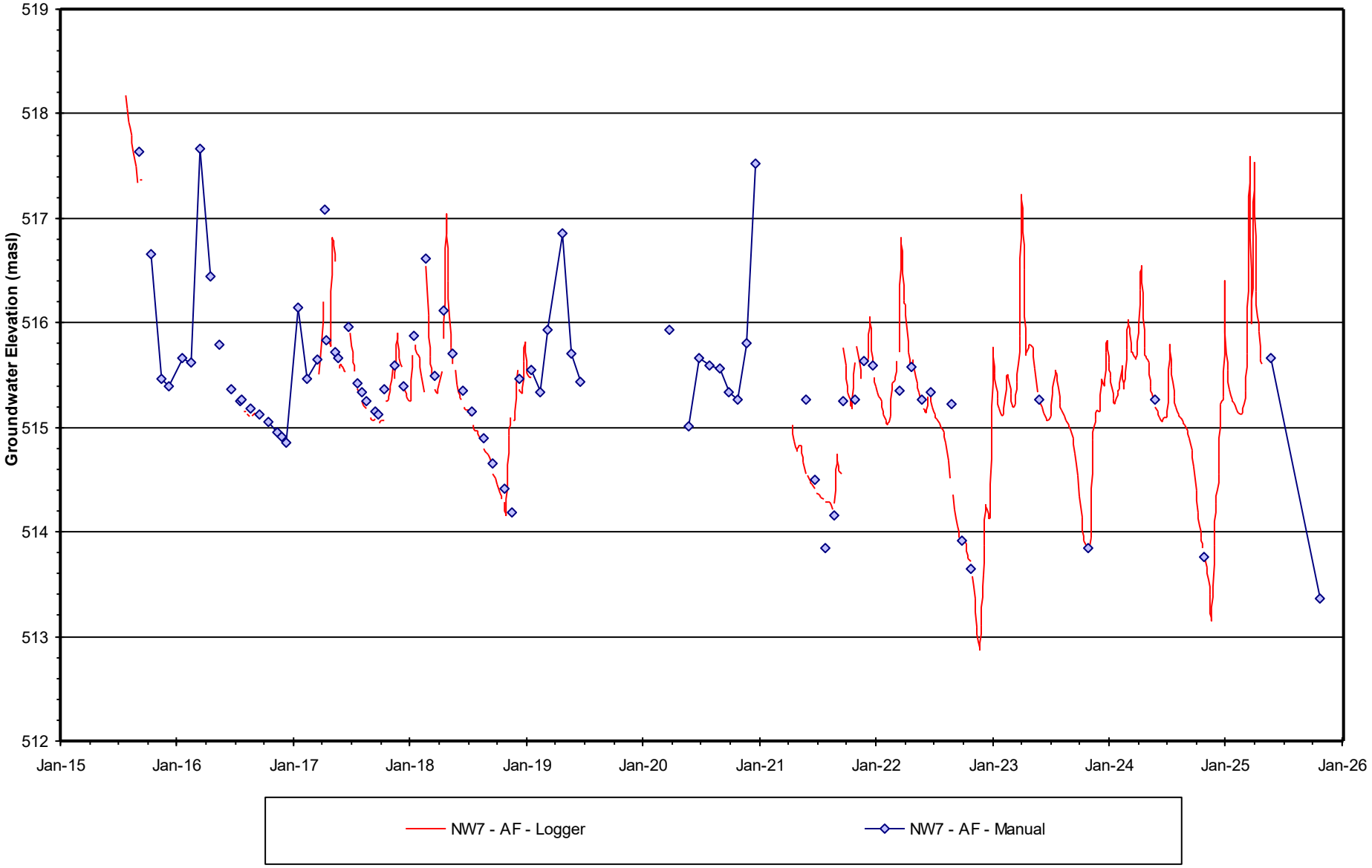


**Figure B-28 Groundwater Hydrograph**

**NW8**

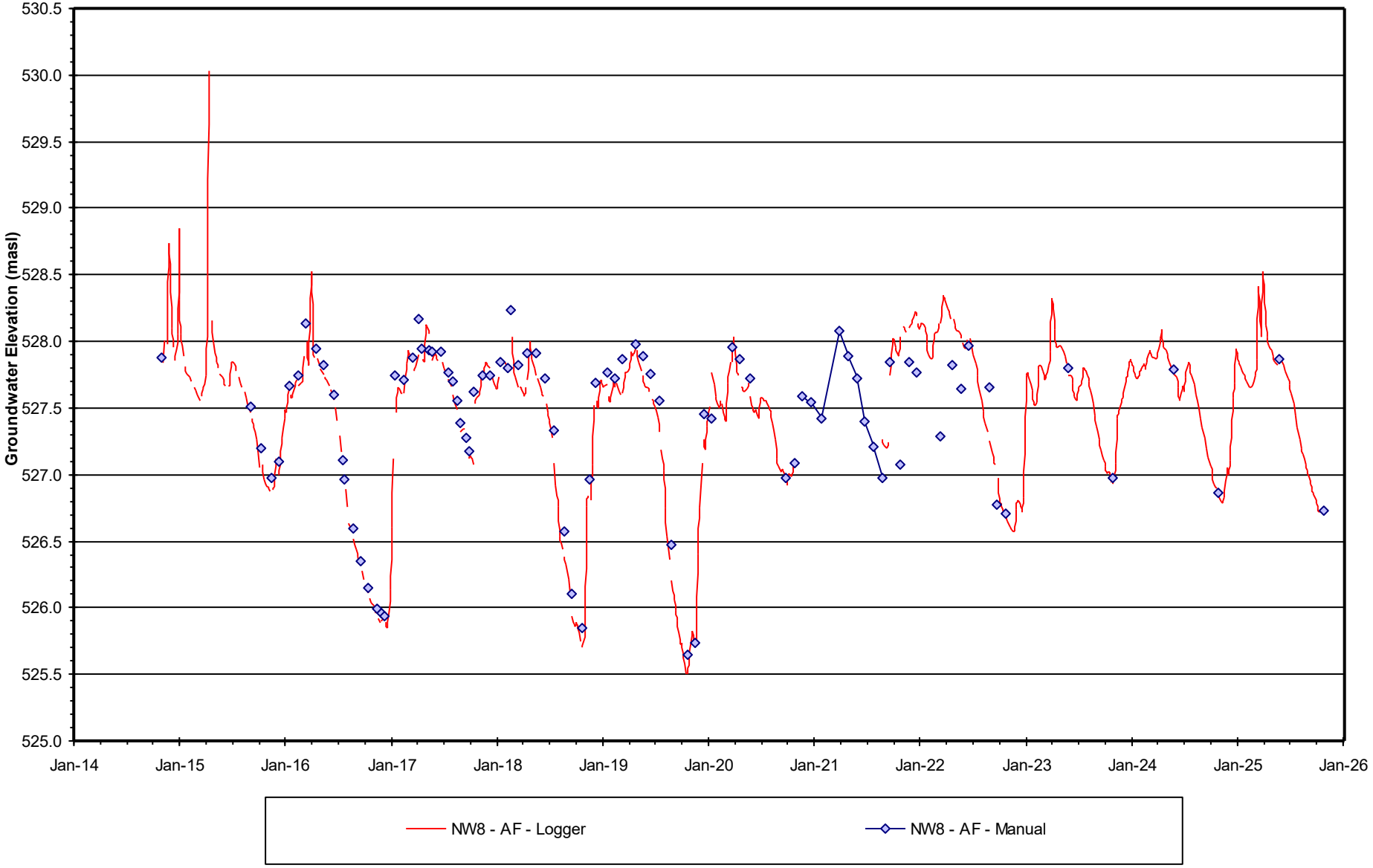


**Figure B-29 Groundwater Hydrograph**

**NW9**

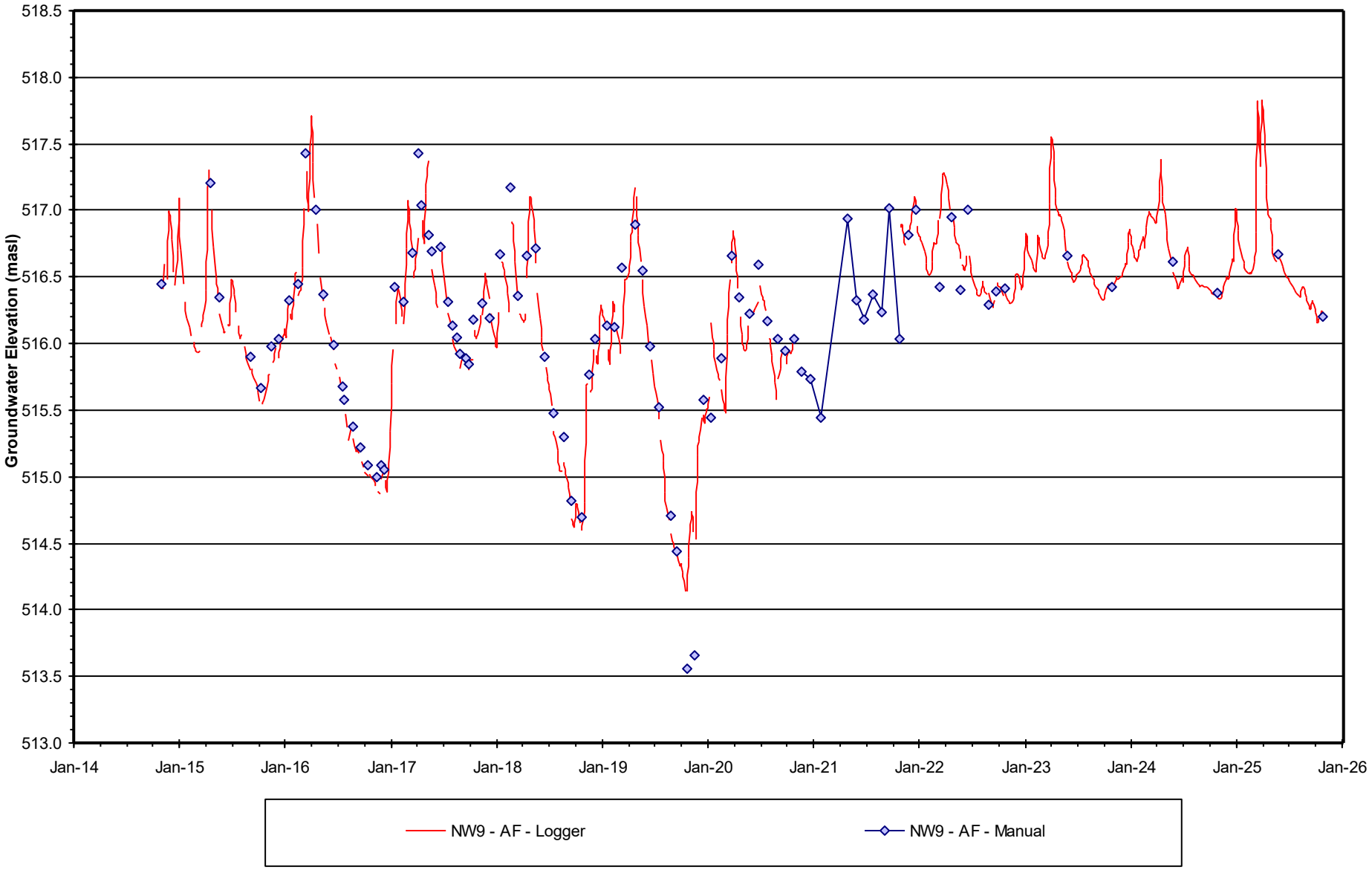


**Figure B-30a Groundwater Hydrograph**

**Nest NW10 - Overburden**

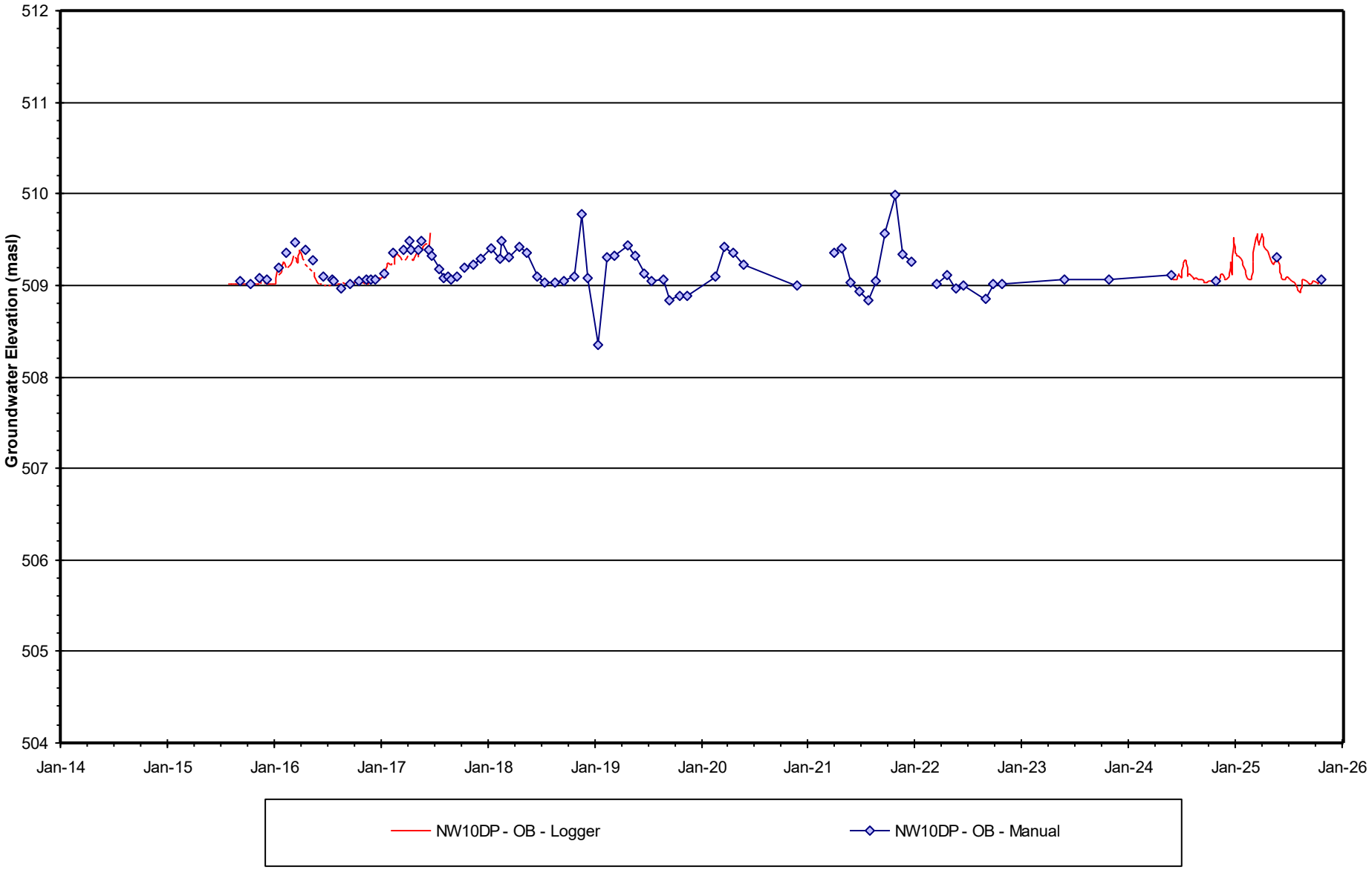


**Figure B-30b Groundwater Hydrograph**

**Nest NW10 - Shallow Amabel Bedrock**

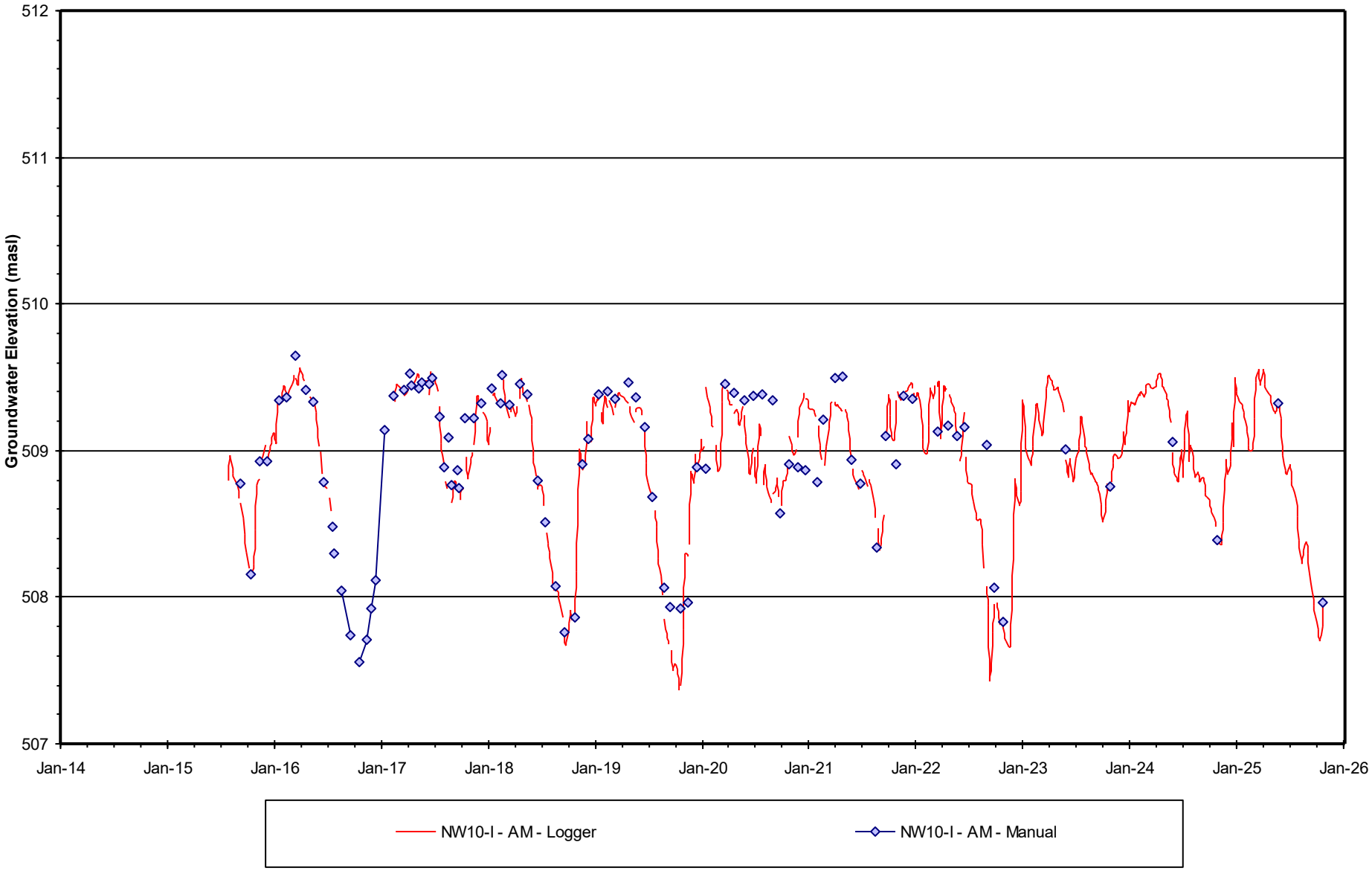


**Figure B-30c Groundwater Hydrograph**

**Nest NW10 - Deep Amabel / Fossil Hill Bedrock**

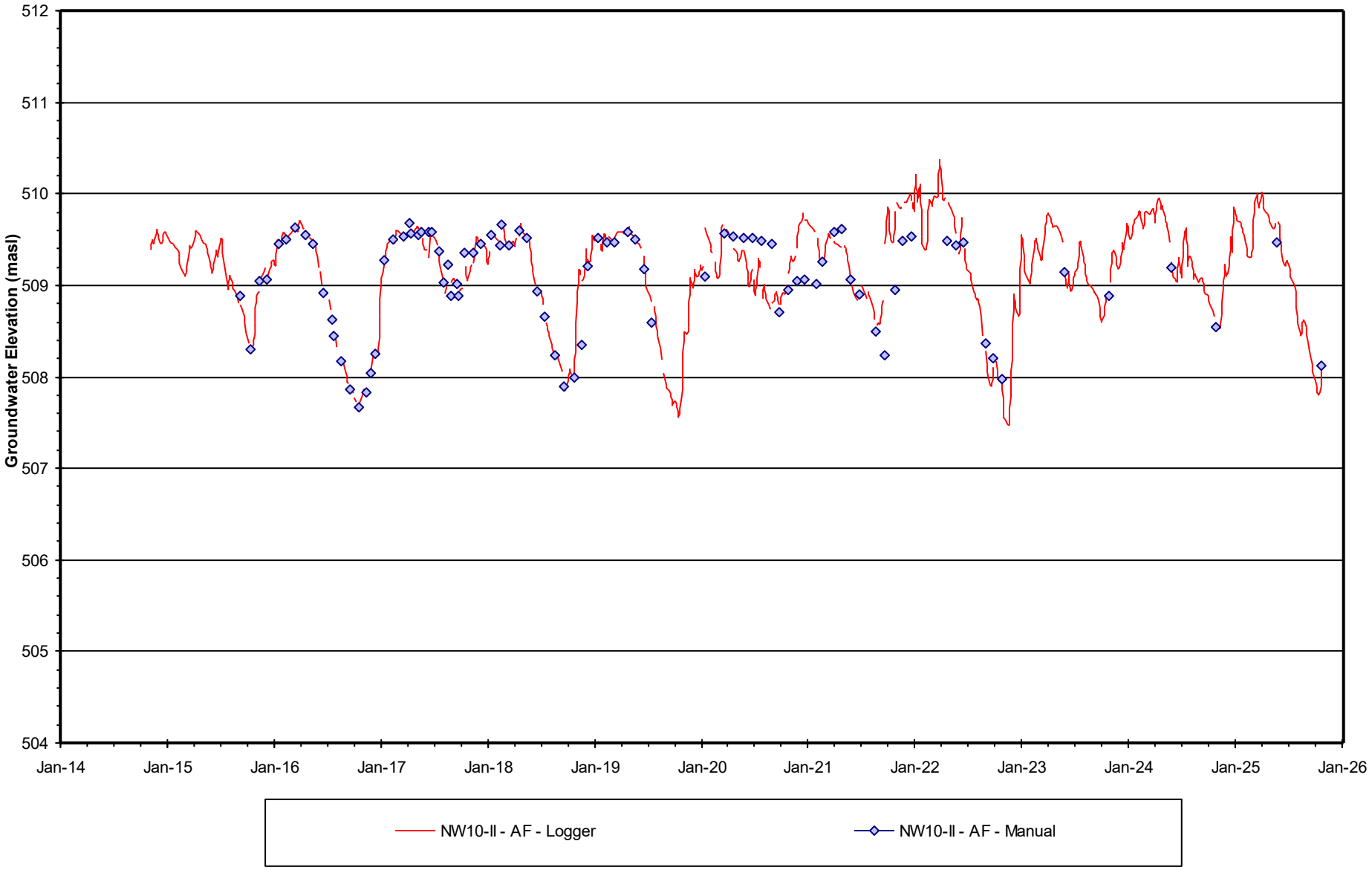


**Figure B-31 Groundwater Hydrograph**

**Nest IW1**

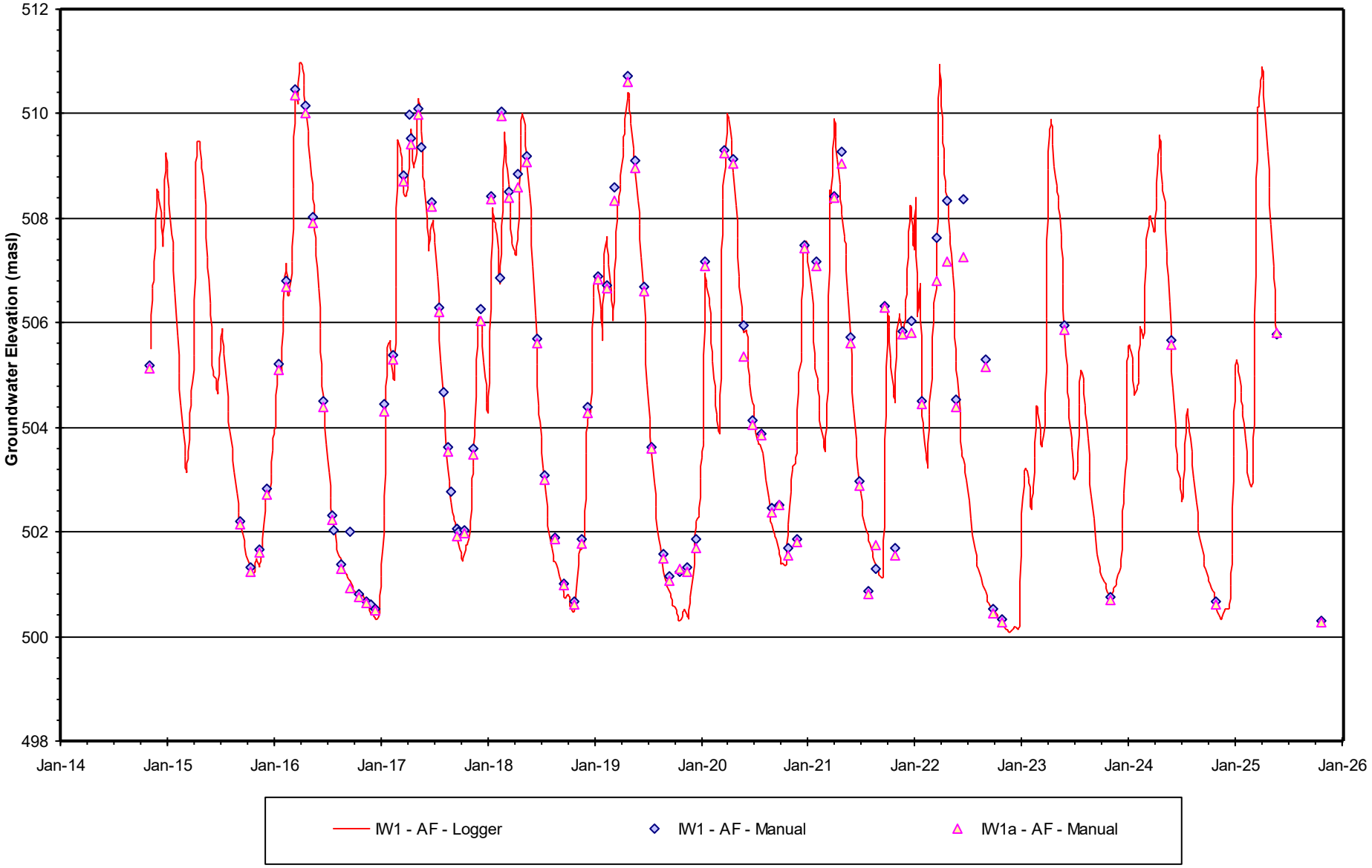


**Figure B-32 Groundwater Hydrograph**

**IW2**

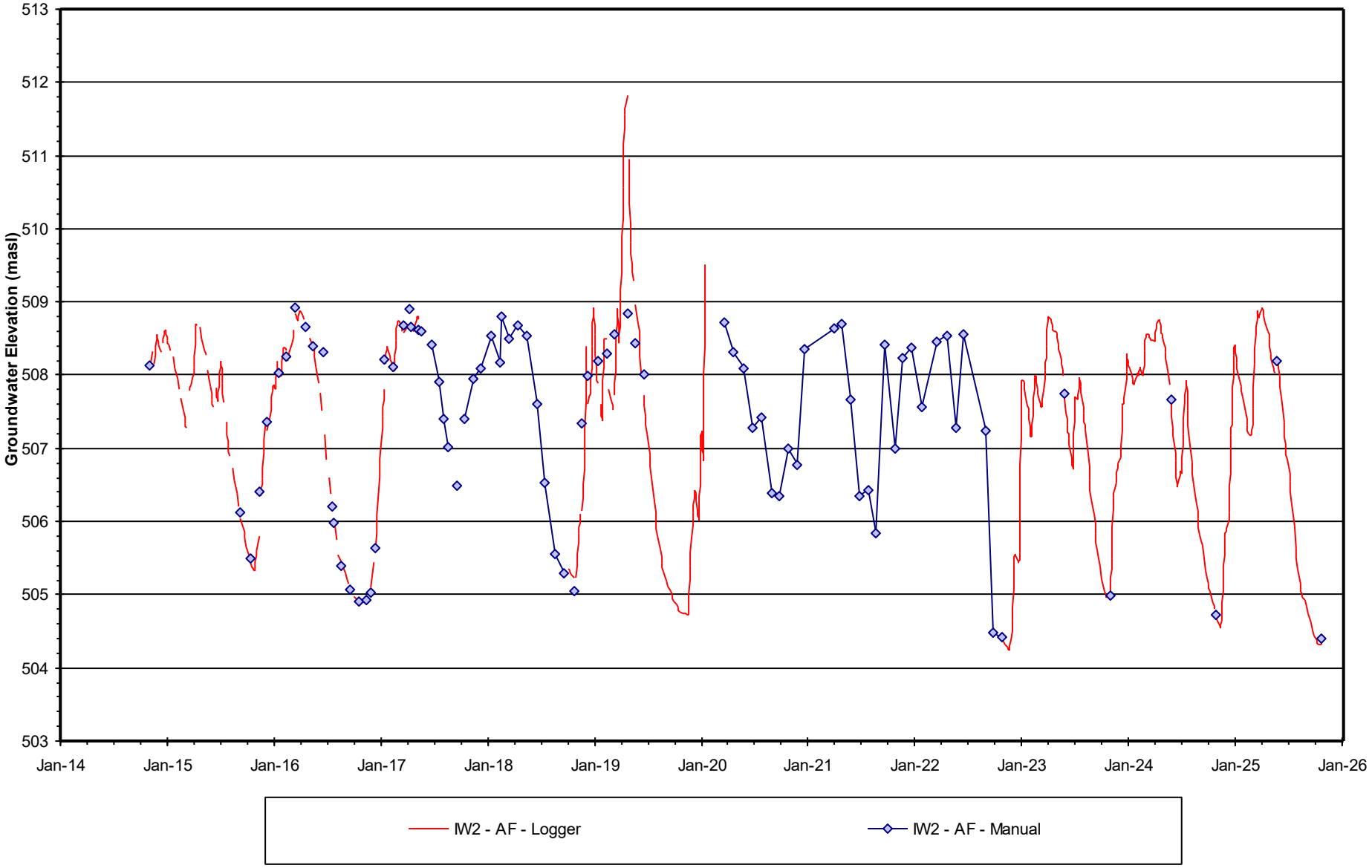


**Figure B-33 Groundwater Hydrograph**

**IW3**

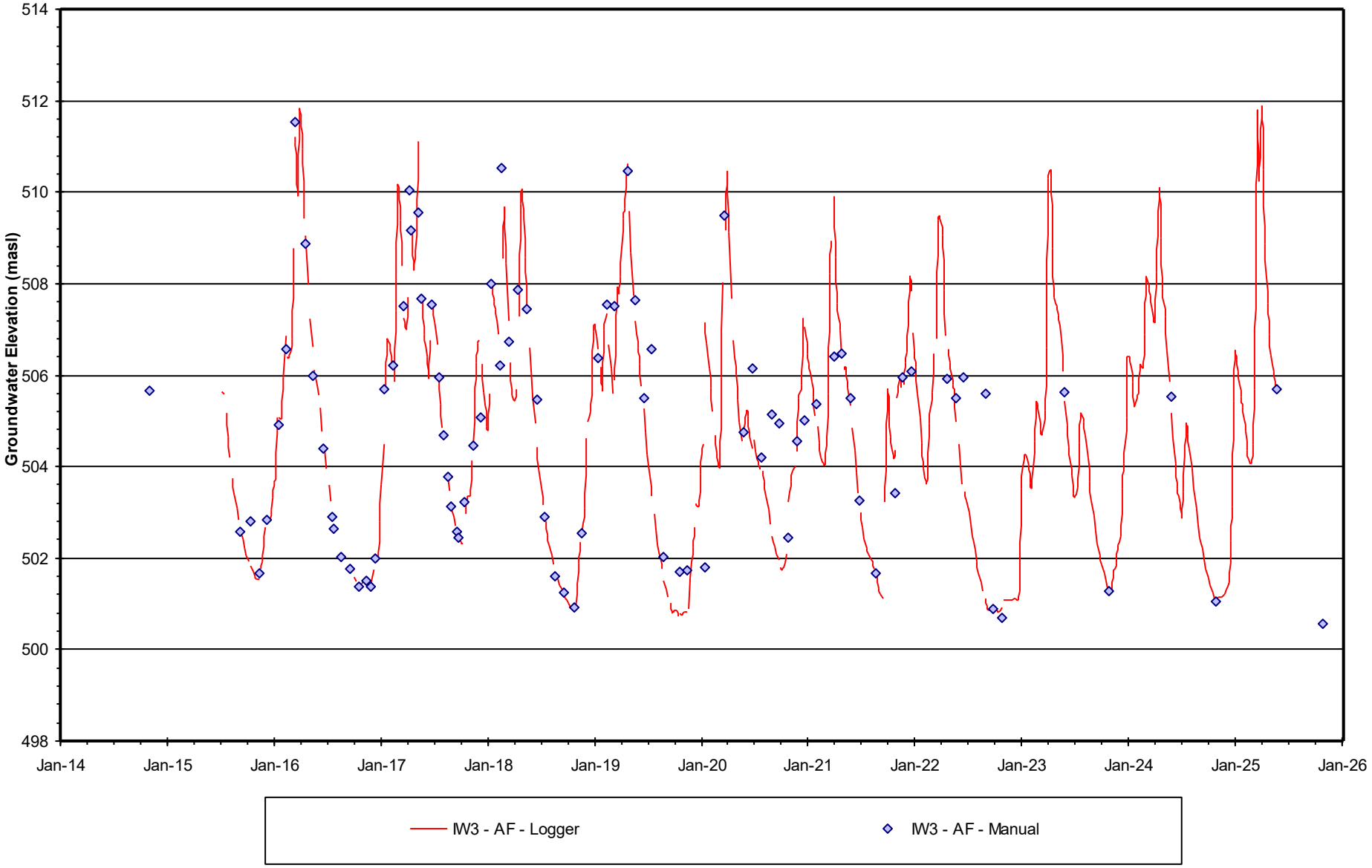


**Figure B-34 Groundwater Hydrograph**

**IW4**

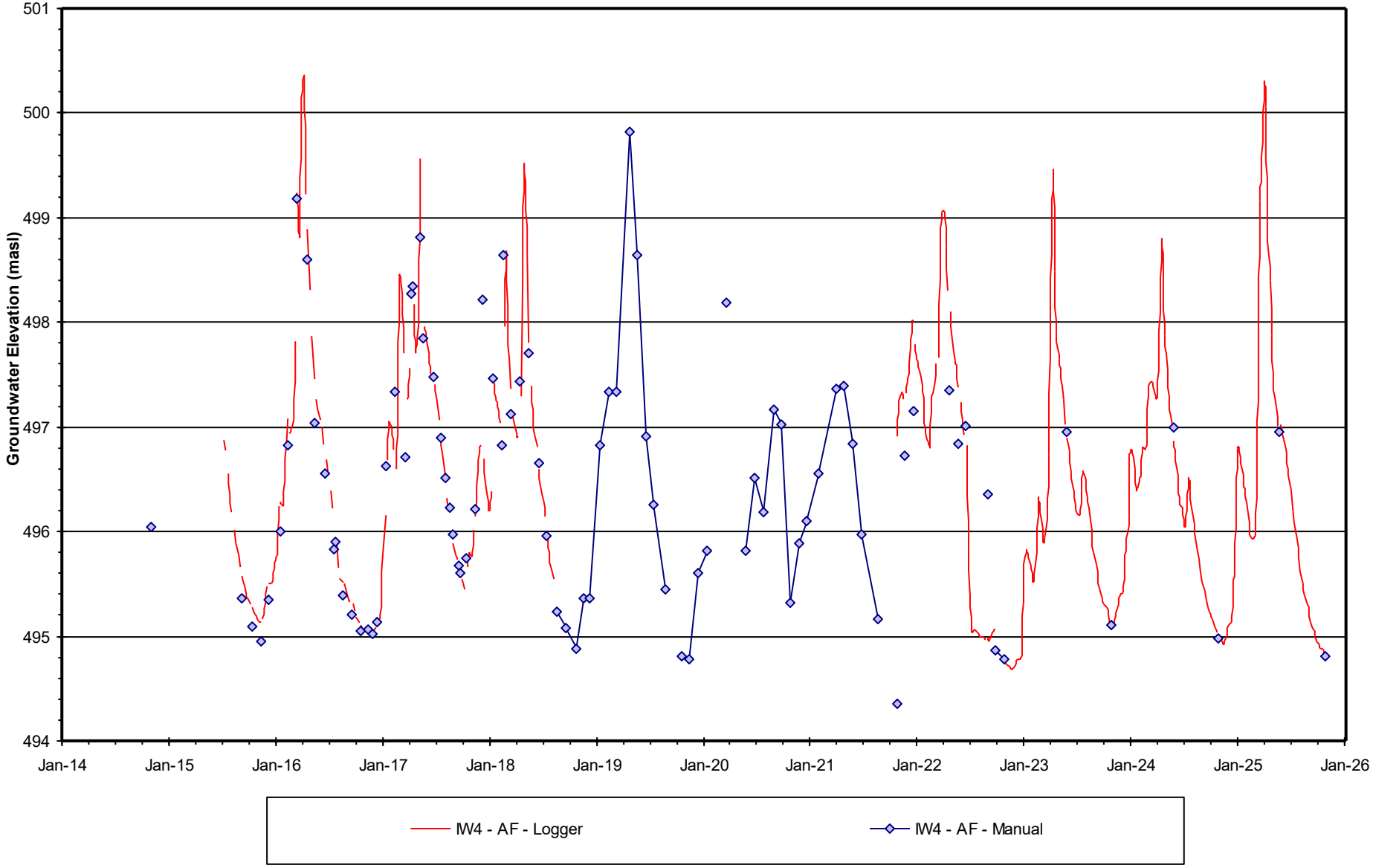


**Figure B-35 Groundwater Hydrograph**

**RW1**

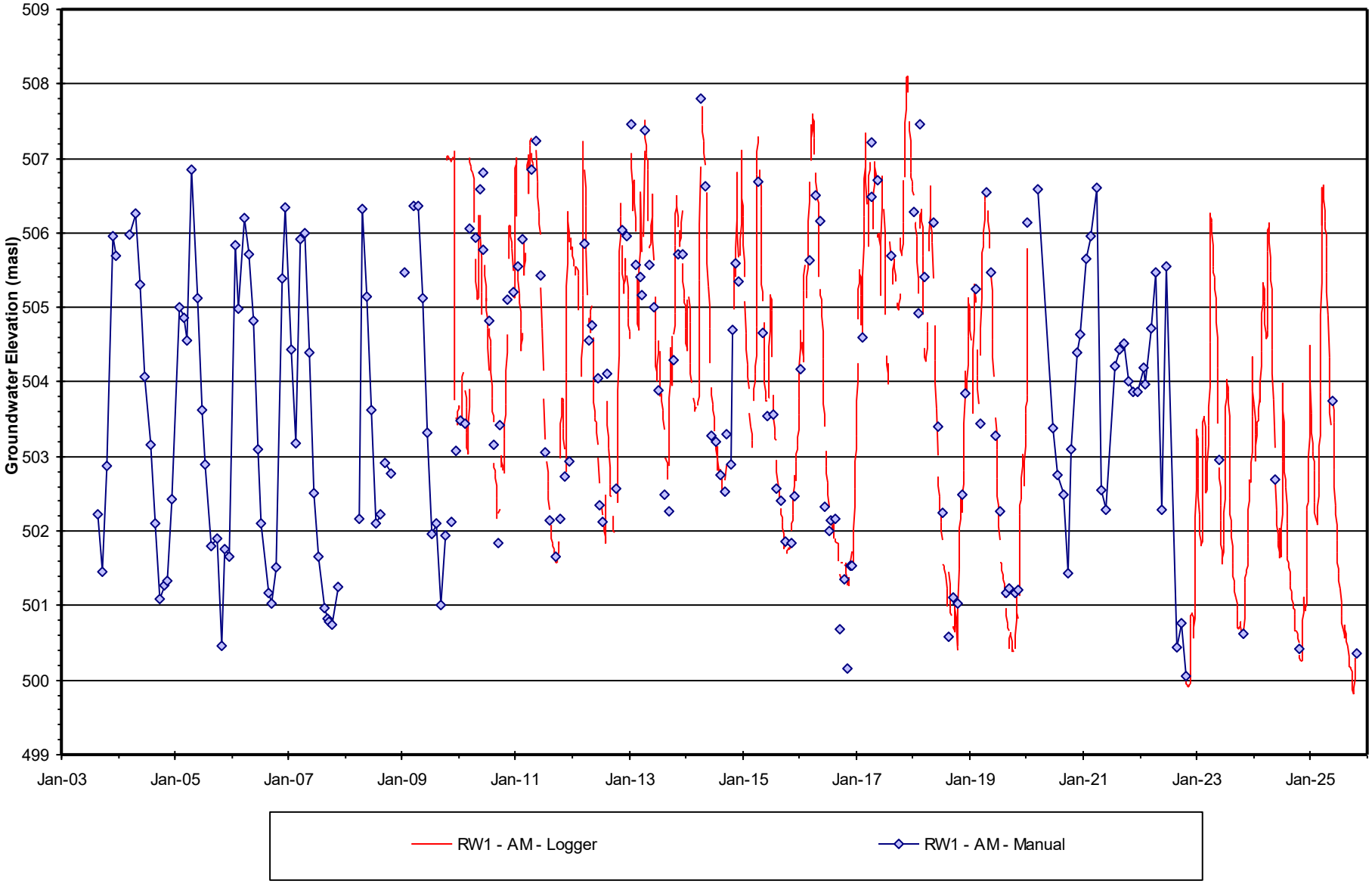


**Figure B-36 Groundwater Hydrograph**

**RW2**

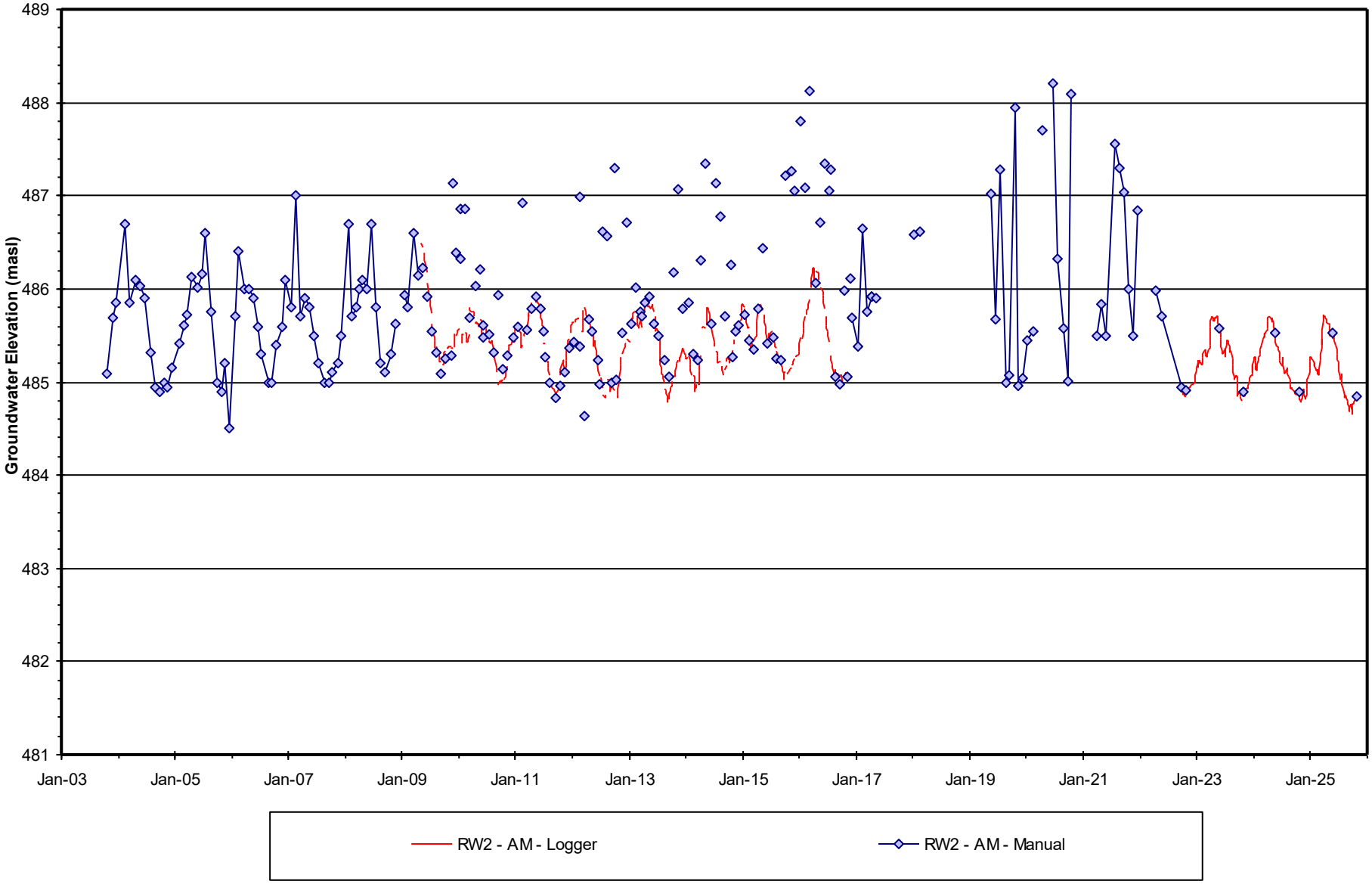


**Figure B-37 Groundwater Hydrograph**

**RW3**

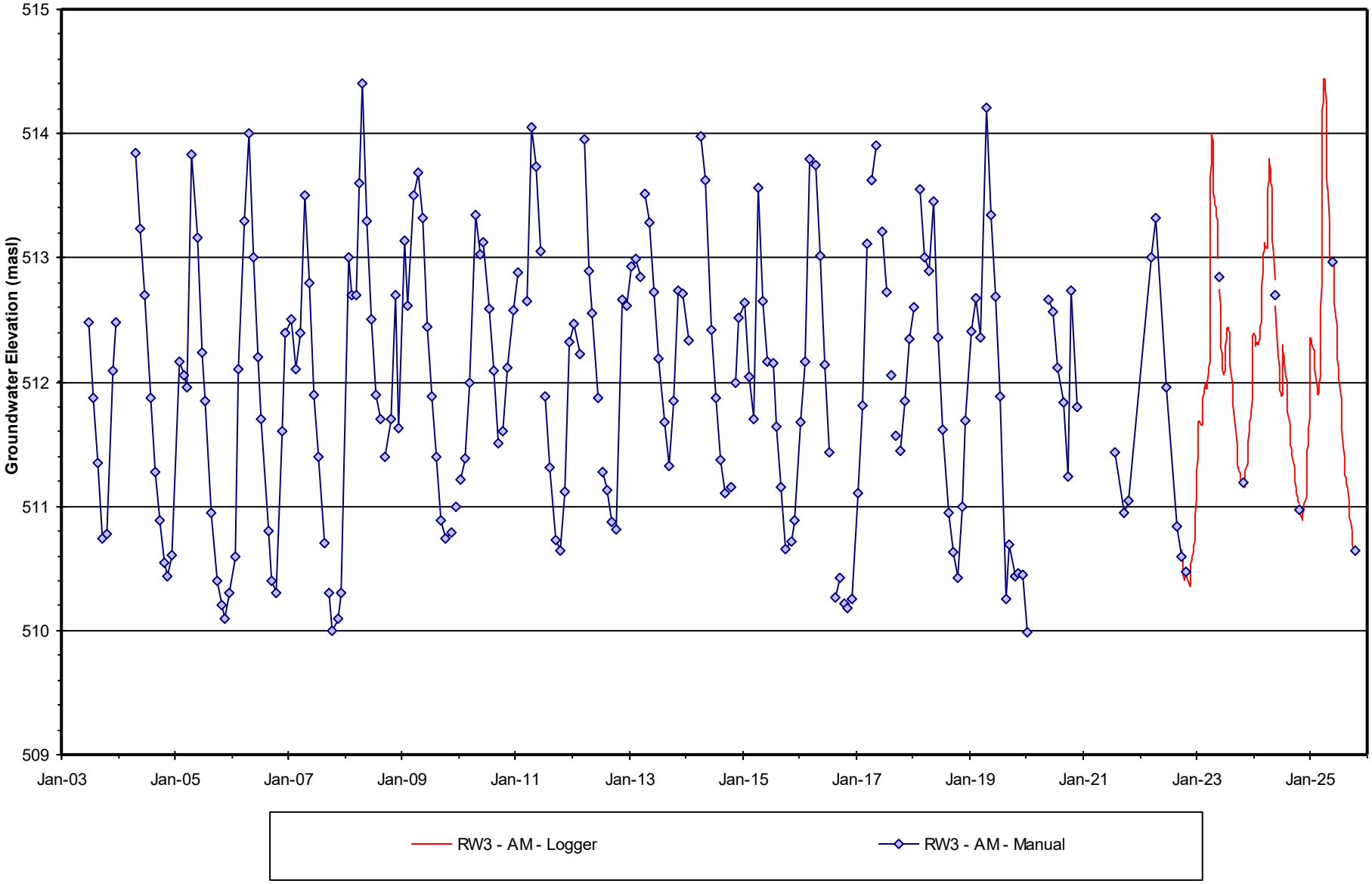


**Figure B-38 Groundwater Hydrograph**

**RW4**

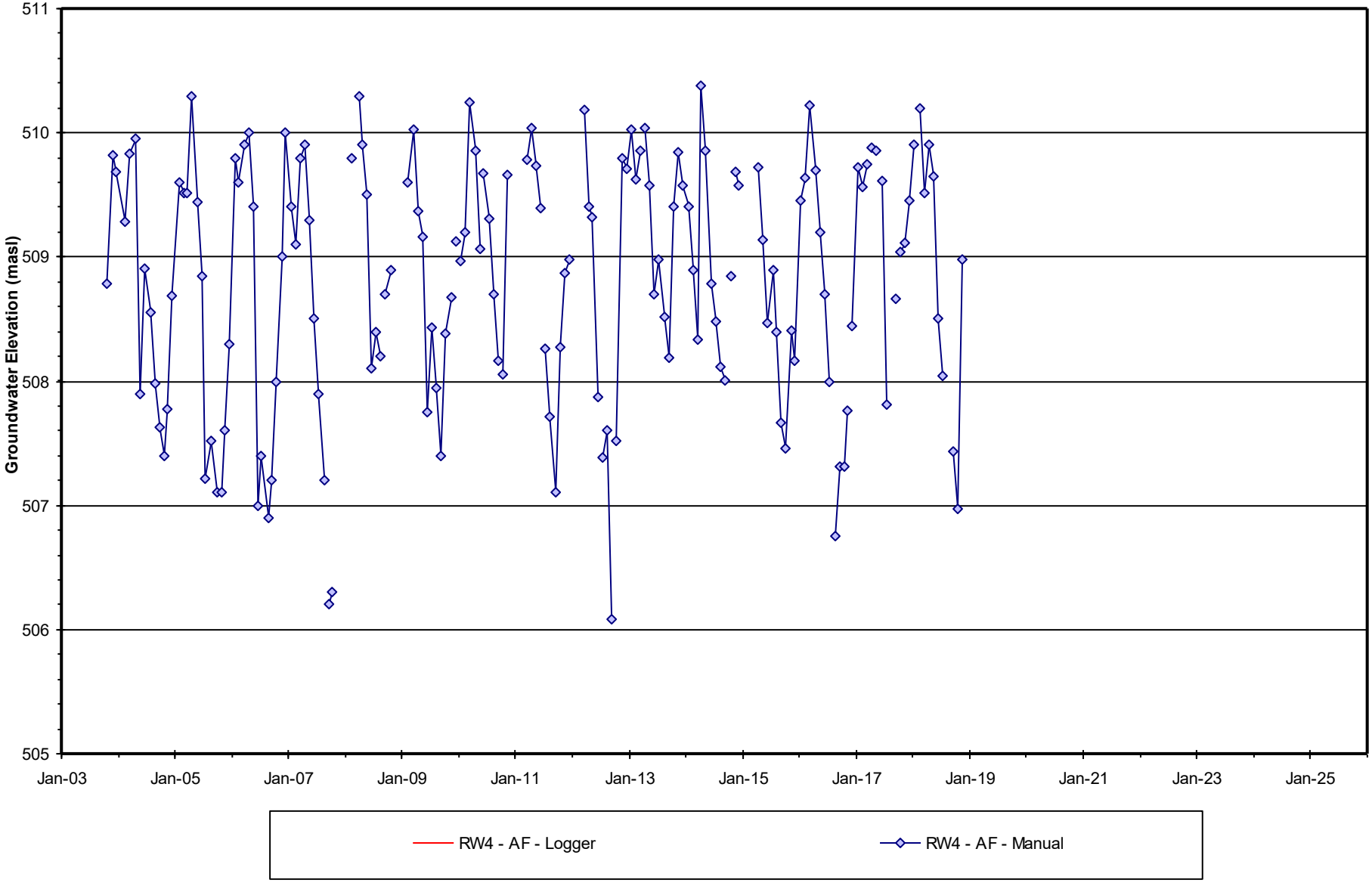


**Figure B-39 Groundwater Hydrograph**

**RW5**

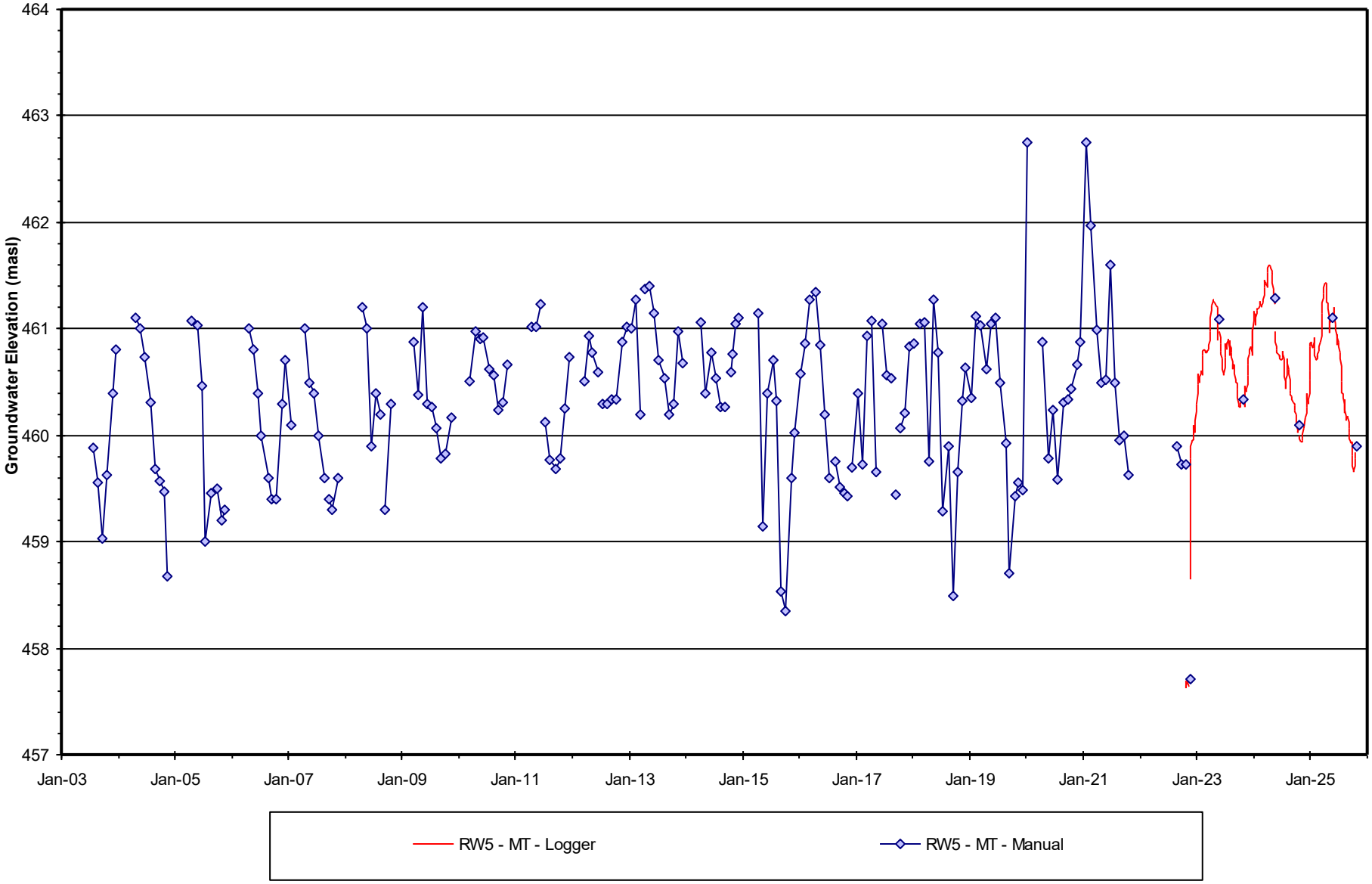


**Figure B-40 Groundwater Hydrograph**

**RW6**

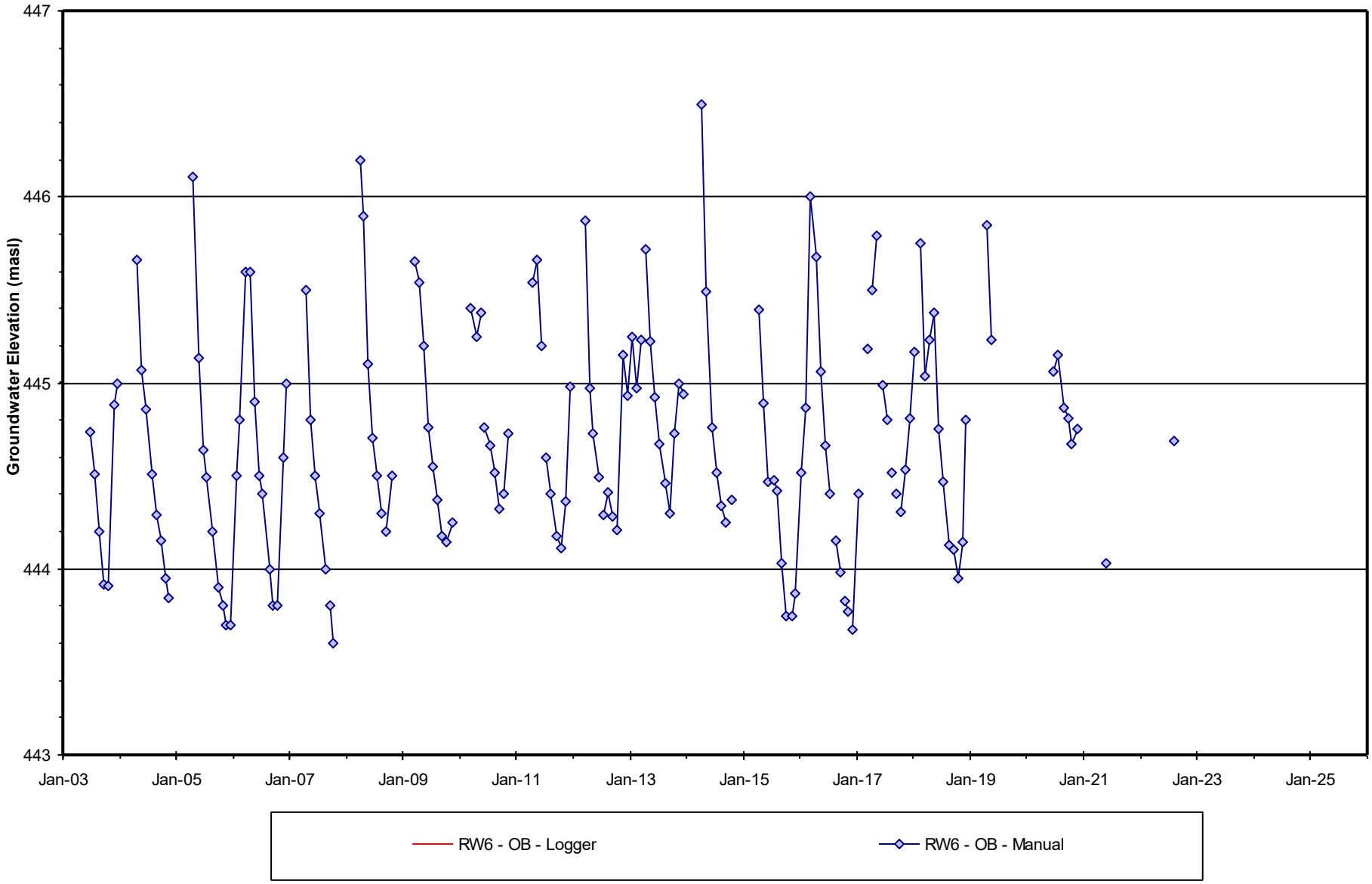


**Figure B-41 Groundwater Hydrograph**

**RW7**

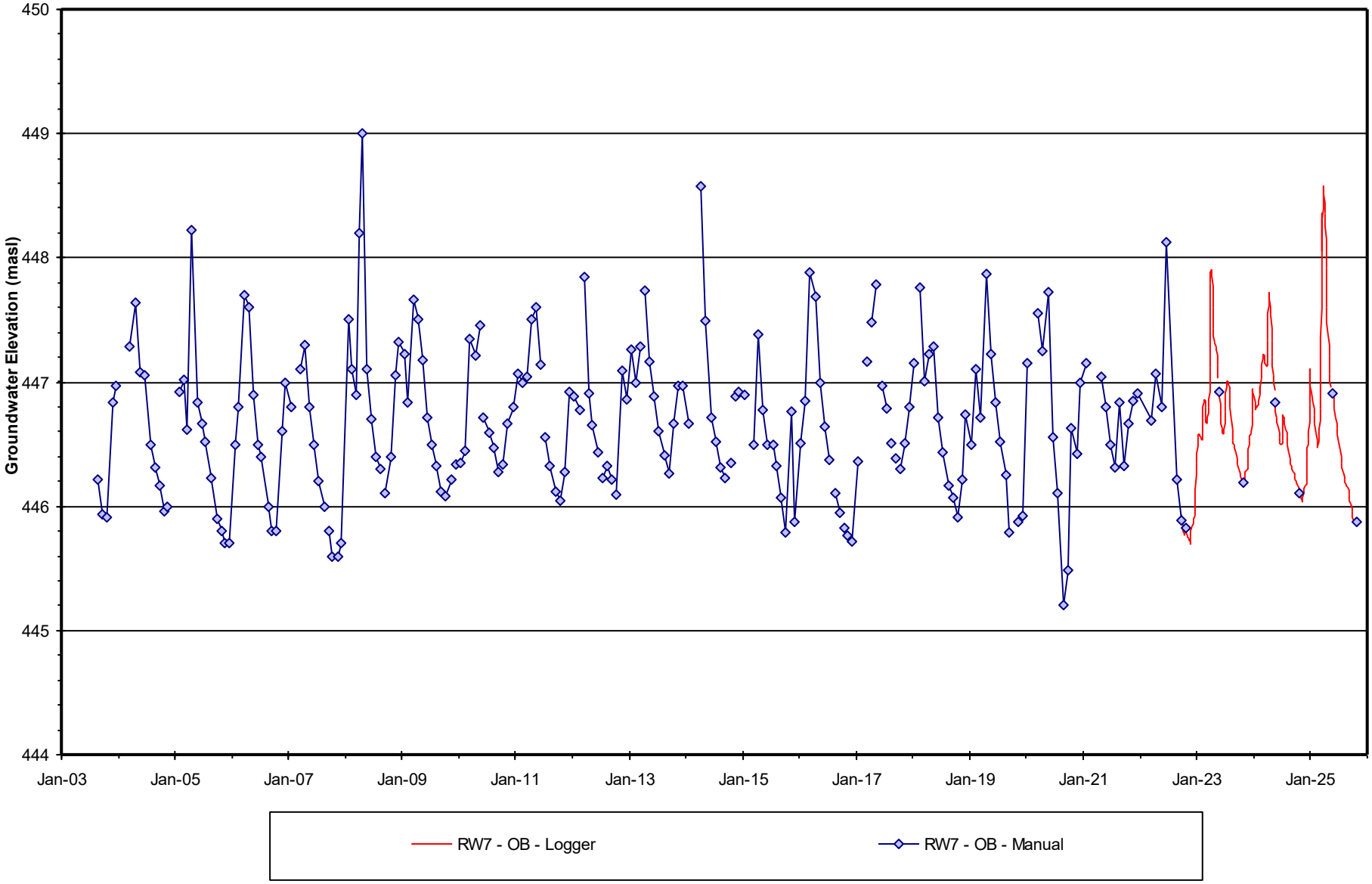
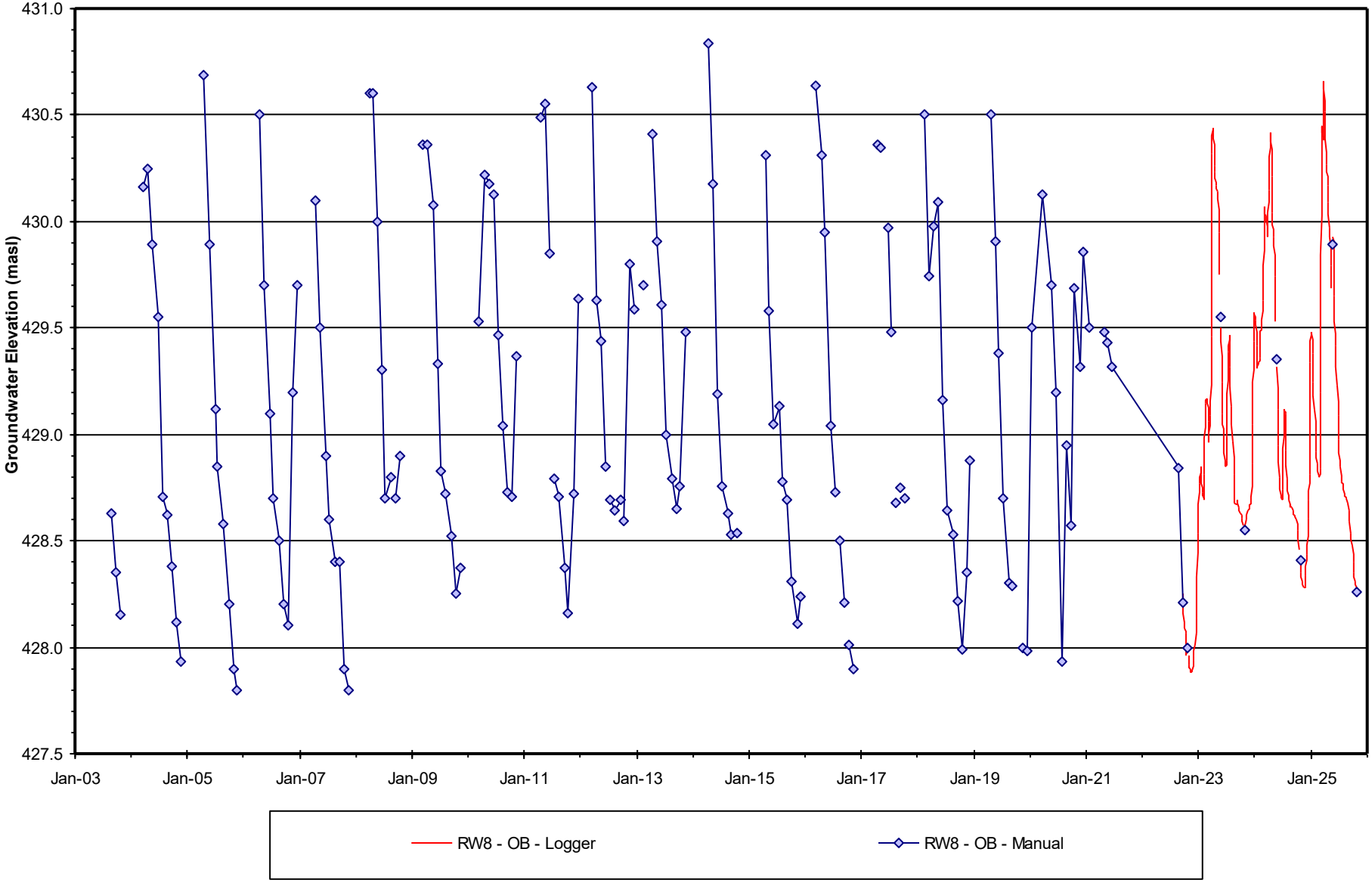


**Figure B-42 Groundwater Hydrograph**

**RW8**



## Figure B-43 Groundwater Hydrograph

**RW9**

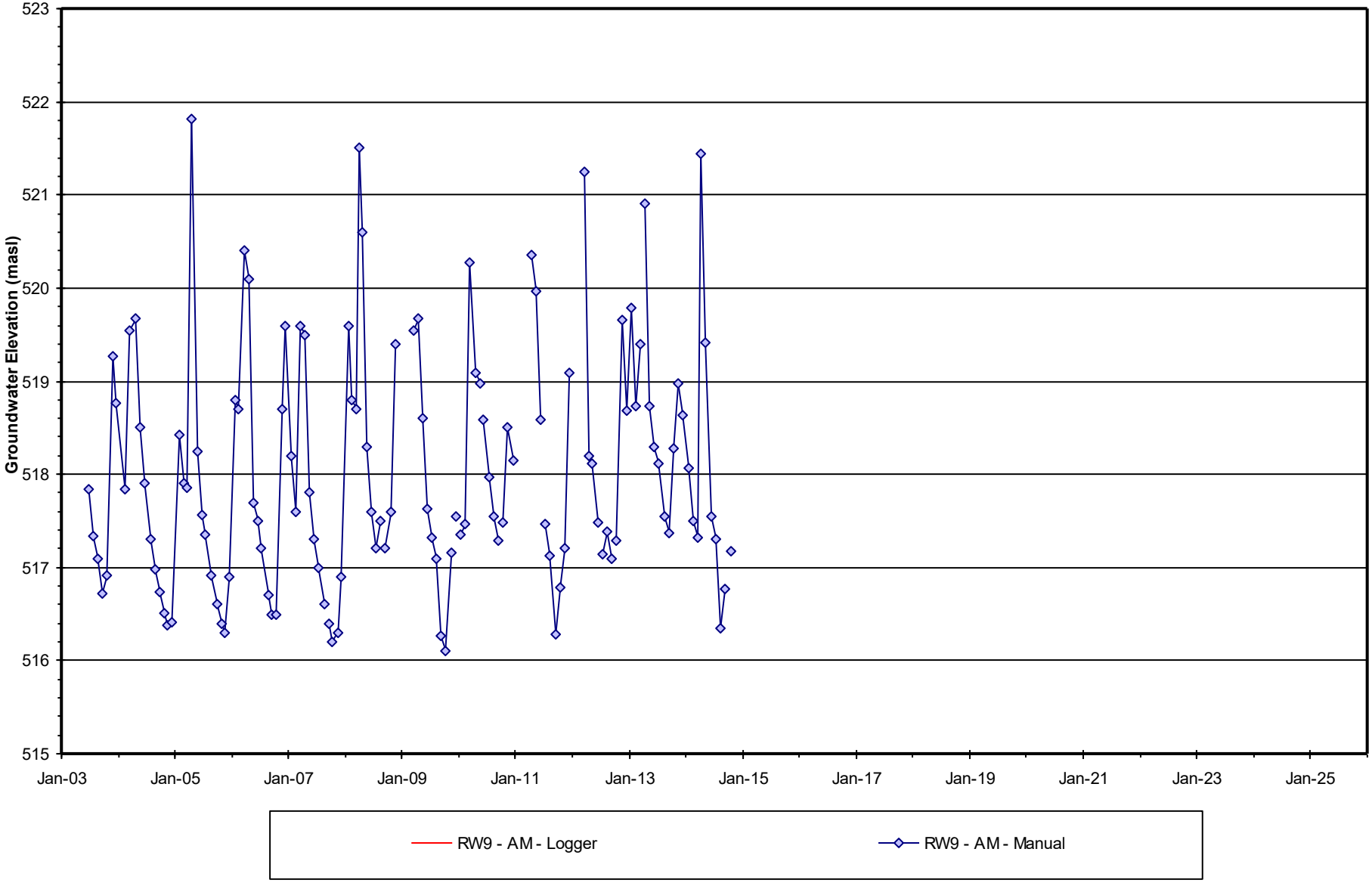


**Figure B-44 Groundwater Hydrograph**

**RW12**

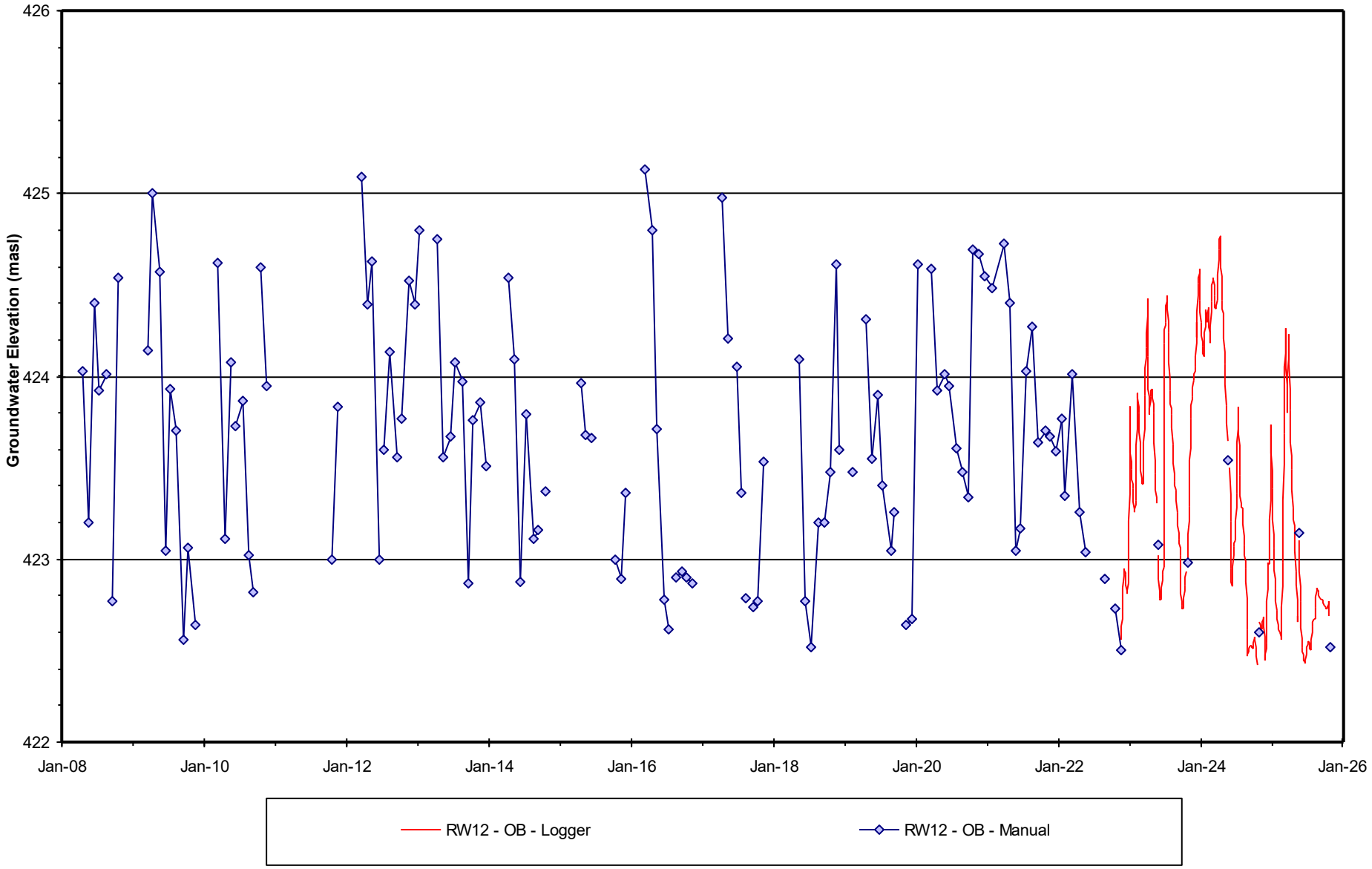


**Figure B-45 Groundwater Hydrograph**

**RW13**

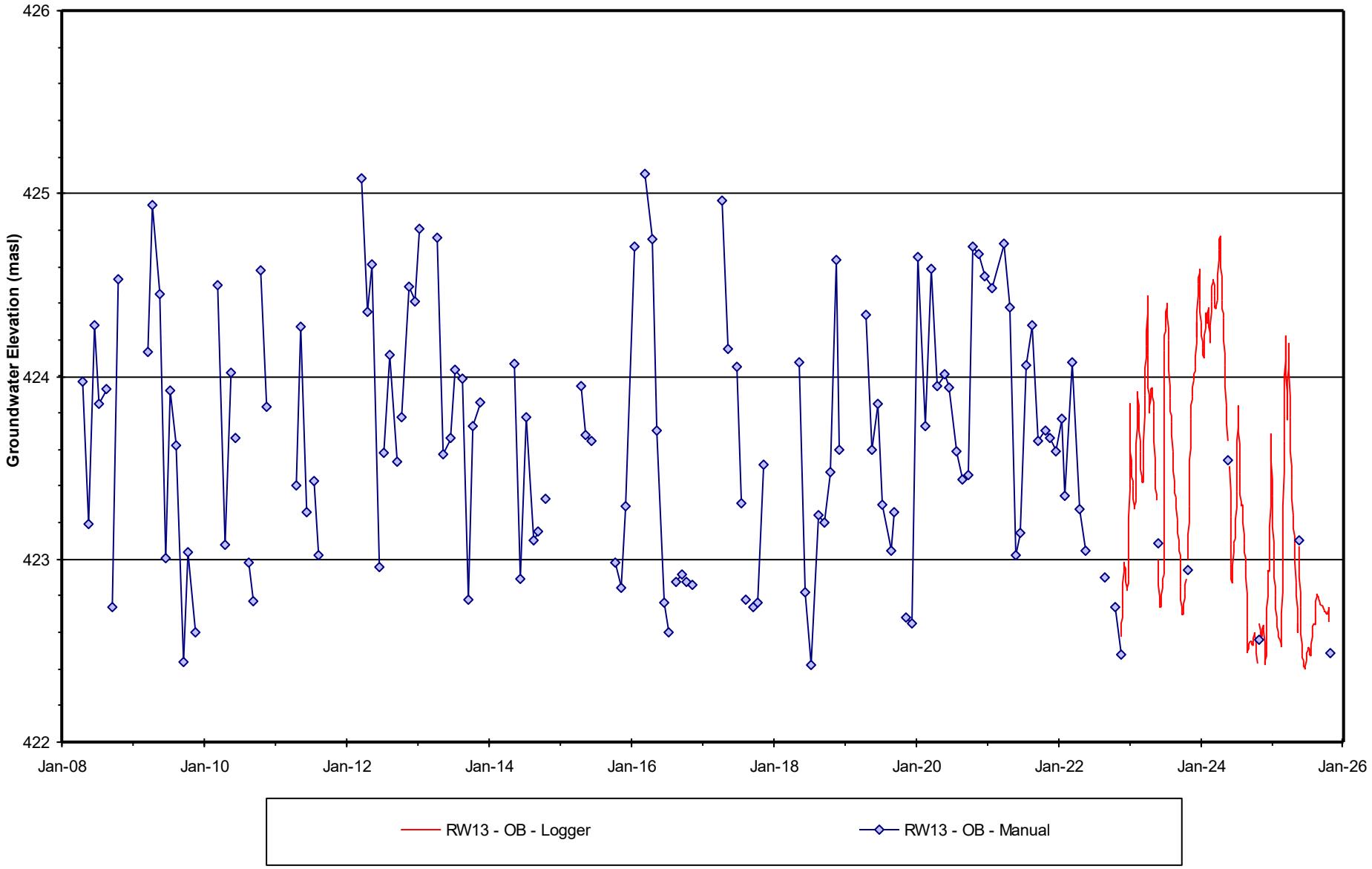


**Figure B-46 Groundwater Hydrograph**

**RW16**

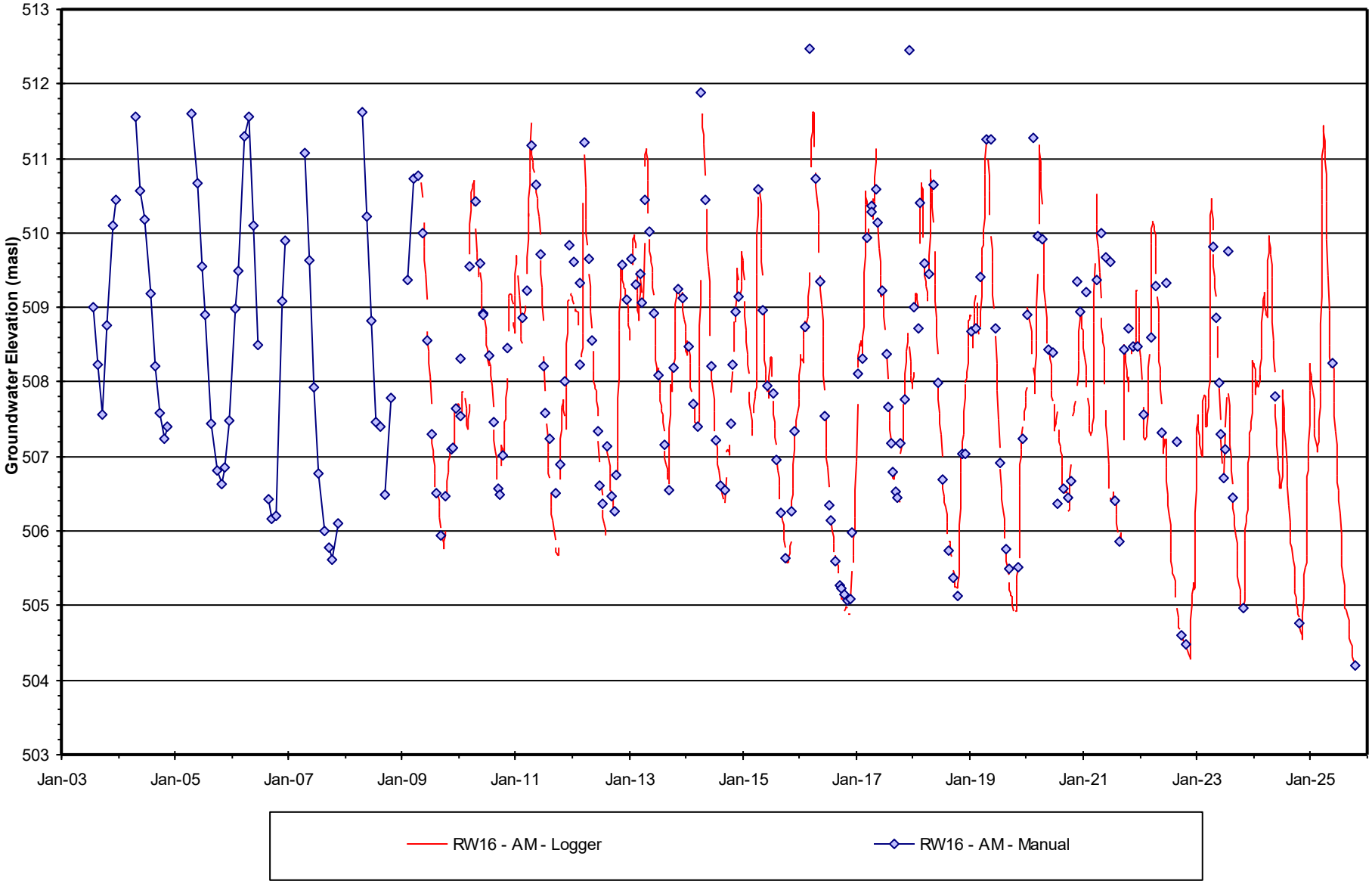


**Figure B-47 Groundwater Hydrograph**

**RW17**

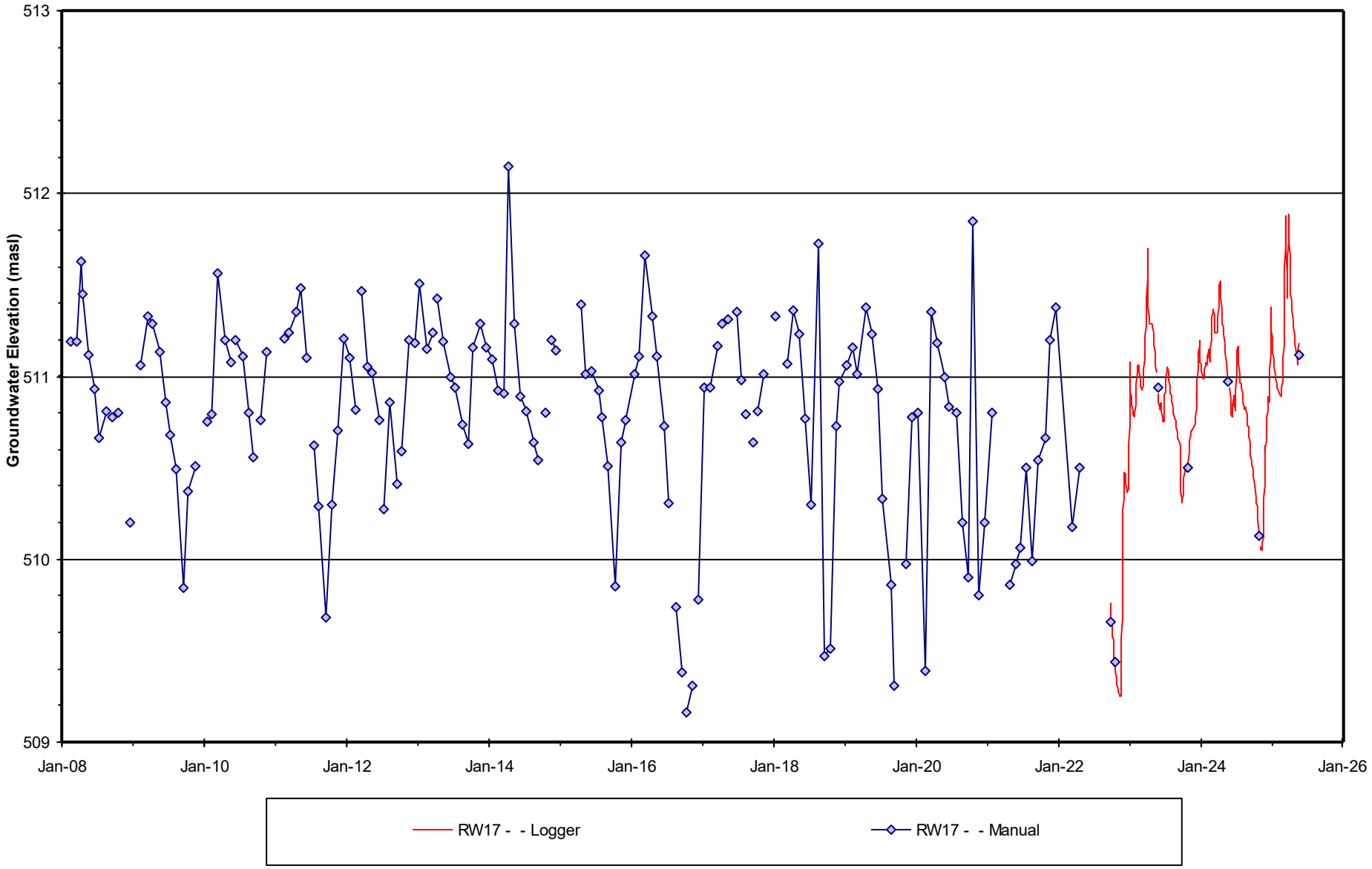


**Figure B-48 Groundwater Hydrograph**

**RW18**

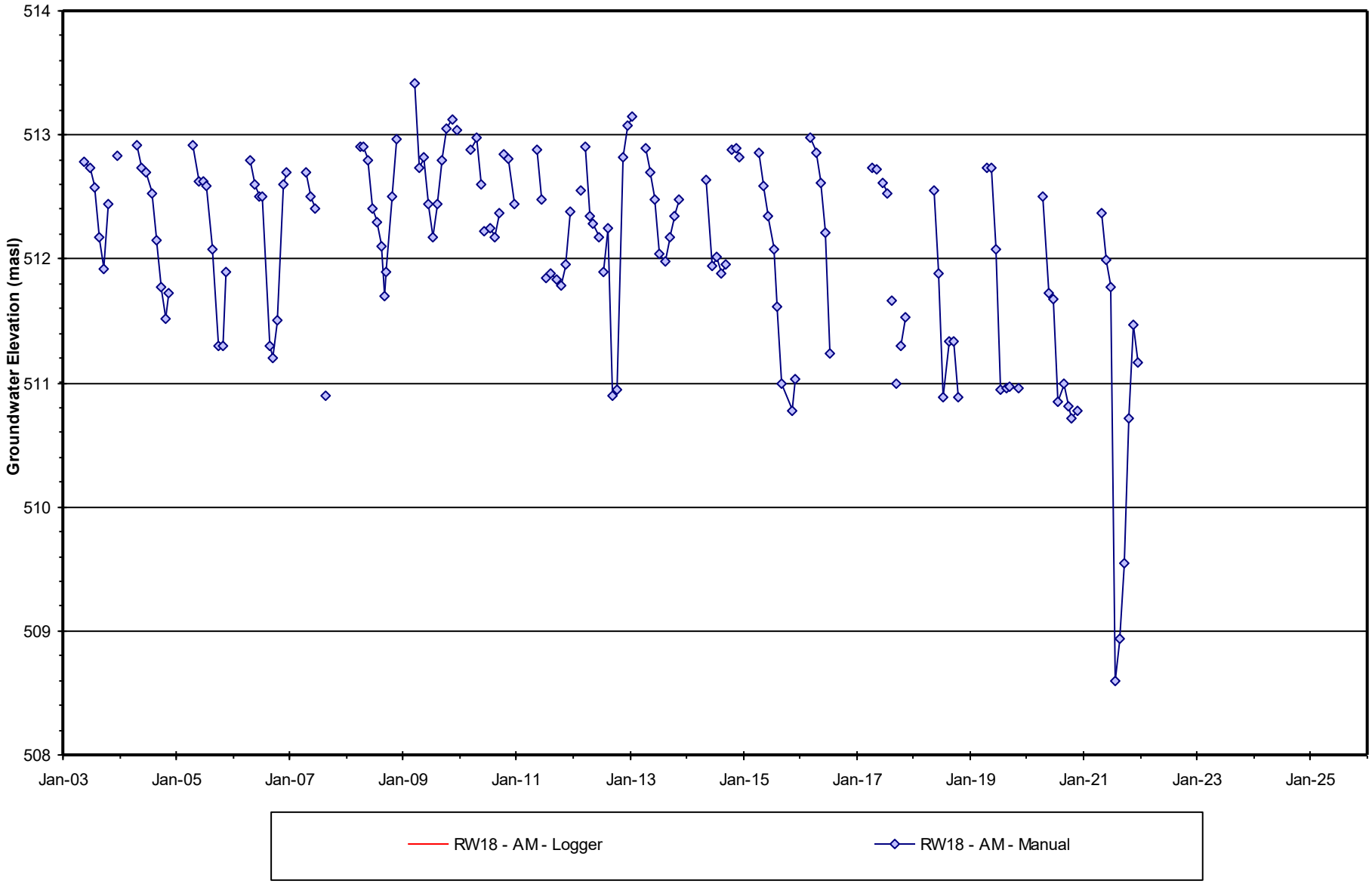


**Figure B-49 Groundwater Hydrograph**

**RW19**

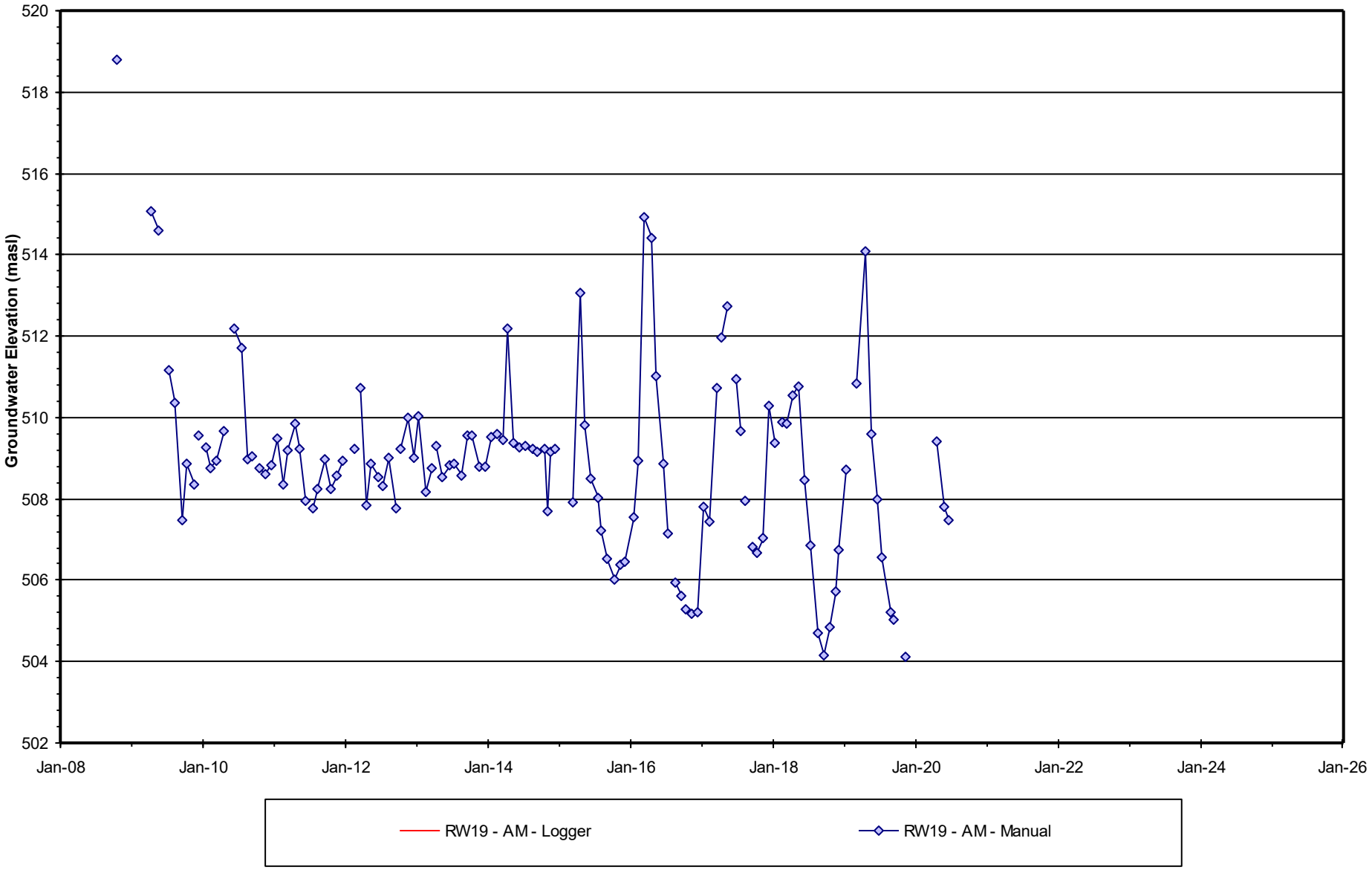


**Figure B-50 Groundwater Hydrograph**

**CLF1**

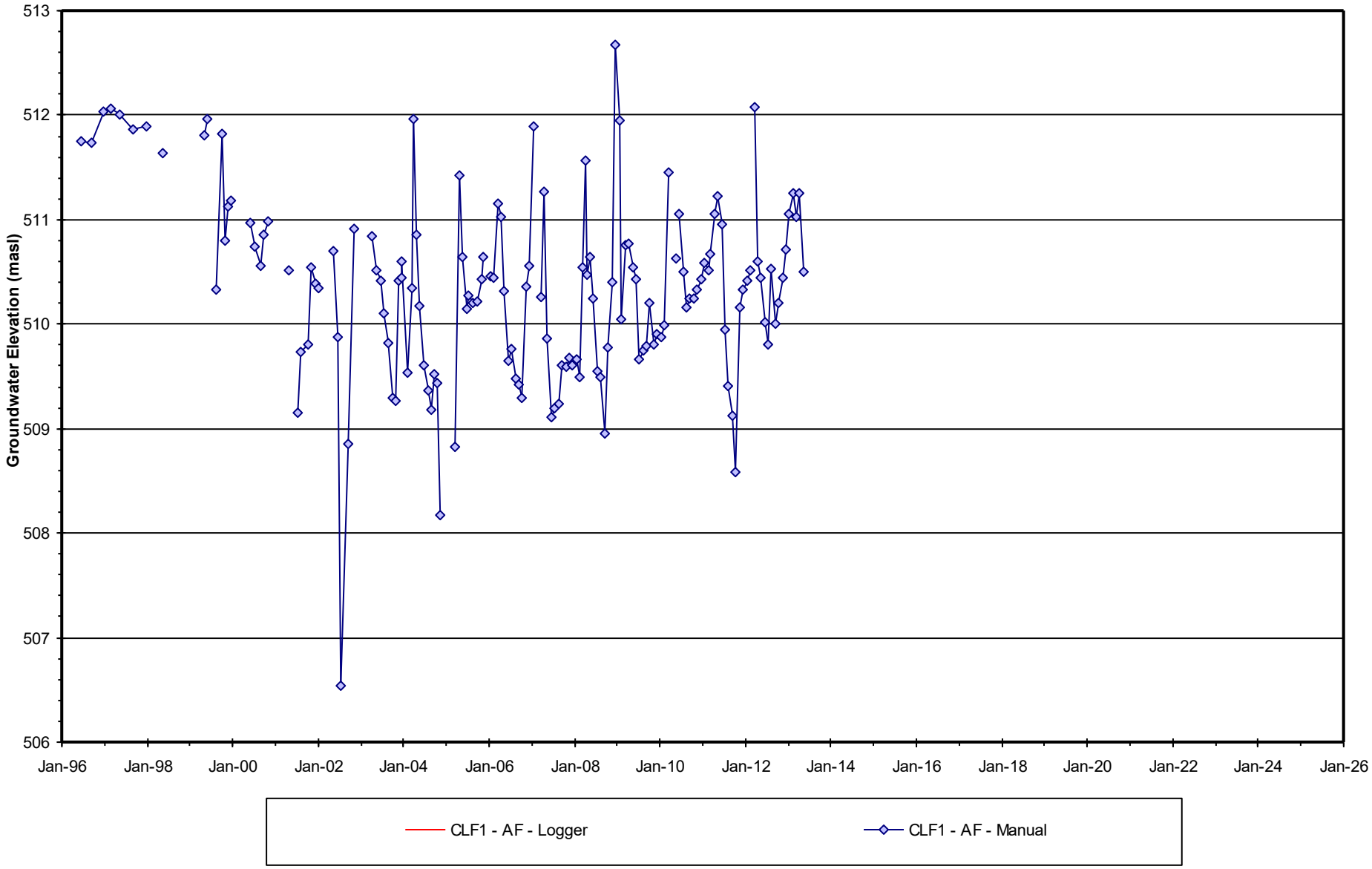


**Figure B-51 Groundwater Hydrograph**

**CLF2**

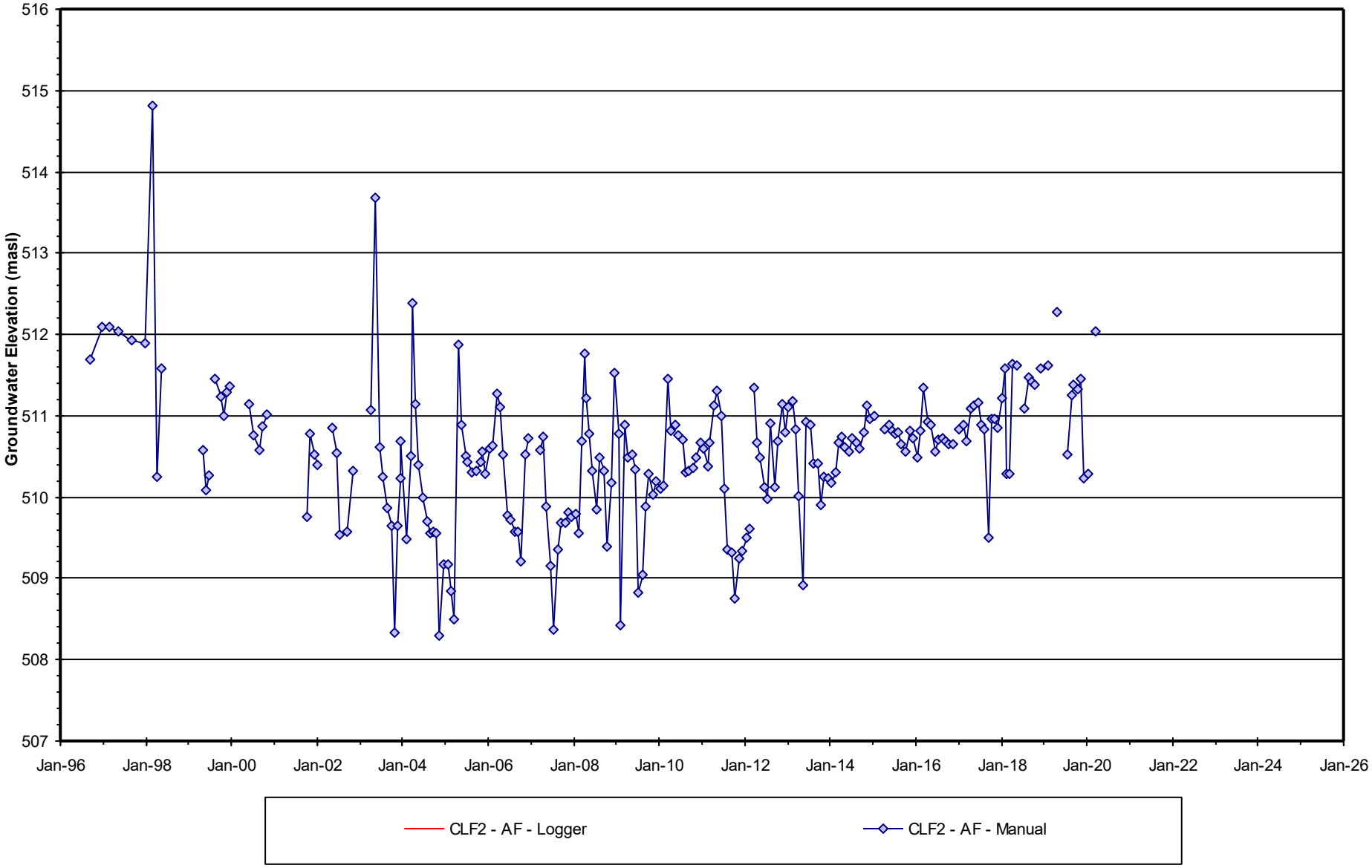


**Figure B-52 Groundwater Hydrograph**

**CLF3**

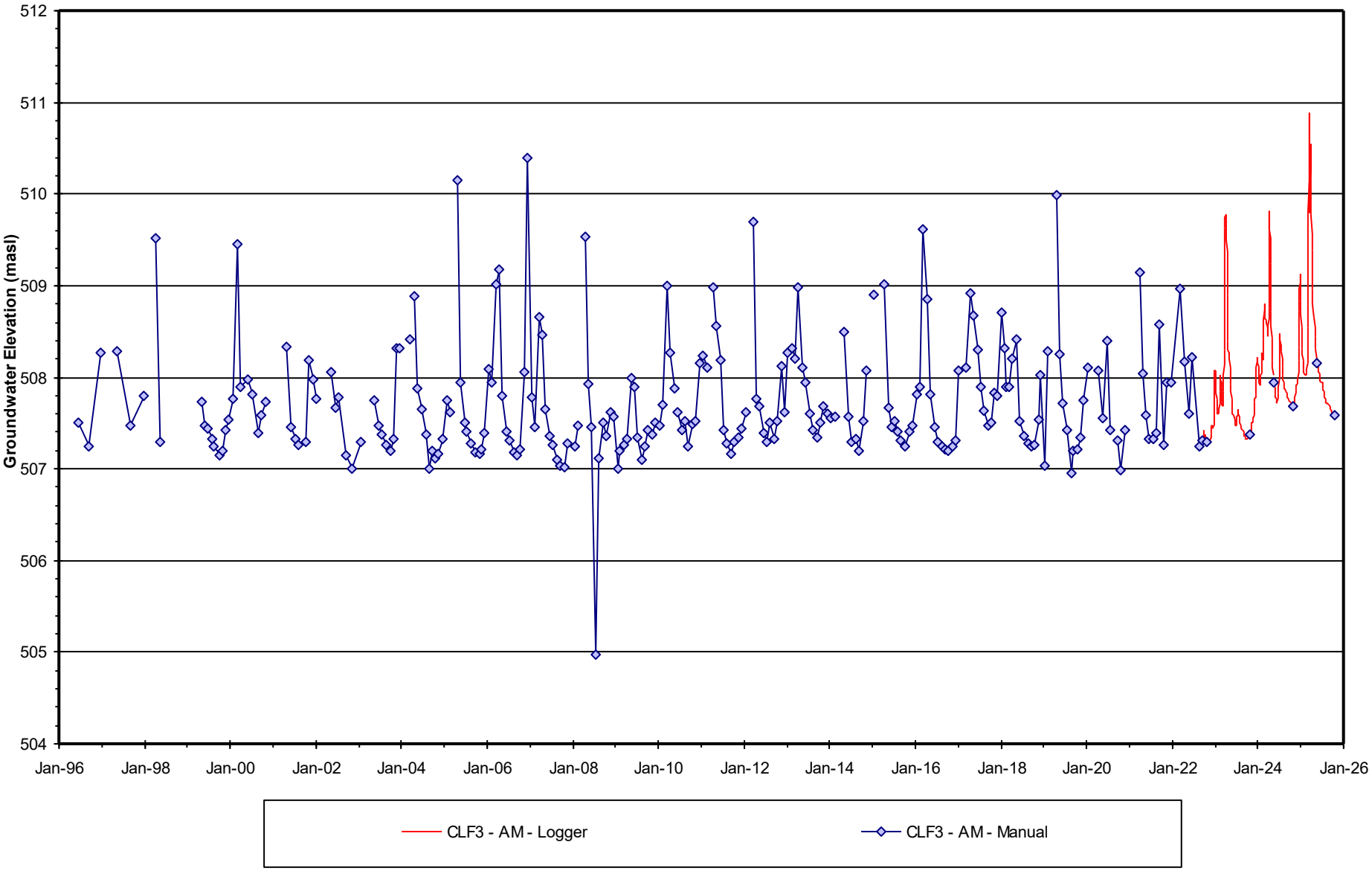


**Figure B-53 Groundwater Hydrograph**

**CLF4**

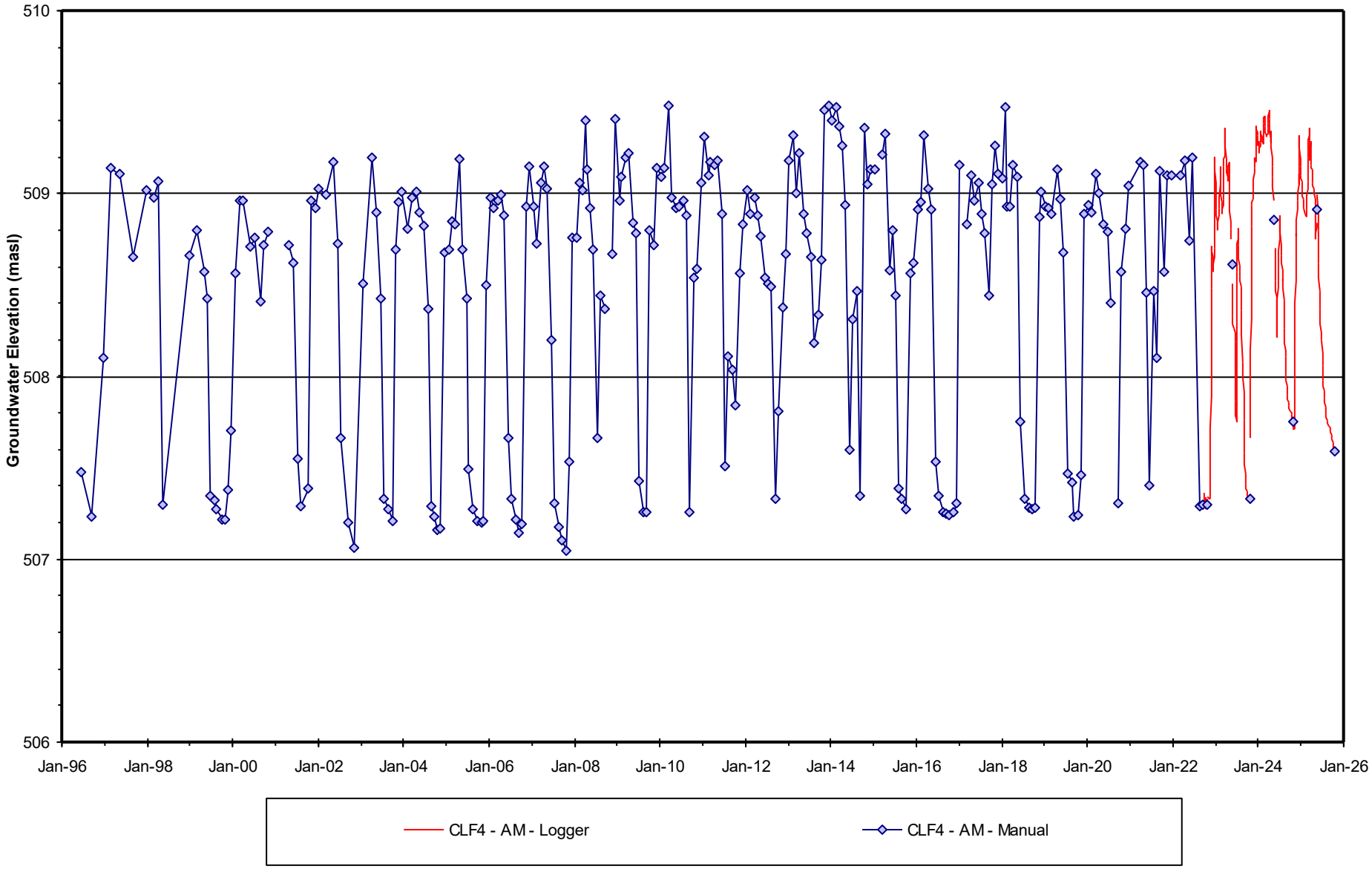


**Figure B-54 Groundwater Hydrograph**

**CLF5**

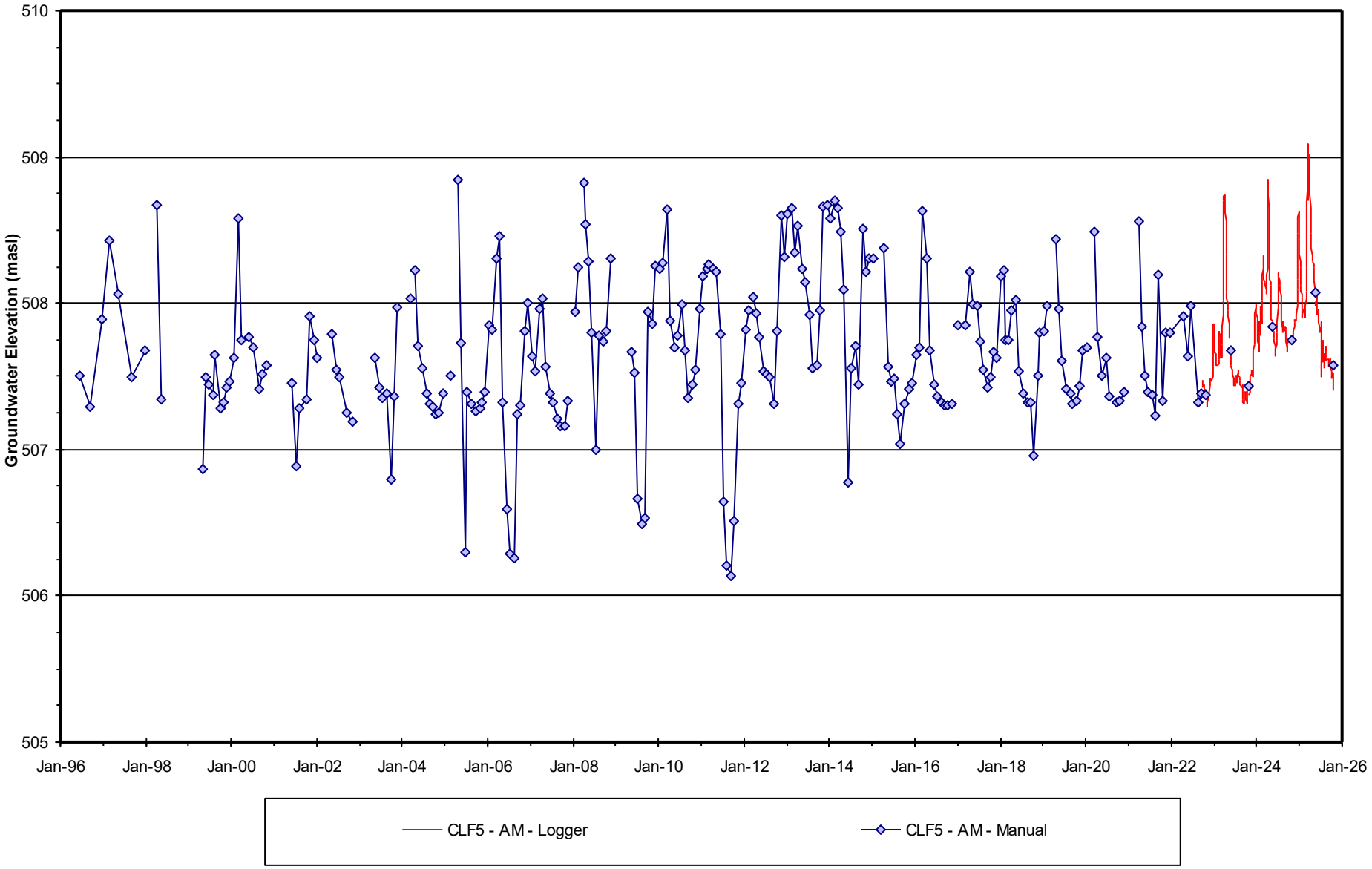


**Figure B-55 Groundwater Hydrograph**

**101-B**

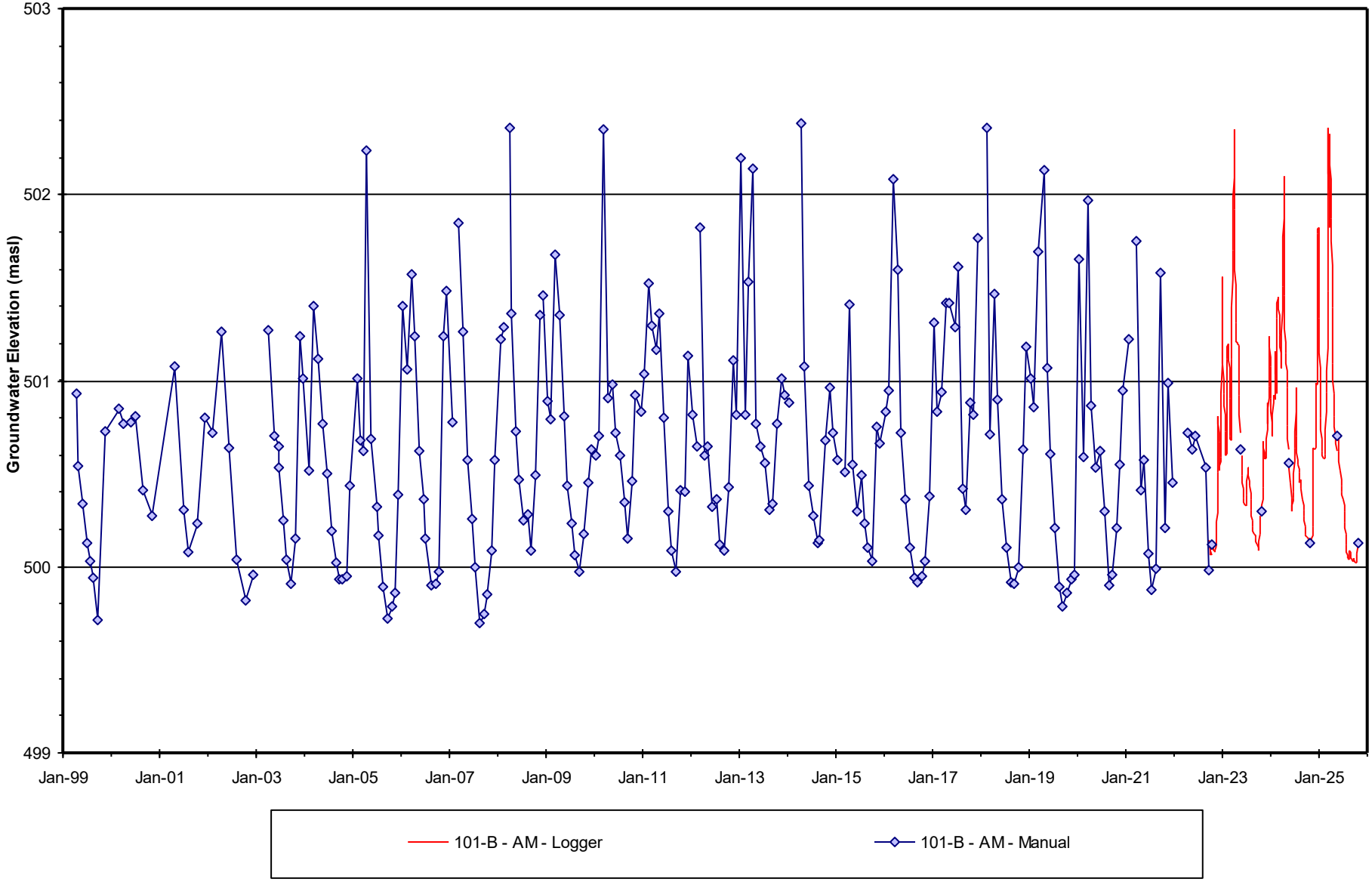


**Figure B-56 Groundwater Hydrograph**

**102-C**

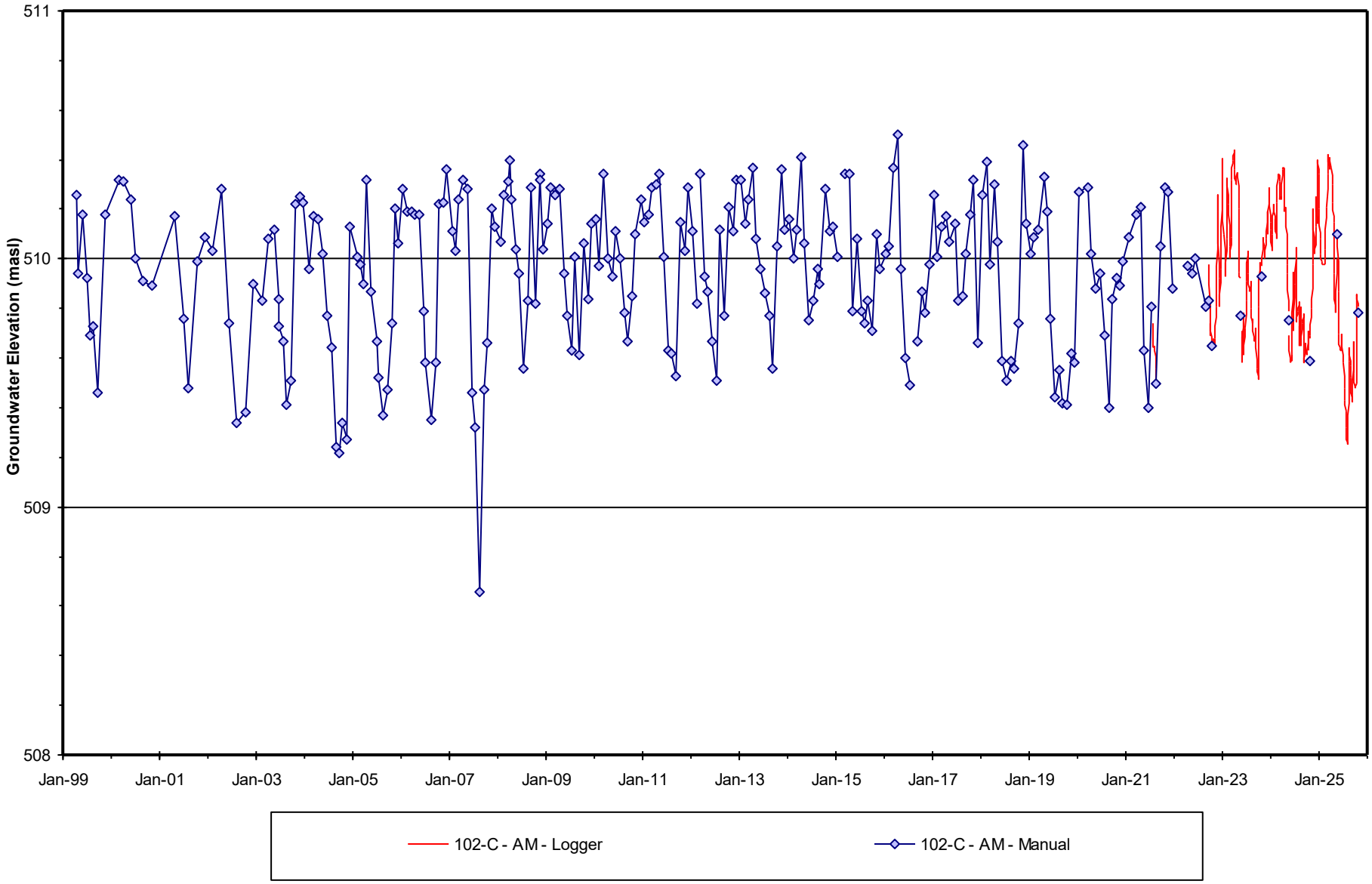


**Figure B-57 Groundwater Hydrograph**

**103-D**

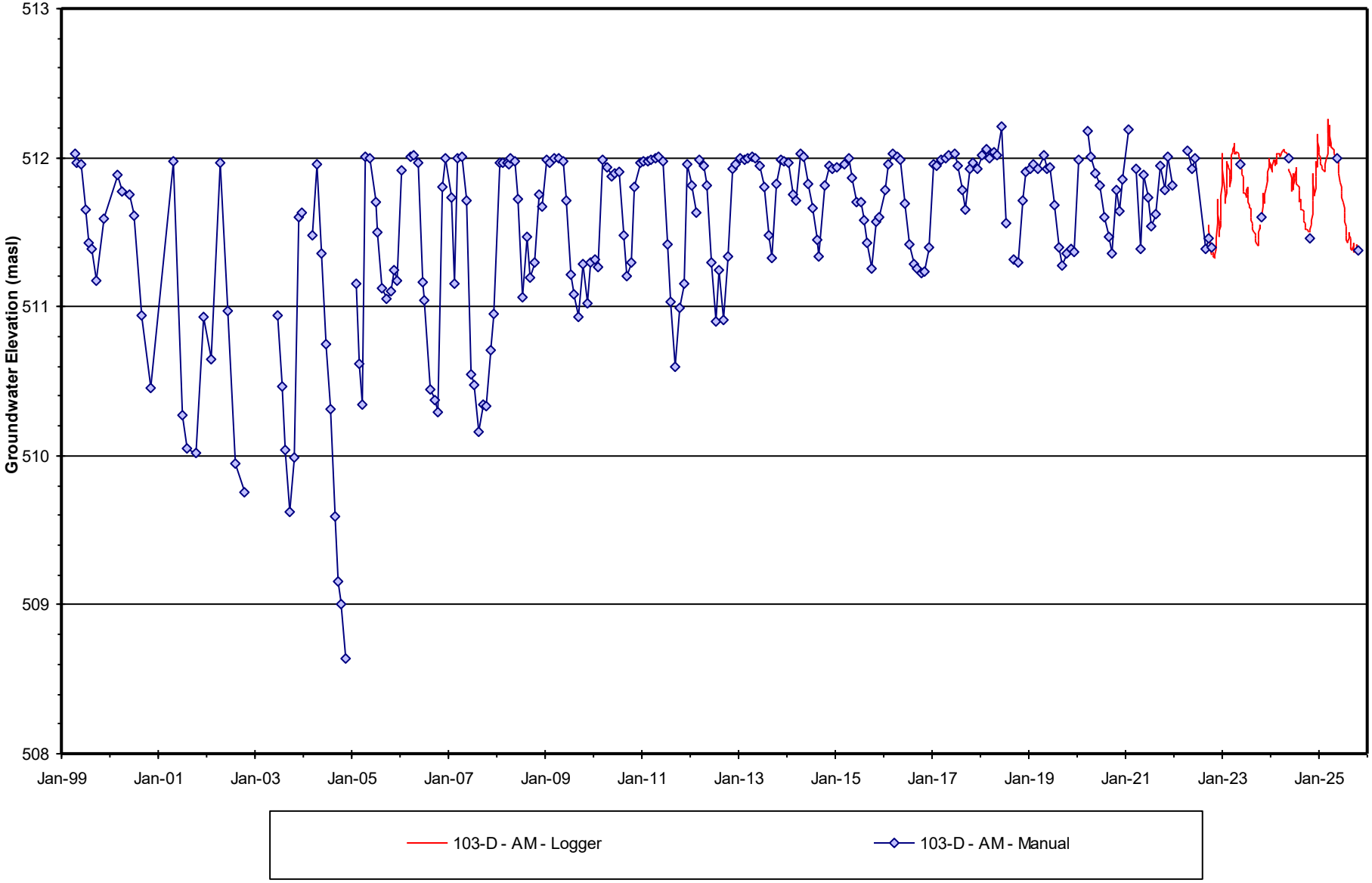


**Figure B-58 Groundwater Hydrograph**

**104-A**

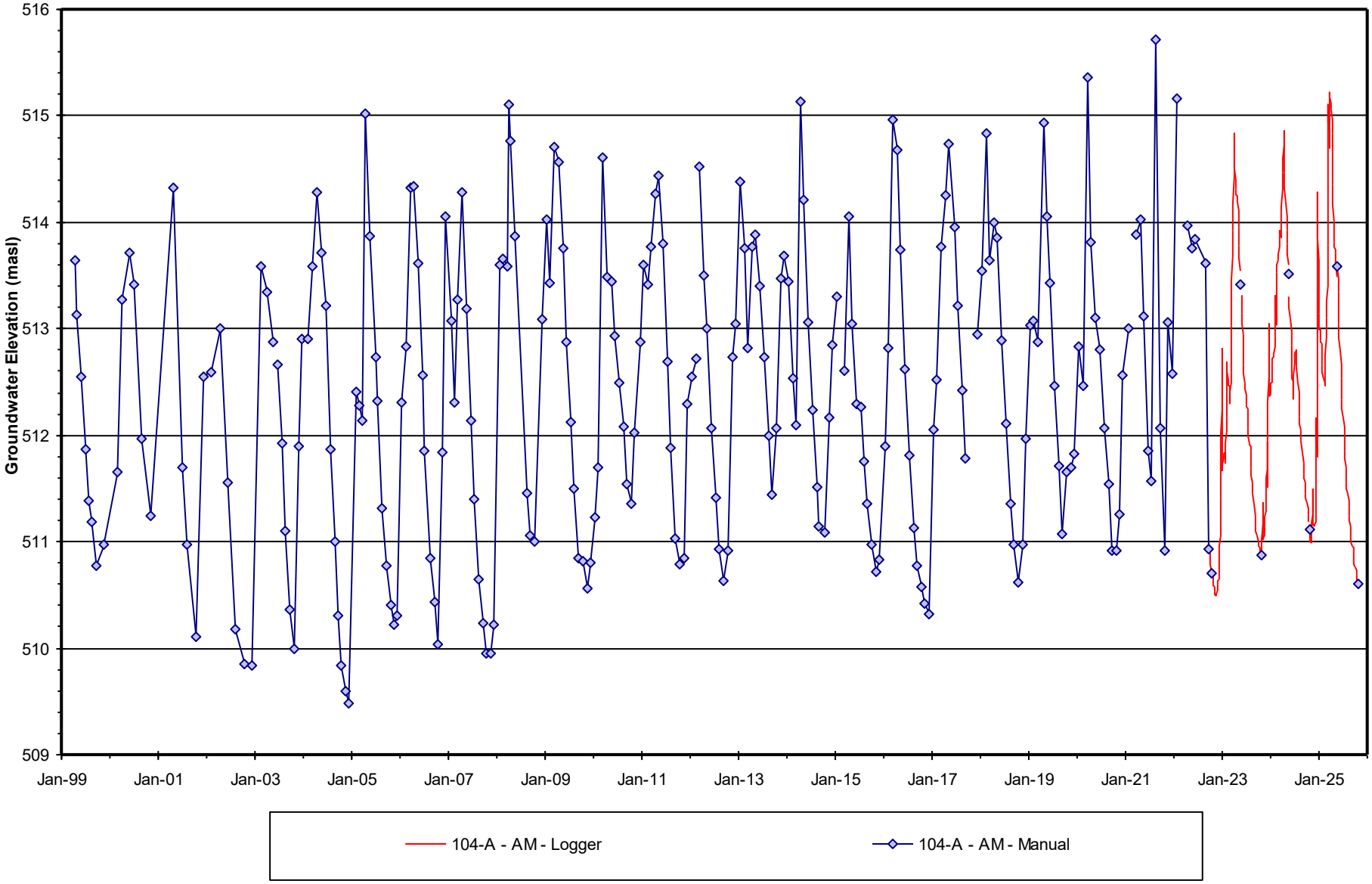


**Figure B-59 Groundwater Hydrograph**

**OW1-4**

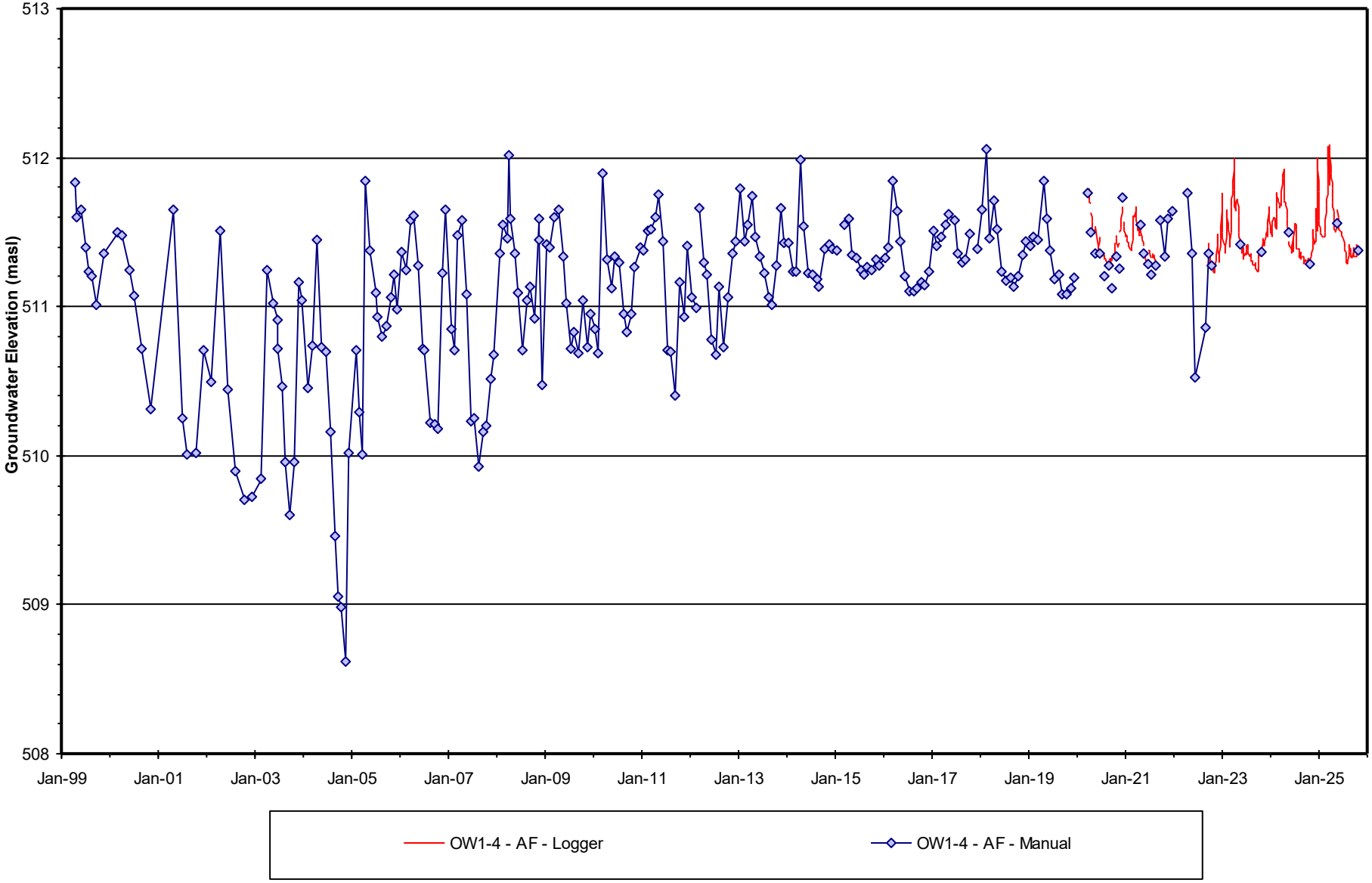


**Figure B-60 Groundwater Hydrograph**

**OW3-1**

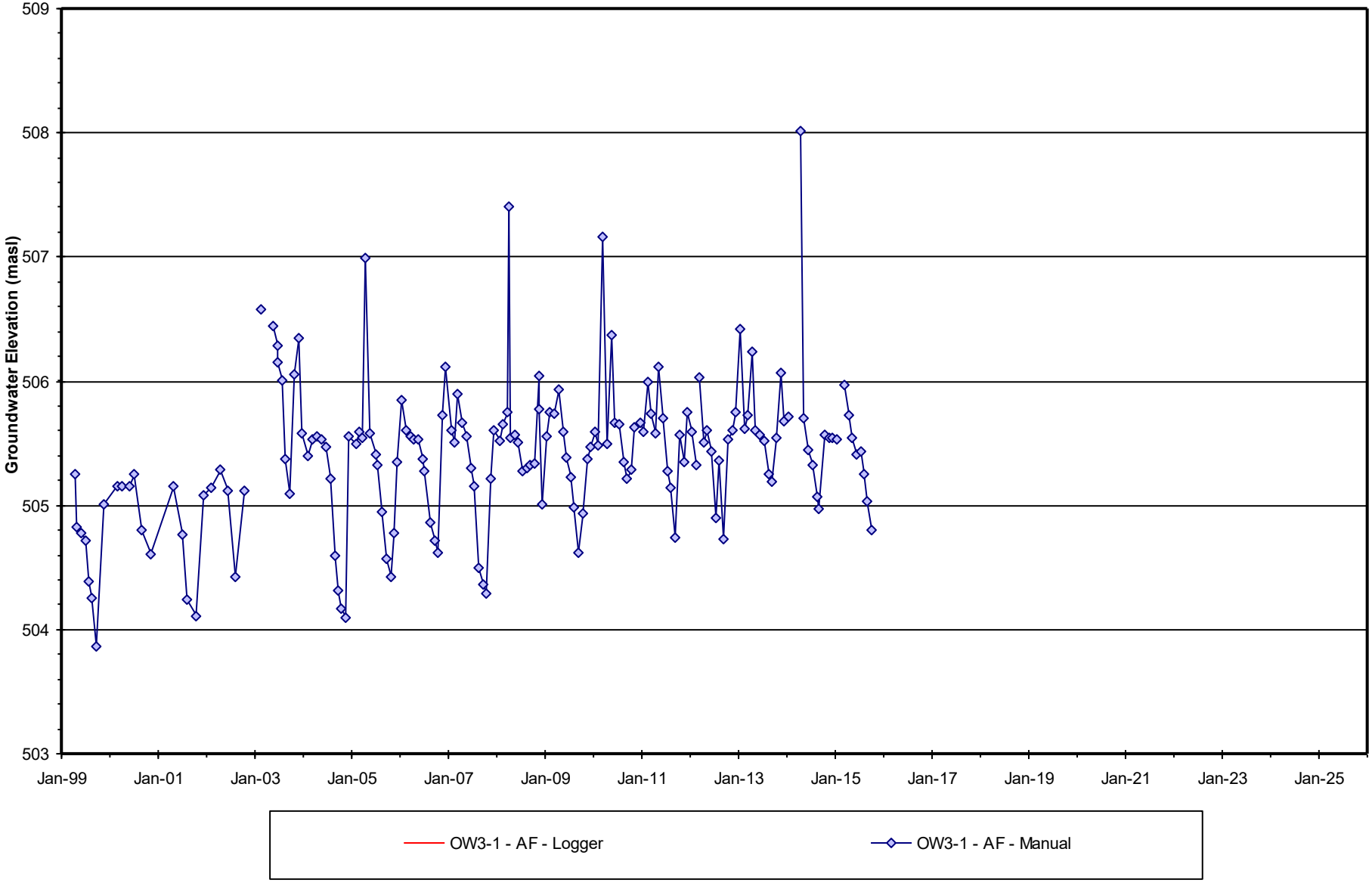


**Figure B-61 Groundwater Hydrograph**

**OW5-2**

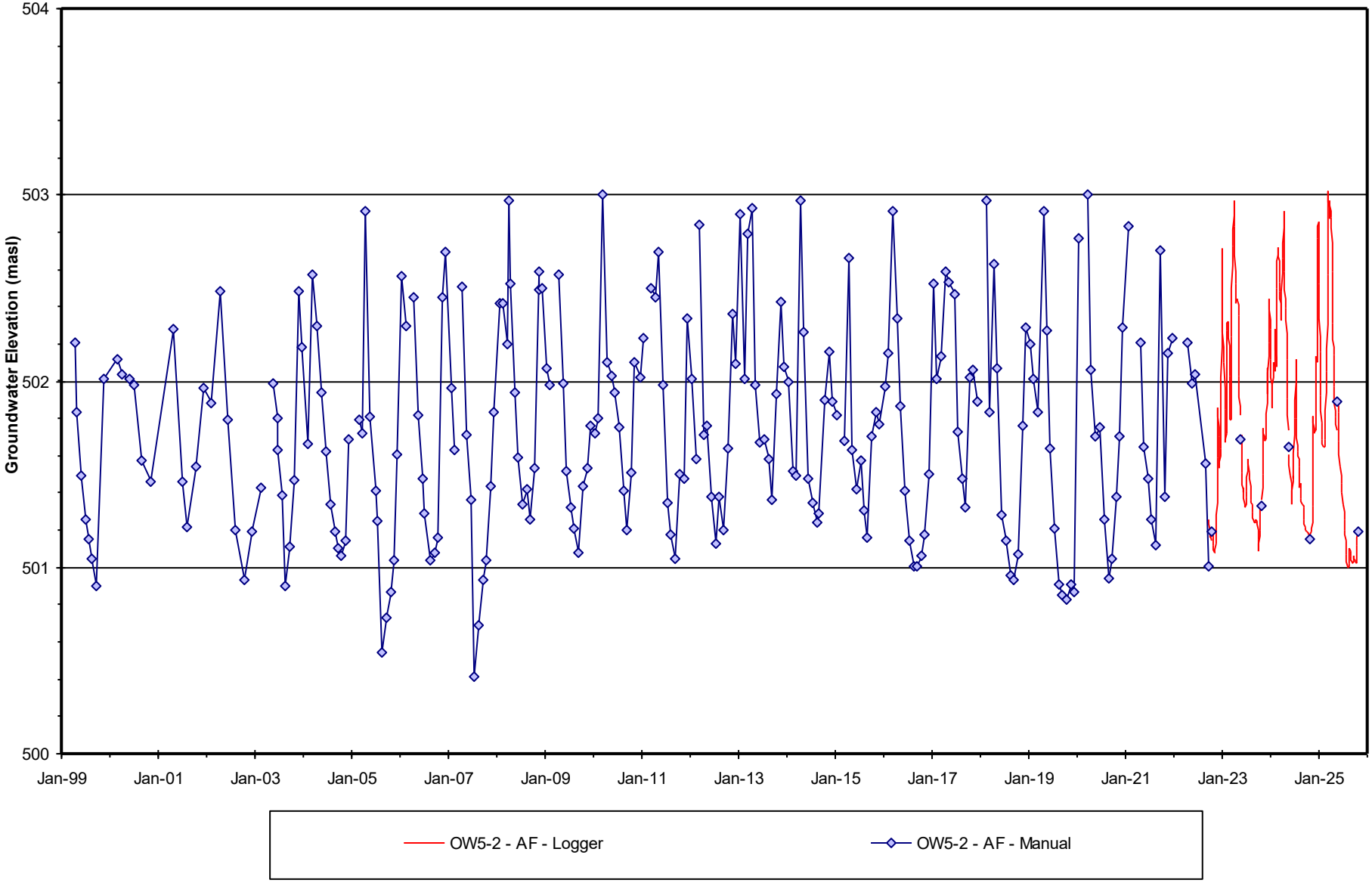
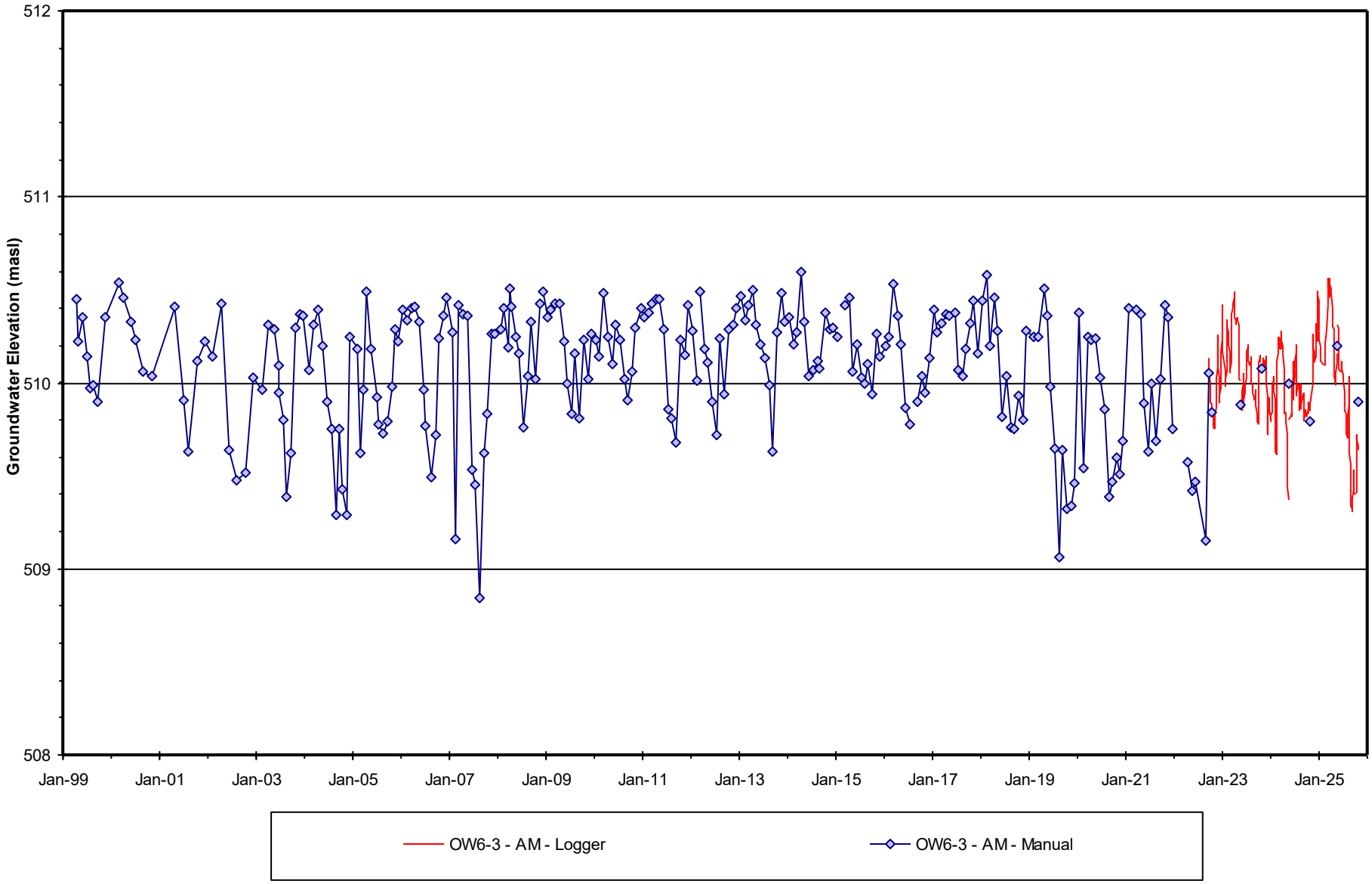


**Figure B-62 Groundwater Hydrograph**

**OW6-3**



## Figure B-63 Groundwater / Surface Water Hydrograph

### DP1 - Rob Roy Swamp 6 Southeast Portion

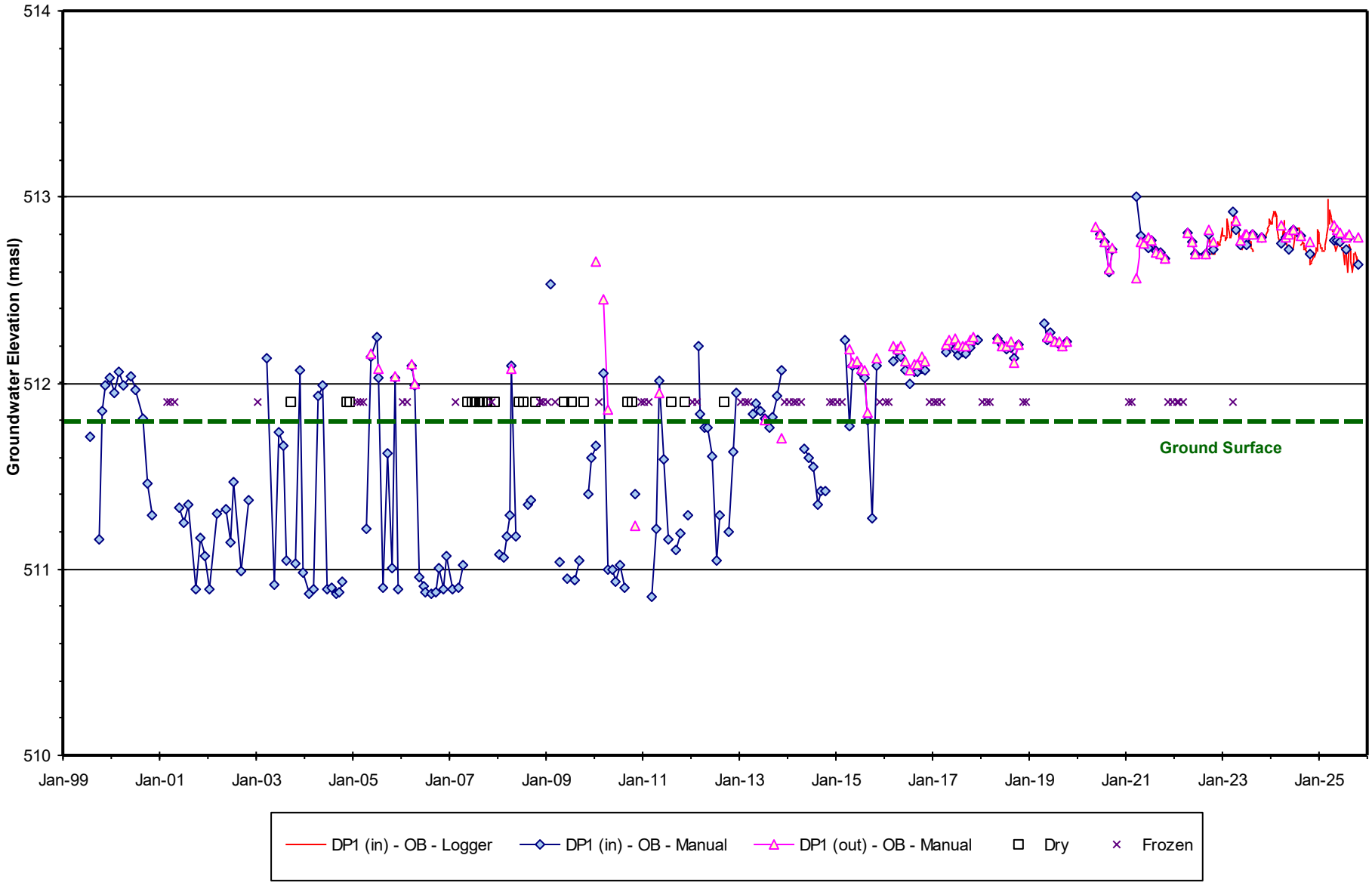
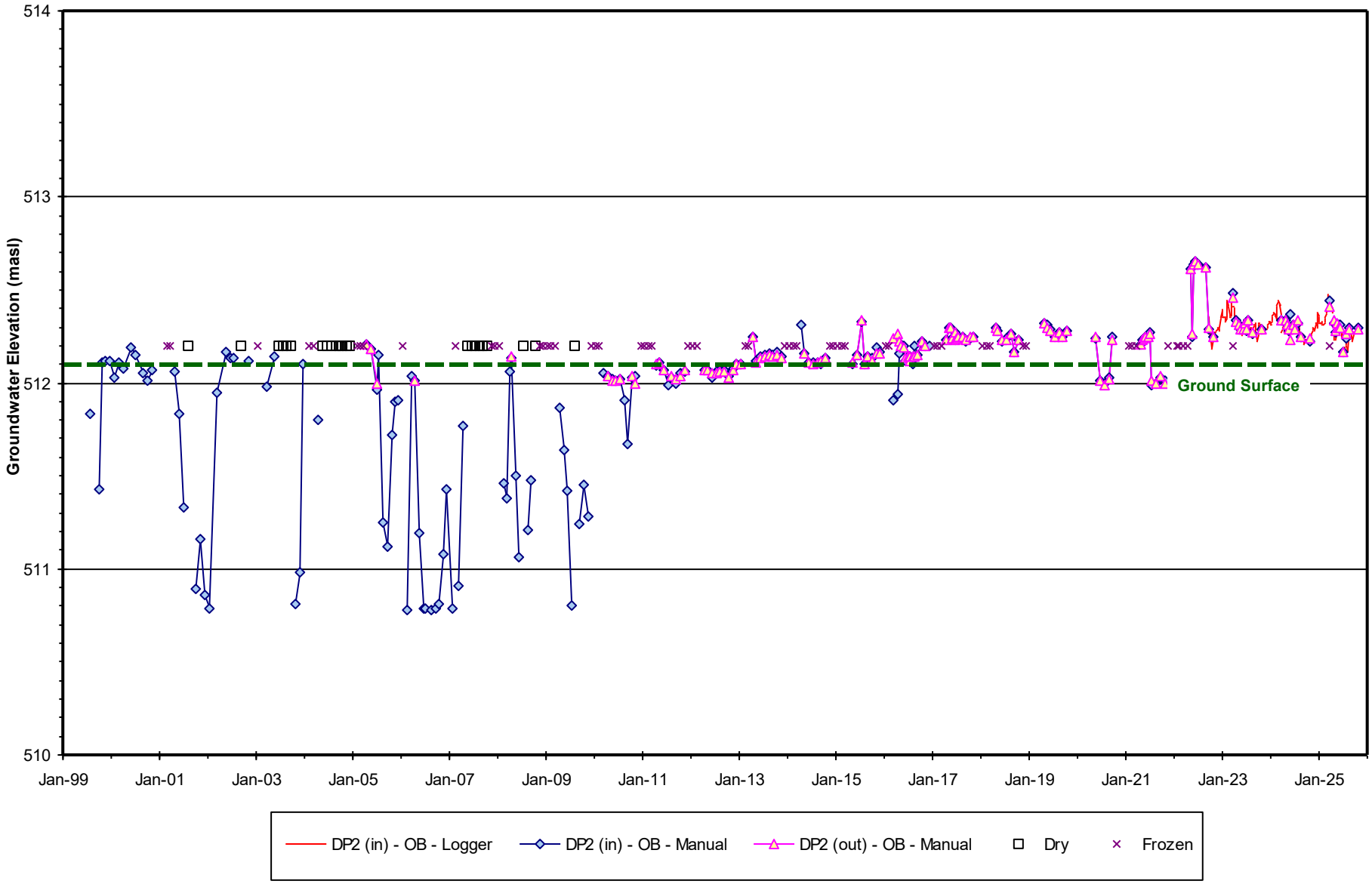


**Figure B-64 Groundwater / Surface Water Hydrograph**

**DP2 - Rob Roy Swamp 6 Northeast Portion**



## Figure B-65 Groundwater / Surface Water Hydrograph

### DP3 - Carmarthen Lake Farms Wetland

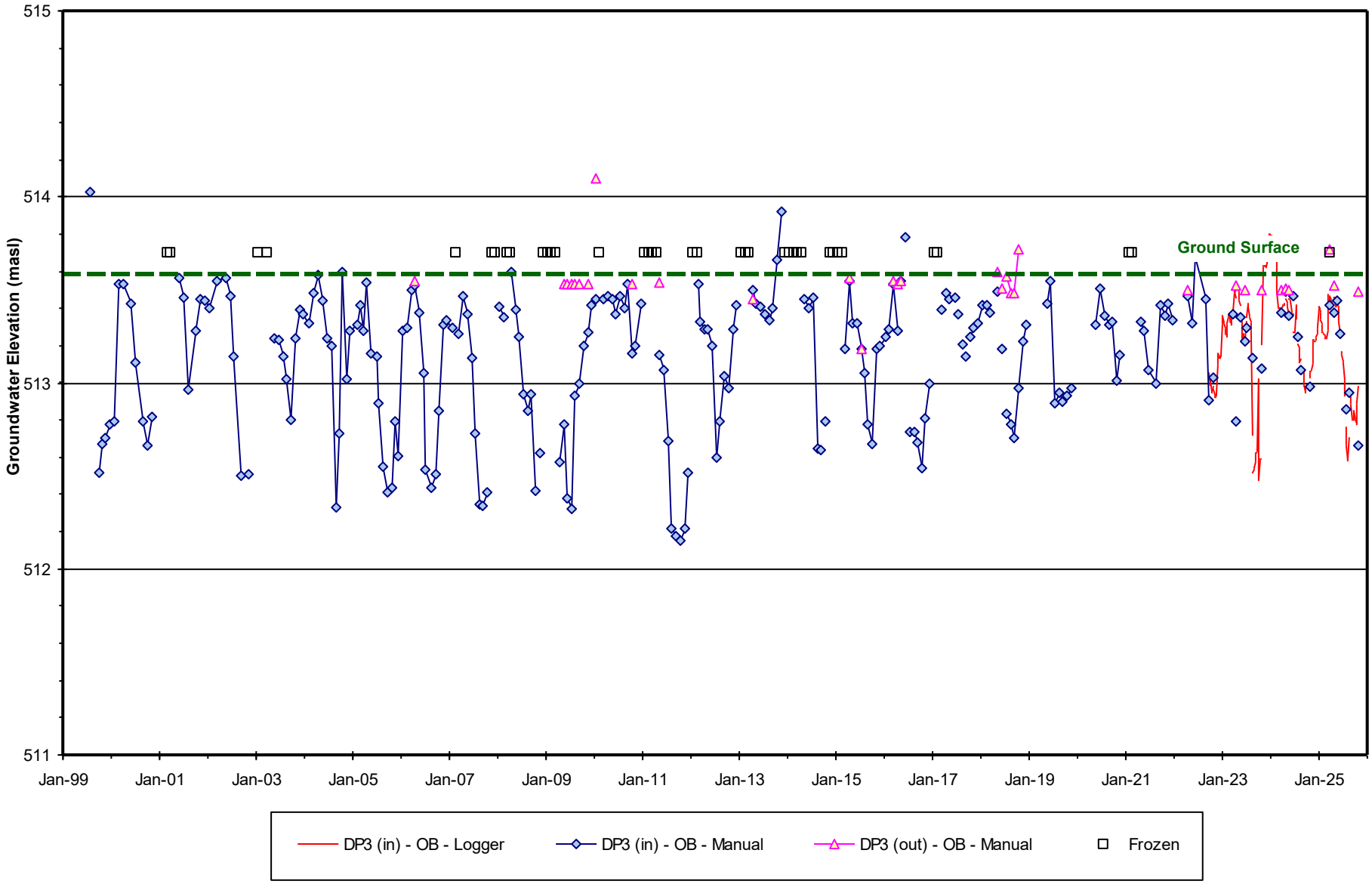


**Figure B-66 Groundwater / Surface Water Hydrograph**

**DP4 - Rob Roy Swamp 6 West of Clearview Townline**

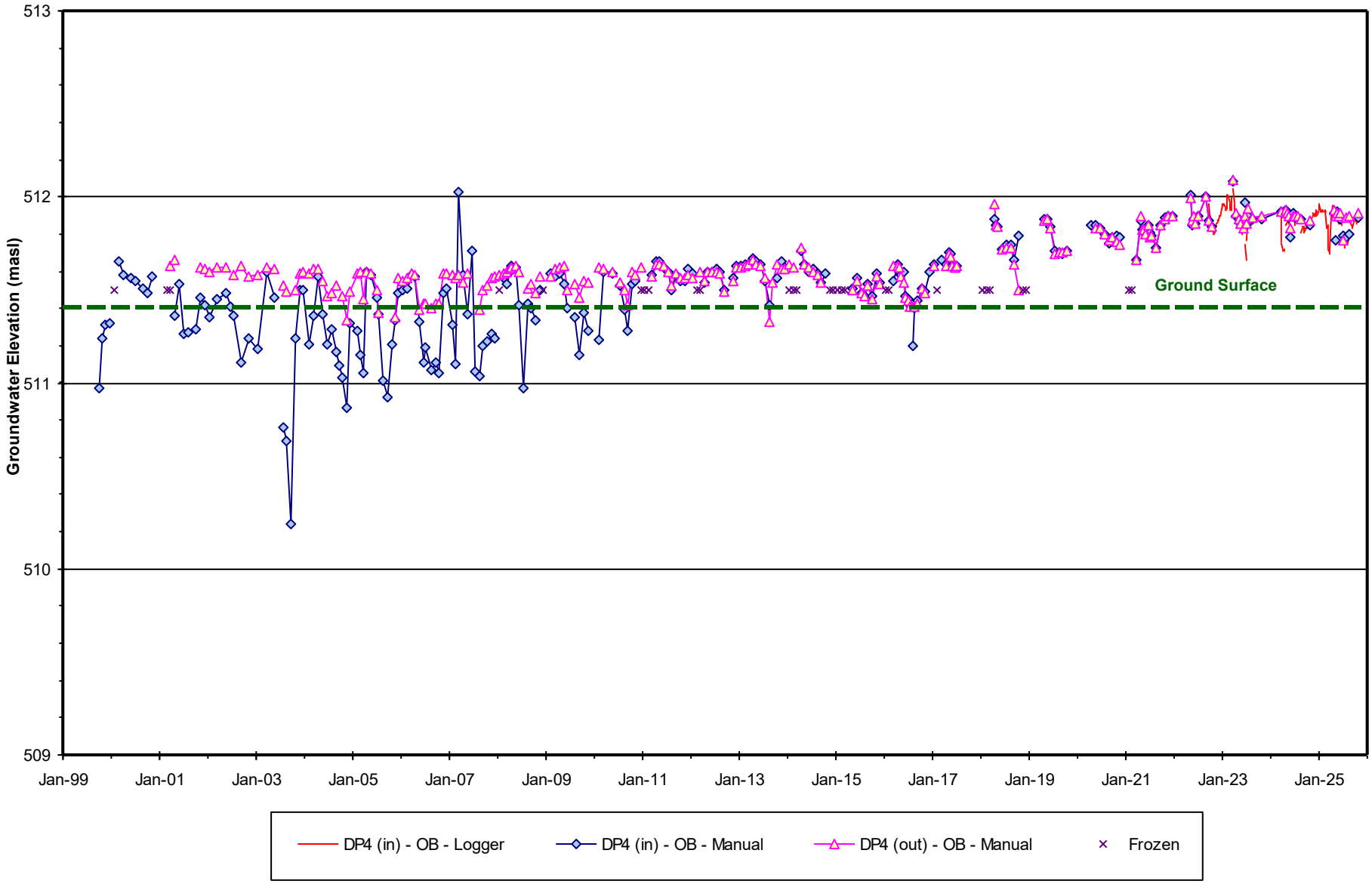
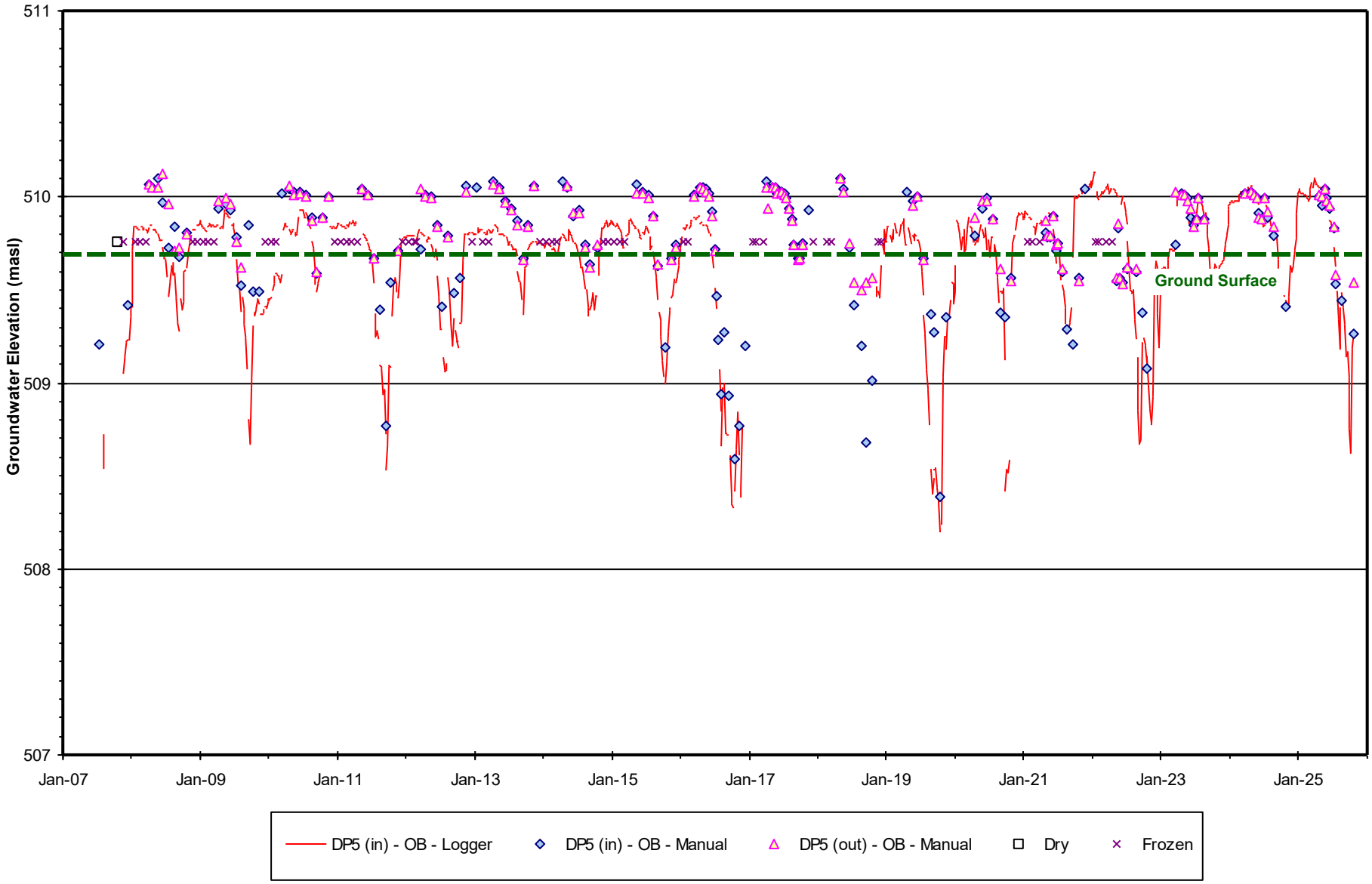


**Figure B-67 Groundwater / Surface Water Hydrograph**

**DP5 - Rob Roy Swamp 2 Vernal Pool**



## Figure B-68 Groundwater / Surface Water Hydrograph

### DP6 - ANSI Wetland A Vernal Pool

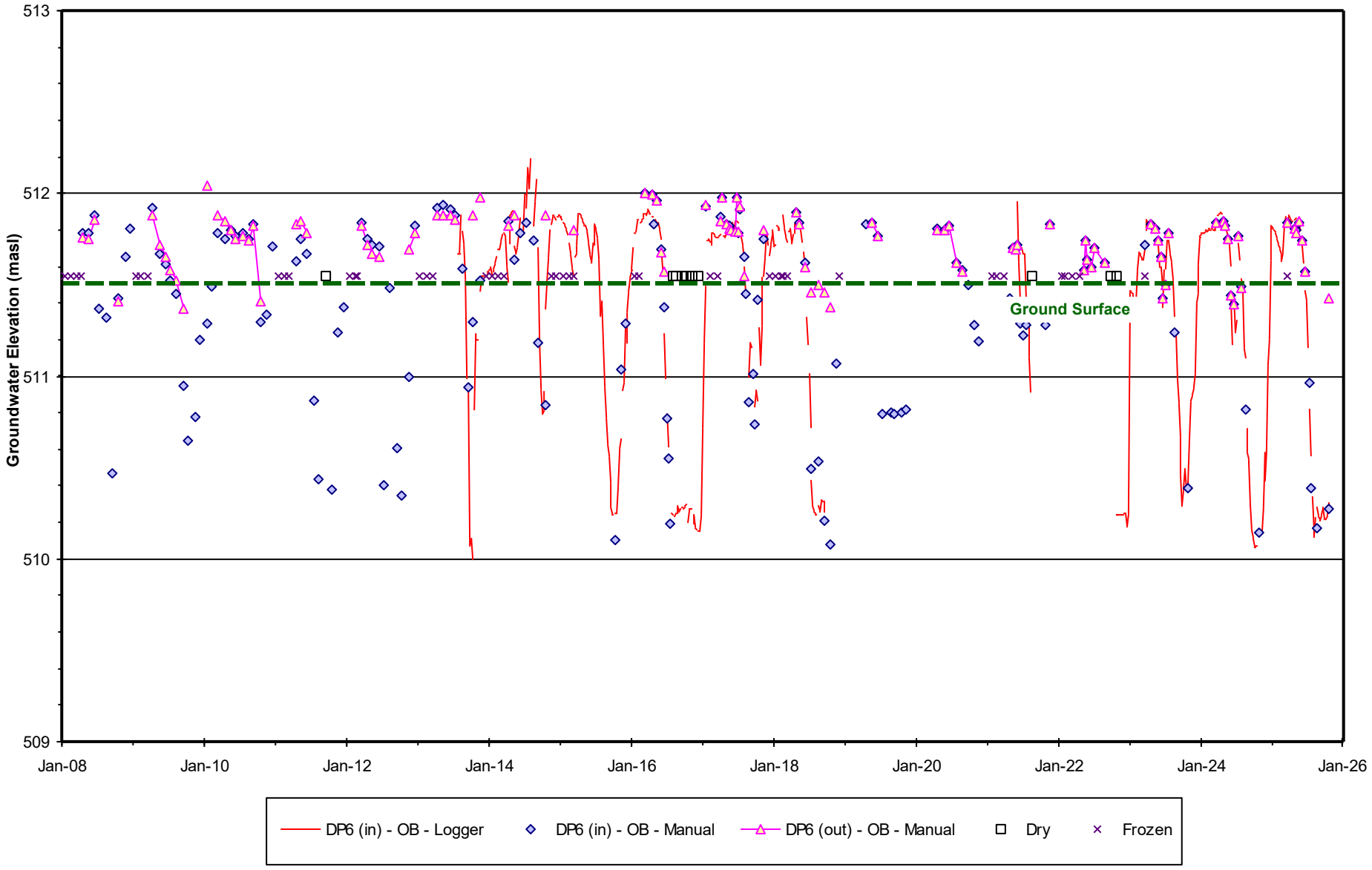
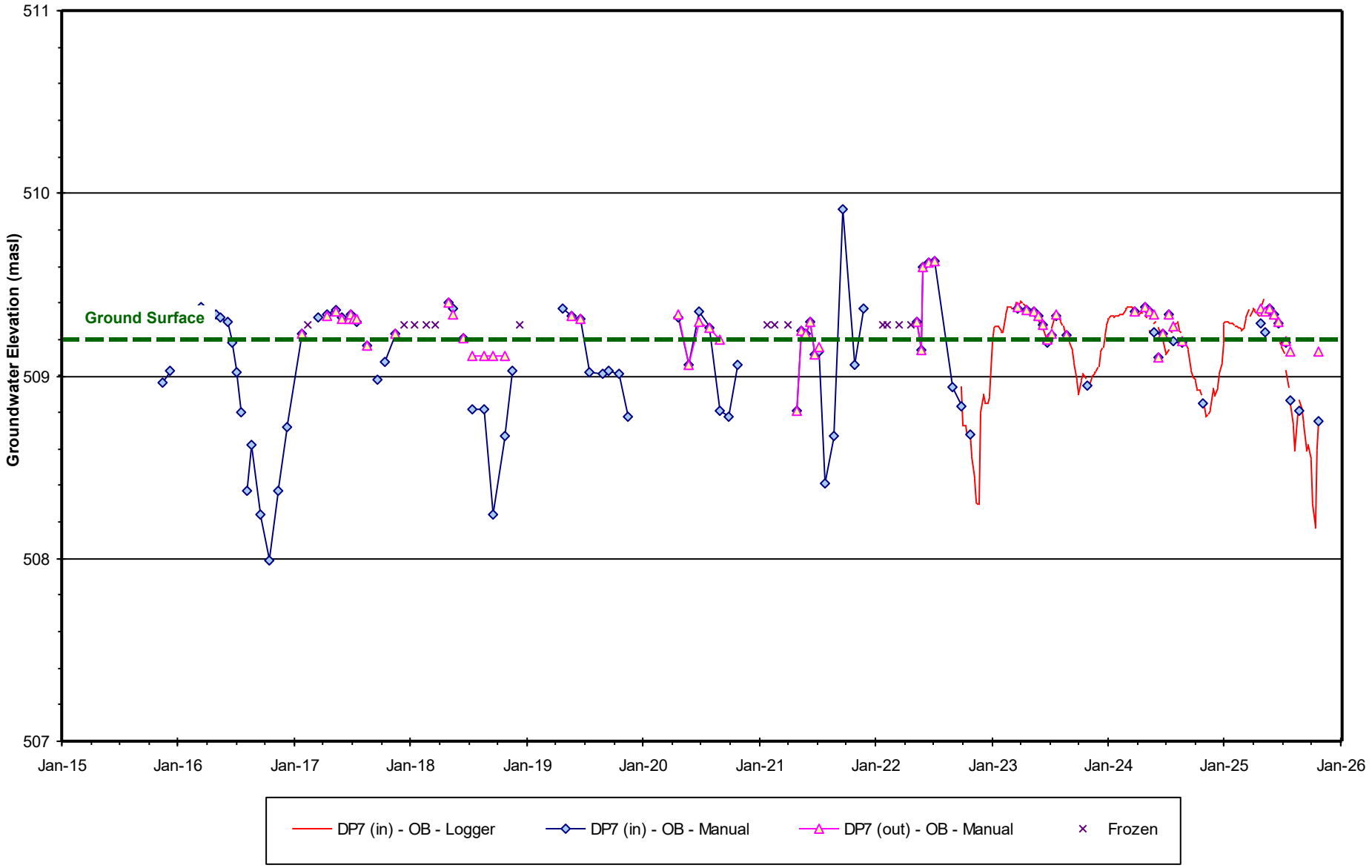


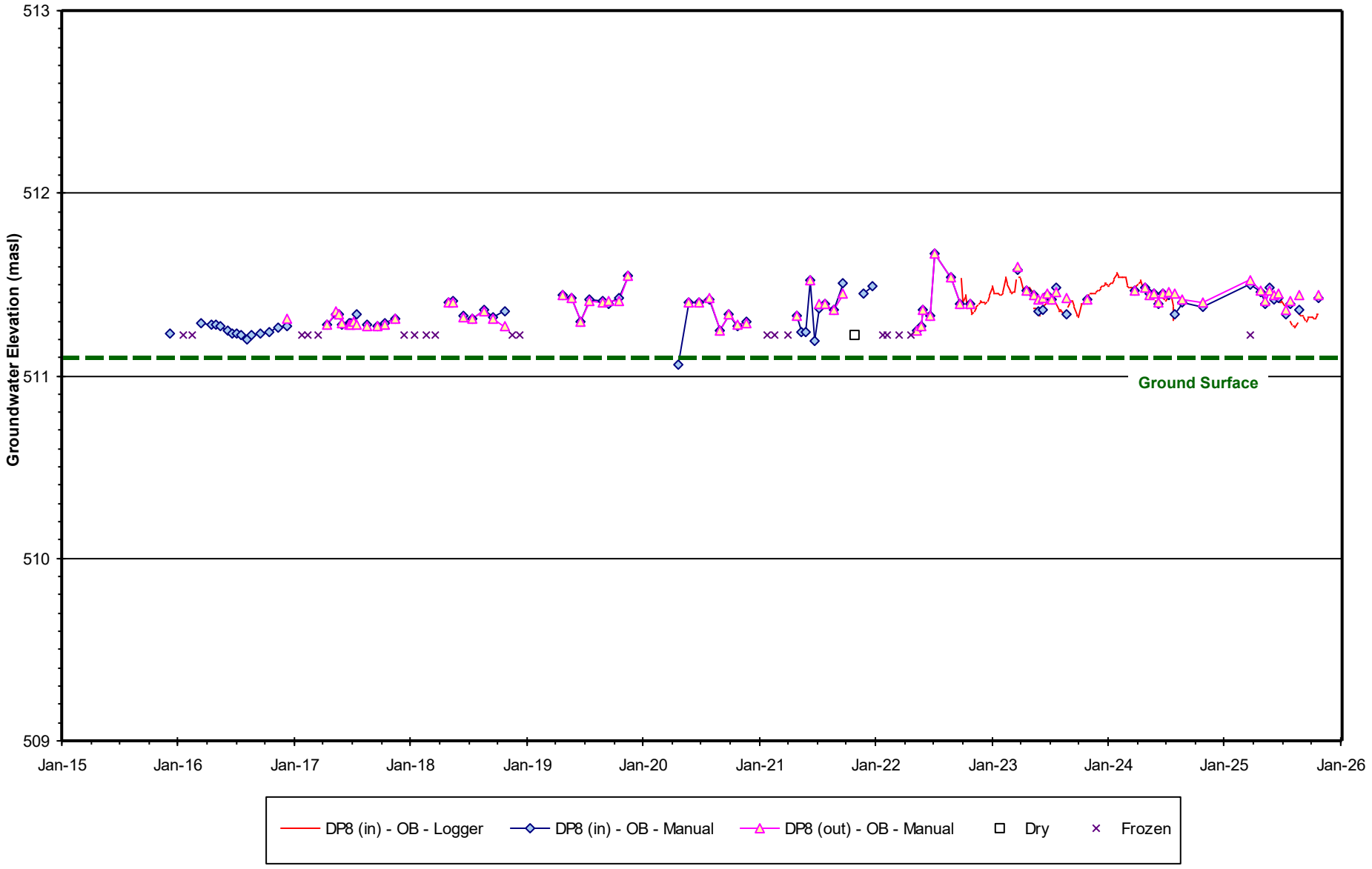
**Figure B-69 Groundwater / Surface Water Hydrograph**

**DP7 - Rob Roy Swamp 2 Vernal Pool**



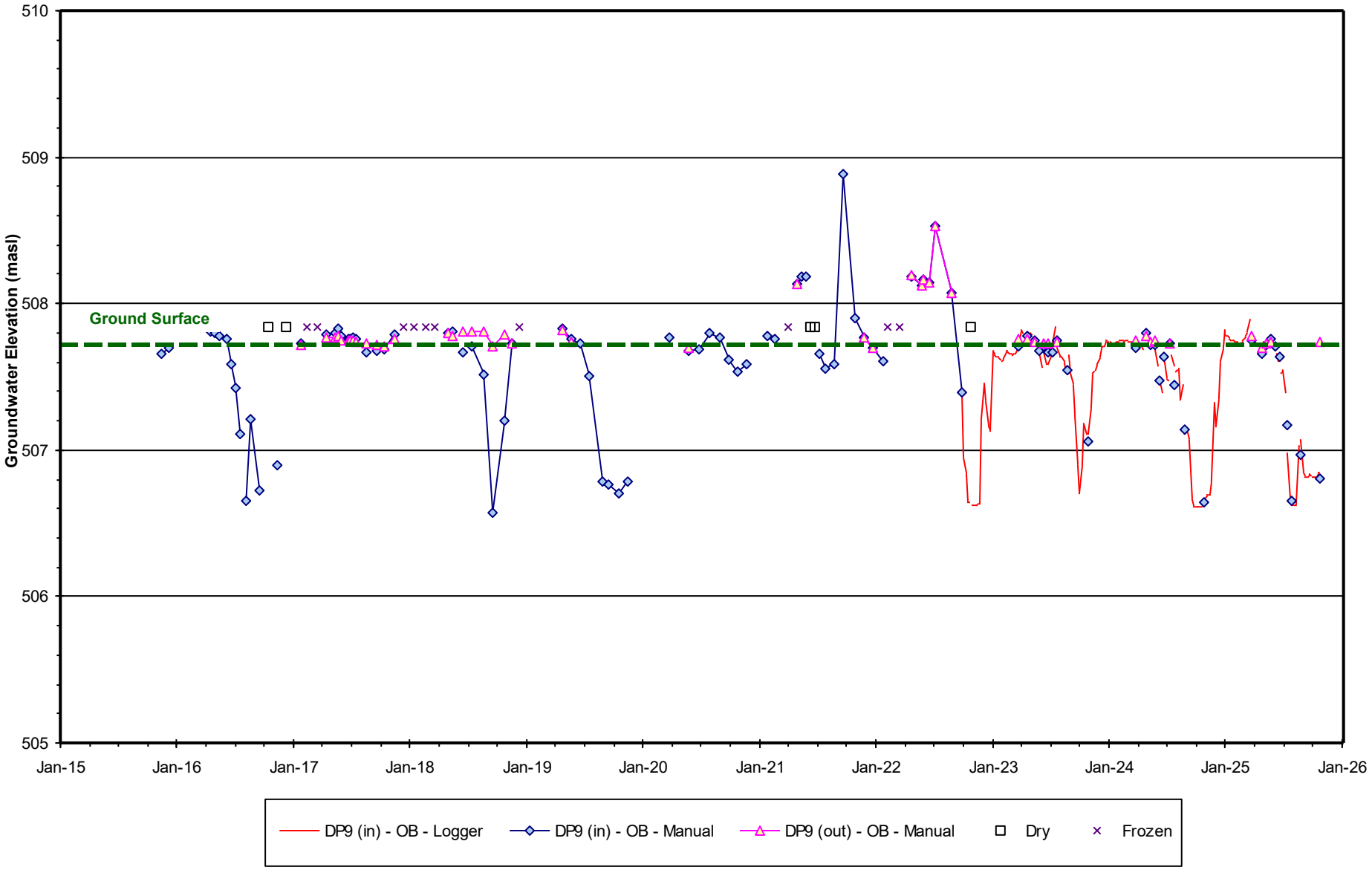
## Figure B-70 Groundwater / Surface Water Hydrograph

### DP8 - Rob Roy Swamp 6 Northwest Portion



## Figure B-71 Groundwater / Surface Water Hydrograph

### DP9 - ANSI Wetland B North Portion



## Figure B-72 Groundwater / Surface Water Hydrograph

### Bridson DP - ANSI Wetland B South Portion

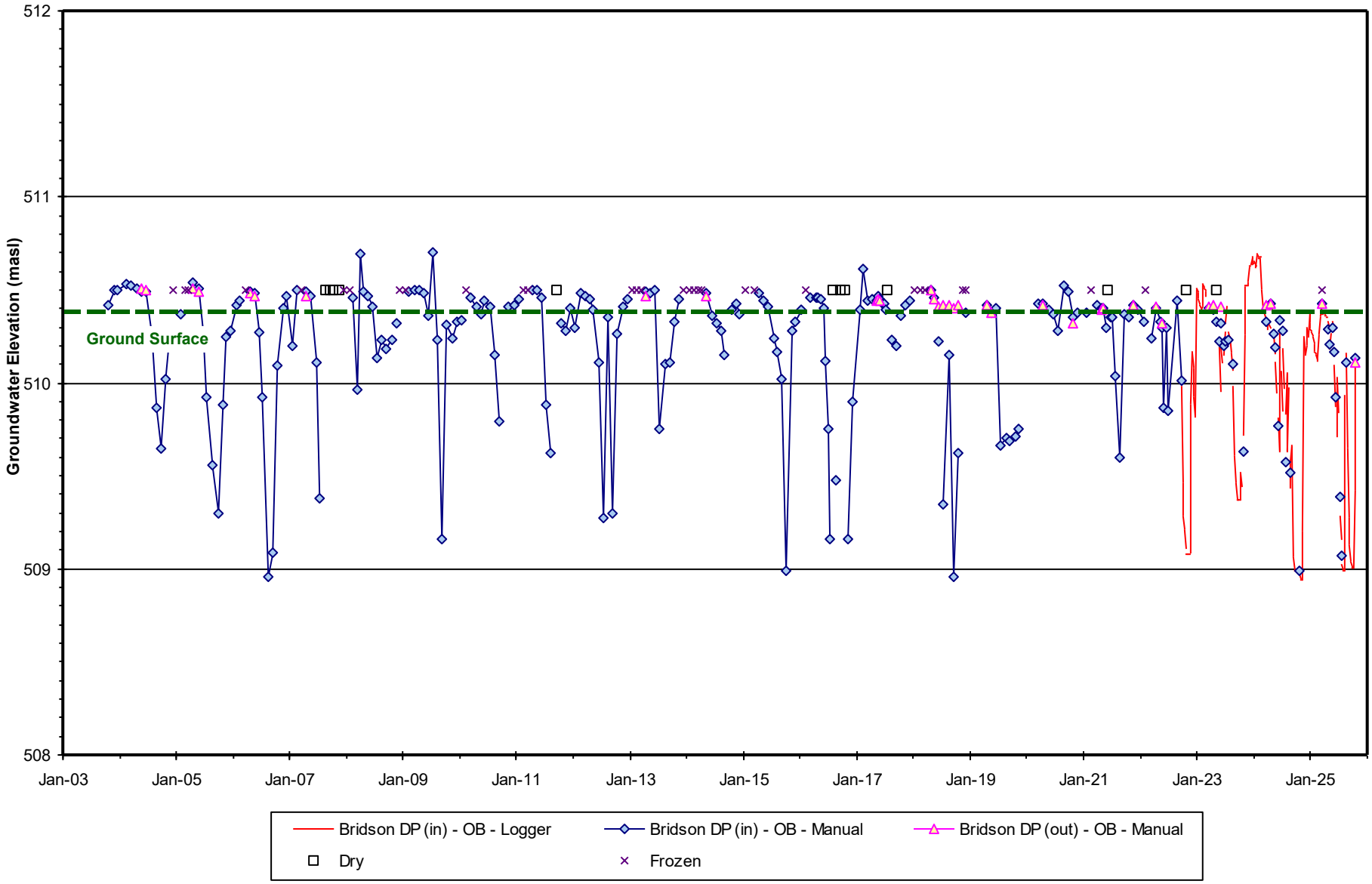
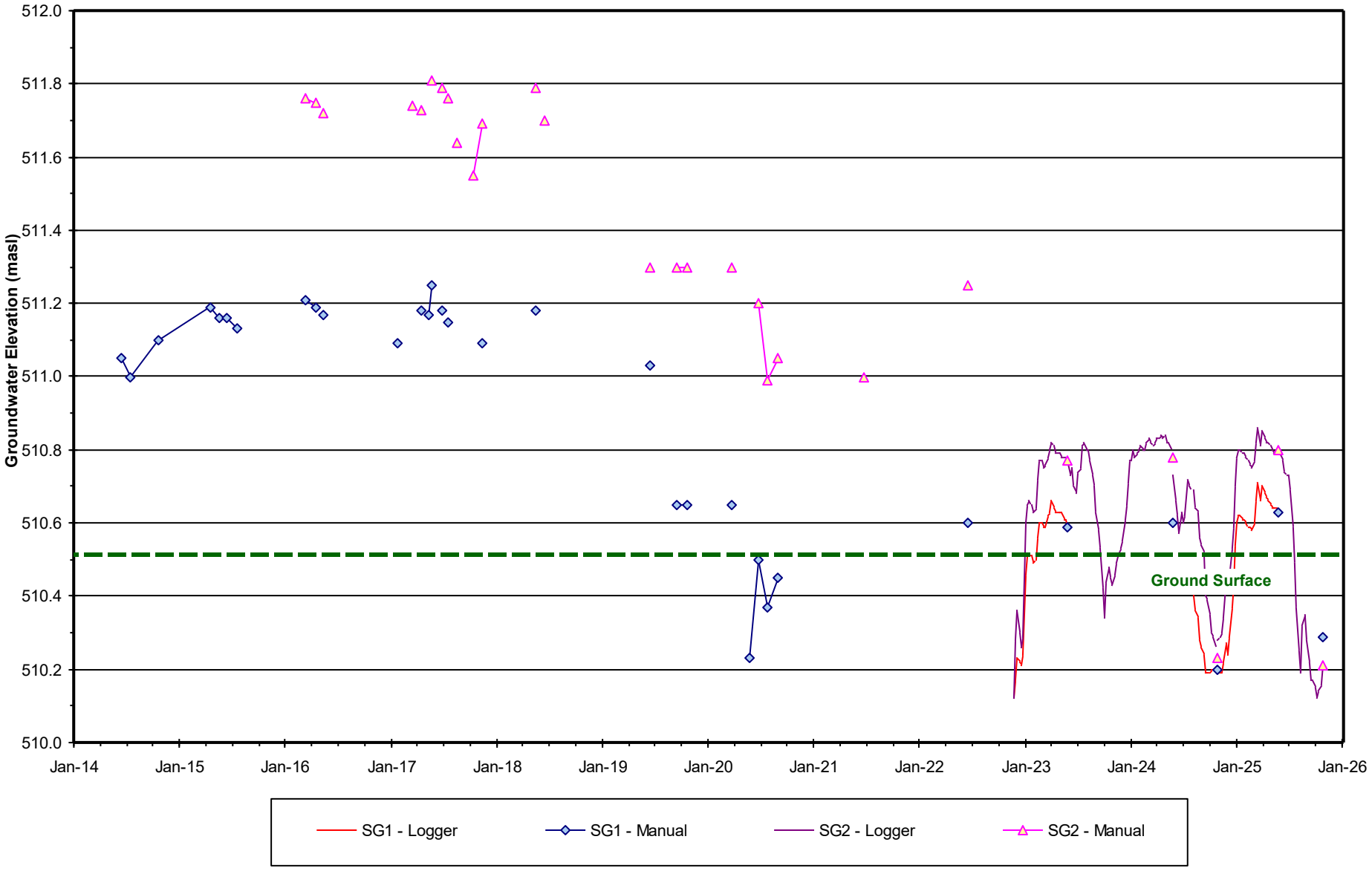


**Figure B-73 Groundwater / Surface Water Hydrograph**

**Staff Gauges at Nest BH03-7 - Rob Roy Swamp 2**



## Appendix B Table Notation for Groundwater Elevation Data

| *Notation* | *Description* | | |
|---|---|---|---|
| mg/L | milligrams per Litre<br>• values in mg/L unless otherwise noted | Colour | provided in True Colour Units (TCU) |
| | | Turbidity | provided in Nephelometric Turbidity Units (NTU) |
| pH | provided in Scientific Units | T S S | Total Suspended Solids |
| E C | Electrical Conductivity<br>provided in microSiemens per centimetre | T D S | Total Dissolved Solids |
| | | T K N | Total Kjehldahl Nitrogen |
| T | Temperature<br>provided in degrees Celsius | T P | Total Phosphorus |
| | | Total Coliforms | provided in colony forming units (cfu) per 100 mL (cfu / 100 mL) |
| µg/L | micrograms per Litre | E.Coli | |
| VOC results | provided in ug/L | Heterotropic Plate Count | provided in cfu / mL |

| **FORMATION NOTATION** | | | |
|---|---|---|---|
| OB | Overburden | AF | Amabel / Fossil Hill |
| AM | Amabel Formation | CH | Cabot Head Formation |
| FH | Fossil Hill Formation | MT | Manitoulin Formation |

| **ODWQS** | Ontario Drinking Water Quality Standards (June 2003 and updates) | | |
|---|---|---|---|
| *MAC* | Maximum Acceptable Concentration | *AO* | Aesthetic objective |
| *IMAC* | Interim Maximum Acceptable Concentration | *OG* | Operational Guideline |
| nc | no OWDQS criteria | | |
| | shading indicates an exceedance of the ODWQS criteria | | |
| ***a*** | **heterotrophic plate count**: | | |
| | Results are not an indicator of water safety and, as such, should not be used as an indicator of potential adverse human health effects. However, sudden increases above normal baseline levels can indicated a change in raw water quality or indicate a problem with drinking water treatment. | | |

| | |
|---|---|
| mASL | metres above sea level |
| | • elevation data in mASL unless otherwise noted |
| TOP | Top of Pipe |
| | • refer to Monitor Construction Details (Table A-1, Appendix A) for information on elevation data |
| (1) | Well dry |
| (2) | Well frozen and / or snow covered |
| (3) | Well inaccessible |
| (4) | Moist ground noted around drivepoint |
| (5) | Anomalous data |
| (6) | No data due to overgrowth (NDOGN). Total coliforms and / or E. coli not detected |
| blank | water level data not available |
| < value | parameter not detected above associated laboratory reported detection limit |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells



| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 18-May-95 | 520.2 | | | | |
| 25-May-95 | 520.0 | | | | |
| 22-May-96 | 520.7 | | | | |
| 8-Jul-96 | 519.8 | | | | |
| 6-Sep-96 | 519.1 | | | | |
| 23-Dec-96 | 520.8 | | | | |
| 26-Feb-97 | 522.2 | | | | |
| 8-May-97 | 520.8 | | | | |
| 26-Aug-97 | 519.2 | | | | |
| 19-Dec-97 | 520.0 | | | | |
| 27-Feb-98 | 519.8 | | | | |
| 8-Apr-98 | 522.3 | | | | |
| 10-May-98 | 519.0 | | | | |
| 29-Dec-98 | 519.4 | | | | |
| 24-Feb-99 | 520.7 | | 519.9 | 511.2 | |
| 28-Apr-99 | 520.4 | | 520.4 | 511.1 | |
| 26-May-99 | 519.7 | | 519.5 | 510.1 | |
| 29-Jun-99 | 519.0 | | 518.8 | 509.0 | |
| 26-Jul-99 | 518.9 | 511.7 | 518.4 | 508.2 | 511.9 |
| 17-Aug-99 | 518.7 | 511.6 | 518.2 | 507.6 | 511.5 |
| 27-Sep-99 | 518.3 | 511.3 | 517.5 | 507.0 | 511.4 |
| 25-Oct-99 | 518.3 | 511.4 | 517.6 | 507.0 | 511.2 |
| 21-Nov-99 | 519.2 | 511.5 | 519.0 | 508.3 | 511.6 |
| 21-Dec-99 | 520.1 | 511.9 | 519.1 | 508.4 | 511.7 |
| 25-Jan-00 | 520.3 | 511.2 | 520.3 | 510.3 | 511.0 |
| 29-Feb-00 | 520.3 | 511.7 | 520.6 | 510.4 | 511.8 |
| 31-Mar-00 | 520.3 | 511.1 | 520.3 | 511.2 | 511.2 |
| 2-Jun-00 | 520.8 | 510.0 | 520.8 | 513.1 | 510.1 |
| 7-Jul-00 | 520.8 | 509.4 | 520.3 | 511.3 | 509.5 |
| 27-Aug-00 | 519.7 | 509.0 | 519.0 | 509.9 | 509.1 |
| 28-Sep-00 | 519.6 | 508.9 | 519.3 | 510.1 | 509.0 |
| 3-Nov-00 | 519.1 | 507.8 | 518.7 | 509.0 | 507.9 |
| 22-Feb-01 | 521.0 | 508.1 | (2) | 512.1 | 508.2 |
| 22-Mar-01 | 520.2 | 506.6 | (2) | 511.1 | 506.7 |
| 26-Apr-01 | 521.4 | 509.6 | 521.3 | 513.4 | 509.7 |
| 31-May-01 | 519.6 | 506.3 | 519.3 | 510.6 | 506.4 |
| 28-Jun-01 | 519.1 | 507.2 | 518.7 | 509.9 | 507.3 |
| 1-Aug-01 | 518.6 | 506.9 | 518.0 | 508.9 | 507.0 |
| 4-Oct-01 | 518.1 | 505.7 | 517.3 | 508.4 | 505.8 |
| 1-Nov-01 | 519.4 | 507.6 | 519.3 | 510.2 | 507.7 |
| 14-Dec-01 | 520.1 | 506.8 | 519.7 | 510.9 | 506.9 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells



| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 10-Jan-02 | 519.5 | 506.0 | 519.2 | 510.8 | 506.1 |
| 14-Mar-02 | 521.4 | 508.6 | 520.8 | 512.2 | 508.7 |
| 16-May-02 | 519.9 | 508.5 | 519.6 | 511.8 | 508.6 |
| 20-Jun-02 | 519.0 | 508.1 | 518.6 | 510.6 | 508.3 |
| 11-Jul-02 | 518.1 | 507.6 | 520.6 | 509.7 | 507.8 |
| 13-Sep-02 | 515.6 | 505.8 | 516.0 | 508.0 | 505.9 |
| 1-Nov-02 | 513.1 | 508.8 | 514.6 | 507.2 | 508.9 |
| 16-Jan-03 | 510.9 | 507.2 | (2) | 507.0 | 507.3 |
| 28-Mar-03 | 512.7 | 510.5 | 516.6 | 513.3 | 510.6 |
| 15-May-03 | 513.3 | 508.1 | 516.0 | 511.1 | 508.2 |
| 23-Jun-03 | 511.9 | 509.0 | 514.7 | 510.4 | 508.1 |
| 22-Jul-03 | 510.7 | | 513.2 | 509.8 | 508.0 |
| 20-Aug-03 | 509.8 | 507.9 | 512.2 | 508.8 | 508.0 |
| 25-Sep-03 | 509.1 | 507.3 | 511.7 | 507.7 | 507.4 |
| 22-Oct-03 | 508.7 | 507.3 | 511.4 | 508.7 | 507.4 |
| 25-Nov-03 | 508.9 | 508.6 | 512.4 | 510.7 | 508.7 |
| 22-Dec-03 | 510.2 | 508.6 | 513.6 | 511.0 | 508.7 |
| 9-Feb-04 | 511.0 | 506.7 | 513.6 | 510.6 | 506.8 |
| 16-Mar-04 | 510.6 | 507.6 | (2) | 512.0 | 507.7 |
| 20-Apr-04 | 514.4 | 509.4 | 517.8 | 512.9 | 509.5 |
| 18-May-04 | 512.4 | 508.4 | 515.5 | 511.4 | 508.5 |
| 22-Jun-04 | 511.2 | 506.8 | 514.3 | 510.9 | 506.9 |
| 28-Jul-04 | 508.9 | 506.9 | 511.7 | 509.6 | 507.0 |
| 25-Aug-04 | 508.2 | 506.5 | 511.0 | 508.3 | 506.6 |
| 22-Sep-04 | 507.8 | 506.1 | 510.5 | 507.4 | 505.9 |
| 19-Oct-04 | 507.4 | 507.4 | 510.2 | 506.8 | 507.5 |
| 16-Nov-04 | 507.1 | 506.3 | 509.8 | 506.6 | 506.4 |
| 16-Dec-04 | 506.8 | 509.5 | 509.6 | 506.7 | 509.6 |
| 31-Jan-05 | 508.5 | 508.1 | 512.0 | 510.7 | 508.3 |
| 24-Feb-05 | 508.5 | 507.4 | 511.8 | 510.0 | 507.5 |
| 22-Mar-05 | 508.1 | 506.9 | 511.4 | 509.4 | 507.0 |
| 20-Apr-05 | 511.6 | 511.9 | 516.6 | 515.0 | 512.0 |
| 25-May-05 | 512.4 | 511.6 | 516.3 | 510.8 | 511.7 |
| 29-Jun-05 | 509.9 | 511.5 | 513.6 | 508.5 | 511.6 |
| 13-Jul-05 | 509.3 | 511.4 | 512.9 | 506.8 | 511.5 |
| 23-Aug-05 | 508.2 | 510.6 | 511.7 | 504.1 | 510.7 |
| 26-Sep-05 | 507.7 | 510.9 | 511.2 | 502.7 | 511.0 |
| 26-Oct-05 | 507.5 | 510.9 | 510.9 | 501.9 | 511.0 |
| 16-Nov-05 | 507.4 | 511.3 | 510.9 | 501.5 | 511.4 |
| 14-Dec-05 | 507.1 | 510.5 | 510.5 | 501.4 | 510.7 |
| 20-Jan-06 | 507.2 | 510.8 | 511.1 | 501.8 | 510.9 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells



| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 14-Feb-06 | 508.8 | 510.5 | 513.0 | 502.1 | 510.6 |
| 19-Mar-06 | 511.9 | 511.8 | 516.3 | 505.2 | 511.9 |
| 17-Apr-06 | 512.9 | 511.7 | 517.6 | 504.5 | 511.8 |
| 19-May-06 | 511.3 | 510.0 | 515.5 | 502.0 | 510.1 |
| 19-Jun-06 | 509.5 | 508.8 | 513.3 | 500.7 | 508.9 |
| 10-Jul-06 | 508.6 | 509.3 | 512.3 | 500.5 | 509.4 |
| 21-Aug-06 | 507.6 | 509.1 | 510.9 | 500.4 | 509.2 |
| 18-Sep-06 | 507.1 | 509.0 | 510.3 | 500.4 | 509.1 |
| 17-Oct-06 | 506.8 | 509.2 | 509.9 | 500.4 | 509.3 |
| 20-Nov-06 | 507.1 | 509.8 | 511.1 | 500.5 | 510.0 |
| 15-Dec-06 | 508.4 | 510.2 | 512.8 | 500.8 | 510.3 |
| 22-Jan-07 | 509.3 | 509.2 | 513.3 | 500.9 | 509.3 |
| 19-Feb-07 | 508.8 | 508.5 | 512.4 | 500.7 | (2) |
| 18-Mar-07 | 508.4 | 509.8 | 512.2 | 501.0 | 509.9 |
| 17-Apr-07 | 511.9 | 510.8 | 516.2 | 501.1 | 510.9 |
| 17-May-07 | 510.2 | 509.4 | 514.0 |  | 509.5 |
| 21-Jun-07 | 508.6 | 507.8 | 512.3 | 502.2 | 507.9 |
| 17-Jul-07 | 508.0 | 508.4 | 511.4 | 502.1 | 508.5 |
| 21-Aug-07 | 507.4 | 508.6 | 510.5 | 501.9 | 508.7 |
| 16-Sep-07 | 506.9 | 508.9 | 510.0 | 502.1 | 509.0 |
| 14-Oct-07 | 506.6 | 508.9 | 509.6 | 502.0 | 509.0 |
| 18-Nov-07 | 506.4 | 508.8 | 509.4 | 502.1 | 508.9 |
| 13-Dec-07 | 506.4 | 508.8 | 509.5 | 502.0 | 508.8 |
| 20-Jan-08 | 510.1 | 511.3 | (2) | 502.6 | 511.2 |
| 17-Feb-08 | 510.2 | 510.6 | 514.3 | 502.5 | 510.7 |
| 16-Mar-08 | 510.3 | 510.4 | 514.5 | 502.4 | 510.8 |
| 6-Apr-08 | 511.6 | 510.6 | 515.8 | 502.3 | 511.7 |
| 20-Apr-08 | 514.1 | 511.8 | 518.8 | 502.8 | 512.0 |
| 18-May-08 | 511.9 | 510.5 | 516.3 | 502.5 | 510.6 |
| 15-Jun-08 | 509.9 | 509.8 | 514.3 | 502.3 | 509.9 |
| 13-Jul-08 | 509.3 | 510.0 | 513.6 | 502.0 | 510.1 |
| 17-Aug-08 | 508.1 | 510.2 | 512.2 | 502.0 | 510.2 |
| 14-Sep-08 |  | 509.9 | 512.1 | 502.1 | 510.0 |
| 19-Oct-08 | 507.9 | 509.7 | 511.6 | 502.0 | 509.8 |
| 16-Nov-08 |  | 510.1 |  |  | 510.2 |
| 23-Nov-08 | 508.6 |  | 513.4 | 502.3 |  |
| 14-Dec-08 | 509.3 | 510.3 | 513.9 | 502.5 | 510.6 |
| 18-Jan-09 |  | 510.7 | 514.2 | 502.3 | (2) |
| 8-Feb-09 | 510.6 | 510.6 | 514.3 | 502.6 | 510.9 |
| 15-Mar-09 | 510.7 | 510.5 | 514.4 | 502.6 | 510.6 |
| 12-Apr-09 | 512.3 | 510.9 | 516.1 | 502.6 | 511.0 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells



| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 17-May-09 | 511.9 | 510.5 | 516.1 | 502.4 | 510.5 |
| 14-Jun-09 | 511.2 | 509.8 | 514.2 | 502.2 | 509.9 |
| 12-Jul-09 | 510.8 | 509.4 | 513.1 | 502.0 | 509.5 |
| 9-Aug-09 | 509.8 | 509.5 | 512.1 | 502.2 | 508.6 |
| 13-Sep-09 | 507.4 | 509.6 | 510.5 | 501.9 | 508.7 |
| 11-Oct-09 | 508.1 | 509.9 | 510.9 | 502.1 | 508.9 |
| 15-Nov-09 | 509.4 | 510.2 | 510.7 | 501.9 | 509.0 |
| 13-Dec-09 | 510.2 | 510.2 | 510.9 | 502.0 | 509.1 |
| 17-Jan-10 | 510.4 | 510.1 | 511.0 | 501.5 | 508.8 |
| 7-Feb-10 | 510.9 | 510.2 | 511.3 | 502.2 | 509.3 |
| 14-Mar-10 | 511.4 | 510.6 | | 502.6 | 510.0 |
| 18-Apr-10 | 510.9 | 511.0 | 515.0 | 502.6 | 511.1 |
| 16-May-10 | 509.3 | 510.7 | 513.9 | 502.2 | 511.0 |
| 8-Jun-10 | | | | | |
| 13-Jun-10 | 508.5 | 510.6 | 513.1 | 501.2 | 510.9 |
| 21-Jul-10 | 508.4 | 510.9 | 512.9 | 501.0 | 511.2 |
| 16-Aug-10 | 508.5 | 510.8 | 512.8 | 500.9 | 511.1 |
| 12-Sep-10 | 508.4 | 511.0 | 512.1 | 501.9 | 511.3 |
| 26-Sep-10 | | | | | |
| 17-Oct-10 | 507.8 | 510.3 | 511.4 | 501.8 | 510.4 |
| 14-Nov-10 | 508.0 | 510.4 | 511.3 | 501.9 | 510.5 |
| 19-Dec-10 | (2) | (2) | 511.5 | 502.3 | 510.9 |
| 16-Jan-11 | | (2) | 512.4 | 502.3 | 511.1 |
| 20-Feb-11 | | 510.8 | 512.4 | 502.3 | 510.9 |
| 13-Mar-11 | 510.7 | 510.9 | 512.5 | 502.4 | 511.0 |
| 17-Apr-11 | 512.9 | 511.4 | 517.7 | 503.0 | 511.0 |
| 15-May-11 | 513.0 | 511.8 | 518.0 | 502.6 | 512.0 |
| 13-Jun-11 | 512.0 | 511.2 | 516.2 | 502.4 | 510.7 |
| 17-Jul-11 | 511.8 | 510.3 | 515.9 | 502.3 | 509.5 |
| 14-Aug-11 | 511.4 | 509.8 | 515.1 | 501.9 | 510.0 |
| 18-Sep-11 | 511.3 | 509.7 | 515.0 | 501.3 | 510.0 |
| 16-Oct-11 | 507.2 | 509.5 | 513.9 | 502.0 | 509.7 |
| 20-Nov-11 | 508.1 | 510.3 | 514.1 | 501.7 | 510.4 |
| 18-Dec-11 | 508.6 | 510.4 | 514.2 | 502.1 | 510.5 |
| 15-Jan-12 | 508.8 | 510.5 | 514.3 | 502.2 | 510.6 |
| 19-Feb-12 | 508.7 | 510.0 | 514.0 | 502.2 | 510.2 |
| 26-Feb-12 | | | | 502.0 | |
| 18-Mar-12 | | 512.5 | 515.6 | | 511.0 |
| 15-Apr-12 | 507.5 | 514.1 | 516.8 | 502.3 | 507.8 |
| 13-May-12 | 509.7 | 514.0 | 516.5 | 502.2 | 507.6 |
| 17-Jun-12 | 509.1 | 513.9 | 516.4 | 502.0 | 507.5 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells

| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 15-Jul-12 | 509.0 | 513.7 | 516.1 | 502.0 | 507.3 |
| 12-Aug-12 | 507.6 | 513.6 | 516.6 | 502.3 | 507.9 |
| 16-Sep-12 | 507.4 | 510.2 | 511.0 | 501.9 | 510.3 |
| 7-Oct-12 | | | | 501.9 | |
| 14-Oct-12 | 507.8 | 510.0 | 511.0 | 501.8 | 510.3 |
| 18-Nov-12 | 508.5 | 510.4 | 512.1 | 502.3 | 511.0 |
| 16-Dec-12 | 508.9 | 510.5 | 512.4 | 502.2 | 511.1 |
| 13-Jan-13 | 509.9 | 511.7 | 513.7 | 503.1 | 511.5 |
| 17-Feb-13 | 510.3 | 512.0 | 514.1 | 503.0 | 511.6 |
| 17-Mar-13 | 509.9 | 511.9 | 513.9 | 503.0 | 511.6 |
| 31-Mar-13 | | | | 503.3 | |
| 14-Apr-13 | 510.0 | 512.3 | 514.0 | 502.6 | 511.7 |
| 12-May-13 | 512.0 | 513.3 | 516.3 | 502.4 | 511.1 |
| 2-Jun-13 | | | | 502.3 | |
| 16-Jun-13 | 511.8 | 513.2 | 516.1 | 501.1 | 510.7 |
| 14-Jul-13 | 511.5 | 512.8 | 516.1 | 502.3 | 510.6 |
| 18-Aug-13 | 508.9 | 511.7 | 516.0 | 501.9 | 510.8 |
| 15-Sep-13 | 508.9 | 511.6 | 515.9 | 501.9 | 510.6 |
| 13-Oct-13 | 508.8 | 511.0 | 515.9 | 502.0 | 510.7 |
| 17-Nov-13 | 508.3 | 511.4 | 516.1 | 502.0 | 510.8 |
| 16-Dec-13 | 508.4 | 511.3 | 516.0 | 502.0 | 510.7 |
| 19-Jan-14 | 508.5 | 511.5 | 516.1 | 502.0 | 510.6 |
| 16-Feb-14 | 508.5 | 511.6 | (2) | 502.1 | 510.4 |
| 17-Mar-14 | 508.6 | 511.7 | (2) | 502.0 | 510.5 |
| 13-Apr-14 | 510.6 | 513.5 | (2) | 503.0 | 511.3 |
| 11-May-14 | 509.1 | 511.5 | 517.2 | 502.5 | 510.2 |
| 15-Jun-14 | | 511.0 | 516.1 | 502.1 | 509.7 |
| 13-Jul-14 | 509.1 | 510.6 | 515.0 | 502.0 | 509.5 |
| 17-Aug-14 | 509.2 | 509.6 | 514.9 | 502.0 | 507.3 |
| 7-Sep-14 | 509.6 | 511.1 | 515.0 | 502.0 | 511.2 |
| 12-Sep-14 | | | | 502.0 | |
| 19-Oct-14 | 509.7 | 509.6 | 515.0 | 502.0 | 511.3 |
| 16-Nov-14 | 507.7 | 511.0 | 512.0 | 502.0 | 511.5 |
| 14-Dec-14 | 507.7 | 511.0 | 512.0 | 501.9 | 511.4 |
| 18-Jan-15 | 507.8 | 511.4 | 512.1 | 501.9 | 510.7 |
| 15-Feb-15 | | | | | |
| 15-Mar-15 | 507.9 | 511.6 | 511.7 | 502.3 | 511.7 |
| 19-Apr-15 | 511.6 | 511.9 | 514.7 | 502.6 | 512.0 |
| 17-May-15 | 509.4 | 511.7 | 513.7 | 502.2 | 511.8 |
| 14-Jun-15 | 509.8 | 511.8 | 512.3 | 502.2 | 511.9 |
| 19-Jul-15 | 507.6 | 511.7 | 512.3 | 502.1 | 511.8 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells

| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 9-Aug-15 | 507.2 | 511.6 | 511.6 | 502.2 | 511.7 |
| 6-Sep-15 | 507.1 | 511.5 | 511.0 | 501.9 | 511.6 |
| 11-Oct-15 | 507.0 | 511.2 | 510.4 | 501.9 | 511.3 |
| 15-Nov-15 | 506.6 | 511.6 | 510.2 | 502.0 | 511.7 |
| 6-Dec-15 | 506.4 | 511.6 | 510.1 | 501.9 | 511.7 |
| 17-Jan-16 | 506.4 | 511.6 | 510.5 | 502.0 | 511.7 |
| 14-Feb-16 | 507.2 | 511.5 | 511.6 | 502.1 | 511.7 |
| 13-Mar-16 | 509.6 | 512.0 | 515.5 | 502.8 | 512.1 |
| 17-Apr-16 | 511.6 | 511.9 | 517.3 | 502.7 | 512.0 |
| 1-May-16 | | | | | |
| 15-May-16 | 509.6 | 511.8 | 514.6 | 502.3 | 511.9 |
| 5-Jun-16 | | | | | |
| 19-Jun-16 | 508.1 | 511.6 | 512.5 | 502.1 | 511.7 |
| 3-Jul-16 | | | | | |
| 17-Jul-16 | 507.2 | 511.5 | 511.2 | 501.9 | 511.6 |
| 24-Jul-16 | | | | 501.9 | |
| 7-Aug-16 | | | | | |
| 21-Aug-16 | 506.5 | 511.5 | 510.2 | 501.9 | 511.7 |
| 18-Sep-16 | 506.2 | 511.6 | 509.8 | 501.9 | 511.7 |
| 16-Oct-16 | 506.0 | 511.5 | 509.6 | 501.9 | 511.7 |
| 13-Nov-16 | 505.8 | 511.5 | 509.4 | 501.8 | 511.6 |
| 27-Nov-16 | | | | 501.9 | |
| 11-Dec-16 | 505.7 | 511.5 | 509.3 | 501.8 | 511.6 |
| 15-Jan-17 | 505.8 | 511.8 | 510.1 | 502.2 | 511.9 |
| 12-Feb-17 | 506.5 | 511.6 | 511.0 | 502.1 | 511.7 |
| 19-Mar-17 | 509.1 | 511.7 | 514.4 | 502.4 | 511.8 |
| 9-Apr-17 | | | | 502.7 | |
| 16-Apr-17 | 509.9 | 511.9 | 515.6 | 502.6 | 512.0 |
| 11-May-17 | 511.6 | 511.9 | 517.2 | 502.7 | 512.0 |
| 21-May-17 | | | | 502.6 | |
| 13-Jun-17 | | | | 502.3 | |
| 25-Jun-17 | 509.5 | 511.9 | 515.1 | 502.4 | 512.0 |
| 19-Jul-17 | 509.5 | 511.9 | 515.1 | 502.4 | 512.0 |
| 3-Aug-17 | | | | 503.2 | |
| 17-Aug-17 | 508.2 | 511.7 | 513.2 | 502.1 | 511.8 |
| 29-Aug-17 | | | | | |
| 17-Sep-17 | 507.4 | 511.7 | 511.4 | 502.1 | 511.8 |
| 26-Sep-17 | | | | 502.0 | |
| 15-Oct-17 | 506.9 | 511.7 | 510.9 | 502.1 | 511.8 |
| 14-Nov-17 | 506.8 | 511.6 | 511.0 | 502.1 | 511.7 |
| 11-Dec-17 | 507.6 | 511.6 | 512.1 | 502.2 | 511.7 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells



| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 14-Jan-18 | 507.7 | 511.8 | 512.2 | 502.4 | 511.9 |
| 11-Feb-18 | | | | 502.2 | |
| 18-Feb-18 | 508.6 | 512.5 | 513.2 | 502.8 | 512.6 |
| 18-Mar-18 | 509.6 | 511.7 | 514.7 | 502.4 | 511.8 |
| 15-Apr-18 | 508.6 | 511.9 | 513.6 | 502.5 | 512.0 |
| 17-May-18 | 510.4 | 511.9 | 515.7 | 502.6 | 512.0 |
| 18-Jun-18 | 508.8 | 511.7 | 513.4 | 502.2 | 511.8 |
| 17-Jul-18 | 507.9 | 511.6 | 512.1 | 502.0 | 511.7 |
| 22-Aug-18 | 507.0 | 511.6 | 510.9 | 502.1 | 511.7 |
| 18-Sep-18 | 506.8 | 511.6 | 510.5 | 501.9 | 511.7 |
| 23-Oct-18 | 506.2 | 511.5 | 509.8 | 501.9 | 511.6 |
| 19-Nov-18 | 506.0 | 511.5 | 510.0 | 502.1 | (2) |
| 10-Dec-18 | | 511.7 | | 502.1 | (2) |
| 17-Jan-19 | 507.4 | 511.7 | 512.2 | 502.2 | 510.8 |
| 14-Feb-19 | 508.3 | 511.8 | 513.1 | (2) | 511.9 |
| 11-Mar-19 | 508.1 | 511.6 | 513.0 | 502.5 | 511.7 |
| 26-Apr-19 | 510.7 | 512.2 | 516.7 | 502.9 | 512.3 |
| 22-May-19 | 510.2 | 511.9 | 516.1 | 502.5 | 512.0 |
| 19-Jun-19 | 509.4 | 511.8 | 514.4 | 502.3 | 511.8 |
| 19-Jul-19 | 508.2 | 511.7 | 512.5 | 502.0 | 511.8 |
| 27-Aug-19 | 507.3 | 511.8 | 511.2 | 502.0 | 511.8 |
| 16-Sep-19 | 508.1 | 511.7 | 512.4 | 502.0 | 511.8 |
| 21-Oct-19 | 507.7 | 511.7 | 511.5 | 502.0 | 511.8 |
| 18-Nov-19 | 507.9 | 511.8 | 511.6 | 502.0 | 511.8 |
| 17-Dec-19 | 508.5 | 511.8 | 512.5 | 502.0 | 511.9 |
| 14-Jan-20 | 509.8 | 511.9 | 513.7 | 502.3 | 511.9 |
| 18-Feb-20 | (2) | (2) | (2) | (2) | 508.4 |
| 24-Mar-20 | 505.9 | 512.0 | 514.4 | | 512.2 |
| 22-Apr-20 | 510.2 | | 515.6 | | |
| 27-May-20 | | | | 502.3 | 511.9 |
| 26-Jun-20 | 509.4 | 511.9 | 513.8 | 502.2 | |
| 28-Jul-20 | 508.0 | (5) | 514.9 | 502.1 | 511.9 |
| 31-Aug-20 | 508.3 | (5) | 511.5 | (5) | 511.7 |
| 28-Sep-20 | 506.9 | 510.9 | 509.5 | 501.5 | |
| 27-Oct-20 | | (5) | (5) | 501.7 | 511.6 |
| 24-Nov-20 | | 512.6 | 510.9 | 501.9 | 511.7 |
| 21-Dec-20 | | 512.4 | 512.3 | 502.0 | 511.5 |
| 29-Jan-21 | (2) | 512.2 | 513.7 | 502.1 | 511.3 |
| 19-Feb-21 | (2) | (2) | (2) | 503.1 | (2) |
| 31-Mar-21 | (3) | 512.2 | (5) | 503.4 | 512.3 |
| 29-Apr-21 | 508.8 | 511.4 | (5) | 500.7 | 512.5 |

## Table B-1 Groundwater Elevations - Main Quarry Monitoring Wells

| Well Name | MW6 | BH98-8 | BH98-9 | BH98-12 | PW99-1 |
|---|---|---|---|---|---|
| Flow System | AM | AF | AF | AF | AF |
| Date TOP | 534.9 | 517.3 | 526.4 | 527.2 | 514.0 |
| 28-May-21 | 508.8 | 510.9 | 509.8 | 502.1 | 512.3 |
| 25-Jun-21 | (5) | 511.2 | 510.8 | 501.4 | 512.1 |
| 26-Jul-21 | 507.6 | 511.7 | 511.6 | 500.9 | 511.8 |
| 24-Aug-21 | 507.1 | 511.6 | 511.0 | 501.9 | 511.8 |
| 22-Sep-21 | 506.8 | (3) | 511.7 | 501.2 | 511.6 |
| 29-Oct-21 | 507.0 | (3) | 511.7 | 501.7 | 511.4 |
| 24-Nov-21 | 508.9 | 512.1 | 511.3 | 502.2 | 511.3 |
| 23-Dec-21 | 509.5 | 512.3 | 512.4 | 502.3 | 511.3 |
| 26-Jan-22 | (2) | 511.2 | (2) | 501.2 | 510.2 |
| 10-Feb-22 | 507.9 | 510.7 | (2) | 500.3 | 509.4 |
| 16-Mar-22 | 509.0 | (2) | (2) | 501.3 | (2) |
| 22-Apr-22 | 510.2 | 511.0 | 510.0 | 502.5 | 512.3 |
| 26-May-22 | 509.8 | 511.1 | 510.4 | 502.5 | 512.3 |
| 20-Jun-22 | 510.2 | 511.0 | 510.5 | (5) | 512.4 |
| 31-Aug-22 | 506.9 | 511.7 | 511.2 | 501.9 | 511.9 |
| 28-Sep-22 | | 511.8 | | 502.0 | 512.0 |
| 29-Sep-22 | 506.7 | | 510.3 | | |
| 26-Oct-22 | | | 510.1 | | |
| 28-Oct-22 | 506.4 | 511.7 | | 501.8 | 511.8 |
| 21-Nov-22 | | | 509.8 | | |
| 27-Mar-23 | 507.2 | | | | |
| 30-May-23 | 509.4 | | 514.3 | | |
| 31-May-23 | | 512.0 | | 502.2 | 512.1 |
| 31-Oct-23 | | 511.9 | | | 512.0 |
| 1-Nov-23 | 506.8 | | 510.5 | 501.9 | |
| 27-May-24 | 509.6 | | | | |
| 28-May-24 | | 512.0 | 514.3 | | 512.1 |
| 29-May-24 | | | | 502.2 | |
| 28-Oct-24 | 507.0 | | | | |
| 29-Oct-24 | | | 510.8 | | |
| 30-Oct-24 | | 511.8 | | 501.9 | 512.0 |
| 26-May-25 | 509.6 | 512.1 | 514.5 | | 512.2 |
| 28-May-25 | | | | 502.2 | |
| 28-Oct-25 | 506.7 | 511.8 | 510.5 | | 512.0 |
| 29-Oct-25 | | | | 501.9 | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 28-Mar-03 | | 521.1 | 526.3 | 526.4 | 511.1 | | | 521.8 | | | |
| 2-May-03 | 514.5 | 517.8 | (1) | 521.9 | 510.6 | | | 519.5 | 510.3 | 510.1 | |
| 16-May-03 | 514.3 | 517.3 | 521.2 | 521.0 | 510.4 | | | 519.1 | 510.2 | 510.0 | |
| 25-Jun-03 | 515.0 | 517.1 | (1) | 520.4 | 509.1 | | | 518.6 | 510.0 | 509.9 | |
| 22-Jul-03 | 514.7 | 516.8 | (1) | 519.6 | 509.7 | | | 517.8 | 510.7 | 510.7 | |
| 20-Aug-03 | 513.2 | 516.3 | (1) | 518.8 | 509.1 | | | 517.3 | 509.2 | 509.4 | |
| 25-Sep-03 | 511.6 | 515.8 | (1) | 518.2 | 508.7 | | | 516.8 | 508.7 | 508.9 | |
| 22-Oct-03 | 512.8 | 515.5 | (1) | 517.9 | 509.2 | | | 516.9 | 509.2 | 509.6 | |
| 25-Nov-03 | 514.4 | 518.0 | 522.9 | 522.6 | 510.5 | | | 519.6 | 510.2 | 510.0 | |
| 22-Dec-03 | 514.5 | 518.0 | 522.5 | 522.2 | 510.5 | | | 519.1 | 510.2 | 510.0 | |
| 9-Feb-04 | 514.2 | 517.3 | 521.0 | 520.8 | 510.2 | | | 518.4 | (2) | 509.9 | |
| 16-Mar-04 | 514.8 | 518.2 | 523.1 | 522.9 | 510.7 | | | 519.8 | (2) | 510.1 | |
| 20-Apr-04 | 515.3 | 518.5 | 523.5 | 523.4 | 511.0 | | | 520.5 | 510.5 | 510.1 | |
| 18-May-04 | 515.8 | 517.6 | 522.0 | 521.7 | 510.5 | | | 520.7 | 510.2 | 510.0 | |
| 22-Jun-04 | 514.3 | 517.3 | 521.3 | 521.1 | 510.2 | | | 518.6 | 510.2 | 510.1 | |
| 28-Jul-04 | 513.6 | 516.7 | (1) | 519.4 | 509.8 | | | 517.6 | 509.7 | 509.8 | |
| 25-Aug-04 | 512.5 | 516.2 | (1) | 517.8 | 508.9 | | | 517.1 | 509.1 | 509.2 | |
| 22-Sep-04 | 512.5 | 515.8 | (1) | 518.2 | 508.8 | | | 516.6 | 508.8 | 509.0 | |
| 19-Oct-04 | 512.2 | 515.5 | (1) | 517.9 | 508.5 | | | 516.3 | 508.5 | 508.8 | |
| 16-Nov-04 | 512.1 | 515.2 | (1) | 517.6 | 508.6 | | | 516.0 | 508.6 | 509.0 | |
| 16-Dec-04 | 512.0 | 515.1 | (1) | 517.5 | 509.1 | | | 515.9 | 509.1 | 509.5 | |
| 31-Jan-05 | 514.4 | 517.5 | 521.7 | 521.4 | 510.4 | | | 518.5 | (2) | 510.0 | |
| 24-Feb-05 | 514.1 | 517.3 | 520.8 | 520.5 | 510.2 | | | 518.0 | 509.8 | 510.0 | |
| 22-Mar-05 | (2) | 517.2 | 520.6 | 520.4 | 510.2 | | | (2) | 509.9 | 510.0 | |
| 20-Apr-05 | 517.7 | 521.5 | 526.3 | 526.1 | 511.5 | | | 522.0 | 510.8 | 510.2 | |
| 25-May-05 | 514.3 | 517.5 | 521.9 | 521.7 | 510.4 | | | 519.0 | 510.2 | 510.0 | |
| 29-Jun-05 | 513.6 | 517.0 | 520.0 | 519.8 | 510.0 | | | 517.9 | 509.9 | 509.9 | |
| 13-Jul-05 | 513.3 | 516.8 | 520.3 | 519.4 | 509.6 | | | 517.5 | 509.5 | 509.6 | |
| 23-Aug-05 | 512.2 | 516.0 | (1) | 518.4 | 508.9 | | | 516.6 | 508.9 | 509.0 | |
| 26-Sep-05 | 511.6 | 515.6 | (1) | 517.9 | 508.4 | | | 516.0 | 508.4 | 508.5 | |
| 26-Oct-05 | 511.3 | 515.2 | (1) | 517.6 | 508.2 | | | 515.7 | 508.3 | 508.5 | |
| 16-Nov-05 | 511.2 | 515.0 | (1) | 517.4 | 508.3 | | | 515.6 | 508.4 | 509.3 | |
| 14-Dec-05 | 510.6 | 515.1 | (1) | 517.7 | 509.0 | | | 515.9 | 509.1 | 509.4 | |
| 20-Jan-06 | 510.7 | 517.7 | 521.8 | 523.1 | 510.1 | | | 517.8 | 510.0 | 509.9 | |
| 14-Feb-06 | (2) | 517.8 | 522.2 | 521.9 | 510.4 | | | 517.8 | 510.2 | 510.0 | |
| 19-Mar-06 | 515.4 | 519.4 | 524.3 | 524.3 | 511.0 | | | 520.4 | (2) | 510.1 | |
| 17-Apr-06 | 515.4 | 518.6 | 523.6 | 523.4 | 511.1 | | | 520.7 | 510.1 | 510.1 | |
| 19-May-06 | 513.4 | 517.3 | 521.5 | 521.3 | 510.4 | | | 518.8 | 510.2 | 510.0 | |
| 19-Jun-06 | 511.5 | 516.9 | (1) | 519.7 | 510.0 | | | 517.8 | 509.9 | 509.9 | |
| 10-Jul-06 | 510.6 | 516.5 | (1) | 519.0 | 509.5 | | | 517.2 | 509.5 | 509.5 | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 22-Aug-06 | 509.8 | 515.7 | (1) | 518.1 | 508.7 | | | 516.1 | 508.7 | 508.7 | |
| 18-Sep-06 | 509.3 | 515.4 | (1) | 517.7 | 508.4 | | | 515.7 | 508.4 | 508.5 | |
| 17-Oct-06 | 508.8 | 515.1 | (1) | 517.4 | 508.5 | | | 515.5 | 508.5 | 509.0 | |
| 20-Nov-06 | 509.2 | 517.7 | 522.2 | 523.3 | 510.3 | | | 518.8 | 510.2 | 510.0 | |
| 15-Dec-06 | 511.7 | 518.7 | 523.4 | 523.7 | 510.7 | | | 520.3 | 510.4 | 510.1 | |
| 28-Dec-06 | | | | | | | | | | | |
| 5-Jan-07 | | | | | | | | | | | |
| 12-Jan-07 | | | | | | | | | | | |
| 19-Jan-07 | | | | | | | | | | | |
| 22-Jan-07 | 512.1 | 517.5 | 521.6 | 521.4 | 510.4 | | | 518.6 | 510.2 | 510.0 | |
| 26-Jan-07 | | | | | | | | | | | |
| 2-Feb-07 | | | | | | | | | | | |
| 9-Feb-07 | | | | | | | | | | | |
| 16-Feb-07 | | | | | | | | | | | |
| 19-Feb-07 | (2) | 516.6 | 520.3 | 520.1 | 510.2 | | | 517.7 | 510.0 | 510.0 | |
| 22-Feb-07 | | | | | | | | | | | |
| 2-Mar-07 | | | | | | | | | | | |
| 9-Mar-07 | | | | | | | | | | | |
| 16-Mar-07 | | | | | | | | | | | |
| 18-Mar-07 | 512.1 | 518.8 | 523.7 | 523.3 | 510.7 | | | 519.9 | (2) | 510.1 | |
| 19-Mar-07 | | | | | | | | | | | |
| 5-Apr-07 | | | | | | | | | | | |
| 13-Apr-07 | | | | | | | | | | | |
| 15-Apr-07 | 513.1 | 518.3 | 523.0 | 522.8 | 510.8 | | | 520.1 | 510.2 | 510.1 | |
| 17-Apr-07 | | | | | | | | | | | |
| 20-Apr-07 | | | | | | | | | | | |
| 27-Apr-07 | | | | | | | | | | | |
| 4-May-07 | | | | | | | | | | | |
| 11-May-07 | | | | | | | | | | | |
| 17-May-07 | 512.2 | 517.2 | 521.0 | 520.7 | 510.3 | | | 518.4 | 510.2 | 510.0 | |
| 18-May-07 | | | | | | | | | | | |
| 25-May-07 | | | | | | | | | | | |
| 1-Jun-07 | | | | | | | | | | | |
| 8-Jun-07 | | | | | | | | | | | |
| 14-Jun-07 | | | | | | | | | | | |
| 21-Jun-07 | 510.0 | 516.8 | (1) | 519.5 | 509.8 | | | 517.6 | 509.8 | 509.8 | |
| 29-Jun-07 | | | | | | | | | | | |
| 6-Jul-07 | | | | | | | | | | | |
| 17-Jul-07 | 508.8 | 516.3 | (1) | 518.7 | 509.3 | | | 516.8 | 509.2 | 509.3 | |
| 20-Jul-07 | | | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 27-Jul-07 | | | | | | | | | | | |
| 3-Aug-07 | | | | | | | | | | | |
| 10-Aug-07 | | | | | | | | | | | |
| 17-Aug-07 | | | | | | | | | | | |
| 21-Aug-07 | 508.0 | 515.6 | (1) | 518.0 | 508.6 | | | 515.8 | 508.6 | 508.5 | |
| 30-Aug-07 | | | | | | | | | | | |
| 7-Sep-07 | | | | | | | | | | | |
| 12-Sep-07 | 507.6 | | | 517.6 | | | | | | 508.5 | |
| 14-Sep-07 | | | | | | | | | | | |
| 18-Sep-07 | 507.5 | 515.2 | (1) | 517.5 | 508.3 | | | 515.6 | 508.3 | 508.4 | |
| 28-Sep-07 | | | | | | | | | | | |
| 14-Oct-07 | 507.1 | 514.9 | (1) | 517.2 | 508.1 | | | 515.1 | 508.2 | 508.3 | |
| 2-Nov-07 | | | | | | | | | | | |
| 9-Nov-07 | | | | | | | | | | | |
| 16-Nov-07 | | | | | | | | | | | |
| 18-Nov-07 | 506.7 | 514.8 | (1) | 517.1 | 508.5 | | | 514.8 | 508.6 | 508.3 | |
| 22-Nov-07 | | | | | | | | | | | |
| 2-Dec-07 | | | | | | | | | | | |
| 9-Dec-07 | 506.5 | 514.7 | (1) | 517.2 | 509.0 | | | 514.7 | 509.1 | 509.5 | |
| 13-Dec-07 | | | | | | | | | | | |
| 28-Dec-07 | | | | | | | | | | | |
| 4-Jan-08 | | | | | | | | | | | |
| 11-Jan-08 | | | | | | | | | | | |
| 18-Jan-08 | | | | | | | | | | | |
| 20-Jan-08 | 513.9 | 518.5 | 523.2 | 523.0 | 510.7 | | | 519.8 | (2) | 510.1 | |
| 24-Jan-08 | | | | | | | | | | | |
| 4-Feb-08 | | | | | | | | | | | |
| 8-Feb-08 | | | | | | | | | | | |
| 15-Feb-08 | | | | | | | | | | | |
| 21-Feb-08 | 512.6 | 518.3 | 522.2 | 522.0 | 510.5 | | | 518.7 | (2) | 510.1 | |
| 29-Feb-08 | | | | | | | | | | | |
| 7-Mar-08 | | | | | | | | | | | |
| 14-Mar-08 | | | | | | | | | | | |
| 19-Mar-08 | 512.5 | 518.0 | 522.0 | 521.9 | 510.3 | | | 519.8 | (2) | 510.0 | |
| 28-Mar-08 | | | | | | | | | | | |
| 4-Apr-08 | | | | | | | | | | | |
| 7-Apr-08 | 513.8 | 522.0 | 526.4 | 526.3 | 510.7 | | | 520.8 | 510.4 | 510.2 | |
| 11-Apr-08 | | | | | | | | | | | |
| 18-Apr-08 | | | | | | | | | | | |
| 20-Apr-08 | 515.6 | 519.3 | 524.5 | 524.4 | 511.2 | | | 522.2 | 510.7 | 510.2 | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 21-Apr-08 | | | | | | | | | | | |
| 3-May-08 | | | | | | | | | | | |
| 8-May-08 | | | | | | | | | | | |
| 20-May-08 | 513.1 | 517.4 | 521.8 | 520.8 | 510.5 | | | 519.1 | 510.2 | 510.0 | |
| 25-May-08 | | | | | | | | | | | |
| 6-Jun-08 | | | | | | | | | | | |
| 13-Jun-08 | | | | | | | | | | | |
| 16-Jun-08 | 511.0 | 517.0 | (1) | 519.9 | 509.8 | | | 517.8 | 510.0 | 509.9 | |
| 20-Jun-08 | | | | | | | | | | | |
| 27-Jun-08 | | | | | | | | | | | |
| 4-Jul-08 | | | | | | | | | | | |
| 11-Jul-08 | | | | | | | | | | | |
| 14-Jul-08 | 509.2 | 516.8 | 521.5 | 519.6 | 509.6 | | | 516.9 | 509.8 | 509.8 | |
| 25-Jul-08 | | | | | | | | | | | |
| 1-Aug-08 | | | | | | | | | | | |
| 3-Aug-08 | | | | | | | | | | | |
| 15-Aug-08 | | | | | | | | | | | |
| 18-Aug-08 | 508.1 | 516.2 | (1) | 518.7 | 509.9 | | | 517.3 | 509.9 | 509.8 | |
| 4-Sep-08 | 507.6 | 516.0 | | 518.4 | | | | 516.9 | | | |
| 5-Sep-08 | | | | | | | | | | | |
| 12-Sep-08 | | | | | | | | | | | |
| 14-Sep-08 | 507.5 | 515.9 | (1) | 518.3 | 509.7 | | | 516.8 | 509.8 | 509.8 | |
| 15-Sep-08 | | | | | | | | | | | |
| 3-Oct-08 | | | | | | | | | | | |
| 10-Oct-08 | | | | | | | | | | | |
| 19-Oct-08 | 507.5 | 517.0 | (1) | 520.0 | 510.6 | | | 517.3 | 509.8 | 509.8 | |
| 20-Oct-08 | | | | | | | | | | | |
| 14-Nov-08 | | | | | | | | | | | |
| 16-Nov-08 | | | | | | | | | | | |
| 23-Nov-08 | 508.6 | | (1) | 523.1 | 510.9 | | | 520.1 | 510.0 | 509.9 | |
| 30-Nov-08 | | | | | | | | | | | |
| 7-Dec-08 | | | | | | | | | | | |
| 14-Dec-08 | | 516.3 | 524.5 | 523.4 | 511.3 | | | 520.5 | 510.3 | 510.3 | |
| 28-Dec-08 | | | | | | | | | | | |
| 4-Jan-09 | | | | | | | | | | | |
| 18-Jan-09 | 516.5 | 515.9 | 522.6 | 522.4 | 510.2 | | | 519.4 | (2) | (2) | |
| 8-Feb-09 | 516.4 | | 520.8 | 520.7 | 510.5 | | | 518.1 | 510.2 | 510.2 | |
| 15-Feb-09 | | | | | | | | | | | |
| 1-Mar-09 | | | | | | | | | | | |
| 15-Mar-09 | 514.3 | 516.6 | 524.5 | 524.3 | 511.0 | | | 520.8 | 510.6 | 510.1 | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 26-Mar-09 | | | | | | | | | | | |
| 29-Mar-09 | | | | | | | | | | | |
| 12-Apr-09 | 513.8 | 517.2 | 524.7 | 524.7 | 511.1 | | | 520.8 | 510.7 | 510.7 | |
| 26-Apr-09 | | | | | | | | | | | |
| 3-May-09 | | | | | | | | | | | |
| 10-May-09 | | | | | | | | | | | |
| 17-May-09 | 513.0 | 517.3 | 525.0 | 524.9 | 511.3 | | | 521.1 | 510.6 | 510.7 | |
| 24-May-09 | | | | | | | | | | | |
| 7-Jun-09 | | | | | | | | | | | |
| 14-Jun-09 | 510.9 | 517.1 | 520.5 | 520.3 | 510.1 | | | 518.0 | 510.0 | 510.1 | |
| 21-Jun-09 | | | | | | | | | | | |
| 28-Jun-09 | | | | | | | | | | | |
| 12-Jul-09 | 509.1 | 516.8 | (1) | 519.1 | 509.5 | | | 517.2 | 509.7 | 509.8 | |
| 19-Jul-09 | | | | | | | | | | | |
| 9-Aug-09 | 507.5 | 516.6 | 520.0 | 519.0 | 509.3 | | | 516.3 | 509.7 | 509.7 | |
| 16-Aug-09 | | | | | | | | | | | |
| 23-Aug-09 | | | | | | | | | | | |
| 13-Sep-09 | 506.6 | 515.3 | (1) | 517.6 | 508.9 | | | 515.4 | 508.8 | 509.0 | |
| 20-Sep-09 | | | | | | | | | | | |
| 11-Oct-09 | 506.4 | 515.0 | 520.2 | 517.4 | 509.1 | | | 515.6 | 509.2 | 509.5 | |
| 15-Nov-09 | 506.1 | 515.2 | 520.3 | 517.5 | 509.2 | | | 515.2 | 509.4 | 509.7 | |
| 29-Nov-09 | 506.0 | | | 518.2 | | | | | | 509.6 | |
| 13-Dec-09 | 506.0 | 515.3 | (1) | 519.1 | 509.7 | | | 515.9 | 509.7 | 509.8 | |
| 17-Jan-10 | 506.0 | 516.6 | (1) | 519.3 | 509.8 | | | 516.4 | 509.8 | 509.8 | |
| 7-Feb-10 | 506.1 | 517.0 | 520.4 | 520.1 | 509.9 | | | 516.8 | 509.8 | 509.9 | |
| 14-Mar-10 | 509.3 | 519.2 | 521.5 | 520.4 | 510.9 | | | 520.7 | 510.6 | 510.5 | |
| 18-Apr-10 | 513.4 | 518.1 | 522.3 | 522.0 | 510.7 | | | 520.1 | 510.1 | 510.4 | |
| 16-May-10 | 511.3 | 517.7 | 521.7 | 521.4 | 510.9 | | | 519.8 | 510.1 | 510.4 | |
| 8-Jun-10 | 510.8 | | | 520.8 | | | | | 510.1 | 510.4 | |
| 13-Jun-10 | 510.6 | 516.9 | 520.3 | 521.0 | 509.6 | | | 518.9 | 510.0 | 510.3 | |
| 21-Jul-10 | 509.9 | 517.0 | 520.4 | 520.3 | 510.3 | | | 518.4 | 510.0 | 510.3 | |
| 16-Aug-10 | 509.1 | 516.9 | 520.2 | 520.0 | 509.6 | | | 517.8 | 510.0 | 510.2 | |
| 12-Sep-10 | 507.5 | | (1) | 518.8 | 509.5 | | | 516.8 | 509.4 | 509.6 | |
| 26-Sep-10 | 507.0 | | | 518.5 | | | | | | 509.7 | |
| 17-Oct-10 | 506.8 | 516.8 | 520.2 | 519.5 | 509.9 | | | 517.0 | 509.8 | 509.8 | |
| 14-Nov-10 | 506.8 | 516.9 | | 519.5 | 510.1 | | | 518.6 | 509.9 | 509.9 | |
| 19-Dec-10 | 507.4 | 517.0 | 521.5 | 521.2 | 510.4 | | | 518.5 | 510.2 | 510.0 | |
| 16-Jan-11 | | 517.3 | 522.2 | 521.0 | 510.6 | | | 519.3 | (2) | (2) | |
| 20-Feb-11 | 507.2 | 517.2 | 522.3 | 522.1 | 510.5 | | | 518.8 | (2) | (2) | |
| 13-Mar-11 | 506.9 | 517.9 | 522.5 | 522.2 | 510.6 | | | 519.4 | 510.0 | 510.1 | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 17-Apr-11 | 514.3 | 518.2 | 523.4 | 523.2 | 511.1 | | | 520.7 | 510.6 | 510.1 | |
| 15-May-11 | 513.4 | 518.3 | 523.5 | 523.5 | 511.0 | | | 521.3 | 510.6 | 510.1 | |
| 13-Jun-11 | 512.5 | 517.0 | 522.1 | 521.9 | 510.5 | | | 519.5 | 510.6 | 510.0 | |
| 3-Jul-11 | 510.6 | | | | | | | | | | |
| 17-Jul-11 | 509.7 | 516.9 | (1) | 520.2 | 509.8 | | | 517.8 | 509.7 | 509.7 | |
| 14-Aug-11 | 507.7 | | (1) | 518.7 | 509.4 | | | 517.7 | 509.6 | 509.6 | |
| 18-Sep-11 | 507.3 | 516.7 | (1) | 516.1 | 507.3 | | | 517.5 | 507.5 | 507.5 | |
| 17-Oct-11 | 507.1 | 515.9 | (1) | 516.0 | 507.1 | | | 515.0 | 507.7 | 507.7 | |
| 20-Nov-11 | 505.9 | 515.8 | (1) | 518.6 | 509.7 | | | 516.0 | 509.7 | 509.8 | |
| 18-Dec-11 | 505.9 | 516.0 | 522.1 | 521.8 | 509.8 | | | 515.6 | 510.3 | 510.0 | |
| 15-Jan-12 | 506.2 | 516.0 | 521.7 | 520.9 | 510.8 | | | 518.4 | 510.2 | 510.0 | |
| 19-Feb-12 | 505.2 | 516.0 | 521.4 | 521.2 | 510.3 | | | 518.4 | 510.2 | 510.0 | |
| 26-Feb-12 | 509.7 | | | 520.5 | | | | | | 510.0 | |
| 18-Mar-12 | 511.8 | 519.9 | 525.1 | 524.7 | 511.3 | | | 521.4 | 510.8 | 510.2 | |
| 15-Apr-12 | 512.7 | 518.0 | 521.4 | 521.3 | 510.3 | | | 518.7 | 510.0 | 510.1 | |
| 13-May-12 | 510.0 | 517.5 | 520.4 | 520.1 | 510.2 | | | 518.3 | 510.0 | 510.1 | |
| 17-Jun-12 | 508.1 | 517.3 | (1) | 519.0 | 509.1 | | | 517.3 | 509.8 | 509.8 | |
| 1-Jul-12 | 507.2 | | | 515.8 | | | | | | 509.5 | |
| 15-Jul-12 | 506.7 | 516.5 | (1) | 518.1 | 509.3 | | | 516.4 | 509.4 | 509.4 | |
| 12-Aug-12 | 507.8 | 517.5 | (1) | 518.1 | 509.8 | | | 516.3 | 509.9 | 509.9 | |
| 16-Sep-12 | 505.8 | 515.8 | (1) | 518.4 | 509.3 | | | 516.2 | 509.3 | 509.5 | |
| 9-Oct-12 | 505.7 | | | 518.3 | | | | | | 509.4 | |
| 14-Oct-12 | 506.3 | 515.7 | (1) | 518.2 | 509.3 | | | 516.1 | 509.5 | 509.4 | |
| 18-Nov-12 | 509.4 | 516.3 | 522.9 | 523.1 | 510.8 | | | 520.4 | 510.0 | 510.6 | |
| 16-Dec-12 | 510.2 | 517.7 | 523.8 | 523.9 | 511.0 | | | 519.2 | 510.2 | 510.7 | |
| 13-Jan-13 | 511.2 | 519.7 | 524.5 | 524.0 | 511.3 | | | 520.9 | 510.6 | 510.1 | |
| 17-Feb-13 | 510.7 | 518.9 | 524.6 | 524.1 | 511.1 | | | 521.6 | 510.6 | 510.1 | |
| 17-Mar-13 | 510.8 | 518.9 | 524.6 | 524.0 | 511.0 | | | 521.6 | 510.6 | 510.0 | |
| 31-Mar-13 | 510.8 | | | 521.5 | | | | | | 510.1 | |
| 14-Apr-13 | 513.2 | 519.3 | 524.8 | 522.1 | 511.2 | | | 521.3 | 510.7 | 510.1 | |
| 12-May-13 | 513.5 | 517.6 | 522.2 | 522.1 | 511.0 | | | 519.5 | 510.0 | 510.3 | |
| 2-Jun-13 | 511.4 | | | 521.7 | | | | | | 510.1 | |
| 16-Jun-13 | 510.8 | 517.4 | 525.6 | 521.2 | 510.7 | | | 518.8 | 510.0 | 510.0 | |
| 14-Jul-13 | 509.1 | 516.9 | 522.3 | 520.4 | 510.6 | | | 518.2 | 509.8 | 508.9 | |
| 18-Aug-13 | 507.4 | 516.8 | 522.2 | 520.4 | 510.5 | | | 517.2 | 509.8 | 509.8 | |
| 15-Sep-13 | 506.7 | 516.7 | 522.1 | 518.2 | 510.4 | | | 516.4 | 509.7 | 509.8 | |
| 13-Oct-13 | 506.9 | 516.5 | 520.2 | 520.6 | 510.2 | | | 518.1 | 510.1 | 510.0 | |
| 17-Nov-13 | 507.3 | 518.0 | 520.3 | 520.9 | 510.2 | | | 518.3 | 510.3 | 510.2 | |
| 15-Dec-13 | 507.1 | 517.8 | 520.3 | 520.8 | 510.2 | | | 518.3 | 510.4 | 510.3 | |
| 19-Jan-14 | 507.2 | 517.8 | 520.2 | 520.8 | 510.2 | | | 518.4 | (2) | (2) | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 16-Feb-14 | 507.4 | 517.9 | 520.3 | 522.1 | 510.3 | | | 518.5 | (2) | (2) | |
| 17-Mar-14 | 507.4 | 517.9 | 520.4 | 522.0 | 510.4 | | | 518.5 | (2) | (2) | |
| 13-Apr-14 | 515.9 | 522.2 | 527.4 | 526.7 | 512.0 | | | 522.6 | 510.6 | 510.6 | |
| 11-May-14 | 513.2 | 516.9 | 522.6 | 521.9 | 510.4 | | | 519.7 | 510.3 | 510.3 | |
| 15-Jun-14 | 509.8 | 516.8 | (1) | 520.0 | 509.8 | | | 517.6 | 509.9 | 510.0 | |
| 13-Jul-14 | 510.0 | 516.7 | 520.1 | 519.9 | 509.7 | | | 517.0 | 510.0 | 510.0 | |
| 17-Aug-14 | 506.1 | 516.2 | (1) | 517.5 | 509.6 | | | 515.5 | 509.5 | 509.7 | |
| 7-Sep-14 | 505.5 | 515.0 | (1) | 517.2 | 509.5 | | | 515.2 | 509.5 | 509.6 | |
| 12-Sep-14 | 505.5 | | | 517.2 | | | | | | 509.7 | |
| 19-Sep-14 | | | | | | | | | | | |
| 19-Oct-14 | 505.3 | 515.3 | (1) | 518.0 | 509.5 | | | 514.8 | 510.2 | 510.2 | |
| 2-Nov-14 | 505.5 | | | | | | | | | | |
| 16-Nov-14 | 506.3 | 516.5 | 521.7 | 520.9 | 510.5 | | | 518.1 | 510.0 | 510.3 | |
| 14-Dec-14 | 506.4 | 516.5 | 521.8 | 521.0 | 510.6 | | | 518.1 | 510.3 | 510.4 | |
| 18-Jan-15 | 508.7 | 516.7 | 521.3 | 521.1 | 510.4 | | | 517.8 | (2) | (2) | |
| 15-Feb-15 | | | | | | | | | | | |
| 15-Mar-15 | 507.0 | 516.2 | (1) | 518.5 | 510.0 | 510.2 | 510.1 | 516.0 | 510.0 | 509.8 | |
| 19-Apr-15 | 513.8 | 518.4 | 522.2 | 521.8 | 511.0 | 511.1 | | 520.2 | 510.1 | 510.6 | 511.0 |
| 17-May-15 | 510.2 | 517.0 | (1) | 520.0 | 510.3 | 510.4 | 510.3 | 517.7 | 510.0 | 510.1 | 510.6 |
| 14-Jun-15 | 508.1 | 517.1 | (1) | 519.0 | 510.2 | 510.3 | | 516.5 | 510.0 | 510.1 | |
| 19-Jul-15 | 507.3 | 517.1 | 520.4 | 520.2 | 510.8 | 510.4 | | 517.4 | 510.0 | 510.1 | |
| 9-Aug-15 | 506.4 | 516.9 | (1) | 519.0 | 509.9 | 510.0 | | 516.2 | 509.8 | 509.9 | |
| 6-Sep-15 | 505.7 | 515.8 | (1) | 518.0 | 509.5 | 509.6 | 509.5 | 515.2 | 509.5 | 509.5 | 509.9 |
| 11-Oct-15 | 505.1 | 514.8 | (1) | 517.1 | 509.0 | 509.2 | 509.1 | 512.8 | 509.1 | 509.0 | 509.5 |
| 15-Nov-15 | 504.9 | 514.6 | (1) | 516.9 | 509.5 | 509.7 | 509.5 | 511.3 | 509.7 | 509.6 | 510.0 |
| 9-Dec-15 | 504.7 | 515.8 | (1) | 517.7 | 509.8 | 510.0 | 509.9 | 510.5 | 509.8 | 509.8 | 510.2 |
| 17-Jan-16 | 505.4 | 517.2 | 520.5 | 520.1 | 510.3 | 510.4 | 510.4 | 509.6 | 510.1 | 510.0 | 510.6 |
| 14-Feb-16 | 507.6 | 517.5 | 520.9 | 520.6 | 510.4 | 510.6 | 510.5 | 509.7 | 510.2 | 510.1 | 510.6 |
| 13-Mar-16 | 514.8 | 520.2 | 523.4 | 523.3 | 511.5 | 511.6 | 511.7 | 516.0 | 510.9 | 510.2 | 511.4 |
| 17-Apr-16 | 514.0 | 518.6 | 523.1 | 523.0 | 511.0 | 511.2 | 511.2 | 514.5 | 510.6 | 510.3 | 510.8 |
| 1-May-16 | | | | | | | | | | | |
| 15-May-16 | 511.5 | 517.1 | 520.5 | 520.3 | 510.2 | 510.8 | 510.6 | 512.6 | 510.2 | 510.1 | 510.7 |
| 5-Jun-16 | | | | | | | | | | | |
| 19-Jun-16 | 508.8 | 516.7 | (1) | 518.3 | 509.9 | 510.1 | 510.0 | 511.0 | 509.9 | 509.9 | 510.3 |
| 3-Jul-16 | | | | | | | | | | | |
| 17-Jul-16 | 506.7 | 515.3 | (1) | 516.8 | 509.4 | 509.6 | 509.5 | 509.8 | 509.4 | 509.4 | 509.8 |
| 24-Jul-16 | 506.3 | | | 516.6 | | | | | | 509.2 | |
| 7-Aug-16 | | | | | | | | | | | |
| 21-Aug-16 | 505.2 | 514.5 | (1) | 516.0 | 508.9 | 509.1 | 509.0 | 509.2 | 508.9 | 509.1 | 509.4 |
| 18-Sep-16 | 504.7 | 514.2 | (1) | 515.5 | 508.6 | 508.8 | 508.7 | 508.9 | 508.6 | 508.8 | 509.1 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 29-Sep-16 | 504.6 | | | 515.3 | | | | | | 508.7 | |
| 16-Oct-16 | 504.4 | 513.8 | (1) | 514.9 | 508.4 | 508.5 | 508.5 | 508.6 | 508.4 | 508.5 | 508.9 |
| 13-Nov-16 | 504.2 | 513.5 | (1) | 514.4 | 508.4 | 508.6 | 508.5 | 508.3 | 508.4 | 508.8 | 508.9 |
| 27-Nov-16 | 504.1 | | | 514.2 | | | | | | 509.3 | |
| 11-Dec-16 | 504.0 | 513.3 | (1) | 514.1 | 508.8 | 508.9 | 508.8 | 508.1 | 508.8 | 509.3 | 509.3 |
| 15-Jan-17 | 504.0 | 517.2 | (1) | 518.9 | 510.4 | 510.5 | 510.4 | 510.1 | 510.2 | 510.0 | 510.6 |
| 12-Feb-17 | 505.2 | 517.1 | (1) | 517.4 | 510.3 | 510.5 | 510.4 | 509.8 | 510.2 | 510.0 | 510.6 |
| 19-Mar-17 | 511.9 | 517.5 | (1) | 519.6 | 510.6 | 510.8 | 510.8 | 510.3 | 510.1 | 510.1 | 510.8 |
| 9-Apr-17 | 512.7 | | | 523.4 | | | | | | 510.2 | |
| 16-Apr-17 | 512.8 | 518.3 | 521.2 | 521.0 | 511.0 | 511.1 | 511.2 | 511.8 | 510.5 | 510.1 | 510.9 |
| 11-May-17 | 513.3 | 517.8 | 521.4 | 521.2 | 510.7 | 511.0 | 511.1 | 513.6 | 510.4 | 510.1 | 510.9 |
| 21-May-17 | 513.0 | | | 520.7 | | | | | | 510.1 | |
| 13-Jun-17 | 511.1 | 518.6 | | | | | | | | | |
| 25-Jun-17 | 510.5 | 517.4 | (1) | 518.8 | 510.7 | 510.9 | 510.9 | 513.2 | 510.4 | 510.1 | 510.8 |
| 19-Jul-17 | 510.5 | 517.4 | (1) | 518.8 | 510.7 | 510.5 | 510.4 | 513.2 | 510.4 | 510.1 | 510.6 |
| 3-Aug-17 | 509.0 | | | 516.3 | | | | | | 510.3 | |
| 17-Aug-17 | 508.0 | 514.9 | (1) | 515.4 | 509.9 | 510.0 | 510.0 | 511.3 | 509.9 | 509.9 | 510.3 |
| 29-Aug-17 | 507.2 | | | 514.5 | | | | | | 509.8 | |
| 17-Sep-17 | 506.3 | 513.5 | (1) | 513.6 | 509.6 | 509.8 | 509.7 | 510.1 | 509.6 | 509.7 | 510.0 |
| 26-Sep-17 | | | | | | | | | | 509.6 | |
| 15-Oct-17 | 505.3 | 513.2 | (1) | 512.8 | 509.9 | 510.0 | 509.9 | 509.1 | 509.9 | 509.9 | 510.3 |
| 14-Nov-17 | 505.2 | 514.8 | (1) | 512.9 | 510.2 | 510.3 | 510.2 | 513.2 | 510.1 | 510.0 | 510.5 |
| 11-Dec-17 | 507.6 | 515.9 | (1) | 513.5 | 510.3 | 510.4 | 510.4 | 509.8 | 510.1 | 510.0 | 510.6 |
| 14-Jan-18 | 509.1 | 518.1 | (1) | 514.2 | 510.8 | 511.0 | 510.9 | 510.4 | (2) | (2) | (2) |
| 11-Feb-18 | 509.8 | | | 514.1 | | | | | | (2) | |
| 18-Feb-18 | 510.2 | 519.4 | 520.3 | 516.5 | 510.7 | 510.9 | 510.8 | (5) | 510.6 | 510.2 | 511.0 |
| 18-Mar-18 | 511.4 | 516.9 | | 514.5 | 510.5 | 510.6 | 510.6 | 512.2 | | | 510.7 |
| 15-Apr-18 | | | | | | | | | | | |
| 18-Apr-18 | 511.0 | 517.2 | | 514.1 | 510.7 | 510.8 | 510.8 | 517.2 | | | |
| 17-May-18 | 512.5 | 517.0 | 520.4 | 515.4 | 510.7 | 511.0 | 510.8 | 513.0 | 510.4 | 510.1 | 510.8 |
| 18-Jun-18 | 509.6 | 514.3 | 520.3 | 512.6 | 510.0 | 510.2 | 510.1 | 511.8 | 509.9 | 509.9 | 510.4 |
| 17-Jul-18 | 507.3 | 513.0 | 520.2 | 511.7 | 509.5 | 509.6 | 509.5 | 511.0 | 509.3 | 509.4 | 509.8 |
| 22-Aug-18 | 505.9 | 512.2 | 520.3 | 511.6 | 508.9 | 509.0 | 509.0 | 509.4 | 509.0 | 509.5 | 509.4 |
| 18-Sep-18 | 504.7 | 511.8 | 520.3 | 510.2 | 508.6 | 508.8 | 508.7 | 508.9 | 508.8 | 508.8 | 509.1 |
| 23-Oct-18 | 504.1 | 511.2 | 520.3 | 509.6 | 508.6 | 508.7 | 508.8 | 508.1 | 508.6 | 508.9 | 509.0 |
| 19-Nov-18 | 504.0 | 512.7 | 520.3 | 509.6 | 509.7 | 509.8 | 509.7 | 507.9 | 509.7 | 509.8 | 510.1 |
| 10-Dec-18 | 504.6 | 516.3 | | 510.9 | 510.2 | 510.4 | 510.2 | | 510.0 | 510.0 | 510.5 |
| 17-Jan-19 | 507.8 | 516.9 | | 512.0 | 510.4 | 510.6 | 510.6 | 509.4 | 510.2 | 510.0 | 510.6 |
| 14-Feb-19 | 509.6 | 516.8 | (2) | 511.8 | (2) | 510.5 | 510.5 | 512.4 | (2) | (2) | 510.6 |
| 11-Mar-19 | 511.1 | 517.9 | | (5) | 510.6 | 511.2 | 511.0 | 510.8 | (2) | 510.1 | 510.6 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 26-Apr-19 | 514.3 | 519.3 | | 514.8 | 511.1 | 511.5 | 511.2 | 513.7 | 510.4 | 510.1 | 511.1 |
| 22-May-19 | 512.2 | 517.0 | | 514.0 | 510.5 | 510.8 | 510.8 | 514.0 | 510.4 | 510.1 | 510.8 |
| 19-Jun-19 | 509.6 | 515.3 | | | 510.1 | 510.4 | 510.4 | 513.4 | 510.1 | 510.0 | 510.5 |
| 19-Jul-19 | 507.8 | 512.7 | | | 509.7 | 509.8 | 509.7 | 511.9 | 509.6 | 509.6 | 510.0 |
| 27-Aug-19 | 505.7 | 511.0 | | | 509.3 | 509.1 | 509.0 | 512.0 | 508.9 | 509.0 | 509.5 |
| 16-Sep-19 | 505.8 | 511.0 | | | 509.2 | 509.1 | 509.0 | 511.9 | 508.6 | 508.5 | 509.2 |
| 21-Oct-19 | 503.9 | 510.1 | | | 508.3 | 508.3 | 508.3 | 511.9 | 508.4 | 508.4 | 509.1 |
| 18-Nov-19 | 504.0 | 510.1 | | | 508.3 | 508.4 | 508.3 | 512.0 | 508.4 | 508.4 | 509.1 |
| 17-Dec-19 | 504.3 | 510.2 | | | 508.4 | 508.8 | 508.7 | 511.9 | 509.8 | 509.8 | 510.3 |
| 14-Jan-20 | 507.1 | 517.1 | | | 510.7 | 510.9 | 510.7 | 512.8 | (5) | 509.6 | (5) |
| 18-Feb-20 | (2) | (2) | | | (2) | (2) | (2) | (2) | (2) | 510.0 | (2) |
| 24-Mar-20 | 512.3 | 517.5 | | | 511.1 | 511.2 | 511.3 | 511.1 | | | |
| 22-Apr-20 | 512.1 | 516.8 | | | 510.7 | 511.0 | 511.0 | 512.8 | 510.3 | 510.1 | 510.8 |
| 27-May-20 | 508.6 | 515.3 | | | 510.3 | 510.4 | 510.3 | | 510.2 | 510.0 | 510.1 |
| 26-Jun-20 | 508.6 | 516.7 | | | 510.2 | 510.5 | 510.4 | 512.3 | 509.8 | 510.2 | 510.6 |
| 28-Jul-20 | | | | | 510.2 | 510.3 | 510.6 | 511.1 | 509.9 | 509.9 | 510.4 |
| 31-Aug-20 | | 512.0 | | | 509.8 | 510.0 | 510.0 | 510.5 | 509.2 | 509.2 | 509.8 |
| 28-Sep-20 | | | | | 510.1 | 510.1 | 510.4 | 509.1 | 509.5 | 509.3 | 510.2 |
| 27-Oct-20 | | 511.1 | | | 509.6 | 510.0 | 510.1 | 509.1 | 509.7 | 509.7 | 510.1 |
| 24-Nov-20 | | 510.8 | | | 510.0 | 509.4 | 510.1 | 509.1 | 509.9 | 509.9 | 510.4 |
| 21-Dec-20 | | 514.8 | | | 510.2 | 511.0 | 510.2 | 510.9 | 509.6 | 509.6 | 510.2 |
| 29-Jan-21 | | 517.1 | | | 510.7 | 510.9 | 510.7 | 512.8 | (5) | 509.6 | (5) |
| 19-Feb-21 | | 516.9 | | | 510.8 | 510.9 | 510.9 | 510.4 | (2) | (2) | (2) |
| 31-Mar-21 | | 516.8 | | | 510.8 | 511.0 | 511.0 | 513.3 | | 509.8 | |
| 29-Apr-21 | | 516.9 | | | 510.8 | 510.8 | 511.0 | 512.5 | 510.3 | 510.0 | 510.7 |
| 28-May-21 | | 511.3 | | | 510.1 | 510.3 | 510.2 | 512.5 | 510.2 | 509.9 | 510.6 |
| 25-Jun-21 | | 510.0 | | | 510.7 | 510.0 | 509.7 | 511.6 | 509.7 | 509.8 | 510.3 |
| 26-Jul-21 | | 507.4 | | | 509.5 | 509.6 | 509.5 | 510.3 | 509.5 | 509.6 | 510.0 |
| 24-Aug-21 | | 507.1 | | | 509.6 | 509.5 | 509.4 | 509.4 | 509.1 | 509.3 | (5) |
| 22-Sep-21 | | 506.9 | | | 509.2 | 509.4 | 509.4 | 511.0 | 509.6 | 509.5 | 509.9 |
| 29-Oct-21 | | 511.1 | | | 509.9 | 510.0 | 509.9 | 509.1 | 509.7 | 509.7 | 510.1 |
| 24-Nov-21 | | 513.9 | | | 510.5 | 510.7 | 510.6 | 510.5 | 510.3 | 510.1 | 510.7 |
| 23-Dec-21 | | 514.2 | | | 510.6 | 510.8 | 510.5 | 510.6 | 510.3 | 510.0 | 510.7 |
| 26-Jan-22 | | 513.4 | | | 510.0 | 510.3 | 510.1 | 509.4 | 510.0 | 509.0 | 509.6 |
| 10-Feb-22 | | 512.8 | | | 509.6 | 509.8 | 509.6 | 508.4 | 509.1 | 508.5 | 509.0 |
| 16-Mar-22 | | (2) | | | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 22-Apr-22 | | 510.7 | | | 510.6 | 510.7 | 510.6 | 514.3 | 510.2 | 510.1 | 510.6 |
| 26-May-22 | | 510.1 | | | 510.4 | 510.3 | 510.5 | 513.2 | 510.2 | 510.0 | 510.6 |
| 20-Jun-22 | | | | | | | | | | | |
| 22-Jun-22 | | 510.2 | | | 510.5 | (5) | 510.6 | 513.3 | 510.3 | 510.0 | 510.7 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH02-1 | BH02-2 | BH02-3 | BH02-4 | BH02-5 | BH02-5 (mid) | BH02-5 (shallow) | BH02-6 | BH03-7-I | BH03-7-II | BH03-7-III |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AM | OB | AF | AM | OB | AF |
| Date TOP | 523.3 | 523.2 | 530.6 | 530.7 | 513.9 | 514.2 | 514.2 | 530.3 | 511.0 | 511.0 | 511.7 |
| 30-Aug-22 | | 506.8 | | | 509.4 | 509.5 | (5) | 511.3 | | | |
| 31-Aug-22 | | | | | | | | | 509.8 | 509.6 | 510.1 |
| 27-Sep-22 | | | | | | | | | | | |
| 28-Sep-22 | | 508.6 | | | 508.6 | 508.7 | 508.7 | 509.0 | | | |
| 29-Sep-22 | | | | | | | | | 508.8 | 509.5 | 509.2 |
| 26-Oct-22 | | | | | | | | | 508.6 | 509.0 | 509.0 |
| 28-Oct-22 | | 505.5 | | | 508.5 | 508.6 | 508.5 | 508.5 | | | |
| 23-Nov-22 | | | | | | | | | 508.5 | | 508.9 |
| 29-May-23 | | | | | | | | | 510.4 | 510.0 | 510.6 |
| 30-May-23 | | 510.6 | | | 510.2 | 510.3 | 510.3 | 512.7 | | | |
| 12-Jul-23 | | | | | | | | | 509.9 | | |
| 30-Oct-23 | | | | | | | | | | | |
| 31-Oct-23 | | | | | | | | | 509.4 | 509.7 | 509.8 |
| 1-Nov-23 | | 510.4 | | | 509.3 | 509.4 | 509.4 | 509.3 | | | |
| 27-May-24 | | | | | | | | 513.7 | | | |
| 28-May-24 | | 510.0 | | | 510.2 | 510.3 | 510.3 | | 510.0 | 510.1 | 510.5 |
| 29-May-24 | | | | | | | | | | | |
| 28-Oct-24 | | | | | 509.1 | 509.2 | 509.2 | 509.4 | | | |
| 29-Oct-24 | | | | | | | | | 509.1 | 509.5 | 509.6 |
| 30-Oct-24 | | | | | | | | | | | |
| 26-May-25 | | | | | 510.4 | 510.5 | 510.5 | 513.3 | 510.3 | 510.1 | 510.7 |
| 28-May-25 | | | | | | | | | | | |
| 27-Oct-25 | | | | | | | | | 508.7 | 509.3 | 509.2 |
| 28-Oct-25 | | | | | 508.6 | 508.7 | 508.7 | 508.9 | | | |
| 29-Oct-25 | | | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 28-Mar-03 | | | | | | | | | | | |
| 2-May-03 | 514.9 | 515.9 | | | | | | | | | |
| 16-May-03 | 514.6 | 515.8 | | | | | | | | | |
| 25-Jun-03 | 514.4 | 515.8 | | | | | | | | | |
| 22-Jul-03 | | 515.8 | | | | | | | | | |
| 20-Aug-03 | 513.9 | 515.8 | | | | | | | | | |
| 25-Sep-03 | 513.6 | 515.7 | | | | | | | | | |
| 22-Oct-03 | 513.7 | 515.8 | | | | | | | | | |
| 25-Nov-03 | 514.4 | 515.9 | | | | | | | | | |
| 22-Dec-03 | 514.8 | 515.8 | | | | | | | | | |
| 9-Feb-04 | 514.7 | 515.8 | | | | | | | | | |
| 16-Mar-04 | 515.2 | 515.9 | | | | | | | | | |
| 20-Apr-04 | 515.9 | 515.9 | | | | | | | | | |
| 18-May-04 | 515.1 | 515.8 | | | | | | | | | |
| 22-Jun-04 | 514.7 | 515.8 | | | | | | | | | |
| 28-Jul-04 | 514.2 | 515.7 | | | | | | | | | |
| 25-Aug-04 | 513.9 | 515.7 | | | | | | | | | |
| 22-Sep-04 | 513.7 | 515.7 | | | | | | | | | |
| 19-Oct-04 | 513.5 | 515.7 | | | | | | | | | |
| 16-Nov-04 | (2) | (2) | 515.7 | 515.7 | 515.7 | | | | | | |
| 16-Dec-04 | 513.3 | (2) | 516.0 | 515.9 | 515.8 | | | | | | |
| 31-Jan-05 | 514.6 | (2) | 515.9 | 515.9 | 515.8 | | | | | | |
| 24-Feb-05 | 514.7 | (2) | 515.9 | 515.9 | 515.8 | | | | | | |
| 22-Mar-05 | 514.5 | (2) | 516.9 | 516.7 | 516.2 | | | | | | |
| 20-Apr-05 | (2) | (2) | 516.1 | 515.9 | 515.8 | | | | | | |
| 25-May-05 | 515.0 | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 29-Jun-05 | 514.3 | 515.8 | 515.8 | 515.8 | 515.8 | | | | | | |
| 13-Jul-05 | 514.2 | 515.7 | 515.8 | 515.7 | 516.7 | | | | | | |
| 23-Aug-05 | 513.8 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 26-Sep-05 | 513.6 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 26-Oct-05 | 513.4 | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 16-Nov-05 | 513.3 | 515.7 | 515.7 | 515.8 | 515.7 | | | | | | |
| 14-Dec-05 | 513.3 | 515.7 | 516.1 | 516.0 | 515.9 | | | | | | |
| 20-Jan-06 | 514.1 | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 14-Feb-06 | 514.6 | (2) | (2) | (2) | (2) | | | | | | |
| 19-Mar-06 | 515.5 | (2) | 516.5 | 516.2 | 516.0 | | | | | | |
| 17-Apr-06 | 516.0 | 516.0 | 516.0 | 515.8 | 515.8 | | | | | | |
| 19-May-06 | 514.9 | 515.8 | 515.8 | 515.8 | 515.8 | | | | | | |
| 19-Jun-06 | 514.4 | 515.8 | 515.8 | 515.8 | 515.7 | | | | | | |
| 10-Jul-06 | 514.1 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 22-Aug-06 | 513.7 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 18-Sep-06 | 513.6 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 17-Oct-06 | 513.5 | 515.7 | 516.1 | 516.0 | 515.9 | | | | | | |
| 20-Nov-06 | 514.2 | 515.9 | 516.3 | 516.1 | 516.0 | | | | | | |
| 15-Dec-06 | 514.9 | 515.9 | 516.1 | 515.9 | 515.8 | | | | | | |
| 28-Dec-06 | | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 5-Jan-07 | | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 12-Jan-07 | | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 19-Jan-07 | | 515.8 | 516.0 | 515.9 | 515.8 | | | | | | |
| 22-Jan-07 | 514.9 | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 26-Jan-07 | | 515.3 | 516.0 | 515.8 | 515.8 | | | | | | |
| 2-Feb-07 | | 515.8 | 515.9 | 515.8 | 515.7 | | | | | | |
| 9-Feb-07 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 16-Feb-07 | | 515.7 | 515.9 | 515.8 | 515.8 | | | | | | |
| 19-Feb-07 | 514.5 | 515.8 | 515.9 | 515.8 | 515.7 | | | | | | |
| 22-Feb-07 | | 515.7 | | 515.8 | 515.7 | | | | | | |
| 2-Mar-07 | | 515.7 | | 515.8 | 515.7 | | | | | | |
| 9-Mar-07 | | 515.7 | | 515.8 | 515.7 | | | | | | |
| 16-Mar-07 | | 516.0 | 516.3 | 516.1 | 516.0 | | | | | | |
| 18-Mar-07 | 515.1 | | | | | | | | | | |
| 19-Mar-07 | | 515.9 | 516.3 | 515.9 | 515.9 | | | | | | |
| 5-Apr-07 | | 516.0 | 516.7 | 516.3 | 516.1 | | | | | | |
| 13-Apr-07 | | 515.9 | 516.3 | 516.0 | 515.9 | | | | | | |
| 15-Apr-07 | 515.6 | | | | | | | | | | |
| 17-Apr-07 | | 515.9 | 516.3 | 516.0 | 515.9 | | | | | | |
| 20-Apr-07 | | 515.0 | 516.2 | 515.9 | 515.8 | | | | | | |
| 27-Apr-07 | | 515.8 | 516.2 | 515.9 | 515.8 | | | | | | |
| 4-May-07 | | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 11-May-07 | | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 17-May-07 | 514.7 | | | | | | | | | | |
| 18-May-07 | | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 25-May-07 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 1-Jun-07 | | 515.7 | 515.9 | 515.8 | 515.8 | | | | | | |
| 8-Jun-07 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 14-Jun-07 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 21-Jun-07 | 514.3 | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 29-Jun-07 | | 515.7 | 515.8 | 515.7 | 515.7 | | | | | | |
| 6-Jul-07 | | 515.7 | 515.8 | 515.7 | 515.7 | | | | | | |
| 17-Jul-07 | 514.0 | 515.7 | 515.8 | 515.7 | 515.7 | | | | | | |
| 20-Jul-07 | | 515.7 | 515.8 | 515.7 | 515.7 | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 27-Jul-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 3-Aug-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 10-Aug-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 17-Aug-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 21-Aug-07 | 513.7 | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 30-Aug-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 7-Sep-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 12-Sep-07 | 513.6 | | | | | | | | | | |
| 14-Sep-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 18-Sep-07 | 513.5 | 515.7 | 515.6 | 515.7 | 515.7 | | | | | | |
| 28-Sep-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 14-Oct-07 | 513.3 | | | | | | | | | | |
| 2-Nov-07 | | 515.6 | 515.6 | 515.6 | 515.6 | | | | | | |
| 9-Nov-07 | | 515.7 | 515.6 | 515.7 | 515.7 | | | | | | |
| 16-Nov-07 | | 515.7 | 515.6 | 515.7 | 515.7 | | | | | | |
| 18-Nov-07 | 513.2 | | | | | | | | | | |
| 22-Nov-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 2-Dec-07 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 9-Dec-07 | 513.4 | | | | | | | | | | |
| 13-Dec-07 | | 515.7 | 515.7 | 515.7 | 516.3 | | | | | | |
| 28-Dec-07 | | 515.7 | 515.9 | 515.8 | 515.8 | | | | | | |
| 4-Jan-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 11-Jan-08 | | 516.4 | 517.0 | 516.8 | 516.4 | | | | | | |
| 18-Jan-08 | | 516.0 | 516.5 | 516.2 | 516.0 | | | | | | |
| 20-Jan-08 | 514.9 | | | | | | | | | | |
| 24-Jan-08 | | 515.7 | 516.3 | 516.8 | 515.4 | | | | | | |
| 4-Feb-08 | | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 8-Feb-08 | | 516.1 | 516.1 | 515.9 | 515.5 | | | | | | |
| 15-Feb-08 | | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 21-Feb-08 | 514.9 | 515.5 | 516.1 | 515.8 | 515.8 | | | | | | |
| 29-Feb-08 | | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 7-Mar-08 | | 515.8 | 516.2 | 515.9 | 515.8 | | | | | | |
| 14-Mar-08 | | 515.9 | 516.2 | 516.0 | 515.9 | | | | | | |
| 19-Mar-08 | 515.0 | 515.8 | 516.0 | 515.7 | 515.8 | | | | | | |
| 28-Mar-08 | | | 516.0 | 515.8 | 515.8 | | | | | | |
| 4-Apr-08 | | 516.2 | 516.8 | 516.6 | 516.3 | | | | | | |
| 7-Apr-08 | 515.7 | | | | | | | | | | |
| 11-Apr-08 | | 516.3 | 517.0 | 516.7 | 516.4 | | | | | | |
| 18-Apr-08 | | 516.1 | 516.8 | 516.4 | 516.2 | | | | | | |
| 20-Apr-08 | 516.1 | | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 21-Apr-08 | | 516.0 | 516.6 | 516.2 | 516.1 | | | | | | |
| 3-May-08 | | 515.8 | 516.2 | 515.9 | 515.8 | | | | | | |
| 8-May-08 | | 515.8 | 516.2 | 515.9 | 515.9 | | | | | | |
| 20-May-08 | 515.1 | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 25-May-08 | | 515.8 | 516.0 | 515.8 | 515.8 | | | | | | |
| 6-Jun-08 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 13-Jun-08 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 16-Jun-08 | 514.5 | 515.9 | 515.9 | 515.7 | 515.7 | | | | | | |
| 20-Jun-08 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 27-Jun-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 4-Jul-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 11-Jul-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 14-Jul-08 | 514.2 | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 25-Jul-08 | | 515.7 | 515.8 | 515.7 | 515.7 | | | | | | |
| 1-Aug-08 | | 515.9 | 515.8 | 515.8 | 515.7 | | | | | | |
| 3-Aug-08 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 15-Aug-08 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 18-Aug-08 | 514.3 | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 4-Sep-08 | 514.2 | | | | | | | | | | |
| 5-Sep-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 12-Sep-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 14-Sep-08 | 514.1 | | | | | | | | | | |
| 15-Sep-08 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 3-Oct-08 | | 515.8 | 515.9 | 515.9 | 515.8 | | | | | | |
| 10-Oct-08 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 19-Oct-08 | 514.4 | | | | | | | | | | |
| 20-Oct-08 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 14-Nov-08 | | 515.9 | 516.9 | 516.0 | 515.9 | | | | | | |
| 16-Nov-08 | | 515.9 | 516.1 | 516.0 | 515.9 | | | | | | |
| 23-Nov-08 | 515.3 | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 30-Nov-08 | | 515.8 | 516.1 | 516.0 | (2) | | | | | | |
| 7-Dec-08 | | 515.5 | 516.1 | 515.9 | 515.8 | | | | | | |
| 14-Dec-08 | 514.1 | | (2) | 515.8 | (2) | | | | | | |
| 28-Dec-08 | | | | | | | | | | | |
| 4-Jan-09 | | 515.9 | 516.4 | 516.1 | 516.3 | | | | | | |
| 18-Jan-09 | (2) | 515.3 | 516.1 | 515.9 | 515.9 | 508.9 | 508.9 | 509.4 | | | |
| 8-Feb-09 | 514.6 | 515.9 | 516.0 | 515.8 | 515.7 | 508.1 | 508.0 | 508.5 | | | |
| 15-Feb-09 | | 515.9 | 516.4 | 516.1 | 515.9 | | | | | | |
| 1-Mar-09 | | 515.9 | 516.2 | 516.0 | 515.9 | | | | | | |
| 15-Mar-09 | 515.9 | 516.0 | 516.5 | 516.1 | 515.9 | 509.2 | 509.3 | 509.8 | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 26-Mar-09 | | 516.0 | 516.5 | 516.1 | 516.0 | | | | | | |
| 29-Mar-09 | | 515.9 | 516.3 | 516.0 | 515.9 | | | | | | |
| 12-Apr-09 | 515.7 | | | | | 510.4 | 510.4 | 510.6 | | | |
| 26-Apr-09 | | 515.9 | 516.4 | 516.1 | 516.0 | | | | | | |
| 3-May-09 | | 515.9 | 516.4 | 515.9 | 515.9 | | | | | | |
| 10-May-09 | | 515.8 | 516.2 | 515.9 | 515.8 | | | | | | |
| 17-May-09 | 515.2 | 515.8 | 516.1 | 515.9 | 515.8 | 509.7 | 509.6 | 510.0 | | | |
| 24-May-09 | | 515.8 | 516.1 | 515.8 | 515.8 | | | | | | |
| 7-Jun-09 | | 515.7 | 515.9 | 515.8 | 515.8 | | | | | | |
| 14-Jun-09 | 514.4 | 515.7 | 515.9 | 515.8 | 515.8 | 508.4 | 508.4 | 508.6 | | | |
| 21-Jun-09 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 28-Jun-09 | | 515.7 | 515.9 | 515.8 | 515.7 | | | | | | |
| 12-Jul-09 | 514.2 | 515.7 | 515.8 | 515.8 | 515.7 | 507.3 | 507.1 | 507.3 | | | |
| 19-Jul-09 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 9-Aug-09 | 513.9 | 515.7 | 515.6 | 515.8 | 515.7 | 506.4 | 506.2 | 506.6 | | | |
| 16-Aug-09 | | 515.7 | 515.8 | 515.8 | 515.7 | | | | | | |
| 23-Aug-09 | | 515.7 | 515.7 | 515.7 | 515.7 | | | | | | |
| 13-Sep-09 | 513.7 | 515.7 | 515.7 | 515.7 | 515.7 | 505.9 | 505.6 | 506.0 | | | |
| 20-Sep-09 | | 515.8 | 515.8 | 515.7 | 515.7 | | | | | | |
| 11-Oct-09 | 513.5 | 515.7 | 515.8 | 515.8 | 515.7 | 506.4 | 506.0 | 506.6 | | | |
| 15-Nov-09 | 513.5 | 515.7 | 515.7 | 515.7 | 515.7 | 507.1 | 506.8 | 507.2 | | | |
| 29-Nov-09 | 514.0 | | | | | | | | | | |
| 13-Dec-09 | 513.8 | 515.9 | 516.0 | 515.7 | 515.8 | 507.6 | 507.5 | 507.7 | | | |
| 17-Jan-10 | 514.1 | 515.7 | 515.8 | 515.6 | 515.8 | 507.8 | 507.6 | 507.7 | | | |
| 7-Feb-10 | 514.3 | 515.8 | 515.9 | 515.8 | 515.7 | 507.7 | 507.6 | 507.8 | | | |
| 14-Mar-10 | 514.8 | 516.2 | 516.5 | 516.3 | 516.1 | 509.6 | 509.5 | 509.4 | | | |
| 18-Apr-10 | 515.6 | 515.9 | 516.2 | 515.9 | 516.0 | 510.1 | 510.0 | 510.3 | | | |
| 16-May-10 | 515.2 | 515.9 | 516.1 | 515.9 | 516.1 | | | | | | |
| 8-Jun-10 | 515.0 | | | | | 509.0 | | | | | |
| 13-Jun-10 | 515.3 | 515.8 | 516.1 | 515.9 | 515.6 | 508.8 | 508.7 | 508.9 | | | |
| 21-Jul-10 | 514.6 | 515.8 | 516.0 | 515.8 | 515.2 | 508.3 | 508.1 | 508.4 | | | |
| 16-Aug-10 | 514.3 | 515.8 | 515.9 | 515.8 | 515.7 | 507.4 | 507.3 | 507.5 | | | |
| 12-Sep-10 | 514.1 | 515.7 | 515.8 | 515.8 | 515.7 | 506.5 | 506.3 | 506.6 | | | |
| 26-Sep-10 | 513.9 | | | | | 506.4 | | | | | |
| 17-Oct-10 | 514.0 | 515.8 | 515.9 | 515.7 | 515.7 | 507.0 | 506.7 | 507.3 | | | |
| 14-Nov-10 | 514.6 | 515.8 | 515.9 | 515.8 | 515.8 | 508.4 | 508.3 | 508.5 | | | |
| 19-Dec-10 | 514.9 | 515.9 | 516.0 | 515.9 | 515.9 | 508.8 | 508.7 | 508.9 | | | |
| 16-Jan-11 | 515.4 | 516.1 | 516.1 | 515.9 | 516.0 | 509.3 | 509.2 | 509.4 | | | |
| 20-Feb-11 | 515.1 | 516.0 | 516.1 | 515.9 | 516.0 | 508.8 | 508.8 | 508.9 | | | |
| 13-Mar-11 | 515.3 | 516.1 | 516.2 | 516.0 | 516.0 | 509.1 | 509.1 | 509.2 | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 17-Apr-11 | 515.9 | 515.9 | 516.5 | 516.1 | 516.0 | 510.7 | 510.7 | 511.0 | | | |
| 15-May-11 | 515.8 | 516.0 | 516.6 | 516.1 | 516.1 | 510.4 | 510.3 | 510.5 | | | |
| 13-Jun-11 | 515.0 | | | | | 509.5 | 509.4 | 509.7 | | | |
| 3-Jul-11 | 514.5 | | | | | 508.1 | | | | | |
| 17-Jul-11 | 514.4 | 515.7 | 515.8 | 515.7 | 515.7 | 507.5 | 507.4 | 507.6 | | | |
| 14-Aug-11 | 514.1 | | 515.8 | 515.7 | 515.7 | 506.5 | 506.3 | 506.6 | | | |
| 18-Sep-11 | 513.8 | 515.6 | 515.9 | 515.8 | 515.7 | 505.8 | 505.5 | 506.9 | | | |
| 17-Oct-11 | 513.6 | 515.6 | 515.7 | 515.5 | 515.6 | 506.2 | 505.8 | 506.8 | | | |
| 20-Nov-11 | 513.8 | 515.7 | 515.8 | 515.7 | 515.7 | 507.3 | 507.1 | 507.4 | | | |
| 18-Dec-11 | 514.8 | 515.7 | 515.8 | 515.8 | 515.7 | 509.1 | 509.0 | 509.2 | | | |
| 15-Jan-12 | 514.9 | 515.8 | 515.9 | 515.8 | 515.8 | 508.6 | 508.6 | 508.9 | | | |
| 19-Feb-12 | 514.6 | 515.8 | 516.0 | 515.8 | 515.7 | 508.3 | 508.2 | 508.4 | | | |
| 26-Feb-12 | 514.6 | | | | | 508.2 | | | | | |
| 18-Mar-12 | 515.8 | 516.0 | 516.7 | 517.3 | 516.0 | 510.8 | 510.6 | 511.1 | | | |
| 15-Apr-12 | 514.9 | 516.1 | 516.0 | 515.8 | 515.7 | 509.4 | 509.4 | 509.6 | | | |
| 13-May-12 | 514.7 | 515.6 | 515.9 | 515.8 | 515.8 | 508.5 | 508.4 | 508.6 | | | |
| 17-Jun-12 | 514.3 | 515.6 | 515.8 | 515.7 | 515.6 | 507.3 | 507.2 | 507.4 | | | |
| 1-Jul-12 | 514.1 | | | | | 506.6 | | | | | |
| 15-Jul-12 | 514.0 | 515.5 | 515.8 | 515.7 | 515.5 | 506.3 | 506.1 | 506.4 | | | |
| 12-Aug-12 | 513.9 | 515.9 | 515.9 | 515.7 | 515.4 | 507.1 | 507.2 | 507.2 | | | |
| 16-Sep-12 | 514.1 | 515.7 | 515.8 | 515.7 | 515.7 | 506.4 | 506.8 | 506.5 | | | |
| 9-Oct-12 | 514.1 | | | | | 506.4 | | | | | |
| 14-Oct-12 | 514.1 | 515.6 | 516.0 | 515.8 | 515.8 | 506.7 | 506.5 | 506.9 | | | |
| 18-Nov-12 | 515.1 | 515.8 | 516.4 | 516.2 | 515.8 | 509.4 | 509.3 | 509.5 | | | |
| 16-Dec-12 | 515.0 | 515.8 | 516.0 | 516.3 | 515.8 | 509.0 | 508.9 | 509.1 | | | |
| 13-Jan-13 | 515.1 | 516.2 | 516.4 | 516.2 | 516.2 | 509.6 | 509.6 | 509.5 | | | |
| 17-Feb-13 | 515.3 | 516.3 | 516.5 | 516.3 | 516.3 | 509.4 | 509.3 | 509.6 | | | |
| 17-Mar-13 | 515.3 | 516.2 | 516.5 | 516.3 | 516.2 | 509.3 | 509.3 | 509.4 | | | |
| 31-Mar-13 | 515.0 | | | | | 509.0 | | | | | |
| 14-Apr-13 | 515.9 | 516.0 | 516.6 | 516.2 | 516.0 | 510.2 | 510.1 | 510.4 | | | |
| 12-May-13 | 515.4 | 516.3 | 516.5 | 516.1 | 516.0 | 509.7 | 509.6 | 509.9 | | | |
| 2-Jun-13 | 514.8 | | | | | 509.1 | | | | | |
| 16-Jun-13 | 514.8 | 516.0 | 516.0 | 515.8 | 515.7 | 508.8 | 508.7 | 508.9 | | | |
| 14-Jul-13 | 514.4 | 515.7 | 516.0 | 515.8 | 515.7 | 508.0 | 508.0 | 508.1 | | | |
| 18-Aug-13 | 514.2 | 515.6 | 515.9 | 515.7 | 515.6 | 507.1 | 507.0 | 507.2 | | | |
| 15-Sep-13 | 513.9 | 515.4 | 515.8 | 515.8 | 515.3 | 506.5 | 506.3 | 506.6 | | | |
| 13-Oct-13 | 514.6 | 515.4 | 515.8 | 515.8 | 515.3 | 508.1 | 508.0 | 508.2 | | | |
| 17-Nov-13 | 515.3 | 515.7 | 516.0 | 515.9 | 515.4 | 509.1 | 509.0 | 509.2 | | | |
| 15-Dec-13 | 515.1 | 515.5 | 515.9 | 515.8 | 515.4 | 509.0 | 508.9 | 509.1 | | | |
| 19-Jan-14 | 514.8 | 515.5 | 516.0 | 515.8 | 515.3 | 508.4 | 508.3 | 508.5 | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 16-Feb-14 | 514.5 | 515.6 | 516.0 | 515.8 | 515.4 | 507.7 | 507.5 | 507.8 | | | |
| 17-Mar-14 | 514.3 | 515.6 | 515.0 | 515.7 | 515.4 | 507.4 | 507.2 | 507.5 | | | |
| 13-Apr-14 | 516.0 | (5) | 516.2 | 517.7 | 516.5 | 511.3 | 511.2 | 511.7 | | | |
| 11-May-14 | 515.8 | 515.5 | 516.1 | 515.7 | 515.3 | 510.1 | 510.0 | 510.4 | | | |
| 15-Jun-14 | 514.6 | 515.6 | 515.5 | 515.7 | 515.6 | 508.1 | 508.0 | 508.2 | | | |
| 13-Jul-14 | 514.3 | 515.7 | 515.8 | 515.7 | 515.4 | 507.2 | 507.0 | 507.3 | | | |
| 17-Aug-14 | 514.0 | 515.7 | 515.7 | 515.7 | 515.6 | 506.6 | 506.3 | 506.7 | | | |
| 7-Sep-14 | 513.8 | 515.7 | 515.5 | 515.7 | 515.6 | 506.3 | 506.0 | 506.4 | | | |
| 12-Sep-14 | 514.0 | | | | | 506.7 | | | | | |
| 19-Sep-14 | 514.1 | | | | | | | | | | |
| 19-Oct-14 | 514.4 | 515.8 | 515.7 | 515.7 | 515.6 | 507.4 | 507.3 | 507.5 | | | |
| 2-Nov-14 | | | | | | | | | | | |
| 16-Nov-14 | 515.1 | 515.8 | 516.0 | 515.9 | 515.5 | 508.8 | 508.8 | 508.9 | | | |
| 14-Dec-14 | 514.9 | 515.8 | 515.9 | 515.8 | 515.7 | 509.0 | 508.9 | 509.1 | | | |
| 18-Jan-15 | (2) | 515.9 | 515.9 | 515.8 | 515.7 | (2) | (2) | (2) | | | |
| 15-Feb-15 | | | | | | | | | | | |
| 15-Mar-15 | 514.4 | 515.8 | 515.8 | 515.8 | 515.7 | 507.5 | 507.2 | 507.6 | | | |
| 19-Apr-15 | 515.8 | 515.8 | 516.2 | 515.9 | 515.8 | 510.2 | 510.2 | 510.5 | | | 512.1 |
| 17-May-15 | 514.8 | 515.7 | 515.9 | 515.8 | 515.7 | 508.8 | 508.7 | 509.0 | | | 511.9 |
| 14-Jun-15 | | 515.7 | 515.8 | 515.8 | 515.7 | 507.9 | 507.7 | 508.0 | | | |
| 19-Jul-15 | | 515.7 | 515.8 | 515.8 | 515.7 | 507.8 | 507.7 | 507.9 | | | |
| 9-Aug-15 | | 515.7 | 515.8 | 515.7 | 515.7 | 506.9 | 506.7 | 507.0 | | | |
| 6-Sep-15 | | 515.6 | 515.7 | 515.7 | 515.7 | 506.2 | 506.0 | 506.3 | 513.3 | 505.0 | 510.0 |
| 11-Oct-15 | 513.8 | 515.5 | 515.1 | 515.5 | 515.5 | 505.6 | 505.4 | 505.7 | 512.5 | | 509.5 |
| 15-Nov-15 | 513.7 | 515.7 | 515.7 | 515.7 | 515.7 | 505.3 | 505.9 | 507.3 | 512.0 | | 509.6 |
| 9-Dec-15 | 513.7 | 515.7 | 515.7 | 515.7 | 515.7 | 507.3 | 507.1 | 507.4 | 511.8 | 504.3 | 510.6 |
| 17-Jan-16 | 514.5 | 515.7 | 515.8 | 515.8 | 515.7 | 508.1 | 508.0 | 508.2 | 512.2 | 505.1 | 511.7 |
| 14-Feb-16 | 515.0 | 515.7 | 515.9 | 515.8 | 515.7 | 508.9 | 508.6 | 508.7 | 513.1 | 507.1 | 512.2 |
| 13-Mar-16 | 516.0 | 515.9 | 516.3 | 516.0 | 515.9 | 510.9 | 511.0 | 512.2 | 516.4 | 513.0 | 514.4 |
| 17-Apr-16 | 516.0 | 515.8 | 516.2 | 515.9 | 515.8 | 510.3 | 510.3 | 510.6 | 516.7 | 514.3 | 513.6 |
| 1-May-16 | | | | | | | | | | | |
| 15-May-16 | 514.8 | 515.8 | 515.9 | 515.8 | 515.8 | 509.2 | 509.1 | 509.3 | 514.3 | 509.9 | 512.1 |
| 5-Jun-16 | | | | | | | | | | | |
| 19-Jun-16 | 514.4 | 515.7 | 515.7 | 515.7 | 515.7 | 507.5 | 507.4 | 507.6 | 512.3 | 506.8 | 511.2 |
| 3-Jul-16 | | | | | | | | | | | |
| 17-Jul-16 | 514.0 | 515.5 | 515.5 | 515.5 | 515.5 | 506.3 | 506.1 | 506.4 | 511.2 | 505.3 | 510.2 |
| 24-Jul-16 | 514.0 | | | | | 506.1 | | | 510.9 | 505.0 | 509.9 |
| 7-Aug-16 | | | | | | | | | | | |
| 21-Aug-16 | 513.7 | 515.2 | 515.2 | 515.2 | 515.2 | 505.5 | 505.3 | 505.7 | 510.0 | 504.6 | 509.3 |
| 18-Sep-16 | 513.5 | 515.0 | 515.0 | 515.0 | 515.0 | 505.2 | 505.0 | 505.4 | 509.1 | 504.2 | 509.0 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 29-Sep-16 | 513.4 | | | | | | | | 508.9 | | 508.9 |
| 16-Oct-16 | 513.3 | 514.8 | 514.9 | 514.9 | 514.8 | 505.1 | 504.8 | 505.2 | 508.5 | 504.1 | 508.8 |
| 13-Nov-16 | 513.3 | 514.7 | 514.7 | 514.8 | 514.7 | 505.0 | 504.7 | 505.2 | 507.9 | 503.9 | 508.6 |
| 27-Nov-16 | 513.2 | | | | | 505.0 | | | 507.5 | 503.8 | 508.6 |
| 11-Dec-16 | 513.1 | 514.9 | 514.8 | 514.9 | 514.8 | 505.5 | 505.1 | 505.7 | 507.1 | 503.7 | 508.7 |
| 15-Jan-17 | 513.8 | 515.8 | 516.0 | 515.9 | 515.8 | 508.1 | 508.0 | 508.2 | 507.5 | 504.6 | 511.3 |
| 12-Feb-17 | 514.4 | 515.8 | 515.9 | 515.8 | 515.8 | 508.3 | 508.2 | 508.3 | 506.8 | 503.5 | 511.7 |
| 19-Mar-17 | 515.2 | 515.8 | 516.1 | 515.9 | 515.8 | 509.7 | 509.6 | 509.9 | 509.5 | 508.7 | 512.4 |
| 9-Apr-17 | 515.5 | | | | | 510.2 | | | 517.0 | 509.3 | 513.1 |
| 16-Apr-17 | 515.6 | 515.8 | 516.2 | 515.9 | 515.8 | 510.0 | 509.9 | 510.2 | 510.5 | 509.9 | 512.8 |
| 11-May-17 | 515.9 | 515.8 | 516.2 | 515.9 | 515.8 | 510.2 | 510.1 | 510.5 | 509.9 | 512.5 | 513.5 |
| 21-May-17 | 515.4 | | | | | 509.8 | | | | 510.9 | 512.6 |
| 13-Jun-17 | | | | | | | | | | 508.5 | |
| 25-Jun-17 | 515.1 | 515.8 | 516.1 | 515.9 | 515.8 | 509.1 | 509.0 | 509.2 | 504.9 | 508.5 | 514.3 |
| 19-Jul-17 | 515.1 | 515.8 | 516.1 | 515.9 | 515.8 | 508.3 | 508.2 | 508.4 | 504.0 | 506.8 | 511.7 |
| 3-Aug-17 | 514.4 | | | | | 507.6 | | | | 505.5 | 511.2 |
| 17-Aug-17 | 514.2 | 515.7 | 515.8 | 515.7 | 515.7 | 507.1 | 507.0 | 507.2 | 503.3 | 504.8 | 510.7 |
| 29-Aug-17 | 514.1 | | | | | 506.7 | | | | 504.3 | 510.3 |
| 17-Sep-17 | 513.9 | 515.7 | 515.7 | 515.7 | 515.7 | 506.5 | 506.2 | 506.6 | 502.6 | 503.9 | 509.8 |
| 26-Sep-17 | | | | | | 506.4 | | | | 503.8 | 509.8 |
| 15-Oct-17 | 514.0 | 515.8 | 515.8 | 515.8 | 515.8 | 507.2 | 506.9 | 507.3 | | 508.9 | 510.0 |
| 14-Nov-17 | 514.6 | 515.8 | 515.9 | 515.8 | 515.8 | 506.8 | 507.6 | 507.8 | 502.3 | 503.8 | 511.1 |
| 11-Dec-17 | 514.9 | 515.8 | 515.9 | 515.8 | 515.8 | 508.4 | 508.3 | 508.5 | 502.3 | 504.4 | 511.8 |
| 14-Jan-18 | 514.2 | 515.8 | 516.0 | 515.9 | 515.8 | 508.9 | 508.9 | 509.0 | 502.4 | 505.3 | 512.4 |
| 11-Feb-18 | 514.8 | | | | | 508.6 | | | 502.6 | 505.0 | 511.8 |
| 18-Feb-18 | 515.4 | 516.1 | 516.4 | 516.5 | 516.2 | 510.1 | 510.1 | 510.3 | 511.4 | 505.6 | 512.6 |
| 18-Mar-18 | 515.0 | 515.8 | 516.0 | 515.8 | 515.8 | 509.4 | 509.3 | 509.6 | 502.6 | 506.3 | 512.0 |
| 15-Apr-18 | | 515.8 | 516.1 | 515.9 | 515.9 | | | | | | |
| 18-Apr-18 | 515.2 | | | | | 509.3 | 509.3 | 509.4 | 503.0 | 505.7 | 512.4 |
| 17-May-18 | 515.5 | 515.8 | 516.1 | 515.9 | 515.9 | 509.7 | 509.6 | 509.9 | 502.9 | 507.2 | 512.2 |
| 18-Jun-18 | 514.5 | 515.7 | 515.8 | 515.8 | 515.7 | 507.9 | 507.8 | 508.0 | 502.7 | 503.9 | 511.1 |
| 17-Jul-18 | 514.1 | 515.4 | 515.4 | 515.4 | 515.4 | 506.6 | 506.5 | 506.8 | 502.3 | | 510.0 |
| 22-Aug-18 | 513.7 | 515.2 | 515.2 | 515.2 | 515.2 | 505.7 | 505.5 | 505.8 | 502.0 | | 508.9 |
| 18-Sep-18 | 513.6 | 514.3 | 514.7 | 514.7 | 514.7 | 505.4 | 505.1 | 505.5 | 502.0 | | 508.6 |
| 23-Oct-18 | 513.3 | 514.5 | 514.5 | 514.6 | 514.5 | 505.1 | 504.8 | 505.2 | 501.7 | | 509.0 |
| 19-Nov-18 | 513.7 | 515.7 | 515.6 | 515.7 | 515.7 | 507.0 | 506.7 | 507.2 | 501.6 | | 510.0 |
| 10-Dec-18 | 514.2 | 515.7 | 515.8 | 515.8 | 515.7 | 507.9 | 507.7 | 507.9 | 501.6 | | 511.5 |
| 17-Jan-19 | 514.8 | 515.8 | 515.9 | 515.8 | 515.8 | 508.6 | 508.6 | 508.7 | 501.7 | | 512.0 |
| 14-Feb-19 | 515.0 | 515.7 | 515.9 | 515.9 | 515.7 | 509.9 | 508.3 | | | | 511.7 |
| 11-Mar-19 | 514.6 | 515.8 | 516.1 | 515.9 | 515.8 | 509.3 | 509.2 | 509.4 | 501.9 | | 512.5 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| Date TOP | 520.8 | 518.9 | 517.5 | 518.1 | 518.6 | 512.3 | 512.0 | 513.4 | 526.2 | 532.0 | 515.1 |
| 26-Apr-19 | 516.2 | 515.8 | 516.3 | 515.9 | 515.8 | 510.8 | 510.7 | 511.1 | | | 513.2 |
| 22-May-19 | 515.4 | 515.8 | 515.8 | 515.8 | 515.8 | 509.6 | 509.6 | 509.8 | 502.3 | | 512.1 |
| 19-Jun-19 | 514.6 | 515.7 | 515.8 | 515.7 | 515.7 | 508.5 | 508.4 | 508.5 | 502.1 | | 511.3 |
| 19-Jul-19 | 514.3 | 515.5 | 515.5 | 515.5 | 515.5 | 506.9 | 506.8 | 507.0 | 501.8 | | 510.0 |
| 27-Aug-19 | 514.3 | 514.8 | 514.7 | 514.7 | 514.8 | 505.7 | 505.5 | 505.8 | 501.5 | | 508.9 |
| 16-Sep-19 | 514.3 | 514.5 | 514.4 | 514.4 | 514.4 | 505.6 | 505.5 | 506.0 | 501.6 | | 508.7 |
| 21-Oct-19 | 514.2 | 514.2 | 514.2 | 514.3 | 514.2 | 505.6 | 505.5 | 505.6 | 501.7 | | 507.8 |
| 18-Nov-19 | 514.3 | 514.2 | 514.3 | 514.4 | 514.3 | 505.6 | 505.5 | 505.6 | 501.7 | | 509.9 |
| 17-Dec-19 | 513.7 | 515.8 | 515.6 | 514.7 | 515.7 | 507.3 | 505.3 | 505.6 | 501.7 | | 510.6 |
| 14-Jan-20 | 513.8 | 515.8 | 516.1 | 516.6 | (5) | (5) | 508.8 | 508.9 | 502.9 | | 511.6 |
| 18-Feb-20 | (5) | (2) | (2) | 515.7 | (2) | 506.2 | 507.6 | 509.2 | | | (2) |
| 24-Mar-20 | 515.4 | 515.8 | 515.8 | 515.9 | 515.9 | 509.6 | 509.7 | 509.9 | 502.2 | | 512.9 |
| 22-Apr-20 | 515.2 | 515.8 | 516.0 | 515.8 | 515.8 | 509.8 | 509.6 | 509.8 | 502.0 | | 512.0 |
| 27-May-20 | | 515.7 | 515.9 | 515.6 | 515.7 | 507.4 | 508.3 | 509.5 | 501.8 | | 510.9 |
| 26-Jun-20 | 514.5 | (5) | 514.4 | 515.8 | 515.8 | 507.7 | 507.2 | 507.4 | | | 510.7 |
| 28-Jul-20 | 514.6 | 515.8 | 514.5 | 515.8 | 515.8 | 507.7 | 507.3 | 507.5 | (5) | | (5) |
| 31-Aug-20 | 514.8 | 515.3 | 514.4 | 515.1 | 515.4 | 506.5 | 506.3 | 506.6 | (5) | | (5) |
| 28-Sep-20 | 513.7 | 515.6 | 515.6 | 515.6 | 515.6 | 506.8 | 507.0 | 507.5 | 500.9 | | (5) |
| 27-Oct-20 | 513.8 | 515.7 | 515.7 | 515.7 | 515.7 | 507.0 | 506.7 | 507.1 | 501.4 | | 510.5 |
| 24-Nov-20 | 513.5 | 515.1 | 515.2 | 515.1 | 515.1 | 506.9 | 506.3 | 506.6 | 501.3 | | 510.2 |
| 21-Dec-20 | 513.7 | 515.1 | 515.4 | 515.5 | 515.9 | 508.8 | 508.7 | 508.9 | 502.0 | | 510.9 |
| 29-Jan-21 | 513.8 | 515.0 | 516.1 | 516.6 | (5) | (5) | 508.8 | 508.9 | 502.9 | | 511.6 |
| 19-Feb-21 | 513.9 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) |
| 31-Mar-21 | 513.9 | 515.8 | 516.3 | 515.9 | 515.8 | 509.3 | 508.2 | 509.3 | 504.2 | | 512.5 |
| 29-Apr-21 | 514.1 | 515.8 | 516.3 | 515.9 | 515.9 | 509.8 | 509.7 | 509.9 | 501.8 | | 512.4 |
| 28-May-21 | 513.8 | 515.7 | 515.9 | 516.1 | 515.7 | 507.9 | 507.8 | 508.0 | 501.1 | | 510.3 |
| 25-Jun-21 | 513.8 | 515.7 | 515.8 | 515.7 | 515.7 | 506.4 | 506.3 | 506.6 | 503.0 | | 509.8 |
| 26-Jul-21 | 513.8 | 515.7 | 515.8 | 515.7 | 515.7 | 505.4 | 506.1 | 506.6 | 505.0 | | 508.4 |
| 24-Aug-21 | 513.6 | 515.6 | 515.8 | 515.7 | 515.8 | 506.0 | 505.6 | 506.0 | 507.0 | | 509.9 |
| 22-Sep-21 | 513.8 | 515.9 | 516.3 | 515.9 | 515.9 | 508.5 | 511.4 | 508.5 | 507.0 | | 510.1 |
| 29-Oct-21 | 513.8 | 515.7 | 516.3 | 515.9 | 515.9 | 507.0 | 506.7 | 507.1 | 501.4 | | 510.5 |
| 24-Nov-21 | 514.8 | 515.8 | 516.2 | 515.9 | 515.9 | 508.4 | 508.3 | 508.5 | 502.6 | | 510.5 |
| 23-Dec-21 | 514.8 | 515.9 | 516.2 | 515.9 | 515.8 | 508.4 | 508.2 | 508.4 | 503.2 | | 510.5 |
| 26-Jan-22 | (2) | (2) | (2) | (2) | (2) | 507.5 | 507.4 | 507.6 | (2) | | |
| 10-Feb-22 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | |
| 16-Mar-22 | 514.7 | 515.2 | 515.8 | 515.2 | 515.2 | 508.4 | 507.2 | 510.0 | 502.2 | | |
| 22-Apr-22 | 515.2 | 515.8 | 516.3 | 515.9 | 515.9 | 509.2 | 507.9 | 510.6 | 502.6 | | |
| 26-May-22 | 513.9 | 515.8 | 516.0 | 516.0 | 515.6 | 506.7 | 505.9 | 509.4 | | | |
| 20-Jun-22 | 515.2 | 516.0 | | | | | | | | | |
| 22-Jun-22 | | | 516.4 | 516.0 | 516.0 | 509.2 | 508.0 | 510.6 | (5) | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | BH03-8 | BH03-9 | TW04-1 | TW04-2 | TW04-3 | BH08-1 | BH08-2 | BH08-3 | NW1 | NW2 | NW3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF | AF |
| **Date TOP** | **520.8** | **518.9** | **517.5** | **518.1** | **518.6** | **512.3** | **512.0** | **513.4** | **526.2** | **532.0** | **515.1** |
| 30-Aug-22 | 513.7 | 515.8 | 516.1 | 516.0 | 515.8 | | | | (5) | | |
| 31-Aug-22 | | | | | | 507.5 | 508.6 | 508.7 | | | |
| 27-Sep-22 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 28-Sep-22 | | | | | | 504.6 | 504.4 | 504.7 | 501.4 | | |
| 29-Sep-22 | 513.4 | | | | | | | | | | |
| 26-Oct-22 | 513.4 | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 28-Oct-22 | | | | | | 504.5 | 504.2 | 504.6 | 501.3 | | |
| 23-Nov-22 | | | | | | | | | | | |
| 29-May-23 | 514.6 | 515.8 | 516.1 | 515.9 | 515.8 | | | | | | |
| 30-May-23 | | | | | | 507.9 | 507.8 | 508.0 | 501.8 | | |
| 12-Jul-23 | | | | | | | | | | | |
| 30-Oct-23 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | | | |
| 31-Oct-23 | | | | | | | | | | | |
| 1-Nov-23 | 513.5 | | | | | 504.9 | 504.6 | 505.1 | 501.4 | | |
| 27-May-24 | | 515.8 | 516.1 | 515.8 | 515.8 | | | | 502.0 | | |
| 28-May-24 | | | | | | 507.8 | 507.6 | 507.8 | | | |
| 29-May-24 | 514.5 | | | | | | | | | | |
| 28-Oct-24 | | | | | | 504.8 | 504.5 | 504.9 | | | |
| 29-Oct-24 | | 515.8 | 515.9 | 515.8 | 515.8 | | | | 501.5 | | |
| 30-Oct-24 | 513.5 | | | | | | | | | | |
| 26-May-25 | | 515.8 | 516.1 | 515.9 | 515.8 | 508.3 | 508.1 | 508.3 | 502.0 | | |
| 28-May-25 | 514.6 | | | | | | | | | | |
| 27-Oct-25 | | | | | | 504.2 | | 504.3 | | | |
| 28-Oct-25 | | 515.7 | 515.8 | 515.7 | 515.7 | | 503.9 | | 501.3 | | |
| 29-Oct-25 | 513.2 | | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 28-Mar-03 | | | | | | | | | |
| 2-May-03 | | | | | | | | | |
| 16-May-03 | | | | | | | | | |
| 25-Jun-03 | | | | | | | | | |
| 22-Jul-03 | | | | | | | | | |
| 20-Aug-03 | | | | | | | | | |
| 25-Sep-03 | | | | | | | | | |
| 22-Oct-03 | | | | | | | | | |
| 25-Nov-03 | | | | | | | | | |
| 22-Dec-03 | | | | | | | | | |
| 9-Feb-04 | | | | | | | | | |
| 16-Mar-04 | | | | | | | | | |
| 20-Apr-04 | | | | | | | | | |
| 18-May-04 | | | | | | | | | |
| 22-Jun-04 | | | | | | | | | |
| 28-Jul-04 | | | | | | | | | |
| 25-Aug-04 | | | | | | | | | |
| 22-Sep-04 | | | | | | | | | |
| 19-Oct-04 | | | | | | | | | |
| 16-Nov-04 | | | | | | | | | |
| 16-Dec-04 | | | | | | | | | |
| 31-Jan-05 | | | | | | | | | |
| 24-Feb-05 | | | | | | | | | |
| 22-Mar-05 | | | | | | | | | |
| 20-Apr-05 | | | | | | | | | |
| 25-May-05 | | | | | | | | | |
| 29-Jun-05 | | | | | | | | | |
| 13-Jul-05 | | | | | | | | | |
| 23-Aug-05 | | | | | | | | | |
| 26-Sep-05 | | | | | | | | | |
| 26-Oct-05 | | | | | | | | | |
| 16-Nov-05 | | | | | | | | | |
| 14-Dec-05 | | | | | | | | | |
| 20-Jan-06 | | | | | | | | | |
| 14-Feb-06 | | | | | | | | | |
| 19-Mar-06 | | | | | | | | | |
| 17-Apr-06 | | | | | | | | | |
| 19-May-06 | | | | | | | | | |
| 19-Jun-06 | | | | | | | | | |
| 10-Jul-06 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 22-Aug-06 | | | | | | | | | |
| 18-Sep-06 | | | | | | | | | |
| 17-Oct-06 | | | | | | | | | |
| 20-Nov-06 | | | | | | | | | |
| 15-Dec-06 | | | | | | | | | |
| 28-Dec-06 | | | | | | | | | |
| 5-Jan-07 | | | | | | | | | |
| 12-Jan-07 | | | | | | | | | |
| 19-Jan-07 | | | | | | | | | |
| 22-Jan-07 | | | | | | | | | |
| 26-Jan-07 | | | | | | | | | |
| 2-Feb-07 | | | | | | | | | |
| 9-Feb-07 | | | | | | | | | |
| 16-Feb-07 | | | | | | | | | |
| 19-Feb-07 | | | | | | | | | |
| 22-Feb-07 | | | | | | | | | |
| 2-Mar-07 | | | | | | | | | |
| 9-Mar-07 | | | | | | | | | |
| 16-Mar-07 | | | | | | | | | |
| 18-Mar-07 | | | | | | | | | |
| 19-Mar-07 | | | | | | | | | |
| 5-Apr-07 | | | | | | | | | |
| 13-Apr-07 | | | | | | | | | |
| 15-Apr-07 | | | | | | | | | |
| 17-Apr-07 | | | | | | | | | |
| 20-Apr-07 | | | | | | | | | |
| 27-Apr-07 | | | | | | | | | |
| 4-May-07 | | | | | | | | | |
| 11-May-07 | | | | | | | | | |
| 17-May-07 | | | | | | | | | |
| 18-May-07 | | | | | | | | | |
| 25-May-07 | | | | | | | | | |
| 1-Jun-07 | | | | | | | | | |
| 8-Jun-07 | | | | | | | | | |
| 14-Jun-07 | | | | | | | | | |
| 21-Jun-07 | | | | | | | | | |
| 29-Jun-07 | | | | | | | | | |
| 6-Jul-07 | | | | | | | | | |
| 17-Jul-07 | | | | | | | | | |
| 20-Jul-07 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 27-Jul-07 | | | | | | | | | |
| 3-Aug-07 | | | | | | | | | |
| 10-Aug-07 | | | | | | | | | |
| 17-Aug-07 | | | | | | | | | |
| 21-Aug-07 | | | | | | | | | |
| 30-Aug-07 | | | | | | | | | |
| 7-Sep-07 | | | | | | | | | |
| 12-Sep-07 | | | | | | | | | |
| 14-Sep-07 | | | | | | | | | |
| 18-Sep-07 | | | | | | | | | |
| 28-Sep-07 | | | | | | | | | |
| 14-Oct-07 | | | | | | | | | |
| 2-Nov-07 | | | | | | | | | |
| 9-Nov-07 | | | | | | | | | |
| 16-Nov-07 | | | | | | | | | |
| 18-Nov-07 | | | | | | | | | |
| 22-Nov-07 | | | | | | | | | |
| 2-Dec-07 | | | | | | | | | |
| 9-Dec-07 | | | | | | | | | |
| 13-Dec-07 | | | | | | | | | |
| 28-Dec-07 | | | | | | | | | |
| 4-Jan-08 | | | | | | | | | |
| 11-Jan-08 | | | | | | | | | |
| 18-Jan-08 | | | | | | | | | |
| 20-Jan-08 | | | | | | | | | |
| 24-Jan-08 | | | | | | | | | |
| 4-Feb-08 | | | | | | | | | |
| 8-Feb-08 | | | | | | | | | |
| 15-Feb-08 | | | | | | | | | |
| 21-Feb-08 | | | | | | | | | |
| 29-Feb-08 | | | | | | | | | |
| 7-Mar-08 | | | | | | | | | |
| 14-Mar-08 | | | | | | | | | |
| 19-Mar-08 | | | | | | | | | |
| 28-Mar-08 | | | | | | | | | |
| 4-Apr-08 | | | | | | | | | |
| 7-Apr-08 | | | | | | | | | |
| 11-Apr-08 | | | | | | | | | |
| 18-Apr-08 | | | | | | | | | |
| 20-Apr-08 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells

| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 21-Apr-08 | | | | | | | | | |
| 3-May-08 | | | | | | | | | |
| 8-May-08 | | | | | | | | | |
| 20-May-08 | | | | | | | | | |
| 25-May-08 | | | | | | | | | |
| 6-Jun-08 | | | | | | | | | |
| 13-Jun-08 | | | | | | | | | |
| 16-Jun-08 | | | | | | | | | |
| 20-Jun-08 | | | | | | | | | |
| 27-Jun-08 | | | | | | | | | |
| 4-Jul-08 | | | | | | | | | |
| 11-Jul-08 | | | | | | | | | |
| 14-Jul-08 | | | | | | | | | |
| 25-Jul-08 | | | | | | | | | |
| 1-Aug-08 | | | | | | | | | |
| 3-Aug-08 | | | | | | | | | |
| 15-Aug-08 | | | | | | | | | |
| 18-Aug-08 | | | | | | | | | |
| 4-Sep-08 | | | | | | | | | |
| 5-Sep-08 | | | | | | | | | |
| 12-Sep-08 | | | | | | | | | |
| 14-Sep-08 | | | | | | | | | |
| 15-Sep-08 | | | | | | | | | |
| 3-Oct-08 | | | | | | | | | |
| 10-Oct-08 | | | | | | | | | |
| 19-Oct-08 | | | | | | | | | |
| 20-Oct-08 | | | | | | | | | |
| 14-Nov-08 | | | | | | | | | |
| 16-Nov-08 | | | | | | | | | |
| 23-Nov-08 | | | | | | | | | |
| 30-Nov-08 | | | | | | | | | |
| 7-Dec-08 | | | | | | | | | |
| 14-Dec-08 | | | | | | | | | |
| 28-Dec-08 | | | | | | | | | |
| 4-Jan-09 | | | | | | | | | |
| 18-Jan-09 | | | | | | | | | |
| 8-Feb-09 | | | | | | | | | |
| 15-Feb-09 | | | | | | | | | |
| 1-Mar-09 | | | | | | | | | |
| 15-Mar-09 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells

| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 26-Mar-09 | | | | | | | | | |
| 29-Mar-09 | | | | | | | | | |
| 12-Apr-09 | | | | | | | | | |
| 26-Apr-09 | | | | | | | | | |
| 3-May-09 | | | | | | | | | |
| 10-May-09 | | | | | | | | | |
| 17-May-09 | | | | | | | | | |
| 24-May-09 | | | | | | | | | |
| 7-Jun-09 | | | | | | | | | |
| 14-Jun-09 | | | | | | | | | |
| 21-Jun-09 | | | | | | | | | |
| 28-Jun-09 | | | | | | | | | |
| 12-Jul-09 | | | | | | | | | |
| 19-Jul-09 | | | | | | | | | |
| 9-Aug-09 | | | | | | | | | |
| 16-Aug-09 | | | | | | | | | |
| 23-Aug-09 | | | | | | | | | |
| 13-Sep-09 | | | | | | | | | |
| 20-Sep-09 | | | | | | | | | |
| 11-Oct-09 | | | | | | | | | |
| 15-Nov-09 | | | | | | | | | |
| 29-Nov-09 | | | | | | | | | |
| 13-Dec-09 | | | | | | | | | |
| 17-Jan-10 | | | | | | | | | |
| 7-Feb-10 | | | | | | | | | |
| 14-Mar-10 | | | | | | | | | |
| 18-Apr-10 | | | | | | | | | |
| 16-May-10 | | | | | | | | | |
| 8-Jun-10 | | | | | | | | | |
| 13-Jun-10 | | | | | | | | | |
| 21-Jul-10 | | | | | | | | | |
| 16-Aug-10 | | | | | | | | | |
| 12-Sep-10 | | | | | | | | | |
| 26-Sep-10 | | | | | | | | | |
| 17-Oct-10 | | | | | | | | | |
| 14-Nov-10 | | | | | | | | | |
| 19-Dec-10 | | | | | | | | | |
| 16-Jan-11 | | | | | | | | | |
| 20-Feb-11 | | | | | | | | | |
| 13-Mar-11 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 17-Apr-11 | | | | | | | | | |
| 15-May-11 | | | | | | | | | |
| 13-Jun-11 | | | | | | | | | |
| 3-Jul-11 | | | | | | | | | |
| 17-Jul-11 | | | | | | | | | |
| 14-Aug-11 | | | | | | | | | |
| 18-Sep-11 | | | | | | | | | |
| 17-Oct-11 | | | | | | | | | |
| 20-Nov-11 | | | | | | | | | |
| 18-Dec-11 | | | | | | | | | |
| 15-Jan-12 | | | | | | | | | |
| 19-Feb-12 | | | | | | | | | |
| 26-Feb-12 | | | | | | | | | |
| 18-Mar-12 | | | | | | | | | |
| 15-Apr-12 | | | | | | | | | |
| 13-May-12 | | | | | | | | | |
| 17-Jun-12 | | | | | | | | | |
| 1-Jul-12 | | | | | | | | | |
| 15-Jul-12 | | | | | | | | | |
| 12-Aug-12 | | | | | | | | | |
| 16-Sep-12 | | | | | | | | | |
| 9-Oct-12 | | | | | | | | | |
| 14-Oct-12 | | | | | | | | | |
| 18-Nov-12 | | | | | | | | | |
| 16-Dec-12 | | | | | | | | | |
| 13-Jan-13 | | | | | | | | | |
| 17-Feb-13 | | | | | | | | | |
| 17-Mar-13 | | | | | | | | | |
| 31-Mar-13 | | | | | | | | | |
| 14-Apr-13 | | | | | | | | | |
| 12-May-13 | | | | | | | | | |
| 2-Jun-13 | | | | | | | | | |
| 16-Jun-13 | | | | | | | | | |
| 14-Jul-13 | | | | | | | | | |
| 18-Aug-13 | | | | | | | | | |
| 15-Sep-13 | | | | | | | | | |
| 13-Oct-13 | | | | | | | | | |
| 17-Nov-13 | | | | | | | | | |
| 15-Dec-13 | | | | | | | | | |
| 19-Jan-14 | | | | | | | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells

| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 16-Feb-14 | | | | | | | | | |
| 17-Mar-14 | | | | | | | | | |
| 13-Apr-14 | | | | | | | | | |
| 11-May-14 | | | | | | | | | |
| 15-Jun-14 | | | | | | | | | |
| 13-Jul-14 | | | | | | | | | |
| 17-Aug-14 | | | | | | | | | |
| 7-Sep-14 | | | | | | | | | |
| 12-Sep-14 | | | | | | | | | |
| 19-Sep-14 | | | | | | | | | |
| 19-Oct-14 | | | | | | | | | |
| 2-Nov-14 | 520.3 | 516.1 | 515.4 | | 527.9 | 516.5 | | | |
| 16-Nov-14 | | | | | | | | | |
| 14-Dec-14 | | | | | | | | | |
| 18-Jan-15 | | | | | | | | | |
| 15-Feb-15 | | | | | | | | | |
| 15-Mar-15 | | | | | | | | | |
| 19-Apr-15 | | | | | | 517.2 | | | |
| 17-May-15 | | | | | | 516.4 | | | |
| 14-Jun-15 | | | | | | | | | |
| 19-Jul-15 | | | | | | | | | |
| 9-Aug-15 | | | | | | | | | |
| 6-Sep-15 | 518.9 | 516.1 | 514.3 | 517.6 | 527.5 | 515.9 | 509.0 | 508.8 | 508.9 |
| 11-Oct-15 | 518.2 | 515.3 | 513.8 | 516.7 | 527.2 | 515.7 | 509.0 | 508.2 | 508.3 |
| 15-Nov-15 | 517.4 | 515.1 | 513.9 | 515.5 | 527.0 | 516.0 | 509.1 | 508.9 | 509.1 |
| 9-Dec-15 | 517.6 | 515.3 | 514.5 | 515.4 | 527.1 | 516.0 | 509.1 | 508.9 | 509.1 |
| 17-Jan-16 | 519.1 | 516.3 | 515.5 | 515.7 | 527.7 | 516.3 | 509.2 | 509.3 | 509.5 |
| 14-Feb-16 | 519.4 | 517.2 | 515.6 | 515.6 | 527.8 | 516.5 | 509.4 | 509.4 | 509.5 |
| 13-Mar-16 | 522.7 | 519.1 | 519.3 | 517.7 | 528.1 | 517.4 | 509.5 | 509.6 | 509.6 |
| 17-Apr-16 | 520.9 | 520.2 | 517.7 | 516.4 | 528.0 | 517.0 | 509.4 | 509.4 | 509.6 |
| 1-May-16 | | | | | | | | | |
| 15-May-16 | 519.1 | 518.1 | 515.9 | 515.8 | 527.8 | 516.4 | 509.3 | 509.3 | 509.5 |
| 5-Jun-16 | | | | | | | | | |
| 19-Jun-16 | 517.8 | (5) | 514.6 | 515.4 | 527.6 | 516.0 | 509.1 | 508.8 | 508.9 |
| 3-Jul-16 | | | | | | | | | |
| 17-Jul-16 | 516.6 | 515.5 | 513.9 | 515.3 | 527.1 | 515.7 | 509.1 | 508.5 | 508.6 |
| 24-Jul-16 | 516.4 | 515.3 | 513.8 | 515.3 | 527.0 | 515.6 | 509.0 | 508.3 | 508.4 |
| 7-Aug-16 | | | | | | | | | |
| 21-Aug-16 | 515.7 | 514.8 | 513.5 | 515.2 | 526.6 | 515.4 | 509.0 | 508.0 | 508.2 |
| 18-Sep-16 | 515.1 | 514.5 | 513.2 | 515.1 | 526.3 | 515.2 | 509.0 | 507.7 | 507.9 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells

| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 29-Sep-16 | | | | | | | | | |
| 16-Oct-16 | 514.6 | 514.3 | 513.0 | 515.0 | 526.2 | 515.1 | 509.0 | 507.6 | 507.7 |
| 13-Nov-16 | 514.1 | 514.1 | 512.9 | 515.0 | 526.0 | 515.0 | 509.1 | 507.7 | 507.8 |
| 27-Nov-16 | 513.9 | 514.0 | 512.8 | 514.9 | 526.0 | 515.1 | 509.1 | 507.9 | 508.0 |
| 11-Dec-16 | 513.8 | 514.0 | 513.0 | 514.9 | 525.9 | 515.0 | 509.1 | 508.1 | 508.3 |
| 15-Jan-17 | 522.3 | 514.8 | 516.4 | 516.1 | 527.7 | 516.4 | 509.1 | 509.1 | 509.3 |
| 12-Feb-17 | 521.0 | 515.5 | 515.3 | 515.5 | 527.7 | 516.3 | 509.4 | 509.4 | 509.5 |
| 19-Mar-17 | 518.2 | 516.9 | 516.1 | 515.6 | 527.9 | 516.7 | 509.4 | 509.4 | 509.5 |
| 9-Apr-17 | 523.7 | 517.5 | 518.5 | 517.1 | 528.2 | 517.4 | 509.5 | 509.5 | 509.7 |
| 16-Apr-17 | 519.0 | 517.6 | 517.5 | 515.8 | 527.9 | 517.0 | 509.4 | 509.4 | 509.6 |
| 11-May-17 | 519.0 | 518.6 | 517.0 | 515.7 | 527.9 | 516.8 | 509.4 | 509.4 | 509.6 |
| 21-May-17 | 518.6 | 518.5 | 516.0 | 515.7 | 527.9 | 516.7 | 509.5 | 509.5 | 509.6 |
| 13-Jun-17 | 516.9 | | | | | | 509.4 | 509.5 | 509.6 |
| 25-Jun-17 | 517.9 | 517.3 | 516.8 | 516.0 | 527.9 | 516.7 | 509.3 | 509.5 | 509.6 |
| 19-Jul-17 | 516.6 | 516.6 | 515.1 | 515.4 | 527.8 | 516.3 | 509.2 | 509.2 | 509.4 |
| 3-Aug-17 | 515.6 | 516.0 | 514.6 | 515.3 | 527.7 | 516.1 | 509.1 | 508.9 | 509.0 |
| 17-Aug-17 | 514.9 | 515.3 | 514.2 | 515.3 | 527.5 | 516.0 | 509.1 | 509.1 | 509.2 |
| 29-Aug-17 | 514.4 | 514.7 | 513.7 | | 527.4 | 515.9 | 509.1 | 508.8 | 508.9 |
| 17-Sep-17 | 513.8 | 514.3 | 513.6 | 515.1 | 527.3 | 515.9 | 509.1 | 508.9 | 509.0 |
| 26-Sep-17 | 513.6 | 514.1 | 513.4 | 515.1 | 527.2 | 515.8 | | 508.7 | 508.9 |
| 15-Oct-17 | 513.6 | 514.0 | 514.1 | 515.4 | 527.6 | 516.2 | 509.2 | 509.2 | 509.4 |
| 14-Nov-17 | 516.0 | 514.0 | 514.7 | 515.6 | 527.8 | 516.3 | 509.2 | 509.2 | 509.4 |
| 11-Dec-17 | 514.7 | 514.3 | 514.6 | 515.4 | 527.8 | 516.2 | 509.3 | 509.3 | 509.5 |
| 14-Jan-18 | 516.8 | 514.4 | 516.3 | 515.9 | 527.8 | 516.7 | 509.4 | 509.4 | 509.6 |
| 11-Feb-18 | 515.4 | 514.7 | 514.9 | (5) | 527.8 | (5) | 509.3 | 509.3 | 509.4 |
| 18-Feb-18 | 524.0 | 514.7 | 516.1 | 516.6 | 528.2 | 517.2 | 509.5 | 509.5 | 509.7 |
| 18-Mar-18 | 515.6 | 515.3 | 515.2 | 515.5 | 527.8 | 516.4 | 509.3 | 509.3 | 509.4 |
| 15-Apr-18 | | | | | | | | | |
| 18-Apr-18 | 517.8 | 514.9 | 516.2 | 516.1 | 527.9 | 516.7 | 509.4 | 509.5 | 509.6 |
| 17-May-18 | 516.8 | 516.0 | 516.1 | 515.7 | 527.9 | 516.7 | 509.3 | 509.4 | 509.5 |
| 18-Jun-18 | 514.1 | 514.7 | 514.3 | 515.3 | 527.7 | 515.9 | 509.1 | 508.8 | 508.9 |
| 17-Jul-18 | 513.1 | 513.8 | 513.3 | 515.2 | 527.3 | 515.5 | 509.0 | 508.5 | 508.6 |
| 22-Aug-18 | 512.8 | 513.3 | 512.8 | 514.9 | 526.6 | 515.3 | 509.0 | 508.1 | 508.2 |
| 18-Sep-18 | 512.5 | 513.1 | 512.6 | 514.7 | 526.1 | 514.8 | 509.0 | 507.8 | 507.9 |
| 23-Oct-18 | 512.2 | 512.8 | 512.3 | 514.4 | 525.8 | 514.7 | 509.1 | 507.9 | 508.0 |
| 19-Nov-18 | 512.5 | 512.8 | 513.2 | 514.2 | 527.0 | 515.8 | 509.8 | 508.9 | 508.4 |
| 10-Dec-18 | 513.2 | 512.9 | 514.7 | 515.5 | 527.7 | 516.0 | 509.1 | 509.1 | 509.2 |
| 17-Jan-19 | 515.0 | 513.5 | 514.9 | 515.5 | 527.8 | 516.1 | 508.4 | 509.4 | 509.5 |
| 14-Feb-19 | 514.9 | 513.6 | 514.5 | 515.3 | 527.7 | 516.1 | 509.3 | 509.4 | 509.5 |
| 11-Mar-19 | 518.0 | 513.7 | 516.1 | 515.9 | 527.9 | 516.6 | 509.3 | 509.4 | 509.5 |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells

| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 26-Apr-19 | 520.9 | 515.2 | 519.1 | 516.8 | 528.0 | 516.9 | 509.4 | 509.5 | 509.6 |
| 22-May-19 | 513.1 | 515.2 | 515.9 | 515.7 | 527.9 | 516.5 | 509.3 | 509.4 | 509.5 |
| 19-Jun-19 | 514.7 | 514.7 | 514.8 | 515.4 | 527.8 | 516.0 | 509.1 | 509.2 | 509.2 |
| 19-Jul-19 | | 513.6 | 513.6 | (5) | 527.6 | 515.5 | 509.0 | 508.7 | 508.6 |
| 27-Aug-19 | | 512.6 | 512.5 | (5) | 526.5 | 514.7 | 509.1 | 508.1 | |
| 16-Sep-19 | | 512.7 | 512.4 | (5) | (5) | 514.4 | 508.8 | 507.9 | (5) |
| 21-Oct-19 | | 512.6 | 512.4 | (5) | 525.7 | 513.6 | 508.9 | 507.9 | (5) |
| 18-Nov-19 | | 512.6 | 512.5 | (5) | 525.7 | 513.7 | 508.9 | 508.0 | (5) |
| 17-Dec-19 | | (5) | 512.6 | | 527.5 | 515.6 | (5) | 508.9 | (5) |
| 14-Jan-20 | | 512.1 | 512.5 | (5) | 527.4 | 515.4 | (5) | 508.9 | 509.1 |
| 18-Feb-20 | | 511.9 | 513.6 | (2) | (2) | 515.9 | 509.1 | (2) | (2) |
| 24-Mar-20 | | 512.5 | 516.0 | 515.9 | 528.0 | 516.7 | 509.4 | 509.5 | 509.6 |
| 22-Apr-20 | | 513.3 | 515.8 | | 527.9 | 516.4 | 509.4 | 509.4 | 509.5 |
| 27-May-20 | | 512.6 | 515.4 | 515.0 | 527.7 | 516.2 | 509.2 | 509.3 | 509.5 |
| 26-Jun-20 | | 512.7 | 514.3 | 515.7 | (5) | 516.6 | (5) | 509.4 | 509.5 |
| 28-Jul-20 | | 512.7 | 514.2 | 515.6 | (5) | 516.2 | (5) | 509.4 | 509.5 |
| 31-Aug-20 | | 512.8 | 514.0 | 515.6 | (5) | 516.0 | (5) | 509.3 | 509.5 |
| 28-Sep-20 | | 511.6 | 511.6 | 515.3 | 527.0 | 516.0 | (5) | 508.6 | 508.7 |
| 27-Oct-20 | | 511.1 | 512.7 | 515.3 | 527.1 | 516.0 | (5) | 508.9 | 509.0 |
| 24-Nov-20 | | 511.2 | 513.4 | 515.8 | 527.6 | 515.8 | 509.0 | 508.9 | 509.1 |
| 21-Dec-20 | | 511.0 | 513.0 | 517.5 | 527.5 | 515.7 | | 508.9 | 509.1 |
| 29-Jan-21 | | 510.8 | 512.2 | (5) | 527.4 | 515.4 | (2) | 508.8 | 509.0 |
| 19-Feb-21 | | (2) | 514.9 | (2) | (2) | (2) | (2) | 509.2 | 509.3 |
| 31-Mar-21 | | 511.1 | 515.3 | (5) | 528.1 | (5) | 509.4 | 509.5 | 509.6 |
| 29-Apr-21 | | 511.5 | 515.7 | (5) | 527.9 | 516.9 | 509.4 | 509.5 | 509.6 |
| 28-May-21 | | 510.9 | 513.6 | 515.3 | 527.7 | 516.3 | 509.0 | 508.9 | 509.1 |
| 25-Jun-21 | | 510.6 | 512.4 | 514.5 | 527.4 | 516.2 | 508.9 | 508.8 | 508.9 |
| 26-Jul-21 | | 510.3 | 511.6 | 513.8 | 527.2 | 516.4 | 508.8 | | |
| 24-Aug-21 | | 512.7 | 511.3 | 514.2 | 527.0 | 516.2 | 509.0 | 508.3 | 508.5 |
| 22-Sep-21 | | 510.8 | 513.5 | 515.3 | 527.8 | 517.0 | 509.6 | 509.1 | 508.2 |
| 29-Oct-21 | | 511.1 | 512.7 | 515.3 | 527.1 | 516.0 | 510.0 | 508.9 | 509.0 |
| 24-Nov-21 | | 510.2 | 514.1 | 515.6 | 527.8 | 516.8 | 509.3 | 509.4 | 509.5 |
| 23-Dec-21 | | 510.1 | 514.1 | 515.6 | 527.8 | 517.0 | 509.3 | 509.4 | 509.5 |
| 26-Jan-22 | | 510.6 | 513.5 | (5) | (2) | (2) | (2) | (2) | (2) |
| 10-Feb-22 | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 16-Mar-22 | | (2) | | 515.3 | 527.3 | 516.4 | 509.0 | 509.1 | (5) |
| 22-Apr-22 | | 511.2 | 514.5 | 515.6 | 527.8 | 517.0 | 509.1 | 509.2 | 509.5 |
| 26-May-22 | | 509.9 | 514.4 | 515.3 | 527.6 | 516.4 | 509.0 | 509.1 | 509.4 |
| 20-Jun-22 | | | | | | | 509.0 | 509.2 | 509.5 |
| 22-Jun-22 | | 510.2 | 514.5 | 515.3 | 528.0 | 517.0 | | | |

## Table B-2 Groundwater Elevations - Extension Quarry Monitoring Wells



| Well Name | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10-DP | NW10-I Shallow | NW10-II Deep |
|---|---|---|---|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF | AF | OB | AM | AF |
| Date TOP | 529.9 | 521.7 | 522.0 | 523.9 | 531.9 | 521.5 | 511.2 | 510.3 | 510.5 |
| 30-Aug-22 | | 510.0 | 513.6 | 515.2 | 527.7 | 516.3 | | | |
| 31-Aug-22 | | | | | | | 508.9 | 509.0 | 508.4 |
| 27-Sep-22 | | | | | 526.8 | 516.4 | | | |
| 28-Sep-22 | | 508.7 | 510.6 | 513.9 | | | | | |
| 29-Sep-22 | | | | | | | 509.0 | 508.1 | 508.2 |
| 26-Oct-22 | | | | | 526.7 | 516.4 | 509.0 | 507.8 | 508.0 |
| 28-Oct-22 | | 508.5 | 510.4 | 513.6 | | | | | |
| 23-Nov-22 | | | | | | | | | |
| 29-May-23 | | | | | 527.8 | 516.7 | 509.1 | 509.0 | 509.1 |
| 30-May-23 | | 509.1 | 511.8 | 515.3 | | | | | |
| 12-Jul-23 | | | | | | | | | |
| 30-Oct-23 | | | | | 527.0 | 516.4 | | | |
| 31-Oct-23 | | | | | | | 509.1 | 508.7 | 508.9 |
| 1-Nov-23 | | 507.9 | 509.7 | 513.8 | | | | | |
| 27-May-24 | | | | 515.3 | 527.8 | 516.6 | 509.1 | 509.1 | 509.2 |
| 28-May-24 | | 508.6 | 511.0 | | | | | | |
| 29-May-24 | | | | | | | | | |
| 28-Oct-24 | | | 509.3 | 513.8 | | | | | |
| 29-Oct-24 | | | | | 526.9 | 516.4 | 509.0 | 508.4 | 508.5 |
| 30-Oct-24 | | | | | | | | | |
| 26-May-25 | | | 510.9 | 515.7 | 527.9 | 516.7 | 509.3 | 509.3 | 509.5 |
| 28-May-25 | | | | | | | | | |
| 27-Oct-25 | | | | | | | 509.1 | 508.0 | 508.1 |
| 28-Oct-25 | | | 508.2 | 513.4 | 526.7 | 516.2 | | | |
| 29-Oct-25 | | | | | | | | | |

## Table B-3 Groundwater Elevations - Extension Quarry Injection Wells



| Well Name | IW1 | IW1a | IW2 | IW3 | IW4 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF |
| Date TOP | 512.1 | 512.0 | 509.2 | 519.1 | 511.0 |
| 2-Nov-14 | 505.2 | 505.1 | 508.1 | 505.7 | 496.0 |
| 16-Nov-14 | | | | | |
| 14-Dec-14 | | | | | |
| 18-Jan-15 | | | | | |
| 15-Feb-15 | | | | | |
| 15-Mar-15 | | | | | |
| 19-Apr-15 | | | | | |
| 17-May-15 | | | | | |
| 14-Jun-15 | | | | | |
| 19-Jul-15 | | | | | |
| 9-Aug-15 | | | | | |
| 6-Sep-15 | 502.2 | 502.1 | 506.1 | 502.6 | 495.4 |
| 11-Oct-15 | 501.3 | 501.2 | 505.5 | 502.8 | 495.1 |
| 15-Nov-15 | 501.7 | 501.6 | 506.4 | 501.7 | 494.9 |
| 9-Dec-15 | 502.8 | 502.7 | 507.4 | 502.8 | 495.3 |
| 17-Jan-16 | 505.2 | 505.1 | 508.0 | 504.9 | 496.0 |
| 14-Feb-16 | 506.8 | 506.7 | 508.3 | 506.6 | 496.8 |
| 13-Mar-16 | 510.5 | 510.4 | 508.9 | 511.5 | 499.2 |
| 17-Apr-16 | 510.1 | 510.0 | 508.7 | 508.9 | 498.6 |
| 1-May-16 | | | | | |
| 15-May-16 | 508.0 | 507.9 | 508.4 | 506.0 | 497.0 |
| 5-Jun-16 | | | | | |
| 19-Jun-16 | 504.5 | 504.4 | 508.3 | 504.4 | 496.6 |
| 3-Jul-16 | | | | | |
| 17-Jul-16 | 502.3 | 502.2 | 506.2 | 502.9 | 495.8 |
| 24-Jul-16 | 502.0 | | 506.0 | 502.6 | 495.9 |
| 7-Aug-16 | | | | | |
| 21-Aug-16 | 501.4 | 501.3 | 505.4 | 502.0 | 495.4 |
| 18-Sep-16 | 502.0 | 500.9 | 505.1 | 501.8 | 495.2 |
| 29-Sep-16 | | | | | |
| 16-Oct-16 | 500.8 | 500.8 | 504.9 | 501.4 | 495.0 |
| 13-Nov-16 | 500.7 | 500.6 | 504.9 | 501.5 | 495.1 |
| 27-Nov-16 | 500.6 | | 505.0 | 501.4 | 495.0 |
| 11-Dec-16 | 500.5 | 500.5 | 505.6 | 502.0 | 495.1 |
| 15-Jan-17 | 504.4 | 504.3 | 508.2 | 505.7 | 496.6 |
| 12-Feb-17 | 505.4 | 505.3 | 508.1 | 506.2 | 497.3 |
| 19-Mar-17 | 508.8 | 508.7 | 508.7 | 507.5 | 496.7 |
| 9-Apr-17 | 510.0 | | 508.9 | 510.0 | 498.3 |
| 16-Apr-17 | 509.5 | 509.4 | 508.6 | 509.2 | 498.3 |
| 11-May-17 | 510.1 | 510.0 | 508.6 | 509.6 | 498.8 |
| 21-May-17 | 509.4 | | 508.6 | 507.7 | 497.8 |

## Table B-3 Groundwater Elevations - Extension Quarry Injection Wells

| Well Name | IW1 | IW1a | IW2 | IW3 | IW4 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF |
| Date TOP | 512.1 | 512.0 | 509.2 | 519.1 | 511.0 |
| 25-Jun-17 | 508.3 | 508.2 | 508.4 | 507.5 | 497.5 |
| 19-Jul-17 | 506.3 | 506.2 | 507.9 | 505.9 | 496.9 |
| 3-Aug-17 | 504.7 | | 507.4 | 504.7 | 496.5 |
| 17-Aug-17 | 503.6 | 503.5 | 507.0 | 503.8 | 496.2 |
| 29-Aug-17 | 502.8 | | | 503.1 | 496.0 |
| 17-Sep-17 | 502.0 | 501.9 | 506.5 | 502.6 | 495.7 |
| 26-Sep-17 | 502.0 | | | 502.5 | 495.6 |
| 15-Oct-17 | 502.0 | 502.0 | 507.4 | 503.2 | 495.7 |
| 14-Nov-17 | 503.6 | 503.5 | 507.9 | 504.5 | 496.2 |
| 11-Dec-17 | 506.3 | 506.0 | 508.1 | 505.1 | 498.2 |
| 14-Jan-18 | 508.4 | 508.4 | 508.5 | 508.0 | 497.5 |
| 11-Feb-18 | 506.9 | | 508.2 | 506.2 | 496.8 |
| 18-Feb-18 | 510.0 | 509.9 | 508.8 | 510.5 | 498.6 |
| 18-Mar-18 | 508.5 | 508.4 | 508.5 | 506.7 | 497.1 |
| 15-Apr-18 | 508.8 | 508.6 | 508.7 | 507.9 | 497.4 |
| 17-May-18 | 509.2 | 509.1 | 508.5 | 507.5 | 497.7 |
| 18-Jun-18 | 505.7 | 505.6 | 507.6 | 505.5 | 496.7 |
| 17-Jul-18 | 503.1 | 503.0 | 506.5 | 502.9 | 496.0 |
| 22-Aug-18 | 501.9 | 501.9 | 505.5 | 501.6 | 495.2 |
| 18-Sep-18 | 501.0 | 501.0 | 505.3 | 501.2 | 495.1 |
| 25-Oct-18 | 500.7 | 500.6 | 505.0 | 500.9 | 494.9 |
| 19-Nov-18 | 501.9 | 501.8 | 507.4 | 502.5 | 495.4 |
| 10-Dec-18 | 504.4 | 504.3 | 508.0 | | 495.4 |
| 17-Jan-19 | 506.9 | 506.8 | 508.2 | 506.4 | 496.8 |
| 14-Feb-19 | 506.7 | 506.7 | 508.3 | 507.6 | 497.3 |
| 11-Mar-19 | 508.6 | 508.3 | 508.5 | 507.5 | 497.3 |
| 26-Apr-19 | 510.7 | 510.6 | 508.9 | 510.5 | 499.8 |
| 22-May-19 | 509.1 | 509.0 | 508.4 | 507.6 | 498.6 |
| 19-Jun-19 | 506.7 | 506.6 | 508.0 | 505.5 | 496.9 |
| 19-Jul-19 | 503.6 | 503.6 | (5) | 506.6 | 496.3 |
| 27-Aug-19 | 501.6 | 501.5 | (5) | 502.0 | 495.4 |
| 16-Sep-19 | 501.1 | 501.1 | (5) | | |
| 21-Oct-19 | 501.3 | 501.3 | (5) | 501.7 | 494.8 |
| 18-Nov-19 | 501.3 | 501.2 | (5) | 501.7 | 494.8 |
| 17-Dec-19 | 501.9 | 501.7 | (5) | | 495.6 |
| 14-Jan-20 | 507.2 | 507.1 | (5) | 501.8 | 495.8 |
| 18-Feb-20 | (2) | (2) | (2) | (2) | (2) |
| 24-Mar-20 | 509.3 | 509.3 | 508.7 | 509.5 | 498.2 |
| 22-Apr-20 | 509.1 | 509.0 | 508.3 | | |
| 27-May-20 | 506.0 | 505.4 | 508.1 | 504.8 | 495.8 |
| 26-Jun-20 | 504.1 | 504.0 | 507.3 | 506.1 | 496.5 |

## Table B-3 Groundwater Elevations - Extension Quarry Injection Wells

| Well Name | IW1 | IW1a | IW2 | IW3 | IW4 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AF | AF | AF |
| Date TOP | 512.1 | 512.0 | 509.2 | 519.1 | 511.0 |
| 28-Jul-20 | 503.9 | 503.9 | 507.4 | 504.2 | 496.2 |
| 31-Aug-20 | 502.5 | 502.4 | 506.4 | 505.1 | 497.2 |
| 28-Sep-20 | 502.5 | 502.5 | 506.4 | 504.9 | 497.0 |
| 27-Oct-20 | 501.7 | 501.6 | 507.0 | 502.5 | 495.3 |
| 24-Nov-20 | 501.9 | 501.8 | 506.8 | 504.6 | 495.9 |
| 21-Dec-20 | 507.5 | 507.4 | 508.4 | 505.0 | 496.1 |
| 29-Jan-21 | 507.2 | 507.1 | (2) | 505.4 | 496.5 |
| 19-Feb-21 | (2) | (2) | (2) | (2) | (2) |
| 31-Mar-21 | 508.4 | 508.4 | 508.6 | 506.4 | 497.4 |
| 29-Apr-21 | 509.3 | 509.0 | 508.7 | 506.5 | 497.4 |
| 28-May-21 | 505.7 | 505.6 | 507.7 | 505.5 | 496.8 |
| 25-Jun-21 | 503.0 | 502.9 | 506.3 | 503.3 | 496.0 |
| 26-Jul-21 | 500.9 | 500.8 | 506.4 | (5) | (5) |
| 24-Aug-21 | 501.3 | 501.8 | 505.8 | 501.7 | 495.2 |
| 22-Sep-21 | 506.3 | 506.3 | 508.4 | | |
| 29-Oct-21 | 501.7 | 501.6 | 507.0 | 503.4 | 494.3 |
| 24-Nov-21 | 505.8 | 505.8 | 508.2 | 506.0 | 496.7 |
| 23-Dec-21 | 506.0 | 505.8 | 508.4 | 506.1 | 497.1 |
| 26-Jan-22 | 504.5 | 504.4 | 507.6 | (2) | (2) |
| 10-Feb-22 | (2) | (2) | (2) | (2) | (2) |
| 16-Mar-22 | 507.6 | 506.8 | 508.5 | (2) | (2) |
| 22-Apr-22 | 508.3 | 507.2 | 508.5 | 505.9 | 497.3 |
| 26-May-22 | 504.5 | 504.4 | 507.3 | 505.5 | 496.8 |
| 20-Jun-22 | 508.4 | 507.3 | 508.6 | 506.0 | 497.0 |
| 31-Aug-22 | 505.3 | 505.2 | 507.2 | 505.6 | 496.3 |
| 28-Sep-22 | 500.5 | 500.4 | 504.5 | | |
| 29-Sep-22 | | | | 500.9 | 494.9 |
| 27-Oct-22 | | | | 500.7 | 494.8 |
| 28-Oct-22 | 500.3 | 500.3 | 504.4 | | |
| 29-May-23 | | | | 505.6 | 497.0 |
| 30-May-23 | 506.0 | 505.9 | 507.8 | | |
| 30-Oct-23 | | | | 501.3 | 495.1 |
| 1-Nov-23 | 500.8 | 500.7 | 505.0 | | |
| 27-May-24 | | | | 505.5 | 497.0 |
| 28-May-24 | 505.7 | 505.6 | 507.7 | | |
| 28-Oct-24 | 500.7 | 500.6 | 504.7 | | |
| 29-Oct-24 | | | | 501.1 | 495.0 |
| 26-May-25 | 505.8 | 505.8 | 508.2 | | |
| 27-May-25 | | | | 505.7 | 496.9 |
| 27-Oct-25 | 500.3 | 500.3 | 504.4 | | |
| 28-Oct-25 | | | | 500.6 | 494.8 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 16-May-03 | | | | | | | | | | | |
| 26-Jun-03 | | | 512.5 | | | 444.7 | | | 517.8 | | |
| 24-Jul-03 | | | 511.9 | | 459.9 | 444.5 | | | 517.3 | | |
| 21-Aug-03 | 502.2 | | 511.4 | | 459.6 | 444.2 | 446.2 | 428.6 | 517.1 | | |
| 25-Sep-03 | 501.5 | | 510.7 | | 459.0 | 443.9 | 445.9 | 428.4 | 516.7 | | |
| 22-Oct-03 | 502.9 | 485.1 | 510.8 | 508.8 | 459.6 | 443.9 | 445.9 | 428.1 | 516.9 | | |
| 25-Nov-03 | 506.0 | 485.7 | 512.1 | 509.8 | 460.4 | 444.9 | 446.8 | (2) | 519.3 | | |
| 22-Dec-03 | 505.7 | 485.9 | 512.5 | 509.7 | 460.8 | 445.0 | 447.0 | (2) | 518.8 | | |
| 9-Feb-04 | (2) | 486.7 | (2) | 509.3 | (2) | (2) | (2) | (2) | 517.8 | | |
| 16-Mar-04 | 506.0 | 485.9 | (2) | 509.8 | (2) | (2) | 447.3 | 430.2 | 519.5 | | |
| 21-Apr-04 | 506.3 | 486.1 | 513.8 | 510.0 | 461.1 | 445.7 | 447.6 | 430.3 | 519.7 | | |
| 18-May-04 | 505.3 | 486.0 | 513.2 | 507.9 | 461.0 | 445.1 | 447.1 | 429.9 | 518.5 | | |
| 22-Jun-04 | 504.1 | 485.9 | 512.7 | 508.9 | 460.7 | 444.9 | 447.0 | 429.5 | 517.9 | | |
| 28-Jul-04 | 503.1 | 485.3 | 511.9 | 508.5 | 460.3 | 444.5 | 446.5 | 428.7 | 517.3 | | |
| 25-Aug-04 | 502.1 | 485.0 | 511.3 | 508.0 | 459.7 | 444.3 | 446.3 | 428.6 | 517.0 | | |
| 24-Sep-04 | 501.1 | 484.9 | 510.9 | 507.6 | 459.6 | 444.1 | 446.2 | 428.4 | 516.7 | | |
| 19-Oct-04 | 501.3 | 485.0 | 510.5 | 507.4 | 459.5 | 444.0 | 446.0 | 428.1 | 516.5 | | |
| 16-Nov-04 | 501.3 | 485.0 | 510.4 | 507.8 | 458.7 | 443.8 | 446.0 | 427.9 | 516.4 | | |
| 16-Dec-04 | 502.4 | 485.2 | 510.6 | 508.7 | (2) | (2) | (2) | (2) | 516.4 | | |
| 31-Jan-05 | 505.0 | 485.4 | 512.2 | 509.6 | (2) | (2) | 446.9 | (2) | 518.4 | | |
| 24-Feb-05 | 504.9 | 485.6 | 512.0 | 509.5 | (2) | (2) | 447.0 | (2) | 517.9 | | |
| 22-Mar-05 | 504.5 | 485.7 | 512.0 | 509.5 | (2) | (2) | 446.6 | (2) | 517.8 | | |
| 20-Apr-05 | 506.9 | 486.1 | 513.8 | 510.3 | 461.1 | 446.1 | 448.2 | 430.7 | 521.8 | | |
| 25-May-05 | 505.1 | 486.0 | 513.2 | 509.4 | 461.0 | 445.1 | 446.8 | 429.9 | 518.2 | | |
| 29-Jun-05 | 503.6 | 486.2 | 512.2 | 508.8 | 460.5 | 444.6 | 446.7 | 429.1 | 517.6 | | |
| 13-Jul-05 | 502.9 | 486.6 | 511.9 | 507.2 | 459.0 | 444.5 | 446.5 | 428.9 | 517.4 | | |
| 23-Aug-05 | 501.8 | 485.8 | 511.0 | 507.5 | 459.5 | 444.2 | 446.2 | 428.6 | 516.9 | | |
| 26-Sep-05 | 501.9 | 485.0 | 510.4 | 507.1 | 459.5 | 443.9 | 445.9 | 428.2 | 516.6 | | |
| 26-Oct-05 | 500.5 | 484.9 | 510.2 | 507.1 | 459.2 | 443.8 | 445.8 | 427.9 | 516.4 | | |
| 16-Nov-05 | 501.8 | 485.2 | 510.1 | 507.6 | 459.3 | 443.7 | 445.7 | 427.8 | 516.3 | | |
| 14-Dec-05 | 501.7 | 484.5 | 510.3 | 508.3 | | 443.7 | 445.7 | (2) | 516.9 | | |
| 20-Jan-06 | 505.8 | 485.7 | 510.6 | 509.8 | | 444.5 | 446.5 | (2) | 518.8 | | |
| 14-Feb-06 | 505.0 | 486.4 | 512.1 | 509.6 | | 444.8 | 446.8 | (2) | 518.7 | | |
| 19-Mar-06 | 506.2 | 486.0 | 513.3 | 509.9 | | 445.6 | 447.7 | (2) | 520.4 | | |
| 17-Apr-06 | 505.7 | 486.0 | 514.0 | 510.0 | 461.0 | 445.6 | 447.6 | 430.5 | 520.1 | | |
| 19-May-06 | 504.8 | 485.9 | 513.0 | 509.4 | 460.8 | 444.9 | 446.9 | 429.7 | 517.7 | | |
| 19-Jun-06 | 503.1 | 485.6 | 512.2 | 507.0 | 460.4 | 444.5 | 446.5 | 429.1 | 517.5 | | |
| 10-Jul-06 | 502.1 | 485.3 | 511.7 | 507.4 | 460.0 | 444.4 | 446.4 | 428.7 | 517.2 | | |
| 23-Aug-06 | 501.2 | 485.0 | 510.8 | 506.9 | 459.6 | 444.0 | 446.0 | 428.5 | 516.7 | | |
| 18-Sep-06 | 501.0 | 485.0 | 510.4 | 507.2 | 459.4 | 443.8 | 445.8 | 428.2 | 516.5 | | |
| 17-Oct-06 | 501.5 | 485.4 | 510.3 | 508.0 | 459.4 | 443.8 | 445.8 | 428.1 | 516.5 | | |

## Table B-4 Groundwater Elevations - Domestic Wells

| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 22-Nov-06 | 505.4 | 485.6 | 511.6 | 509.0 | 460.3 | 444.6 | 446.6 | 429.2 | 518.7 | | |
| 15-Dec-06 | 506.3 | 486.1 | 512.4 | 510.0 | 460.7 | 445.0 | 447.0 | 429.7 | 519.6 | | |
| 22-Jan-07 | 504.4 | 485.8 | 512.5 | 509.4 | 460.1 | (2) | 446.8 | (2) | 518.2 | | |
| 19-Feb-07 | 503.2 | 487.0 | 512.1 | 509.1 | (2) | (2) | (2) | (2) | 517.6 | | |
| 18-Mar-07 | 505.9 | 485.7 | 512.4 | 509.8 | (2) | (2) | 447.1 | (2) | 519.6 | | |
| 15-Apr-07 | 506.0 | 485.9 | 513.5 | 509.9 | 461.0 | 445.5 | 447.3 | 430.1 | 519.5 | | |
| 17-May-07 | 504.4 | 485.8 | 512.8 | 509.3 | 460.5 | 444.8 | 446.8 | 429.5 | 517.8 | | |
| 17-Jun-07 | 502.5 | 485.5 | 511.9 | 508.5 | 460.4 | 444.5 | 446.5 | 428.9 | 517.3 | | |
| 15-Jul-07 | 501.7 | 485.2 | 511.4 | 507.9 | 460.0 | 444.3 | 446.2 | 428.6 | 517.0 | | |
| 19-Aug-07 | 501.0 | 485.0 | 510.7 | 507.2 | 459.6 | 444.0 | 446.0 | 428.4 | 516.6 | | |
| 10-Sep-07 | 500.8 | | | | | | | | | | |
| 16-Sep-07 | 500.8 | 485.0 | 510.3 | 506.2 | 459.4 | 443.8 | 445.8 | 428.4 | 516.4 | | |
| 14-Oct-07 | 500.7 | 485.1 | 510.0 | 506.3 | 459.3 | 443.6 | 445.6 | 427.9 | 516.2 | | |
| 18-Nov-07 | 501.3 | 485.2 | 510.1 | | 459.6 | (2) | 445.6 | 427.8 | 516.3 | | |
| 9-Dec-07 | (2) | 485.5 | 510.3 | (2) | (2) | (2) | 445.7 | (2) | 516.9 | | |
| 20-Jan-08 | | 486.7 | 513.0 | (2) | (2) | (2) | 447.5 | (2) | 519.6 | | |
| 17-Feb-08 | (2) | 485.7 | 512.7 | 509.8 | (2) | (2) | 447.1 | (2) | 518.8 | | |
| 16-Mar-08 | (2) | 485.8 | 512.7 | (2) | (2) | (2) | 446.9 | (2) | 518.7 | | |
| 6-Apr-08 | 502.2 | 486.0 | 513.6 | 510.3 | (2) | 446.2 | 448.2 | 430.6 | 521.5 | | |
| 20-Apr-08 | 506.3 | 486.1 | 514.4 | 509.9 | 461.2 | 445.9 | 449.0 | 430.6 | 520.6 | 424.0 | 424.0 |
| 18-May-08 | 505.1 | 486.0 | 513.3 | 509.5 | 461.0 | 445.1 | 447.1 | 430.0 | 518.3 | 423.2 | 423.2 |
| 15-Jun-08 | 503.6 | 486.7 | 512.5 | 508.1 | 459.9 | 444.7 | 446.7 | 429.3 | 517.6 | 424.4 | 424.3 |
| 13-Jul-08 | 502.1 | 485.8 | 511.9 | 508.4 | 460.4 | 444.5 | 446.4 | 428.7 | 517.2 | 423.9 | 423.8 |
| 17-Aug-08 | 502.2 | 485.2 | 511.7 | 508.2 | 460.2 | 444.3 | 446.3 | 428.8 | 517.5 | 424.0 | 423.9 |
| 31-Aug-08 | | | | | | | | | | | |
| 14-Sep-08 | 502.9 | 485.1 | 511.4 | 508.7 | 459.3 | 444.2 | 446.1 | 428.7 | 517.2 | 422.8 | 422.7 |
| 19-Oct-08 | 502.8 | 485.3 | 511.7 | 508.9 | 460.3 | 444.5 | 446.4 | 428.9 | 517.6 | 424.5 | 424.5 |
| 23-Nov-08 | (2) | 485.6 | 512.7 | (2) | (2) | (2) | 447.0 | (2) | 519.4 | (2) | (2) |
| 14-Dec-08 | (2) | (2) | 511.6 | (2) | (2) | (2) | 447.3 | (2) | (2) | (2) | (2) |
| 18-Jan-09 | 505.5 | 485.9 | 513.1 | (2) | (2) | (2) | 447.2 | | (2) | (2) | (2) |
| 8-Feb-09 | (2) | 485.8 | 512.6 | 509.6 | (2) | (2) | 446.8 | | (2) | (2) | (2) |
| 15-Mar-09 | 506.4 | 486.6 | 513.5 | 510.0 | 460.9 | 445.6 | 447.7 | 430.4 | 519.5 | 424.1 | 424.1 |
| 12-Apr-09 | 506.4 | 486.1 | 513.7 | 509.4 | 460.4 | 445.5 | 447.5 | 430.4 | 519.7 | 425.0 | 424.9 |
| 17-May-09 | 505.1 | 486.2 | 513.3 | 509.2 | 461.2 | 445.2 | 447.2 | 430.1 | 518.6 | 424.6 | 424.4 |
| 14-Jun-09 | 503.3 | 485.9 | 512.5 | 507.8 | 460.3 | 444.8 | 446.7 | 429.3 | 517.6 | 423.0 | 423.0 |
| 12-Jul-09 | 502.0 | 485.5 | 511.9 | 508.4 | 460.3 | 444.5 | 446.5 | 428.8 | 517.3 | 423.9 | 423.9 |
| 9-Aug-09 | 502.1 | 485.3 | 511.4 | 507.9 | 460.1 | 444.4 | 446.3 | 428.7 | 517.1 | 423.7 | 423.6 |
| 13-Sep-09 | 501.0 | 485.1 | 510.9 | 507.4 | 459.8 | 444.2 | 446.1 | 428.5 | 516.3 | 422.6 | 422.4 |
| 11-Oct-09 | 501.9 | 485.3 | 510.7 | 508.4 | 459.8 | 444.1 | 446.1 | 428.3 | 516.1 | 423.1 | 423.0 |
| 15-Nov-09 | 502.1 | 485.3 | 510.8 | 508.7 | 460.2 | 444.3 | 446.2 | 428.4 | 517.2 | 422.6 | 422.6 |
| 29-Nov-09 | | 487.1 | | | | | | | | | |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 13-Dec-09 | 503.1 | 486.4 | 511.0 | 509.1 | (2) | (2) | 446.3 | (2) | 517.5 | (2) | (2) |
| 12-Jan-10 | 503.5 | 486.9 | | | | | | | | | |
| 17-Jan-10 | | 486.3 | 511.2 | 509.0 | (2) | | 446.4 | | 517.4 | | |
| 7-Feb-10 | 503.4 | 486.9 | 511.4 | 509.2 | (2) | | 446.5 | | 517.5 | | |
| 14-Mar-10 | 506.1 | 485.7 | 512.0 | 510.3 | 460.5 | 445.4 | 447.4 | 429.5 | 520.3 | 424.6 | 424.5 |
| 18-Apr-10 | 505.9 | 486.0 | 513.3 | 509.9 | 461.0 | 445.3 | 447.2 | 430.2 | 519.1 | 423.1 | 423.1 |
| 16-May-10 | 506.6 | 486.2 | 513.0 | 509.1 | 460.9 | 445.4 | 447.5 | 430.2 | 519.0 | 424.1 | 424.0 |
| 8-Jun-10 | 506.8 | 485.6 | | | | | | | | | |
| 13-Jun-10 | 505.8 | 485.5 | 513.1 | 509.7 | 460.9 | 444.8 | 446.7 | 430.1 | 518.6 | 423.7 | 423.7 |
| 21-Jul-10 | 504.8 | 485.5 | 512.6 | 509.3 | 460.6 | 444.7 | 446.6 | 429.5 | 518.0 | 423.9 | |
| 16-Aug-10 | 503.1 | 485.3 | 512.1 | 508.7 | 460.6 | 444.5 | 446.5 | 429.0 | 517.5 | 423.0 | 423.0 |
| 12-Sep-10 | 501.8 | 485.9 | 511.5 | 508.2 | 460.2 | 444.3 | 446.3 | 428.7 | 517.3 | 422.8 | 422.8 |
| 26-Sep-10 | 503.4 | | | | | | | | | | |
| 17-Oct-10 | | 485.1 | 511.6 | 508.0 | 460.3 | 444.4 | 446.3 | 428.7 | 517.5 | 424.6 | 424.6 |
| 14-Nov-10 | 505.1 | 485.3 | 512.1 | 509.7 | 460.7 | 444.7 | 446.7 | 429.4 | 518.5 | 423.9 | 423.8 |
| 19-Dec-10 | 505.2 | 485.5 | 512.6 | (2) | (2) | (2) | 446.8 | (2) | 518.2 | (2) | (2) |
| 16-Jan-11 | 505.6 | 485.6 | 512.9 | (2) | (2) | (2) | 447.1 | (2) | (2) | (2) | (2) |
| 20-Feb-11 | 505.9 | 486.9 | (2) | (2) | (2) | (2) | 447.0 | (2) | (2) | (2) | (2) |
| 13-Mar-11 | (2) | 485.6 | 512.7 | 509.8 | (2) | (2) | 447.0 | (2) | | (2) | (2) |
| 17-Apr-11 | 506.9 | 485.8 | 514.0 | 510.0 | 461.0 | 445.5 | 447.5 | 430.5 | 520.3 | | 423.4 |
| 15-May-11 | 507.2 | 485.9 | 513.7 | 509.7 | 461.0 | 445.7 | 447.6 | 430.5 | 520.0 | | 424.3 |
| 13-Jun-11 | 505.4 | 485.8 | 513.0 | 509.4 | 461.2 | 445.2 | 447.1 | 429.9 | 518.6 | | 423.3 |
| 3-Jul-11 | | 485.5 | | | | | | | | | |
| 17-Jul-11 | 503.1 | 485.3 | 511.9 | 508.3 | 460.1 | 444.6 | 446.6 | 428.8 | 517.5 | | 423.4 |
| 14-Aug-11 | 502.1 | 485.0 | 511.3 | 507.7 | 459.8 | 444.4 | 446.3 | 428.7 | 517.1 | | 423.0 |
| 18-Sep-11 | 501.7 | 484.8 | 510.7 | 507.1 | 459.7 | 444.2 | 446.1 | 428.4 | 516.3 | | |
| 17-Oct-11 | 502.2 | 485.0 | 510.6 | 508.3 | 459.8 | 444.1 | 446.0 | 428.2 | 516.8 | 423.0 | |
| 20-Nov-11 | 502.7 | 485.1 | 511.1 | 508.9 | 460.3 | 444.4 | 446.3 | 428.7 | 517.2 | 423.8 | |
| 18-Dec-11 | 502.9 | 485.4 | 512.3 | 509.0 | 460.7 | 445.0 | 446.9 | 429.6 | 519.1 | | |
| 15-Jan-12 | (2) | 485.4 | 512.5 | | (2) | (2) | 446.9 | | | | |
| 19-Feb-12 | (2) | 485.4 | 512.2 | | (2) | (2) | 446.8 | | | | |
| 26-Feb-12 | (2) | 487.0 | | | | | | | | | |
| 18-Mar-12 | 505.9 | 484.6 | 514.0 | 510.2 | 460.5 | 445.9 | 447.9 | 430.6 | 521.2 | 425.1 | 425.1 |
| 15-Apr-12 | 504.6 | 485.7 | 512.9 | 509.4 | 460.9 | 445.0 | 446.9 | 429.6 | 518.2 | 424.4 | 424.3 |
| 13-May-12 | 504.8 | 485.6 | 512.5 | 509.3 | 460.8 | 444.7 | 446.6 | 429.4 | 518.1 | 424.6 | 424.6 |
| 17-Jun-12 | 504.1 | 485.2 | 511.9 | 507.9 | 460.6 | 444.5 | 446.4 | 428.9 | 517.5 | 423.0 | 423.0 |
| 1-Jul-12 | 502.3 | 485.0 | | | | | | | | | |
| 15-Jul-12 | 502.1 | 486.6 | 511.3 | 507.4 | 460.3 | 444.3 | 446.2 | 428.7 | 517.1 | 423.6 | 423.6 |
| 12-Aug-12 | 504.1 | 486.6 | 511.1 | 507.6 | 460.3 | 444.4 | 446.3 | 428.6 | 517.4 | 424.1 | 424.1 |
| 16-Sep-12 | | 485.0 | 510.9 | 506.1 | 460.3 | 444.3 | 446.2 | 428.7 | 517.1 | 423.6 | 423.5 |
| 7-Oct-12 | | 487.3 | | | | | | | | | |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 14-Oct-12 | 502.6 | 485.0 | 510.8 | 507.5 | 460.3 | 444.2 | 446.1 | 428.6 | 517.3 | 423.8 | 423.8 |
| 18-Nov-12 | 506.0 | 485.5 | 512.7 | 509.8 | 460.9 | 445.1 | 447.1 | 429.8 | 519.7 | 424.5 | 424.5 |
| 16-Dec-12 | 506.0 | 486.7 | 512.6 | 509.7 | 461.0 | 444.9 | 446.9 | 429.6 | 518.7 | 424.4 | 424.4 |
| 13-Jan-13 | 507.5 | 485.6 | 512.9 | 510.0 | 461.0 | 445.3 | 447.3 | (2) | 519.8 | 424.8 | 424.8 |
| 17-Feb-13 | 505.6 | 486.0 | 513.0 | 509.6 | 461.3 | 445.0 | 447.0 | 429.7 | 518.7 | (2) | (2) |
| 17-Mar-13 | 505.4 | 485.8 | 512.8 | 509.9 | 460.2 | 445.2 | 447.3 | (2) | 519.4 | (2) | (2) |
| 31-Mar-13 | 505.2 | 485.7 | | | | | | | | | |
| 14-Apr-13 | 507.4 | 485.9 | 513.5 | 510.0 | 461.4 | 445.7 | 447.7 | 430.4 | 520.9 | 424.8 | 424.8 |
| 12-May-13 | 505.6 | 485.9 | 513.3 | 509.6 | 461.4 | 445.2 | 447.2 | 429.9 | 518.7 | 423.6 | 423.6 |
| 16-Jun-13 | 505.0 | 485.6 | 512.7 | 508.7 | 461.1 | 444.9 | 446.9 | 429.6 | 518.3 | 423.7 | 423.7 |
| 14-Jul-13 | 503.9 | 485.5 | 512.2 | 509.0 | 460.7 | 444.7 | 446.6 | 429.0 | 518.1 | 424.1 | 424.0 |
| 18-Aug-13 | 502.5 | 485.2 | 511.7 | 508.5 | 460.5 | 444.5 | 446.4 | 428.8 | 517.5 | 424.0 | 424.0 |
| 15-Sep-13 | 502.3 | 485.1 | 511.3 | 508.2 | 460.2 | 444.3 | 446.3 | 428.6 | 517.4 | 422.9 | 422.8 |
| 13-Oct-13 | 504.3 | 486.2 | 511.9 | 509.4 | 460.3 | 444.7 | 446.7 | 428.8 | 518.3 | 423.8 | 423.7 |
| 17-Nov-13 | 505.7 | 487.1 | 512.7 | 509.8 | 461.0 | 445.0 | 447.0 | 429.5 | 519.0 | 423.9 | 423.9 |
| 16-Dec-13 | 505.7 | 485.8 | 512.7 | 509.6 | 460.7 | 444.9 | 447.0 | (2) | 518.6 | 423.5 | (2) |
| 19-Jan-14 | (2) | 485.9 | 512.3 | 509.4 | (2) | (2) | 446.7 | (2) | 518.1 | (2) | (2) |
| 16-Feb-14 | (2) | 485.3 | (2) | 508.9 | (2) | (2) | (2) | (2) | 517.5 | (2) | (2) |
| 17-Mar-14 | (2) | 485.2 | (2) | 508.3 | (2) | (2) | (2) | (2) | 517.3 | (2) | (2) |
| 13-Apr-14 | 507.8 | 486.3 | 514.0 | 510.4 | 461.1 | 446.5 | 448.6 | 430.8 | 521.4 | 424.5 | (2) |
| 11-May-14 | 506.6 | 487.4 | 513.6 | 509.9 | 460.4 | 445.5 | 447.5 | 430.2 | 519.4 | 424.1 | 424.1 |
| 15-Jun-14 | 503.3 | 485.6 | 512.4 | 508.8 | 460.8 | 444.8 | 446.7 | 429.2 | 517.5 | 422.9 | 422.9 |
| 13-Jul-14 | 503.2 | 487.1 | 511.9 | 508.5 | 460.5 | 444.5 | 446.5 | 428.8 | 517.3 | 423.8 | 423.8 |
| 17-Aug-14 | 502.8 | 486.8 | 511.4 | 508.1 | 460.3 | 444.3 | 446.3 | 428.6 | 516.3 | 423.1 | 423.1 |
| 7-Sep-14 | 502.5 | 486.2 | 511.1 | 508.0 | 460.3 | 444.3 | 446.2 | 428.5 | 516.8 | 423.2 | 423.1 |
| 12-Sep-14 | | 485.2 | | | | | | | | | |
| 19-Sep-14 | 503.3 | | | | | | | | | | |
| 19-Oct-14 | 502.9 | 486.3 | 511.1 | 508.9 | 460.6 | 444.4 | 446.4 | 428.5 | 517.2 | 423.4 | 423.3 |
| 2-Nov-14 | 504.7 | 485.3 | | | 460.8 | | | | | | |
| 16-Nov-14 | 505.6 | 485.5 | 512.0 | 509.7 | 461.0 | | 446.9 | | | | |
| 14-Dec-14 | 505.3 | 485.6 | 512.5 | 509.6 | 461.1 | | 446.9 | | | | |
| 18-Jan-15 | | 485.7 | 512.6 | | | | 446.9 | | | | |
| 15-Feb-15 | | 485.4 | 512.0 | | | | | | | | |
| 15-Mar-15 | | 485.4 | 511.7 | | | | 446.5 | | | | |
| 19-Apr-15 | 506.7 | 485.8 | 513.6 | 509.7 | 461.1 | 445.4 | 447.4 | 430.3 | | 424.0 | 423.9 |
| 17-May-15 | 504.7 | 486.4 | 512.7 | 509.1 | 459.1 | 444.9 | 446.8 | 429.6 | | 423.7 | 423.7 |
| 14-Jun-15 | 503.5 | 485.4 | 512.2 | 508.5 | 460.4 | 444.5 | 446.5 | 429.0 | | 423.7 | 423.6 |
| 19-Jul-15 | 503.6 | 485.5 | 512.2 | 508.9 | 460.7 | 444.5 | 446.5 | 429.1 | | | |
| 9-Aug-15 | 502.6 | 485.3 | 511.6 | 508.4 | 460.3 | 444.4 | 446.3 | 428.8 | | | |
| 6-Sep-15 | 502.4 | 485.2 | 511.2 | 507.7 | 458.5 | 444.0 | 446.1 | 428.7 | | | |
| 11-Oct-15 | 501.9 | 487.2 | 510.6 | 507.5 | 458.4 | 443.8 | 445.8 | 428.3 | | 423.0 | 423.0 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 15-Nov-15 | 501.8 | 487.3 | 510.7 | 508.4 | 459.6 | 443.8 | 446.8 | 428.1 | | 422.9 | 422.8 |
| 6-Dec-15 | 502.5 | 487.1 | 510.9 | 508.2 | 460.0 | 443.9 | 445.9 | 428.2 | | 423.4 | 423.3 |
| 17-Jan-16 | 504.2 | 487.8 | 511.7 | 509.5 | 460.6 | 444.5 | 446.5 | (2) | | (2) | 424.7 |
| 14-Feb-16 | (2) | 487.1 | 512.2 | 509.6 | 460.9 | 444.9 | 446.9 | (2) | | (2) | (2) |
| 13-Mar-16 | 505.6 | 488.1 | 513.8 | 510.2 | 461.3 | 446.0 | 447.9 | 430.6 | | 425.1 | 425.1 |
| 17-Apr-16 | 506.5 | 486.1 | 513.8 | 509.7 | 461.3 | 445.7 | 447.7 | 430.3 | | 424.8 | 424.8 |
| 15-May-16 | 506.2 | 486.7 | 513.0 | 509.2 | 460.9 | 445.1 | 447.0 | 430.0 | | 423.7 | 423.7 |
| 19-Jun-16 | 502.3 | 487.3 | 512.1 | 508.7 | 460.2 | 444.7 | 446.6 | 429.0 | | 422.8 | 422.8 |
| 17-Jul-16 | 502.0 | 487.1 | 511.4 | 508.0 | 459.6 | 444.4 | 446.4 | 428.7 | | 422.6 | 422.6 |
| 24-Jul-16 | 502.1 | 487.3 | | | | | | | | | |
| 21-Aug-16 | 502.2 | 485.1 | 510.3 | 506.8 | 459.8 | 444.1 | 446.1 | 428.5 | | 422.9 | 422.9 |
| 18-Sep-16 | 500.7 | 485.0 | 510.4 | 507.3 | 459.5 | 444.0 | 446.0 | 428.2 | | 422.9 | 422.9 |
| 29-Sep-16 | | | | | | | | | | | |
| 16-Oct-16 | 501.4 | 486.0 | 510.2 | 507.3 | 459.5 | 443.8 | 445.8 | 428.0 | | 422.9 | 422.9 |
| 13-Nov-16 | 500.2 | 485.1 | 510.2 | 507.8 | 459.4 | 443.8 | 445.8 | 427.9 | | 422.9 | 422.9 |
| 27-Nov-16 | 501.5 | 486.1 | | | | | | | | | |
| 11-Dec-16 | 501.5 | 485.7 | 510.3 | 508.4 | 459.7 | 443.7 | 445.7 | (2) | | (2) | (2) |
| 15-Jan-17 | (2) | 485.4 | 511.1 | 509.7 | 460.4 | 444.4 | 446.4 | (2) | | (2) | (2) |
| 12-Feb-17 | 504.6 | 486.6 | 511.8 | 509.6 | 459.7 | (2) | (2) | (2) | | (2) | (2) |
| 19-Mar-17 | (2) | 485.8 | 513.1 | 509.8 | 460.9 | 445.2 | 447.2 | (2) | | (2) | (2) |
| 9-Apr-17 | 507.2 | 485.9 | | | | | | | | | |
| 16-Apr-17 | 506.5 | 485.9 | 513.6 | 509.9 | 461.1 | 445.5 | 447.5 | 430.4 | | 425.0 | 425.0 |
| 11-May-17 | | 485.9 | 513.9 | 509.9 | 459.7 | 445.8 | 447.8 | 430.4 | | 424.2 | 424.1 |
| 21-May-17 | 506.7 | | | | | | | | | | |
| 25-Jun-17 | | | 513.2 | 509.6 | 461.1 | 445.0 | 447.0 | 430.0 | | 424.0 | 424.0 |
| 19-Jul-17 | | | 512.7 | 507.8 | 460.6 | 444.8 | 446.8 | 429.5 | | 423.4 | 423.3 |
| 3-Aug-17 | | | | | | | | | | | |
| 17-Aug-17 | 505.7 | | 512.0 | (5) | 460.5 | 444.5 | 446.5 | 428.7 | | 422.8 | 422.8 |
| 29-Aug-17 | | | | | | | | | | | |
| 17-Sep-17 | | | 511.6 | 508.7 | 459.4 | 444.4 | 446.4 | 428.8 | | 422.7 | 422.7 |
| 26-Sep-17 | | | | | | | | | | | |
| 15-Oct-17 | | | 511.5 | 509.0 | 460.1 | 444.3 | 446.3 | 428.7 | | 422.8 | 422.8 |
| 14-Nov-17 | (2) | | 511.9 | 509.1 | 460.2 | 444.5 | 446.5 | | | 423.5 | 423.5 |
| 11-Dec-17 | (2) | | 512.3 | 509.5 | 460.8 | 444.8 | 446.8 | (2) | | (2) | (2) |
| 14-Jan-18 | 506.3 | 486.6 | 512.6 | 509.9 | 460.9 | 445.2 | 447.1 | (2) | | (2) | (2) |
| 11-Feb-18 | 504.9 | | | | | | | | | | |
| 18-Feb-18 | 507.5 | 486.6 | 513.5 | 510.2 | 461.1 | 445.8 | 447.8 | 430.5 | | (2) | (2) |
| 18-Mar-18 | 505.4 | | 513.0 | 509.5 | 461.1 | 445.0 | 447.0 | 429.7 | | (2) | (2) |
| 15-Apr-18 | | | 512.9 | 509.9 | 459.8 | 445.2 | 447.2 | 430.0 | | | |
| 17-May-18 | 506.1 | | 513.5 | 509.6 | 461.3 | 445.4 | 447.3 | 430.1 | | 424.1 | 424.1 |
| 18-Jun-18 | 503.4 | | 512.4 | 508.5 | 460.8 | 444.8 | 446.7 | 429.2 | | 422.8 | 422.8 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 17-Jul-18 | 502.3 | | 511.6 | 508.0 | 459.3 | 444.5 | 446.4 | 428.6 | | 422.5 | 422.4 |
| 22-Aug-18 | 500.6 | | 511.0 | | 459.9 | 444.1 | 446.2 | 428.5 | | 423.2 | 423.2 |
| 18-Sep-18 | 501.1 | | 510.6 | 507.4 | 458.5 | 444.1 | 446.1 | 428.2 | | 423.2 | 423.2 |
| 23-Oct-18 | 501.0 | | 510.4 | 507.0 | 459.6 | 444.0 | 445.9 | 428.0 | | 423.5 | 423.5 |
| 19-Nov-18 | 502.5 | | 511.0 | 509.0 | 460.3 | 444.1 | 446.2 | 428.4 | | 424.6 | 424.6 |
| 10-Dec-18 | 503.8 | | 511.7 | | 460.6 | 444.8 | 446.7 | 428.9 | | 423.6 | 423.6 |
| 17-Jan-19 | (2) | | 512.4 | | 460.4 | (2) | 446.5 | (2) | | (2) | (2) |
| 14-Feb-19 | 505.2 | | 512.7 | | 461.1 | (2) | 447.1 | (2) | | 423.5 | (2) |
| 11-Mar-19 | 503.5 | | 512.4 | | 461.0 | (2) | 446.7 | (2) | | (2) | (2) |
| 26-Apr-19 | 506.5 | | 514.2 | | 460.6 | 445.9 | 447.9 | 430.5 | | 424.3 | 424.3 |
| 22-May-19 | 505.5 | 487.0 | 513.3 | | 461.1 | 445.2 | 447.2 | 429.9 | | 423.5 | 423.6 |
| 19-Jun-19 | 503.3 | 485.7 | 512.7 | | 461.1 | | 446.8 | 429.4 | | 423.9 | 423.8 |
| 19-Jul-19 | 502.3 | 487.3 | 511.9 | | 460.5 | | 446.5 | 428.7 | | 423.4 | 423.3 |
| 27-Aug-19 | 501.2 | 485.0 | 510.3 | | 459.9 | | 446.3 | 428.3 | | 423.0 | 423.0 |
| 16-Sep-19 | 501.2 | 485.1 | 510.7 | | 458.7 | | 445.8 | 428.3 | | 423.3 | 423.3 |
| 21-Oct-19 | 501.2 | 487.9 | 510.4 | | 459.4 | | | | | | |
| 18-Nov-19 | 501.2 | 485.0 | 510.5 | | 459.6 | | 445.9 | 428.0 | | 422.6 | 422.7 |
| 17-Dec-19 | (2) | 485.0 | 510.5 | | 459.5 | | 445.9 | 428.0 | | 422.7 | 422.6 |
| 14-Jan-20 | 506.1 | 485.4 | 510.0 | | 462.8 | | 447.1 | 429.5 | | 424.6 | 424.6 |
| 18-Feb-20 | | 485.5 | | | | | | (5) | | | 423.7 |
| 24-Mar-20 | 506.6 | | | | | | 447.5 | 430.1 | | 424.6 | 424.6 |
| 22-Apr-20 | (5) | 487.7 | | | 460.9 | | 447.3 | (5) | | 423.9 | 423.9 |
| 27-May-20 | (5) | | 512.7 | | 459.8 | | 447.7 | 429.7 | | 424.0 | 424.0 |
| 26-Jun-20 | 503.4 | 488.2 | 512.6 | | 460.2 | 445.1 | 446.5 | 429.2 | | 423.9 | 423.9 |
| 28-Jul-20 | 502.8 | 486.3 | 512.1 | | 459.6 | 445.1 | 446.1 | 427.9 | | 423.6 | 423.6 |
| 31-Aug-20 | 502.5 | 485.6 | 511.8 | | 460.3 | 444.9 | 445.2 | 429.0 | | 423.5 | 423.4 |
| 29-Sep-20 | 501.4 | 485.0 | 511.2 | | 460.3 | 444.8 | 445.5 | 428.6 | | 423.3 | 423.5 |
| 22-Oct-20 | 503.1 | 488.1 | 512.7 | | 460.4 | 444.7 | 446.6 | 429.7 | | 424.7 | 424.7 |
| 24-Nov-20 | 504.4 | | 511.8 | | 460.7 | 444.8 | 446.4 | 429.3 | | 424.7 | 424.7 |
| 21-Dec-20 | 504.6 | | | | 460.9 | | 447.0 | 429.9 | | 424.5 | 424.5 |
| 29-Jan-21 | 505.6 | | (2) | | 462.8 | | 447.1 | 429.5 | | 424.5 | 424.5 |
| 19-Feb-21 | 506.0 | (2) | (2) | | 462.0 | | (2) | (2) | | (2) | (2) |
| 31-Mar-21 | 506.6 | 485.5 | (3) | | 461.0 | | | | | 424.7 | 424.7 |
| 29-Apr-21 | 502.5 | 485.8 | (3) | | 460.5 | | 447.0 | 429.5 | | 424.4 | 424.4 |
| 28-May-21 | 502.3 | 485.5 | (3) | | 460.5 | 444.0 | 446.8 | 429.4 | | 423.0 | 423.0 |
| 25-Jun-21 | (3) | (5) | (3) | | 461.6 | (5) | 446.5 | 429.3 | | 423.2 | 423.1 |
| 26-Jul-21 | 504.2 | 487.6 | 511.4 | | 460.5 | | 446.3 | (3) | | 424.0 | 424.1 |
| 24-Aug-21 | 504.4 | 487.3 | (3) | | 460.0 | | 446.8 | (3) | | 424.3 | 424.3 |
| 22-Sep-21 | 504.5 | 487.0 | 511.0 | | 460.0 | | 446.3 | (3) | | 423.6 | 423.6 |
| 29-Oct-21 | 504.0 | 486.0 | 511.0 | | 459.6 | | 446.7 | (3) | | 423.7 | 423.7 |
| 24-Nov-21 | 503.9 | 485.5 | (3) | | | | 446.9 | (3) | | 423.7 | 423.7 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW1 | RW2 | RW3 | RW4 | RW5 | RW6 | RW7 | RW8 | RW9 | RW12 | RW13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AF | MT | OB | OB | OB | AM | OB | OB |
| Date TOP | 508.8 | 505.2 | 519.0 | 510.5 | 478.6 | 451.0 | 453.0 | 431.0 | 524.0 | 425.8 | 425.8 |
| 23-Dec-21 | 503.9 | 486.8 | (3) | | | | 446.9 | (3) | | 423.6 | 423.6 |
| 26-Jan-22 | 504.2 | (3) | (3) | | | | (2) | (2) | | 423.8 | 423.8 |
| 10-Feb-22 | 504.0 | (3) | (3) | | | | (2) | (2) | | 423.3 | 423.3 |
| 16-Mar-22 | 504.7 | | 513.0 | | | | 446.7 | (3) | | 424.0 | 424.1 |
| 22-Apr-22 | 505.5 | 486.0 | 513.3 | | | | 447.1 | (3) | | 423.3 | 423.3 |
| 26-May-22 | 502.3 | 485.7 | (3) | | | | 446.8 | (3) | | 423.0 | 423.0 |
| 20-Jun-22 | 505.5 | (3) | 512.0 | | | | 448.1 | (3) | | | |
| 22-Jun-22 | | | | | | | | | | | |
| 13-Aug-22 | | | | | | 444.7 | | | | | |
| 31-Aug-22 | 500.5 | (3) | 510.8 | | 459.9 | | 446.2 | 428.8 | | 422.9 | 422.9 |
| 28-Sep-22 | | | | | | | | | | | |
| 29-Sep-22 | 500.8 | 485.0 | 510.6 | | 459.7 | (3) | 445.9 | 428.2 | | | |
| 26-Oct-22 | | | | | | | | | | | |
| 27-Oct-22 | | | 510.5 | | 459.7 | | 445.8 | 428.0 | | 422.7 | 422.7 |
| 28-Oct-22 | 500.0 | 484.9 | | | | | | | | | |
| 22-Nov-22 | | | | | | | | | | 422.5 | 422.5 |
| 23-Nov-22 | | | | | 457.7 | | | | | | |
| 24-Apr-23 | | | | | | | | | | | |
| 15-May-23 | | | | | | | | | | | |
| 29-May-23 | | | 512.8 | | | | | | | | |
| 30-May-23 | 503.0 | 485.6 | | | 461.1 | | 446.9 | 429.5 | | 423.1 | 423.1 |
| 14-Jun-23 | | | | | | | | | | | |
| 27-Jun-23 | | | | | | | | | | | |
| 12-Jul-23 | | | | | | | | | | | |
| 25-Jul-23 | | | | | | | | | | | |
| 30-Aug-23 | | | | | | | | | | | |
| 30-Oct-23 | | | 511.2 | | | | | | | | |
| 31-Oct-23 | | | | | | | | 428.5 | | | |
| 1-Nov-23 | 500.6 | 484.9 | | | 460.3 | | 446.2 | | | 423.0 | 422.9 |
| 27-May-24 | | | 512.7 | | 461.3 | | | | | | |
| 28-May-24 | | | | | | | 446.8 | 429.3 | | 423.5 | 423.5 |
| 29-May-24 | 502.7 | 485.5 | | | | | | | | | |
| 28-Oct-24 | | | | | | | | | | | |
| 29-Oct-24 | 500.4 | 484.9 | 511.0 | | 460.1 | | 446.1 | 428.4 | | 422.6 | 422.6 |
| 31-Oct-24 | | | | | | | | | | | |
| 26-May-25 | | | | | | | | | | | |
| 27-May-25 | | | 513.0 | | | | | 429.9 | | 423.1 | 423.1 |
| 28-May-25 | 503.8 | 485.5 | | | 461.1 | | 446.9 | | | | |
| 27-Oct-25 | | | | | | | | | | | |
| 28-Oct-25 | | | 510.6 | | | | | | | | |
| 29-Oct-25 | 500.3 | 484.8 | | | 459.9 | | 445.9 | 428.3 | | 422.5 | 422.5 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 16-May-03 | | | 512.8 | |
| 26-Jun-03 | | | 512.7 | |
| 24-Jul-03 | 509.0 | | 512.6 | |
| 21-Aug-03 | 508.2 | | 512.2 | |
| 25-Sep-03 | 507.6 | | 511.9 | |
| 22-Oct-03 | 508.8 | | 512.4 | |
| 25-Nov-03 | 510.1 | | (2) | |
| 22-Dec-03 | 510.4 | | 512.8 | |
| 9-Feb-04 | (2) | | (2) | |
| 16-Mar-04 | (2) | | (2) | |
| 21-Apr-04 | 511.6 | | 512.9 | |
| 18-May-04 | 510.6 | | 512.7 | |
| 22-Jun-04 | 510.2 | | 512.7 | |
| 28-Jul-04 | 509.2 | | 512.5 | |
| 25-Aug-04 | 508.2 | | 512.1 | |
| 24-Sep-04 | 507.6 | | 511.8 | |
| 19-Oct-04 | 507.2 | | 511.5 | |
| 16-Nov-04 | 507.4 | | 511.7 | |
| 16-Dec-04 | (2) | | (2) | |
| 31-Jan-05 | (2) | | (2) | |
| 24-Feb-05 | (2) | | (2) | |
| 22-Mar-05 | (2) | | (2) | |
| 20-Apr-05 | 511.6 | | 512.9 | |
| 25-May-05 | 510.7 | | 512.6 | |
| 29-Jun-05 | 509.6 | | 512.6 | |
| 13-Jul-05 | 508.9 | | 512.6 | |
| 23-Aug-05 | 507.4 | | 512.1 | |
| 26-Sep-05 | 506.8 | | 511.3 | |
| 26-Oct-05 | 506.6 | | 511.3 | |
| 16-Nov-05 | 506.9 | | 511.9 | |
| 14-Dec-05 | 507.5 | | (2) | |
| 20-Jan-06 | 509.0 | | (2) | |
| 14-Feb-06 | 509.5 | | (2) | |
| 19-Mar-06 | 511.3 | | (2) | |
| 17-Apr-06 | 511.6 | | 512.8 | |
| 19-May-06 | 510.1 | | 512.6 | |
| 19-Jun-06 | 508.5 | | 512.5 | |
| 10-Jul-06 | | | 512.5 | |
| 23-Aug-06 | 506.4 | | 511.3 | |
| 18-Sep-06 | 506.2 | | 511.2 | |
| 17-Oct-06 | 506.2 | | 511.5 | |

## Table B-4 Groundwater Elevations - Domestic Wells

| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 22-Nov-06 | 509.1 | | 512.6 | |
| 15-Dec-06 | 509.9 | | 512.7 | |
| 22-Jan-07 | (2) | | (2) | |
| 19-Feb-07 | (2) | | (2) | |
| 18-Mar-07 | (2) | | (2) | |
| 15-Apr-07 | 511.1 | | 512.7 | |
| 17-May-07 | 509.6 | | 512.5 | |
| 17-Jun-07 | 507.9 | | 512.4 | |
| 15-Jul-07 | 506.8 | | | |
| 19-Aug-07 | 506.0 | | 510.9 | |
| 10-Sep-07 | | | | |
| 16-Sep-07 | 505.8 | | | |
| 14-Oct-07 | 505.6 | | | |
| 18-Nov-07 | 506.1 | | | |
| 9-Dec-07 | (2) | | | |
| 20-Jan-08 | (2) | | | |
| 17-Feb-08 | (2) | 511.2 | | |
| 16-Mar-08 | (2) | 511.2 | | |
| 6-Apr-08 | (2) | 511.6 | 512.9 | |
| 20-Apr-08 | 511.6 | 511.5 | 512.9 | |
| 18-May-08 | 510.2 | 511.1 | 512.8 | |
| 15-Jun-08 | 508.8 | 510.9 | 512.4 | |
| 13-Jul-08 | 507.5 | 510.7 | 512.3 | |
| 17-Aug-08 | 507.4 | 510.8 | 512.1 | |
| 31-Aug-08 | | | 511.7 | |
| 14-Sep-08 | 506.5 | 510.8 | 511.9 | |
| 19-Oct-08 | 507.8 | 510.8 | 512.5 | 518.8 |
| 23-Nov-08 | (2) | (2) | 513.0 | (2) |
| 14-Dec-08 | (2) | 510.2 | (2) | (2) |
| 18-Jan-09 | (2) | (2) | (2) | (2) |
| 8-Feb-09 | 509.4 | 511.1 | (2) | (2) |
| 15-Mar-09 | 510.7 | 511.3 | 513.4 | (2) |
| 12-Apr-09 | 510.8 | 511.3 | 512.7 | 515.1 |
| 17-May-09 | 510.0 | 511.1 | 512.8 | 514.6 |
| 14-Jun-09 | 508.6 | 510.9 | 512.4 | |
| 12-Jul-09 | 507.3 | 510.7 | 512.2 | 511.2 |
| 9-Aug-09 | 506.5 | 510.5 | 512.4 | 510.3 |
| 13-Sep-09 | 506.0 | 509.8 | 512.8 | 507.5 |
| 11-Oct-09 | 506.5 | 510.4 | 513.0 | 508.9 |
| 15-Nov-09 | 507.1 | 510.5 | 513.1 | 508.3 |
| 29-Nov-09 | 507.1 | | | |

## Table B-4 Groundwater Elevations - Domestic Wells

| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 13-Dec-09 | 507.6 | (2) | 513.0 | 509.6 |
| 12-Jan-10 | 507.5 | | | |
| 17-Jan-10 | 508.3 | 510.8 | (2) | 509.3 |
| 7-Feb-10 | | 510.8 | (2) | 508.8 |
| 14-Mar-10 | 509.6 | 511.6 | 512.9 | 508.9 |
| 18-Apr-10 | 510.4 | 511.2 | 513.0 | 509.6 |
| 16-May-10 | 509.6 | 511.1 | 512.6 | |
| 8-Jun-10 | 508.9 | | | |
| 13-Jun-10 | 508.9 | 511.2 | 512.2 | 512.2 |
| 21-Jul-10 | 508.4 | 511.1 | 512.3 | 511.7 |
| 16-Aug-10 | 507.5 | 510.8 | 512.2 | 509.0 |
| 12-Sep-10 | 506.6 | 510.6 | 512.4 | 509.0 |
| 26-Sep-10 | 506.5 | | | |
| 17-Oct-10 | 507.0 | 510.8 | 512.8 | 508.8 |
| 14-Nov-10 | 508.5 | 511.1 | 512.8 | 508.6 |
| 19-Dec-10 | | (2) | 512.4 | 508.8 |
| 16-Jan-11 | | (2) | (2) | 509.5 |
| 20-Feb-11 | 508.9 | 511.2 | (2) | 508.3 |
| 13-Mar-11 | 509.2 | 511.2 | (2) | 509.2 |
| 17-Apr-11 | 511.2 | 511.4 | (2) | 509.8 |
| 15-May-11 | 510.6 | 511.5 | 512.9 | 509.2 |
| 13-Jun-11 | 509.7 | 511.1 | 512.5 | 507.9 |
| 3-Jul-11 | 508.2 | | | |
| 17-Jul-11 | 507.6 | 510.6 | 511.8 | 507.8 |
| 14-Aug-11 | 507.2 | 510.3 | 511.9 | 508.2 |
| 18-Sep-11 | 506.5 | 509.7 | 511.8 | 509.0 |
| 17-Oct-11 | 506.9 | 510.3 | 511.8 | 508.2 |
| 20-Nov-11 | 508.0 | 510.7 | 511.9 | 508.6 |
| 18-Dec-11 | 509.8 | 511.2 | 512.4 | 508.9 |
| 15-Jan-12 | 509.6 | 511.1 | | |
| 19-Feb-12 | 509.3 | 510.8 | 512.5 | 509.2 |
| 26-Feb-12 | 508.2 | | | |
| 18-Mar-12 | 511.2 | 511.5 | 512.9 | 510.7 |
| 15-Apr-12 | 509.6 | 511.1 | 512.3 | 507.8 |
| 13-May-12 | 508.6 | 511.0 | 512.3 | 508.8 |
| 17-Jun-12 | 507.4 | 510.8 | 512.2 | 508.5 |
| 1-Jul-12 | 506.6 | | | |
| 15-Jul-12 | 506.4 | 510.3 | 511.9 | 508.3 |
| 12-Aug-12 | 507.1 | 510.9 | 512.3 | 509.0 |
| 16-Sep-12 | 506.5 | 510.4 | 510.9 | 507.8 |
| 7-Oct-12 | 506.3 | | | |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 14-Oct-12 | 506.8 | 510.6 | 510.9 | 509.2 |
| 18-Nov-12 | 509.6 | 511.2 | 512.8 | 510.0 |
| 16-Dec-12 | 509.1 | 511.2 | 513.1 | 509.0 |
| 13-Jan-13 | 509.6 | 511.5 | 513.1 | 510.0 |
| 17-Feb-13 | 509.3 | 511.2 | (2) | 508.2 |
| 17-Mar-13 | 509.5 | 511.2 | (2) | 508.7 |
| 31-Mar-13 | 509.1 | | | |
| 14-Apr-13 | 510.5 | 511.4 | 512.9 | 509.3 |
| 12-May-13 | 510.0 | 511.2 | 512.7 | 508.5 |
| 16-Jun-13 | 508.9 | 511.0 | 512.5 | 508.8 |
| 14-Jul-13 | 508.1 | 510.9 | 512.0 | 508.9 |
| 18-Aug-13 | 507.1 | 510.7 | 512.0 | 508.6 |
| 15-Sep-13 | 506.5 | 510.6 | 512.2 | 509.6 |
| 13-Oct-13 | 508.2 | 511.2 | 512.3 | 509.6 |
| 17-Nov-13 | 509.2 | 511.3 | 512.5 | 508.8 |
| 16-Dec-13 | 509.1 | 511.2 | (2) | 508.8 |
| 19-Jan-14 | 508.5 | 511.1 | (2) | 509.5 |
| 16-Feb-14 | 507.7 | 510.9 | (2) | 509.6 |
| 17-Mar-14 | 507.4 | 510.9 | (2) | 509.4 |
| 13-Apr-14 | 511.9 | 512.2 | (2) | 512.2 |
| 11-May-14 | 510.5 | 511.3 | 512.6 | 509.4 |
| 15-Jun-14 | 508.2 | 510.9 | 511.9 | 509.3 |
| 13-Jul-14 | 507.2 | 510.8 | 512.0 | 509.3 |
| 17-Aug-14 | 506.6 | 510.6 | 511.9 | 509.2 |
| 7-Sep-14 | 506.3 | 510.5 | 511.9 | 509.2 |
| 12-Sep-14 | 506.8 | | | |
| 19-Sep-14 | | | | |
| 19-Oct-14 | 507.5 | 510.8 | 512.9 | 509.2 |
| 2-Nov-14 | 508.2 | | | 507.7 |
| 16-Nov-14 | 508.9 | 511.2 | 512.9 | 509.2 |
| 14-Dec-14 | 509.1 | 511.1 | 512.8 | 509.2 |
| 18-Jan-15 | | | | |
| 15-Feb-15 | | | | |
| 15-Mar-15 | | | | 507.9 |
| 19-Apr-15 | 510.6 | 511.4 | 512.9 | 513.1 |
| 17-May-15 | 509.0 | 511.0 | 512.6 | 509.8 |
| 14-Jun-15 | 507.9 | 511.0 | 512.3 | 508.5 |
| 19-Jul-15 | 507.9 | 510.9 | 512.1 | 508.0 |
| 9-Aug-15 | 507.0 | 510.8 | 511.6 | 507.2 |
| 6-Sep-15 | 506.2 | 510.5 | 511.0 | 506.5 |
| 11-Oct-15 | 505.6 | 509.9 | (1) | 506.0 |

## Table B-4 Groundwater Elevations - Domestic Wells



| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 15-Nov-15 | 506.3 | 510.6 | 510.8 | 506.4 |
| 6-Dec-15 | 507.3 | 510.8 | 511.0 | 506.4 |
| 17-Jan-16 | (2) | 511.0 | (2) | 507.5 |
| 14-Feb-16 | 508.7 | 511.1 | (2) | 508.9 |
| 13-Mar-16 | 512.5 | 511.7 | 513.0 | 514.9 |
| 17-Apr-16 | 510.7 | 511.3 | 512.9 | 514.4 |
| 15-May-16 | 509.4 | 511.1 | 512.6 | 511.0 |
| 19-Jun-16 | 507.6 | 510.7 | 512.2 | 508.8 |
| 17-Jul-16 | 506.3 | 510.3 | 511.2 | 507.1 |
| 24-Jul-16 | 506.1 | | | |
| 21-Aug-16 | 505.6 | 509.7 | (1) | 506.0 |
| 18-Sep-16 | 505.3 | 509.4 | (1) | 505.6 |
| 29-Sep-16 | 505.2 | | | |
| 16-Oct-16 | 505.1 | 509.2 | (1) | 505.3 |
| 13-Nov-16 | 505.1 | 509.3 | (1) | 505.2 |
| 27-Nov-16 | 505.1 | | | |
| 11-Dec-16 | 506.0 | 509.8 | (2) | 505.2 |
| 15-Jan-17 | 508.1 | 510.9 | (2) | 507.8 |
| 12-Feb-17 | 508.3 | 510.9 | (2) | 507.4 |
| 19-Mar-17 | 509.9 | 511.2 | (2) | 510.7 |
| 9-Apr-17 | 510.4 | | | |
| 16-Apr-17 | 510.3 | 511.3 | 512.7 | 512.0 |
| 11-May-17 | 510.6 | 511.3 | 512.7 | 512.8 |
| 21-May-17 | 510.1 | | | |
| 25-Jun-17 | 509.2 | 511.4 | 512.6 | 510.9 |
| 19-Jul-17 | 508.4 | 511.0 | 512.5 | 509.6 |
| 3-Aug-17 | 507.7 | | | |
| 17-Aug-17 | 507.2 | 510.8 | 511.7 | 507.9 |
| 29-Aug-17 | 506.8 | | | |
| 17-Sep-17 | 506.5 | 510.6 | 511.0 | 506.8 |
| 26-Sep-17 | 506.5 | | | |
| 15-Oct-17 | 507.2 | 510.8 | 511.3 | 506.7 |
| 14-Nov-17 | 507.8 | 511.0 | 511.5 | 507.0 |
| 11-Dec-17 | 512.5 | (2) | (2) | 510.3 |
| 14-Jan-18 | 509.0 | 511.3 | (2) | 509.4 |
| 11-Feb-18 | 508.7 | | | |
| 18-Feb-18 | 510.4 | | (2) | 509.9 |
| 18-Mar-18 | 509.6 | 511.1 | (2) | 509.9 |
| 15-Apr-18 | 509.5 | 511.4 | | 510.5 |
| 17-May-18 | 510.6 | 511.2 | 512.5 | 510.8 |
| 18-Jun-18 | 508.0 | 510.8 | 511.9 | 508.5 |

## Table B-4 Groundwater Elevations - Domestic Wells

| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 17-Jul-18 | 506.7 | 510.3 | 510.9 | 506.8 |
| 22-Aug-18 | 505.7 | 511.7 | 511.3 | 504.7 |
| 18-Sep-18 | 505.4 | 509.5 | 511.3 | 504.2 |
| 23-Oct-18 | 505.1 | 509.5 | 510.9 | 504.9 |
| 19-Nov-18 | 507.0 | 510.7 | (2) | 505.7 |
| 10-Dec-18 | 507.0 | 511.0 | (2) | 506.8 |
| 17-Jan-19 | 508.7 | 511.1 | (2) | 508.7 |
| 14-Feb-19 | 508.7 | 511.2 | (2) | (2) |
| 11-Mar-19 | 509.4 | 511.0 | (2) | 510.8 |
| 26-Apr-19 | 511.3 | 511.4 | 512.7 | 514.1 |
| 22-May-19 | 511.3 | 511.2 | 512.7 | 509.6 |
| 19-Jun-19 | 508.7 | 510.9 | 512.1 | 508.0 |
| 19-Jul-19 | 506.9 | 510.3 | 510.9 | 506.5 |
| 27-Aug-19 | 505.8 | 509.9 | 511.0 | 505.2 |
| 16-Sep-19 | 505.5 | 509.3 | 511.0 | 505.0 |
| 21-Oct-19 | | | | |
| 18-Nov-19 | 505.5 | 510.0 | 511.0 | 504.1 |
| 17-Dec-19 | 507.2 | 510.8 | (2) | (2) |
| 14-Jan-20 | 508.9 | 510.8 | (5) | |
| 18-Feb-20 | 511.3 | 509.4 | | |
| 24-Mar-20 | 510.0 | 511.4 | | |
| 22-Apr-20 | 509.9 | 511.2 | 512.5 | 509.4 |
| 27-May-20 | 508.4 | 511.0 | 511.7 | 507.8 |
| 26-Jun-20 | 508.4 | 510.8 | 511.7 | 507.5 |
| 28-Jul-20 | 506.4 | 510.8 | 510.8 | |
| 31-Aug-20 | 506.6 | 510.2 | 511.0 | |
| 29-Sep-20 | 506.4 | 509.9 | 510.8 | |
| 22-Oct-20 | 506.7 | 511.9 | 510.7 | |
| 24-Nov-20 | 509.4 | 509.8 | 510.8 | |
| 21-Dec-20 | 509.0 | 510.2 | | |
| 29-Jan-21 | 509.2 | 510.8 | (2) | |
| 19-Feb-21 | (2) | (2) | (2) | |
| 31-Mar-21 | 509.4 | | (2) | |
| 29-Apr-21 | 510.0 | 509.9 | 512.4 | |
| 28-May-21 | 509.7 | 510.0 | 512.0 | |
| 25-Jun-21 | 509.6 | 510.1 | 511.8 | |
| 26-Jul-21 | 506.4 | 510.5 | 508.6 | |
| 24-Aug-21 | 505.9 | 510.0 | 508.9 | |
| 22-Sep-21 | 508.4 | 510.5 | 509.5 | |
| 29-Oct-21 | 508.7 | 510.7 | 510.7 | |
| 24-Nov-21 | 508.5 | 511.2 | 511.5 | |

## Table B-4 Groundwater Elevations - Domestic Wells

| Well Name | RW16 | RW17 | RW18 | RW19 |
|---|---|---|---|---|
| Flow System | AM | | OB | AM |
| Date TOP | 513.3 | 514.7 | 513.8 | 523.8 |
| 23-Dec-21 | 508.5 | 511.4 | 511.2 | |
| 26-Jan-22 | 507.6 | (3) | | |
| 10-Feb-22 | (2) | (3) | | |
| 16-Mar-22 | 508.6 | 510.2 | | |
| 22-Apr-22 | 509.3 | 510.5 | | |
| 26-May-22 | 507.3 | (3) | | |
| 20-Jun-22 | | | | |
| 22-Jun-22 | 509.3 | | | |
| 13-Aug-22 | | | | |
| 31-Aug-22 | 507.2 | (3) | | |
| 28-Sep-22 | 504.6 | | | |
| 29-Sep-22 | | 509.7 | | |
| 26-Oct-22 | | 509.4 | | |
| 27-Oct-22 | | | | |
| 28-Oct-22 | 504.5 | | | |
| 22-Nov-22 | | | | |
| 23-Nov-22 | | | | |
| 24-Apr-23 | 509.8 | | | |
| 15-May-23 | 508.9 | | | |
| 29-May-23 | | 510.9 | | |
| 30-May-23 | 508.0 | | | |
| 14-Jun-23 | 507.3 | | | |
| 27-Jun-23 | 506.7 | | | |
| 12-Jul-23 | 507.1 | | | |
| 25-Jul-23 | 509.8 | | | |
| 30-Aug-23 | 506.4 | | | |
| 30-Oct-23 | | 510.5 | | |
| 31-Oct-23 | | | | |
| 1-Nov-23 | 505.0 | | | |
| 27-May-24 | | 511.0 | | |
| 28-May-24 | 507.8 | | | |
| 29-May-24 | | | | |
| 28-Oct-24 | 504.8 | | | |
| 29-Oct-24 | | | | |
| 31-Oct-24 | | 510.1 | | |
| 26-May-25 | 508.3 | | | |
| 27-May-25 | | 511.1 | | |
| 28-May-25 | | | | |
| 27-Oct-25 | 504.2 | | | |
| 28-Oct-25 | | | | |
| 29-Oct-25 | | | | |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells



| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 8-Jun-96 | 511.8 | | 507.5 | 507.5 | 507.5 |
| 6-Sep-96 | 511.7 | 511.7 | 507.2 | 507.2 | 507.3 |
| 23-Dec-96 | 512.0 | 512.1 | 508.3 | 508.1 | 507.9 |
| 26-Feb-97 | 512.1 | 512.1 | (2) | 509.1 | 508.4 |
| 8-May-97 | 512.0 | 512.0 | 508.3 | 509.1 | 508.1 |
| 26-Aug-97 | 511.9 | 511.9 | 507.5 | 508.6 | 507.5 |
| 19-Dec-97 | 511.9 | 511.9 | 507.8 | 509.0 | 507.7 |
| 27-Feb-98 | (2) | 514.8 | (2) | 509.0 | (2) |
| 8-Apr-98 | | 510.2 | 509.5 | 509.1 | 508.7 |
| 10-May-98 | 511.6 | 511.6 | 507.3 | 507.3 | 507.3 |
| 29-Dec-98 | (2) | (2) | (2) | 508.7 | (2) |
| 24-Feb-99 | (2) | (2) | (2) | 508.8 | (2) |
| 28-Apr-99 | 511.8 | 510.6 | 507.7 | 508.6 | 506.9 |
| 26-May-99 | 512.0 | 510.1 | 507.5 | 508.4 | 507.5 |
| 29-Jun-99 | | 510.3 | 507.4 | 507.4 | 507.4 |
| 26-Jul-99 | | | 507.3 | 507.3 | 507.4 |
| 17-Aug-99 | 510.3 | 511.4 | 507.2 | 507.3 | 507.6 |
| 27-Sep-99 | 511.8 | 511.2 | 507.1 | 507.2 | 507.3 |
| 25-Oct-99 | 510.8 | 511.0 | 507.2 | 507.2 | 507.3 |
| 21-Nov-99 | 511.1 | 511.3 | 507.4 | 507.4 | 507.4 |
| 21-Dec-99 | 511.2 | 511.4 | 507.5 | 507.7 | 507.5 |
| 25-Jan-00 | (2) | (2) | 507.8 | 508.6 | 507.6 |
| 29-Feb-00 | (2) | (2) | 509.5 | 509.0 | 508.6 |
| 31-Mar-00 | (2) | (2) | 507.9 | 509.0 | 507.8 |
| 2-Jun-00 | 511.0 | 511.1 | 508.0 | 508.7 | 507.8 |
| 7-Jul-00 | 510.7 | 510.8 | 507.8 | 508.8 | 507.7 |
| 27-Aug-00 | 510.6 | 510.6 | 507.4 | 508.4 | 507.4 |
| 28-Sep-00 | 510.9 | 510.9 | 507.6 | 508.7 | 507.5 |
| 3-Nov-00 | 511.0 | 511.0 | 507.7 | 508.8 | 507.6 |
| 22-Feb-01 | (2) | (2) | (2) | (2) | (2) |
| 22-Mar-01 | (2) | (2) | (2) | (2) | (2) |
| 2-May-01 | 510.5 | | 508.3 | 508.7 | |
| 7-Jun-01 | | | 507.5 | 508.6 | 507.5 |
| 12-Jul-01 | 509.1 | | 507.3 | 507.5 | 506.9 |
| 1-Aug-01 | 509.7 | | 507.3 | 507.3 | 507.3 |
| 4-Oct-01 | 509.8 | 509.7 | 507.3 | 507.4 | 507.3 |
| 1-Nov-01 | 510.5 | 510.8 | 508.2 | 509.0 | 507.9 |
| 14-Dec-01 | 510.4 | 510.5 | 508.0 | 508.9 | 507.8 |
| 10-Jan-02 | 510.3 | 510.4 | 507.8 | 509.0 | 507.6 |
| 14-Mar-02 | (2) | (2) | (2) | 509.0 | (2) |
| 16-May-02 | 510.7 | 510.8 | 508.0 | 509.2 | 507.8 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 20-Jun-02 | 509.9 | 510.5 | 507.7 | 508.7 | 507.6 |
| 11-Jul-02 | 506.5 | 509.5 | 507.8 | 507.7 | 507.5 |
| 13-Sep-02 | 508.9 | 509.6 | 507.1 | 507.2 | 507.3 |
| 1-Nov-02 | 510.9 | 510.3 | 507.0 | 507.1 | 507.2 |
| 16-Jan-03 | (2) | (2) | 507.3 | 508.5 | (2) |
| 11-Apr-03 | 510.8 | 511.1 | (2) | 509.2 | (2) |
| 15-May-03 | 510.5 | 513.7 | 507.8 | 508.9 | 507.6 |
| 24-Jun-03 | 510.4 | 510.6 | 507.5 | 508.4 | 507.4 |
| 22-Jul-03 | 510.1 | 510.2 | 507.4 | 507.3 | 507.4 |
| 20-Aug-03 | 509.8 | 509.9 | 507.3 | 507.3 | 507.4 |
| 25-Sep-03 | 509.3 | 509.6 | 507.2 | 507.2 | 506.8 |
| 22-Oct-03 | 509.3 | 508.3 | 507.3 | 508.7 | 507.4 |
| 25-Nov-03 | 510.4 | 509.6 | 508.3 | 508.9 | 508.0 |
| 11-Dec-03 | 510.4 | 510.2 | (2) | (2) | (2) |
| 22-Dec-03 | 510.6 | 510.7 | 508.3 | 509.0 | |
| 9-Feb-04 | 509.5 | 509.5 | (2) | 508.8 | (2) |
| 16-Mar-04 | 510.3 | 510.5 | 508.4 | 509.0 | 508.0 |
| 2-Apr-04 | 512.0 | 512.4 | (2) | (2) | (2) |
| 20-Apr-04 | 510.8 | 511.1 | 508.9 | 509.0 | 508.2 |
| 18-May-04 | 510.2 | 510.4 | 507.9 | 508.9 | 507.7 |
| 22-Jun-04 | 509.6 | 510.0 | 507.6 | 508.8 | 507.6 |
| 28-Jul-04 | 509.4 | 509.7 | 507.4 | 508.4 | 507.4 |
| 25-Aug-04 | 509.2 | 509.5 | 507.0 | 507.3 | 507.3 |
| 22-Sep-04 | 509.5 | 509.6 | 507.2 | 507.2 | 507.3 |
| 19-Oct-04 | 509.4 | 509.5 | 507.1 | 507.2 | 507.2 |
| 16-Nov-04 | 508.2 | 508.3 | 507.2 | 507.2 | 507.3 |
| 16-Dec-04 | (2) | 509.2 | 507.3 | 508.7 | 507.4 |
| 31-Jan-05 | (2) | 509.2 | 507.8 | 508.7 | (2) |
| 24-Feb-05 | (2) | 508.8 | 507.6 | 508.9 | 507.5 |
| 22-Mar-05 | 508.8 | 508.5 | (2) | 508.8 | (2) |
| 20-Apr-05 | 511.4 | 511.9 | 510.1 | 509.2 | 508.8 |
| 25-May-05 | 510.6 | 510.9 | 507.9 | 508.7 | 507.7 |
| 29-Jun-05 | 510.1 | 510.5 | 507.5 | 508.4 | 506.3 |
| 13-Jul-05 | 510.3 | 510.4 | 507.4 | 507.5 | 507.4 |
| 23-Aug-05 | 510.2 | 510.3 | 507.3 | 507.3 | 507.3 |
| 26-Sep-05 | 510.2 | 510.3 | 507.2 | 507.2 | 507.3 |
| 26-Oct-05 | 510.4 | 510.4 | 507.2 | 507.2 | 507.3 |
| 16-Nov-05 | 510.6 | 510.6 | 507.2 | 507.2 | 507.3 |
| 14-Dec-05 | (2) | 510.3 | 507.4 | 508.5 | 507.4 |
| 20-Jan-06 | 510.5 | 510.6 | 508.1 | 509.0 | 507.9 |
| 12-Feb-06 | 510.4 | 510.6 | 507.9 | 508.9 | 507.8 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 19-Mar-06 | 511.2 | 511.3 | 509.0 | 509.0 | 508.3 |
| 16-Apr-06 | 511.0 | 511.1 | 509.2 | 509.0 | 508.5 |
| 14-May-06 | 510.3 | 510.5 | 507.8 | 508.9 | 507.3 |
| 18-Jun-06 | 509.6 | 509.8 | 507.4 | 507.7 | 506.6 |
| 9-Jul-06 | 509.8 | 509.7 | 507.3 | 507.3 | 506.3 |
| 20-Aug-06 | 509.5 | 509.6 | 507.2 | 507.2 | 506.3 |
| 17-Sep-06 | 509.4 | 509.6 | 507.1 | 507.1 | 507.2 |
| 15-Oct-06 | 509.3 | 509.2 | 507.2 | 507.2 | 507.3 |
| 19-Nov-06 | 510.4 | 510.5 | 508.1 | 508.9 | 507.8 |
| 10-Dec-06 | 510.6 | 510.7 | 510.4 | 509.1 | 508.0 |
| 21-Jan-07 | 511.9 | (2) | 507.8 | 508.9 | 507.6 |
| 18-Feb-07 | (2) | (2) | 507.5 | 508.7 | 507.5 |
| 18-Mar-07 | 510.3 | 510.6 | 508.7 | 509.1 | 508.0 |
| 15-Apr-07 | 511.3 | 510.7 | 508.5 | 509.1 | 508.0 |
| 17-May-07 | 509.9 | 509.9 | 507.6 | 509.0 | 507.6 |
| 21-Jun-07 | 509.1 | 509.1 | 507.4 | 508.2 | 507.4 |
| 17-Jul-07 | 509.2 | 508.4 | 507.3 | 507.3 | 507.3 |
| 21-Aug-07 | 509.2 | 509.3 | 507.1 | 507.2 | 507.2 |
| 18-Sep-07 | 509.6 | 509.7 | 507.0 | 507.1 | 507.2 |
| 22-Oct-07 | 509.6 | 509.7 | 507.0 | 507.0 | 507.2 |
| 23-Nov-07 | 509.7 | 509.8 | 507.3 | 507.5 | 507.3 |
| 13-Dec-07 | 509.6 | 509.8 | (2) | 508.8 | (2) |
| 24-Jan-08 | 509.7 | 509.8 | 507.3 | 508.8 | 507.9 |
| 21-Feb-08 | 509.5 | 509.6 | 507.5 | 509.1 | 508.3 |
| 18-Mar-08 | 510.5 | 510.7 | (2) | 509.0 | (2) |
| 7-Apr-08 | 511.6 | 511.8 | (2) | 509.4 | 508.8 |
| 21-Apr-08 | 510.5 | 511.2 | 509.5 | 509.1 | 508.5 |
| 20-May-08 | 510.6 | 510.8 | 507.9 | 508.9 | 508.3 |
| 16-Jun-08 | 510.3 | 510.3 | 507.4 | 508.7 | 507.8 |
| 14-Jul-08 | 509.5 | 509.8 | 505.0 | 507.7 | 507.0 |
| 18-Aug-08 | 509.5 | 510.5 | 507.1 | 508.4 | 507.8 |
| 15-Sep-08 | 508.9 | 510.3 | 507.5 | 508.4 | 507.7 |
| 20-Oct-08 | 509.8 | 509.4 | 507.4 | | 507.8 |
| 23-Nov-08 | 510.4 | 510.2 | 507.6 | 508.7 | 508.3 |
| 14-Dec-08 | 512.7 | 511.5 | 507.6 | 509.4 | (2) |
| 18-Jan-09 | 511.9 | 510.8 | 507.0 | 509.0 | (2) |
| 8-Feb-09 | 510.0 | 508.4 | 507.2 | 509.1 | (2) |
| 15-Mar-09 | 510.8 | 510.9 | 507.3 | 509.2 | |
| 12-Apr-09 | 510.8 | 510.5 | 507.3 | 509.2 | |
| 17-May-09 | 510.5 | 510.5 | 508.0 | 508.8 | 507.7 |
| 14-Jun-09 | 510.4 | 510.3 | 507.9 | 508.8 | 507.5 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 12-Jul-09 | 509.7 | 508.8 | 507.4 | 507.4 | 506.7 |
| 9-Aug-09 | 509.8 | 509.0 | 507.1 | 507.3 | 506.5 |
| 13-Sep-09 | 509.8 | 509.9 | 507.2 | 507.3 | 506.5 |
| 11-Oct-09 | 510.2 | 510.3 | 507.4 | 508.8 | 507.9 |
| 15-Nov-09 | 509.8 | 510.0 | 507.4 | 508.7 | 507.9 |
| 13-Dec-09 | 509.9 | 510.2 | 507.5 | 509.1 | 508.3 |
| 17-Jan-10 | 509.9 | 510.1 | 507.5 | 509.1 | 508.2 |
| 7-Feb-10 | 510.0 | 510.1 | 507.7 | 509.1 | 508.3 |
| 14-Mar-10 | 511.4 | 511.4 | 509.0 | 509.5 | 508.6 |
| 18-Apr-10 | | 510.8 | 508.3 | 509.0 | 507.9 |
| 16-May-10 | 510.6 | 510.9 | 507.9 | 508.9 | 507.7 |
| 8-Jun-10 | | | | | |
| 13-Jun-10 | 511.0 | 510.8 | 507.6 | 508.9 | 507.8 |
| 21-Jul-10 | 510.5 | 510.7 | 507.4 | 509.0 | 508.0 |
| 16-Aug-10 | 510.2 | 510.3 | 507.5 | 508.9 | 507.7 |
| 12-Sep-10 | 510.2 | 510.3 | 507.2 | 507.3 | 507.4 |
| 17-Oct-10 | 510.3 | 510.3 | 507.5 | 508.5 | 507.4 |
| 14-Nov-10 | 510.3 | 510.5 | 507.5 | 508.6 | 507.6 |
| 19-Dec-10 | 510.4 | 510.7 | 508.2 | 509.1 | 508.0 |
| 16-Jan-11 | 510.6 | 510.6 | 508.2 | 509.3 | 508.2 |
| 20-Feb-11 | 510.5 | 510.4 | 508.1 | 509.1 | 508.2 |
| 13-Mar-11 | 510.7 | 510.7 | | 509.2 | 508.3 |
| 17-Apr-11 | 511.0 | 511.1 | 509.0 | 509.2 | 508.2 |
| 15-May-11 | 511.2 | 511.3 | 508.6 | 509.2 | 508.2 |
| 13-Jun-11 | 510.9 | 511.0 | 508.2 | 508.9 | 507.8 |
| 17-Jul-11 | 509.9 | 510.1 | 507.4 | 507.5 | 506.6 |
| 14-Aug-11 | 509.4 | 509.4 | 507.3 | 508.1 | 506.2 |
| 18-Sep-11 | 509.1 | 509.3 | 507.2 | 508.0 | 506.1 |
| 17-Oct-11 | 508.6 | 508.8 | 507.3 | 507.8 | 506.5 |
| 20-Nov-11 | 510.2 | 509.2 | 507.3 | 508.6 | 507.3 |
| 18-Dec-11 | 510.3 | 509.3 | 507.4 | 508.8 | 507.5 |
| 15-Jan-12 | 510.4 | 509.5 | 507.6 | 509.0 | 507.8 |
| 19-Feb-12 | 510.5 | 509.6 | (2) | 508.9 | 508.0 |
| 26-Feb-12 | | | | | |
| 18-Mar-12 | 512.1 | 511.3 | 509.7 | 509.0 | 508.0 |
| 15-Apr-12 | 510.6 | 510.7 | 507.8 | 508.9 | 507.9 |
| 13-May-12 | 510.4 | 510.5 | 507.7 | 508.8 | 507.8 |
| 17-Jun-12 | 510.0 | 510.1 | 507.4 | 508.5 | 507.5 |
| 15-Jul-12 | 509.8 | 510.0 | 507.3 | 508.5 | 507.5 |
| 12-Aug-12 | 510.5 | 510.9 | 507.5 | 508.5 | 507.5 |
| 16-Sep-12 | 510.0 | 510.1 | 507.3 | 507.3 | 507.3 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 14-Oct-12 | 510.2 | 510.7 | 507.5 | 507.8 | 507.8 |
| 18-Nov-12 | 510.4 | 511.1 | 508.1 | 508.4 | 508.6 |
| 16-Dec-12 | 510.7 | 510.8 | 507.6 | 508.7 | 508.3 |
| 13-Jan-13 | 511.0 | 511.1 | 508.3 | 509.2 | 508.6 |
| 17-Feb-13 | 511.3 | 511.2 | 508.3 | 509.3 | 508.6 |
| 17-Mar-13 | 511.0 | 510.8 | 508.2 | 509.0 | 508.4 |
| 14-Apr-13 | 511.3 | 510.0 | 509.0 | 509.2 | 508.5 |
| 12-May-13 | 510.5 | 508.9 | 508.1 | 508.9 | 508.2 |
| 16-Jun-13 | | 510.9 | 507.9 | 508.8 | 508.1 |
| 14-Jul-13 | | 510.9 | 507.6 | 508.6 | 507.9 |
| 18-Aug-13 | | 510.4 | 507.4 | 508.2 | 507.6 |
| 15-Sep-13 | | 510.4 | 507.4 | 508.3 | 507.6 |
| 13-Oct-13 | | 509.9 | 507.5 | 508.6 | 508.0 |
| 17-Nov-13 | | 510.2 | 507.7 | 509.5 | 508.7 |
| 16-Dec-13 | | 510.2 | 507.6 | 509.5 | 508.7 |
| 19-Jan-14 | | 510.2 | 507.5 | 509.4 | 508.6 |
| 16-Feb-14 | | 510.3 | 507.6 | 509.5 | 508.7 |
| 17-Mar-14 | | 510.7 | (2) | 509.4 | 508.6 |
| 13-Apr-14 | | 510.7 | (2) | 509.3 | 508.5 |
| 11-May-14 | | 510.6 | 508.5 | 508.9 | 508.1 |
| 18-Jun-14 | | 510.6 | 507.6 | 507.6 | 506.8 |
| 13-Jul-14 | | 510.7 | 507.3 | 508.3 | 507.6 |
| 17-Aug-14 | | 510.7 | 507.3 | 508.5 | 507.7 |
| 7-Sep-14 | | 510.6 | 507.2 | 507.4 | 507.4 |
| 19-Oct-14 | | 510.8 | 507.5 | 509.4 | 508.5 |
| 16-Nov-14 | | 511.1 | 508.1 | 509.0 | 508.2 |
| 14-Dec-14 | | 511.0 | | 509.1 | 508.3 |
| 18-Jan-15 | | 511.0 | 508.9 | 509.1 | 508.3 |
| 15-Feb-15 | | (2) | (2) | (2) | (2) |
| 15-Mar-15 | | (2) | (2) | 509.2 | (2) |
| 19-Apr-15 | | 510.8 | 509.0 | 509.3 | 508.4 |
| 17-May-15 | | 510.9 | 507.7 | 508.6 | 507.6 |
| 14-Jun-15 | | 510.8 | 507.5 | 508.8 | 507.5 |
| 19-Jul-15 | | 510.8 | 507.5 | 508.4 | 507.5 |
| 9-Aug-15 | | 510.8 | 507.4 | 507.4 | 507.2 |
| 6-Sep-15 | | 510.6 | 507.3 | 507.3 | 507.0 |
| 11-Oct-15 | | 510.6 | 507.2 | 507.3 | 507.3 |
| 15-Nov-15 | | 510.8 | 507.4 | 508.6 | 507.4 |
| 6-Dec-15 | | 510.7 | 507.5 | 508.6 | 507.5 |
| 17-Jan-16 | | 510.5 | 507.8 | 508.9 | 507.6 |
| 14-Feb-16 | | 510.8 | 507.9 | 508.9 | 507.7 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 13-Mar-16 | | 511.3 | 509.6 | 509.3 | 508.6 |
| 17-Apr-16 | | 510.9 | 508.9 | 509.0 | 508.3 |
| 15-May-16 | | 510.9 | 507.8 | 508.9 | 507.7 |
| 19-Jun-16 | | 510.6 | 507.5 | 507.5 | 507.4 |
| 17-Jul-16 | | 510.7 | 507.3 | 507.4 | 507.4 |
| 21-Aug-16 | | 510.7 | 507.2 | 507.3 | 507.3 |
| 18-Sep-16 | | 510.7 | 507.2 | 507.3 | 507.3 |
| 16-Oct-16 | | 510.7 | 507.2 | 507.2 | 507.3 |
| 13-Nov-16 | | 510.6 | 507.2 | 507.3 | 507.3 |
| 11-Dec-16 | | (2) | 507.3 | 507.3 | (2) |
| 15-Jan-17 | | 510.8 | 508.1 | 509.2 | 507.9 |
| 12-Feb-17 | | 510.9 | (2) | (2) | (2) |
| 19-Mar-17 | | 510.7 | 508.1 | 508.8 | 507.9 |
| 16-Apr-17 | | 511.1 | 508.9 | 509.1 | 508.2 |
| 19-May-17 | | 511.1 | 508.7 | 509.0 | 508.0 |
| 25-Jun-17 | | 511.2 | 508.3 | 509.1 | 508.0 |
| 19-Jul-17 | | 510.9 | 507.9 | 508.9 | 507.7 |
| 17-Aug-17 | | 510.8 | 507.6 | 508.8 | 507.6 |
| 17-Sep-17 | | 509.5 | 507.5 | 508.4 | 507.4 |
| 15-Oct-17 | | 511.0 | 507.5 | 509.0 | 507.5 |
| 14-Nov-17 | | 511.0 | 507.8 | 509.3 | 507.7 |
| 11-Dec-17 | | 510.9 | 507.8 | 509.1 | 507.6 |
| 14-Jan-18 | | 511.2 | 508.7 | 509.1 | 508.2 |
| 11-Feb-18 | | 511.6 | 508.3 | 509.5 | 508.2 |
| 18-Feb-18 | | 510.3 | 507.9 | 508.9 | 507.8 |
| 18-Mar-18 | | 510.3 | 507.9 | 508.9 | 507.8 |
| 15-Apr-18 | | 511.6 | 508.2 | 509.2 | 508.0 |
| 17-May-18 | | 511.6 | 508.4 | 509.1 | 508.0 |
| 18-Jun-18 | | | 507.5 | 507.8 | 507.5 |
| 17-Jul-18 | | 511.1 | 507.4 | 507.3 | 507.4 |
| 22-Aug-18 | | 511.5 | 507.3 | 507.3 | 507.3 |
| 18-Sep-18 | | 511.4 | 507.3 | 507.3 | 507.3 |
| 23-Oct-18 | | 511.4 | 507.3 | 507.3 | 507.0 |
| 19-Nov-18 | | | 507.5 | 508.9 | 507.5 |
| 10-Dec-18 | | 511.6 | 508.0 | 509.0 | 507.8 |
| 17-Jan-19 | | (2) | 507.0 | 508.9 | 507.8 |
| 14-Feb-19 | | 511.6 | 508.3 | 508.9 | 508.0 |
| 11-Mar-19 | | (2) | (2) | 508.9 | (2) |
| 26-Apr-19 | | 512.3 | 510.0 | 509.1 | 508.4 |
| 22-May-19 | | | 508.3 | 509.0 | 508.0 |
| 19-Jun-19 | | | 507.7 | 508.7 | 507.6 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 19-Jul-19 | | 510.5 | 507.4 | 507.5 | 507.4 |
| 27-Aug-19 | | 511.2 | 506.9 | 507.4 | 507.4 |
| 16-Sep-19 | | 511.4 | 507.2 | 507.2 | 507.3 |
| 21-Oct-19 | | 511.3 | 507.2 | 507.2 | 507.3 |
| 18-Nov-19 | | 511.5 | 507.4 | 507.5 | 507.4 |
| 17-Dec-19 | | 510.2 | 507.8 | 508.9 | 507.7 |
| 14-Jan-20 | | 510.3 | 508.1 | 508.9 | 507.7 |
| 18-Feb-20 | | | | 508.9 | |
| 24-Mar-20 | | 512.0 | | 509.1 | 508.5 |
| 22-Apr-20 | | | 508.1 | 509.0 | 507.8 |
| 27-May-20 | | | 507.5 | 508.8 | 507.5 |
| 26-Jun-20 | | | 508.4 | 508.8 | 507.6 |
| 28-Jul-20 | | | 507.4 | 508.4 | 507.4 |
| 31-Aug-20 | | | | | |
| 28-Sep-20 | | | 507.3 | 507.3 | 507.3 |
| 27-Oct-20 | | | 507.0 | 508.6 | 507.3 |
| 24-Nov-20 | | | 507.4 | 508.8 | 507.4 |
| 21-Dec-20 | | | | 509.0 | |
| 29-Jan-21 | | | (2) | (2) | (2) |
| 19-Feb-21 | | | (2) | (2) | (2) |
| 31-Mar-21 | | | 509.1 | 509.2 | 508.6 |
| 29-Apr-21 | | | 508.0 | 509.2 | 507.8 |
| 28-May-21 | | | 507.6 | 508.5 | 507.5 |
| 25-Jun-21 | | | 507.3 | 507.4 | 507.4 |
| 26-Jul-21 | | | 507.3 | 508.5 | 507.4 |
| 24-Aug-21 | | | 507.4 | 508.1 | 507.2 |
| 22-Sep-21 | | | 508.6 | 509.1 | 508.2 |
| 29-Oct-21 | | | 507.3 | 508.6 | 507.3 |
| 24-Nov-21 | | | 507.9 | 509.1 | 507.8 |
| 23-Dec-21 | | | 507.9 | 509.1 | 507.8 |
| 26-Jan-22 | | | (2) | (2) | (2) |
| 10-Feb-22 | | | (2) | (2) | (2) |
| 16-Mar-22 | | | 509.0 | 509.1 | (2) |
| 22-Apr-22 | | | 508.2 | 509.2 | 507.9 |
| 26-May-22 | | | 507.6 | 508.7 | 507.6 |
| 20-Jun-22 | | | 508.2 | 509.2 | 508.0 |
| 31-Aug-22 | | | 507.3 | 507.3 | 507.3 |
| 27-Sep-22 | | | 507.3 | 507.3 | 507.4 |
| 28-Oct-22 | | | 507.3 | 507.3 | 507.4 |
| 29-May-23 | | | (5) | 508.6 | 507.7 |
| 1-Nov-23 | | | 507.4 | 507.3 | 507.4 |

## Table B-5 Groundwater Elevations - Carmarthen Lake Farms Wells

| Well Name | CLF1 | CLF2 | CLF3 | CLF4 | CLF5 |
|---|---|---|---|---|---|
| Flow System | AF | AF | AM | AM | AM |
| Date TOP | 521.1 | 519.2 | 517.6 | 510.0 | 509.2 |
| 27-May-24 | | | 507.9 | 508.9 | 507.8 |
| 29-Oct-24 | | | 507.7 | 507.7 | 507.7 |
| 28-May-25 | | | 508.1 | 508.9 | 508.1 |
| 29-Oct-25 | | | 507.6 | 507.6 | 507.6 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells



| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 17-Apr-99 | 500.9 | 510.3 | 512.0 | 513.6 | 511.8 | 505.3 | 502.2 | 510.4 |
| 28-Apr-99 | 500.5 | 509.9 | 512.0 | 513.1 | 511.6 | 504.8 | 501.8 | 510.2 |
| 26-May-99 | 500.3 | 510.2 | 512.0 | 512.5 | 511.7 | 504.8 | 501.5 | 510.4 |
| 29-Jun-99 | 500.1 | 509.9 | 511.7 | 511.9 | 511.4 | 504.7 | 501.3 | 510.1 |
| 26-Jul-99 | 500.0 | 509.7 | 511.4 | 511.4 | 511.2 | 504.4 | 501.1 | 510.0 |
| 17-Aug-99 | 499.9 | 509.7 | 511.4 | 511.2 | 511.2 | 504.3 | 501.0 | 510.0 |
| 17-Sep-99 | 499.7 | 509.5 | 511.2 | 510.8 | 511.0 | 503.9 | 500.9 | 509.9 |
| 21-Nov-99 | 500.7 | 510.2 | 511.6 | 511.0 | 511.4 | 505.0 | 502.0 | 510.4 |
| 29-Feb-00 | 500.9 | 510.3 | 511.9 | 511.7 | 511.5 | 505.2 | 502.1 | 510.5 |
| 31-Mar-00 | 500.8 | 510.3 | 511.8 | 513.3 | 511.5 | 505.1 | 502.0 | 510.5 |
| 2-Jun-00 | 500.8 | 510.2 | 511.8 | 513.7 | 511.3 | 505.1 | 502.0 | 510.3 |
| 7-Jul-00 | 500.8 | 510.0 | 511.6 | 513.4 | 511.1 | 505.3 | 502.0 | 510.2 |
| 29-Aug-00 | 500.4 | 509.9 | 510.9 | 512.0 | 510.7 | 504.8 | 501.6 | 510.1 |
| 9-Nov-00 | 500.3 | 509.9 | 510.5 | 511.2 | 510.3 | 504.6 | 501.5 | 510.0 |
| 26-Apr-01 | 501.1 | 510.2 | 512.0 | 514.3 | 511.7 | 505.1 | 502.3 | 510.4 |
| 5-Jul-01 | 500.3 | 509.8 | 510.3 | 511.7 | 510.3 | 504.8 | 501.5 | 509.9 |
| 1-Aug-01 | 500.1 | 509.5 | 510.1 | 511.0 | 510.0 | 504.2 | 501.2 | 509.6 |
| 11-Oct-01 | 500.2 | 510.0 | 510.0 | 510.1 | 510.0 | 504.1 | 501.5 | 510.1 |
| 14-Dec-01 | 500.8 | 510.1 | 510.9 | 512.5 | 510.7 | 505.1 | 502.0 | 510.2 |
| 7-Feb-02 | 500.7 | 510.0 | 510.7 | 512.6 | 510.5 | 505.1 | 501.9 | 510.1 |
| 18-Apr-02 | 501.3 | 510.3 | 512.0 | 513.0 | 511.5 | 505.3 | 502.5 | 510.4 |
| 13-Jun-02 | 500.6 | 509.7 | 511.0 | 511.6 | 510.4 | 505.1 | 501.8 | 509.6 |
| 8-Aug-02 | 500.0 | 509.3 | 510.0 | 510.2 | 509.9 | 504.4 | 501.2 | 509.5 |
| 11-Oct-02 | 499.8 | 509.4 | 509.8 | 509.8 | 509.7 | 505.1 | 500.9 | 509.5 |
| 9-Dec-02 | 500.0 | 509.9 | (2) | 509.8 | 509.7 | (2) | 501.2 | 510.0 |
| 14-Feb-03 | (2) | 509.8 | (2) | 513.6 | 509.9 | 506.6 | 501.4 | 510.0 |
| 9-Apr-03 | 501.3 | 510.1 | (2) | 513.3 | 511.3 | (2) | (2) | 510.3 |
| 15-May-03 | 500.7 | 510.1 | (2) | 512.9 | 511.0 | 506.5 | 502.0 | 510.3 |
| 17-Jun-03 | 500.7 | 509.8 | | | 510.9 | 506.3 | 501.8 | 510.1 |
| 25-Jun-03 | 500.5 | 509.7 | 510.9 | 512.7 | 510.7 | 506.1 | 501.6 | 509.9 |
| 22-Jul-03 | 500.3 | 509.7 | 510.5 | 511.9 | 510.5 | 506.0 | 501.4 | 509.8 |
| 20-Aug-03 | 500.0 | 509.4 | 510.0 | 511.1 | 510.0 | 505.4 | 500.9 | 509.4 |
| 25-Sep-03 | 499.9 | 509.5 | 509.6 | 510.4 | 509.6 | 505.1 | 501.1 | 509.6 |
| 22-Oct-03 | 500.2 | 510.2 | 510.0 | 510.0 | 510.0 | 506.0 | 501.5 | 510.3 |
| 25-Nov-03 | 501.2 | 510.3 | 511.6 | 511.9 | 511.2 | 506.4 | 502.5 | 510.4 |
| 22-Dec-03 | 501.0 | 510.2 | 511.6 | 512.9 | 511.0 | 505.6 | 502.2 | 510.4 |
| 9-Feb-04 | 500.5 | 510.0 | (2) | 512.9 | 510.5 | 505.4 | 501.7 | 510.1 |
| 16-Mar-04 | 501.4 | 510.2 | 511.5 | 513.6 | 510.7 | 505.5 | 502.6 | 510.3 |
| 20-Apr-04 | 501.1 | 510.2 | 512.0 | 514.3 | 511.5 | 505.6 | 502.3 | 510.4 |
| 18-May-04 | 500.8 | 510.0 | 511.4 | 513.7 | 510.7 | 505.5 | 501.9 | 510.2 |
| 22-Jun-04 | 500.5 | 509.8 | 510.8 | 513.2 | 510.7 | 505.5 | 501.6 | 509.9 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells

| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 28-Jul-04 | 500.2 | 509.6 | 510.3 | 511.9 | 510.2 | 505.2 | 501.3 | 509.8 |
| 25-Aug-04 | 500.0 | 509.2 | 509.6 | 511.0 | 509.5 | 504.6 | 501.2 | 509.3 |
| 22-Sep-04 | 499.9 | 509.2 | 509.2 | 510.3 | 509.1 | 504.3 | 501.1 | 509.8 |
| 19-Oct-04 | 499.9 | 509.3 | 509.0 | 509.8 | 509.0 | 504.2 | 501.1 | 509.4 |
| 16-Nov-04 | 500.0 | 509.3 | 508.6 | 509.6 | 508.6 | 504.1 | 501.1 | 509.3 |
| 16-Dec-04 | 500.4 | 510.1 | (2) | 509.5 | 510.0 | 505.6 | 501.7 | 510.3 |
| 31-Jan-05 | 501.0 | 510.0 | 511.2 | 512.4 | 510.7 | 505.5 | (2) | 510.2 |
| 24-Feb-05 | 500.7 | 510.0 | 510.6 | 512.3 | 510.3 | 505.6 | 501.8 | 509.6 |
| 22-Mar-05 | 500.6 | 509.9 | 510.3 | 512.1 | 510.0 | 505.5 | 501.7 | 510.0 |
| 20-Apr-05 | 502.2 | 510.3 | 512.0 | 515.0 | 511.8 | 507.0 | 502.9 | 510.5 |
| 25-May-05 | 500.7 | 509.9 | 512.0 | 513.9 | 511.4 | 505.6 | 501.8 | 510.2 |
| 29-Jun-05 | 500.3 | 509.7 | 511.7 | 512.7 | 511.1 | 505.4 | 501.4 | 509.9 |
| 13-Jul-05 | 500.2 | 509.5 | 511.5 | 512.3 | 510.9 | 505.3 | 501.3 | 509.8 |
| 23-Aug-05 | 499.9 | 509.4 | 511.1 | 511.3 | 510.8 | 505.0 | 500.5 | 509.7 |
| 26-Sep-05 | 499.7 | 509.5 | 511.1 | 510.8 | 510.9 | 504.6 | 500.7 | 509.8 |
| 26-Oct-05 | 499.8 | 509.7 | 511.1 | 510.4 | 511.1 | 504.4 | 500.9 | 510.0 |
| 16-Nov-05 | 499.9 | 510.2 | 511.3 | 510.2 | 511.2 | 504.8 | 501.0 | 510.3 |
| 14-Dec-05 | 500.4 | 510.1 | 511.2 | 510.3 | 511.0 | 505.4 | 501.6 | 510.2 |
| 20-Jan-06 | 501.4 | 510.3 | 511.9 | 512.3 | 511.4 | 505.9 | 502.6 | 510.4 |
| 14-Feb-06 | 501.1 | 510.2 | (2) | 512.8 | 511.3 | 505.6 | 502.3 | 510.3 |
| 19-Mar-06 | 501.6 | 510.2 | 512.0 | 514.3 | 511.6 | 505.5 | (2) | 510.4 |
| 17-Apr-06 | 501.2 | 510.2 | 512.0 | 514.3 | 511.6 | 505.5 | 502.4 | 510.4 |
| 19-May-06 | 500.6 | 510.2 | 512.0 | 513.6 | 511.3 | 505.5 | 501.8 | 510.3 |
| 19-Jun-06 | 500.4 | 509.8 | 511.2 | 512.6 | 510.7 | 505.4 | 501.5 | 510.0 |
| 10-Jul-06 | 500.2 | 509.6 | 511.0 | 511.9 | 510.7 | 505.3 | 501.3 | 509.8 |
| 21-Aug-06 | 499.9 | 509.4 | 510.4 | 510.8 | 510.2 | 504.9 | 501.0 | 509.5 |
| 18-Sep-06 | 499.9 | 509.6 | 510.4 | 510.4 | 510.2 | 504.7 | 501.1 | 509.7 |
| 17-Oct-06 | 500.0 | 510.2 | 510.3 | 510.0 | 510.2 | 504.6 | 501.2 | 510.2 |
| 20-Nov-06 | 501.2 | 510.2 | 511.8 | 511.8 | 511.2 | 505.7 | 502.4 | 510.4 |
| 15-Dec-06 | 501.5 | 510.4 | 512.0 | 514.0 | 511.7 | 506.1 | 502.7 | 510.5 |
| 22-Jan-07 | 500.8 | 510.1 | 511.7 | 513.1 | 510.9 | 505.6 | 502.0 | 510.3 |
| 19-Feb-07 | (2) | 510.0 | 511.2 | 512.3 | 510.7 | 505.5 | 501.6 | 509.2 |
| 18-Mar-07 | 501.9 | 510.2 | 512.0 | 513.3 | 511.5 | 505.9 | (2) | 510.4 |
| 15-Apr-07 | 501.3 | 510.3 | 512.0 | 514.3 | 511.6 | 505.7 | 502.5 | 510.4 |
| 17-May-07 | 500.6 | 510.3 | 511.7 | 513.2 | 511.1 | 505.5 | 501.7 | 510.4 |
| 21-Jun-07 | 500.3 | 509.5 | 510.6 | 512.1 | 510.2 | 505.3 | 501.4 | 509.5 |
| 17-Jul-07 | 500.0 | 509.3 | 510.5 | 511.4 | 510.3 | 505.1 | 500.4 | 509.4 |
| 21-Aug-07 | 499.7 | 508.7 | 510.2 | 510.6 | 509.9 | 504.5 | 500.7 | 508.8 |
| 18-Sep-07 | 499.8 | 509.5 | 510.3 | 510.2 | 510.2 | 504.4 | 500.9 | 509.6 |
| 19-Oct-07 | 499.9 | 509.7 | 510.3 | 509.9 | 510.2 | 504.3 | 501.0 | 509.8 |
| 22-Nov-07 | 500.1 | 510.2 | 510.7 | 509.9 | 510.5 | 505.2 | 501.4 | 510.3 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells



| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 13-Dec-07 | 500.6 | 510.1 | 511.0 | 510.2 | 510.7 | 505.6 | 501.8 | 510.3 |
| 24-Jan-08 | 501.2 | 510.1 | 512.0 | 513.6 | 511.4 | 505.5 | 502.4 | 510.3 |
| 21-Feb-08 | 501.3 | 510.3 | 512.0 | 513.7 | 511.6 | 505.6 | 502.4 | 510.4 |
| 19-Mar-08 | (2) | 510.3 | 512.0 | 513.6 | 511.5 | 505.8 | 502.2 | 510.2 |
| 7-Apr-08 | 502.4 | 510.4 | 512.0 | 515.1 | 512.0 | 507.4 | 503.0 | 510.5 |
| 21-Apr-08 | 501.4 | 510.2 | 512.0 | 514.8 | 511.6 | 505.5 | 502.5 | 510.4 |
| 20-May-08 | 500.7 | 510.0 | 512.0 | 513.9 | 511.4 | 505.6 | 501.9 | 510.3 |
| 16-Jun-08 | 500.5 | 509.9 | 511.7 | (3) | 511.1 | 505.5 | 501.6 | 510.2 |
| 14-Jul-08 | 500.3 | 509.6 | 511.1 | (3) | 510.7 | 505.3 | 501.3 | 509.8 |
| 18-Aug-08 | 500.3 | 509.8 | 511.5 | 511.5 | 511.0 | 505.3 | 501.4 | 510.0 |
| 15-Sep-08 | 500.1 | 510.3 | 511.2 | 511.1 | 511.1 | 505.3 | 501.3 | 510.3 |
| 20-Oct-08 | 500.5 | 509.8 | 511.3 | 511.0 | 510.9 | 505.3 | 501.5 | 510.0 |
| 16-Nov-08 | 501.4 | 510.3 | 511.8 | (3) | 511.6 | 506.0 | 502.6 | 510.4 |
| 23-Nov-08 | (2) | 510.3 | (2) | (3) | 511.5 | 505.8 | 502.5 | (2) |
| 14-Dec-08 | 501.5 | 510.0 | 511.7 | 513.1 | 510.5 | 505.0 | 502.5 | 510.5 |
| 18-Jan-09 | 500.9 | 510.1 | 512.0 | 514.0 | 511.4 | 505.6 | 502.1 | 510.4 |
| 8-Feb-09 | 500.8 | 510.3 | 512.0 | 513.4 | 511.4 | 505.8 | 502.0 | 510.4 |
| 15-Mar-09 | 501.7 | 510.3 | 512.0 | 514.7 | 511.6 | 505.7 | (2) | 510.4 |
| 12-Apr-09 | 501.4 | 510.3 | 512.0 | 514.6 | 511.7 | 505.9 | 502.6 | 510.4 |
| 17-May-09 | 500.8 | 509.9 | 512.0 | 513.8 | 511.3 | 505.6 | 502.0 | 510.2 |
| 14-Jun-09 | 500.4 | 509.8 | 511.7 | 512.9 | 511.0 | 505.4 | 501.5 | 510.0 |
| 12-Jul-09 | 500.2 | 509.6 | 511.2 | 512.1 | 510.7 | 505.2 | 501.3 | 509.8 |
| 9-Aug-09 | 500.1 | 510.0 | 511.1 | 511.5 | 510.8 | 505.0 | 501.2 | 510.2 |
| 13-Sep-09 | 500.0 | 509.6 | 510.9 | 510.8 | 510.7 | 504.6 | 501.1 | 509.8 |
| 11-Oct-09 | 500.2 | 510.1 | 511.3 | 510.8 | 511.0 | 504.9 | 501.4 | 510.2 |
| 15-Nov-09 | 500.5 | 509.8 | 511.0 | 510.6 | 510.7 | 505.4 | 501.5 | 510.0 |
| 13-Dec-09 | 500.6 | 510.1 | 511.3 | 510.8 | 511.0 | 505.5 | 501.8 | 510.3 |
| 17-Jan-10 | 500.6 | 510.2 | 511.3 | 511.2 | 510.9 | 505.6 | 501.7 | 510.2 |
| 7-Feb-10 | 500.7 | 510.0 | 511.3 | 511.7 | 510.7 | 505.5 | 501.8 | 510.1 |
| 14-Mar-10 | 502.4 | 510.3 | 512.0 | 514.6 | 511.9 | 507.2 | 503.0 | 510.5 |
| 18-Apr-10 | 500.9 | 510.0 | 511.9 | 513.5 | 511.3 | 505.5 | 502.1 | 510.3 |
| 16-May-10 | 501.0 | 509.9 | 511.9 | 513.4 | 511.1 | 506.4 | 502.0 | 510.1 |
| 13-Jun-10 | 500.7 | 510.1 | 511.9 | 512.9 | 511.3 | 505.7 | 501.9 | 510.3 |
| 21-Jul-10 | 500.6 | 510.0 | 511.9 | 512.5 | 511.3 | 505.6 | 501.8 | 510.2 |
| 16-Aug-10 | 500.4 | 509.8 | 511.5 | 512.1 | 511.0 | 505.4 | 501.4 | 510.0 |
| 12-Sep-10 | 500.2 | 509.7 | 511.2 | 511.5 | 510.8 | 505.2 | 501.2 | 509.9 |
| 17-Oct-10 | 500.5 | 509.9 | 511.3 | 511.4 | 511.0 | 505.3 | 501.5 | 510.1 |
| 14-Nov-10 | 500.9 | 510.1 | 511.8 | 512.0 | 511.3 | 505.6 | 502.1 | 510.3 |
| 19-Dec-10 | 500.8 | 510.2 | 512.0 | 512.9 | 511.4 | 505.7 | 502.0 | 510.4 |
| 16-Jan-11 | 501.0 | 510.2 | 512.0 | 513.6 | 511.4 | 505.6 | 502.2 | 510.4 |
| 22-Feb-11 | 501.5 | 510.2 | 512.0 | 513.4 | 511.5 | 506.0 | (2) | 510.4 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells



| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 13-Mar-11 | 501.3 | 510.3 | 512.0 | 513.8 | 511.5 | 505.7 | 502.5 | 510.4 |
| 17-Apr-11 | 501.2 | 510.3 | 512.0 | 514.3 | 511.6 | 505.6 | 502.4 | 510.4 |
| 15-May-11 | 501.4 | 510.3 | 512.0 | 514.4 | 511.8 | 506.1 | 502.7 | 510.4 |
| 13-Jun-11 | 500.8 | 510.0 | 512.0 | 513.8 | 511.4 | 505.7 | 502.0 | 510.3 |
| 17-Jul-11 | 500.3 | 509.6 | 511.4 | 512.7 | 510.7 | 505.3 | 501.4 | 509.9 |
| 14-Aug-11 | 500.1 | 509.6 | 511.0 | 511.9 | 510.7 | 505.1 | 501.2 | 509.8 |
| 18-Sep-11 | 500.0 | 509.5 | 510.6 | 511.0 | 510.4 | 504.7 | 501.0 | 509.7 |
| 17-Oct-11 | 500.4 | 510.2 | 511.0 | 510.8 | 511.2 | 505.6 | 501.5 | 510.2 |
| 20-Nov-11 | 500.4 | 510.0 | 511.2 | 510.8 | 510.9 | 505.4 | 501.5 | 510.1 |
| 18-Dec-11 | 501.1 | 510.3 | 512.0 | 512.3 | 511.4 | 505.8 | 502.3 | 510.4 |
| 15-Jan-12 | 500.8 | 510.1 | 511.8 | 512.5 | 511.1 | 505.6 | 502.0 | 510.3 |
| 19-Feb-12 | 500.7 | 509.8 | 511.6 | 512.7 | 511.0 | 505.3 | 501.6 | 510.0 |
| 26-Feb-12 | | | | | | | | |
| 18-Mar-12 | 501.8 | 510.3 | 512.0 | 514.5 | 511.7 | 506.0 | 502.8 | 510.5 |
| 15-Apr-12 | 500.6 | 509.9 | 512.0 | 513.5 | 511.3 | 505.5 | 501.7 | 510.2 |
| 13-May-12 | 500.7 | 509.9 | 511.8 | 513.0 | 511.2 | 505.6 | 501.8 | 510.1 |
| 17-Jun-12 | 500.3 | 509.7 | 511.3 | 512.1 | 510.8 | 505.4 | 501.4 | 509.9 |
| 15-Jul-12 | 500.4 | 509.5 | 510.9 | 511.4 | 510.7 | 504.9 | 501.1 | 509.7 |
| 12-Aug-12 | 500.1 | 510.1 | 511.3 | 510.9 | 511.1 | 505.4 | 501.4 | 510.2 |
| 16-Sep-12 | 500.1 | 509.8 | 510.9 | 510.6 | 510.7 | 504.7 | 501.2 | 509.9 |
| 14-Oct-12 | 500.4 | 510.2 | 511.3 | 510.9 | 511.1 | 505.5 | 501.6 | 510.3 |
| 18-Nov-12 | 501.1 | 510.1 | 511.9 | 512.7 | 511.4 | 505.6 | 502.4 | 510.3 |
| 16-Dec-12 | 500.8 | 510.3 | 512.0 | 513.0 | 511.4 | 505.8 | 502.1 | 510.4 |
| 13-Jan-13 | 502.2 | 510.3 | 512.0 | 514.4 | 511.8 | 506.4 | 502.9 | 510.5 |
| 17-Feb-13 | 500.8 | 510.1 | 512.0 | 513.8 | 511.4 | 505.6 | 502.0 | 510.3 |
| 17-Mar-13 | 501.5 | 510.2 | 512.0 | 512.8 | 511.6 | 505.7 | 502.8 | 510.4 |
| 14-Apr-13 | 502.1 | 510.4 | 512.0 | 513.8 | 511.7 | 506.2 | 502.9 | 510.5 |
| 12-May-13 | 500.8 | 510.1 | 512.0 | 513.9 | 511.5 | 505.6 | 502.0 | 510.3 |
| 16-Jun-13 | 500.7 | 510.0 | 512.0 | 513.4 | 511.3 | 505.6 | 501.7 | 510.2 |
| 14-Jul-13 | 500.6 | 509.9 | 511.8 | 512.7 | 511.2 | 505.5 | 501.7 | 510.1 |
| 18-Aug-13 | 500.3 | 509.8 | 511.5 | 512.0 | 511.1 | 505.3 | 501.6 | 510.0 |
| 15-Sep-13 | 500.3 | 509.6 | 511.3 | 511.4 | 511.0 | 505.2 | 501.4 | 509.6 |
| 13-Oct-13 | 500.8 | 510.1 | 511.8 | 512.1 | 511.3 | 505.5 | 501.9 | 510.3 |
| 17-Nov-13 | 501.0 | 510.4 | 512.0 | 513.5 | 511.7 | 506.1 | 502.4 | 510.5 |
| 16-Dec-13 | 500.9 | 510.1 | 512.0 | 513.7 | 511.4 | 505.7 | 502.1 | 510.3 |
| 19-Jan-14 | 500.9 | 510.2 | 512.0 | 513.4 | 511.4 | 505.7 | 502.0 | 510.4 |
| 16-Feb-14 | (2) | 510.0 | 511.8 | 512.5 | 511.2 | (2) | 501.5 | 510.2 |
| 16-Mar-14 | (2) | 510.1 | 511.7 | 512.1 | 511.2 | (2) | 501.5 | 510.3 |
| 13-Apr-14 | 502.4 | 510.4 | 512.0 | 515.1 | 512.0 | 508.0 | 503.0 | 510.6 |
| 11-May-14 | 501.1 | 510.1 | 512.0 | 514.2 | 511.5 | 505.7 | 502.3 | 510.3 |
| 15-Jun-14 | 500.4 | 509.8 | 511.8 | 513.1 | 511.2 | 505.5 | 501.5 | 510.0 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells



| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 13-Jul-14 | 500.3 | 509.8 | 511.7 | 512.2 | 511.2 | 505.3 | 501.4 | 510.1 |
| 17-Aug-14 | 500.1 | 510.0 | 511.5 | 511.5 | 511.2 | 505.1 | 501.2 | 510.1 |
| 7-Sep-14 | 500.1 | 509.9 | 511.3 | 511.1 | 511.1 | 505.0 | 501.3 | 510.1 |
| 19-Oct-14 | 500.7 | 510.3 | 511.8 | 511.1 | 511.4 | 505.6 | 501.9 | 510.4 |
| 16-Nov-14 | 501.0 | 510.1 | 512.0 | 512.2 | 511.4 | 505.5 | 502.2 | 510.3 |
| 14-Dec-14 | 500.7 | 510.1 | 511.9 | 512.8 | 511.4 | 505.5 | 501.9 | 510.3 |
| 18-Jan-15 | 500.6 | 510.0 | 511.9 | 513.3 | 511.4 | 505.5 | 501.8 | 510.3 |
| 15-Feb-15 | | | | | | | | |
| 15-Mar-15 | 500.5 | 510.3 | 512.0 | 512.6 | 511.6 | 506.0 | 501.7 | 510.4 |
| 19-Apr-15 | 501.4 | 510.3 | 512.0 | 514.1 | 511.6 | 505.7 | 502.7 | 510.5 |
| 17-May-15 | 500.6 | 509.8 | 511.9 | 513.0 | 511.4 | 505.5 | 501.6 | 510.1 |
| 14-Jun-15 | 500.3 | 510.1 | 511.7 | 512.3 | 511.3 | 505.4 | 501.4 | 510.2 |
| 19-Jul-15 | 500.5 | 509.8 | 511.7 | 512.3 | 511.3 | 505.4 | 501.6 | 510.0 |
| 9-Aug-15 | 500.2 | 509.7 | 511.6 | 511.7 | 511.2 | 505.3 | 501.3 | 510.0 |
| 6-Sep-15 | 500.1 | 509.8 | 511.4 | 511.3 | 511.3 | 505.0 | 501.2 | 510.1 |
| 11-Oct-15 | 500.0 | 509.7 | 511.3 | 511.0 | 511.3 | 504.8 | 501.7 | 509.9 |
| 15-Nov-15 | 500.8 | 510.1 | 511.6 | 510.7 | 511.3 | (3) | 501.8 | 510.3 |
| 6-Dec-15 | 500.7 | 510.0 | 511.6 | 510.8 | 511.3 | | 501.8 | 510.1 |
| 17-Jan-16 | 500.8 | 510.0 | 511.8 | 511.9 | 511.3 | | 502.0 | 510.2 |
| 14-Feb-16 | 501.0 | 510.1 | 512.0 | 512.8 | 511.4 | | 502.1 | 510.3 |
| 13-Mar-16 | 502.1 | 510.4 | 512.0 | 515.0 | 511.8 | | 502.9 | 510.5 |
| 17-Apr-16 | 501.6 | 510.5 | 512.0 | 514.7 | 511.6 | | 502.3 | 510.4 |
| 15-May-16 | 500.7 | 510.0 | 512.0 | 513.7 | 511.4 | | 501.9 | 510.2 |
| 19-Jun-16 | 500.4 | 509.6 | 511.7 | 512.6 | 511.2 | | 501.4 | 509.9 |
| 17-Jul-16 | 500.1 | 509.5 | 511.4 | 511.8 | 511.1 | | 501.1 | 509.8 |
| 21-Aug-16 | 499.9 | | 511.3 | 511.1 | 511.1 | | 501.0 | |
| 18-Sep-16 | 499.9 | 509.7 | 511.3 | 510.8 | 511.1 | | 501.0 | 509.9 |
| 16-Oct-16 | 500.0 | 509.9 | 511.2 | 510.6 | 511.2 | | 501.1 | 510.0 |
| 13-Nov-16 | 500.0 | 509.8 | 511.2 | 510.4 | 511.1 | | 501.2 | 509.9 |
| 11-Dec-16 | 500.4 | 510.0 | 511.4 | 510.3 | 511.2 | | 501.5 | 510.1 |
| 15-Jan-17 | 501.3 | 510.3 | 512.0 | 512.0 | 511.5 | | 502.5 | 510.4 |
| 12-Feb-17 | 500.8 | 510.0 | 512.0 | 512.5 | 511.4 | | 502.0 | 510.3 |
| 19-Mar-17 | 500.9 | 510.1 | 512.0 | 513.8 | 511.5 | | 502.1 | 510.3 |
| 16-Apr-17 | 501.4 | 510.2 | 512.0 | 514.3 | 511.6 | | 502.6 | 510.4 |
| 11-May-17 | 501.4 | 510.1 | 512.0 | 514.7 | 511.6 | | 502.5 | 510.4 |
| 25-Jun-17 | 501.3 | 510.1 | 512.0 | 514.0 | 511.6 | | 502.5 | 510.4 |
| 19-Jul-17 | 501.6 | 509.8 | 512.0 | 513.2 | 511.4 | | 501.7 | 510.1 |
| 17-Aug-17 | 500.4 | 509.9 | 511.8 | 512.4 | 511.3 | | 501.5 | 510.0 |
| 17-Sep-17 | 500.3 | 510.0 | 511.7 | 511.8 | 511.3 | | 501.3 | 510.2 |
| 15-Oct-17 | 500.9 | 510.2 | 511.9 | | 511.5 | | 502.0 | 510.3 |
| 14-Nov-17 | 500.8 | 510.3 | 512.0 | | | | 502.1 | 510.4 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells



| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 11-Dec-17 | 501.8 | 509.7 | 511.9 | 513.0 | 511.4 | | 501.9 | 510.2 |
| 14-Jan-18 | (2) | 510.3 | 512.0 | 513.5 | 511.7 | | (2) | 510.4 |
| 18-Feb-18 | 502.4 | 510.4 | 512.1 | 514.8 | 512.1 | | 503.0 | 510.6 |
| 18-Mar-18 | 500.7 | 510.0 | 512.0 | 513.6 | 511.5 | | 501.8 | 510.2 |
| 15-Apr-18 | 501.5 | 510.3 | 512.0 | 514.0 | 511.7 | | 502.6 | 510.5 |
| 17-May-18 | 500.9 | 510.1 | 512.0 | 513.8 | 511.5 | | 502.1 | 510.3 |
| 18-Jun-18 | 500.4 | 509.6 | 512.2 | 512.9 | 511.2 | | 501.3 | 509.8 |
| 17-Jul-18 | 500.1 | 509.5 | 511.6 | 512.1 | 511.2 | | 501.1 | 510.0 |
| 22-Aug-18 | 499.9 | 509.6 | | 511.4 | 511.2 | | 501.0 | 509.8 |
| 18-Sep-18 | 499.9 | 509.6 | 511.3 | 511.0 | 511.1 | | 500.9 | 509.8 |
| 23-Oct-18 | 500.0 | 509.7 | 511.3 | 510.6 | 511.2 | | 501.1 | 509.9 |
| 19-Nov-18 | 500.6 | 510.5 | 511.7 | 511.0 | 511.4 | | 501.8 | 509.8 |
| 10-Dec-18 | 501.2 | 510.1 | 511.9 | 512.0 | 511.4 | | 502.3 | 510.3 |
| 17-Jan-19 | 501.0 | 510.0 | 511.9 | 513.0 | 511.4 | | 502.2 | (5) |
| 14-Feb-19 | 500.9 | 510.1 | 512.0 | 513.1 | 511.5 | | 502.0 | 510.3 |
| 11-Mar-19 | 501.7 | 510.1 | 511.9 | 512.9 | 511.5 | | 501.8 | 510.3 |
| 26-Apr-19 | 502.1 | 510.3 | 512.0 | 514.9 | 511.8 | | 502.9 | 510.5 |
| 22-May-19 | 501.1 | 510.2 | 511.9 | 514.1 | 511.6 | | 502.3 | 510.4 |
| 19-Jun-19 | 500.6 | 509.8 | 511.9 | 513.4 | 511.4 | | 501.6 | 510.0 |
| 19-Jul-19 | 500.2 | 509.4 | 511.7 | 512.5 | 511.2 | | 501.2 | 509.6 |
| 27-Aug-19 | 499.9 | 509.6 | 511.4 | 511.7 | 511.2 | | 500.9 | 509.1 |
| 16-Sep-19 | 499.8 | 509.4 | 511.3 | 511.1 | 511.1 | | 500.9 | 509.6 |
| 21-Oct-19 | 499.9 | 509.4 | 511.4 | 511.7 | 511.1 | | 500.8 | 509.3 |
| 18-Nov-19 | 499.9 | 509.6 | 511.4 | 511.7 | 511.1 | | 500.9 | 509.3 |
| 17-Dec-19 | 500.0 | 509.6 | 511.4 | 511.8 | 511.2 | | 500.9 | 509.5 |
| 14-Jan-20 | 501.7 | 510.3 | 512.0 | 512.8 | (5) | | 502.8 | 510.4 |
| 18-Feb-20 | 500.6 | (5) | (2) | 512.5 | (2) | | (2) | 509.5 |
| 24-Mar-20 | 502.0 | 510.3 | 512.2 | 515.4 | 511.8 | | 503.0 | 510.3 |
| 22-Apr-20 | 500.9 | 510.0 | 512.0 | 513.8 | 511.5 | | 502.1 | 510.2 |
| 27-May-20 | 500.5 | 509.9 | 511.9 | 513.1 | 511.4 | | 501.7 | 510.2 |
| 26-Jun-20 | 500.6 | 509.9 | 511.8 | 512.8 | 511.4 | | 501.8 | 510.0 |
| 28-Jul-20 | 500.3 | 509.7 | 511.6 | 512.1 | 511.2 | | 501.3 | 509.9 |
| 31-Aug-20 | 499.9 | 509.4 | 511.5 | 511.5 | 511.3 | | 500.9 | 509.4 |
| 28-Sep-20 | 500.0 | 509.8 | 511.4 | 510.9 | 511.1 | | 501.0 | 509.5 |
| 27-Oct-20 | 500.2 | 509.9 | 511.8 | 510.9 | 511.3 | | 501.4 | 509.6 |
| 24-Nov-20 | 500.6 | 509.9 | 511.6 | 511.3 | 511.3 | | 501.7 | 509.5 |
| 21-Dec-20 | 501.0 | 510.0 | 511.9 | 512.6 | 511.7 | | 502.3 | 509.7 |
| 29-Jan-21 | 501.2 | 510.1 | 512.2 | 513.0 | (5) | | 502.8 | 510.4 |
| 19-Feb-21 | | (2) | | | (2) | | | |
| 31-Mar-21 | 501.8 | 510.2 | 511.9 | 513.9 | (5) | | (2) | 510.4 |
| 29-Apr-21 | 500.4 | 510.2 | 511.4 | 514.0 | 511.6 | | 502.2 | 510.4 |

## Table B-6 Groundwater Elevations - Offsite Monitoring Wells

| Well Name | 101-B | 102-C | 103-D | 104-A | OW1-4 | OW3-1 | OW5-2 | OW6-3 |
|---|---|---|---|---|---|---|---|---|
| Flow System | AM | AM | AM | AM | AF | AF | AF | AM |
| Date TOP | 503.0 | 511.4 | 513.4 | 517.7 | 514.4 | 508.8 | 504.2 | 511.1 |
| 28-May-21 | 500.6 | 509.6 | 511.9 | 513.1 | 511.4 | | 501.6 | 509.9 |
| 25-Jun-21 | 500.1 | 509.4 | 511.7 | 511.8 | 511.3 | | 501.5 | 509.6 |
| 26-Jul-21 | 499.9 | 509.8 | 511.5 | 511.6 | 511.2 | | 501.3 | 510.0 |
| 24-Aug-21 | 500.0 | 509.5 | 511.6 | 515.7 | 511.3 | | 501.1 | 509.7 |
| 22-Sep-21 | 501.6 | 510.1 | 512.0 | 512.1 | 511.6 | | 502.7 | 510.0 |
| 29-Oct-21 | 500.2 | 510.3 | 511.8 | 510.9 | 511.3 | | 501.4 | 510.4 |
| 24-Nov-21 | 501.0 | 510.3 | 512.0 | 513.1 | 511.6 | | 502.1 | 510.4 |
| 23-Dec-21 | 500.5 | 509.9 | 511.8 | 512.6 | 511.6 | | 502.2 | 509.8 |
| 26-Jan-22 | (2) | (5) | (5) | 515.2 | (5) | | (2) | (2) |
| 10-Feb-22 | (2) | (2) | (2) | (2) | (2) | | (2) | (2) |
| 16-Mar-22 | (2) | (2) | (2) | (2) | (2) | | (2) | (2) |
| 22-Apr-22 | 500.7 | 510.0 | 512.1 | 514.0 | 511.8 | | 502.2 | 509.6 |
| 26-May-22 | 500.6 | 509.9 | 511.9 | 513.8 | 511.4 | | 502.0 | 509.4 |
| 22-Jun-22 | 500.7 | 510.0 | 512.0 | 513.8 | 510.5 | | 502.0 | 509.5 |
| 30-Aug-22 | 500.5 | 509.8 | 511.4 | 513.6 | 510.9 | | 501.6 | 509.1 |
| 27-Sep-22 | 500.0 | 509.8 | 511.5 | 510.9 | 511.4 | | 501.0 | 510.0 |
| 26-Oct-22 | 500.1 | 509.7 | 511.4 | 510.7 | 511.3 | | 501.2 | 509.8 |
| 29-May-23 | 500.6 | 509.8 | 512.0 | 513.4 | 511.4 | | 501.7 | 509.9 |
| 30-Oct-23 | 500.3 | 509.9 | 511.6 | 510.9 | 511.4 | | 501.3 | 510.1 |
| 27-May-24 | 500.6 | 509.8 | 512.0 | 513.5 | 511.5 | | 501.6 | 510.0 |
| 28-Oct-24 | 500.1 | 509.6 | 511.5 | 511.1 | 511.3 | | 501.1 | 509.8 |
| 27-May-25 | 500.7 | 510.1 | 512.0 | 513.6 | 511.6 | | 501.9 | 510.2 |
| 27-Oct-25 | 500.1 | 509.8 | 511.4 | 510.6 | 511.4 | | 501.2 | 509.9 |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 26-Jul-99 | 511.7 | | 511.8 | | 514.0 | | | | | | | |
| 17-Aug-99 | | | | | | | | | | | | |
| 27-Sep-99 | 511.2 | | 511.4 | | 512.5 | | 511.0 | | | | | |
| 25-Oct-99 | 511.8 | | 512.1 | | 512.7 | | 511.2 | | | | | |
| 21-Nov-99 | 512.0 | | 512.1 | | 512.7 | | 511.3 | | | | | |
| 21-Dec-99 | 512.0 | | 512.1 | | 512.8 | | 511.3 | | | | | |
| 25-Jan-00 | 511.9 | | 512.0 | | 512.8 | | (2) | | | | | |
| 29-Feb-00 | 512.1 | | 512.1 | | 513.5 | | 511.6 | | | | | |
| 31-Mar-00 | 512.0 | | 512.1 | | 513.5 | | 511.6 | | | | | |
| 2-Jun-00 | 512.0 | | 512.2 | | 513.4 | | 511.6 | | | | | |
| 7-Jul-00 | 512.0 | | 512.2 | | 513.1 | | 511.5 | | | | | |
| 27-Aug-00 | 511.8 | | 512.0 | | 512.8 | | 511.5 | | | | | |
| 28-Sep-00 | 511.5 | | 512.0 | | 512.7 | | 511.5 | | | | | |
| 3-Nov-00 | 511.3 | | 512.1 | | 512.8 | | 511.6 | | | | | |
| 22-Feb-01 | (2) | | (2) | | (2) | | (2) | | | | | |
| 22-Mar-01 | (2) | | (2) | | (2) | | (2) | 511.6 | | | | |
| 26-Apr-01 | (2) | | 512.1 | | | | 511.4 | 511.7 | | | | |
| 31-May-01 | 511.3 | | 511.8 | | 513.6 | | 511.5 | | | | | |
| 28-Jun-01 | 511.3 | | 511.3 | | 513.5 | | 511.3 | | | | | |
| 1-Aug-01 | 511.3 | | (1) | | 513.0 | | 511.3 | | | | | |
| 4-Oct-01 | 510.9 | | 510.9 | | 513.3 | | 511.3 | | | | | |
| 1-Nov-01 | 511.2 | | 511.2 | | 513.5 | | 511.5 | 511.6 | | | | |
| 14-Dec-01 | 511.1 | | 510.9 | | 513.4 | | 511.4 | 511.6 | | | | |
| 10-Jan-02 | 510.9 | | 510.8 | | 513.4 | | 511.3 | 511.6 | | | | |
| 14-Mar-02 | 511.3 | | 512.0 | | 513.6 | | 511.4 | 511.6 | | | | |
| 16-May-02 | 511.3 | | 512.2 | | 513.6 | | 511.5 | 511.6 | | | | |
| 20-Jun-02 | 511.1 | | 512.1 | | 513.5 | | 511.4 | | | | | |
| 11-Jul-02 | 511.5 | | 512.1 | | 513.1 | | 511.4 | 511.6 | | | | |
| 13-Sep-02 | 511.0 | | (1) | | 512.5 | | 511.1 | 511.6 | | | | |
| 1-Nov-02 | 511.4 | | 512.1 | | 512.5 | | 511.2 | 511.6 | | | | |
| 16-Jan-03 | (2) | | (2) | | (2) | | 511.2 | 511.6 | | | | |
| 28-Mar-03 | 512.1 | | 512.0 | | (2) | | 511.6 | 511.6 | | | | |
| 15-May-03 | 510.9 | | 512.1 | | 513.2 | | 511.5 | 511.6 | | | | |
| 23-Jun-03 | 511.7 | | (1) | | 513.2 | | (3) | | | | | |
| 22-Jul-03 | 511.7 | | (1) | | 513.1 | | 510.8 | 511.5 | | | | |
| 20-Aug-03 | 511.0 | | (1) | | 513.0 | | 510.7 | 511.5 | | | | |
| 25-Sep-03 | (1) | | (1) | | 512.8 | | 510.2 | | | | | |
| 22-Oct-03 | 511.0 | | 510.8 | | 513.2 | | 511.2 | 511.5 | | | | |
| 25-Nov-03 | 512.1 | | 511.0 | | 513.4 | | 511.5 | 511.6 | | | | |
| 22-Dec-03 | 511.0 | | 512.1 | | 513.4 | | 511.5 | 511.6 | | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 9-Feb-04 | 510.9 | | (2) | | 513.3 | | 511.2 | 511.6 | | | | |
| 16-Mar-04 | 510.9 | | (2) | | 513.5 | | 511.4 | 511.6 | | | | |
| 20-Apr-04 | 511.9 | | 511.8 | | 513.6 | | 511.6 | 511.6 | | | | |
| 18-May-04 | 512.0 | | (1) | | 513.4 | | 511.4 | 511.5 | | | | |
| 22-Jun-04 | 510.9 | | (1) | | 513.2 | | 511.2 | 511.5 | | | | |
| 28-Jul-04 | 510.9 | | (1) | | 513.2 | | 511.3 | 511.5 | | | | |
| 25-Aug-04 | 510.9 | | (1) | | 512.3 | | 511.2 | 511.5 | | | | |
| 22-Sep-04 | 510.9 | | (1) | | 512.7 | | 511.1 | | | | | |
| 19-Oct-04 | 510.9 | (1) | (1) | (1) | 513.6 | (1) | 511.0 | 511.5 | | | | |
| 16-Nov-04 | (1) | (1) | (1) | (1) | 513.0 | (1) | 510.9 | 511.3 | | | | |
| 16-Dec-04 | (1) | | (1) | | 513.3 | | 511.3 | 511.5 | | | | |
| 13-Jan-05 | | (2) | | | | | | | | | | |
| 31-Jan-05 | (2) | | (2) | (2) | 513.3 | (2) | 511.3 | 511.6 | | | | |
| 24-Feb-05 | (2) | (2) | (2) | (2) | 513.4 | (2) | 511.1 | 511.6 | | | | |
| 22-Mar-05 | (2) | (2) | (2) | (2) | 513.3 | (2) | 511.0 | 511.4 | | | | |
| 20-Apr-05 | 511.2 | (2) | 512.2 | 512.2 | 513.5 | (2) | 511.6 | 511.6 | | | | |
| 25-May-05 | 512.1 | 512.2 | 512.2 | 512.2 | 513.2 | (4) | 511.6 | 511.6 | | | | |
| 29-Jun-05 | 512.3 | (1) | 512.0 | 512.0 | 513.1 | (1) | 511.5 | 511.5 | | | | |
| 13-Jul-05 | 512.0 | 512.1 | 512.2 | (1) | 512.9 | (1) | 511.4 | 511.4 | | | | |
| 23-Aug-05 | 510.9 | (1) | 511.3 | (1) | 512.6 | (1) | 511.0 | (1) | | | | |
| 26-Sep-05 | 511.6 | (1) | 511.1 | (1) | 512.4 | (1) | 510.9 | (1) | | | | |
| 26-Oct-05 | 511.0 | | 511.7 | | 512.4 | | 511.2 | | | | | |
| 16-Nov-05 | 512.0 | 512.0 | 511.9 | (1) | 512.8 | (1) | 511.3 | 511.3 | | | | |
| 14-Dec-05 | 510.9 | (2) | 511.9 | (2) | 512.6 | (2) | 511.5 | 511.6 | | | | |
| 20-Jan-06 | (2) | (2) | (2) | (2) | 513.3 | (2) | 511.5 | 511.5 | | | | |
| 14-Feb-06 | (2) | (2) | 510.8 | (2) | 513.3 | (2) | 511.5 | 511.6 | | | | |
| 19-Mar-06 | 512.1 | 512.1 | 512.0 | (2) | 513.5 | (2) | 511.6 | 511.6 | | | | |
| 17-Apr-06 | 512.0 | 512.0 | 512.0 | 512.0 | 513.5 | 513.6 | 511.6 | 511.6 | | | | |
| 19-May-06 | 511.0 | (4) | 511.2 | (4) | 513.4 | (4) | 511.3 | 511.4 | | | | |
| 19-Jun-06 | 510.9 | (1) | 510.8 | (4) | 513.1 | (1) | 511.1 | 511.4 | | | | |
| 10-Jul-06 | 510.9 | (4) | 510.8 | (4) | 512.5 | (4) | 511.2 | 511.4 | | | | |
| 21-Aug-06 | 510.9 | (1) | 510.8 | (1) | 512.4 | (1) | 511.1 | 511.4 | | | | |
| 18-Sep-06 | 510.9 | (1) | 510.8 | (1) | 512.5 | (1) | 511.1 | 511.4 | | | | |
| 17-Oct-06 | 511.0 | | 510.8 | | 512.9 | | 511.0 | 511.4 | | | | |
| 20-Nov-06 | 510.9 | | 511.1 | | 513.3 | | 511.5 | 511.6 | | | | |
| 15-Dec-06 | 511.1 | | 511.4 | | 513.3 | | 511.5 | 511.6 | | | | |
| 22-Jan-07 | 510.9 | | 510.8 | | 513.3 | | 511.3 | 511.6 | | | | |
| 19-Feb-07 | (2) | (2) | (2) | (2) | (2) | (2) | 511.1 | 511.6 | | | | |
| 18-Mar-07 | 510.9 | (2) | 510.9 | (2) | 513.3 | (2) | 512.0 | 511.6 | | | | |
| 17-Apr-07 | 511.0 | (4) | 511.8 | (4) | 513.5 | (2) | 511.6 | 511.5 | | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 17-May-07 | (1) | (4) | (1) | (1) | 513.4 | (4) | 511.4 | 511.6 | | | | |
| 21-Jun-07 | (1) | (1) | (1) | (1) | 513.1 | (1) | 511.7 | (4) | | | | |
| 17-Jul-07 | (1) | (1) | (1) | (1) | 512.7 | (1) | 511.1 | (1) | 509.2 | | (3) | |
| 21-Aug-07 | (1) | (1) | (1) | (1) | 512.4 | (1) | 511.0 | 511.4 | (3) | (1) | (3) | (1) |
| 16-Sep-07 | (1) | (1) | (1) | (1) | 512.3 | (1) | 511.2 | 511.5 | (3) | (1) | (1) | (1) |
| 14-Oct-07 | (1) | (1) | (1) | (1) | 512.4 | (1) | 511.2 | 511.5 | (1) | (1) | (1) | (1) |
| 18-Nov-07 | (2) | (2) | (2) | (2) | (2) | (2) | 511.3 | 511.6 | (2) | (2) | (1) | (2) |
| 13-Dec-07 | (1) | (2) | (2) | (2) | (2) | (2) | 511.2 | 511.6 | 509.4 | (2) | (2) | (2) |
| 20-Jan-08 | 511.1 | (2) | (2) | (2) | 513.4 | (2) | (2) | 511.6 | (2) | (2) | (2) | (2) |
| 17-Feb-08 | 511.1 | (2) | 511.5 | (2) | 513.4 | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 16-Mar-08 | 511.2 | (2) | 511.4 | (2) | (2) | | 511.5 | 511.6 | (2) | (2) | (2) | (2) |
| 6-Apr-08 | 511.3 | (2) | 512.1 | (2) | (2) | (2) | 511.6 | 511.6 | 510.1 | 510.1 | (2) | (2) |
| 20-Apr-08 | 512.1 | 512.1 | 512.1 | 512.1 | 513.6 | (2) | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.8 |
| 18-May-08 | 511.2 | (1) | 511.5 | (1) | 513.4 | (1) | 511.6 | 511.6 | 510.1 | 510.0 | 511.8 | 511.8 |
| 15-Jun-08 | (1) | (1) | 511.1 | (4) | 513.3 | (1) | 511.4 | 511.6 | 510.0 | 510.1 | 511.9 | 511.9 |
| 13-Jul-08 | (1) | (1) | (1) | (1) | 512.9 | (1) | 511.0 | (4) | 509.7 | 510.0 | 511.4 | (1) |
| 17-Aug-08 | 511.3 | (1) | 511.2 | (1) | 512.9 | (1) | 511.4 | 511.5 | 509.8 | 509.7 | 511.3 | (4) |
| 14-Sep-08 | 511.4 | (1) | 511.5 | (1) | 512.9 | (1) | 511.4 | 511.5 | 509.7 | 509.7 | 510.5 | (1) |
| 19-Oct-08 | (1) | (1) | (1) | (1) | 512.4 | (1) | 511.3 | 511.5 | 509.8 | 509.8 | 511.4 | 511.4 |
| 16-Nov-08 | (2) | (2) | (2) | (2) | (3) | | (3) | | | | | |
| 23-Nov-08 | (2) | | (2) | (2) | 512.6 | (2) | 511.5 | 511.6 | (2) | (2) | 511.7 | |
| 14-Dec-08 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 511.8 | |
| 18-Jan-09 | (2) | (2) | (2) | (2) | (2) | (2) | (3) | | (2) | (2) | (2) | (2) |
| 8-Feb-09 | 512.5 | (2) | (2) | (2) | (2) | | 511.6 | 511.6 | (2) | (2) | (2) | |
| 15-Mar-09 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 12-Apr-09 | 511.0 | (2) | 511.9 | (2) | 512.6 | (2) | 511.6 | 511.6 | 509.9 | 510.0 | 511.9 | 511.9 |
| 17-May-09 | (1) | (1) | 511.6 | (1) | 512.8 | 513.5 | 511.5 | 511.6 | 510.0 | 510.0 | 511.7 | 511.7 |
| 14-Jun-09 | 510.9 | (1) | 511.4 | (1) | 512.4 | 513.5 | 511.4 | 511.5 | 509.9 | 510.0 | 511.6 | 511.7 |
| 12-Jul-09 | (1) | (1) | 510.8 | (1) | 512.3 | 513.5 | (3) | | 509.8 | 509.8 | 511.5 | 511.6 |
| 9-Aug-09 | 510.9 | (1) | (1) | (1) | 512.9 | 513.5 | 511.3 | 511.5 | 509.5 | 509.6 | 511.5 | 511.5 |
| 13-Sep-09 | 511.0 | (1) | 511.2 | (4) | 513.0 | 513.5 | 511.1 | 511.5 | 509.8 | (4) | 511.0 | 511.4 |
| 11-Oct-09 | (1) | (1) | 511.5 | (4) | 513.2 | (1) | 511.4 | 511.5 | 509.5 | (4) | 510.7 | (1) |
| 15-Nov-09 | 511.4 | (1) | 511.3 | (4) | 513.3 | 513.5 | 511.3 | 511.5 | 509.5 | (4) | 510.8 | (1) |
| 13-Dec-09 | 511.6 | (2) | (2) | (2) | 513.4 | (2) | (3) | | (2) | (2) | 511.2 | (2) |
| 17-Jan-10 | 511.7 | 512.6 | (2) | (2) | 513.5 | 514.1 | (3) | | (2) | (2) | 511.3 | 512.0 |
| 7-Feb-10 | (2) | (2) | (2) | (2) | (2) | (2) | 511.2 | 511.6 | (2) | (2) | 511.5 | (2) |
| 14-Mar-10 | 512.0 | 512.5 | 512.0 | (2) | 513.5 | (2) | 511.6 | 511.6 | 510.0 | (2) | 511.8 | 511.9 |
| 18-Apr-10 | 511.0 | 511.9 | 512.0 | 512.0 | 513.5 | (1) | (3) | | 510.0 | 510.1 | 511.8 | 511.9 |
| 16-May-10 | 511.0 | (1) | 512.0 | 512.0 | 513.5 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.8 |
| 13-Jun-10 | 510.9 | (1) | 512.0 | 512.0 | 513.4 | (1) | (3) | | 510.0 | 510.0 | 511.8 | 511.8 |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 21-Jul-10 | 511.0 | (1) | 512.0 | 512.0 | 513.5 | (1) | 511.5 | 511.5 | 510.0 | 510.0 | 511.8 | 511.8 |
| 16-Aug-10 | 510.9 | (1) | 511.9 | (4) | 513.4 | (1) | 511.4 | 511.5 | 509.9 | 509.9 | 511.8 | 511.7 |
| 12-Sep-10 | (1) | (1) | 511.7 | (1) | 513.5 | (1) | 511.3 | 511.4 | 509.6 | 509.6 | 511.8 | 511.8 |
| 17-Oct-10 | (1) | (1) | 512.0 | 512.0 | 513.2 | 513.5 | 511.5 | 511.6 | 509.9 | 509.9 | 511.3 | 511.4 |
| 14-Nov-10 | 511.4 | 511.2 | 512.0 | 512.0 | 513.2 | (1) | 511.5 | 511.6 | 510.0 | 510.0 | 511.3 | (1) |
| 19-Dec-10 | (2) | (2) | (2) | (2) | 513.4 | (2) | (2) | 511.6 | (2) | (2) | 511.7 | (2) |
| 16-Jan-11 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 20-Feb-11 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 13-Mar-11 | 510.8 | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 17-Apr-11 | 511.2 | (1) | 512.1 | 512.1 | (2) | (1) | 511.6 | 511.6 | (2) | (2) | 511.6 | 511.8 |
| 15-May-11 | 512.0 | 511.9 | 512.1 | 512.1 | 513.2 | 513.5 | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.9 |
| 13-Jun-11 | 511.6 | (1) | 512.1 | 512.1 | 513.1 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 511.7 | 511.8 |
| 17-Jul-11 | 511.2 | (1) | 512.0 | (1) | 512.7 | (1) | 511.6 | 511.6 | 509.7 | 509.7 | 510.9 | (1) |
| 14-Aug-11 | (1) | (1) | 512.0 | 512.0 | 512.2 | (1) | 511.5 | 511.5 | 509.4 | (4) | 510.4 | (1) |
| 18-Sep-11 | 511.1 | (1) | 512.0 | 512.0 | 512.2 | (1) | 511.6 | 511.6 | 508.8 | (4) | (1) | (1) |
| 16-Oct-11 | 511.2 | (1) | 512.0 | 512.0 | 512.2 | (1) | 511.5 | 511.6 | 509.5 | (4) | 510.4 | (1) |
| 20-Nov-11 | (1) | (1) | 512.1 | 512.1 | 512.2 | (1) | 511.5 | 511.6 | 509.7 | 509.7 | 511.2 | (1) |
| 18-Dec-11 | 511.3 | (2) | (2) | (2) | 512.5 | (2) | 511.6 | 511.6 | (2) | (2) | 511.4 | (2) |
| 15-Jan-12 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 19-Feb-12 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 26-Feb-12 | 512.2 | (4) | (3) | | 513.5 | (1) | | | (2) | | (2) | |
| 18-Mar-12 | 511.8 | (1) | (3) | | 513.3 | (1) | (2) | 511.6 | 509.7 | 510.0 | 511.8 | 511.8 |
| 15-Apr-12 | 511.8 | (1) | 512.1 | 512.1 | 513.3 | (1) | 511.5 | 511.5 | 510.0 | 510.0 | 511.8 | 511.7 |
| 13-May-12 | 511.8 | (1) | 512.1 | 512.1 | 513.3 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 511.7 | 511.7 |
| 17-Jun-12 | 511.6 | (1) | 512.0 | 512.0 | 513.2 | (1) | 511.6 | 511.6 | 509.8 | 509.8 | 511.7 | 511.7 |
| 15-Jul-12 | 511.0 | (1) | 512.1 | 512.0 | 512.6 | (1) | 511.6 | 511.6 | 509.4 | (1) | 510.4 | (1) |
| 12-Aug-12 | 511.3 | (1) | 512.1 | 512.1 | 512.8 | (1) | 511.6 | 511.6 | 509.8 | 509.8 | 511.5 | (1) |
| 16-Sep-12 | (1) | (1) | 512.1 | 512.1 | 513.0 | (4) | 511.5 | 511.5 | 509.5 | (4) | 510.6 | (4) |
| 14-Oct-12 | 511.2 | (1) | 512.0 | 512.0 | 513.0 | (1) | | | 509.6 | (4) | 510.4 | (1) |
| 18-Nov-12 | 511.6 | (1) | 512.1 | 512.1 | 513.3 | (1) | 511.6 | 511.5 | 510.1 | 510.0 | 511.0 | 511.7 |
| 16-Dec-12 | 511.9 | (1) | 512.1 | 512.1 | 513.4 | (1) | 511.6 | 511.6 | (2) | (2) | 511.8 | 511.8 |
| 13-Jan-13 | (2) | (2) | 512.1 | 512.1 | (2) | (2) | 511.6 | 511.6 | 510.0 | (2) | (2) | (2) |
| 17-Feb-13 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 17-Mar-13 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 14-Apr-13 | 511.8 | (1) | 512.3 | 512.3 | 513.5 | 513.5 | 511.7 | 511.7 | 510.1 | 510.1 | 511.9 | 511.9 |
| 12-May-13 | 511.9 | (1) | 512.1 | 512.1 | 513.4 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 511.9 | 511.9 |
| 16-Jun-13 | 511.8 | (1) | 512.1 | 512.1 | 513.4 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 511.9 | 511.9 |
| 14-Jul-13 | 511.8 | 511.8 | 512.2 | 512.1 | 513.4 | (1) | 511.5 | 511.6 | 509.9 | 509.9 | 511.9 | 511.9 |
| 18-Aug-13 | 511.8 | (1) | 512.2 | 512.2 | 513.3 | (1) | 511.4 | 511.3 | 509.9 | 509.8 | 511.6 | (1) |
| 15-Sep-13 | 511.8 | (1) | 512.2 | 512.1 | 513.4 | (1) | | 511.5 | 509.7 | 509.7 | 510.9 | (1) |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 13-Oct-13 | 511.9 | (1) | 512.2 | 512.2 | 513.7 | (1) | 511.6 | 511.6 | 509.8 | 509.8 | 511.3 | 511.9 |
| 17-Nov-13 | 512.1 | 511.7 | 512.1 | 512.1 | 513.9 | (1) | 511.6 | 511.6 | 510.1 | 510.1 | 511.5 | 512.0 |
| 16-Dec-13 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | (2) | (2) |
| 19-Jan-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | (2) | (2) | (2) | (2) |
| 16-Feb-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | (2) | (2) | (2) | (2) |
| 17-Mar-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 13-Apr-14 | (2) | (2) | 512.3 | (2) | (2) | (2) | 511.7 | 511.7 | 510.1 | (2) | 511.9 | 511.8 |
| 11-May-14 | 511.6 | (1) | 512.2 | 512.2 | 513.5 | (1) | 511.6 | 511.6 | 510.0 | 510.1 | 511.6 | 511.9 |
| 15-Jun-14 | 511.6 | (1) | 512.1 | 512.1 | 513.4 | (1) | 511.6 | 511.6 | 509.9 | 509.9 | 511.8 | (1) |
| 13-Jul-14 | 511.5 | (1) | 512.1 | 512.1 | 513.5 | (1) | 511.6 | 511.6 | 509.9 | 509.9 | 511.8 | (1) |
| 17-Aug-14 | 511.3 | (1) | 512.1 | 512.1 | 512.7 | (1) | 511.6 | 511.6 | 509.7 | 509.7 | 511.7 | (1) |
| 7-Sep-14 | 511.4 | (1) | 512.1 | 512.1 | 512.6 | (1) | 511.5 | 511.5 | 509.6 | 509.6 | 511.6 | (1) |
| 12-Sep-14 | | | | 512.1 | | | | | 509.7 | 509.6 | 510.7 | (1) |
| 19-Oct-14 | 511.4 | (1) | 512.1 | 512.1 | 512.8 | (1) | 511.6 | | 509.7 | 509.7 | 510.8 | 511.9 |
| 16-Nov-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 14-Dec-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 18-Jan-15 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 15-Feb-15 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 15-Mar-15 | 512.2 | (2) | (2) | (2) | 513.2 | (2) | (2) | | (2) | (2) | (2) | 511.8 |
| 19-Apr-15 | 511.8 | 512.2 | (3) | (3) | 513.6 | 513.6 | | | (3) | (3) | (3) | (3) |
| 17-May-15 | 512.1 | 512.1 | 512.1 | 512.1 | 513.3 | (1) | 511.5 | 511.5 | 510.1 | 510.0 | (3) | (3) |
| 14-Jun-15 | 512.1 | 512.1 | 512.2 | 512.2 | 513.3 | (1) | 511.6 | 511.5 | 510.0 | 510.0 | (3) | (3) |
| 19-Jul-15 | 512.0 | 512.1 | 512.3 | 512.3 | 513.2 | 513.2 | 511.5 | 511.5 | 510.0 | 510.0 | (3) | (3) |
| 9-Aug-15 | 512.0 | 512.1 | 512.1 | 512.1 | 513.1 | (1) | 511.5 | 511.5 | 509.9 | 509.9 | (3) | (3) |
| 6-Sep-15 | 511.8 | 511.8 | 512.1 | 512.1 | 512.8 | (1) | 511.5 | 511.5 | 509.6 | 509.6 | (3) | (3) |
| 11-Oct-15 | 511.3 | (1) | 512.1 | 512.1 | 512.7 | (1) | 511.5 | 511.4 | 509.2 | (1) | 510.1 | (1) |
| 15-Nov-15 | 512.1 | 512.1 | 512.2 | 512.2 | 513.2 | (1) | 511.6 | 511.6 | 509.7 | 509.7 | 511.0 | (1) |
| 6-Dec-15 | (2) | (2) | 512.2 | 512.2 | 513.2 | (1) | 511.5 | 511.5 | 509.7 | 509.7 | 511.3 | (1) |
| 17-Jan-16 | (2) | (2) | (2) | (2) | 513.3 | (2) | (2) | | (2) | (2) | (2) | (2) |
| 14-Feb-16 | (2) | (2) | (2) | (2) | 513.3 | (2) | (2) | | (2) | (2) | (2) | (2) |
| 13-Mar-16 | 512.1 | 512.2 | 511.9 | 512.2 | 513.5 | 513.6 | 511.5 | 511.6 | 510.0 | 510.0 | 512.0 | 512.0 |
| 17-Apr-16 | 512.2 | 512.2 | 511.9 | 512.3 | 513.3 | 513.5 | 511.6 | 511.6 | 510.0 | 510.0 | 512.0 | 512.0 |
| 1-May-16 | | | 512.2 | 512.2 | | | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | |
| 15-May-16 | 512.1 | 512.2 | 512.2 | 512.2 | 513.6 | 513.6 | 511.6 | 511.6 | 510.0 | 510.0 | 512.0 | 512.0 |
| 5-Jun-16 | | | 512.2 | 512.2 | | | 511.6 | 511.5 | 510.0 | 510.0 | 511.7 | 511.7 |
| 19-Jun-16 | 512.1 | 512.1 | 512.1 | 512.1 | 513.8 | (1) | 511.5 | 511.5 | 509.9 | 509.9 | 511.4 | 511.6 |
| 3-Jul-16 | | | 512.1 | 512.1 | | | 511.4 | 511.4 | 509.7 | 509.7 | 510.8 | (1) |
| 17-Jul-16 | 512.0 | 512.1 | 512.1 | 512.1 | 512.7 | (1) | 511.4 | 511.4 | 509.5 | (1) | 510.6 | (1) |
| 24-Jul-16 | | | | 512.1 | | | | | 509.2 | (1) | 510.2 | (1) |
| 7-Aug-16 | | | 512.1 | 512.1 | | | 511.2 | | 508.9 | (1) | (1) | (1) |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 21-Aug-16 | 512.1 | 512.1 | 512.2 | 512.1 | 512.7 | (1) | 511.4 | 511.4 | 509.3 | (1) | (1) | (1) |
| 18-Sep-16 | 512.1 | 512.1 | 512.2 | 512.2 | 512.7 | (1) | 511.4 | 511.4 | 508.9 | (1) | (1) | (1) |
| 16-Oct-16 | 512.1 | 512.1 | 512.2 | 512.2 | 512.5 | (1) | 511.5 | 511.5 | 508.6 | (1) | (1) | (1) |
| 13-Nov-16 | 512.1 | 512.1 | 512.2 | 512.2 | 512.8 | (1) | 511.5 | 511.5 | 508.8 | (1) | (1) | (1) |
| 11-Dec-16 | (2) | (2) | 512.2 | (2) | 513.0 | (2) | 511.6 | | 509.2 | (1) | (1) | (1) |
| 23-Jan-17 | (2) | (2) | (2) | (2) | (2) | (2) | 511.6 | 511.6 | (2) | (2) | 511.9 | 511.9 |
| 12-Feb-17 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 19-Mar-17 | (2) | (2) | (2) | (2) | 513.4 | (2) | 511.7 | (2) | (2) | (2) | (2) | (2) |
| 9-Apr-17 | | | | | | | | | 510.1 | 510.0 | 511.9 | 511.9 |
| 16-Apr-17 | 512.2 | 512.2 | 512.2 | 512.2 | 513.5 | | 511.6 | 511.6 | 510.0 | 509.9 | 512.0 | 512.0 |
| 10-May-17 | | | 512.3 | 512.3 | | | 511.7 | 511.7 | 510.0 | 510.0 | 511.8 | 511.8 |
| 14-May-17 | 512.2 | 512.2 | | | 513.5 | | | | | | | |
| 21-May-17 | | | 512.3 | 512.3 | | | 511.7 | 511.7 | 510.0 | 510.0 | 511.8 | 511.8 |
| 23-May-17 | | | | | | | 511.7 | 511.7 | 510.0 | 510.0 | 511.8 | 511.8 |
| 25-May-17 | | | 512.3 | 512.3 | | | 511.7 | 511.7 | 510.0 | 510.0 | 511.8 | 511.8 |
| 1-Jun-17 | | | 512.2 | 512.2 | | | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.8 |
| 22-Jun-17 | | | 512.2 | 512.2 | | | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.8 |
| 26-Jun-17 | 512.2 | 512.2 | 512.3 | 512.3 | 513.5 | (1) | 511.6 | 511.6 | 510.0 | 510.0 | 512.0 | 512.0 |
| 7-Jul-17 | | | 512.2 | 512.2 | | | 511.6 | 511.6 | 510.0 | 510.0 | 511.8 | 511.8 |
| 17-Jul-17 | 512.1 | 512.2 | 512.3 | 512.3 | 513.4 | (1) | | | 510.0 | 510.0 | 511.9 | 511.9 |
| 3-Aug-17 | | | | | | | | | 509.9 | 509.9 | 511.7 | 511.6 |
| 17-Aug-17 | 512.2 | 512.2 | 512.3 | 512.3 | 513.2 | (1) | | | 509.9 | 509.9 | 511.5 | (1) |
| 29-Aug-17 | | | | | | | | | 509.7 | 509.7 | 510.9 | (1) |
| 18-Sep-17 | 512.2 | 512.2 | 512.2 | 512.2 | 513.1 | (1) | | | 509.7 | 509.7 | 511.0 | (1) |
| 26-Sep-17 | | | | | | | | | 509.7 | 509.7 | 510.7 | (1) |
| 15-Oct-17 | 512.2 | 512.2 | 512.2 | 512.3 | 513.3 | (1) | | | 509.8 | 509.7 | 511.4 | (1) |
| 14-Nov-17 | 512.2 | 512.3 | 512.3 | 512.3 | 513.3 | (1) | | | 509.9 | (2) | 511.8 | 511.8 |
| 11-Dec-17 | 512.2 | (2) | (3) | (3) | 513.3 | (1) | | | (2) | (2) | (2) | (2) |
| 14-Jan-18 | (2) | (2) | (2) | (2) | 513.4 | (2) | (2) | (2) | 501.1 | (2) | (2) | (2) |
| 11-Feb-18 | | | | | | | | | | (2) | (2) | (2) |
| 18-Feb-18 | (2) | (2) | (2) | (2) | 513.4 | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 18-Mar-18 | (2) | (2) | (2) | (2) | 513.4 | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 15-Apr-18 | | | | | | | 511.9 | 512.0 | | | | |
| 1-May-18 | | | 512.3 | 512.3 | | | 511.8 | 511.8 | 510.1 | 510.1 | 511.9 | 511.9 |
| 17-May-18 | 512.2 | 512.2 | 512.3 | 512.3 | 513.5 | 513.6 | 511.8 | 511.8 | 510.0 | 510.0 | 511.8 | 511.8 |
| 1-Jun-18 | | | | | | | | | | | | |
| 18-Jun-18 | 512.2 | 512.2 | 512.2 | 512.2 | 513.2 | 513.5 | 511.7 | 511.7 | 509.7 | 509.7 | 511.6 | 511.6 |
| 1-Jul-18 | | | | | | | | | | | | |
| 17-Jul-18 | 512.2 | 512.2 | 512.2 | 512.2 | 512.8 | 513.6 | 511.7 | 511.7 | 509.4 | 509.5 | 510.5 | 511.5 |
| 22-Aug-18 | 512.2 | 512.2 | 512.3 | 512.3 | 512.8 | 513.5 | 511.7 | 511.7 | 509.2 | 509.5 | 510.5 | 511.5 |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 18-Sep-18 | 512.1 | 512.1 | 512.2 | 512.2 | 512.7 | 513.5 | 511.7 | 511.6 | 508.7 | 509.5 | 510.2 | 511.5 |
| 23-Oct-18 | 512.2 | 512.2 | 512.2 | 512.2 | 513.0 | 513.7 | 511.8 | 511.5 | 509.0 | 509.6 | 510.1 | 511.4 |
| 19-Nov-18 | (2) | (2) | (2) | (2) | 513.2 | (2) | (2) | (2) | (2) | | 511.1 | |
| 10-Dec-18 | (2) | (2) | (2) | (2) | 513.3 | (2) | (2) | (2) | (2) | | (2) | (2) |
| 17-Jan-19 | | | | | | | | | | | | |
| 14-Feb-19 | | | | | | | | | | | | |
| 11-Mar-19 | | | | | | | | | | | | |
| 26-Apr-19 | 512.3 | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | | 511.8 | |
| 22-May-19 | 512.2 | 512.3 | 512.3 | 512.3 | 513.4 | | 511.9 | 511.9 | 510.0 | 509.9 | 511.8 | 511.8 |
| 19-Jun-19 | 512.3 | 512.3 | 512.3 | 512.3 | 513.6 | | 511.8 | 511.8 | 510.0 | 510.0 | 511.8 | 511.8 |
| 19-Jul-19 | 512.2 | 512.2 | 512.3 | 512.3 | 512.9 | | 511.7 | 511.7 | 509.7 | 509.7 | 510.8 | |
| 27-Aug-19 | 512.2 | 512.2 | 512.3 | 512.3 | 513.0 | | 511.7 | 511.7 | 509.4 | | 510.8 | |
| 16-Sep-19 | 512.2 | 512.2 | 512.3 | 512.3 | 512.9 | | 511.7 | 511.7 | 509.3 | | 510.8 | |
| 21-Oct-19 | 512.2 | 512.2 | 512.3 | 512.3 | 512.9 | | 511.7 | 511.7 | 508.4 | | 510.8 | |
| 18-Nov-19 | | | | | 513.0 | | (5) | (5) | 509.3 | | 510.8 | |
| 17-Dec-19 | | | | | | | | | | | | |
| 14-Jan-20 | | | | | | | | | | | | |
| 18-Feb-20 | | | | | | | | | | | | |
| 24-Mar-20 | | | | | | | (5) | (5) | | | | |
| 22-Apr-20 | | | | | | | 511.8 | (5) | 509.8 | 509.9 | 511.8 | 511.8 |
| 27-May-20 | | 512.8 | 512.2 | 512.3 | 513.3 | | 511.8 | 511.8 | 509.9 | 510.0 | 511.8 | 511.8 |
| 26-Jun-20 | 512.8 | 512.8 | 512.0 | 512.0 | 513.5 | | 511.8 | 511.8 | 510.0 | 510.0 | 511.8 | 511.8 |
| 28-Jul-20 | 512.8 | 512.8 | 512.0 | 512.0 | 513.4 | | 511.8 | 511.8 | 509.9 | 509.9 | 511.6 | 511.6 |
| 31-Aug-20 | 512.6 | 512.6 | 512.0 | 512.0 | 513.3 | | 511.8 | 511.8 | 509.4 | 509.6 | 511.6 | 511.6 |
| 28-Sep-20 | 512.7 | 512.7 | 512.3 | 512.2 | 513.3 | | 511.8 | 511.8 | 509.3 | | 511.5 | |
| 27-Oct-20 | | | | | 513.0 | | 511.8 | 511.8 | 509.6 | 509.5 | 511.3 | |
| 24-Nov-20 | | | | | 513.2 | | 511.8 | 511.7 | | | 511.2 | |
| 21-Dec-20 | | | | | | | | | | | | |
| 29-Jan-21 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 19-Feb-21 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 31-Mar-21 | 513.0 | 512.6 | (2) | (2) | | | 511.7 | 511.7 | (2) | (2) | (2) | (2) |
| 29-Apr-21 | 512.8 | 512.8 | 512.2 | 512.2 | 513.3 | (1) | 511.9 | 511.9 | 509.8 | 509.9 | 511.4 | (1) |
| 13-May-21 | | | 512.2 | 512.2 | | | 511.8 | 511.8 | 509.8 | 509.8 | 511.7 | 511.7 |
| 28-May-21 | 512.8 | 512.8 | 512.2 | 512.2 | 513.3 | (1) | 511.8 | 511.8 | 509.8 | 509.8 | 511.7 | 511.7 |
| 9-Jun-21 | | | 512.3 | 512.3 | | | 511.8 | 511.8 | 509.9 | 509.9 | 511.7 | 511.7 |
| 25-Jun-21 | 512.7 | 512.8 | 512.3 | 512.3 | 513.1 | (1) | 511.8 | 511.8 | 509.7 | 509.7 | 511.3 | (1) |
| 8-Jul-21 | | | 512.3 | 512.3 | | | 511.8 | 511.8 | 509.8 | 509.8 | 511.2 | (1) |
| 26-Jul-21 | 512.8 | 512.8 | 512.0 | 512.0 | (5) | (1) | 511.8 | 511.8 | 509.6 | 509.6 | 511.3 | (1) |
| 24-Aug-21 | 512.7 | 512.7 | 512.0 | 512.0 | 513.0 | (1) | 511.7 | 511.7 | 509.3 | (1) | (1) | (1) |
| 22-Sep-21 | 512.7 | 512.7 | 512.0 | 512.0 | 513.4 | (1) | 511.8 | 511.8 | 509.2 | (1) | (5) | (1) |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 29-Oct-21 | 512.7 | 512.7 | 512.0 | 512.0 | 513.4 | (1) | 511.9 | 511.9 | 509.6 | 509.5 | 511.3 | (1) |
| 24-Nov-21 | (2) | (2) | (2) | (2) | 513.4 | (1) | 511.9 | 511.9 | 510.0 | (2) | 511.8 | 511.8 |
| 23-Dec-21 | (2) | (2) | (3) | (3) | 513.3 | (1) | 511.9 | 511.9 | (3) | (3) | (3) | (3) |
| 26-Jan-22 | (2) | (2) | (3) | (3) | (2) | (2) | (2) | (2) | (3) | (3) | (3) | (3) |
| 10-Feb-22 | (2) | (2) | (3) | (3) | (2) | (2) | (2) | (2) | (3) | (3) | (3) | (3) |
| 16-Mar-22 | (2) | (2) | (3) | (3) | (2) | (2) | (2) | (2) | (3) | (3) | (2) | (2) |
| 22-Apr-22 | 512.8 | 512.8 | (3) | (3) | 513.5 | 513.5 | (3) | (3) | (3) | (3) | (3) | (3) |
| 13-May-22 | | | 512.6 | 512.6 | | | 512.0 | 512.0 | 509.5 | 509.6 | 511.6 | 511.6 |
| 26-May-22 | 512.8 | 512.8 | 512.3 | 512.3 | 513.3 | (1) | 511.8 | 511.9 | 509.8 | 509.9 | 511.7 | 511.7 |
| 2-Jun-22 | | | 512.6 | 512.6 | | | 511.9 | 511.9 | 509.6 | 509.6 | 511.6 | 511.6 |
| 20-Jun-22 | 512.7 | 512.7 | 512.7 | 512.7 | 513.7 | (1) | | | 509.5 | 509.5 | 511.6 | 511.6 |
| 22-Jun-22 | | | | | | | 511.9 | 511.9 | | | | |
| 7-Jul-22 | | | 512.6 | 512.6 | | | 511.9 | 511.9 | 509.6 | 509.6 | 511.7 | 511.7 |
| 30-Aug-22 | | | | | 513.5 | (1) | 512.0 | 512.0 | | | 511.6 | 511.6 |
| 31-Aug-22 | 512.7 | 512.7 | 512.6 | 512.6 | | | | | 509.6 | 509.6 | | |
| 27-Sep-22 | | | | | | | 511.9 | 511.9 | | | | |
| 28-Sep-22 | 512.8 | 512.8 | | | 512.9 | (1) | | | | | (1) | (1) |
| 29-Sep-22 | | | 512.3 | 512.3 | | | | | 509.4 | (1) | | |
| 26-Oct-22 | | | | | | | 511.8 | 511.8 | 509.1 | (1) | | |
| 28-Oct-22 | 512.7 | 512.8 | 512.2 | 512.2 | 513.0 | (1) | | | | | (1) | (1) |
| 23-Nov-22 | | | | | | | | | | | | |
| 27-Mar-23 | (2) | (2) | (2) | 512.5 | 513.4 | (1) | 512.1 | 512.1 | 509.7 | 510.0 | (2) | (2) |
| 24-Apr-23 | 512.8 | 512.9 | 512.3 | 512.3 | 512.8 | 513.5 | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 15-May-23 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 29-May-23 | | | | | | | | | 510.0 | 510.0 | | |
| 30-May-23 | | | 512.3 | 512.3 | 513.4 | (1) | 511.9 | 511.9 | | | 511.7 | 511.7 |
| 31-May-23 | 512.7 | 512.8 | | | | | | | | | | |
| 14-Jun-23 | | | 512.3 | 512.3 | | | 511.9 | 511.8 | 509.9 | 509.9 | 511.7 | 511.7 |
| 27-Jun-23 | 512.8 | 512.8 | 512.3 | 512.3 | 513.2 | 513.5 | 512.0 | 511.9 | 509.8 | 509.8 | 511.4 | 511.4 |
| 12-Jul-23 | 512.7 | 512.8 | 512.3 | 512.3 | 513.3 | (1) | 511.9 | 511.9 | 509.9 | 509.9 | 511.5 | 511.5 |
| 24-Jul-23 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 28-Aug-23 | | | | | | | 511.9 | 511.9 | 509.9 | 509.9 | 511.2 | (1) |
| 29-Aug-23 | | | 512.3 | 512.3 | | | | | | | | |
| 30-Aug-23 | 512.8 | 512.8 | | | 513.1 | (1) | | | | | | |
| 30-Oct-23 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | | | | |
| 31-Oct-23 | 512.8 | 512.8 | | | 513.1 | 513.5 | | | 509.6 | 509.6 | | |
| 1-Nov-23 | | | | | | | | | | | 510.4 | (1) |
| 28-Mar-24 | 512.8 | 512.8 | 512.3 | 512.3 | 513.4 | 513.5 | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 30-Apr-24 | 512.8 | 512.8 | 512.3 | 512.3 | 513.5 | 513.5 | 511.9 | 511.9 | 510.0 | 510.0 | 511.9 | 511.9 |
| 13-May-24 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP1 | | DP2 | | DP3 | | DP4 | | DP5 | | DP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) |
| Flow System | OB | | OB | | OB | | OB | | OB | | OB | |
| Date TOP | 513.1 | | 512.9 | | 514.7 | | 512.1 | | 510.5 | | 512.2 | |
| 28-May-24 | 512.7 | 512.8 | 512.3 | 512.3 | 513.4 | 513.5 | 511.9 | 511.9 | 510.0 | 510.0 | 511.7 | 511.7 |
| 11-Jun-24 | | | 512.4 | 512.2 | | | 511.8 | 511.8 | 509.9 | 509.9 | 511.4 | 511.4 |
| 26-Jun-24 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 509.9 | 509.9 | 511.4 | 511.4 |
| 27-Jun-24 | 512.8 | 512.8 | | | 513.5 | (1) | | | | | | |
| 15-Jul-24 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 29-Jul-24 | | | | | | | | | 509.9 | 509.9 | 511.5 | 511.5 |
| 30-Jul-24 | | | 512.3 | 512.3 | 513.3 | (1) | 511.9 | 511.9 | | | | |
| 26-Aug-24 | 512.8 | 512.8 | | | | | 511.9 | 511.9 | 509.8 | 509.8 | | |
| 27-Aug-24 | | | 512.3 | 512.3 | | | | | | | 510.8 | (1) |
| 28-Aug-24 | | | | | 513.1 | (1) | | | | | | |
| 28-Oct-24 | | | | | 513.0 | (1) | 511.8 | 511.9 | | | 510.1 | (1) |
| 29-Oct-24 | | | 512.2 | 512.2 | | | | | 509.4 | (1) | | |
| 30-Oct-24 | 512.7 | 512.8 | | | | | | | | | | |
| 25-Mar-25 | | | (2) | (2) | | | (3) | (3) | (3) | (3) | (2) | (2) |
| 26-Mar-25 | (3) | (3) | | | (2) | (2) | | | | | | |
| 29-Apr-25 | 512.8 | 512.8 | 512.3 | 512.3 | 513.4 | 513.5 | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.8 |
| 12-May-25 | | | 512.3 | 512.3 | | | 511.8 | 511.9 | 509.9 | 510.0 | 511.8 | 511.8 |
| 26-May-25 | 512.8 | 512.8 | 512.3 | 512.3 | 513.4 | (1) | 511.9 | 511.9 | 510.0 | 510.0 | 511.8 | 511.9 |
| 9-Jun-25 | | | 512.3 | 512.3 | | | 511.9 | 511.9 | 510.0 | 510.0 | 511.7 | 511.7 |
| 23-Jun-25 | 512.8 | 512.8 | 512.3 | 512.3 | 513.3 | (1) | 511.9 | 511.9 | 509.9 | 509.9 | 511.6 | 511.6 |
| 14-Jul-25 | | | 512.2 | 512.2 | | | 511.8 | 511.8 | 509.8 | 509.8 | 511.0 | (1) |
| 28-Jul-25 | 512.7 | 512.8 | 512.2 | 512.3 | 512.9 | (1) | 511.8 | 511.9 | 509.5 | 509.6 | 510.4 | (1) |
| 25-Aug-25 | 512.8 | 512.8 | 512.3 | 512.3 | 513.0 | (1) | 511.8 | 511.9 | 509.4 | (1) | 510.2 | (1) |
| 27-Oct-25 | | | | | | | 511.9 | 511.9 | 509.3 | 509.5 | | |
| 28-Oct-25 | 512.6 | 512.8 | 512.3 | 512.3 | 512.7 | 513.5 | | | | | 510.3 | 511.4 |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 26-Jul-99 | | | | | | | | | | |
| 17-Aug-99 | | | | | | | | | | |
| 27-Sep-99 | | | | | | | | | | |
| 25-Oct-99 | | | | | | | | | | |
| 21-Nov-99 | | | | | | | | | | |
| 21-Dec-99 | | | | | | | | | | |
| 25-Jan-00 | | | | | | | | | | |
| 29-Feb-00 | | | | | | | | | | |
| 31-Mar-00 | | | | | | | | | | |
| 2-Jun-00 | | | | | | | | | | |
| 7-Jul-00 | | | | | | | | | | |
| 27-Aug-00 | | | | | | | | | | |
| 28-Sep-00 | | | | | | | | | | |
| 3-Nov-00 | | | | | | | | | | |
| 22-Feb-01 | | | | | | | | | | |
| 22-Mar-01 | | | | | | | | | | |
| 26-Apr-01 | | | | | | | | | | |
| 31-May-01 | | | | | | | | | | |
| 28-Jun-01 | | | | | | | | | | |
| 1-Aug-01 | | | | | | | | | | |
| 4-Oct-01 | | | | | | | | | | |
| 1-Nov-01 | | | | | | | | | | |
| 14-Dec-01 | | | | | | | | | | |
| 10-Jan-02 | | | | | | | | | | |
| 14-Mar-02 | | | | | | | | | | |
| 16-May-02 | | | | | | | | | | |
| 20-Jun-02 | | | | | | | | | | |
| 11-Jul-02 | | | | | | | | | | |
| 13-Sep-02 | | | | | | | | | | |
| 1-Nov-02 | | | | | | | | | | |
| 16-Jan-03 | | | | | | | | | | |
| 28-Mar-03 | | | | | | | | | | |
| 15-May-03 | | | | | | | | | | |
| 23-Jun-03 | | | | | | | | | | |
| 22-Jul-03 | | | | | | | | | | |
| 20-Aug-03 | | | | | | | | | | |
| 25-Sep-03 | | | | | | | | | | |
| 22-Oct-03 | | | | | | | 510.4 | | | |
| 25-Nov-03 | | | | | | | 510.5 | | | |
| 22-Dec-03 | | | | | | | 510.5 | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 9-Feb-04 | | | | | | | 510.5 | | | |
| 16-Mar-04 | | | | | | | 510.5 | | | |
| 20-Apr-04 | | | | | | | 510.5 | | | |
| 18-May-04 | | | | | | | 510.5 | 510.5 | | |
| 22-Jun-04 | | | | | | | 510.5 | 510.5 | | |
| 28-Jul-04 | | | | | | | 510.3 | | | |
| 25-Aug-04 | | | | | | | 509.9 | | | |
| 22-Sep-04 | | | | | | | 509.6 | | | |
| 19-Oct-04 | | | | | | | 510.0 | | | |
| 16-Nov-04 | | | | | | | 510.2 | | | |
| 16-Dec-04 | | | | | | | (2) | | | |
| 13-Jan-05 | | | | | | | | | | |
| 31-Jan-05 | | | | | | | 510.4 | | | |
| 24-Feb-05 | | | | | | | (2) | | | |
| 22-Mar-05 | | | | | | | (2) | | | |
| 20-Apr-05 | | | | | | | 510.5 | 510.5 | | |
| 25-May-05 | | | | | | | 510.5 | 510.5 | | |
| 29-Jun-05 | | | | | | | 510.3 | | | |
| 13-Jul-05 | | | | | | | 509.9 | | | |
| 23-Aug-05 | | | | | | | 509.6 | | | |
| 26-Sep-05 | | | | | | | 509.3 | | | |
| 26-Oct-05 | | | | | | | 509.9 | | | |
| 16-Nov-05 | | | | | | | 510.3 | | | |
| 14-Dec-05 | | | | | | | 510.3 | | | |
| 20-Jan-06 | | | | | | | 510.4 | | | |
| 14-Feb-06 | | | | | | | 510.4 | | | |
| 19-Mar-06 | | | | | | | (2) | | | |
| 17-Apr-06 | | | | | | | 510.5 | 510.5 | | |
| 19-May-06 | | | | | | | 510.5 | 510.5 | | |
| 19-Jun-06 | | | | | | | 510.3 | | | |
| 10-Jul-06 | | | | | | | 509.9 | | | |
| 21-Aug-06 | | | | | | | 509.0 | | | |
| 18-Sep-06 | | | | | | | 509.1 | | | |
| 17-Oct-06 | | | | | | | 510.1 | | | |
| 20-Nov-06 | | | | | | | 510.4 | | | |
| 15-Dec-06 | | | | | | | 510.5 | | | |
| 22-Jan-07 | | | | | | | 510.2 | | | |
| 19-Feb-07 | | | | | | | 510.5 | | | |
| 18-Mar-07 | | | | | | | (2) | | | |
| 17-Apr-07 | | | | | | | 510.5 | 510.5 | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 17-May-07 | | | | | | | 510.5 | | | |
| 21-Jun-07 | | | | | | | 510.1 | | | |
| 17-Jul-07 | | | | | | | 509.4 | (1) | | |
| 21-Aug-07 | | | | | | | (1) | (1) | | |
| 16-Sep-07 | | | | | | | (1) | | | |
| 14-Oct-07 | | | | | | | (1) | | | |
| 18-Nov-07 | | | | | | | (1) | (1) | | |
| 13-Dec-07 | | | | | | | (2) | | | |
| 20-Jan-08 | | | | | | | (2) | | | |
| 17-Feb-08 | | | | | | | 510.5 | (2) | | |
| 16-Mar-08 | | | | | | | 510.0 | | | |
| 6-Apr-08 | | | | | | | 510.7 | | | |
| 20-Apr-08 | | | | | | | 510.5 | | | |
| 18-May-08 | | | | | | | 510.5 | | | |
| 15-Jun-08 | | | | | | | 510.4 | | | |
| 13-Jul-08 | | | | | | | 510.1 | | | |
| 17-Aug-08 | | | | | | | 510.2 | | | |
| 14-Sep-08 | | | | | | | 510.2 | | | |
| 19-Oct-08 | | | | | | | 510.2 | | | |
| 16-Nov-08 | | | | | | | (3) | | | |
| 23-Nov-08 | | | | | | | 510.3 | | | |
| 14-Dec-08 | | | | | | | (2) | | | |
| 18-Jan-09 | | | | | | | (2) | | | |
| 8-Feb-09 | | | | | | | 510.5 | | | |
| 15-Mar-09 | | | | | | | 510.5 | | | |
| 12-Apr-09 | | | | | | | 510.5 | | | |
| 17-May-09 | | | | | | | 510.5 | | | |
| 14-Jun-09 | | | | | | | 510.4 | | | |
| 12-Jul-09 | | | | | | | 510.7 | | | |
| 9-Aug-09 | | | | | | | 510.2 | | | |
| 13-Sep-09 | | | | | | | 509.2 | | | |
| 11-Oct-09 | | | | | | | 510.3 | | | |
| 15-Nov-09 | | | | | | | 510.2 | | | |
| 13-Dec-09 | | | | | | | 510.3 | | | |
| 17-Jan-10 | | | | | | | 510.3 | | | |
| 7-Feb-10 | | | | | | | (2) | | | |
| 14-Mar-10 | | | | | | | 510.5 | | | |
| 18-Apr-10 | | | | | | | 510.4 | | | |
| 16-May-10 | | | | | | | 510.4 | | | |
| 13-Jun-10 | | | | | | | 510.4 | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 21-Jul-10 | | | | | | | 510.4 | | | |
| 16-Aug-10 | | | | | | | 510.1 | | | |
| 12-Sep-10 | | | | | | | 509.8 | | | |
| 17-Oct-10 | | | | | | | (3) | | | |
| 14-Nov-10 | | | | | | | 510.4 | | | |
| 19-Dec-10 | | | | | | | 510.4 | | | |
| 16-Jan-11 | | | | | | | 510.4 | | | |
| 20-Feb-11 | | | | | | | (2) | | | |
| 13-Mar-11 | | | | | | | (2) | | | |
| 17-Apr-11 | | | | | | | 510.5 | | | |
| 15-May-11 | | | | | | | 510.5 | | | |
| 13-Jun-11 | | | | | | | 510.5 | | | |
| 17-Jul-11 | | | | | | | 509.9 | | | |
| 14-Aug-11 | | | | | | | 509.6 | | | |
| 18-Sep-11 | | | | | | | (1) | | | |
| 16-Oct-11 | | | | | | | 510.3 | | | |
| 20-Nov-11 | | | | | | | 510.3 | | | |
| 18-Dec-11 | | | | | | | 510.4 | | | |
| 15-Jan-12 | | | | | | | 510.3 | | | |
| 19-Feb-12 | | | | | | | 510.5 | | | |
| 26-Feb-12 | | | | | | | | | | |
| 18-Mar-12 | | | | | | | 510.5 | | | |
| 15-Apr-12 | | | | | | | 510.4 | (4) | | |
| 13-May-12 | | | | | | | 510.4 | | | |
| 17-Jun-12 | | | | | | | 510.1 | | | |
| 15-Jul-12 | | | | | | | 509.3 | | | |
| 12-Aug-12 | | | | | | | 510.3 | | | |
| 16-Sep-12 | | | | | | | 509.3 | | | |
| 14-Oct-12 | | | | | | | 510.3 | | | |
| 18-Nov-12 | | | | | | | 510.4 | | | |
| 16-Dec-12 | | | | | | | 510.4 | | | |
| 13-Jan-13 | | | | | | | (2) | | | |
| 17-Feb-13 | | | | | | | (2) | | | |
| 17-Mar-13 | | | | | | | (2) | | | |
| 14-Apr-13 | | | | | | | 510.5 | 510.5 | | |
| 12-May-13 | | | | | | | 510.5 | | | |
| 16-Jun-13 | | | | | | | 510.5 | | | |
| 14-Jul-13 | | | | | | | 509.8 | | | |
| 18-Aug-13 | | | | | | | 510.1 | | | |
| 15-Sep-13 | | | | | | | 510.1 | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 13-Oct-13 | | | | | | | 510.3 | | | |
| 17-Nov-13 | | | | | | | 510.4 | | | |
| 16-Dec-13 | | | | | | | (2) | | | |
| 19-Jan-14 | | | | | | | (2) | | (2) | |
| 16-Feb-14 | | | | | | | (2) | | (2) | |
| 17-Mar-14 | | | | | | | (2) | | (2) | |
| 13-Apr-14 | | | | | | | (2) | | (2) | |
| 11-May-14 | | | | | | | 510.5 | 510.5 | (1) | |
| 15-Jun-14 | | | | | | | 510.4 | | 511.1 | |
| 13-Jul-14 | | | | | | | 510.3 | | 511.0 | |
| 17-Aug-14 | | | | | | | 510.3 | | (1) | |
| 7-Sep-14 | | | | | | | 510.1 | | (3) | |
| 12-Sep-14 | | | | | | | (3) | | (1) | |
| 19-Oct-14 | | | | | | | 510.4 | | 511.1 | |
| 16-Nov-14 | | | | | | | 510.4 | | (2) | |
| 14-Dec-14 | | | | | | | 510.4 | | (2) | |
| 18-Jan-15 | | | | | | | (2) | | (2) | |
| 15-Feb-15 | | | | | | | (3) | | (3) | |
| 15-Mar-15 | | | | | | | (2) | | (2) | |
| 19-Apr-15 | | | | | | | 510.5 | | 511.2 | |
| 17-May-15 | | | | | | | 510.4 | | 511.2 | |
| 14-Jun-15 | | | | | | | 510.4 | | 511.2 | |
| 19-Jul-15 | | | | | | | 510.2 | | 511.1 | |
| 9-Aug-15 | | | | | | | 510.2 | | (1) | |
| 6-Sep-15 | (3) | | (3) | | (3) | | 510.0 | | (1) | |
| 11-Oct-15 | (3) | | (3) | | (3) | | 509.0 | | (1) | |
| 15-Nov-15 | 509.0 | | (3) | | 507.7 | | 510.3 | | (1) | (1) |
| 6-Dec-15 | 509.0 | | 511.2 | | 507.7 | | 510.3 | | (2) | (2) |
| 17-Jan-16 | (2) | | (2) | | (2) | | 510.4 | | (2) | (2) |
| 14-Feb-16 | (2) | | (2) | | (2) | | (2) | | (2) | (2) |
| 13-Mar-16 | 509.4 | | 511.3 | | 507.8 | | 510.5 | | 511.2 | 511.8 |
| 17-Apr-16 | 509.3 | | 511.3 | | 507.8 | | 510.5 | | 511.2 | 511.8 |
| 1-May-16 | 509.3 | | 511.3 | | 507.8 | | 510.5 | | | |
| 15-May-16 | 509.3 | | 511.3 | | 507.8 | | 510.4 | | 511.2 | 511.7 |
| 5-Jun-16 | 509.3 | | 511.3 | | 507.8 | | 510.4 | (1) | | |
| 19-Jun-16 | 509.2 | | 511.2 | | 507.6 | | 510.1 | | (1) | (1) |
| 3-Jul-16 | 509.0 | | 511.2 | | 507.4 | | 509.8 | (1) | | |
| 17-Jul-16 | 508.8 | | 511.2 | | 507.1 | | 509.2 | | (1) | (1) |
| 24-Jul-16 | | | | | | | | | | |
| 7-Aug-16 | 508.4 | | 511.2 | | 506.6 | | (1) | | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 21-Aug-16 | 508.6 | | 511.2 | | 507.2 | | 509.5 | | (1) | (1) |
| 18-Sep-16 | 508.2 | | 511.2 | | 506.7 | | (1) | | (1) | (1) |
| 16-Oct-16 | 508.0 | | 511.2 | | (1) | | (1) | | (1) | (1) |
| 13-Nov-16 | 508.4 | | 511.3 | | 506.9 | | 509.2 | | (1) | (1) |
| 11-Dec-16 | 508.7 | (1) | 511.3 | 511.3 | (1) | (1) | 509.9 | | (1) | (1) |
| 23-Jan-17 | 509.2 | 509.2 | (2) | (2) | 507.7 | 507.7 | 510.4 | | 511.1 | (2) |
| 12-Feb-17 | (2) | (2) | (2) | (2) | (2) | (2) | 510.6 | (2) | (2) | (2) |
| 19-Mar-17 | 509.3 | (2) | (2) | (2) | (2) | (2) | 510.4 | (2) | (2) | 511.7 |
| 9-Apr-17 | | | | | | | | | | |
| 16-Apr-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | | 511.2 | 511.7 |
| 10-May-17 | 509.4 | 509.4 | 511.3 | 511.4 | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 14-May-17 | | | | | | | | | 511.2 | |
| 21-May-17 | | | 511.3 | 511.3 | 507.8 | 507.8 | 510.5 | 510.4 | 511.3 | 511.8 |
| 23-May-17 | | | | | | | | | | |
| 25-May-17 | | | 511.3 | 511.3 | 507.8 | 507.8 | 510.5 | 510.4 | | |
| 1-Jun-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 22-Jun-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | (1) | | |
| 26-Jun-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | | 511.2 | 511.8 |
| 7-Jul-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | (1) | | |
| 17-Jul-17 | 509.3 | 509.3 | 511.3 | 511.3 | 507.8 | 507.7 | (1) | (1) | 511.2 | 511.8 |
| 3-Aug-17 | | | | | | | | | | |
| 17-Aug-17 | 509.2 | 509.2 | 511.3 | 511.3 | 507.7 | 507.7 | 510.2 | (1) | (1) | 511.6 |
| 29-Aug-17 | | | | | | | | | | |
| 18-Sep-17 | 509.0 | (1) | 511.3 | 511.3 | 507.7 | 507.7 | 510.2 | (1) | (1) | |
| 26-Sep-17 | | | | | | | | | | |
| 15-Oct-17 | 509.1 | (1) | 511.3 | 511.3 | 507.7 | 507.7 | 510.4 | (1) | (1) | 511.6 |
| 14-Nov-17 | 509.2 | 509.2 | 511.3 | 511.3 | 507.8 | 507.8 | 510.4 | | 511.1 | 511.7 |
| 11-Dec-17 | (2) | (2) | (2) | (2) | (2) | (2) | 510.4 | (1) | (2) | (2) |
| 14-Jan-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) |
| 11-Feb-18 | | | | | | | | | | |
| 18-Feb-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) |
| 18-Mar-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) |
| 15-Apr-18 | | | | | | | | | | |
| 1-May-18 | 509.4 | 509.4 | 511.4 | 511.4 | 507.8 | 507.8 | 510.5 | 510.5 | | |
| 17-May-18 | 509.4 | 509.3 | 511.4 | 511.4 | 507.8 | 507.8 | 510.5 | 510.4 | 511.2 | 511.8 |
| 1-Jun-18 | | | | | | | | | | |
| 18-Jun-18 | 509.2 | 509.2 | 511.3 | 511.3 | 507.7 | 507.8 | 510.2 | 510.4 | (1) | 511.7 |
| 1-Jul-18 | | | | | | | | | | |
| 17-Jul-18 | 508.8 | 509.1 | 511.3 | 511.3 | 507.7 | 507.8 | 509.4 | 510.4 | (1) | (1) |
| 22-Aug-18 | 508.8 | 509.1 | 511.4 | 511.4 | 507.5 | 507.8 | 510.1 | 510.4 | (1) | (1) |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 18-Sep-18 | 508.2 | 509.1 | 511.3 | 511.3 | 506.6 | 507.7 | 509.0 | 510.4 | (1) | (1) |
| 23-Oct-18 | 508.7 | 509.1 | 511.4 | 511.3 | 507.2 | 507.8 | 509.6 | 510.4 | (1) | (1) |
| 19-Nov-18 | 509.0 | | (2) | (2) | 507.7 | 507.7 | (2) | (2) | (2) | (2) |
| 10-Dec-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 17-Jan-19 | | | | | | | | | | |
| 14-Feb-19 | | | | | | | | | | |
| 11-Mar-19 | | | | | | | | | | |
| 26-Apr-19 | 509.4 | | 511.4 | 511.4 | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 22-May-19 | 509.3 | 509.3 | 511.4 | 511.4 | 507.8 | 507.7 | 510.4 | 510.4 | | |
| 19-Jun-19 | 509.3 | 509.3 | 511.3 | 511.3 | 507.7 | | 510.4 | | 511.0 | 511.3 |
| 19-Jul-19 | 509.0 | | 511.4 | 511.4 | 507.5 | | 509.7 | | | |
| 27-Aug-19 | 509.0 | | 511.4 | 511.4 | 506.8 | | 509.7 | | | |
| 16-Sep-19 | 509.0 | | 511.4 | 511.4 | 506.8 | | 509.7 | | 510.7 | 511.3 |
| 21-Oct-19 | 509.0 | | 511.4 | 511.4 | 506.7 | | 509.7 | | 510.7 | 511.3 |
| 18-Nov-19 | 508.8 | | 511.6 | 511.6 | 506.8 | | 509.8 | | | |
| 17-Dec-19 | | | | | | | | | | |
| 14-Jan-20 | | | | | | | | | | |
| 18-Feb-20 | | | | | | | | | | |
| 24-Mar-20 | | | | | 507.8 | | 510.4 | | 510.7 | 511.3 |
| 22-Apr-20 | 509.3 | 509.3 | 511.1 | (5) | | | 510.4 | 510.4 | | |
| 27-May-20 | 509.1 | 509.1 | 511.4 | 511.4 | 507.7 | 507.7 | 510.4 | | 510.2 | |
| 26-Jun-20 | 509.4 | 509.3 | 511.4 | 511.4 | 507.7 | | 510.4 | | 510.5 | 511.2 |
| 28-Jul-20 | 509.3 | 509.3 | 511.4 | 511.4 | 507.8 | | 510.3 | | 510.4 | 511.0 |
| 31-Aug-20 | 508.8 | 509.2 | 511.3 | 511.3 | 507.8 | | 510.5 | | 510.5 | 511.0 |
| 28-Sep-20 | 508.8 | | 511.3 | 511.3 | 507.6 | | 510.5 | | | |
| 27-Oct-20 | 509.1 | | 511.3 | 511.3 | 507.5 | | 510.3 | 510.3 | | |
| 24-Nov-20 | | | 511.3 | 511.3 | 507.6 | | 510.4 | | | |
| 21-Dec-20 | | | | | | | | | | |
| 29-Jan-21 | (2) | (2) | (2) | (2) | 507.8 | (2) | 510.4 | (2) | (2) | (2) |
| 19-Feb-21 | (2) | (2) | (2) | (2) | 507.8 | (2) | (2) | (2) | (2) | (2) |
| 31-Mar-21 | (2) | (2) | (2) | | (2) | (2) | 510.4 | (1) | (2) | (2) |
| 29-Apr-21 | 508.8 | 508.8 | 511.3 | 511.3 | 508.1 | 508.1 | 510.4 | 510.4 | | |
| 13-May-21 | 509.3 | 509.3 | 511.2 | (1) | 508.2 | (1) | 510.4 | 510.4 | | |
| 28-May-21 | 509.2 | 509.2 | 511.2 | (1) | 508.2 | (1) | 510.3 | (1) | | |
| 9-Jun-21 | 509.3 | 509.3 | 511.5 | 511.5 | (1) | (1) | (1) | (1) | | |
| 25-Jun-21 | 509.1 | 509.1 | 511.2 | (1) | (1) | (1) | 510.3 | (1) | (1) | 511.0 |
| 8-Jul-21 | 509.1 | 509.2 | 511.4 | 511.4 | 507.7 | (1) | 510.3 | (1) | | |
| 26-Jul-21 | 508.4 | (1) | 511.4 | 511.4 | 507.6 | (1) | 510.0 | (1) | (1) | (1) |
| 24-Aug-21 | 508.7 | (1) | 511.4 | 511.4 | 507.6 | (1) | 509.6 | (1) | (1) | (1) |
| 22-Sep-21 | 509.9 | (1) | 511.5 | 511.5 | 508.9 | (1) | 510.4 | (1) | (1) | (1) |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints



| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 29-Oct-21 | 509.1 | (1) | (1) | (1) | 507.9 | (1) | 510.3 | (1) | (1) | (1) |
| 24-Nov-21 | 509.4 | (2) | 511.5 | (2) | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 23-Dec-21 | (3) | (3) | 511.5 | (2) | 507.7 | 507.7 | 510.4 | (1) | | |
| 26-Jan-22 | (3) | (3) | (2) | (2) | 507.6 | (2) | 510.3 | (2) | (2) | (2) |
| 10-Feb-22 | (3) | (3) | (2) | (2) | (2) | (2) | (2) | (2) | (3) | (3) |
| 16-Mar-22 | (3) | (3) | (2) | (2) | (2) | (2) | 510.2 | (2) | (2) | (2) |
| 22-Apr-22 | (3) | (3) | (3) | (3) | 508.2 | 508.2 | 510.4 | 510.4 | (3) | (3) |
| 13-May-22 | 509.3 | 509.3 | 511.3 | 511.3 | (5) | (5) | 510.3 | (1) | | |
| 26-May-22 | 509.1 | 509.1 | 511.3 | 511.3 | 508.1 | 508.1 | 510.3 | 510.3 | | |
| 2-Jun-22 | 509.6 | 509.6 | 511.4 | 511.4 | 508.2 | 508.2 | 509.9 | (1) | | |
| 20-Jun-22 | 509.6 | 509.6 | | | 508.1 | 508.1 | 510.3 | (1) | 510.6 | 511.3 |
| 22-Jun-22 | | | 511.3 | 511.3 | | | | | | |
| 7-Jul-22 | 509.6 | 509.6 | 511.7 | 511.7 | 508.5 | 508.5 | 509.8 | (1) | | |
| 30-Aug-22 | | | 511.5 | 511.5 | 508.1 | 508.1 | 510.4 | (1) | | |
| 31-Aug-22 | 508.9 | (1) | | | | | | | | |
| 27-Sep-22 | | | 511.4 | 511.4 | | | | | | |
| 28-Sep-22 | | | | | 507.4 | (1) | 510.0 | (1) | | |
| 29-Sep-22 | 508.8 | (1) | | | | | | | (1) | (1) |
| 26-Oct-22 | 508.7 | (1) | 511.4 | 511.4 | | | | | (1) | (1) |
| 28-Oct-22 | | | | | (1) | (1) | (1) | (1) | | |
| 23-Nov-22 | | | | | | | | | (1) | (1) |
| 27-Mar-23 | 509.4 | 509.4 | 511.6 | 511.6 | 507.7 | 507.8 | 510.4 | 510.4 | | |
| 24-Apr-23 | 509.4 | 509.4 | 511.5 | 511.5 | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 15-May-23 | 509.4 | 509.4 | 511.4 | 511.4 | 507.8 | 507.7 | 510.3 | (1) | | |
| 29-May-23 | 509.3 | 509.3 | | | | | | | 510.6 | 510.8 |
| 30-May-23 | | | 511.4 | 511.4 | 507.7 | (1) | 510.2 | (1) | | |
| 31-May-23 | | | | | | | | | | |
| 14-Jun-23 | 509.3 | 509.3 | 511.4 | 511.4 | 507.7 | 507.7 | 510.3 | 510.4 | | |
| 27-Jun-23 | 509.2 | 509.2 | 511.4 | 511.5 | 507.7 | 507.7 | 510.2 | (1) | | |
| 12-Jul-23 | 509.2 | 509.2 | 511.4 | 511.4 | 507.7 | (1) | 510.2 | (1) | | |
| 24-Jul-23 | 509.3 | 509.3 | 511.5 | 511.5 | 507.8 | 507.7 | 510.2 | (1) | | |
| 28-Aug-23 | 509.2 | 509.2 | 511.3 | 511.4 | 507.6 | (1) | | | | |
| 29-Aug-23 | | | | | | | | | | |
| 30-Aug-23 | | | | | | | 510.1 | (1) | | |
| 30-Oct-23 | | | 511.4 | 511.4 | | | | | | |
| 31-Oct-23 | 508.9 | (1) | | | | | | | (1) | (1) |
| 1-Nov-23 | | | | | 507.1 | (1) | 509.6 | (1) | | |
| 28-Mar-24 | 509.4 | 509.4 | 511.5 | 511.5 | 507.7 | 507.8 | 510.3 | 510.4 | | |
| 30-Apr-24 | 509.4 | 509.4 | 511.5 | 511.5 | 507.8 | 507.8 | 510.4 | 510.4 | | |
| 13-May-24 | 509.4 | 509.4 | 511.5 | 511.4 | 507.7 | 507.7 | 510.3 | (1) | | |

## Table B-7 Groundwater / Surface Water Elevations - Drivepoints

| Drivepoint Name | DP7 | | DP8 | | DP9 | | Bridson DP | | SG1 | SG2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (out) | (in) | (out) | (in) | (out) | (in) | (out) | | |
| Flow System | OB | | OB | | OB | | OB | | OB | OB |
| Date TOP | 509.9 | | 511.9 | | 508.9 | | 511.3 | | 511.0 | 511.5 |
| 28-May-24 | 509.2 | 509.3 | 511.5 | 511.5 | 507.7 | 507.8 | 510.2 | (1) | 510.6 | 510.8 |
| 11-Jun-24 | 509.1 | 509.1 | 511.4 | 511.4 | 507.5 | (1) | 509.8 | (1) | | |
| 26-Jun-24 | 509.2 | 509.2 | 511.5 | 511.5 | 507.6 | (1) | | | | |
| 27-Jun-24 | | | | | | | 510.3 | (1) | | |
| 15-Jul-24 | 509.3 | 509.3 | 511.4 | 511.5 | 507.7 | 507.7 | 510.3 | (1) | | |
| 29-Jul-24 | 509.2 | 509.3 | | | 507.4 | (1) | 509.6 | (1) | | |
| 30-Jul-24 | | | 511.3 | 511.5 | | | | | | |
| 26-Aug-24 | 509.2 | 509.2 | 511.4 | 511.4 | | | | | | |
| 27-Aug-24 | | | | | 507.1 | (1) | 509.5 | (1) | | |
| 28-Aug-24 | | | | | | | | | | |
| 28-Oct-24 | | | 511.4 | 511.4 | 506.6 | (1) | | | | |
| 29-Oct-24 | 508.9 | (1) | | | | | | | 510.2 | 510.2 |
| 30-Oct-24 | | | | | | | 509.0 | (1) | | |
| 25-Mar-25 | (3) | (3) | (2) | (2) | 507.8 | 507.8 | (2) | (2) | | |
| 26-Mar-25 | | | | | | | | | | |
| 29-Apr-25 | 509.3 | 509.4 | 511.5 | 511.5 | 507.7 | 507.7 | 510.3 | (1) | | |
| 12-May-25 | 509.2 | 509.4 | 511.4 | 511.4 | 507.7 | 507.7 | 510.2 | (1) | | |
| 26-May-25 | 509.4 | 509.4 | 511.5 | 511.5 | 507.8 | 507.7 | 510.3 | (1) | 510.6 | 510.8 |
| 9-Jun-25 | 509.3 | 509.3 | 511.4 | 511.4 | 507.7 | (1) | 510.2 | (1) | | |
| 23-Jun-25 | 509.3 | 509.3 | 511.4 | 511.5 | 507.6 | (1) | 509.9 | (1) | | |
| 14-Jul-25 | 509.2 | 509.2 | 511.3 | 511.4 | 507.2 | (1) | 509.4 | (1) | | |
| 28-Jul-25 | 508.9 | 509.1 | 511.4 | 511.4 | 506.6 | (1) | 509.1 | (1) | | |
| 25-Aug-25 | 508.8 | (1) | 511.4 | 511.4 | 507.0 | (1) | 510.1 | (1) | | |
| 27-Oct-25 | 508.8 | 509.1 | 511.4 | 511.4 | | | 510.1 | 510.1 | 510.3 | 510.2 |
| 28-Oct-25 | | | | | 506.8 | 507.7 | | | | |

## Table B-8 Surface Water Temperature - Drivepoints



| Date | DP1 | DP2 | DP3 | DP4 | DP5 | DP6 | DP7 | DP8 | DP9 | Bridson DP |
|---|---|---|---|---|---|---|---|---|---|---|
| 16-Nov-16 | 7.4 | 7.7 | (1) | 5.6 | (1) | (1) | (1) | 4.7 | (1) | (1) |
| 11-Dec-16 | 1.1 | (2) | (1) | 0.2 | (1) | (1) | (1) | 0.1 | (1) | (1) |
| 23-Jan-17 | (2) | (2) | (2) | 0.5 | 0.7 | | | (2) | 0.0 | (2) |
| 12-Feb-17 | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 19-Mar-17 | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 16-Apr-17 | 10.5 | 8.7 | (1) | 4.1 | 7.1 | 5.8 | 6.1 | 4.7 | 10.2 | 16.2 |
| 10-May-17 | | 9.4 | | 9.9 | 11.0 | 8.2 | 8.5 | 8.5 | 6.0 | 6.4 |
| 19-May-17 | 14.9 | | (1) | | | | | | | |
| 25-May-17 | | 12.1 | | 12.2 | 12.6 | 10.1 | 12.9 | 12.2 | 12.0 | 14.1 |
| 1-Jun-17 | | 11.8 | | 12.1 | 14.1 | 11.4 | 13.6 | 11.4 | 12.2 | 11.5 |
| 22-Jun-17 | | 15.1 | | 14.9 | 15.2 | 15.0 | 15.1 | 14.9 | 15.1 | 15.4 |
| 26-Jun-17 | 21.7 | 12.9 | (1) | 12.1 | 13.6 | 13.8 | 13.9 | 12.0 | 14.8 | |
| 7-Jul-17 | | 18.2 | | 18.6 | 18.5 | 18.3 | 18.6 | 17.8 | 18.5 | (1) |
| 19-Jul-17 | 19.6 | 17.8 | (1) | 17.4 | 17.9 | 17.7 | 18.7 | 17.3 | 18.8 | (1) |
| 17-Aug-17 | 18.3 | 17.6 | (1) | | 17.7 | (1) | 16.9 | 17.2 | (1) | |
| 18-Sep-17 | 20.5 | 22.4 | (1) | 17.9 | 18.7 | (1) | (1) | 18.1 | (1) | (1) |
| 15-Oct-17 | 8.1 | 11.9 | (1) | | 9.8 | (1) | (1) | 10.0 | | (1) |
| 14-Nov-17 | 0.7 | 1.8 | (1) | | 2.2 | 1.0 | 1.3 | 1.6 | 2.5 | (1) |
| 11-Dec-17 | (2) | | (1) | | (2) | (2) | (2) | (2) | (2) | |
| 14-Jan-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 11-Feb-18 | | | | | (2) | (2) | | | | |
| 18-Feb-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 18-Mar-18 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 15-Apr-18 | (2) | (2) | (2) | | (2) | (2) | (2) | (2) | (2) | (2) |
| 17-May-18 | 17.7 | 13.0 | 12.3 | 14.4 | 15.9 | 12.3 | 12.7 | 13.4 | 16.4 | 16.0 |
| 18-Jun-18 | | 19.6 | | 20.6 | 20.3 | 20.6 | 20.5 | 19.5 | | |
| 17-Jul-18 | | 19.5 | | 20.2 | | | | 20.1 | 16.4 | |
| 22-Aug-18 | | 16.6 | | 19.4 | | | | 18.8 | | |
| 18-Sep-18 | 18.3 | 17.8 | | | | | | | | |
| 23-Oct-18 | | | | | | | | | | |
| 19-Nov-18 | | | | | | | | | | |
| 10-Dec-18 | | | | | | | | | | |
| 17-Jan-19 | | | | | | | | | | |
| 14-Feb-19 | | | | | | | | | | |
| 11-Mar-19 | | | | | | | | | | |
| 26-Apr-19 | | | | | | | | | | |
| 22-May-19 | 10.6 | 9.7 | | 9.6 | 11.4 | 10.4 | 10.4 | 8.7 | 8.3 | 8.4 |
| 19-Jun-19 | 17.0 | 14.5 | | 15.3 | 14.0 | 14.3 | 14.3 | 14.2 | | |
| 19-Jul-19 | 20.9 | 19.6 | | | 18.6 | | | 18.9 | | |

## Table B-8 Surface Water Temperature - Drivepoints



| Date | DP1 | DP2 | DP3 | DP4 | DP5 | DP6 | DP7 | DP8 | DP9 | Bridson DP |
|---|---|---|---|---|---|---|---|---|---|---|
| 27-Aug-19 | 18.4 | 17.1 | (1) | 18.2 | (1) | (1) | (1) | 19.4 | (1) | (1) |
| 16-Sep-19 | 17.8 | 17.5 | | 18.9 | | | 18.8 | | | |
| 21-Oct-19 | 12.9 | 12.8 | | 11.9 | | | | 13.5 | | |
| 18-Nov-19 | | | | 0.1 | | | | 0.1 | | |
| 17-Dec-19 | | | | | | | | | | |
| 14-Jan-20 | | | | | | | | | | |
| 18-Feb-20 | | | | | | | | | | |
| 24-Mar-20 | | | | | | | | | | |
| 22-Apr-20 | | | | | | | | | | |
| 27-May-20 | | | | | | | | | | |
| 26-Jun-20 | | | | | | | | | | |
| 28-Jul-20 | 26.0 | 22.5 | (1) | 19.6 | 20.3 | 18.5 | 20.6 | 20.6 | 19.9 | (1) |
| 31-Aug-20 | 18.8 | 17.5 | (1) | 18.6 | 18.0 | 17.0 | 18.2 | 18.3 | (1) | (1) |
| 28-Sep-20 | | | | | | | | | | |
| 27-Oct-20 | | | | | | | | | | |
| 24-Nov-20 | | | | | | | | | | |
| 21-Dec-20 | | | | | | | | | | |
| 29-Jan-21 | | | | | | | | | | |
| 19-Feb-21 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 31-Mar-21 | | (2) | | 7.0 | | (2) | (2) | | | (1) |
| 29-Apr-21 | 10.6 | 10.2 | (1) | 11.7 | 6.7 | (1) | 7.2 | 8.3 | 8.8 | 11.9 |
| 13-May-21 | | 15.9 | | 15.6 | 13.3 | 18.0 | 13.5 | (1) | (1) | (1) |
| 28-May-21 | 16.1 | 15.8 | (1) | 18.7 | 13.5 | 18.2 | 13.7 | (1) | (1) | (1) |
| 9-Jun-21 | | 15.6 | | 19.6 | 20.9 | (1) | 21.6 | 26.2 | (1) | (1) |
| 25-Jun-21 | 25.5 | 22.9 | (1) | 23.6 | 18.6 | (1) | 20.4 | (1) | (1) | (1) |
| 8-Jul-21 | | 15.2 | | 15.9 | 13.2 | (1) | 12.5 | 14.8 | (1) | (1) |
| 26-Jul-21 | 25.3 | 22.1 | (1) | 18.1 | 21.7 | (1) | (1) | 21.1 | (1) | (1) |
| 24-Aug-21 | 25.8 | 22.3 | (1) | 18.0 | (1) | (1) | (1) | 23.0 | (1) | (1) |
| 22-Sep-21 | 22.1 | 20.9 | (1) | 18.2 | (1) | (1) | (1) | 20.6 | (1) | (1) |
| 29-Oct-21 | 17.9 | 16.7 | (1) | | 17.0 | (1) | (1) | (1) | (1) | (1) |
| 24-Nov-21 | (2) | (2) | (1) | 0.0 | (2) | 1.3 | (2) | (2) | 1.1 | 0.4 |
| 23-Dec-21 | (2) | | (1) | 0.0 | | | | (2) | 0.0 | (1) |
| 26-Jan-22 | (2) | (3) | (2) | (2) | (3) | (3) | (3) | (2) | (2) | (2) |
| 10-Feb-22 | (2) | (3) | (2) | (2) | (3) | (3) | (3) | (2) | (2) | (2) |
| 16-Mar-22 | (2) | | (2) | (2) | (3) | (2) | (3) | (2) | (2) | (2) |
| 22-Apr-22 | 0.1 | | 1.2 | | | | | | 2.3 | 3.4 |
| 13-May-22 | | 25.7 | | 21.0 | 15.7 | 17.8 | 16.2 | 20.8 | 17.1 | (1) |
| 26-May-22 | 14.2 | 13.9 | (1) | 15.1 | 14.5 | 14.5 | 15.6 | 13.2 | 14.8 | 14.8 |
| 2-Jun-22 | | 19.2 | | 18.2 | 11.8 | 13.5 | 12.1 | 15.3 | 14.6 | (1) |

## Table B-8 Surface Water Temperature - Drivepoints



| Date | DP1 | DP2 | DP3 | DP4 | DP5 | DP6 | DP7 | DP8 | DP9 | Bridson DP |
|---|---|---|---|---|---|---|---|---|---|---|
| 20-Jun-22 | | 23.1 | | | 14.5 | 14.3 | 16.8 | | 16.4 | (1) |
| 22-Jun-22 | | | | 20.1 | | | | 15.7 | | |
| 7-Jul-22 | | 23.4 | | 21.2 | 15.2 | 16.5 | 15.8 | 19.3 | 17.5 | (1) |
| 30-Aug-22 | | | | 17.2 | | 17.8 | | 16.8 | 18.1 | (1) |
| 31-Aug-22 | 18.4 | 17.0 | | | 17.9 | | (1) | | | |
| 27-Sep-22 | | | | 15.5 | | | | 15.2 | | |
| 28-Sep-22 | | | | | | (1) | | | (1) | (1) |
| 29-Sep-22 | | 15.3 | | | (1) | | (1) | | | |
| 26-Oct-22 | | | | 10.2 | (1) | | (1) | 10.6 | | |
| 28-Oct-22 | | 8.7 | | | | (1) | | | (1) | (1) |
| 27-Mar-23 | | 0.2 | | 0.3 | 0.5 | 0.5 | 0.4 | 0.7 | 2.4 | 0.8 |
| 24-Apr-23 | | 7.2 | | 4.7 | 6.7 | 5.6 | 7.2 | 7.4 | 4.7 | 4.8 |
| 15-May-23 | | 17.1 | | 14.1 | 14.6 | 10.1 | 15.5 | 14.1 | 9.6 | (1) |
| 29-May-23 | | | | | 17.5 | | 18.2 | | | |
| 30-May-23 | | 18.0 | | 16.2 | | 15.6 | | 16.0 | 18.1 | (1) |
| 14-Jun-23 | | 19.3 | | 16.0 | 13.3 | 14.3 | 12.8 | 16.8 | 14.1 | (1) |
| 27-Jun-23 | | 21.2 | | 20.5 | 19.2 | 18.2 | 18.0 | 20.8 | 17.2 | (1) |
| 12-Jul-23 | | 22.1 | | 20.8 | 18.3 | 17.8 | 18.1 | | (1) | (1) |
| 24-Jul-23 | | 23.0 | | 22.4 | 20.4 | 18.4 | 19.0 | 25.4 | 16.2 | (1) |
| 28-Aug-23 | | | | 17.9 | 15.4 | (1) | 16.9 | 19.8 | (1) | |
| 29-Aug-23 | | 15.1 | | | | | | | | |
| 30-Aug-23 | | | | | | | | | | (1) |
| 30-Oct-23 | | 6.6 | | 6.6 | | | | 6.2 | | |
| 31-Oct-23 | | | | | 1.6 | | (1) | | | |
| 1-Nov-23 | | | | | | (1) | | | (1) | (1) |
| 28-Mar-24 | | 2.9 | | 4.2 | 2.4 | 1.6 | 3.7 | 5.5 | 1.5 | 1.5 |
| 30-Apr-24 | | 13.1 | | 13.3 | 13.3 | 12.1 | 13.2 | 13.6 | 9.4 | 11.0 |
| 13-May-24 | | 15.3 | | 15.7 | | 12.6 | 14.5 | 15.0 | 11.6 | (1) |
| 28-May-24 | | 16.5 | | 15.1 | 15.4 | 15.1 | 14.9 | 15.6 | 15.3 | (1) |
| 11-Jun-24 | | 20.5 | | 17.9 | 15.1 | 13.2 | 13.5 | 19.9 | (1) | (1) |
| 26-Jun-24 | | 20.8 | | 18.8 | 19.1 | 19.2 | 18.6 | 20.3 | (1) | |
| 27-Jun-24 | | | | | | | | | | (1) |
| 15-Jul-24 | | 23.4 | | 21.7 | 19.8 | 18.7 | 19.7 | 21.7 | 17.6 | (1) |
| 29-Jul-24 | | | | | 19.1 | 17.2 | 19.3 | | (1) | (1) |
| 30-Jul-24 | | 24.2 | | 20.6 | | | | 21.3 | | |
| 26-Aug-24 | | | | 17.7 | 18.2 | | 20.2 | 20.4 | | |
| 27-Aug-24 | | 23.1 | | | | (1) | | | (1) | (1) |
| 28-Oct-24 | | | | 6.5 | | (1) | | 6.2 | (1) | |
| 29-Oct-24 | | 11.3 | | | (1) | | (1) | | | |

## Table B-8 Surface Water Temperature - Drivepoints

| Date | DP1 | DP2 | DP3 | DP4 | DP5 | DP6 | DP7 | DP8 | DP9 | Bridson DP |
|---|---|---|---|---|---|---|---|---|---|---|
| 30-Oct-24 | | | | | | | | | | (1) |
| 25-Mar-25 | | (2) | | (3) | (3) | (2) | (3) | (2) | 0.3 | (2) |
| 29-Apr-25 | | 15.9 | | 13.0 | 14.0 | 13.0 | 15.2 | 13.9 | 11.7 | (1) |
| 12-May-25 | | 14.8 | | 15.1 | 16.2 | 12.4 | 17.4 | 15.5 | 12.0 | (1) |
| 26-May-25 | | 21.8 | | 21.1 | 17.6 | 10.8 | 17.9 | 20.7 | 11.6 | (1) |
| 9-Jun-25 | | 17.5 | | 16.9 | 18.3 | 17.1 | 18.8 | 17.9 | (1) | (1) |
| 23-Jun-25 | | 23.2 | | 21.6 | 23.5 | 22.0 | 23.8 | 23.2 | (1) | (1) |
| 14-Jul-25 | | 20.2 | | 28.0 | 22.9 | (1) | 23.1 | 24.4 | (1) | (1) |
| 28-Jul-25 | | 21.0 | | 21.8 | 20.4 | (1) | (1) | 24.7 | (1) | (1) |
| 25-Aug-25 | | 15.8 | | 15.4 | (1) | (1) | (1) | 15.8 | (1) | (1) |
| 27-Oct-25 | | | | 3.4 | (1) | | (1) | 4.7 | | (1) |
| 28-Oct-25 | | 4.6 | | | | (1) | | | (1) | |

## Table B-9 Domestic Well Laboratory Chemical Results



| | | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface Water Station | Date | pH (SU) | EC (µS/cm) | TSS | TDS | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | TKN | TP P |
| | ODWQS | 6.5 - 8.5 OG | nc | nc | 500 AO | 80 - 100 OG | 5 AO | 5 AO | 30 - 500 OG | 250 AO | 500 AO | nc | nc | 200 AO | nc | 10 MAC | 1 MAC | nc | nc | nc |
| RW1 | 24-Oct-16 | 7.91 | 595 | 3 | 354 | <1 | <2 | | 276 | 17 | 7 | 0.07 | 0.02 | 159 | <0.1 | 1.1 | <0.1 | 0.01 | <0.1 | <0.01 |
| | 2-May-17 | 8.05 | 487 | <3 | 266 | <1 | | | 240 | 6.4 | 6 | 0.17 | 0.08 | 107 | 0.1 | 0.6 | <0.1 | <0.01 | 0.2 | <0.01 |
| | 9-May-18 | 8.04 | 460 | <2 | 256 | 247 | 7.1 | 0.94 | 239 | 4.65 | 1.79 | 68.1 | 18.6 | 3.71 | 0.957 | 0.471 | <0.01 | 0.156 | <0.15 | <0.05 |
| | 6-Jun-19 | | | <10 | | 250 | <2 | | 260 | 5.9 | 4.7 | 70 | 17 | 14 | 0.82 | 0.34 | <0.01 | <0.05 | <0.1 | <0.004 |
| | 20-May-20 | 7.80 | 500 | <10 | 265 | 260 | <2 | 0.2 | 260 | 6.8 | 5.1 | 14 | 3.5 | 110 | 0.36 | 0.39 | <0.01 | <0.05 | 0.13 | <0.02 |
| | 27-May-21 | | | <10 | | 290 | <2 | | 270 | 5.5 | 5.1 | 81 | 21 | | | 0.27 | <0.01 | <0.05 | <0.1 | <0.004 |
| | 2-Jun-22 | 7.38 | 1,117 | <10 | | 290 | <2 | | 280 | 5.2 | 4.7 | 83 | 21 | 3.8 | 0.85 | 0.34 | <0.01 | <0.05 | <0.1 | <0.004 |
| | 31-May-23 | | | <10 | | 280 | <2 | | 270 | 3.9 | 4.9 | 84 | 20 | 3.9 | 0.95 | 0.34 | <0.01 | <0.05 | 0.11 | 0.007 |
| | 29-May-24 | | | <10 | | 340 | <2 | | 280 | 4.1 | 4.7 | 77 | 20 | 3.1 | 0.83 | 0.27 | <0.01 | <0.05 | <0.1 | <0.004 |
| | 28-May-25 | | | <10 | | 280 | <2 | | 280 | 3.3 | 3.8 | 79 | 19 | 2.9 | 0.86 | 0.22 | <0.01 | <0.05 | <0.1 | <0.004 |
| RW2 | 24-Oct-16 | 7.88 | 1,260 | 11 | 674 | 348 | 7 | | 302 | 204 | 12 | 103 | 22.4 | 144 | 0.6 | 1.6 | <0.1 | 0.04 | 0.3 | 0.01 |
| | 2-May-17 | 7.95 | 760 | <3 | 391 | 255 | | | 247 | 81.5 | 6 | 73.8 | 17.1 | 60.6 | 0.3 | 0.8 | <0.1 | <0.01 | 0.2 | 0.01 |
| | 9-May-18 | 8.03 | 1,110 | <2 | 630 | 321 | <2 | 0.46 | 284 | 204 | 8.26 | 91.7 | 22.4 | 116 | 0.671 | 0.769 | <0.01 | 0.026 | <0.15 | 0.0051 |
| | 6-Jun-19 | | | <10 | | 320 | <2 | | 280 | 180 | 9.9 | 95 | 22 | 130 | 0.87 | 0.69 | <0.01 | 0.14 | <0.1 | 0.008 |
| | 20-May-20 | 7.76 | 1,200 | <10 | 635 | 310 | <2 | 0.2 | 290 | 190 | 11 | 93 | 22 | 130 | 0.72 | 0.74 | <0.01 | <0.05 | 0.15 | <0.02 |
| | 26-May-21 | | | <10 | | 300 | 3 | | 310 | 130 | 8.9 | 90 | 22 | | | 0.1 | <0.01 | <0.05 | <0.1 | 0.018 |
| | 2-Jun-22 | 7.75 | 288 | <10 | | 340 | <2 | | 320 | 150 | 9.9 | 95 | 24 | 100 | 0.68 | 0.9 | <0.01 | <0.05 | <0.1 | 0.013 |
| | 31-May-23 | | | <10 | | 340 | <2 | | 320 | 160 | 10 | 100 | 25 | 110 | 0.88 | 0.9 | <0.01 | <0.05 | <0.1 | 0.015 |
| | 29-May-24 | | | <10 | | 390 | <2 | | 330 | 140 | 10 | 93 | 24 | 110 | 0.84 | 0.83 | <0.01 | <0.05 | <0.1 | 0.009 |
| | 28-May-25 | | | <10 | | 350 | <2 | | 330 | 200 | 9.6 | 110 | 25 | 130 | 0.98 | 0.91 | <0.01 | <0.05 | <0.1 | 0.011 |

## Table B-9 Domestic Well Laboratory Chemical Results



| Surface Water Station | Date | *Metals* | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Fluoride | Iron | Lead | Manganese | Molybdenum | Nickel | Selenium | Silicon | Silver |
| | | Al | Sb | As | Ba | Be | B | Cd | Cr | Co | Cu | F | Fe | Pb | Mn | Mo | Ni | Se | Si | Ag |
| | ODWQS | 0.1 OG | 0.006 IMAC | 0.025 IMAC | 1 MAC | nc | 5 IMAC | 0.005 MAC | 0.05 MAC | nc | 1 AO | 1.5 MAC | 0.3 AO | 0.01 MAC | 0.05 AO | nc | nc | 0.01 MAC | nc | nc |
| RW1 | 24-Oct-16 | <0.01 | 0.0002 | 0.0123 | <0.001 | <0.002 | | <0.00002 | 0.002 | <0.0001 | 0.147 | 0.1 | <0.005 | 0.00077 | <0.001 | <0.0001 | <0.01 | <0.001 | | <0.00002 |
| | 2-May-17 | <0.01 | <0.0001 | 0.0007 | <0.001 | <0.002 | | <0.000014 | <0.001 | 0.0001 | 0.0263 | <0.1 | <0.005 | 0.00017 | <0.001 | <0.0001 | <0.01 | <0.001 | | <0.00002 |
| | 9-May-18 | 0.0142 | <0.0001 | 0.0005 | 0.0138 | <0.0001 | <0.01 | <0.000005 | <0.0005 | <0.0001 | 0.0155 | 0.036 | <0.01 | 0.00032 | <0.0005 | <0.00005 | <0.0005 | 0.00006 | 2.23 | <0.00005 |
| | 6-Jun-19 | 0.0082 | <0.0005 | <0.001 | 0.013 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | 0.031 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.0001 |
| | 20-May-20 | 0.014 | <0.0005 | <0.001 | 0.0028 | <0.0005 | 0.015 | <0.0001 | <0.005 | <0.0005 | 0.087 | <0.1 | <0.1 | 0.00069 | 0.0027 | <0.0005 | <0.001 | <0.002 | | <0.0001 |
| | 27-May-21 | <0.005 | <0.0005 | <0.001 | 0.015 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0077 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 2-Jun-22 | 0.0091 | <0.0005 | <0.001 | 0.016 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.028 | <0.1 | <0.1 | 0.00063 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 31-May-23 | 0.042 | <0.0005 | <0.001 | 0.015 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.021 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 29-May-24 | 0.016 | <0.0005 | <0.001 | 0.014 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.012 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 28-May-25 | 0.0086 | <0.0005 | <0.001 | 0.014 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.027 | <0.1 | <0.1 | 0.00057 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| RW2 | 24-Oct-16 | 0.03 | 0.0001 | 0.0003 | 0.015 | <0.002 | | <0.00002 | <0.002 | 0.0001 | 0.011 | 0.1 | 0.009 | 0.00015 | <0.001 | <0.0001 | <0.01 | <0.001 | | <0.00002 |
| | 2-May-17 | 0.04 | <0.0001 | 0.0005 | 0.008 | <0.002 | | <0.000014 | 0.003 | <0.0001 | 0.0076 | <0.1 | 0.073 | 0.00026 | <0.001 | 0.0001 | <0.01 | <0.001 | | <0.00002 |
| | 9-May-18 | 0.0064 | <0.0001 | 0.0001 | 0.0129 | <0.0001 | 0.019 | <0.000005 | 0.00062 | <0.0001 | 0.0151 | 0.065 | 0.013 | 0.00023 | <0.0005 | 0.000077 | 0.00064 | 0.000087 | 2.4 | <0.00005 |
| | 6-Jun-19 | 0.023 | <0.0005 | <0.001 | 0.012 | <0.0005 | 0.036 | <0.0001 | <0.005 | <0.0005 | 0.014 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.0001 |
| | 20-May-20 | 0.011 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.032 | <0.0001 | <0.005 | <0.0005 | 0.03 | <0.1 | <0.1 | 0.002 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.0001 |
| | 26-May-21 | 0.014 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | 0.025 | <0.1 | <0.1 | 0.00076 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 2-Jun-22 | 0.01 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.023 | <0.00009 | <0.005 | <0.0005 | 0.0086 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 31-May-23 | 0.01 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.03 | <0.00009 | <0.005 | <0.0005 | 0.0053 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 29-May-24 | <0.005 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.046 | <0.00009 | <0.005 | <0.0005 | 0.041 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |
| | 28-May-25 | 0.0055 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.048 | <0.00009 | <0.005 | <0.0005 | 0.016 | <0.1 | <0.1 | 0.00096 | <0.002 | <0.0005 | <0.001 | <0.002 | | <0.00009 |

## Table B-9 Domestic Well Laboratory Chemical Results

| Surface Water Station | Date | Metals | | | | | | | | BTEX & Hydrocarbons (µg/L) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Strontium Sr | Thallium Tl | Titanium Ti | Tungsten W | Uranium U | Vanadium V | Zinc Zn | Zirconium Zr | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | ODWQS | nc | nc | nc | nc | 0.02 MAC | nc | 5 AO | nc | 1 MAC | 24 AO | 1.6 AO | 20 AO | 20 AO | nc | nc | nc | nc |
| RW1 | 24-Oct-16 | <0.001 | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | <0.005 | <0.003 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <50 | <50 | <400 | <400 |
| | 2-May-17 | <0.001 | <0.00005 | <0.005 | <0.01 | 0.0001 | <0.005 | <0.005 | <0.003 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <50 | <50 | <400 | <400 |
| | 9-May-18 | 0.0802 | <0.00001 | 0.00047 | <0.0001 | 0.000125 | <0.0005 | 0.0201 | <0.0003 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <25 | <100 | <250 | <250 |
| | 6-Jun-19 | 0.081 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.033 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 20-May-20 | 0.015 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | 0.045 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 27-May-21 | 0.099 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 2-Jun-22 | 0.096 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.015 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 31-May-23 | 0.089 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.0071 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 29-May-24 | 0.092 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.0062 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 28-May-25 | 0.094 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | 0.015 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <90 | <200 | <200 |
| RW2 | 24-Oct-16 | 0.275 | <0.00005 | <0.005 | <0.01 | 0.00016 | <0.005 | <0.005 | <0.003 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <50 | <50 | <400 | <400 |
| | 2-May-17 | 0.159 | <0.00005 | <0.005 | <0.01 | 0.00013 | <0.005 | 0.007 | <0.003 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <50 | <50 | <400 | <400 |
| | 9-May-18 | 0.213 | <0.00001 | <0.0003 | <0.0001 | 0.000124 | <0.0005 | 0.0156 | <0.0003 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <25 | <100 | <250 | <250 |
| | 6-Jun-19 | 0.23 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.012 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 20-May-20 | 0.21 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.048 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 26-May-21 | 0.24 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | 0.16 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 2-Jun-22 | 0.23 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 31-May-23 | 0.25 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 29-May-24 | 0.3 | <0.00005 | <0.005 | <0.001 | 0.00015 | <0.0005 | 0.019 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <100 | <200 | <200 |
| | 28-May-25 | 0.35 | <0.00005 | <0.005 | <0.001 | 0.00015 | <0.0005 | 0.019 | <0.001 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <25 | <90 | <200 | <200 |

## Table B-10 Domestic Well Laboratory Microbiological Results



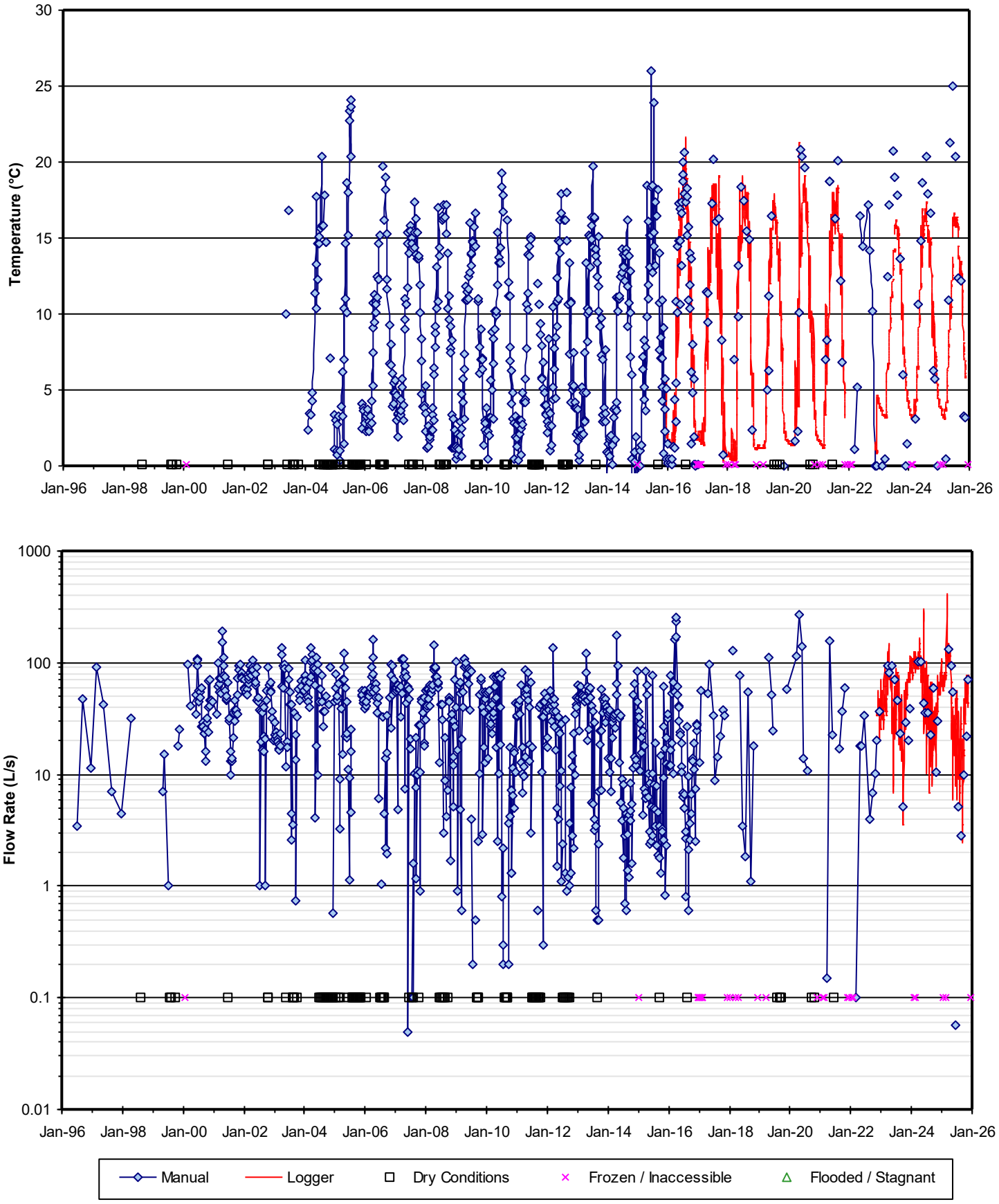
| Surface Water Station | Date | | Microbiological | | |
|---|---|---|---|---|---|
| | | | Total Coliforms (cfu/100mL) | E.Coli (cfu/100mL) | Heterotrophic Plate Count (cfu/mL) |
| | | ODWQS | 0 MAC | 0 MAC | *a* OG |
| RW1 | 24-Oct-16 | | <2 | 0 | 130 |
| | 2-May-17 | | 0 | 0 | 200 |
| | 9-May-18 | | 0 | 0 | 1 |
| | 6-Jun-19 | | 0 | 0 | 5 |
| | 20-May-20 | | 3 | 0 | 6 |
| | 27-May-21 | | 0 | 0 | 180 |
| | 2-Jun-22 | | 0 | 0 | 710 |
| | 31-May-23 | | 5 | 0 | 0 |
| | 29-May-24 | | 9 | 0 | 2 |
| | 28-May-25 | | 0 | 0 | 73 |
| RW2 | 24-Oct-16 | | 12 | 0 | 290 |
| | 2-May-17 | | 40 | 0 | 30 |
| | 16-May-17 | | 6 | 0 | 130 |
| | 9-May-18 | | 2 | 0 | 2 |
| | 6-Jun-19 | | 91 | 0 | 39 |
| | 20-May-20 | | 15 | 3 | 6 |
| | 26-May-21 | | (6) | (6) | >5700 |
| | 23-Jun-21 | Inside | 0 | 0 | 510 |
| | 23-Jun-21 | Outside | 5 | 2 | 2500 |
| | 2-Jun-22 | | 6 | 4 | 8 |
| | 31-May-23 | Inside | 0 | 0 | 7 |
| | 31-May-23 | Outside | 180 | 15 | 280 |
| | 29-May-24 | Inside | 2 | 0 | 29 |
| | 29-May-24 | Outside | 6 | 0 | 10 |
| | 28-May-25 | Inside | 16 | 4 | 72 |
| | 28-May-25 | Outside | 38 | 12 | 34 |

# C

## Surface Water Data

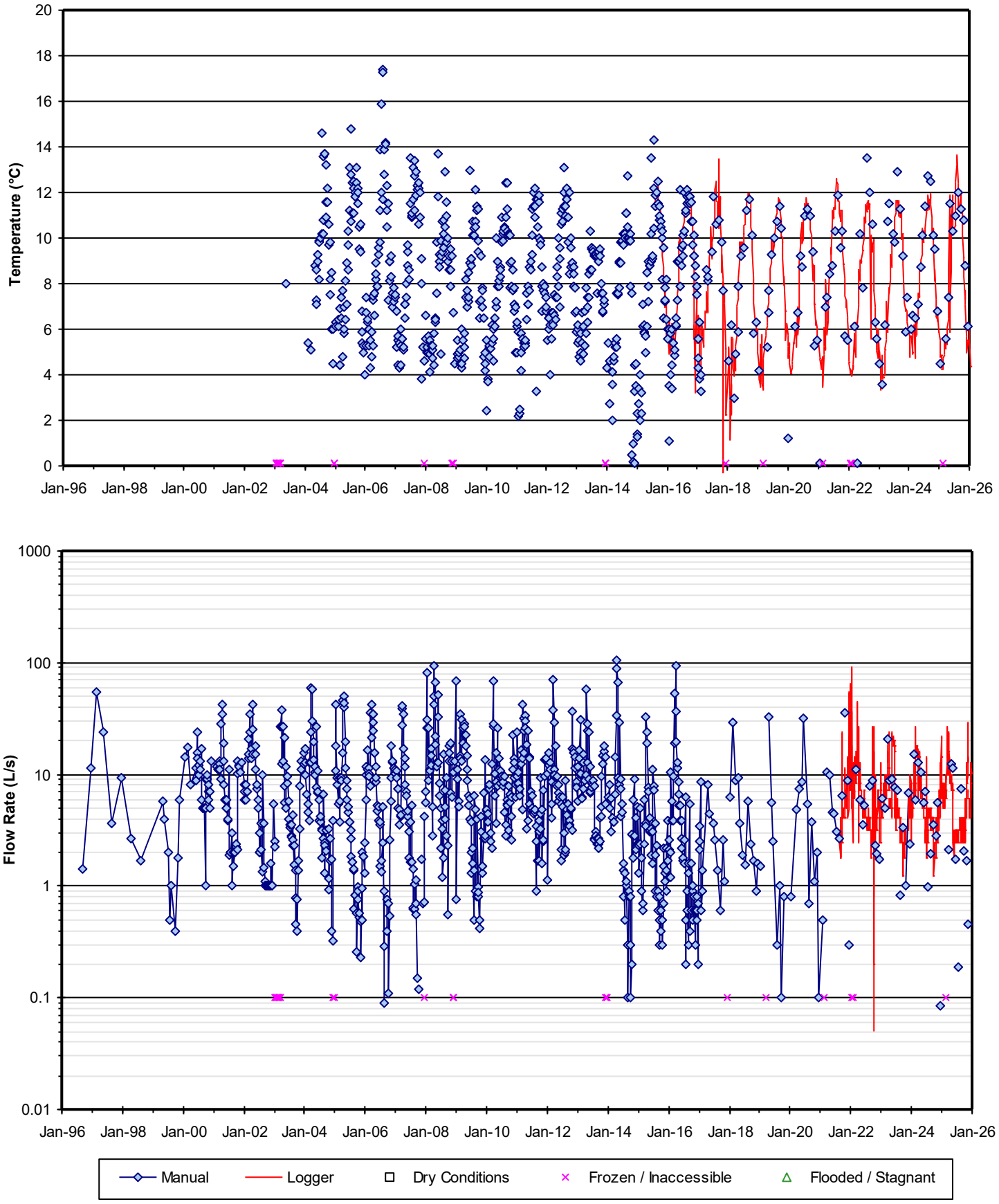
## Figure C-1 Surface Water Temperature and Flow

### SW1 - Rob Roy Swamp 6 Quarry Discharge



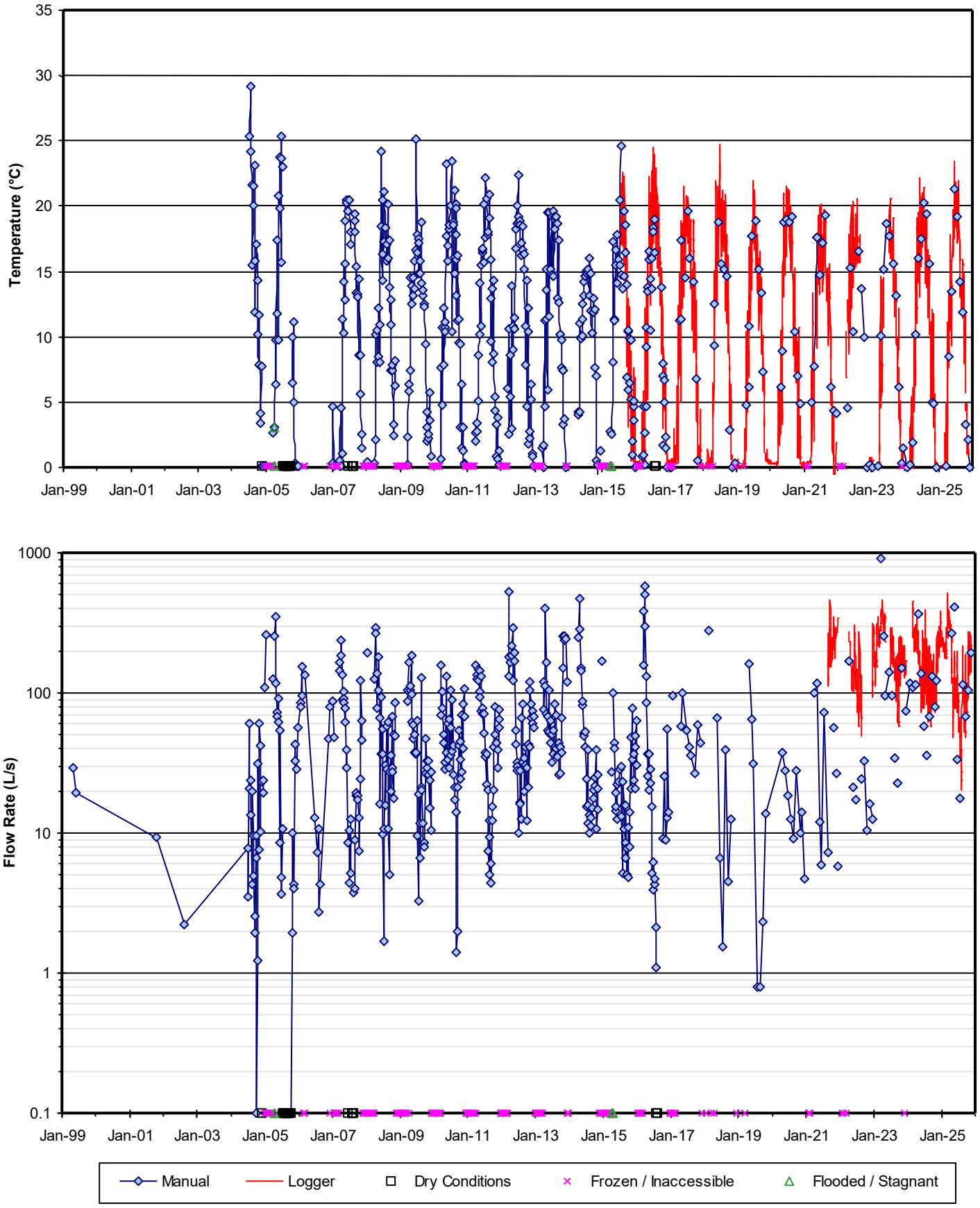
## Figure C-2 Surface Water Temperature and Flow

### SW2 - Rob Roy Swamp 6 Culvert south of County Rd 91



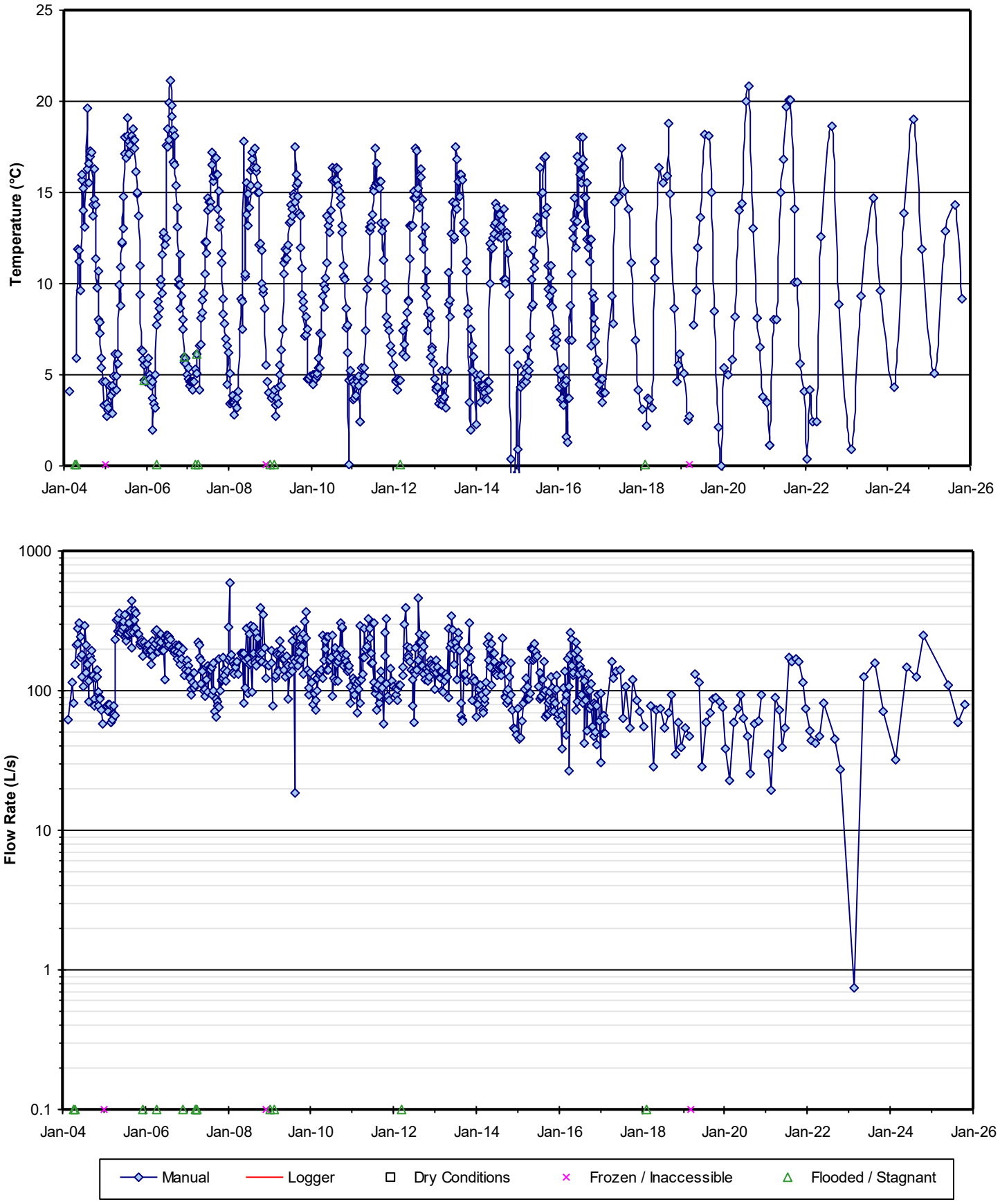
## Figure C-3 Surface Water Temperature and Flow

### SW0-2 - Rob Roy Swamp 6 Northwest Outlet



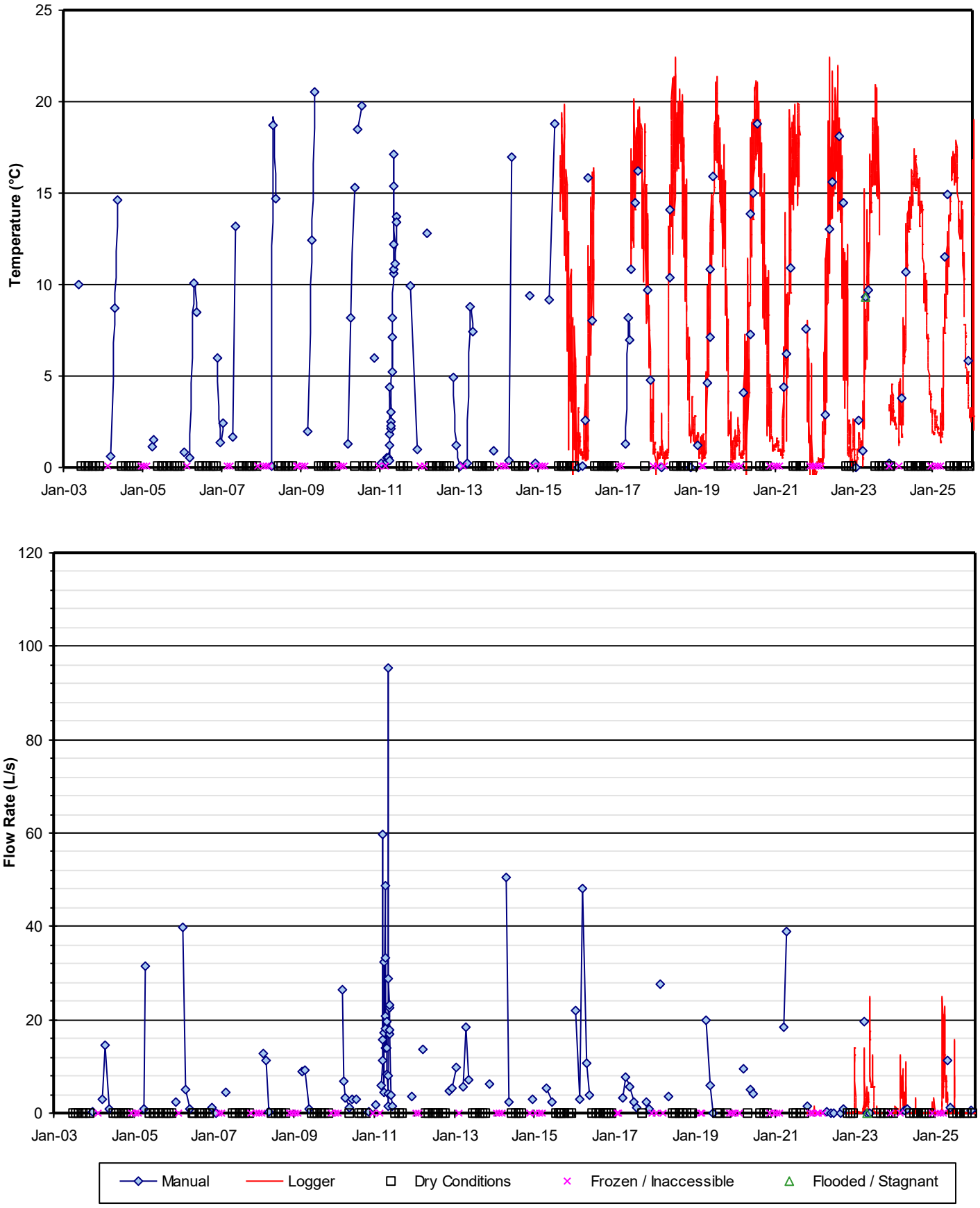
## Figure C-4 Surface Water Temperature and Flow

### QFSW2 - Main Quarry Sump 1 Discharge



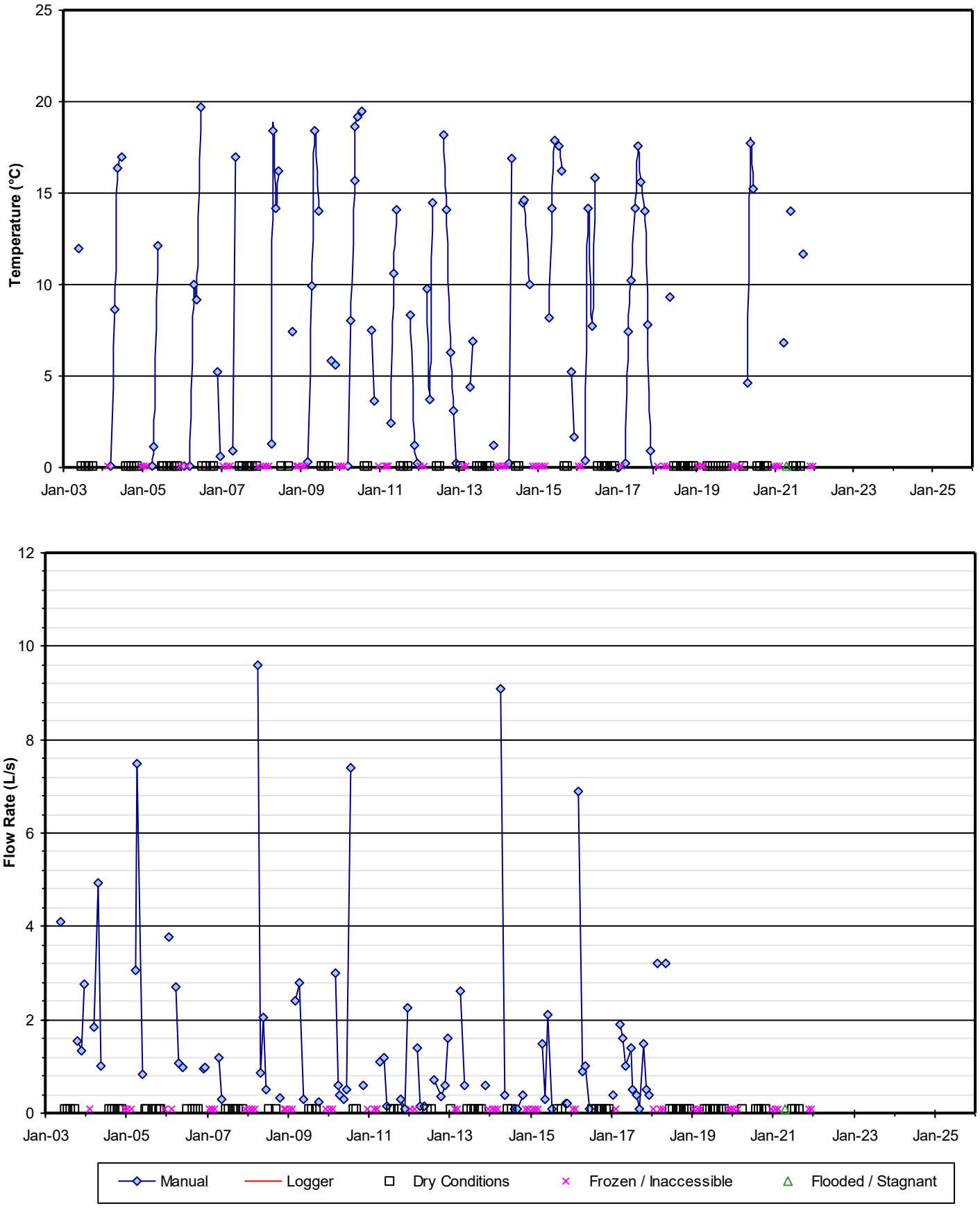
## Figure C-5 Surface Water Temperature and Flow

### SW3 - Rob Roy Swamp 2 West Outlet



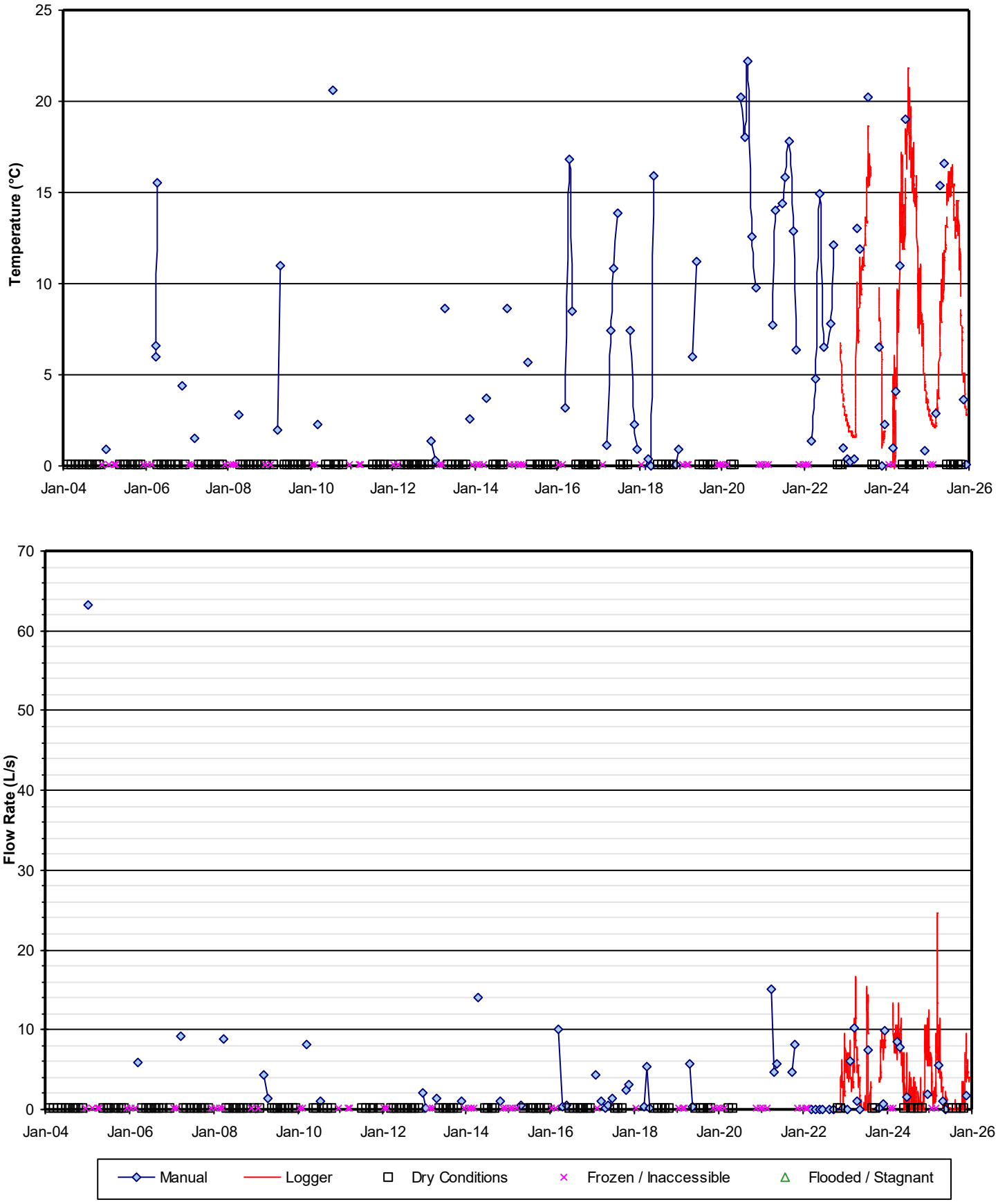
## Figure C-6 Surface Water Temperature and Flow

### SW3A - Rob Roy Swamp 1 Culvert Under County Road 31



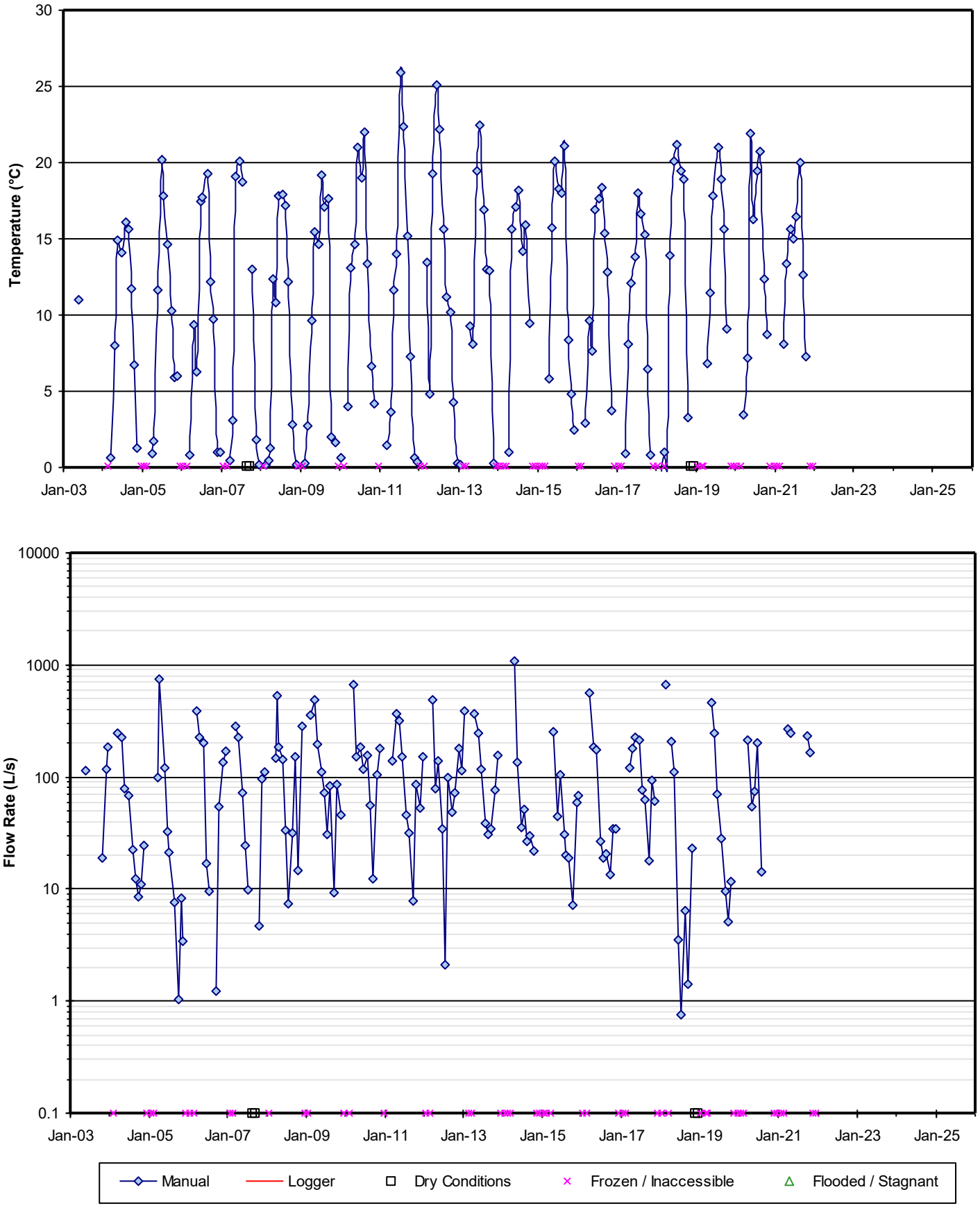
## Figure C-7 Surface Water Temperature and Flow

### SW4 - Rob Roy Swamp 6 Inlet at Southwest



## Figure C-8 Surface Water Temperature and Flow

### SW5 - Beaver River / Rob Roy Swamp 7 Along 10th Concession



## Figure C-9 Surface Water Temperature and Flow

### SW6 - Beaver River / Rob Roy Swamp 7 Downstream of SW5

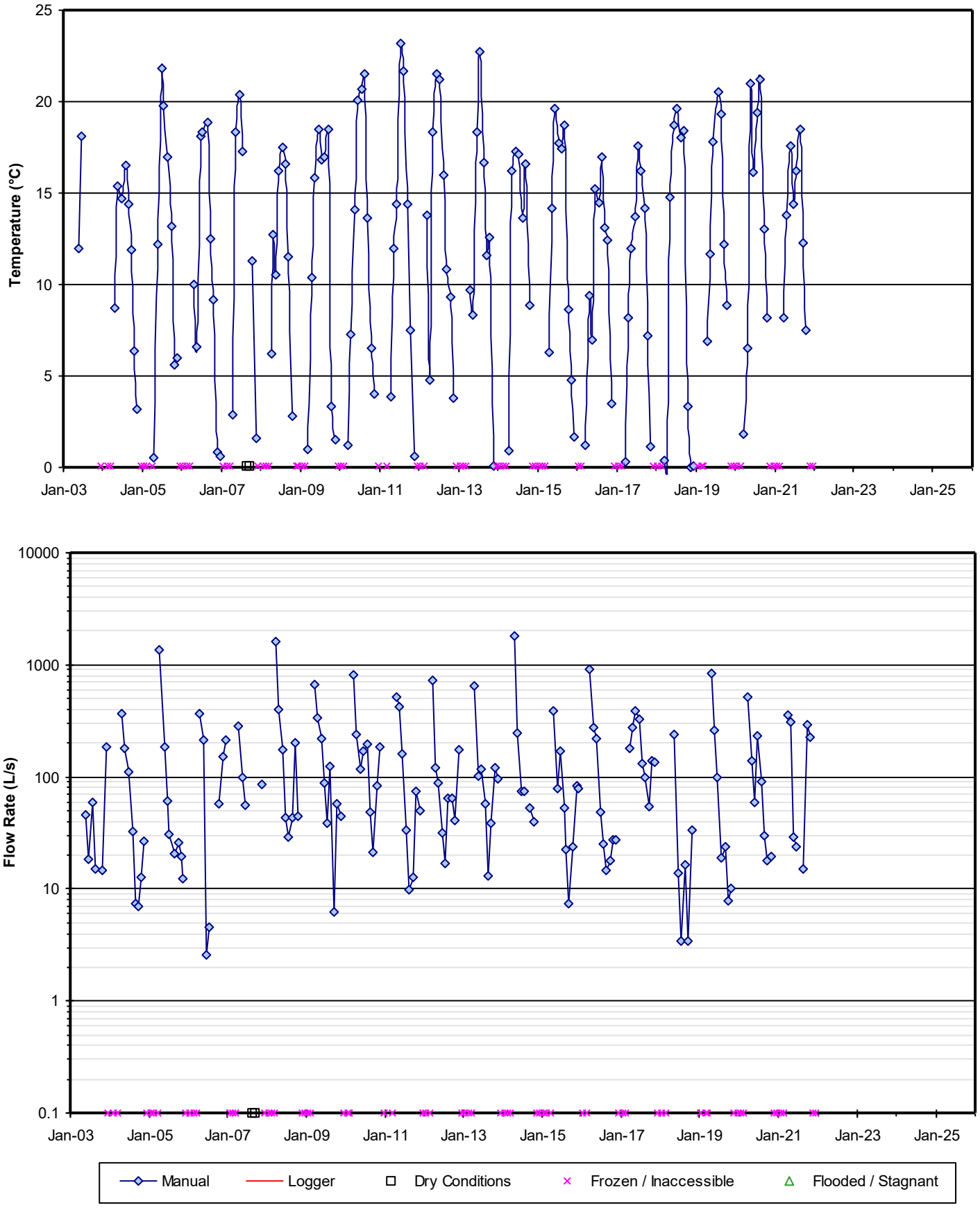
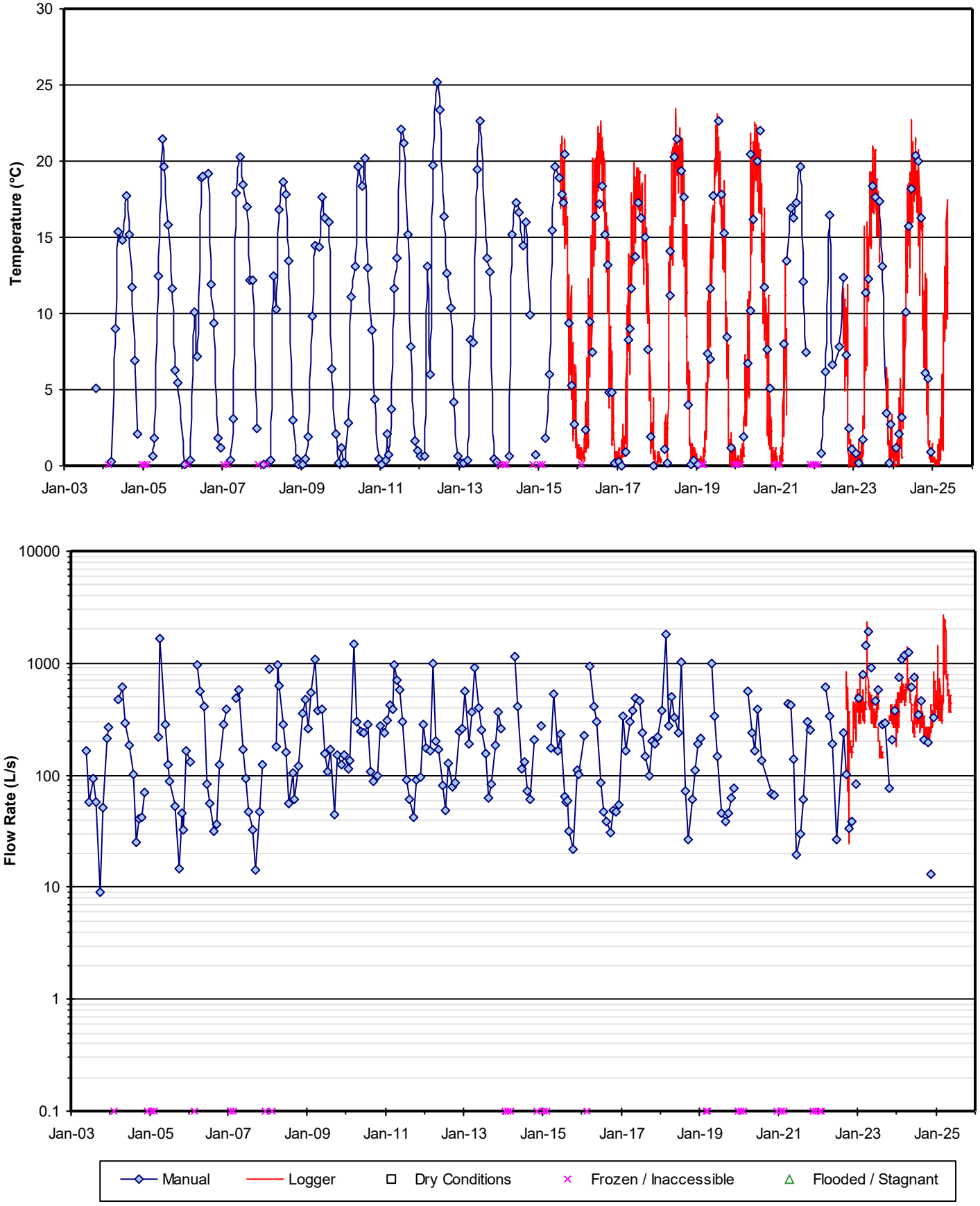


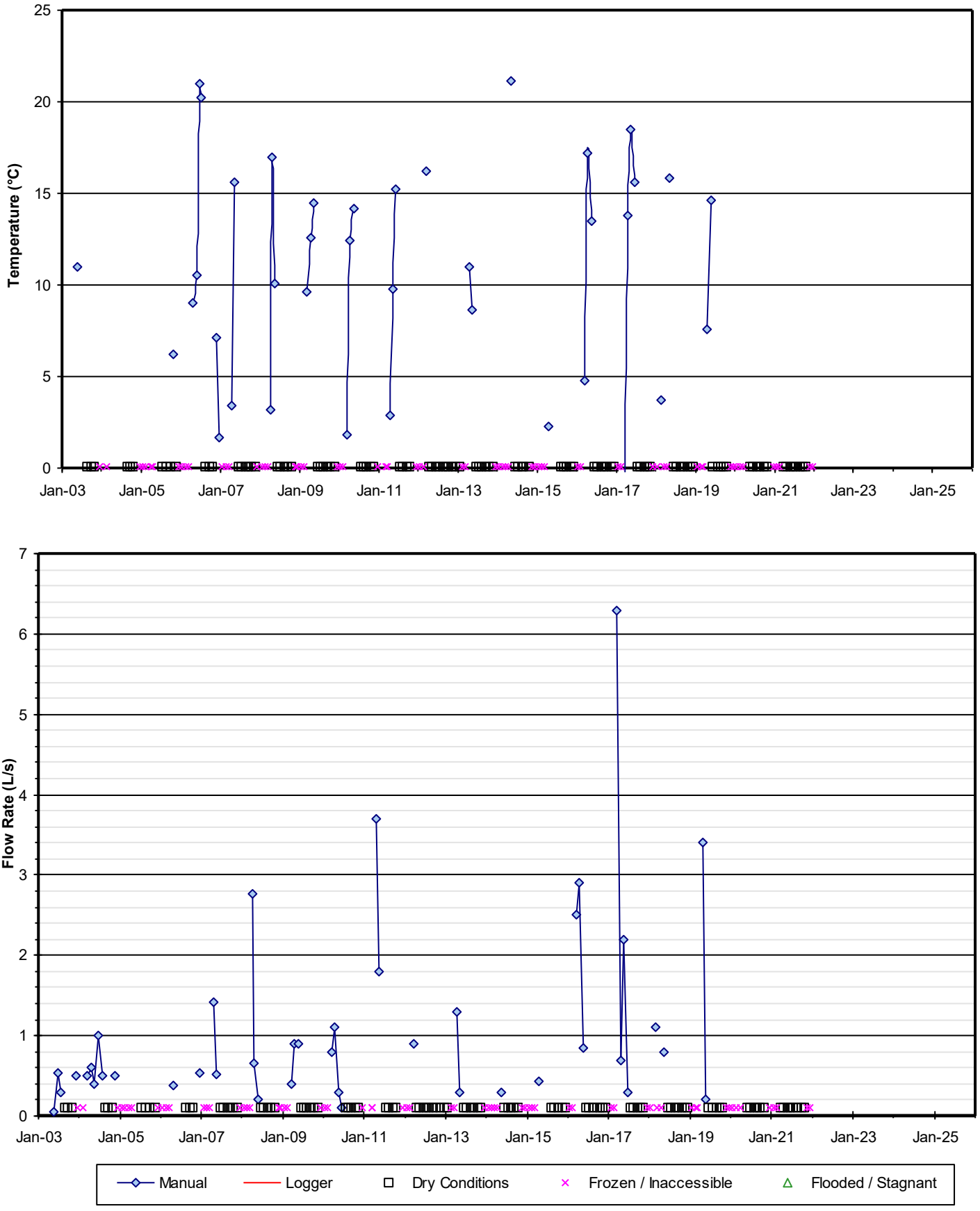
**Figure C-10 Surface Water Temperature and Flow**

**SW6A - Beaver River Downstream of SW6 at Sideroad 30**



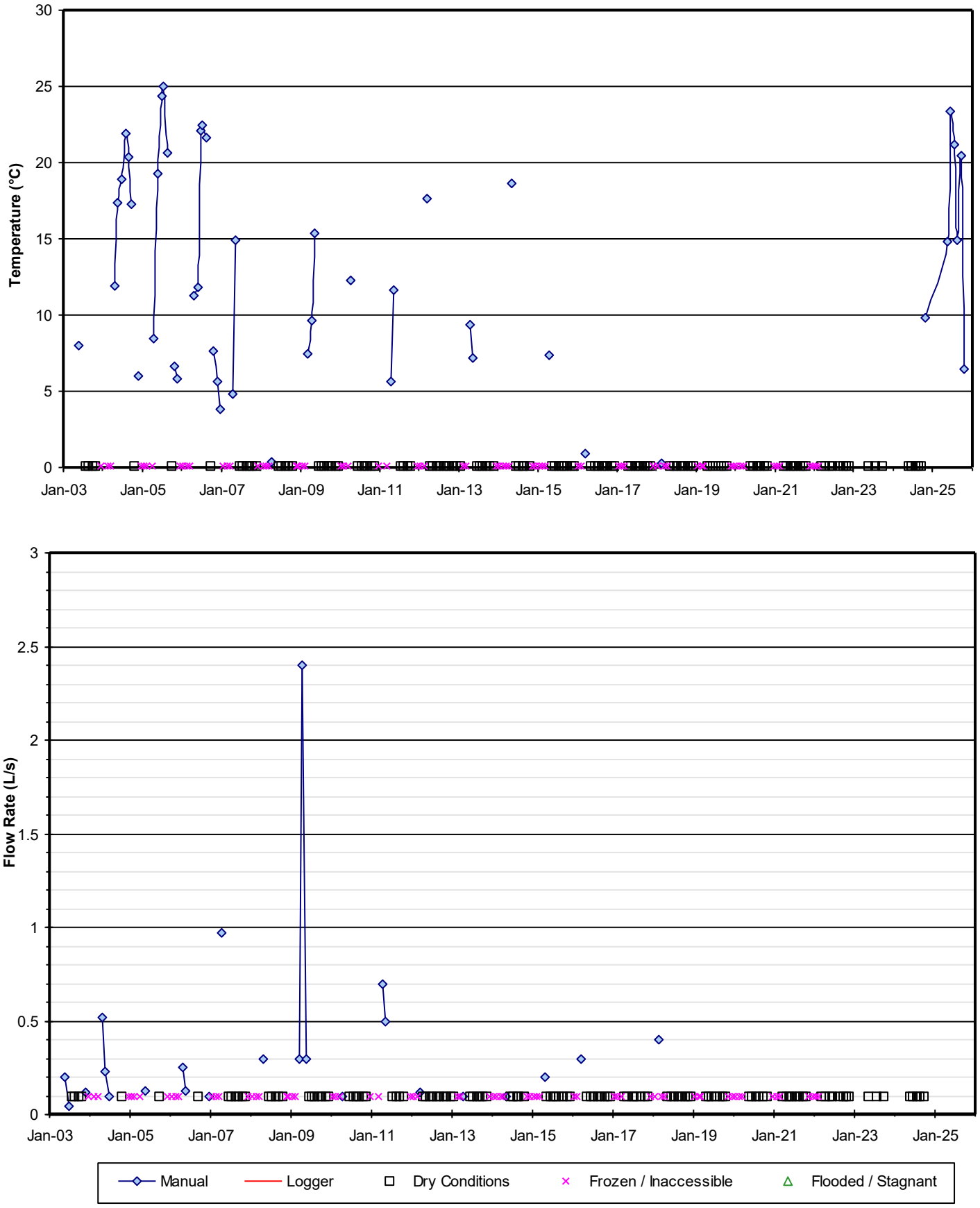
## Figure C-11 Surface Water Temperature and Flow

### SW7 - Millar Pond Outlet



## Figure C-12 Surface Water Temperature and Flow

### SW8 - Bridson Pond Outlet



## Figure C-13 Surface Water Temperature and Flow

### SW9 - Inlet to Sinkhole on Bridson Property

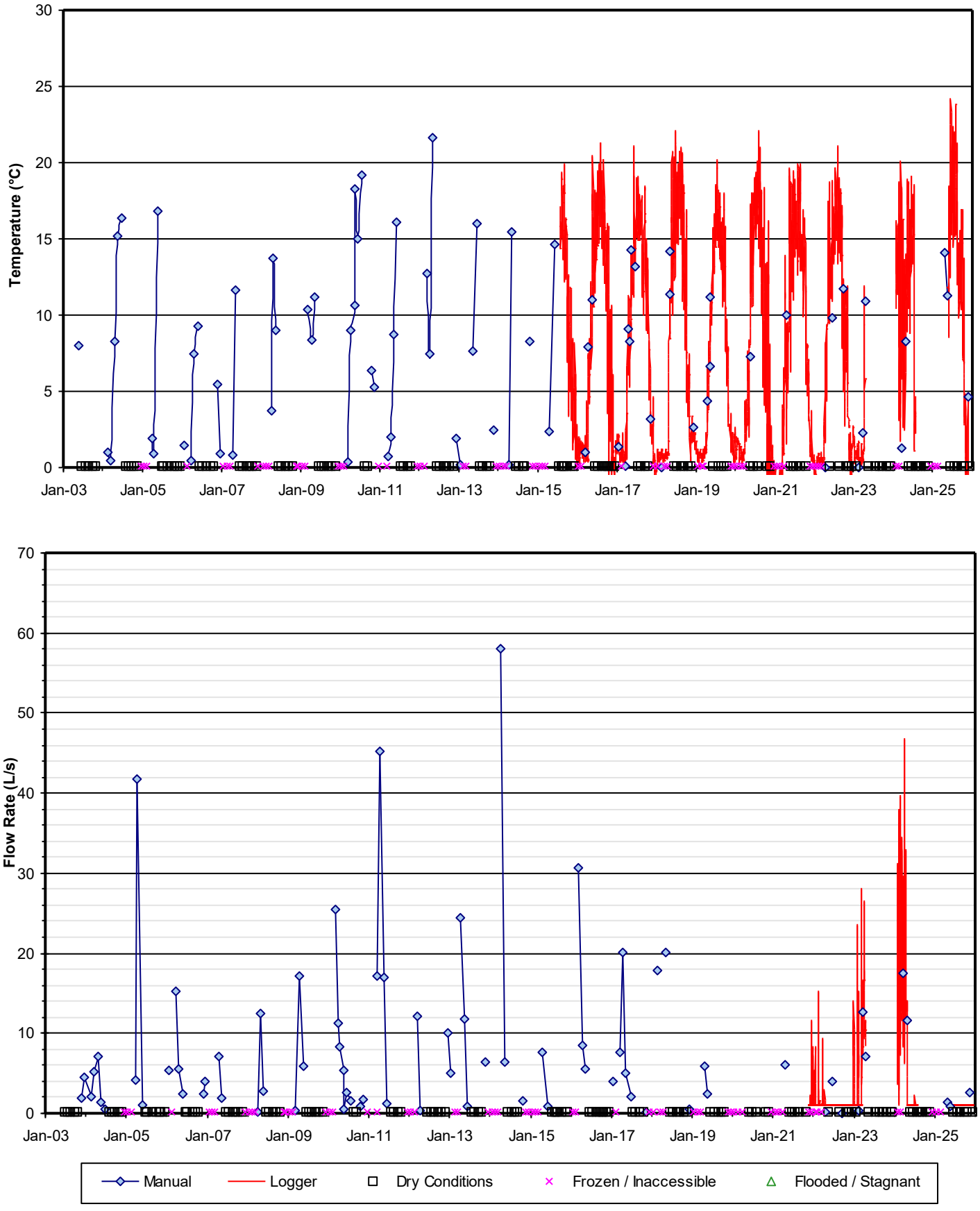
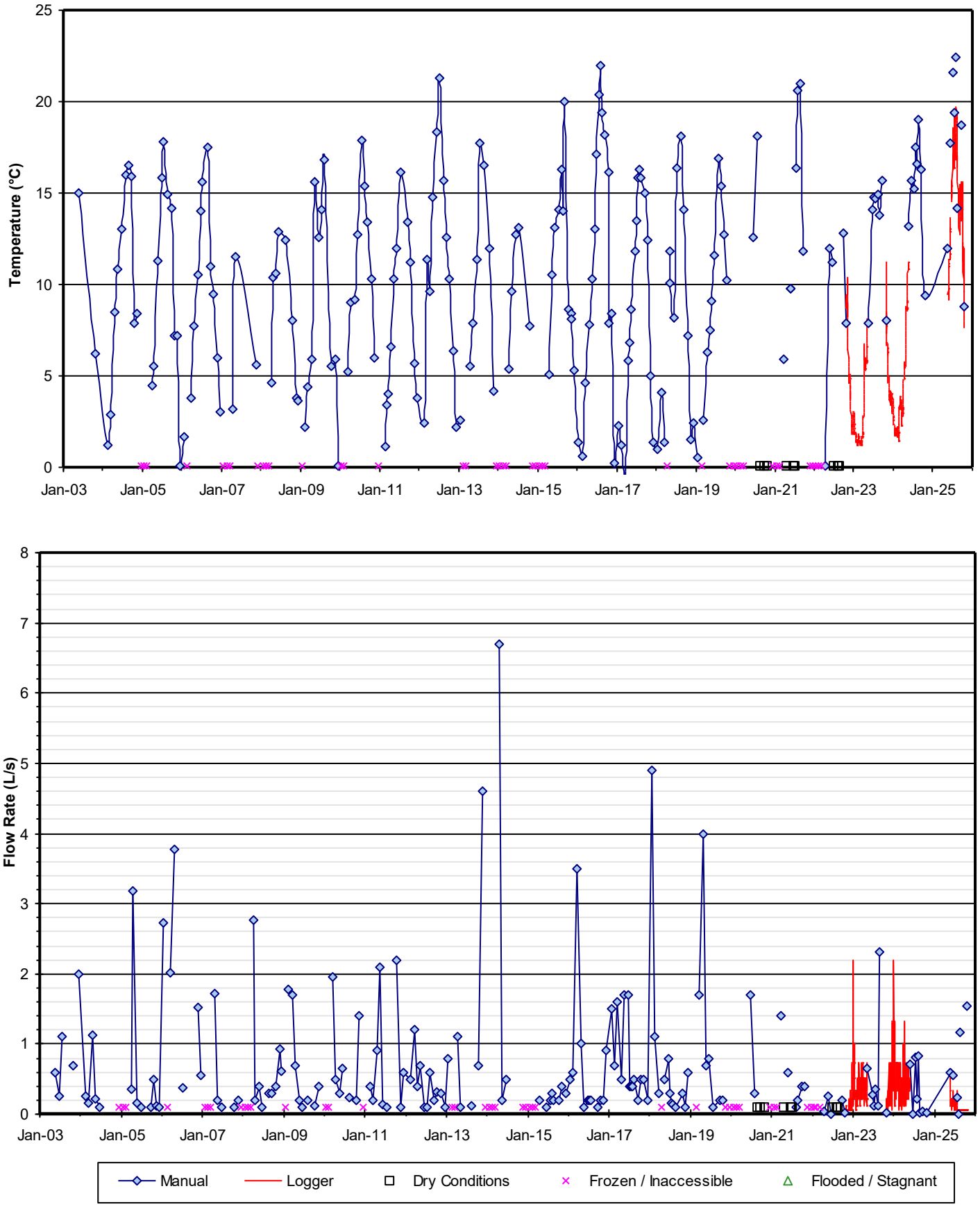


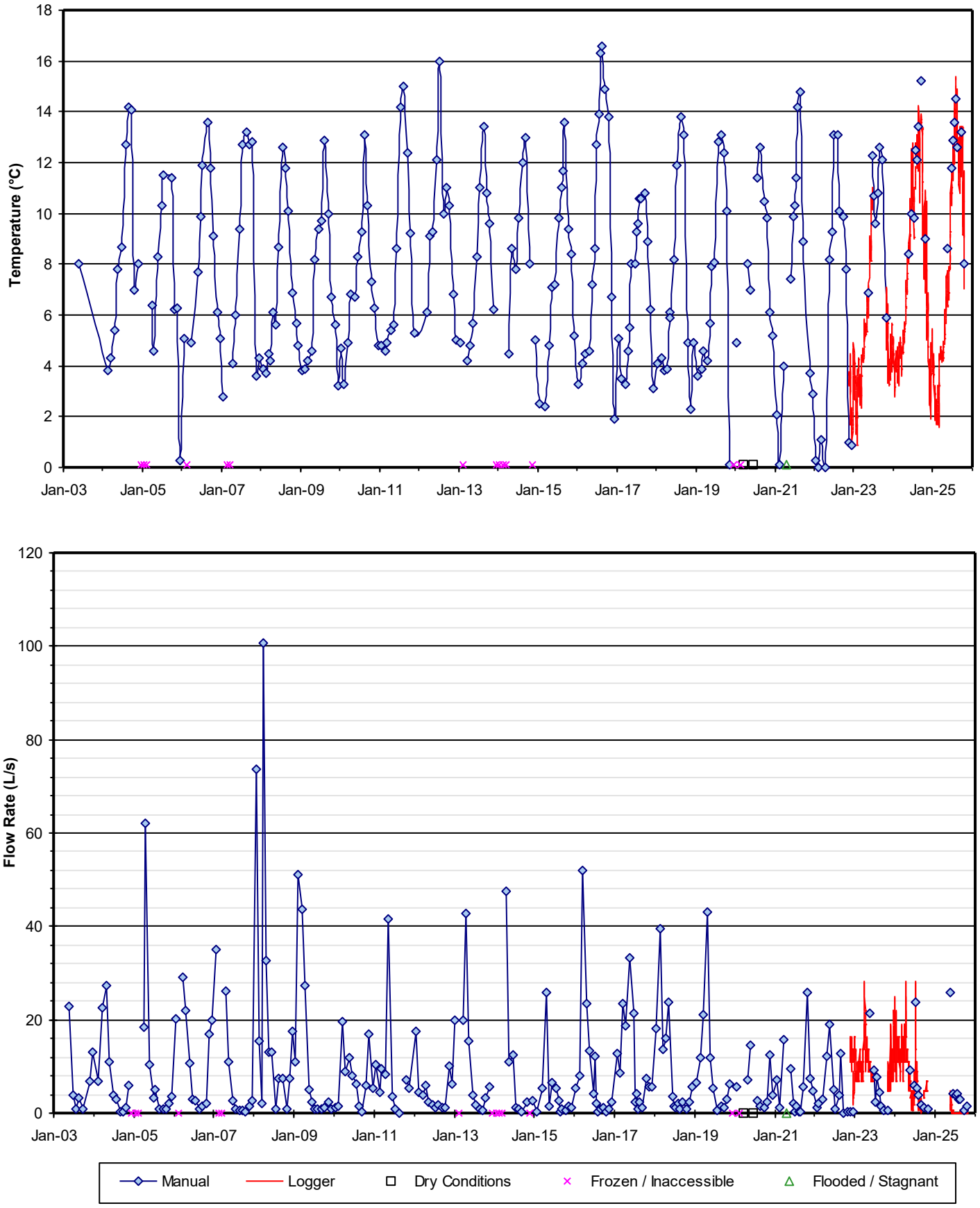
**Figure C-14 Surface Water Temperature and Flow**

**SW10 - Escarpment Seep on Franks Property**



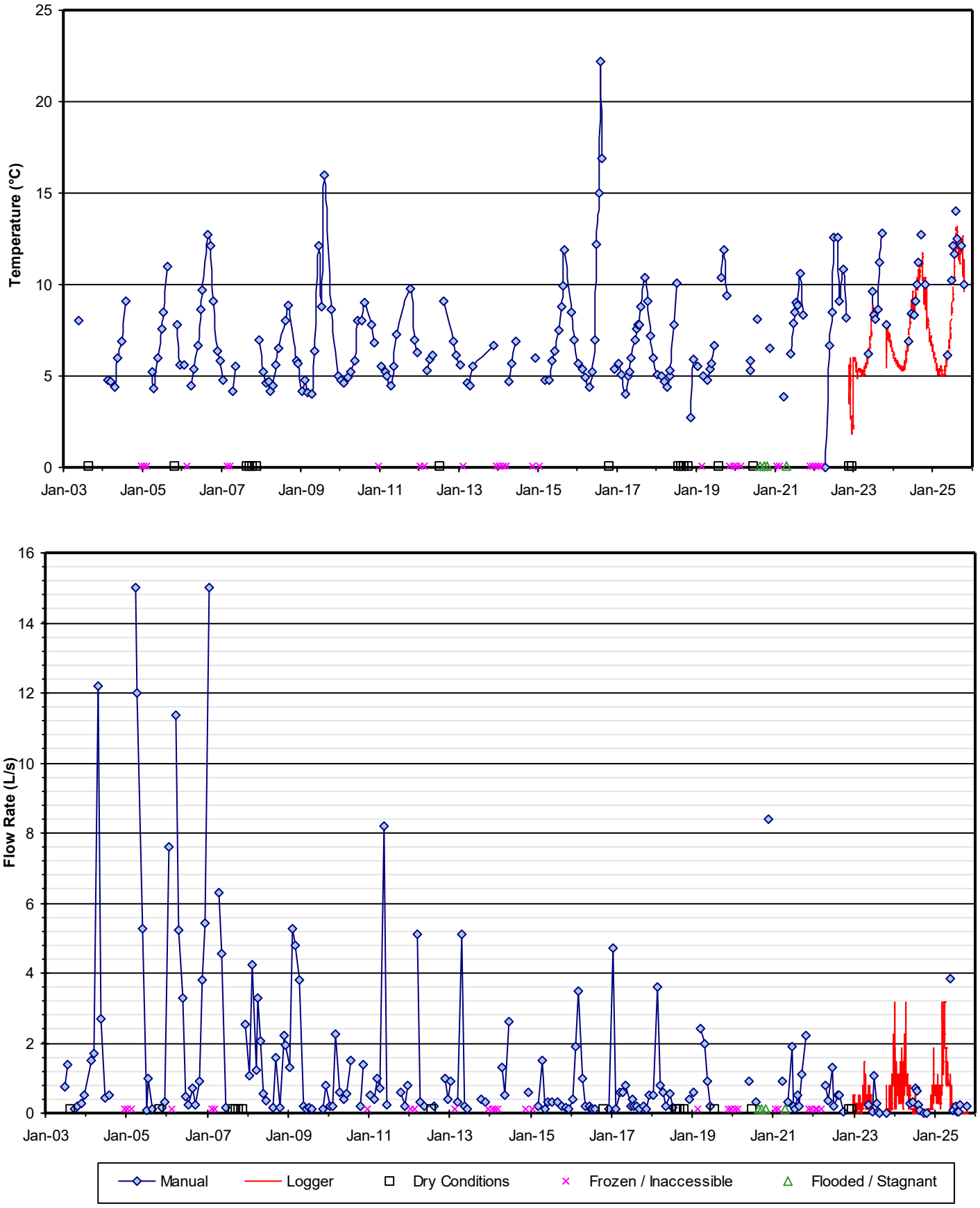
## Figure C-15 Surface Water Temperature and Flow

### SW11 - Culmination of Escarpment Seeps SW11A-D on Franks Property



## Figure C-16 Surface Water Temperature and Flow

### SW11A - Escarpment Seep on Franks Property



## Figure C-17 Surface Water Temperature and Flow

### SW11B - Escarpment Seep on Franks Property

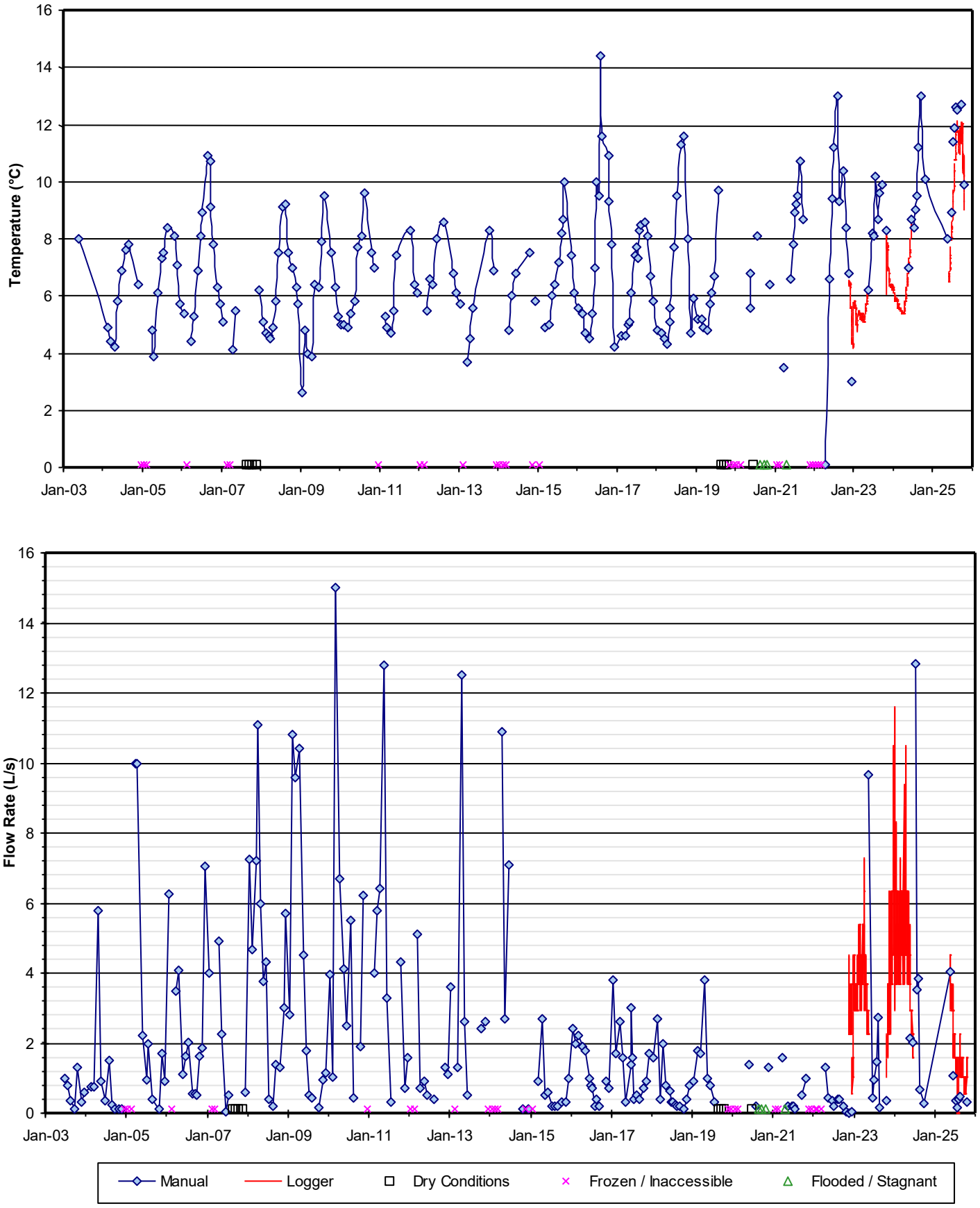


**Figure C-18 Surface Water Temperature and Flow**

**SW11C - Escarpment Seep on Franks Property**

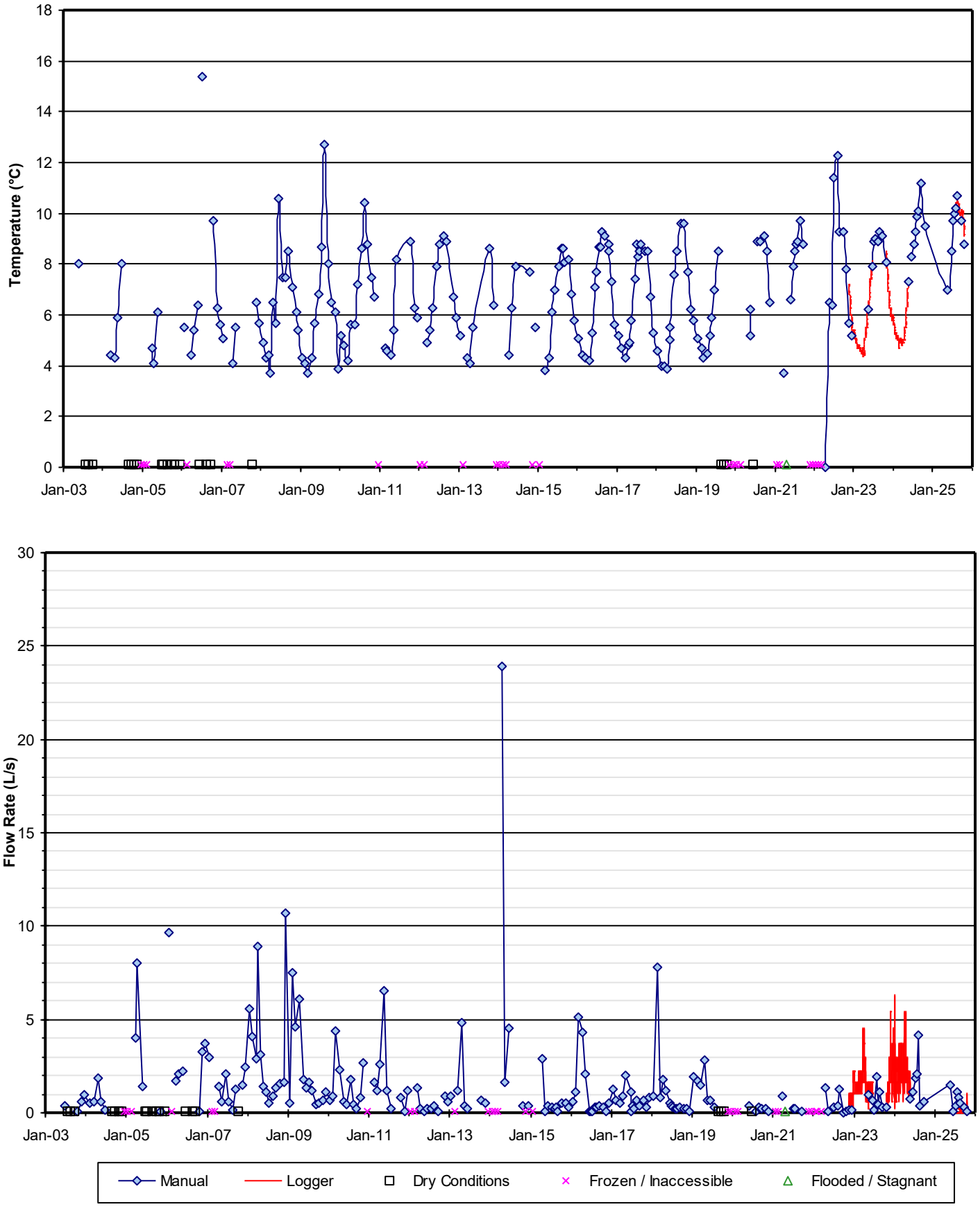


**Figure C-19 Surface Water Temperature and Flow**

**SW11D - Escarpment Seep on Franks Property**

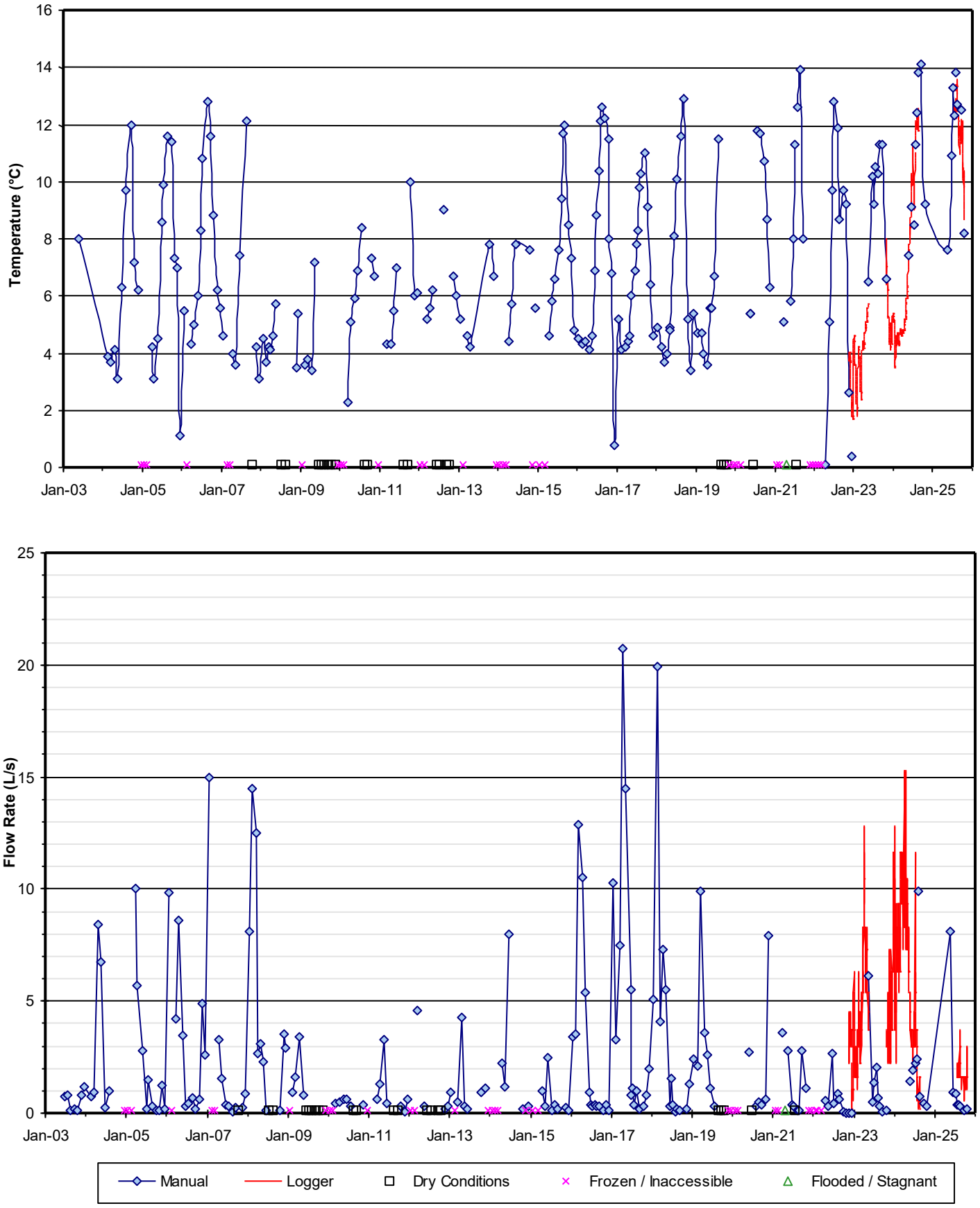


**Figure C-20 Surface Water Temperature and Flow**

**SW11E - Downstream of SW11 on Franks Property**

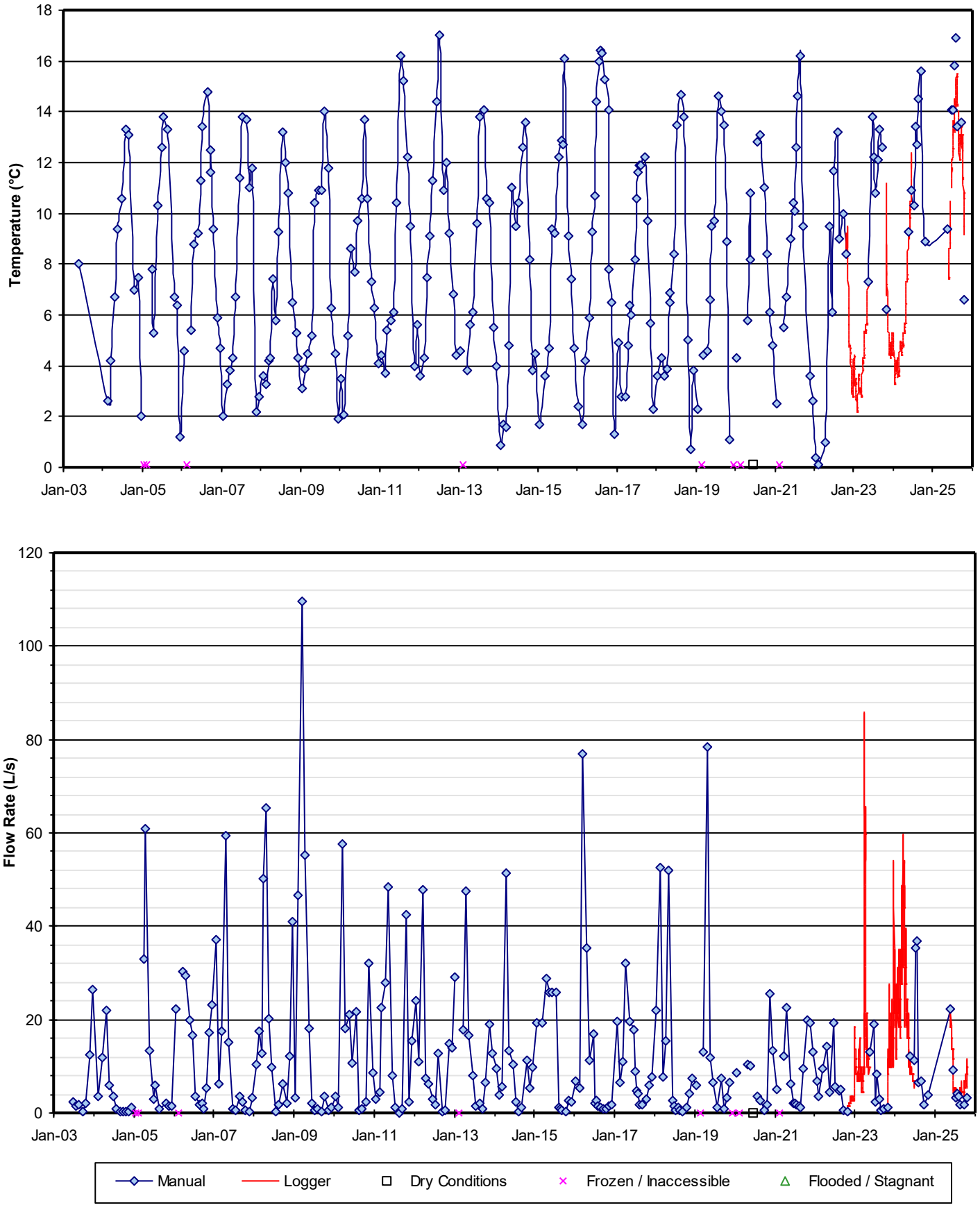
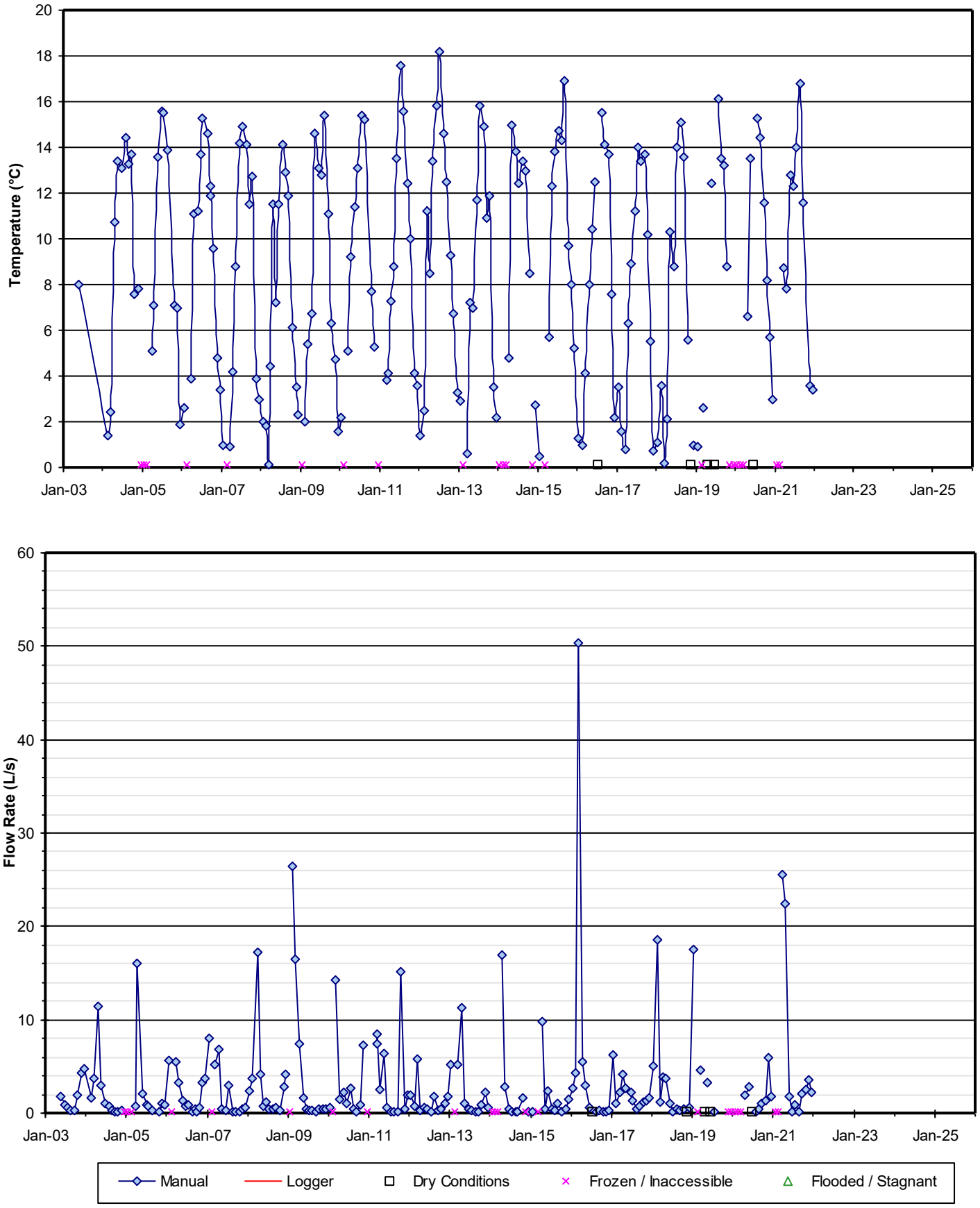


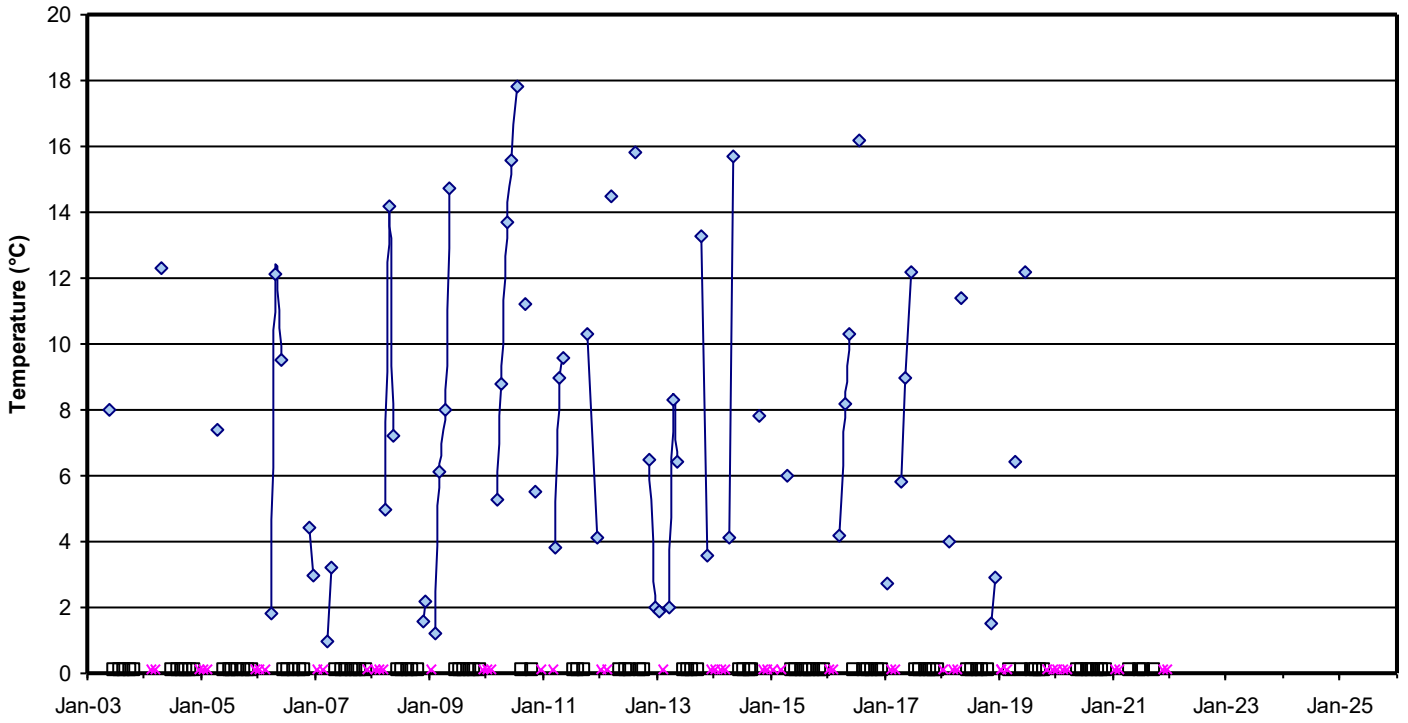
**Figure C-21 Surface Water Temperature and Flow**

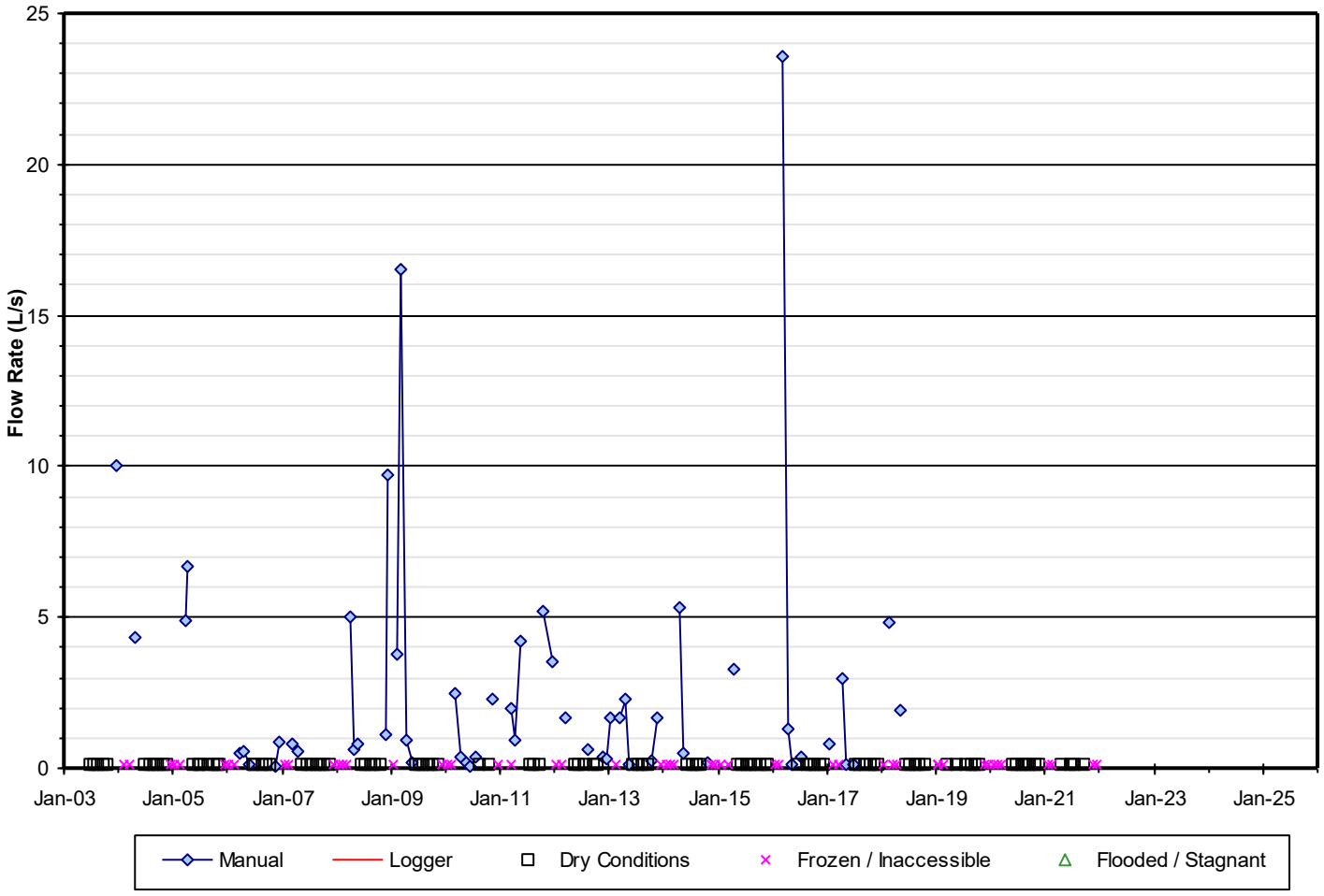
**SW12 - Culvert Upstream of Franks Pond**



## Figure C-22 Surface Water Temperature and Flow

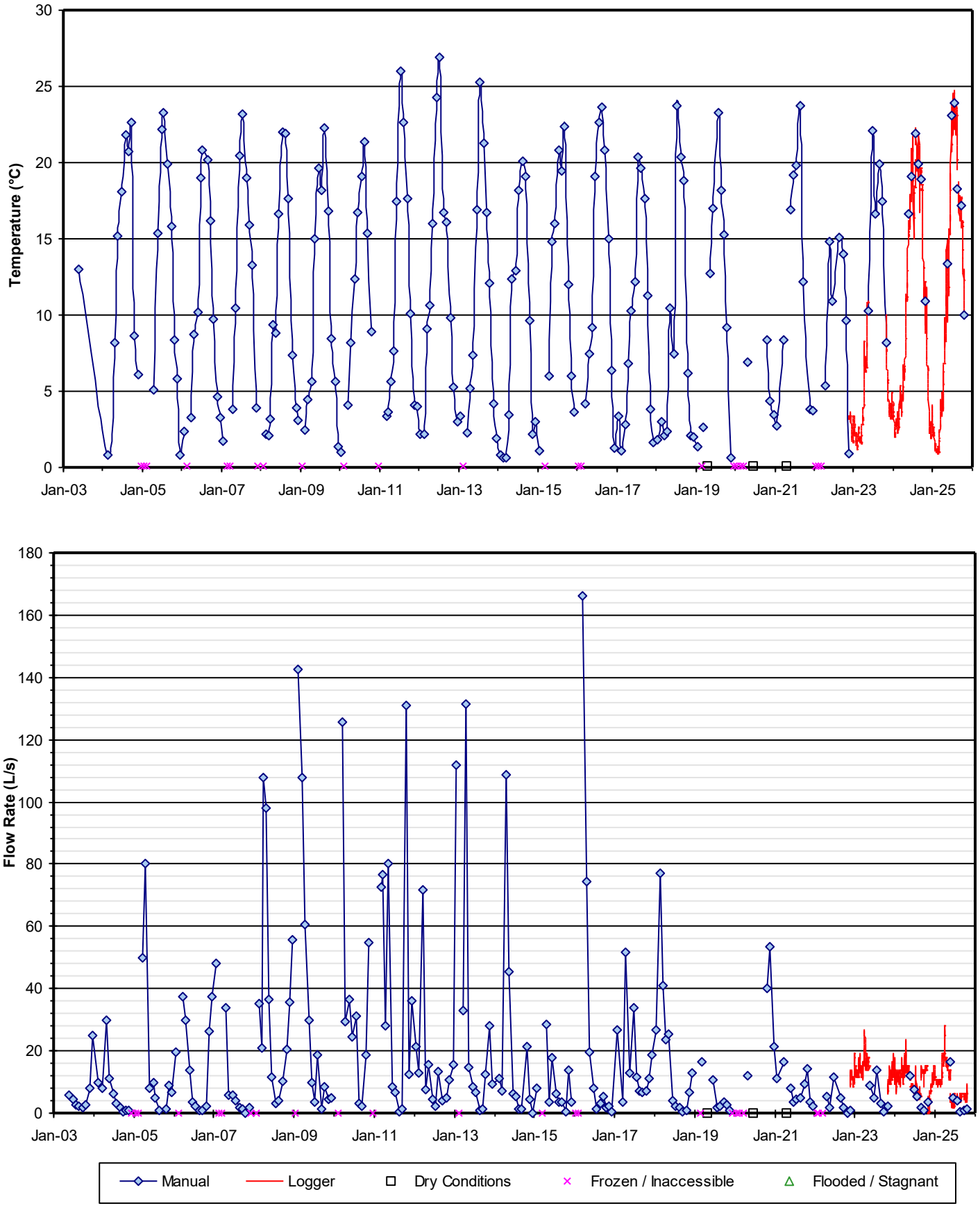
### SW12A - Upstream of SW12 on Franks Property



## Figure C-23 Surface Water Temperature and Flow

### SW13 - Franks Pond Outlet



## Figure C-24 Surface Water Temperature and Flow

### SW14 - Batteaux Creek Downstream of Franks Pond

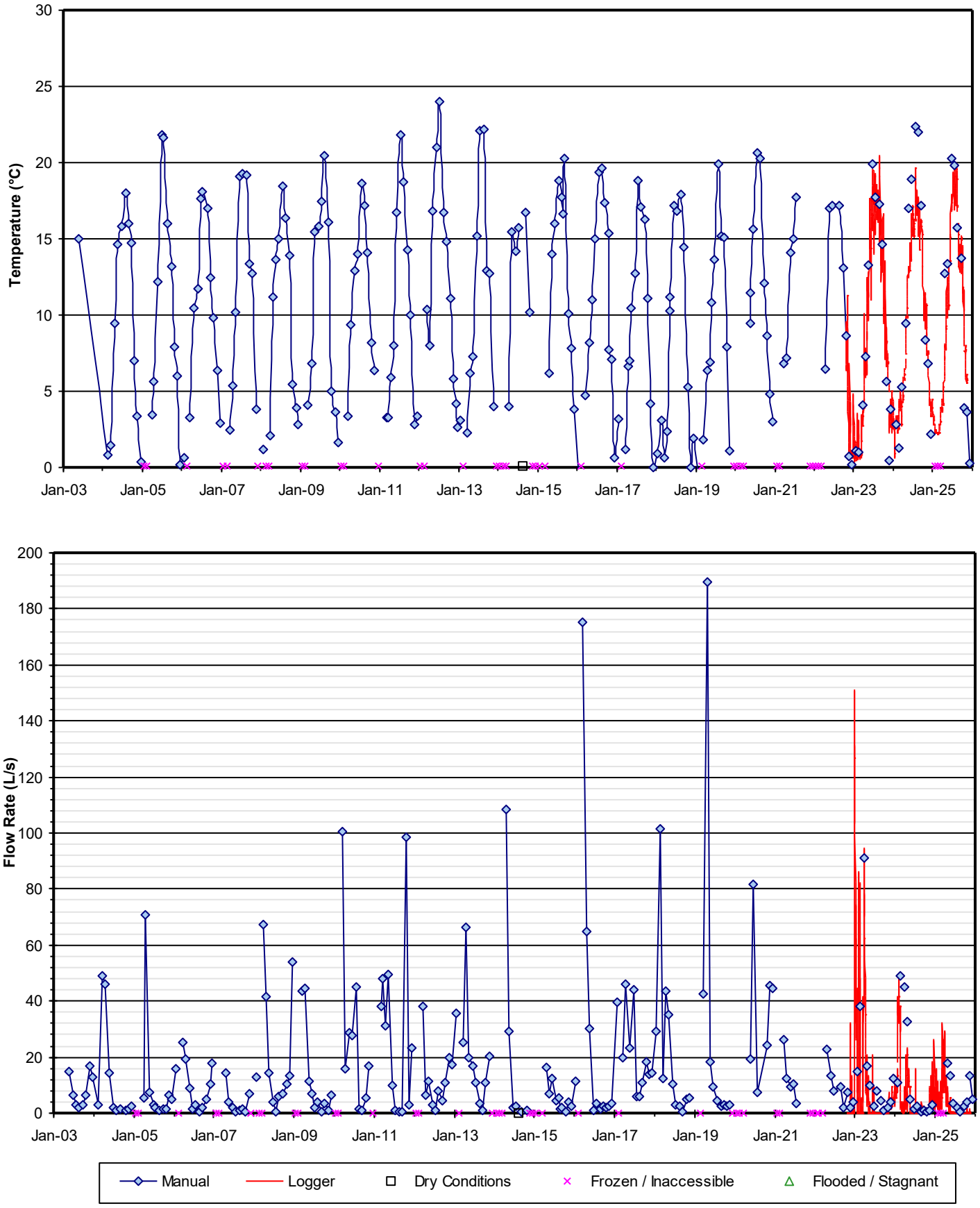


**Figure C-25 Surface Water Temperature and Flow**

**SW15 - Batteaux Creek Downstream of Franks Pond**

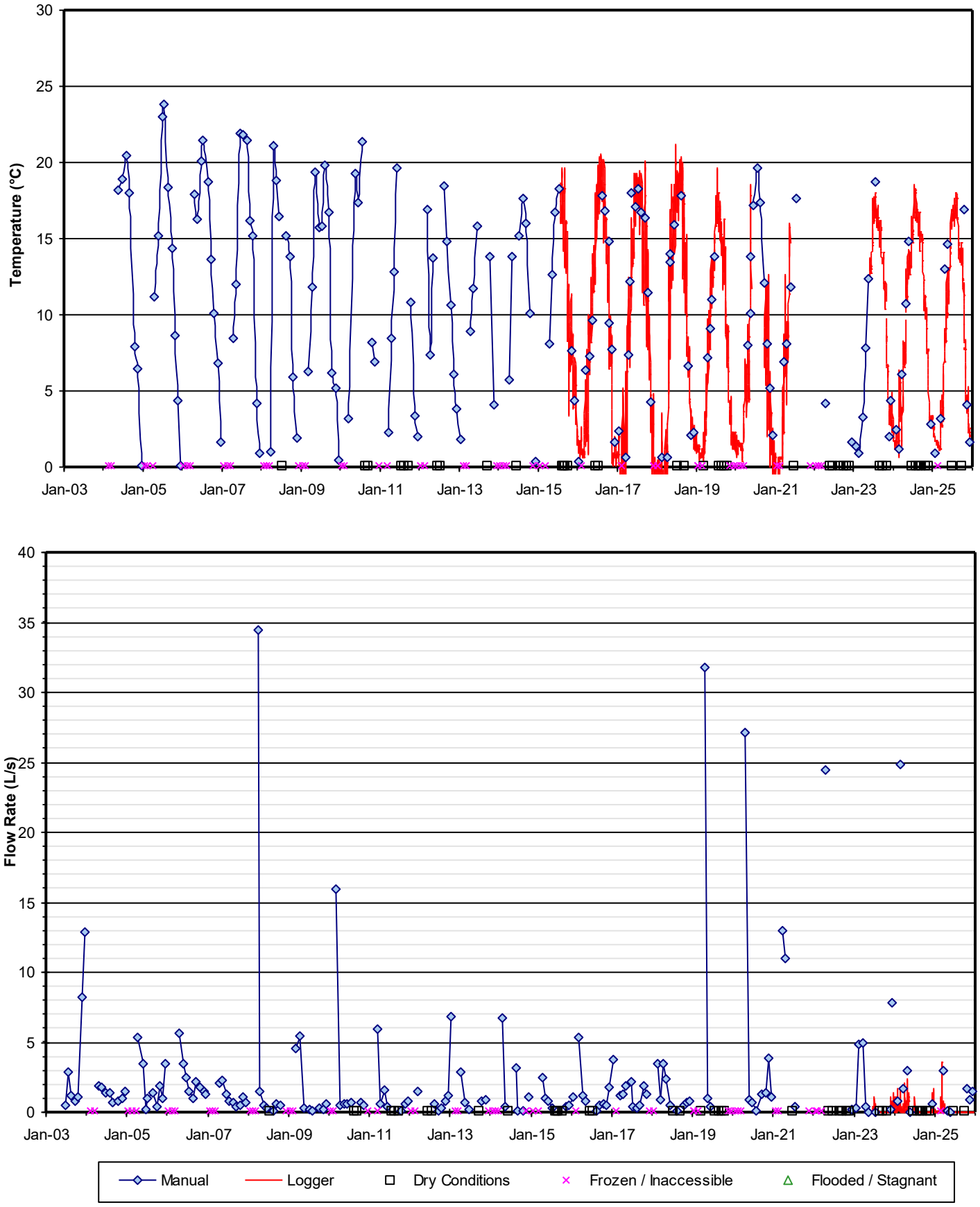


**Figure C-26 Surface Water Temperature and Flow**

**SW16 - Pretty River Escarpment Seep**

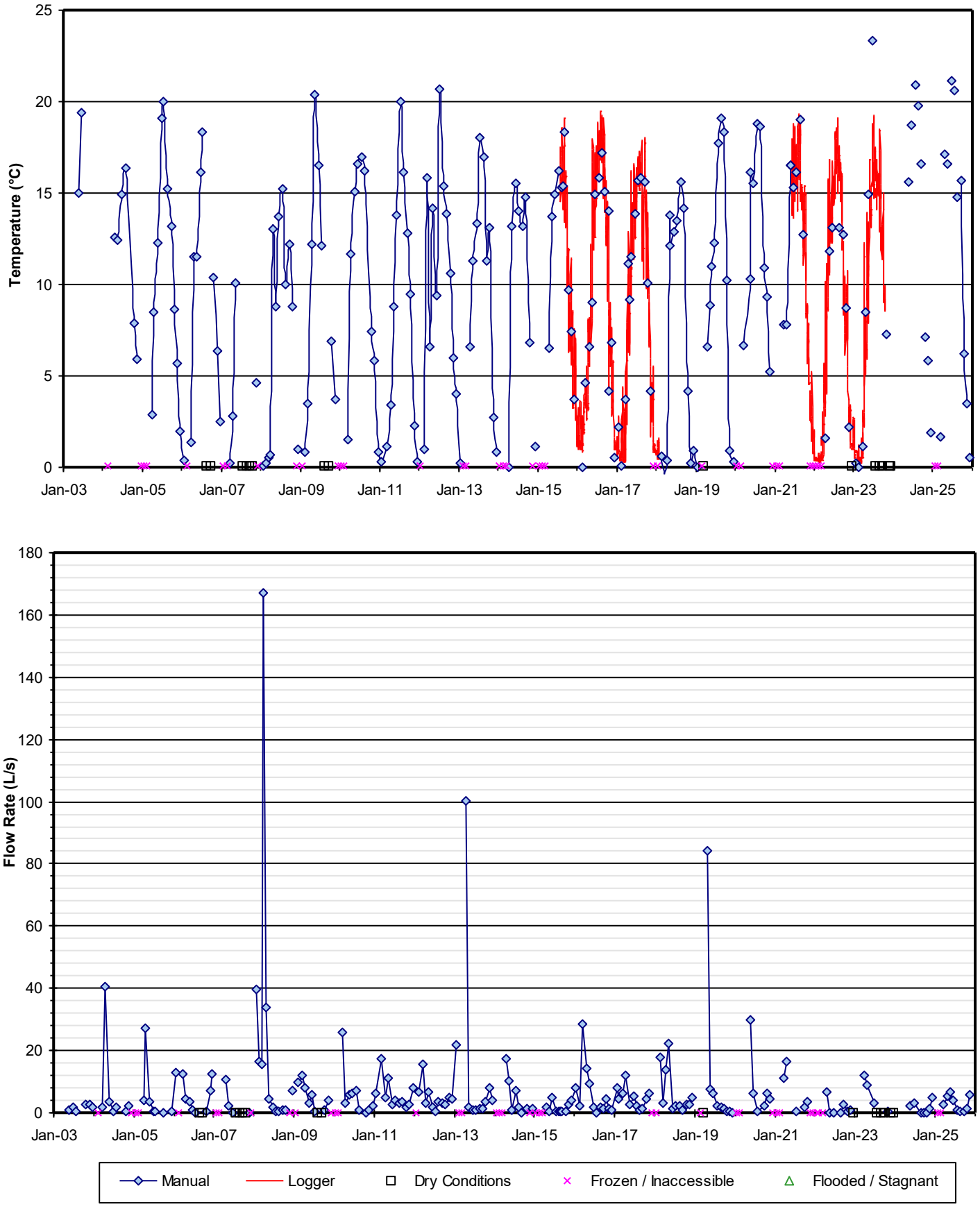


**Figure C-27 Surface Water Temperature and Flow**

**SW17 - Sestito Pond Outlet**

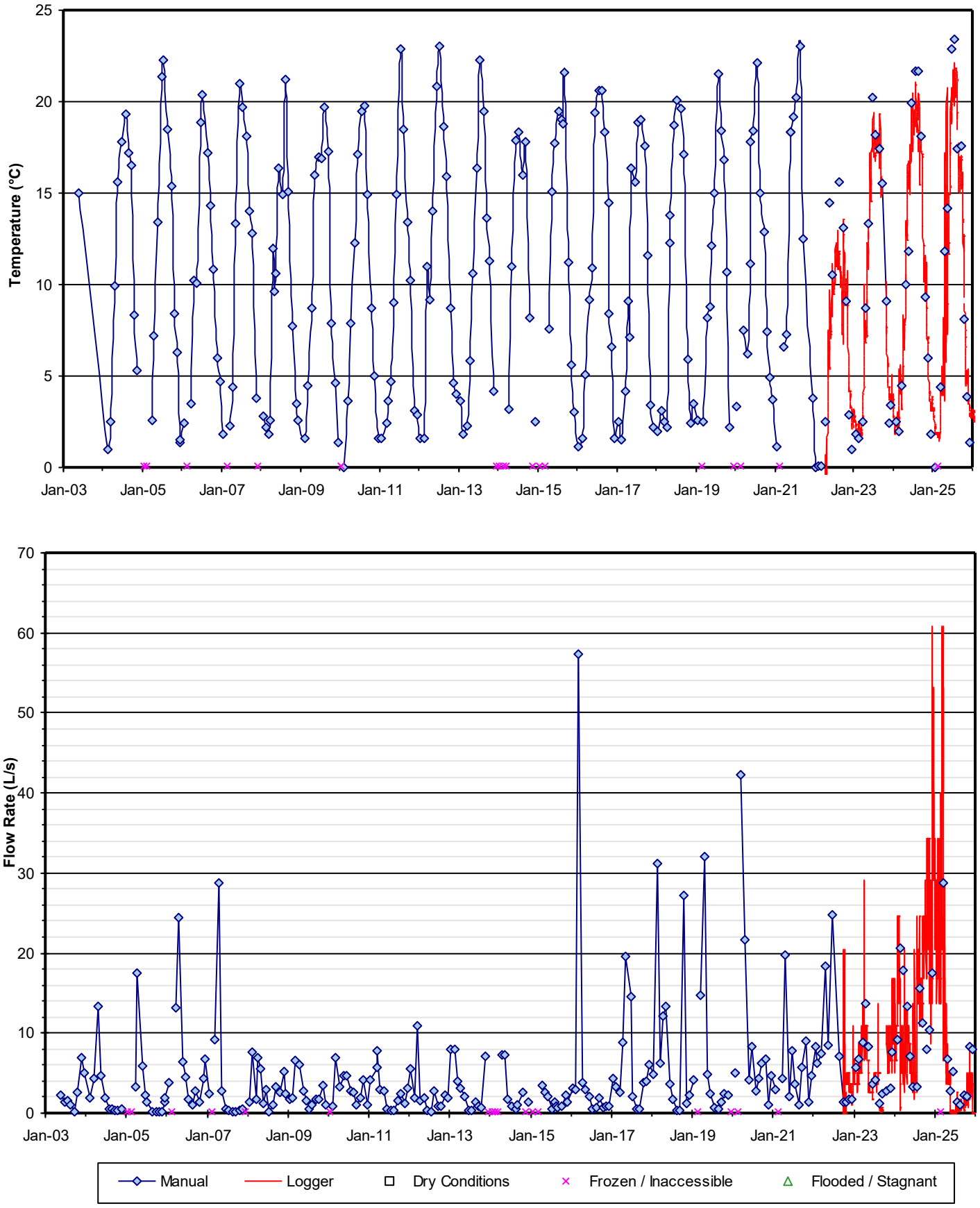


**Figure C-28 Surface Water Temperature and Flow**

**SW17A - Downstream of SW17**

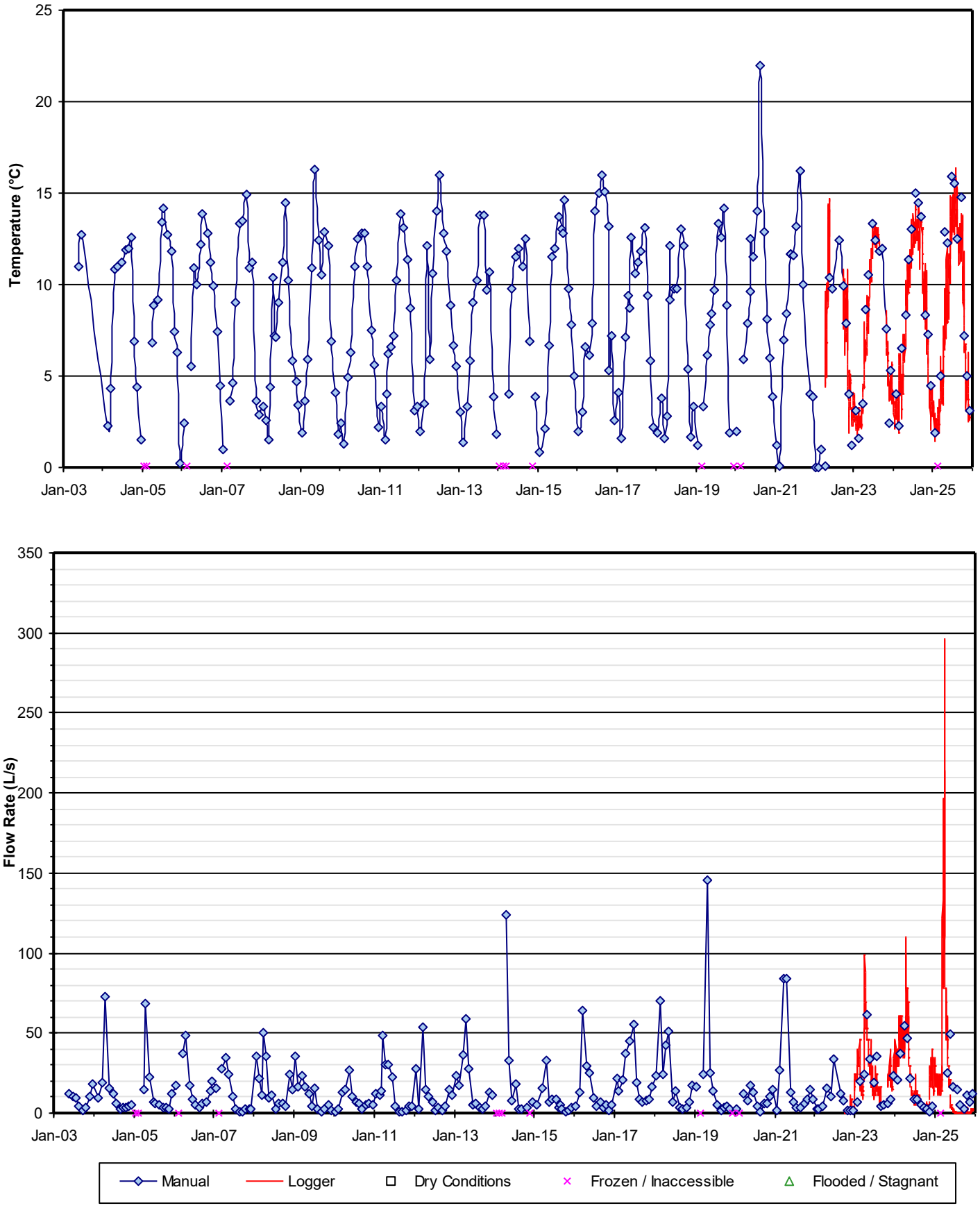
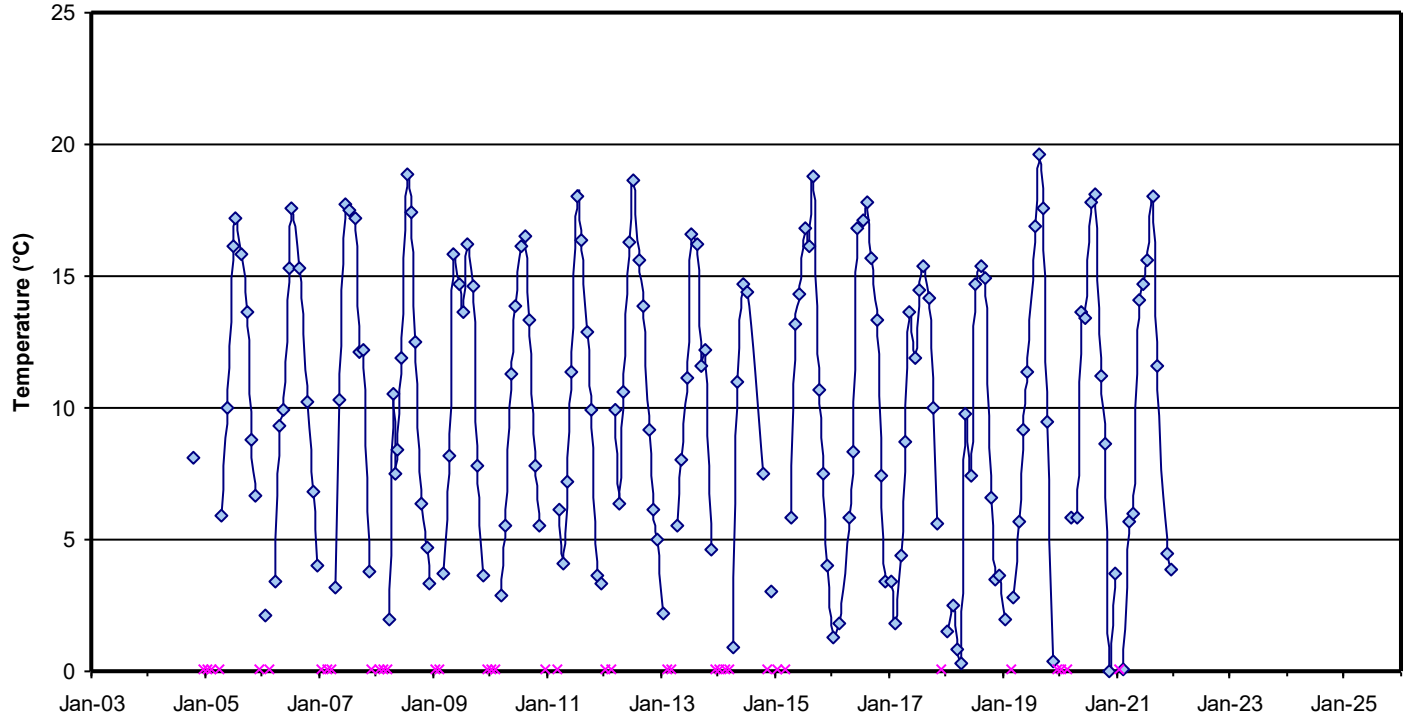


**Figure C-29 Surface Water Temperature and Flow**

**SW17B - Upstream of SW17**



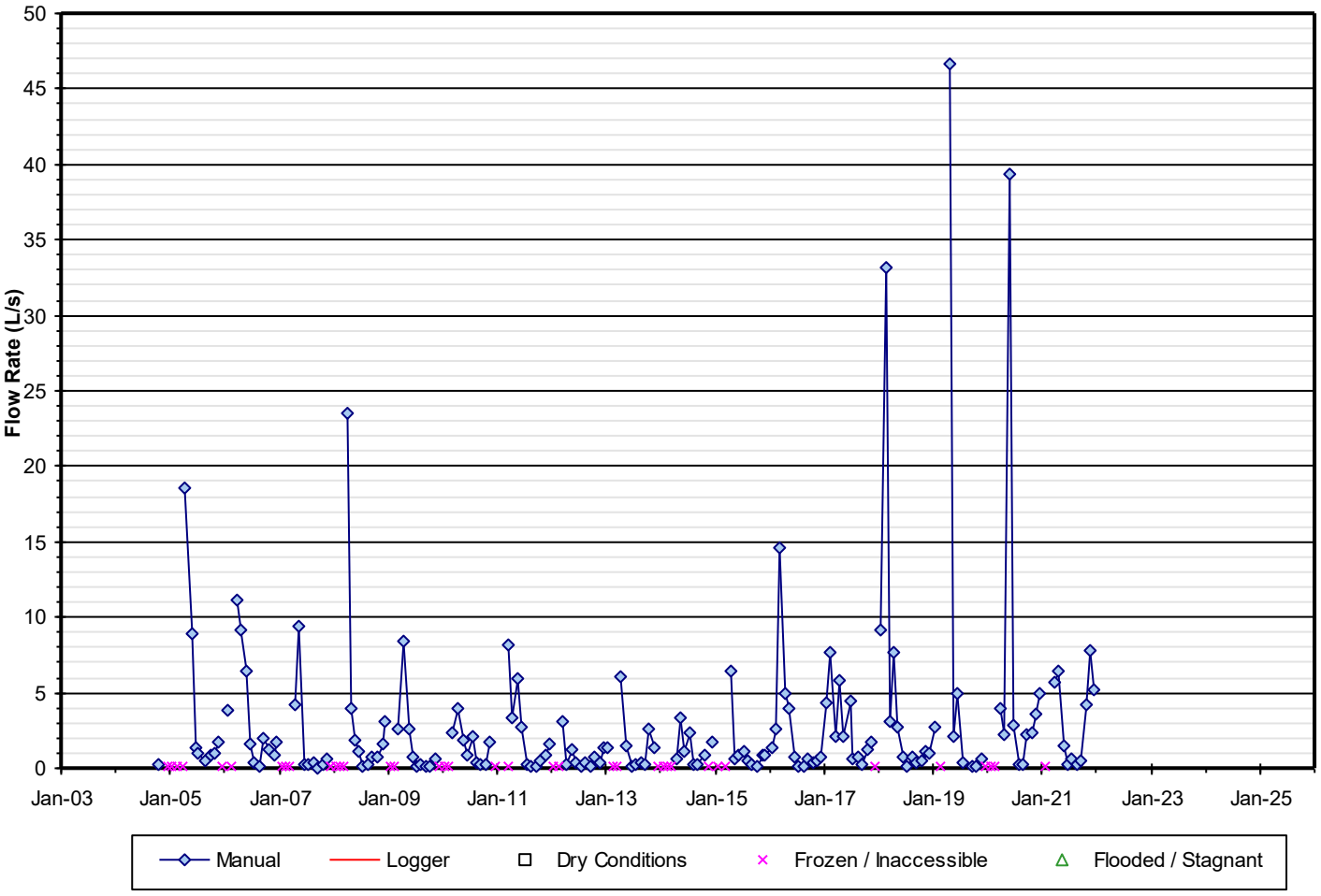
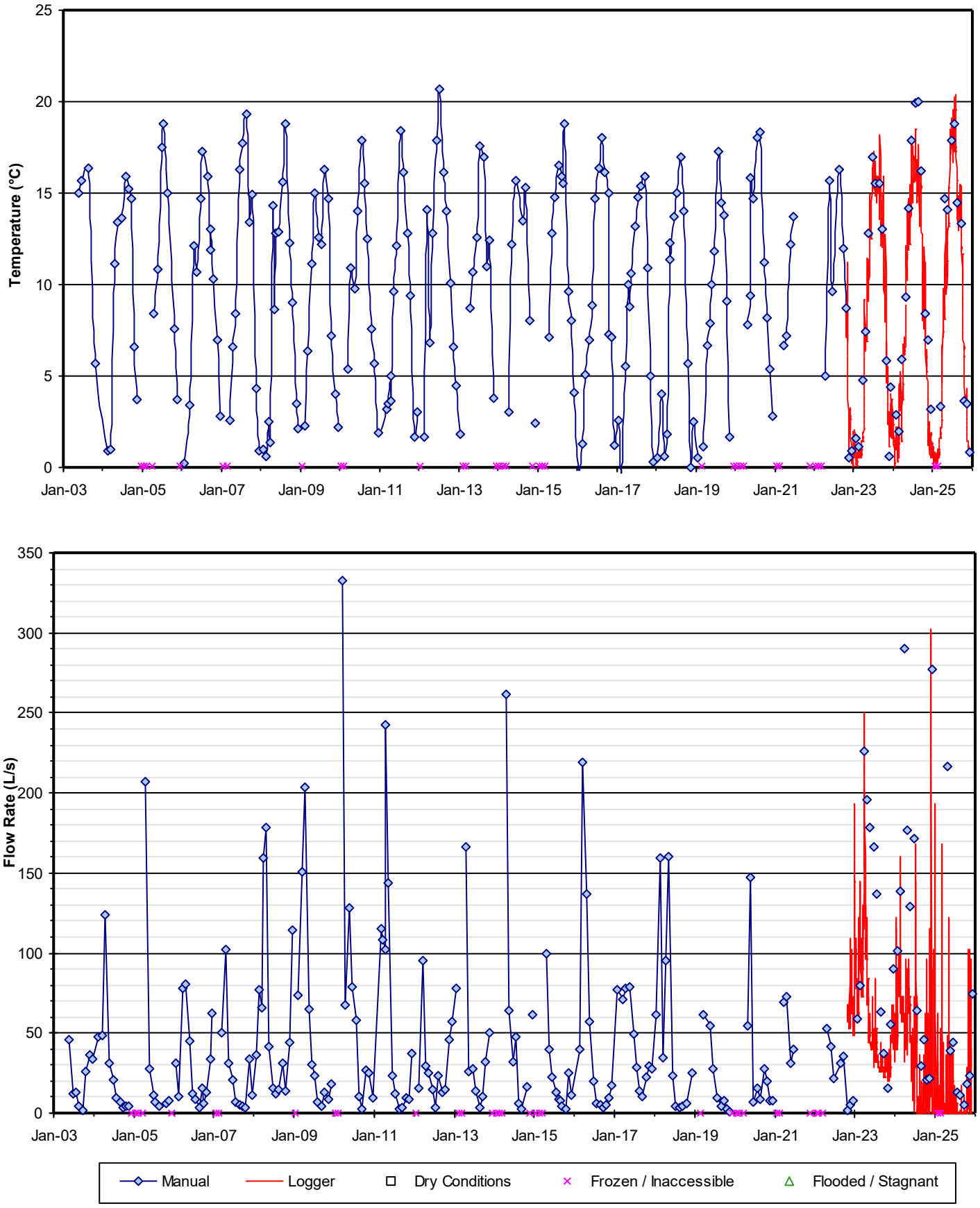



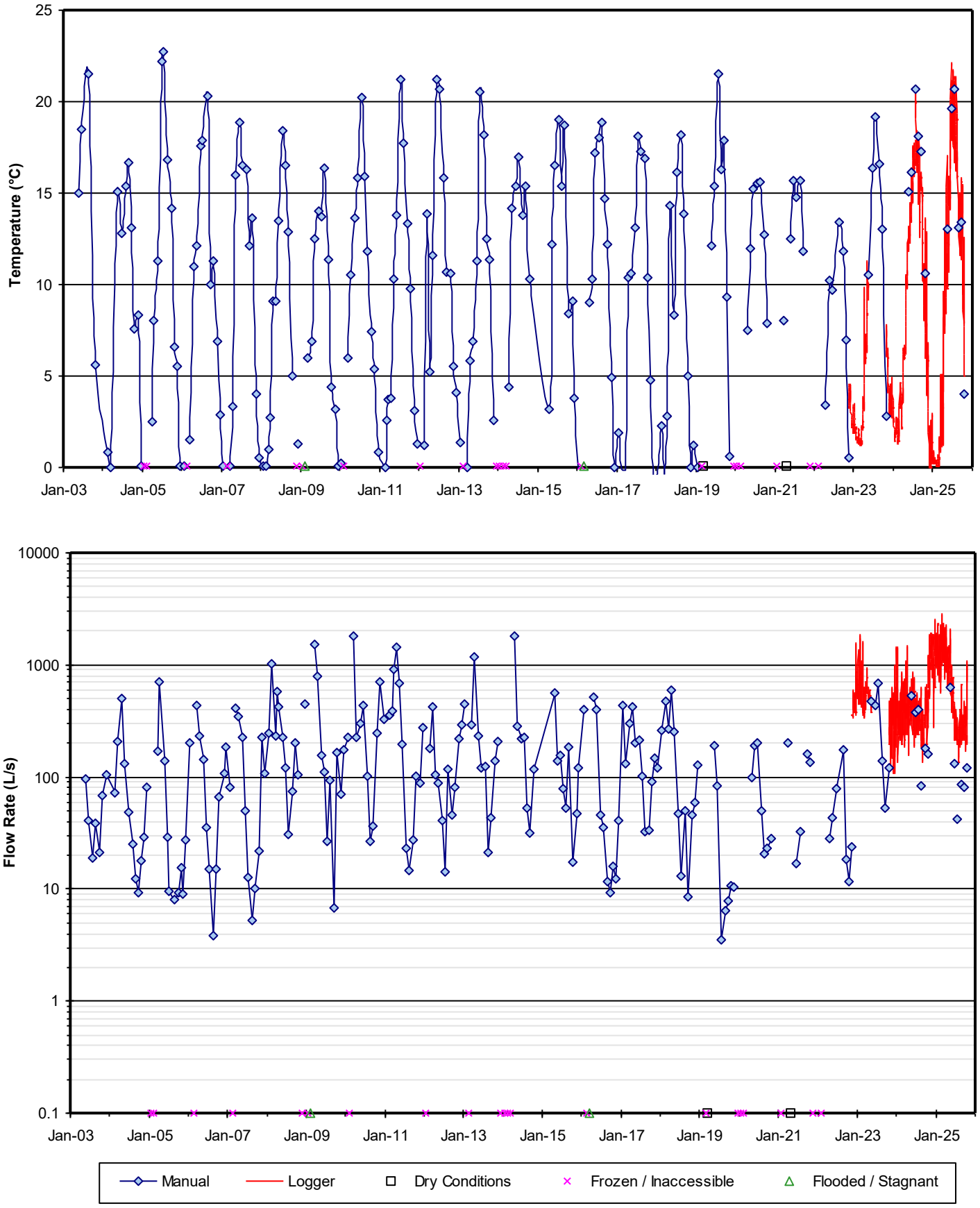
**Figure C-30 Surface Water Temperature and Flow**

**SW18 - Pretty River at Concession 10**



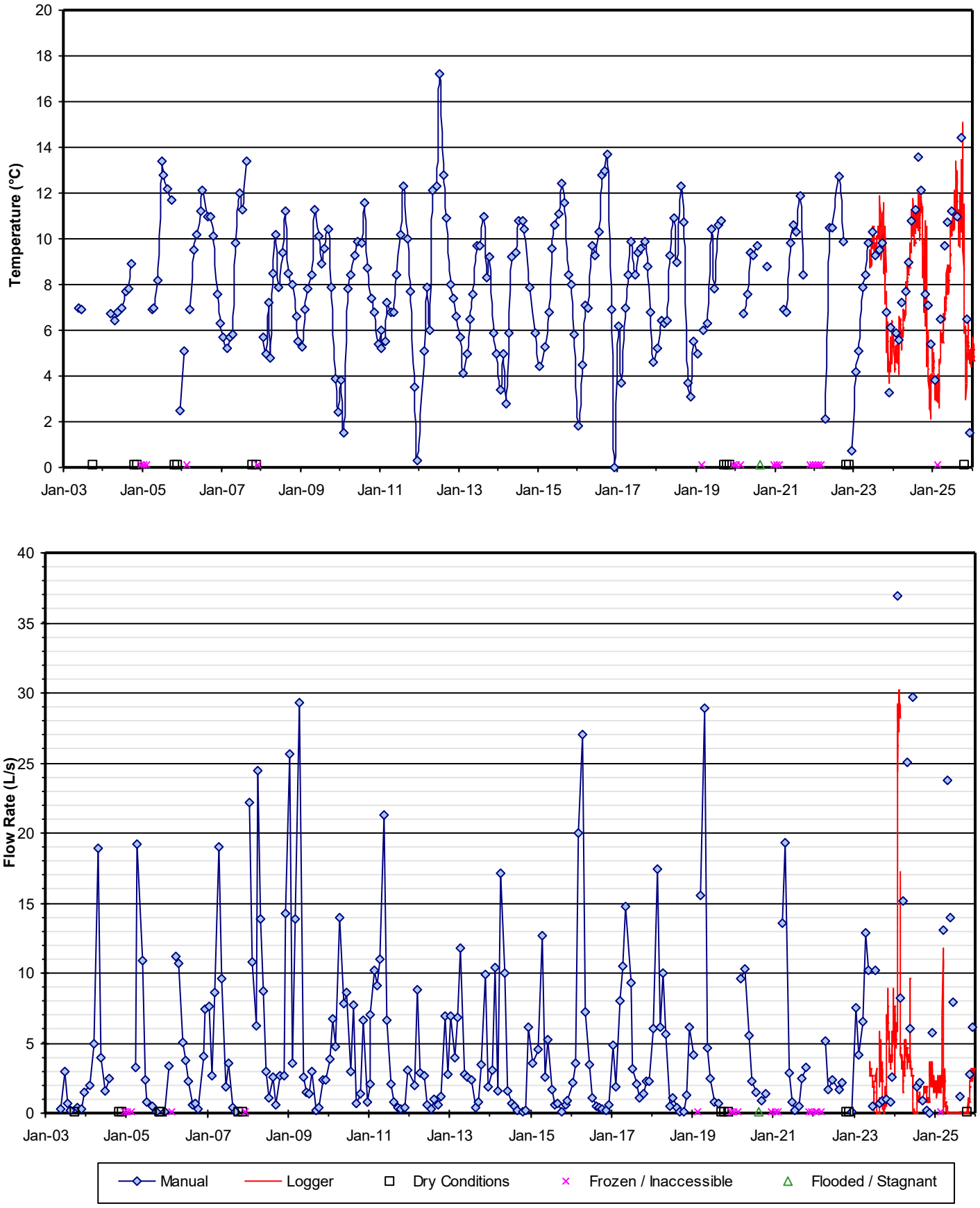
## Figure C-31 Surface Water Temperature and Flow

### SW19 - Batteaux Creek at County Road 124



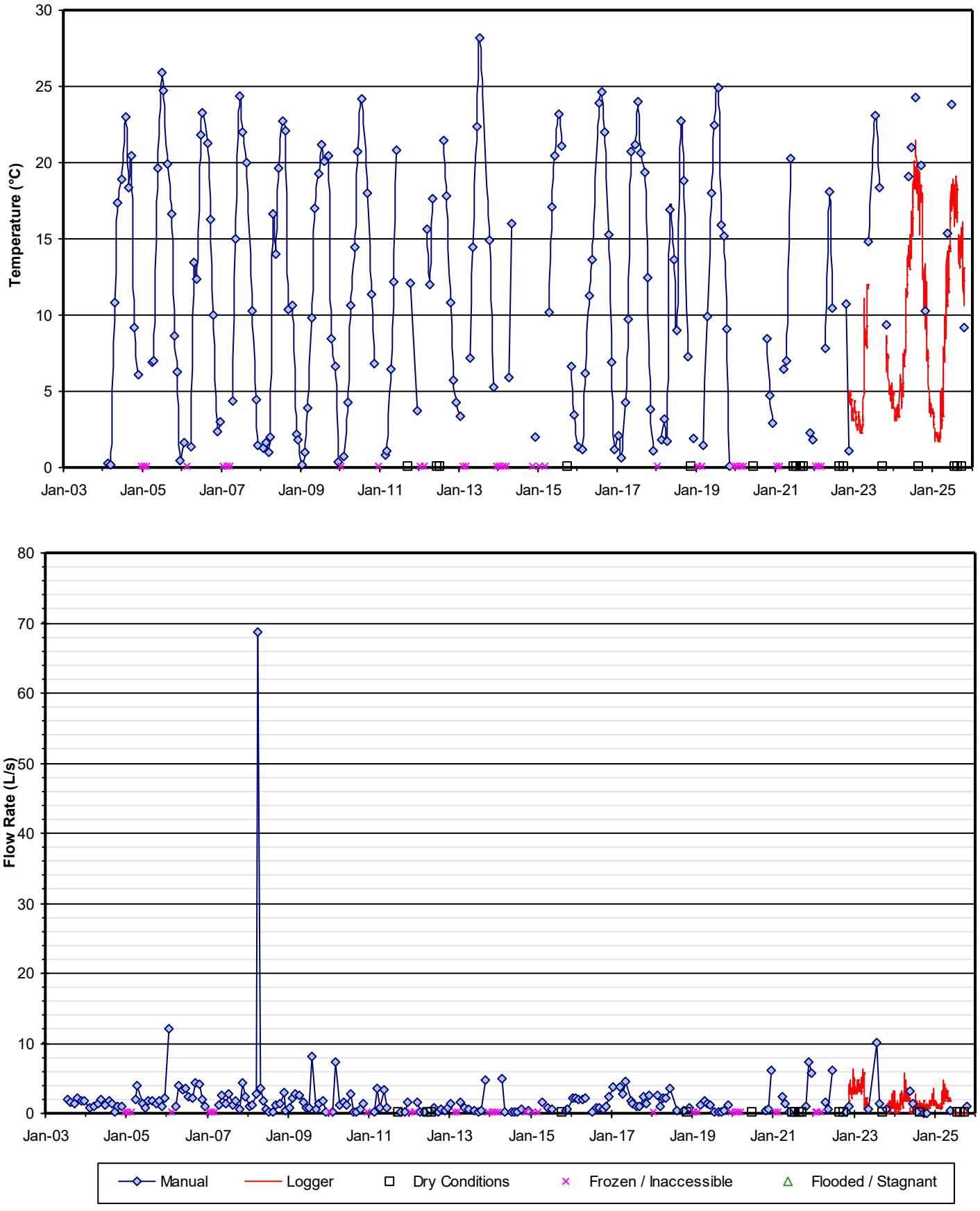
## Figure C-32 Surface Water Temperature and Flow

### SW20 - Escarpment Seep to Pretty River



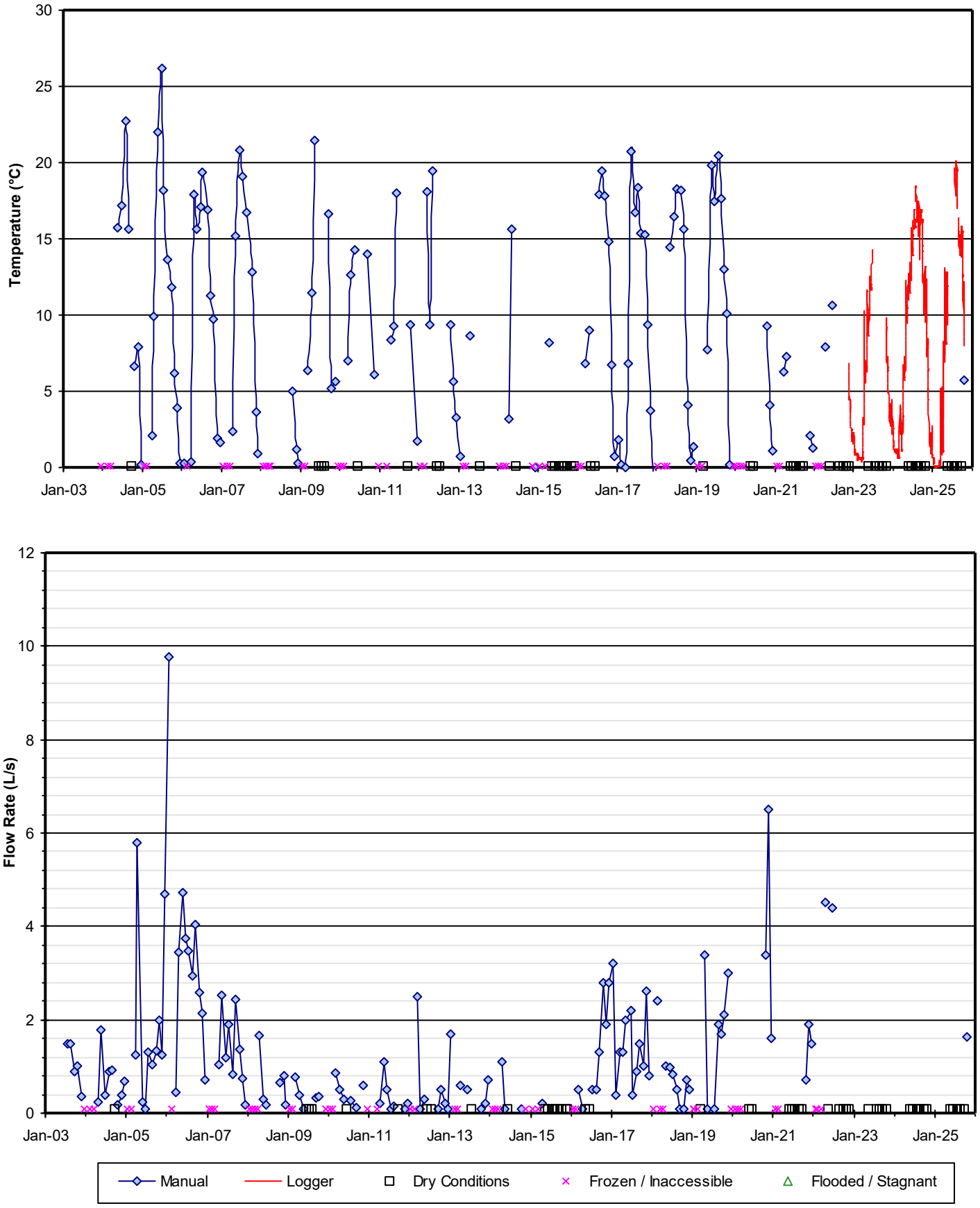
## Figure C-33 Surface Water Temperature and Flow

### SW21 - Franks Pond Outlet



## Figure C-34 Surface Water Temperature and Flow

### SW21A - Franks Pond Inlet



## Figure C-35 Surface Water Temperature and Flow

### SW21B - Upstream of Franks Pond Inlet

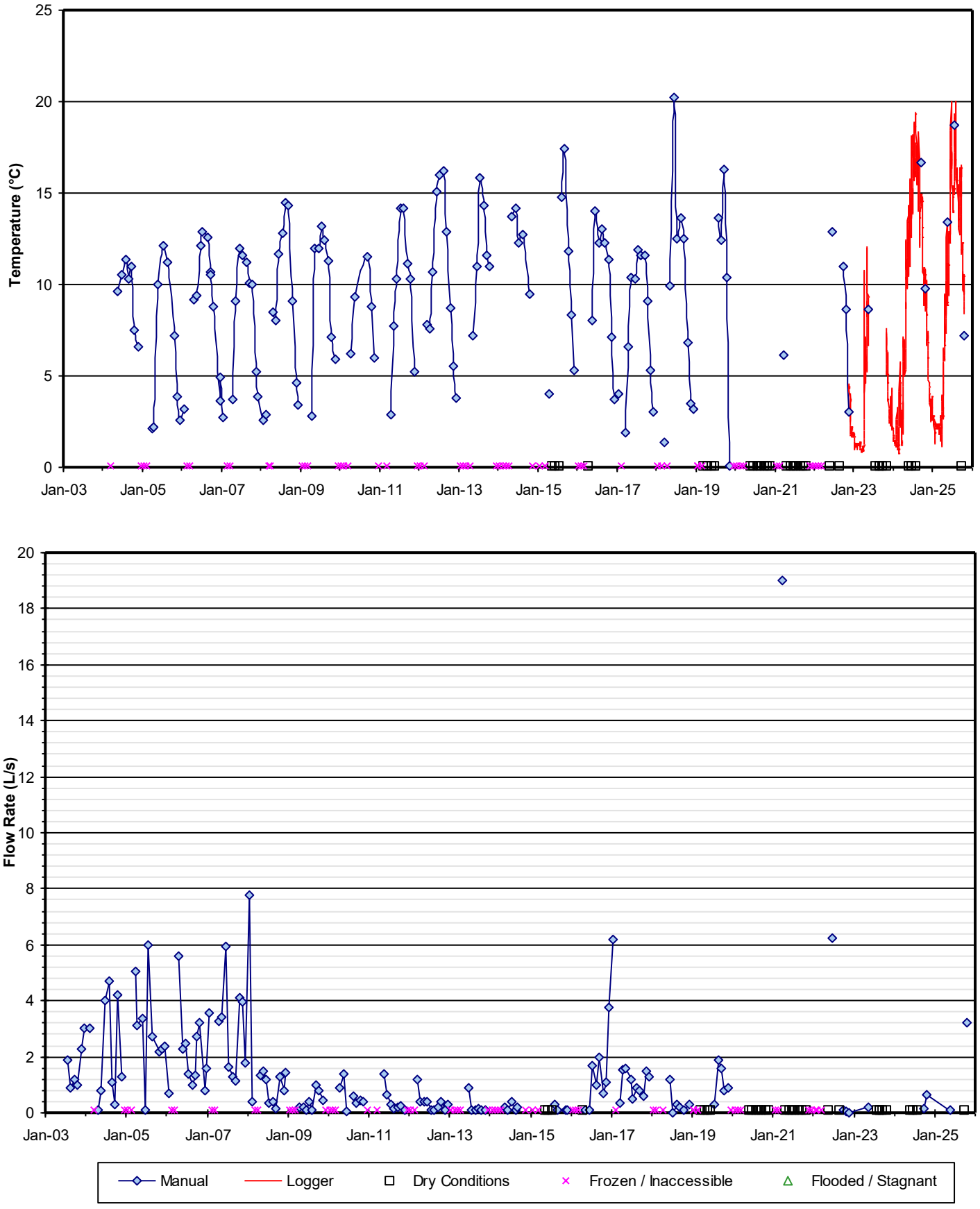
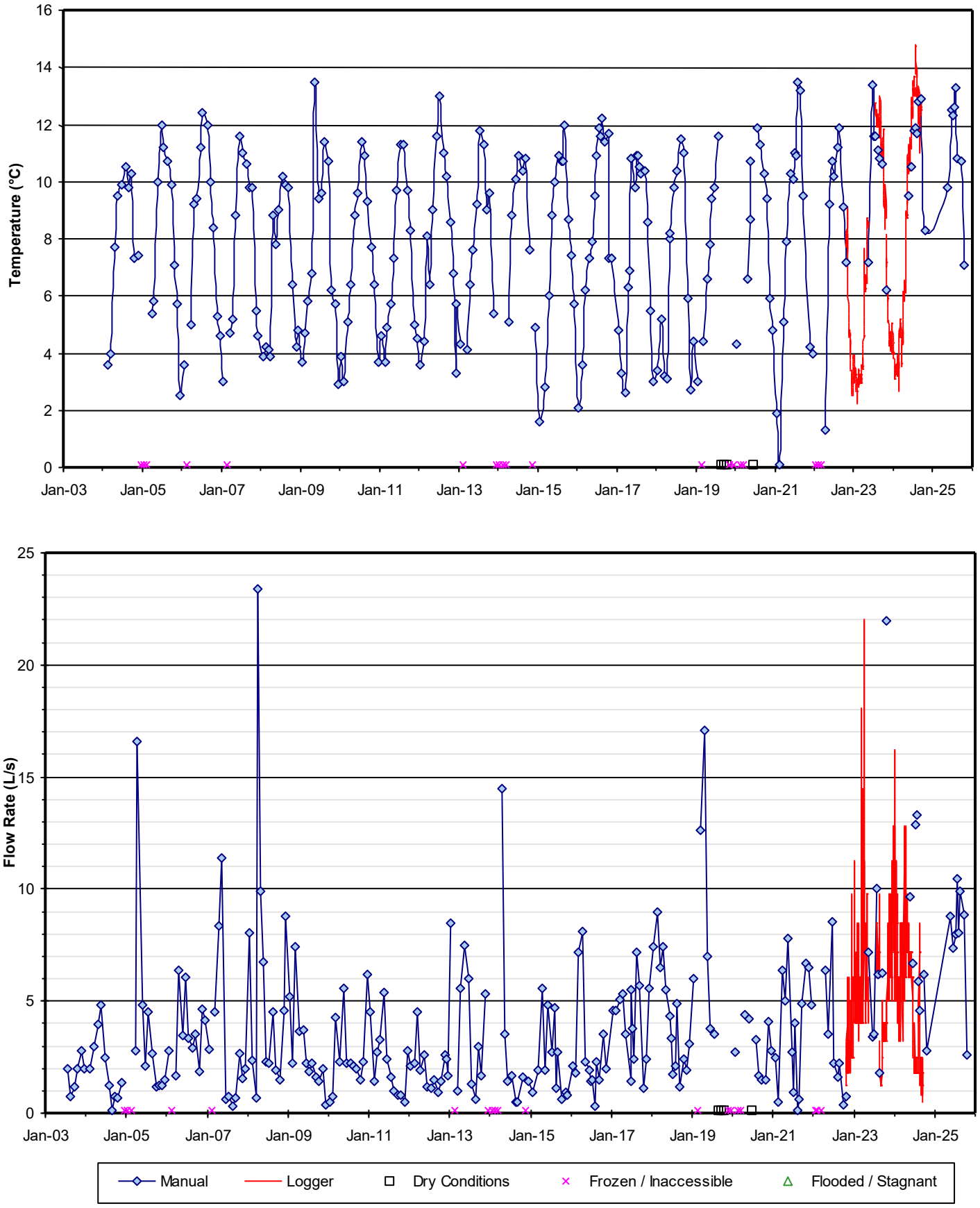


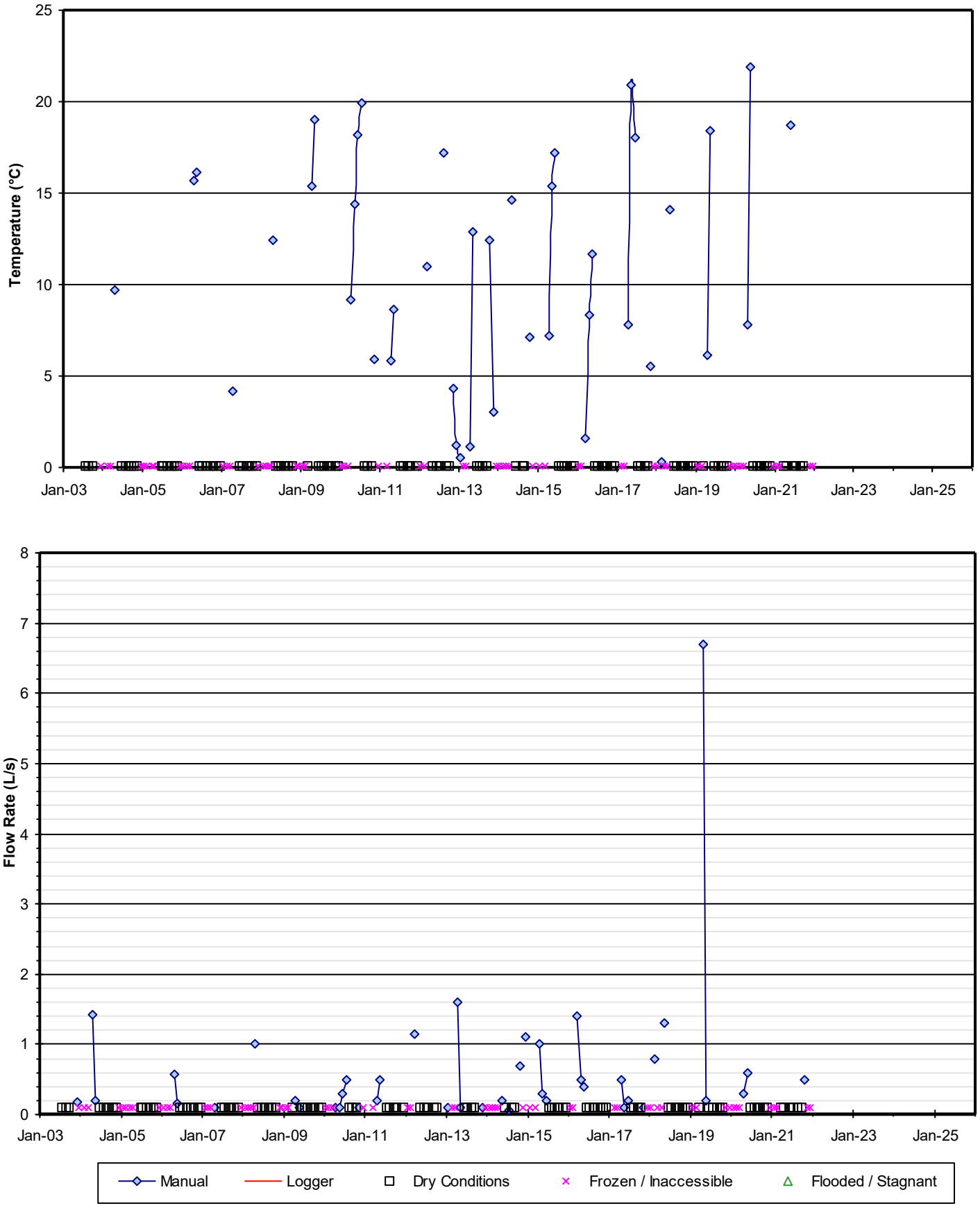
**Figure C-36 Surface Water Temperature and Flow**

**SW21C - Upstream of SW21B**



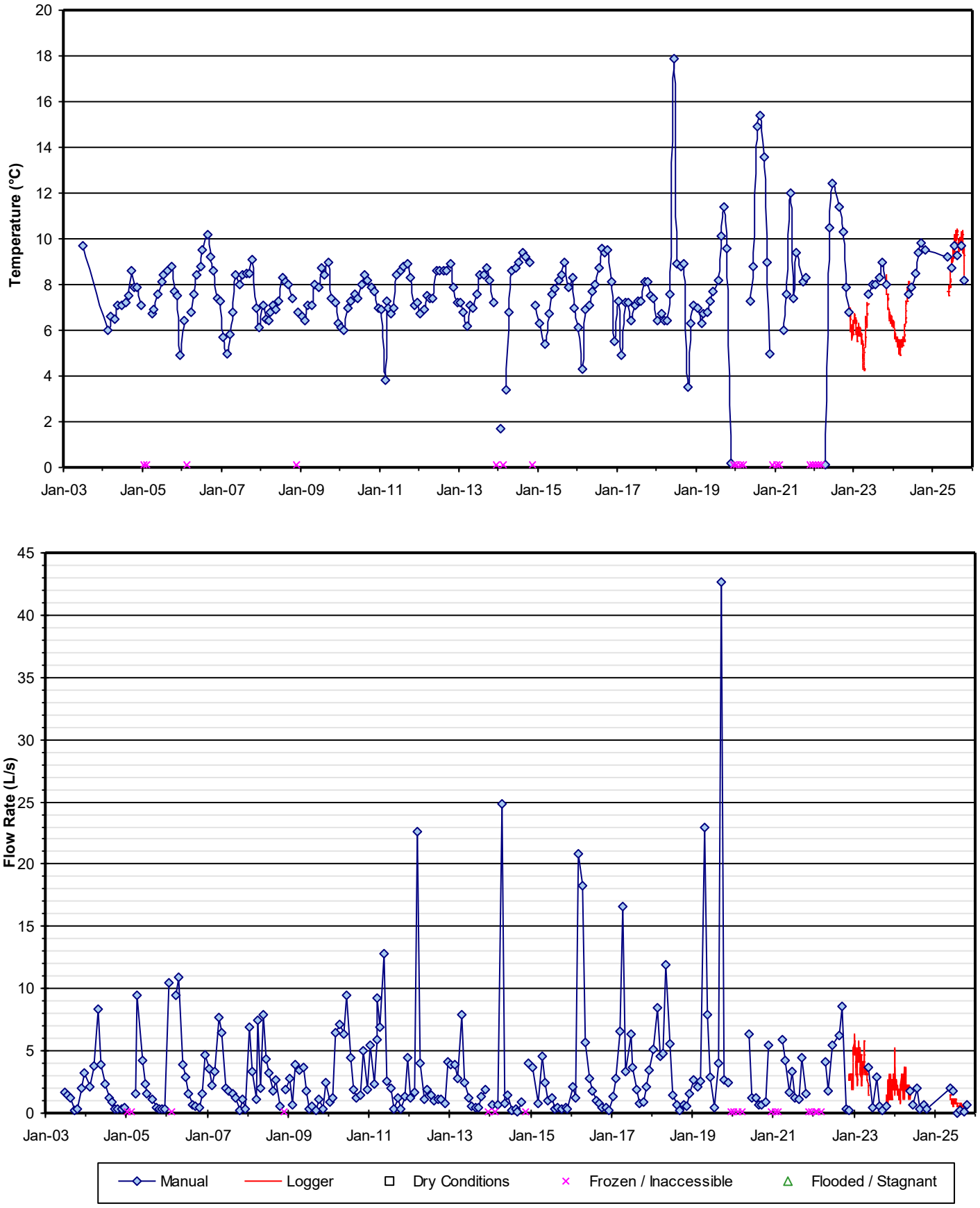
## Figure C-37 Surface Water Temperature and Flow

### SW21D - Escarpment Seep Upstream of Franks Pond



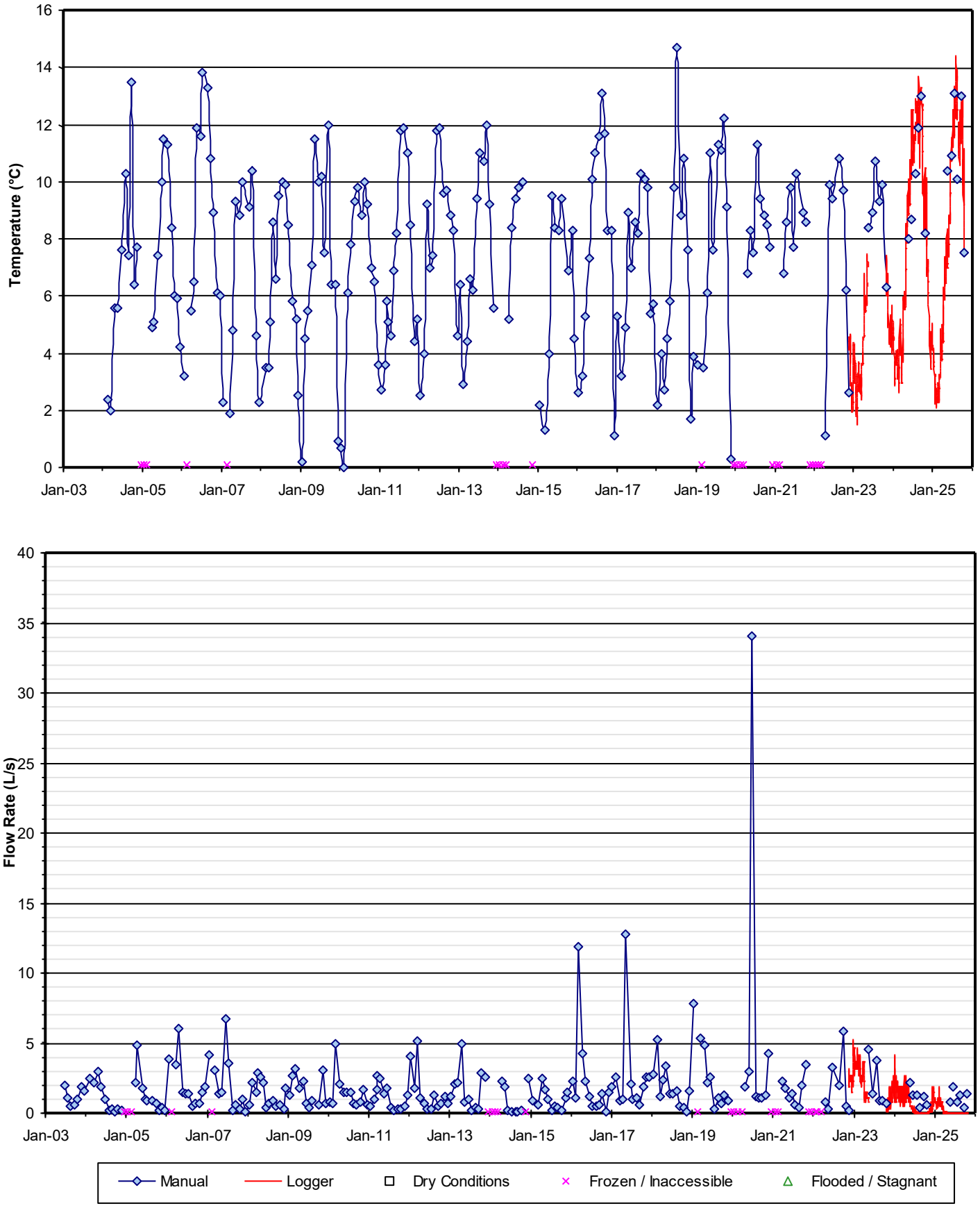
## Figure C-38 Surface Water Temperature and Flow

### SW22 - Escarpment Seep on Sampson Property to Batteaux Creek



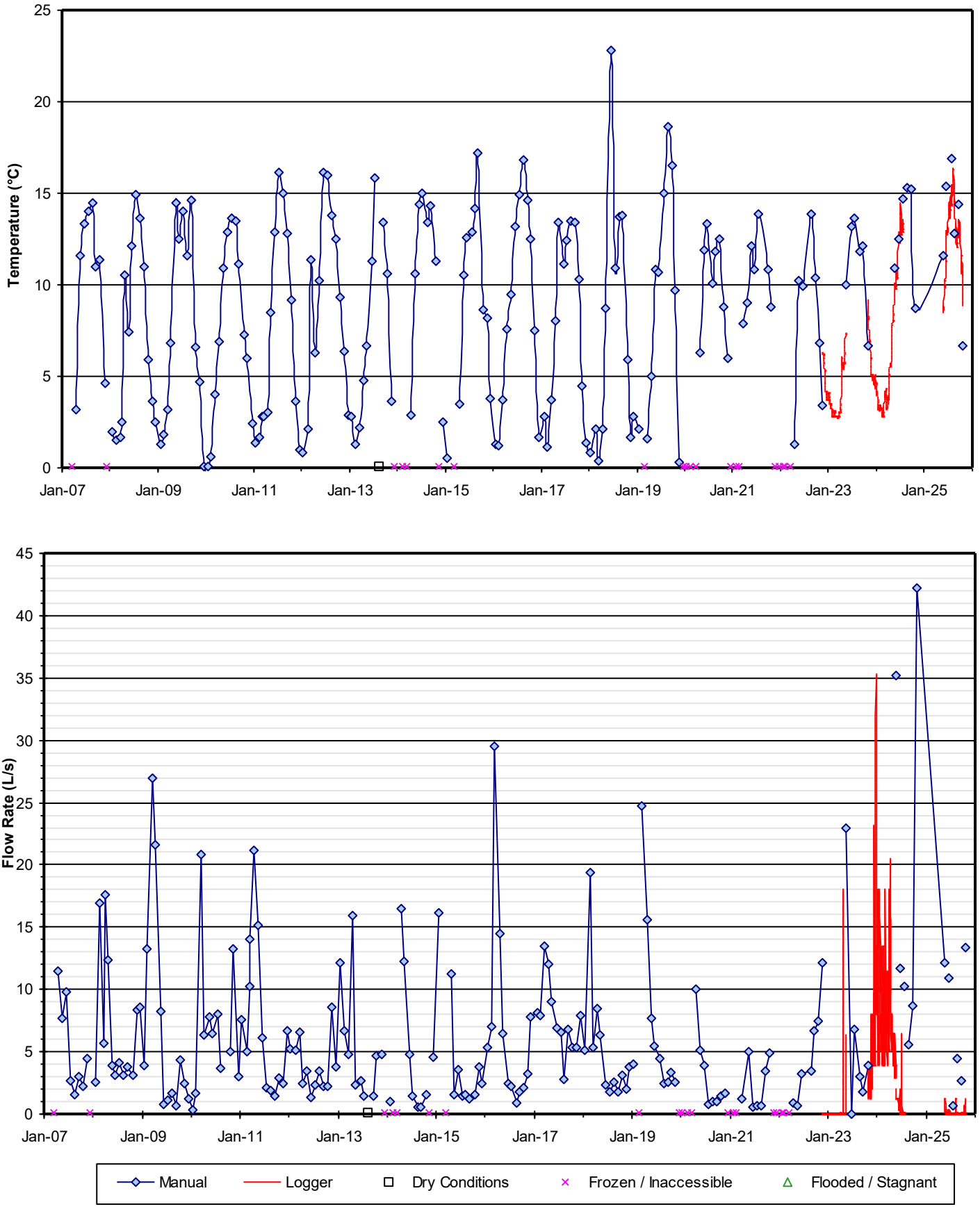
## Figure C-39 Surface Water Temperature and Flow

### SW22A - Escarpment Seep on Sampson Property to Batteaux Creek



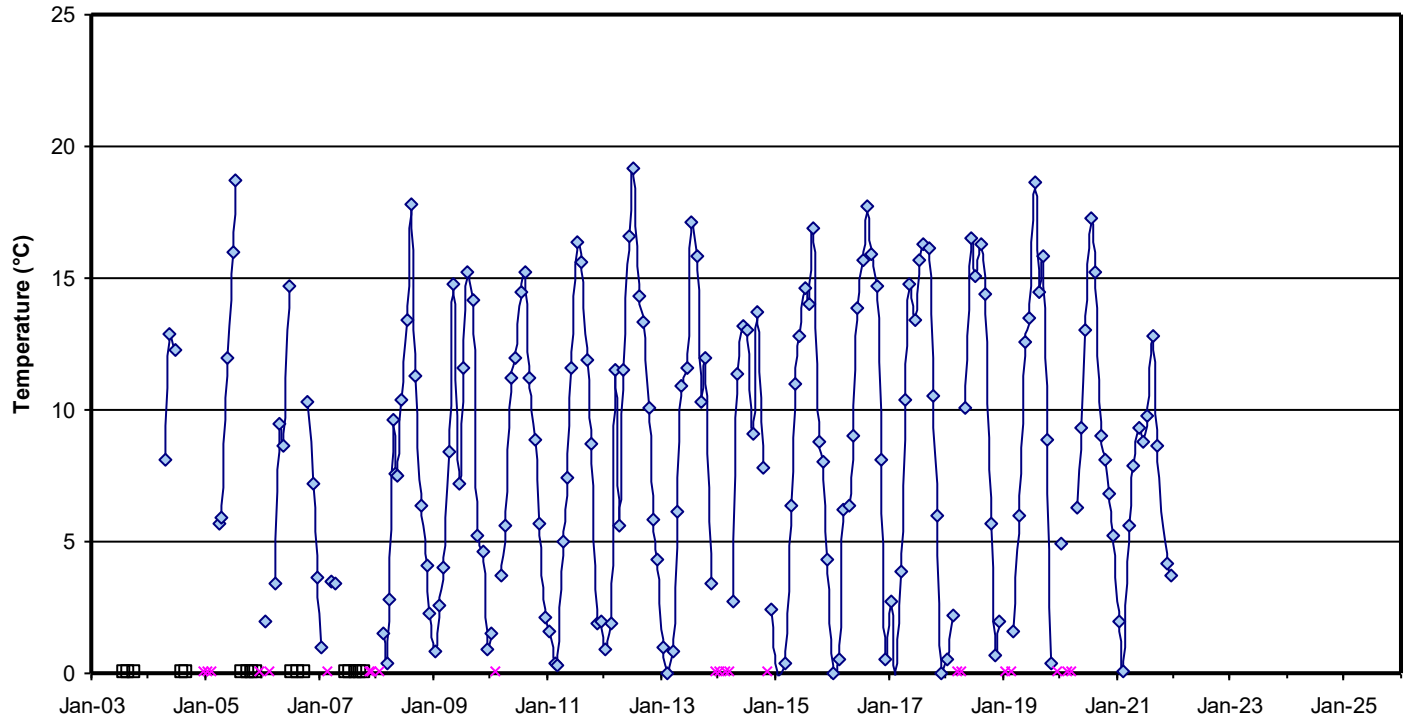
## Figure C-40 Surface Water Temperature and Flow

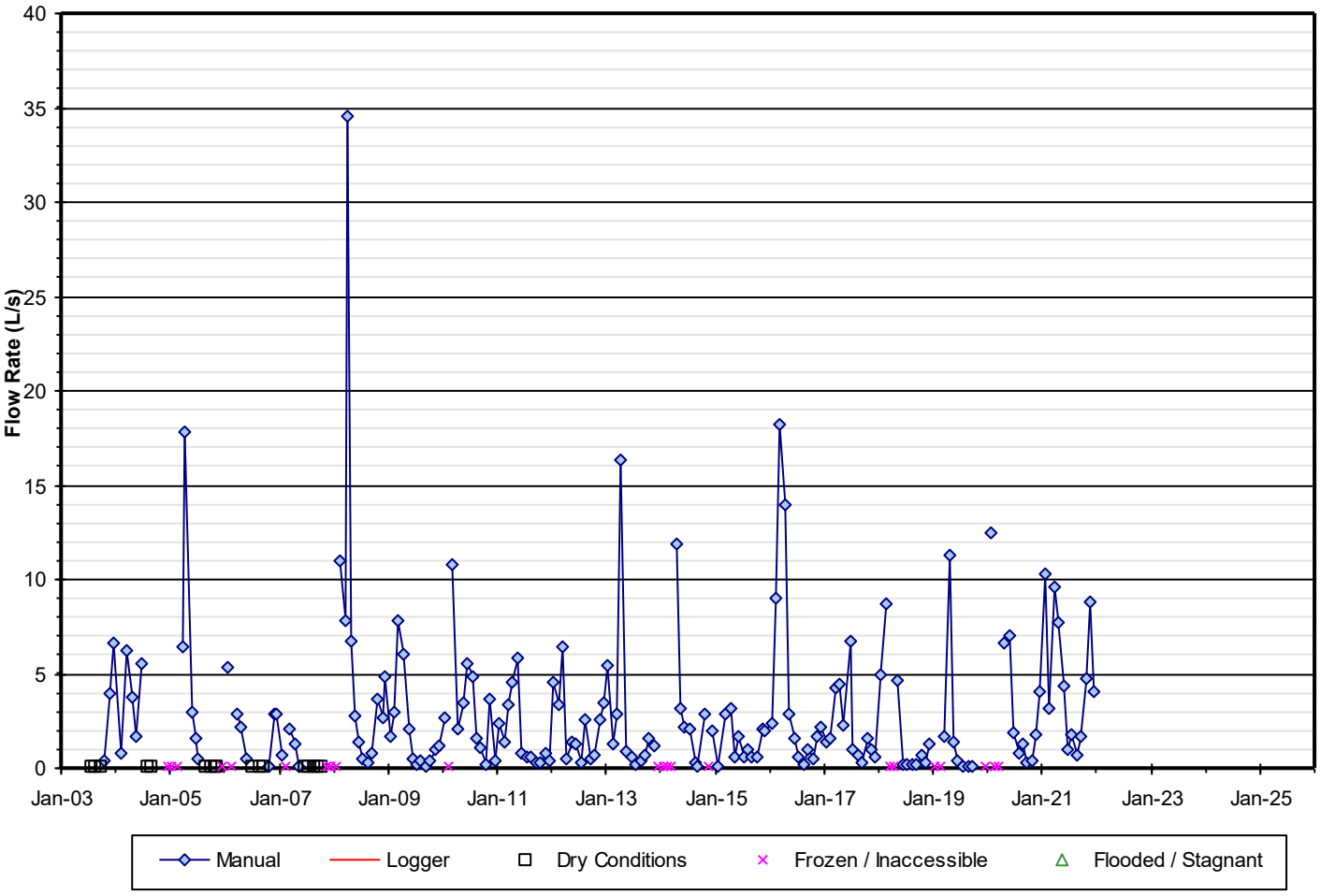
### SW22C - Escarpment Seep on Sampson Property to Batteaux Creek



## Figure C-41 Surface Water Temperature and Flow

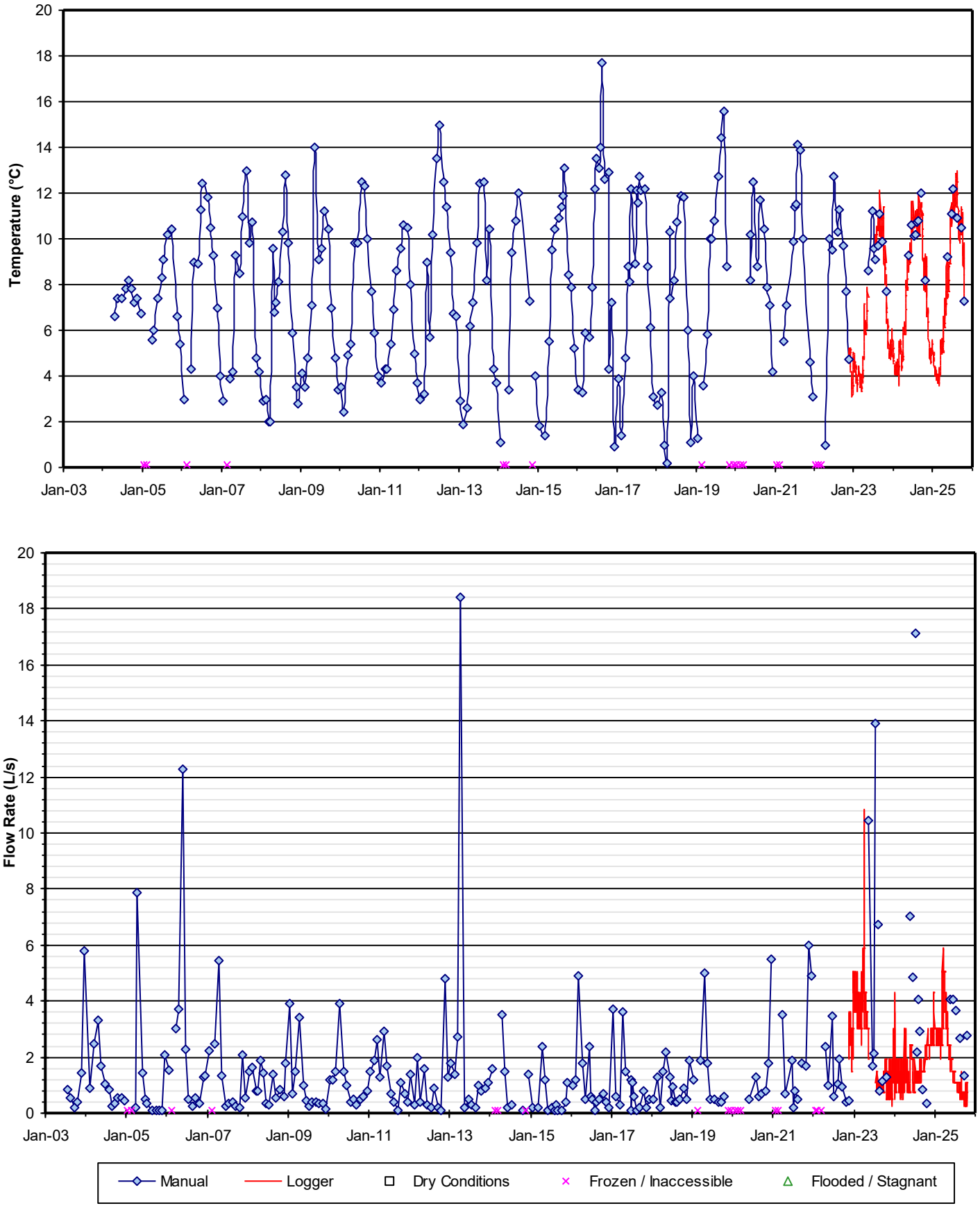
### SW24 - Sestito Pond Inlet from Franks Property



## Figure C-42 Surface Water Temperature and Flow

### SW24A - Escarpment Seep on Sestito Property



## Figure C-43 Surface Water Temperature and Flow

### SW24B - Escarpment Seep Inlet to Sestito Pond

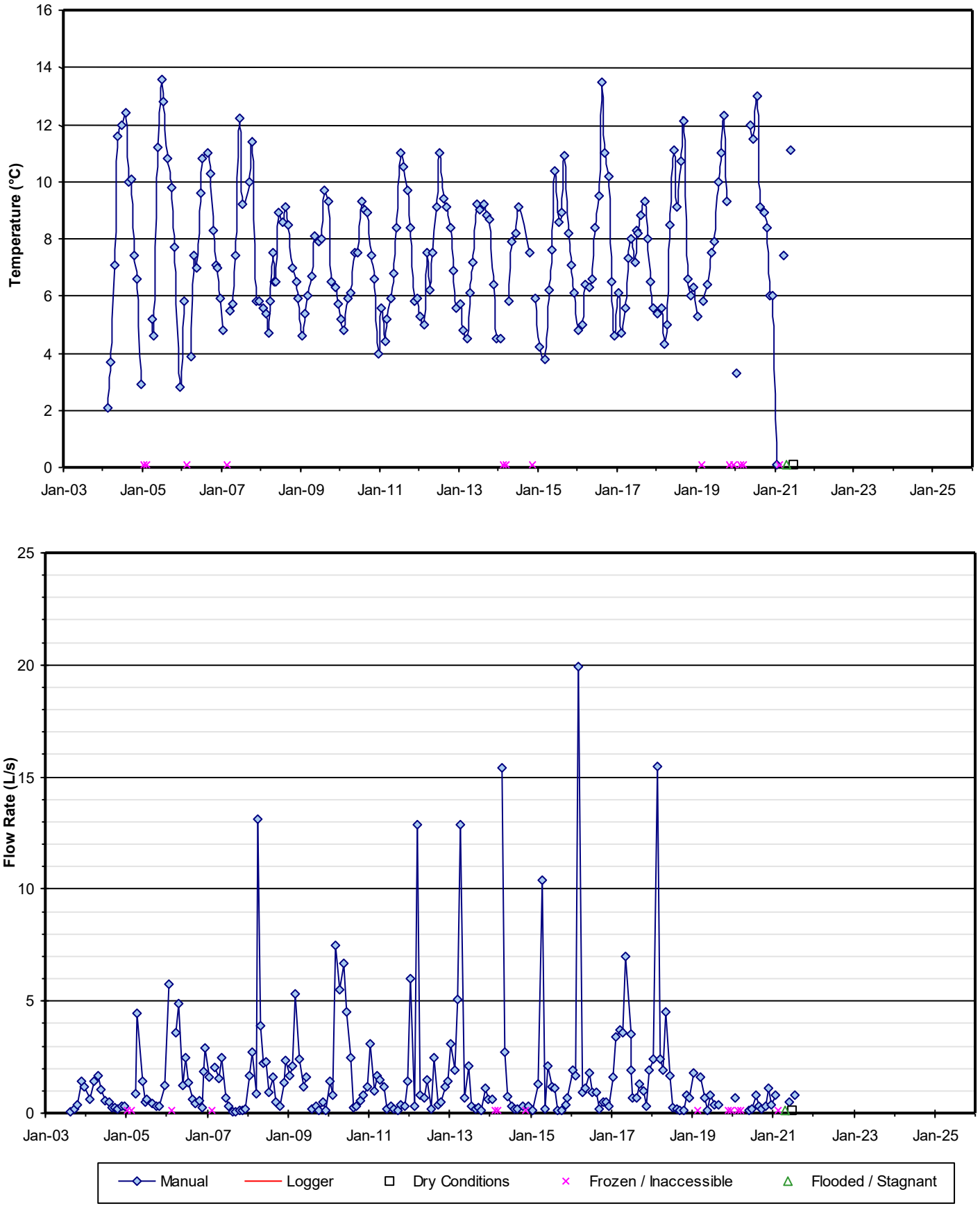


**Figure C-44 Surface Water Temperature and Flow**

**SW24C - Upstream of Sestito Pond Inlet**

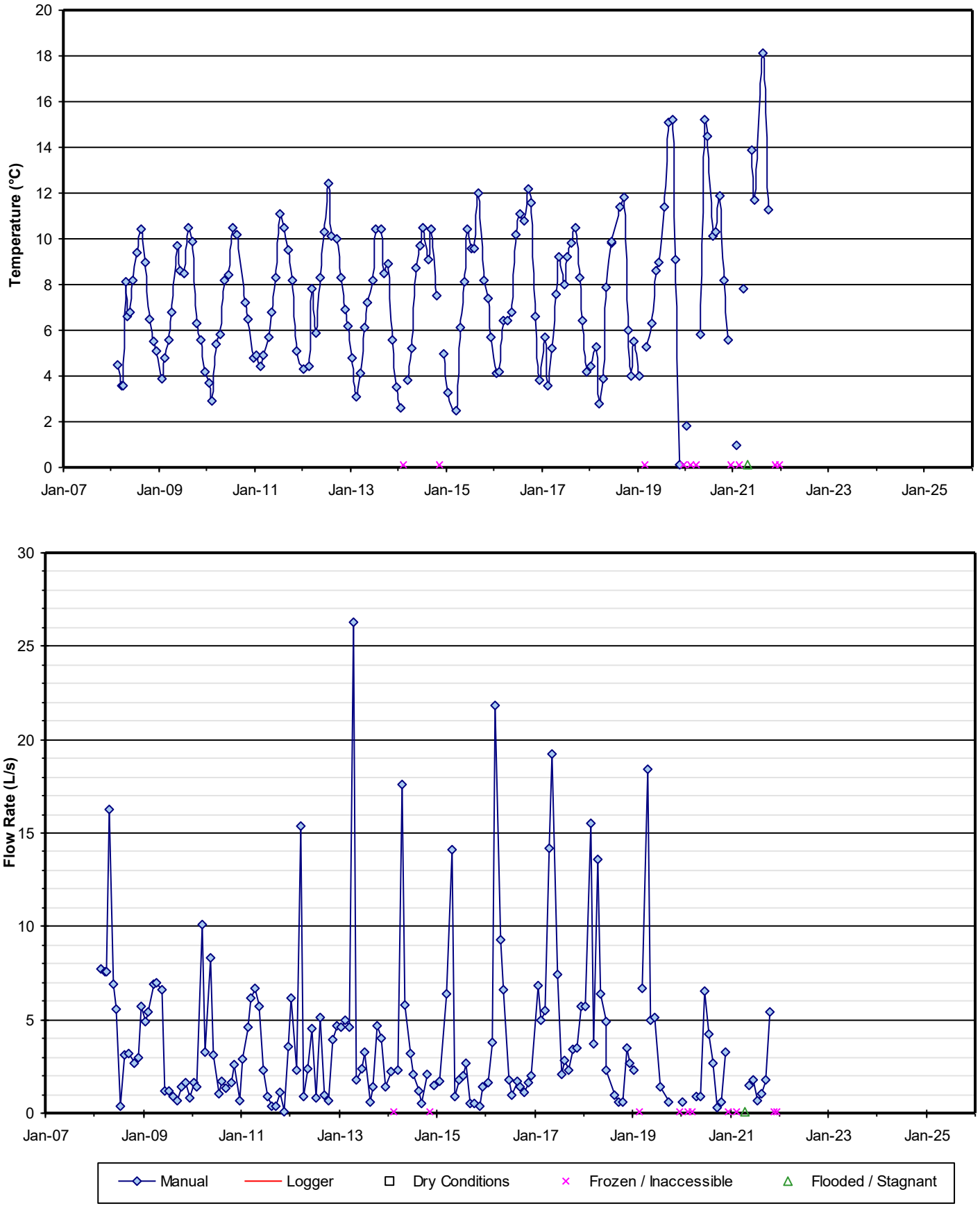
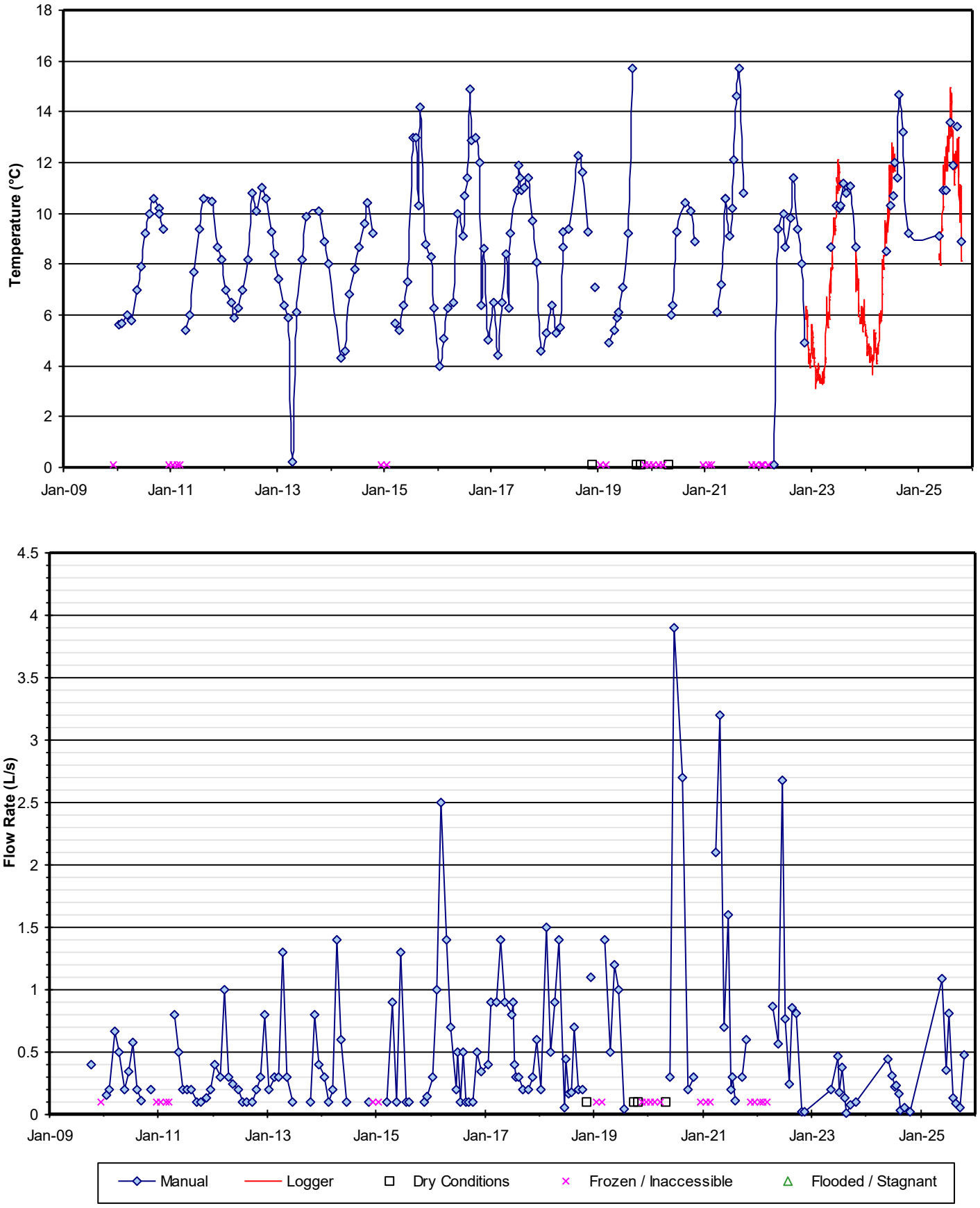


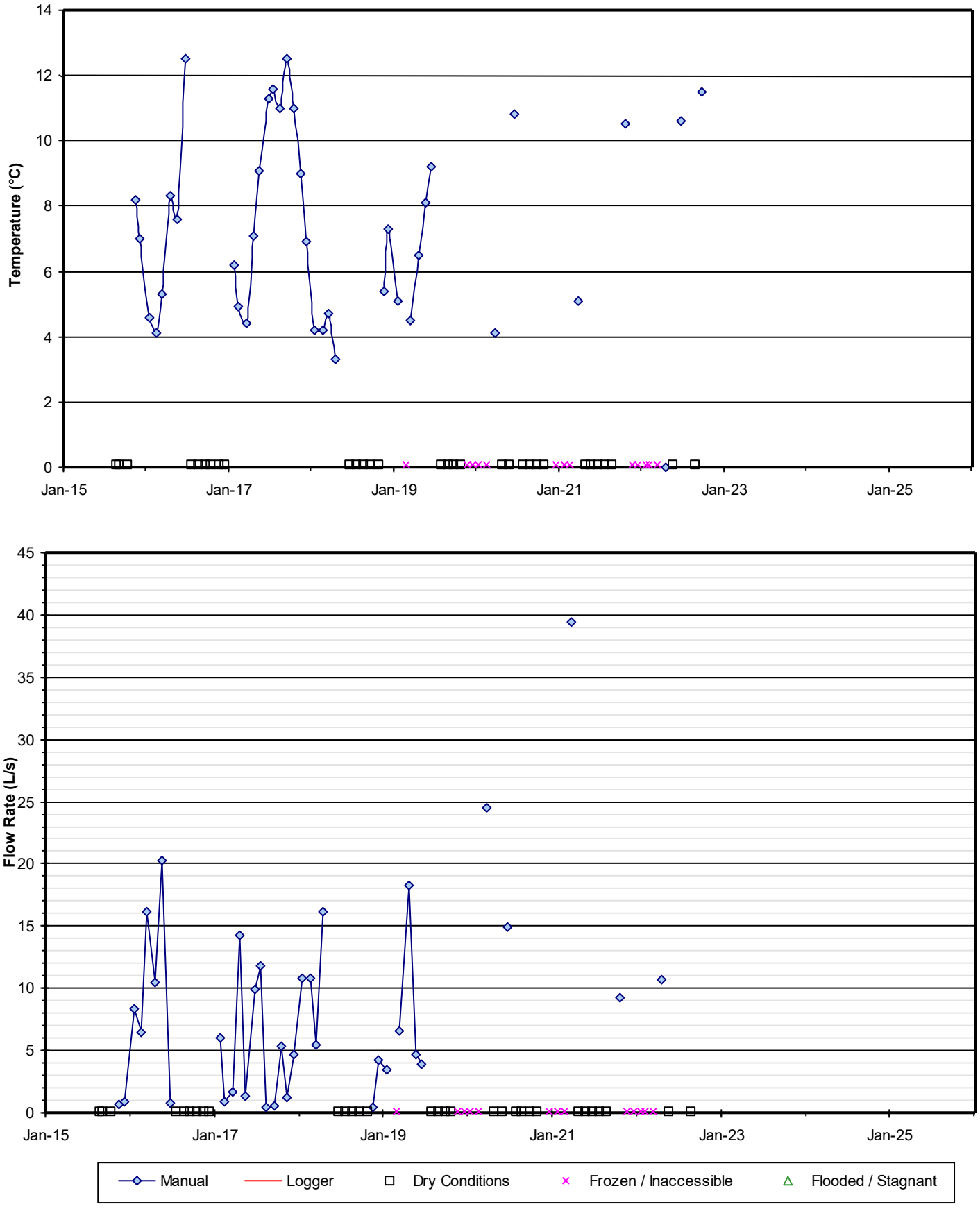
**Figure C-45 Surface Water Temperature and Flow**

**SW77 - Escarpment Seep to Pretty River**



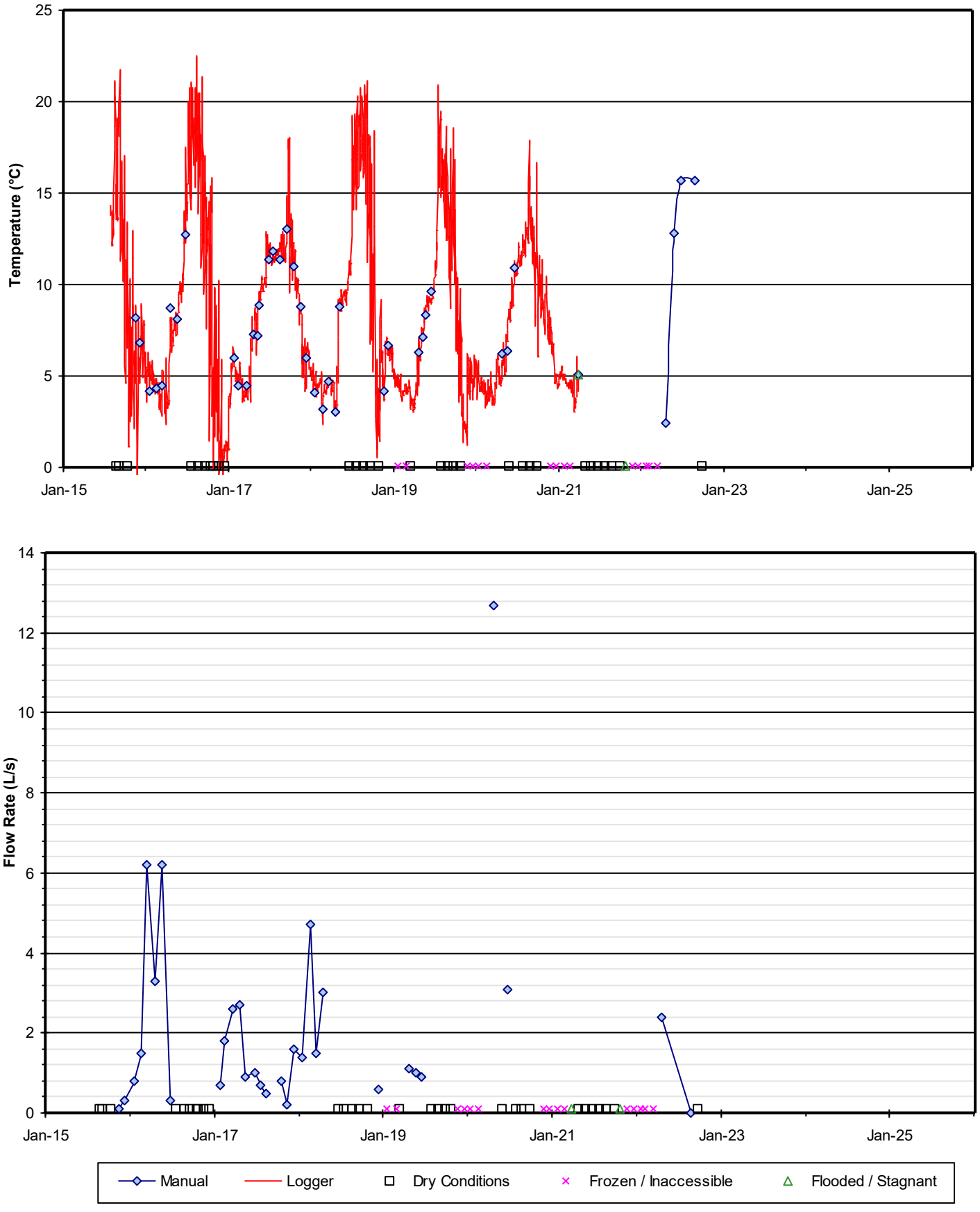
## Figure C-46 Surface Water Temperature and Flow

### SW3C - Rob Roy Swamp 3 Pond Outflow



## Figure C-47 Surface Water Temperature and Flow

### SW3B - Rob Roy Swamp 3 Karst Sinkpoint Channel



## Figure C-48 Surface Water Temperature and Flow

### Pretty River Control

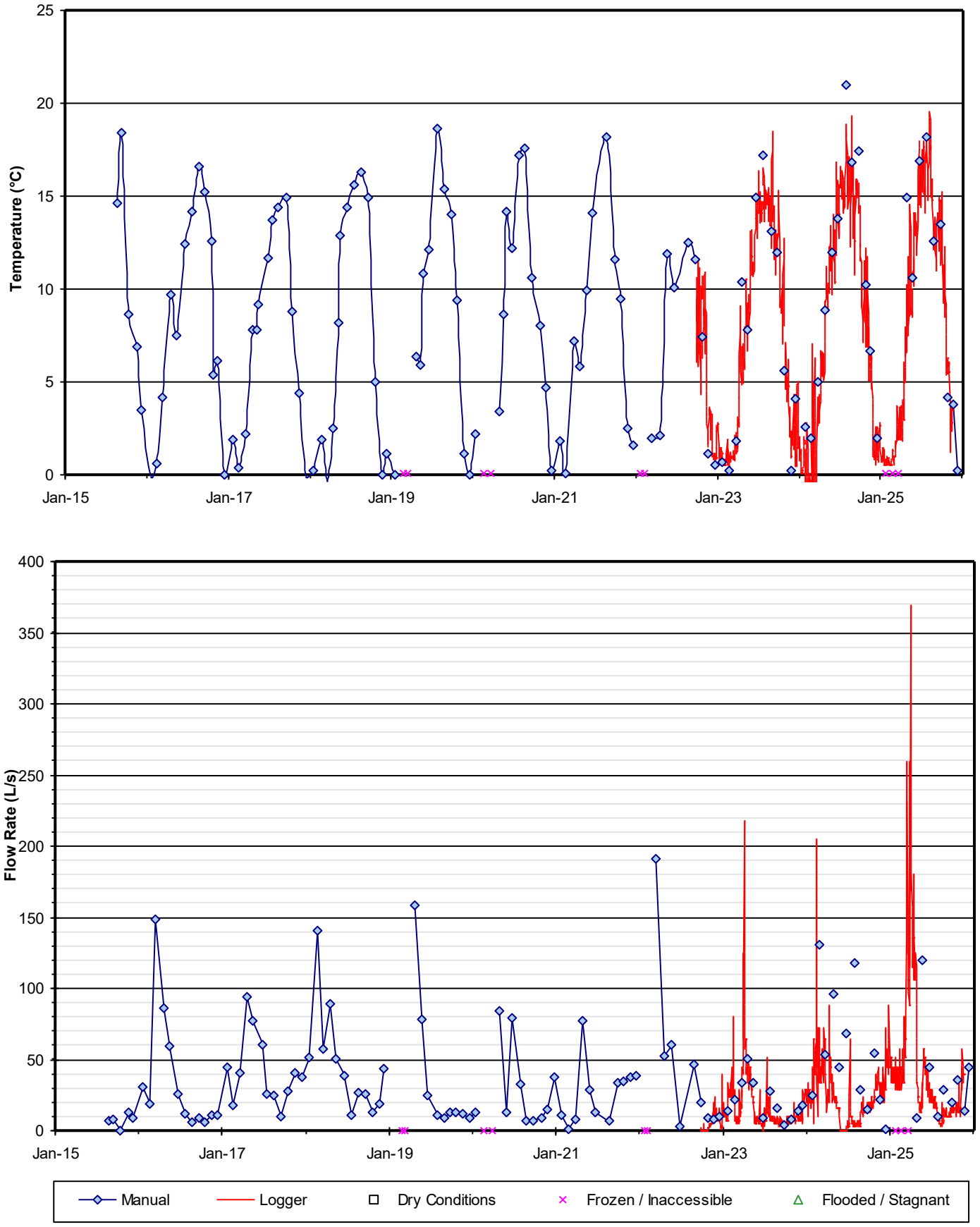
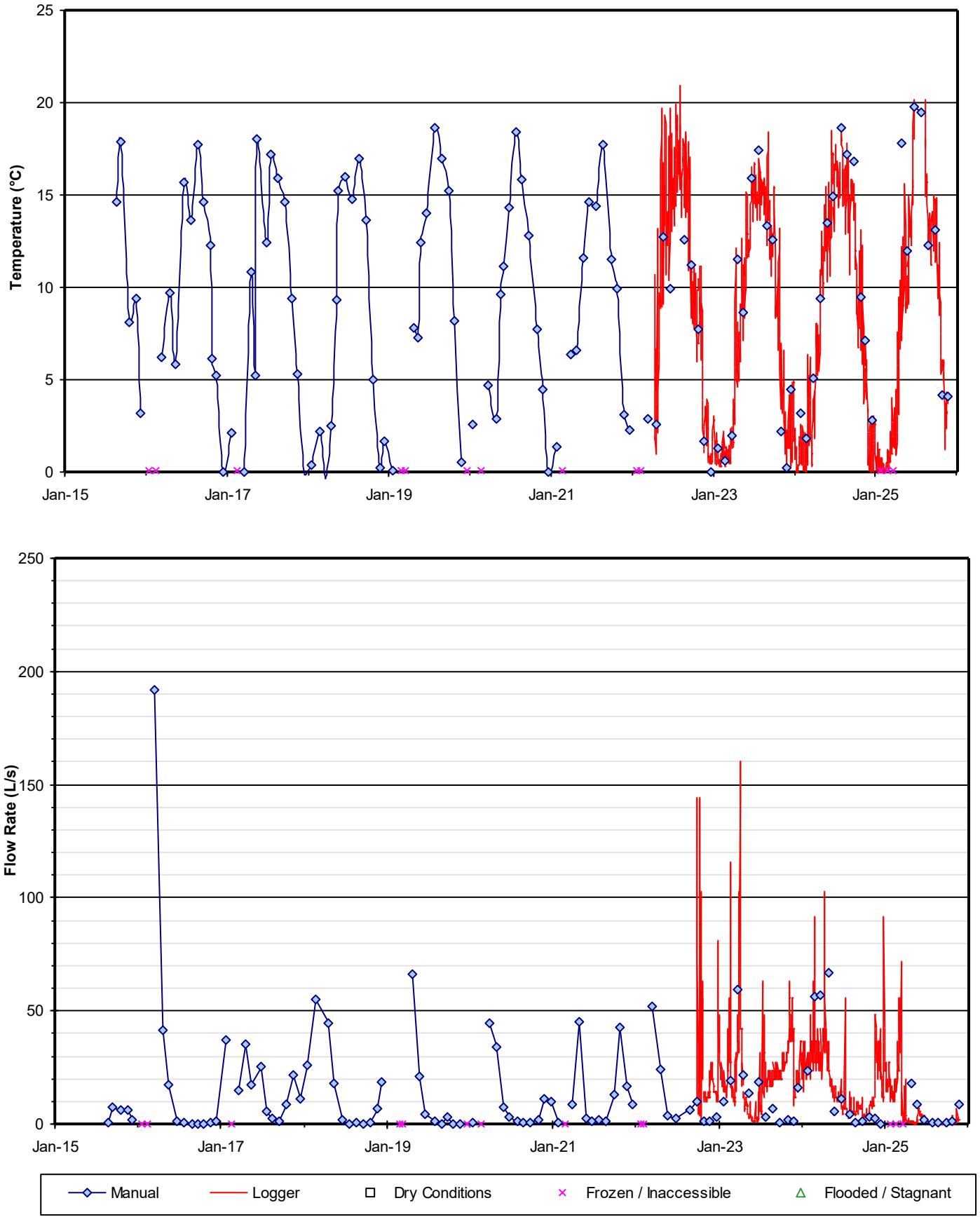


**Figure C-49 Surface Water Temperature and Flow**

**Batteaux Creek Control**



# Appendix C Table Notation for Surface Water Chemical Results



| Notation | Description | | |
|---|---|---|---|
| mg/L | milligrams per Litre<br>• values in mg/L unless otherwise noted | Colour | provided in True Colour Units (TCU) |
| | | Turbidity | provided in Nephelometric Turbidity Units (NTU) |
| pH | provided in Scientific Units | T D S | Total Dissolved Solids |
| E C | Electrical Conductivity<br>provided in microSiemens per centimetre | T S S | Total Suspended Solids |
| | | T K N | Total Kjeldahl Nitrogren |
| T | Temperature<br>provided in degrees Celsius | T P | Total Phosphorus |
| | | Total Coliforms | provided in colony forming units (cfu) per 100 mL (cfu / 100 mL) |
| D O | Dissolved Oxygen | E.Coli | |
| Flow Rate | provided in L/s | Heterotropic Plate Count | provided in cfu / mL |
| µg/L | micrograms per Litre | | |
| VOC Results | provided in ug/L | | |
| **QA / QC** | | | |
| RDL | laboratory reported detection limit | | |
| RPD | relative percent difference, provided in % | | |
| | bold and shading indicates RPD greater than 20% or >2 RDL | | |
| **PWQO** | Provincial Water Quality Objectives (MECP, 1994 and updates) | | |
| *i* | interim PWQO | | |
| *nc* | no PWQO criteria | | |
| | shading indicates an exceedance of the PWQO criteria | | |
| ***a*** | **dissolved oxygen** is temperature dependent:<br>value should not be less than the range of 4 mg/L (0 °C) to 7 mg/L (25 °C) for warm water biota | | |
| ***b*** | **turbidity** suspended matter should not be added to surface water in concentrations that will<br>change the natural Secchi disc reading by more than 10% | | |
| ***c*** | **alkalinity** should not decrease by more than 25% of the natural concentration:<br>calculated on an event specific basis from background station SW1 when sampled | | |
| ***d*** | **un-ionized ammonia** value calculated value using the fraction (*f*) of $NH_3$ from: $f = 1 \div (10^{pKa-pH} + 1)$<br>*where:* pKa = 0.09018 + 2729.92 ÷ T<br>T = ambient water temperature in Kelvin (K)<br>K = °C + 273.16<br>Field pH and temperature values and laboratory total ammonia results are used in the equation | | |
| ***e*** | **total phosphorus** does not have a firm objective:<br>excessive plant growth in rivers and streams should be eliminated at a concenctration below 0.03 mg/L | | |
| ***f*** | **oil & grease** should not be present in concentrations that:<br>can be detected as a visible film, sheen or discolouration on the surface<br>can be detected by odour<br>can cause tainting of edible aquatic organisms<br>can form deposits on shorelines and bottom sediments that are detectable by sight or odour, or are deleterious to resident aquatic organisms | | |

## Appendix C Table Notation for Surface Water Chemical Results

| *Notation* | *Description* |
|---|---|
| (1) | Station dry / stagnant |
| (2) | Station frozen and / or snow covered, in some cases field results were not measurable |
| (3) | Station inaccessible, in some cases only for flow measurement |
| (4) | Flow measured <0.1 L/s |
| (5) | Station flooded |
| (6) | Anomalous data |
| (7) | No Data: Overgrown with Target (NDOGT) |
| blank | data not available |
| < value | parameter not detected above associated laboratory reported detection limit |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations



| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 8-Jul-96 | 3.4 | | | |
| 6-Sep-96 | 47.0 | 1.4 | | |
| 23-Dec-96 | 11.3 | 11.3 | | |
| 26-Feb-97 | 91.2 | 55.2 | | |
| 8-May-97 | 42.1 | 24.0 | | |
| 26-Aug-97 | 7.0 | 3.6 | | |
| 19-Dec-97 | 4.5 | 9.4 | | |
| 27-Feb-98 | | | | |
| 8-Apr-98 | 32.2 | 2.7 | | |
| 10-Aug-98 | (1) | 1.7 | | |
| 29-Dec-98 | | | | |
| 24-Feb-99 | | | | |
| 28-Apr-99 | 7.1 | 5.8 | 29.1 | |
| 26-May-99 | 15.0 | 4.0 | 19.5 | |
| 29-Jun-99 | 1.0 | 2.0 | | |
| 26-Jul-99 | (1) | 0.5 | | |
| 17-Aug-99 | (1) | 1.0 | | |
| 27-Sep-99 | (1) | 0.4 | | |
| 25-Oct-99 | 18.0 | 1.8 | | |
| 21-Nov-99 | 25.0 | 6.0 | | |
| 21-Dec-99 | | | | |
| 25-Jan-00 | (2) | 14.3 | | |
| 29-Feb-00 | 98.0 | 17.4 | | |
| 31-Mar-00 | 41.0 | 8.0 | | |
| 2-Jun-00 | 51.6 | 11.5 | | |
| 8-Jun-00 | 35.0 | 8.9 | | |
| 15-Jun-00 | 107.0 | 23.6 | | |
| 22-Jun-00 | 93.6 | 15.8 | | |
| 29-Jun-00 | 106.0 | 14.0 | | |
| 7-Jul-00 | 57.0 | 12.0 | | |
| 13-Jul-00 | 45.0 | 10.0 | | |
| 20-Jul-00 | 54.0 | 13.0 | | |
| 27-Jul-00 | 49.0 | 11.0 | | |
| 3-Aug-00 | 58.8 | 17.0 | | |
| 17-Aug-00 | 27.0 | 6.0 | | |
| 24-Aug-00 | 29.0 | 5.0 | | |
| 29-Aug-00 | 27.0 | 5.0 | | |
| 7-Sep-00 | 23.0 | 5.0 | | |
| 14-Sep-00 | 23.0 | 5.0 | | |
| 21-Sep-00 | 13.0 | 1.0 | | |
| 28-Sep-00 | 16.0 | 5.0 | | |
| 5-Oct-00 | 25.0 | 9.0 | | |
| 12-Oct-00 | 29.0 | 9.0 | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 19-Oct-00 | 32.0 | 10.0 | | |
| 26-Oct-00 | 24.0 | 6.0 | | |
| 2-Nov-00 | 68.0 | 7.0 | | |
| 9-Nov-00 | 40.0 | 8.0 | | |
| 16-Nov-00 | 71.0 | 7.0 | | |
| 18-Nov-00 | 46.1 | | | |
| 24-Nov-00 | 41.0 | 5.0 | | |
| 30-Nov-00 | 45.7 | 13.2 | | |
| 21-Dec-00 | 45.0 | | | |
| 16-Feb-01 | 35.0 | 11.9 | | |
| 22-Feb-01 | 62.0 | 11.0 | | |
| 1-Mar-01 | 99.0 | 11.1 | | |
| 8-Mar-01 | 64.0 | 13.2 | | |
| 15-Mar-01 | 72.0 | 12.5 | | |
| 22-Mar-01 | 54.0 | 11.0 | | |
| 29-Mar-01 | 53.0 | 9.0 | | |
| 6-Apr-01 | 72.0 | 28.7 | | |
| 12-Apr-01 | 152.0 | 35.0 | | |
| 19-Apr-01 | 191.0 | 42.0 | | |
| 26-Apr-01 | 110.0 | 19.0 | | |
| 2-May-01 | 94.0 | 13.0 | | |
| 10-May-01 | 76.0 | 8.0 | | |
| 17-May-01 | 56.0 | 6.0 | | |
| 24-May-01 | 74.0 | 6.0 | | |
| 31-May-01 | 45.5 | 6.0 | | |
| 7-Jun-01 | 47.0 | 5.0 | | |
| 12-Jun-01 | 49.8 | 5.0 | | |
| 21-Jun-01 | (1) | 3.9 | | |
| 28-Jun-01 | 66.0 | 4.0 | | |
| 5-Jul-01 | 30.0 | 11.0 | | |
| 12-Jul-01 | 32.0 | 1.9 | | |
| 19-Jul-01 | 16.0 | 2.0 | | |
| 26-Jul-01 | 10.0 | 2.0 | | |
| 30-Jul-01 | 13.0 | 2.0 | | |
| 9-Aug-01 | 13.0 | 3.0 | | |
| 16-Aug-01 | 14.0 | 1.0 | | |
| 23-Aug-01 | 21.2 | 2.0 | | |
| 30-Aug-01 | 35.3 | 1.5 | | |
| 6-Sep-01 | 30.0 | 2.0 | | |
| 13-Sep-01 | 46.0 | 2.0 | | |
| 20-Sep-01 | 38.0 | 2.0 | | |
| 27-Sep-01 | 35.8 | 2.2 | | |
| 4-Oct-01 | 38.1 | 2.4 | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 11-Oct-01 | 34.4 | 2.2 | 9.2 | |
| 18-Oct-01 | 51.7 | 10.2 | | |
| 24-Oct-01 | 73.0 | 13.0 | | |
| 1-Nov-01 | 93.0 | 12.0 | | |
| 6-Nov-01 | 85.9 | 11.7 | | |
| 15-Nov-01 | 97.6 | 10.4 | | |
| 29-Nov-01 | 81.4 | 12.8 | | |
| 6-Dec-01 | 73.9 | | | |
| 12-Dec-01 | 72.6 | | | |
| 4-Jan-02 | 70.0 | 8.0 | | |
| 10-Jan-02 | 60.0 | 6.0 | | |
| 16-Jan-02 | 57.5 | 7.0 | | |
| 24-Jan-02 | 53.0 | 8.0 | | |
| 31-Jan-02 | 55.0 | 6.0 | | |
| 7-Feb-02 | 58.5 | 7.0 | | |
| 14-Feb-02 | 51.0 | 7.0 | | |
| 21-Feb-02 | 64.0 | 21.0 | | |
| 28-Feb-02 | 71.5 | 14.0 | | |
| 7-Mar-02 | 74.0 | 15.0 | | |
| 14-Mar-02 | 94.5 | 35.0 | | |
| 21-Mar-02 | 80.5 | 24.0 | | |
| 28-Mar-02 | 78.0 | 14.0 | | |
| 4-Apr-02 | 86.5 | 17.0 | | |
| 12-Apr-02 | 104.0 | 42.0 | | |
| 18-Apr-02 | 92.5 | 25.0 | | |
| 25-Apr-02 | 86.0 | 15.0 | | |
| 16-May-02 | 79.0 | 18.0 | | |
| 23-May-02 | 62.5 | 15.0 | | |
| 30-May-02 | 67.0 | 11.0 | | |
| 6-Jun-02 | 46.0 | 7.5 | | |
| 13-Jun-02 | 90.0 | 8.0 | | |
| 20-Jun-02 | 45.0 | 5.0 | | |
| 28-Jun-02 | 48.5 | 6.0 | | |
| 4-Jul-02 | (4) | 2.0 | | |
| 11-Jul-02 | 38.0 | 3.0 | | |
| 18-Jul-02 | 1.0 | 2.0 | | |
| 25-Jul-02 | 19.5 | 3.6 | | |
| 1-Aug-02 | 36.6 | 2.1 | | |
| 8-Aug-02 | 16.5 | 1.3 | 2.2 | |
| 15-Aug-02 | 36.1 | 10.0 | | |
| 23-Aug-02 | 40.3 | | | |
| 30-Aug-02 | 21.7 | 3.7 | | |
| 6-Sep-02 | 16.0 | 1.5 | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 13-Sep-02 | 20.7 | 1.1 | | |
| 19-Sep-02 | 1.0 | 1.0 | | |
| 26-Sep-02 | 46.6 | 1.0 | | |
| 3-Oct-02 | 56.4 | 1.0 | | |
| 11-Oct-02 | (1) | 1.0 | | |
| 17-Oct-02 | (1) | 1.0 | | |
| 25-Oct-02 | 92.0 | 1.0 | | |
| 1-Nov-02 | 62.2 | 1.0 | | |
| 8-Nov-02 | (4) | 1.0 | | |
| 15-Nov-02 | 66.2 | 1.0 | | |
| 22-Nov-02 | 56.1 | 1.0 | | |
| 28-Nov-02 | 54.0 | 1.6 | | |
| 6-Dec-02 | 36.6 | 1.0 | | |
| 12-Dec-02 | 31.4 | 1.0 | | |
| 20-Dec-02 | 20.2 | 5.5 | | |
| 3-Jan-03 | 29.5 | 2.5 | | |
| 10-Jan-03 | 20.8 | 2.3 | | |
| 16-Jan-03 | 22.8 | (2) | | |
| 24-Jan-03 | 24.2 | (2) | | |
| 31-Jan-03 | 22.0 | (2) | | |
| 7-Feb-03 | 20.7 | (2) | | |
| 14-Feb-03 | 19.6 | (2) | | |
| 21-Feb-03 | 17.1 | (2) | | |
| 28-Feb-03 | 18.5 | (2) | | |
| 7-Mar-03 | 16.4 | (2) | | |
| 14-Mar-03 | 17.8 | (2) | | |
| 21-Mar-03 | 23.0 | 26.7 | | |
| 28-Mar-03 | 134.9 | 38.3 | | |
| 4-Apr-03 | 119.5 | 26.7 | | |
| 9-Apr-03 | 61.0 | 12.6 | | |
| 17-Apr-03 | 94.6 | 27.0 | | |
| 25-Apr-03 | 60.4 | 13.2 | | |
| 2-May-03 | 88.9 | 21.1 | | |
| 9-May-03 | 96.7 | 7.9 | | |
| 15-May-03 | 87.7 | 5.7 | | |
| 22-May-03 | 11.9 | 5.0 | | |
| 29-May-03 | (1) | 11.8 | | |
| 9-Jun-03 | 19.3 | 8.3 | | |
| 13-Jun-03 | 17.3 | 9.6 | | |
| 23-Jun-03 | 89.6 | 5.8 | | |
| 4-Jul-03 | 69.8 | 4.0 | | |
| 11-Jul-03 | 54.2 | 3.4 | | |
| 18-Jul-03 | 42.7 | 3.6 | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 22-Jul-03 | 2.6 | 3.6 | | |
| 24-Jul-03 | 4.5 | 2.8 | | |
| 31-Jul-03 | 42.6 | 2.8 | | |
| 8-Aug-03 | 3.6 | 4.3 | | |
| 15-Aug-03 | (1) | 2.3 | | |
| 20-Aug-03 | (1) | 2.6 | | |
| 27-Aug-03 | 35.2 | 1.6 | | |
| 5-Sep-03 | (1) | 2.3 | | |
| 11-Sep-03 | 22.9 | 1.4 | | |
| 18-Sep-03 | 13.5 | 0.8 | | |
| 25-Sep-03 | 0.7 | 0.5 | | |
| 2-Oct-03 | 33.1 | 0.8 | | |
| 9-Oct-03 | (1) | 0.4 | | |
| 17-Oct-03 | 58.3 | 1.7 | | |
| 23-Oct-03 | (4) | 1.4 | | |
| 31-Oct-03 | 49.5 | 3.2 | | |
| 7-Nov-03 | 46.6 | 8.0 | | |
| 17-Nov-03 | 67.8 | 11.1 | | |
| 28-Nov-03 | 60.4 | 13.3 | | |
| 19-Dec-03 | 55.8 | 12.5 | | |
| 31-Dec-03 | 55.8 | 15.7 | | |
| 12-Jan-04 | 106.1 | 16.8 | | |
| 16-Jan-04 | 76.9 | 13.0 | | |
| 20-Jan-04 | 68.8 | 9.8 | | |
| 30-Jan-04 | 58.9 | 6.6 | | |
| 6-Feb-04 | 49.2 | 5.4 | | |
| 12-Feb-04 | 44.4 | 4.6 | | |
| 24-Feb-04 | | | | 62.3 |
| 27-Feb-04 | 39.9 | 3.9 | | |
| 4-Mar-04 | 66.1 | 12.8 | | |
| 12-Mar-04 | 101.7 | 24.2 | | |
| 19-Mar-04 | 73.9 | 12.8 | | |
| 26-Mar-04 | 136.1 | 58.8 | | 114.7 |
| 2-Apr-04 | 117.1 | 58.1 | | 82.2 |
| 8-Apr-04 | 104.8 | 30.1 | | (5) |
| 16-Apr-04 | 86.7 | 19.9 | | (5) |
| 23-Apr-04 | 91.3 | 13.5 | | 153.2 |
| 30-Apr-04 | 62.4 | 10.5 | | 210.2 |
| 7-May-04 | 88.9 | 11.9 | | |
| 14-May-04 | 4.1 | 9.8 | | 217.0 |
| 20-May-04 | 18.2 | 7.6 | | 278.6 |
| 28-May-04 | 112.8 | 26.6 | | 308.7 |
| 4-Jun-04 | 95.6 | 10.6 | | 242.3 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 11-Jun-04 | 9.8 | 6.9 | | 172.2 |
| 17-Jun-04 | 84.6 | 6.9 | | 179.5 |
| 23-Jun-04 | | | | 125.1 |
| 24-Jun-04 | (1) | 5.9 | | |
| 1-Jul-04 | 44.7 | 3.8 | 7.7 | 108.3 |
| 9-Jul-04 | (1) | 3.7 | 3.5 | |
| 16-Jul-04 | 58.3 | 4.2 | 60.8 | 293.0 |
| 22-Jul-04 | 45.3 | 3.3 | 20.6 | 213.8 |
| 29-Jul-04 | 76.7 | 3.2 | 24.0 | 133.5 |
| 6-Aug-04 | (1) | 1.8 | 13.3 | 159.1 |
| 12-Aug-04 | (1) | 2.7 | 4.3 | 155.5 |
| 19-Aug-04 | 26.8 | | | |
| 20-Aug-04 | 36.5 | 6.6 | 19.8 | 84.2 |
| 26-Aug-04 | 36.5 | 2.4 | 9.5 | 116.9 |
| 3-Sep-04 | (1) | 1.3 | 4.9 | 176.6 |
| 9-Sep-04 | | 2.3 | 1.9 | 163.4 |
| 17-Sep-04 | 49.6 | 3.2 | 2.6 | 194.3 |
| 23-Sep-04 | (1) | | | |
| 26-Sep-04 | (1) | 2.1 | 9.5 | 126.7 |
| 1-Oct-04 | (1) | (4) | 6.6 | 128.9 |
| 7-Oct-04 | (1) | (4) | 0.1 | 86.9 |
| 14-Oct-04 | (1) | 3.2 | 1.2 | 77.1 |
| 20-Oct-04 | (1) | 0.9 | 31.3 | 122.7 |
| 24-Oct-04 | 42.4 | | | |
| 28-Oct-04 | (1) | 1.2 | 7.7 | 141.1 |
| 4-Nov-04 | 90.0 | 2.7 | 60.0 | 124.2 |
| 7-Nov-04 | 90.0 | | | |
| 11-Nov-04 | (1) | 1.7 | 42.4 | 78.0 |
| 19-Nov-04 | (1) | 1.8 | 10.2 | 97.6 |
| 25-Nov-04 | (1) | 0.4 | (1) | 88.8 |
| 2-Dec-04 | (1) | 0.3 | 23.3 | 87.8 |
| 9-Dec-04 | (1) | 3.9 | 23.8 | 71.9 |
| 17-Dec-04 | 0.6 | (2) | 19.2 | 57.6 |
| 29-Dec-04 | 44.1 | (2) | (2) | (2) |
| 5-Jan-05 | 59.4 | 10.7 | 108.9 | |
| 13-Jan-05 | (1) | 41.9 | 258.5 | |
| 20-Jan-05 | 79.2 | 18.1 | (2) | |
| 28-Jan-05 | 45.5 | 9.3 | (2) | 78.0 |
| 3-Feb-05 | 50.6 | 8.1 | (2) | 71.3 |
| 10-Feb-05 | (1) | 5.5 | (2) | 80.4 |
| 16-Feb-05 | 64.0 | 9.0 | (2) | 80.2 |
| 24-Feb-05 | 9.0 | 3.8 | (2) | |
| 3-Mar-05 | 3.3 | 5.7 | (2) | 59.5 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations



| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 10-Mar-05 | (1) | 9.4 | (2) | 67.6 |
| 17-Mar-05 | (4) | 9.4 | (2) | 62.6 |
| 24-Mar-05 | 38.5 | 8.9 | (2) | 68.5 |
| 30-Mar-05 | 71.4 | 15.6 | 124.3 | 77.0 |
| 7-Apr-05 | 15.2 | 46.6 | (5) | 65.7 |
| 15-Apr-05 | 121.8 | 49.9 | (5) | 233.4 |
| 21-Apr-05 | 90.8 | 39.8 | 253.6 | 319.3 |
| 28-Apr-05 | 70.3 | | | |
| 29-Apr-05 | | 43.1 | 348.6 | 323.8 |
| 6-May-05 | 60.1 | 19.4 | 116.2 | 268.9 |
| 13-May-05 | 21.7 | 11.3 | 73.4 | 272.0 |
| 20-May-05 | 21.2 | 8.7 | 68.5 | 356.3 |
| 27-May-05 | 44.4 | 7.4 | 90.8 | 268.7 |
| 3-Jun-05 | 23.5 | 5.8 | 62.2 | 258.3 |
| 10-Jun-05 | (1) | 4.6 | 8.5 | 273.4 |
| 17-Jun-05 | 11.0 | 5.1 | 53.8 | 283.9 |
| 24-Jun-05 | 1.1 | 3.7 | 4.9 | 313.2 |
| 30-Jun-05 | 9.3 | 3.8 | 3.6 | 346.8 |
| 7-Jul-05 | 4.6 | 3.1 | 10.6 | 244.5 |
| 15-Jul-05 | 25.0 | 2.7 | (1) | 238.6 |
| 21-Jul-05 | 16.2 | 1.8 | (1) | 226.1 |
| 28-Jul-05 | (1) | 1.7 | (1) | 251.2 |
| 2-Aug-05 | (1) | 1.7 | (1) | 256.0 |
| 12-Aug-05 | (1) | 1.4 | (1) | 309.1 |
| 19-Aug-05 | (1) | 1.4 | (1) | 373.3 |
| 24-Aug-05 | (1) | 0.6 | (1) | 263.0 |
| 1-Sep-05 | (1) | 0.8 | (1) | 201.0 |
| 9-Sep-05 | (1) | 0.8 | (1) | 436.8 |
| 16-Sep-05 | (1) | 0.6 | (1) | 258.7 |
| 23-Sep-05 | (1) | 0.3 | (1) | 317.2 |
| 30-Sep-05 | (1) | 1.0 | (1) | 371.9 |
| 7-Oct-05 | (1) | 0.9 | (1) | 280.3 |
| 14-Oct-05 | (1) | 0.8 | 0.1 | 357.7 |
| 21-Oct-05 | (1) | 0.5 | 1.9 | 256.0 |
| 28-Oct-05 | (1) | 0.6 | 10.1 | |
| 4-Nov-05 | (1) | 0.5 | 4.4 | 254.8 |
| 11-Nov-05 | (1) | 0.2 | 4.1 | 210.7 |
| 18-Nov-05 | 57.0 | 1.0 | 42.9 | 222.3 |
| 25-Nov-05 | 49.5 | 0.5 | | 231.2 |
| 2-Dec-05 | 51.5 | 2.0 | 32.7 | 221.8 |
| 9-Dec-05 | 44.1 | 1.9 | 28.5 | 175.0 |
| 16-Dec-05 | 45.8 | 1.8 | | (5) |
| 22-Dec-05 | 39.0 | 1.3 | 56.6 | 220.0 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 30-Dec-05 | 55.4 | 2.5 | | |
| 6-Jan-06 | 40.7 | 5.9 | | 207.8 |
| 13-Jan-06 | (1) | 10.0 | | 202.1 |
| 20-Jan-06 | 44.7 | 11.6 | 85.5 | 194.5 |
| 27-Jan-06 | 53.1 | 11.0 | 78.8 | 210.5 |
| 3-Feb-06 | 53.5 | 16.7 | 154.3 | 179.6 |
| 10-Feb-06 | 52.8 | 11.4 | 94.6 | 194.5 |
| 20-Feb-06 | 51.9 | 10.2 | (2) | 191.9 |
| 24-Feb-06 | 50.4 | 9.7 | (2) | 153.2 |
| 3-Mar-06 | 55.3 | 7.9 | (2) | 177.4 |
| 10-Mar-06 | 58.7 | 35.6 | 134.3 | 229.0 |
| 17-Mar-06 | 92.4 | 41.8 | | |
| 20-Mar-06 | | | | 208.2 |
| 24-Mar-06 | 74.4 | 21.4 | | 215.0 |
| 31-Mar-06 | 79.7 | 24.7 | | 266.8 |
| 7-Apr-06 | 162.9 | 35.1 | | (5) |
| 10-Apr-06 | 111.0 | 29.3 | | |
| 13-Apr-06 | 55.1 | 35.1 | | 274.4 |
| 21-Apr-06 | 59.8 | 15.5 | | 190.8 |
| 26-Apr-06 | 60.2 | 15.4 | | 225.8 |
| 5-May-06 | 64.1 | 11.9 | | 202.0 |
| 12-May-06 | 57.7 | 8.7 | | 253.8 |
| 19-May-06 | 48.5 | 9.3 | | 219.6 |
| 25-May-06 | 43.0 | 4.7 | | 197.5 |
| 2-Jun-06 | 35.4 | 5.3 | | 192.3 |
| 9-Jun-06 | 48.5 | 5.1 | | 194.4 |
| 16-Jun-06 | 6.1 | 3.9 | | |
| 19-Jun-06 | | | | 120.1 |
| 23-Jun-06 | | 3.6 | 12.9 | 236.8 |
| 30-Jun-06 | (1) | 3.7 | | 251.6 |
| 7-Jul-06 | | 1.5 | | 225.1 |
| 10-Jul-06 | 1.0 | | | |
| 14-Jul-06 | (1) | 1.3 | | 249.6 |
| 21-Jul-06 | (1) | 1.7 | | 226.0 |
| 28-Jul-06 | (1) | 2.5 | 7.2 | 214.4 |
| 4-Aug-06 | 32.8 | 5.1 | 10.8 | 245.0 |
| 11-Aug-06 | (1) | 0.3 | 2.7 | 232.7 |
| 18-Aug-06 | (1) | 0.9 | 4.4 | 197.2 |
| 25-Aug-06 | 4.4 | (4) | | 197.9 |
| 1-Sep-06 | 13.8 | (4) | | 204.3 |
| 8-Sep-06 | 2.2 | (4) | | 192.7 |
| 15-Sep-06 | 33.8 | (4) | | 185.7 |
| 21-Sep-06 | 2.0 | 0.4 | | 191.6 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 28-Sep-06 | 15.6 | 0.8 | | 212.0 |
| 6-Oct-06 | | 0.7 | | 170.4 |
| 13-Oct-06 | | 0.1 | | 189.7 |
| 20-Oct-06 | 48.2 | 0.5 | | 209.0 |
| 26-Oct-06 | | 2.6 | | 213.1 |
| 28-Oct-06 | | | | 205.9 |
| 3-Nov-06 | 95.4 | 5.7 | | 153.9 |
| 10-Nov-06 | 77.8 | 9.4 | | 186.3 |
| 17-Nov-06 | 26.4 | 17.8 | | 167.8 |
| 24-Nov-06 | 51.5 | 12.7 | 47.2 | 196.5 |
| 4-Dec-06 | 92.9 | 13.1 | 80.3 | (5) |
| 8-Dec-06 | 70.2 | 11.5 | (2) | 128.8 |
| 14-Dec-06 | | | | |
| 21-Dec-06 | | | | |
| 28-Dec-06 | 54.9 | 10.2 | 86.8 | 141.1 |
| 5-Jan-07 | 60.1 | 11.1 | 88.1 | 164.8 |
| 12-Jan-07 | 56.1 | 10.8 | 48.2 | 150.0 |
| 19-Jan-07 | 58.8 | 9.3 | (2) | 136.9 |
| 26-Jan-07 | 4.9 | 7.4 | (2) | 125.7 |
| 2-Feb-07 | 63.4 | 7.4 | (2) | 122.2 |
| 9-Feb-07 | 63.6 | 5.1 | (2) | 102.9 |
| 16-Feb-07 | 60.0 | 4.8 | (2) | 94.3 |
| 22-Feb-07 | 58.4 | 3.5 | (2) | 114.8 |
| 2-Mar-07 | 60.8 | 4.2 | (2) | 134.7 |
| 9-Mar-07 | 32.4 | 4.3 | (2) | 105.4 |
| 16-Mar-07 | 105.0 | 27.6 | 166.4 | (5) |
| 23-Mar-07 | 53.6 | 38.8 | 143.4 | 109.8 |
| 30-Mar-07 | 106.9 | 41.1 | 184.9 | (5) |
| 5-Apr-07 | 108.9 | 35.0 | 238.5 | (5) |
| 13-Apr-07 | 74.5 | 16.8 | 133.9 | 223.9 |
| 20-Apr-07 | 95.2 | 14.0 | 88.6 | 172.0 |
| 28-Apr-07 | 7.4 | 11.6 | 92.0 | 214.0 |
| 4-May-07 | 80.5 | 8.1 | 102.0 | 111.5 |
| 11-May-07 | 43.3 | 7.0 | 84.6 | 165.5 |
| 18-May-07 | 74.8 | 6.4 | 61.4 | 141.8 |
| 25-May-07 | 61.2 | 4.2 | 77.7 | 138.9 |
| 1-Jun-07 | (4) | 4.8 | 29.0 | 100.5 |
| 8-Jun-07 | 58.1 | 3.6 | 39.3 | 90.4 |
| 14-Jun-07 | 47.9 | 3.1 | 8.6 | 103.2 |
| 22-Jun-07 | (1) | 1.8 | (1) | 121.0 |
| 29-Jun-07 | 17.0 | 1.6 | 4.5 | 147.4 |
| 6-Jul-07 | 20.5 | 3.8 | 10.5 | 150.0 |
| 13-Jul-07 | (1) | 5.2 | 5.2 | 97.0 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 20-Jul-07 | 0.1 | 1.7 | 12.7 | 140.9 |
| 27-Jul-07 | 1.6 | 1.4 | (1) | 148.6 |
| 3-Aug-07 | (1) | 0.6 | (1) | 141.8 |
| 10-Aug-07 | 0.1 | 0.6 | (1) | 93.0 |
| 17-Aug-07 | 10.1 | 0.6 | (1) | 147.7 |
| 24-Aug-07 | (4) | 1.1 | 3.8 | 157.2 |
| 30-Aug-07 | 7.6 | 0.6 | 4.0 | 100.3 |
| 7-Sep-07 | 21.1 | 1.1 | 8.9 | 71.6 |
| 14-Sep-07 | 1.2 | 0.7 | 18.6 | 65.4 |
| 21-Sep-07 | 10.7 | 0.2 | 19.2 | 86.9 |
| 28-Sep-07 | 9.8 | (4) | 18.7 | 84.1 |
| 5-Oct-07 | 27.4 | (4) | 17.5 | 78.3 |
| 12-Oct-07 | (1) | 0.1 | 12.9 | 76.4 |
| 19-Oct-07 | 10.4 | (4) | 7.4 | 169.1 |
| 26-Oct-07 | 0.9 | (4) | 24.5 | 99.0 |
| 2-Nov-07 | 27.2 | (4) | 123.3 | 118.2 |
| 9-Nov-07 | 47.1 | 1.8 | 62.7 | 118.9 |
| 16-Nov-07 | 45.3 | (4) | 45.6 | 122.8 |
| 23-Nov-07 | 35.6 | 0.7 | (2) | 172.8 |
| 30-Nov-07 | 36.1 | | (2) | 139.6 |
| 7-Dec-07 | 48.9 | 0.7 | (2) | 128.2 |
| 14-Dec-07 | 19.3 | 4.2 | | 117.3 |
| 20-Dec-07 | 18.2 | (2) | (2) | 138.3 |
| 28-Dec-07 | 56.5 | 5.7 | (2) | |
| 4-Jan-08 | 31.1 | 7.0 | (2) | 165.0 |
| 11-Jan-08 | 38.4 | 81.9 | 194.5 | 284.3 |
| 18-Jan-08 | 41.5 | 30.9 | (2) | 593.7 |
| 25-Jan-08 | 57.3 | 26.2 | (2) | 172.2 |
| 1-Feb-08 | 57.6 | 8.9 | (2) | 180.9 |
| 8-Feb-08 | 48.0 | 25.8 | (2) | 160.4 |
| 15-Feb-08 | 41.5 | 11.0 | (2) | 135.9 |
| 22-Feb-08 | 63.4 | 10.8 | (2) | 153.8 |
| 29-Feb-08 | 55.9 | 16.8 | (2) | 131.6 |
| 7-Mar-08 | 61.3 | 12.0 | (2) | 151.7 |
| 14-Mar-08 | 53.1 | 14.8 | (2) | 146.3 |
| 20-Mar-08 | 58.5 | 2.8 | (2) | 161.9 |
| 28-Mar-08 | 63.5 | 5.1 | (2) | 132.9 |
| 4-Apr-08 | 86.5 | 41.8 | 125.8 | |
| 11-Apr-08 | 145.7 | 93.3 | 295.2 | |
| 15-Apr-08 | 91.8 | 50.0 | | |
| 18-Apr-08 | 88.1 | 66.2 | 265.7 | |
| 25-Apr-08 | 74.1 | 18.5 | 77.7 | 183.3 |
| 2-May-08 | 92.0 | 22.0 | 138.4 | 177.6 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 8-May-08 | 74.4 | 12.8 | 103.9 | 184.5 |
| 15-May-08 | 75.6 | 11.6 | 181.9 | 82.1 |
| 23-May-08 | 59.5 | 12.6 | 66.7 | 184.1 |
| 30-May-08 | 64.9 | 51.1 | 16.1 | 104.3 |
| 6-Jun-08 | 67.2 | 32.6 | 93.8 | 165.4 |
| 13-Jun-08 | 12.7 | 8.3 | 36.7 | 277.3 |
| 20-Jun-08 | (1) | 6.5 | 36.5 | 169.0 |
| 27-Jun-08 | 42.5 | 5.0 | 55.4 | 95.0 |
| 4-Jul-08 | (1) | 2.2 | 9.8 | 256.1 |
| 11-Jul-08 | (1) | 3.3 | 1.7 | 153.7 |
| 18-Jul-08 | 30.7 | 3.9 | 10.8 | 291.4 |
| 25-Jul-08 | 41.7 | 1.2 | 30.6 | 156.9 |
| 1-Aug-08 | 3.0 | 1.8 | 15.9 | 97.2 |
| 8-Aug-08 | (1) | 15.3 | 57.4 | 287.6 |
| 15-Aug-08 | 8.9 | 4.0 | 28.8 | 184.1 |
| 22-Aug-08 | (1) | 7.1 | 61.5 | 166.6 |
| 28-Aug-08 | 21.2 | 5.1 | 10.8 | 159.1 |
| 5-Sep-08 | | 9.3 | 5.1 | 259.7 |
| 12-Sep-08 | 4.2 | 2.9 | 27.5 | 149.3 |
| 19-Sep-08 | (1) | 2.3 | 35.9 | 236.1 |
| 26-Sep-08 | 7.2 | 0.6 | 19.6 | 168.1 |
| 3-Oct-08 | 48.2 | 13.3 | 67.2 | 185.5 |
| 10-Oct-08 | 46.5 | 17.9 | 29.5 | 396.5 |
| 17-Oct-08 | 45.2 | 15.5 | 27.1 | 188.4 |
| 24-Oct-08 | 1.7 | 18.9 | 17.7 | 162.3 |
| 31-Oct-08 | 30.7 | 6.9 | 51.0 | 184.8 |
| 2-Nov-08 | | | | |
| 7-Nov-08 | 34.8 | 6.2 | 48.8 | 347.1 |
| 9-Nov-08 | | | | |
| 13-Nov-08 | 34.8 | | | |
| 14-Nov-08 | | 13.2 | 85.5 | 204.8 |
| 16-Nov-08 | | | | |
| 21-Nov-08 | 12.0 | (2) | (2) | |
| 23-Nov-08 | | | | |
| 28-Nov-08 | 14.2 | (2) | (2) | 121.8 |
| 30-Nov-08 | 5.1 | (2) | (2) | (2) |
| 7-Dec-08 | 30.4 | 10.6 | (2) | 154.9 |
| 12-Dec-08 | | | | |
| 19-Dec-08 | 26.8 | | (2) | |
| 23-Dec-08 | 70.1 | 13.1 | (2) | 151.5 |
| 29-Dec-08 | 103.2 | 69.3 | (2) | |
| 9-Jan-09 | 40.2 | 0.8 | (2) | (5) |
| 16-Jan-09 | 16.5 | 9.2 | (2) | 193.2 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 23-Jan-09 | 0.9 | 11.0 | (2) | 156.6 |
| 30-Jan-09 | 63.4 | 5.8 | (2) | |
| 6-Feb-09 | (4) | 5.1 | (2) | 77.5 |
| 13-Feb-09 | 53.7 | 35.0 | (2) | (5) |
| 20-Feb-09 | 67.1 | 14.6 | (2) | 121.7 |
| 27-Feb-09 | 4.8 | 13.8 | (2) | 128.6 |
| 6-Mar-09 | 0.6 | 13.0 | (2) | 189.6 |
| 13-Mar-09 | 21.0 | 31.2 | (2) | 179.6 |
| 20-Mar-09 | 55.3 | 26.3 | 88.0 | 142.3 |
| 27-Mar-09 | 40.5 | 19.2 | 104.3 | 139.1 |
| 3-Apr-09 | 109.6 | 28.3 | 166.7 | 226.5 |
| 9-Apr-09 | 92.3 | 26.6 | (2) | 182.0 |
| 17-Apr-09 | 109.7 | 22.4 | 104.1 | 196.0 |
| 24-Apr-09 | 94.2 | 18.0 | 112.2 | 178.5 |
| 1-May-09 | 98.4 | 22.6 | 185.3 | 168.4 |
| 8-May-09 | 77.9 | 14.6 | 98.2 | 142.2 |
| 15-May-09 | 76.1 | 11.2 | 62.2 | 167.5 |
| 22-May-09 | 79.0 | 8.8 | 46.9 | 126.9 |
| 29-May-09 | 87.5 | 6.4 | 59.5 | 177.8 |
| 5-Jun-09 | 65.3 | 5.3 | 50.1 | 152.6 |
| 12-Jun-09 | 38.2 | 6.0 | 37.5 | 151.8 |
| 19-Jun-09 | 86.8 | 4.0 | 36.3 | 86.4 |
| 26-Jun-09 | 83.2 | 3.7 | 37.8 | |
| 2-Jul-09 | (4) | 2.0 | 63.4 | 131.2 |
| 10-Jul-09 | 4.0 | 1.3 | 9.6 | 141.6 |
| 17-Jul-09 | 0.2 | 2.2 | 3.3 | 150.1 |
| 24-Jul-09 | (4) | 1.6 | 19.0 | 229.0 |
| 26-Jul-09 | | | | 137.3 |
| 31-Jul-09 | (4) | 0.5 | 11.8 | 167.8 |
| 7-Aug-09 | | 1.4 | 6.7 | 268.3 |
| 14-Aug-09 | | 6.4 | 129.9 | 18.7 |
| 21-Aug-09 | | 4.8 | 21.0 | 161.5 |
| 28-Aug-09 | 0.5 | 0.9 | 20.1 | 271.0 |
| 4-Sep-09 | (1) | 0.8 | 11.8 | 151.4 |
| 11-Sep-09 | (1) | 4.0 | 8.4 | 168.1 |
| 18-Sep-09 | (1) | 1.0 | 8.6 | 209.0 |
| 25-Sep-09 | (1) | 0.8 | 8.0 | 188.8 |
| 2-Oct-09 | 2.5 | 0.9 | 26.8 | 166.0 |
| 9-Oct-09 | 51.3 | 0.4 | 47.3 | 238.6 |
| 16-Oct-09 | 10.3 | 0.5 | 29.0 | 207.6 |
| 23-Oct-09 | 69.3 | 3.1 | 33.0 | 130.1 |
| 30-Oct-09 | 73.5 | 4.2 | 32.8 | 257.2 |
| 6-Nov-09 | 54.4 | 1.3 | 25.9 | 311.6 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 13-Nov-09 | 39.7 | 1.5 | 15.2 | 181.5 |
| 20-Nov-09 | 2.9 | 1.5 | 24.0 | 236.7 |
| 27-Nov-09 | 17.4 | 2.7 | 10.5 | 370.2 |
| 4-Dec-09 | 35.2 | 6.9 | 27.1 | 141.8 |
| 11-Dec-09 | 47.4 | 2.7 | (2) | 94.1 |
| 18-Dec-09 | 12.9 | 13.4 | (2) | 104.6 |
| 22-Dec-09 | 54.8 | 2.8 | (2) | 135.1 |
| 28-Dec-09 | 52.6 | 4.7 | (2) | |
| 8-Jan-10 | 52.8 | 4.9 | (2) | |
| 15-Jan-10 | 55.2 | 4.5 | (2) | 114.4 |
| 22-Jan-10 | 13.8 | 3.7 | (2) | 80.2 |
| 29-Jan-10 | 32.7 | 8.2 | (2) | |
| 5-Feb-10 | 55.5 | 7.5 | (2) | 95.8 |
| 12-Feb-10 | 40.3 | 8.2 | (2) | 71.9 |
| 19-Feb-10 | 26.8 | 3.0 | (2) | 86.0 |
| 1-Mar-10 | 28.0 | 2.5 | (2) | 122.6 |
| 5-Mar-10 | 42.4 | 2.2 | (2) | 100.8 |
| 12-Mar-10 | 23.1 | 12.5 | (2) | 133.5 |
| 19-Mar-10 | 32.5 | 68.9 | 156.8 | 129.2 |
| 26-Mar-10 | 35.3 | 26.9 | 69.3 | 135.6 |
| 2-Apr-10 | 75.2 | 28.2 | 102.1 | |
| 9-Apr-10 | 61.2 | 6.5 | 78.0 | 140.5 |
| 16-Apr-10 | 48.0 | 10.1 | 50.0 | 123.5 |
| 23-Apr-10 | 48.6 | 8.6 | 43.6 | 248.1 |
| 30-Apr-10 | 17.6 | 15.8 | 31.7 | 163.3 |
| 7-May-10 | 75.2 | 3.6 | 28.3 | 199.4 |
| 14-May-10 | 2.5 | 26.3 | 132.0 | 229.0 |
| 21-May-10 | 77.8 | 7.9 | 37.7 | 244.7 |
| 28-May-10 | 10.3 | 11.1 | 33.5 | 139.4 |
| 4-Jun-10 | 76.5 | 13.9 | 59.9 | 244.2 |
| 11-Jun-10 | 39.4 | 10.8 | 64.5 | 141.1 |
| 18-Jun-10 | 18.6 | 9.4 | 29.4 | 163.6 |
| 25-Jun-10 | 72.8 | 8.3 | 56.7 | 171.2 |
| 1-Jul-10 | 80.3 | 9.7 | 36.0 | |
| 9-Jul-10 | 0.8 | 9.6 | 105.5 | 250.5 |
| 15-Jul-10 | 2.2 | 7.8 | 38.8 | 92.0 |
| 23-Jul-10 | 0.3 | 9.3 | 89.6 | 123.7 |
| 30-Jul-10 | 0.2 | 8.5 | 41.6 | 202.1 |
| 6-Aug-10 | (4) | 9.7 | 26.0 | 118.3 |
| 13-Aug-10 | (1) | 4.6 | 21.1 | 182.7 |
| 20-Aug-10 | (1) | 2.8 | 17.1 | 153.8 |
| 27-Aug-10 | (1) | 3.5 | 14.0 | 117.2 |
| 30-Aug-10 | | | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 1-Sep-10 | | | | |
| 3-Sep-10 | (1) | 5.9 | 1.4 | 162.1 |
| 7-Sep-10 | | | | |
| 10-Sep-10 | (1) | 5.4 | 2.0 | 172.0 |
| 17-Sep-10 | (1) | 5.3 | 21.3 | 302.9 |
| 24-Sep-10 | 0.2 | 3.2 | 41.7 | 199.9 |
| 1-Oct-10 | 3.6 | 7.8 | 53.5 | 276.6 |
| 8-Oct-10 | 17.6 | 6.6 | 33.5 | 285.1 |
| 15-Oct-10 | 4.2 | 5.6 | 45.2 | 151.5 |
| 22-Oct-10 | 7.2 | 2.6 | 24.2 | 182.7 |
| 29-Oct-10 | 1.3 | 4.2 | 27.1 | 169.8 |
| 5-Nov-10 | 1.3 | 6.2 | 68.8 | 162.8 |
| 12-Nov-10 | 6.4 | 11.1 | 40.3 | 182.8 |
| 19-Nov-10 | 11.5 | 22.6 | 83.3 | 139.1 |
| 26-Nov-10 | 16.6 | 13.8 | 106.6 | 150.7 |
| 3-Dec-10 | 5.0 | 12.7 | 68.3 | 140.0 |
| 9-Dec-10 | 15.5 | 9.3 | (2) | 151.7 |
| 17-Dec-10 | 43.8 | 8.1 | (2) | 106.0 |
| 23-Dec-10 | 10.4 | 6.3 | (2) | 81.3 |
| 30-Dec-10 | 32.7 | 9.7 | (2) | |
| 7-Jan-11 | 34.0 | 23.6 | (2) | 99.3 |
| 14-Jan-11 | 43.7 | 10.5 | (2) | 123.9 |
| 21-Jan-11 | 42.0 | 8.1 | (2) | 118.4 |
| 28-Jan-11 | 42.4 | 8.3 | (2) | 93.9 |
| 4-Feb-11 | 34.8 | 6.4 | (2) | 107.8 |
| 11-Feb-11 | 46.6 | 7.4 | (2) | 69.4 |
| 18-Feb-11 | 12.6 | 16.5 | (2) | 112.5 |
| 25-Feb-11 | 63.1 | 12.5 | (2) | 102.1 |
| 4-Mar-11 | 6.8 | 4.8 | (2) | 117.7 |
| 11-Mar-11 | 17.4 | 13.9 | (2) | 82.0 |
| 18-Mar-11 | 10.3 | 42.0 | (2) | 293.8 |
| 22-Mar-11 | | 31.4 | | |
| 25-Mar-11 | 9.7 | 24.3 | (2) | 120.5 |
| 1-Apr-11 | 11.7 | 15.8 | 158.7 | 132.1 |
| 8-Apr-11 | 14.2 | 34.0 | 134.2 | 171.4 |
| 15-Apr-11 | 53.3 | 30.0 | 124.6 | 172.6 |
| 21-Apr-11 | 86.0 | 26.3 | 148.1 | 278.8 |
| 29-Apr-11 | 51.0 | 18.7 | 123.7 | |
| 6-May-11 | 57.9 | 3.3 | 103.2 | 200.2 |
| 13-May-11 | 45.5 | 3.9 | 94.0 | 206.2 |
| 20-May-11 | 81.7 | 24.4 | 144.1 | 328.9 |
| 27-May-11 | 18.7 | 14.2 | 132.7 | |
| 3-Jun-11 | 13.1 | 5.5 | 74.4 | 239.5 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations



| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 10-Jun-11 | 39.9 | 14.0 | 77.5 | 279.7 |
| 17-Jun-11 | 66.3 | 7.0 | 70.3 | 184.7 |
| 24-Jun-11 | 3.0 | 4.9 | 52.2 | 158.6 |
| 30-Jun-11 | 17.7 | 5.0 | 71.2 | 158.6 |
| 8-Jul-11 | (1) | 5.0 | 37.6 | 113.5 |
| 14-Jul-11 | (1) | 6.4 | 34.7 | 304.6 |
| 22-Jul-11 | (1) | 4.7 | 22.4 | 95.4 |
| 29-Jul-11 | (1) | 4.4 | 36.9 | 105.2 |
| 5-Aug-11 | (1) | 4.6 | 20.3 | 105.3 |
| 12-Aug-11 | (1) | 4.9 | 7.5 | 73.5 |
| 19-Aug-11 | (1) | 0.9 | 5.1 | 110.6 |
| 26-Aug-11 | (1) | 3.4 | 12.3 | 81.0 |
| 2-Sep-11 | (1) | 2.5 | 9.3 | 91.3 |
| 9-Sep-11 | (1) | 1.7 | 6.0 | 136.2 |
| 16-Sep-11 | 0.6 | 1.7 | 4.4 | 119.2 |
| 23-Sep-11 | (1) | 3.9 | 12.2 | |
| 30-Sep-11 | (1) | 3.1 | 15.5 | 105.0 |
| 6-Oct-11 | 40.2 | 1.7 | 20.5 | 57.7 |
| 14-Oct-11 | (1) | 3.3 | 41.2 | 177.6 |
| 20-Oct-11 | | 9.4 | | |
| 21-Oct-11 | 42.0 | 4.4 | 79.3 | 258.3 |
| 28-Oct-11 | 10.6 | 4.9 | 50.4 | 326.5 |
| 4-Nov-11 | 32.6 | 1.6 | 43.8 | 111.2 |
| 11-Nov-11 | 0.3 | 7.3 | 43.6 | 91.8 |
| 18-Nov-11 | 32.5 | 2.5 | 39.6 | |
| 25-Nov-11 | 45.1 | 2.6 | 28.9 | 85.6 |
| 2-Dec-11 | 45.3 | 9.7 | 56.9 | |
| 9-Dec-11 | 52.9 | 13.4 | 75.7 | 142.7 |
| 16-Dec-11 | 18.0 | 13.7 | 65.5 | 116.8 |
| 23-Dec-11 | 36.8 | 14.0 | (2) | |
| 30-Dec-11 | 21.1 | 10.1 | (2) | |
| 6-Jan-12 | 17.7 | 1.1 | (2) | 107.0 |
| 13-Jan-12 | 48.7 | | (2) | |
| 20-Jan-12 | 41.0 | 15.5 | (2) | 105.4 |
| 27-Jan-12 | 37.3 | 12.1 | (2) | 92.7 |
| 3-Feb-12 | 56.7 | 12.7 | (2) | 103.4 |
| 10-Feb-12 | 42.1 | 11.2 | (2) | 85.4 |
| 17-Feb-12 | 30.1 | 5.5 | (2) | 109.6 |
| 24-Feb-12 | 41.2 | 8.5 | (2) | |
| 1-Mar-12 | 46.5 | 4.1 | (2) | 109.4 |
| 9-Mar-12 | 36.7 | 37.8 | (2) | (5) |
| 16-Mar-12 | 136.7 | 70.3 | 529.8 | |
| 23-Mar-12 | 26.7 | 29.0 | 131.3 | 146.3 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 30-Mar-12 | 42.1 | 11.1 | 180.4 | 128.7 |
| 6-Apr-12 | 47.5 | 9.8 | | |
| 13-Apr-12 | 16.6 | 8.0 | 163.8 | 296.9 |
| 20-Apr-12 | 37.0 | 18.2 | 185.5 | 388.5 |
| 27-Apr-12 | 1.5 | 7.9 | 218.5 | 167.7 |
| 4-May-12 | 5.0 | 9.5 | 290.7 | 208.7 |
| 11-May-12 | 4.0 | 5.8 | 121.9 | 181.5 |
| 18-May-12 | 32.7 | 8.1 | 191.8 | 173.5 |
| 25-May-12 | 24.8 | 6.8 | 170.1 | 204.3 |
| 1-Jun-12 | 7.9 | 6.3 | 54.5 | 162.0 |
| 8-Jun-12 | 23.2 | 6.2 | 43.3 | 141.0 |
| 15-Jun-12 | 10.8 | 5.4 | 31.7 | 119.0 |
| 22-Jun-12 | 28.5 | 1.7 | 29.9 | 77.4 |
| 28-Jun-12 | 1.1 | 2.1 | 27.7 | 136.6 |
| 6-Jul-12 | 2.4 | 5.1 | 10.1 | 59.0 |
| 13-Jul-12 | (1) | 6.3 | 16.4 | 201.6 |
| 20-Jul-12 | (1) | 3.0 | 16.3 | 130.7 |
| 27-Jul-12 | (1) | 1.9 | 27.6 | 141.7 |
| 3-Aug-12 | (1) | 2.0 | 12.5 | 165.2 |
| 10-Aug-12 | 1.3 | 2.1 | 67.0 | 457.5 |
| 17-Aug-12 | 30.8 | 8.7 | 82.8 | 254.4 |
| 24-Aug-12 | (1) | 4.9 | 31.7 | 222.2 |
| 31-Aug-12 | 0.9 | 4.3 | 34.6 | 222.1 |
| 7-Sep-12 | (1) | 3.5 | 19.6 | 183.1 |
| 14-Sep-12 | 1.2 | 5.5 | 30.7 | 149.1 |
| 21-Sep-12 | (1) | 3.5 | 41.2 | 130.8 |
| 28-Sep-12 | 1.0 | 3.9 | 12.4 | 206.1 |
| 5-Oct-12 | 3.6 | 3.4 | 29.0 | 246.5 |
| 12-Oct-12 | 1.3 | 4.9 | 43.0 | 121.2 |
| 19-Oct-12 | 7.7 | 5.0 | 21.4 | 145.2 |
| 26-Oct-12 | 2.8 | 3.2 | 40.8 | 117.4 |
| 2-Nov-12 | 11.7 | 36.3 | 120.0 | 136.3 |
| 9-Nov-12 | 14.7 | 16.8 | 103.7 | 146.8 |
| 16-Nov-12 | 2.2 | 16.5 | 83.3 | 127.0 |
| 23-Nov-12 | 23.4 | 15.7 | 66.9 | 165.1 |
| 30-Nov-12 | 9.9 | 14.5 | 60.8 | 152.7 |
| 7-Dec-12 | 35.0 | 11.3 | 73.7 | 149.6 |
| 14-Dec-12 | 42.7 | 7.8 | 56.8 | 140.0 |
| 21-Dec-12 | 39.9 | 8.5 | 67.5 | 148.6 |
| 28-Dec-12 | 49.3 | 7.7 | (2) | |
| 4-Jan-13 | 47.8 | 5.8 | (2) | 102.5 |
| 11-Jan-13 | 62.4 | 11.8 | (2) | 163.8 |
| 17-Jan-13 | 48.4 | 16.7 | (2) | 133.4 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 25-Jan-13 | 24.7 | 14.0 | (2) | 146.0 |
| 1-Feb-13 | 60.8 | 31.3 | (2) | |
| 8-Feb-13 | 53.7 | 9.9 | (2) | |
| 15-Feb-13 | 52.0 | 10.2 | (2) | 123.5 |
| 22-Feb-13 | 52.0 | 6.2 | (2) | 138.1 |
| 1-Mar-13 | 47.9 | 6.1 | (2) | 138.5 |
| 8-Mar-13 | 49.8 | 7.5 | (2) | 99.0 |
| 15-Mar-13 | 50.7 | 15.2 | (2) | 96.8 |
| 22-Mar-13 | 50.4 | 12.7 | (2) | 129.5 |
| 28-Mar-13 | 48.9 | 9.2 | 118.7 | 116.7 |
| 5-Apr-13 | 45.1 | 8.8 | 76.7 | 129.5 |
| 12-Apr-13 | 81.9 | 9.8 | 113.2 | 131.1 |
| 19-Apr-13 | 123.1 | 57.8 | 405.3 | |
| 26-Apr-13 | 61.3 | 24.5 | 164.6 | 125.5 |
| 3-May-13 | 19.9 | 28.2 | 71.0 | 279.3 |
| 9-May-13 | 46.7 | 12.8 | 67.6 | 88.7 |
| 16-May-13 | 25.0 | 9.0 | 53.9 | 204.5 |
| 24-May-13 | 55.7 | 23.6 | 104.5 | 216.8 |
| 31-May-13 | 58.7 | 6.8 | 51.2 | 341.3 |
| 7-Jun-13 | 49.2 | 11.7 | 53.4 | |
| 14-Jun-13 | 48.7 | 7.1 | 63.7 | 274.0 |
| 21-Jun-13 | 41.2 | 8.4 | 43.8 | 155.1 |
| 27-Jun-13 | 5.6 | 7.7 | 32.0 | 197.3 |
| 5-Jul-13 | 37.1 | 8.2 | 49.9 | 222.3 |
| 12-Jul-13 | 5.5 | 8.8 | 53.7 | 203.8 |
| 19-Jul-13 | 3.2 | 7.9 | 36.4 | 119.8 |
| 25-Jul-13 | 29.0 | 2.7 | 41.2 | 236.8 |
| 2-Aug-13 | 4.0 | 2.6 | 84.2 | 259.9 |
| 8-Aug-13 | 3.4 | 3.1 | 69.5 | 193.1 |
| 16-Aug-13 | 0.6 | 2.8 | 40.4 | 81.2 |
| 23-Aug-13 | (1) | 2.4 | 35.5 | 65.6 |
| 30-Aug-13 | 0.5 | 2.7 | 35.4 | 62.3 |
| 6-Sep-13 | 0.5 | 2.4 | 42.2 | 59.9 |
| 13-Sep-13 | 7.0 | 2.2 | 44.3 | 129.4 |
| 20-Sep-13 | 2.4 | 2.7 | 25.8 | 131.3 |
| 27-Sep-13 | 18.7 | 2.5 | 26.7 | 131.3 |
| 4-Oct-13 | 24.8 | 4.1 | 41.3 | |
| 11-Oct-13 | 58.1 | 4.2 | 37.6 | 116.7 |
| 18-Oct-13 | 7.3 | 5.2 | 67.0 | 165.6 |
| 25-Oct-13 | 24.9 | 9.5 | 150.6 | 204.3 |
| 31-Oct-13 | 35.5 | 12.5 | 257.4 | 302.3 |
| 8-Nov-13 | 48.0 | 14.9 | 255.1 | 159.6 |
| 14-Nov-13 | 49.0 | 16.1 | 240.1 | 171.2 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 22-Nov-13 | 44.5 | 17.8 | 244.9 | 116.8 |
| 29-Nov-13 | 47.8 | 5.5 | | 85.4 |
| 6-Dec-13 | 29.2 | 14.2 | 119.7 | 121.6 |
| 13-Dec-13 | 42.7 | (2) | (2) | |
| 19-Dec-13 | 39.5 | (2) | (2) | 118.4 |
| 27-Dec-13 | 36.8 | (2) | (2) | |
| 3-Jan-14 | 34.5 | | | 65.3 |
| 10-Jan-14 | 13.8 | 6.3 | | 88.7 |
| 17-Jan-14 | 10.5 | 8.1 | | 80.4 |
| 24-Jan-14 | 35.9 | | | 102.6 |
| 31-Jan-14 | 37.8 | 5.0 | | 92.1 |
| 7-Feb-14 | 14.1 | 6.1 | | 86.6 |
| 14-Feb-14 | 7.1 | 3.1 | | 110.8 |
| 21-Feb-14 | 29.2 | | | 92.8 |
| 28-Feb-14 | | | | 73.4 |
| 7-Mar-14 | 21.1 | 4.1 | | 69.3 |
| 14-Mar-14 | 31.9 | 3.7 | | 82.2 |
| 21-Mar-14 | 33.8 | 3.8 | | 88.0 |
| 28-Mar-14 | 34.4 | 6.6 | | 114.5 |
| 4-Apr-14 | 26.2 | 14.4 | | 98.1 |
| 11-Apr-14 | 52.3 | 33.6 | | 215.1 |
| 17-Apr-14 | 177.9 | 104.1 | 247.6 | 244.9 |
| 25-Apr-14 | 65.4 | 88.3 | 469.4 | 166.7 |
| 1-May-14 | 93.7 | 67.1 | 288.6 | 147.4 |
| 9-May-14 | 35.8 | 9.4 | 151.0 | 197.1 |
| 16-May-14 | 31.4 | 8.2 | 142.7 | 110.8 |
| 23-May-14 | 12.8 | 28.8 | 82.1 | 214.9 |
| 30-May-14 | 33.3 | 9.0 | 86.4 | 185.2 |
| 6-Jun-14 | 5.6 | 7.5 | 51.7 | 186.0 |
| 13-Jun-14 | 5.6 | 4.2 | 49.6 | 161.0 |
| 20-Jun-14 | 9.1 | 5.5 | 52.9 | 135.7 |
| 27-Jun-14 | 3.9 | | 40.7 | 132.9 |
| 28-Jun-14 | | 4.6 | | |
| 4-Jul-14 | 1.8 | 1.4 | 24.5 | 149.0 |
| 11-Jul-14 | 8.2 | 0.8 | 15.4 | 127.1 |
| 18-Jul-14 | 5.0 | 1.6 | 39.5 | 145.0 |
| 25-Jul-14 | 2.8 | 0.5 | 15.9 | 147.8 |
| 1-Aug-14 | 0.7 | 1.3 | 11.8 | 149.3 |
| 8-Aug-14 | 0.6 | 1.0 | 10.1 | 128.5 |
| 15-Aug-14 | 4.4 | 1.1 | 13.3 | 148.0 |
| 22-Aug-14 | 2.9 | 0.3 | 12.8 | 237.3 |
| 29-Aug-14 | 1.4 | | 11.2 | 147.8 |
| 5-Sep-14 | 4.0 | 0.1 | | 167.3 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 12-Sep-14 | 1.2 | 0.8 | 15.1 | 91.5 |
| 19-Sep-14 | 4.3 | 0.9 | 17.7 | 88.9 |
| 26-Sep-14 | 3.9 | 0.8 | 20.4 | 98.5 |
| 3-Oct-14 | 4.7 | 0.3 | 21.9 | 81.3 |
| 10-Oct-14 | 8.4 | 0.1 | 25.1 | 85.1 |
| 16-Oct-14 | 5.4 | 0.2 | 39.1 | 102.0 |
| 24-Oct-14 | 1.6 | 2.9 | 10.8 | 124.2 |
| 31-Oct-14 | 11.5 | 1.8 | 14.8 | 156.0 |
| 7-Nov-14 | 51.6 | 6.0 | 20.8 | 92.8 |
| 14-Nov-14 | 14.4 | 9.2 | 26.2 | 71.9 |
| 20-Nov-14 | | | | |
| 28-Nov-14 | 65.3 | 2.8 | (2) | 54.0 |
| 5-Dec-14 | 12.0 | 4.1 | (2) | 52.8 |
| 12-Dec-14 | 13.7 | 2.1 | (2) | 53.0 |
| 19-Dec-14 | 45.3 | 2.4 | (2) | 48.4 |
| 26-Dec-14 | 84.6 | 5.2 | 169.2 | |
| 2-Jan-15 | 36.4 | 2.4 | (2) | |
| 8-Jan-15 | (2) | 2.3 | (2) | 73.9 |
| 14-Jan-15 | 33.0 | 1.3 | (2) | 45.2 |
| 22-Jan-15 | | | (2) | |
| 23-Jan-15 | 28.4 | 2.4 | | 45.9 |
| 30-Jan-15 | 10.8 | 5.0 | (2) | |
| 6-Feb-15 | 15.8 | 1.8 | (2) | 60.5 |
| 12-Feb-15 | 21.2 | 0.9 | (2) | |
| 27-Feb-15 | 24.5 | 0.6 | (2) | 82.1 |
| 6-Mar-15 | 4.3 | 0.7 | (2) | 103.1 |
| 13-Mar-15 | 7.5 | 2.4 | (2) | 124.0 |
| 20-Mar-15 | 17.8 | 5.9 | (2) | 87.8 |
| 26-Mar-15 | 6.8 | 3.6 | (2) | 107.4 |
| 2-Apr-15 | 6.1 | 3.4 | 27.0 | 87.8 |
| 10-Apr-15 | 83.3 | 32.3 | (5) | 164.0 |
| 17-Apr-15 | 63.3 | 23.6 | (5) | 86.9 |
| 23-Apr-15 | 51.0 | 18.8 | 99.4 | 96.6 |
| 1-May-15 | 10.3 | 7.7 | 44.2 | 204.6 |
| 8-May-15 | 6.3 | 7.0 | 40.0 | 200.0 |
| 15-May-15 | 2.4 | 3.1 | 14.5 | 199.6 |
| 21-May-15 | 3.1 | 4.1 | 15.3 | 164.2 |
| 28-May-15 | 8.3 | 3.2 | 19.3 | 219.4 |
| 4-Jun-15 | 5.1 | 3.3 | 12.6 | 167.4 |
| 12-Jun-15 | 2.5 | 1.9 | 22.3 | 191.5 |
| 18-Jun-15 | 2.8 | 3.1 | 23.3 | 172.2 |
| 26-Jun-15 | 10.3 | 1.6 | | 178.8 |
| 1-Jul-15 | 77.9 | 11.0 | | |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 10-Jul-15 | 5.0 | 7.9 | 28.3 | 106.2 |
| 17-Jul-15 | 8.0 | 7.3 | 30.0 | 135.9 |
| 22-Jul-15 | 4.9 | 3.6 | 13.1 | 86.7 |
| 30-Jul-15 | 3.4 | 0.9 | 5.2 | 89.9 |
| 5-Aug-15 | 19.2 | 1.9 | 23.0 | 92.2 |
| 13-Aug-15 | 7.8 | 2.3 | 15.6 | 120.2 |
| 21-Aug-15 | 2.3 | 0.8 | 10.8 | 159.7 |
| 28-Aug-15 | 1.9 | 0.9 | 8.5 | 95.3 |
| 3-Sep-15 | 4.6 | 0.6 | 6.6 | 99.5 |
| 10-Sep-15 | 1.8 | 0.8 | 15.6 | 65.1 |
| 18-Sep-15 | (1) | 0.3 | 5.0 | 68.5 |
| 25-Sep-15 | 3.4 | 0.5 | 7.8 | 68.0 |
| 2-Oct-15 | 14.8 | 0.4 | 4.8 | 81.3 |
| 9-Oct-15 | 1.3 | 0.6 | 11.0 | 97.8 |
| 16-Oct-15 | 3.3 | 0.5 | 8.0 | 84.9 |
| 23-Oct-15 | 3.1 | 0.3 | 14.1 | 70.6 |
| 30-Oct-15 | 27.0 | 0.7 | 48.6 | 124.2 |
| 5-Nov-15 | 2.6 | 2.2 | 20.7 | 103.7 |
| 10-Nov-15 | 9.4 | | | |
| 13-Nov-15 | 61.5 | 1.5 | 78.0 | 70.3 |
| 19-Nov-15 | 17.1 | 1.1 | 33.3 | 86.0 |
| 26-Nov-15 | 0.8 | 1.3 | 36.6 | 81.6 |
| 4-Dec-15 | 2.3 | 0.9 | 24.0 | 100.5 |
| 10-Dec-15 | 12.3 | 1.4 | 20.9 | 102.9 |
| 17-Dec-15 | 21.2 | 2.2 | 41.5 | 127.2 |
| 23-Dec-15 | 32.0 | 3.9 | 49.7 | 63.7 |
| 30-Dec-15 | 34.4 | 1.7 | 63.5 | 67.5 |
| 8-Jan-16 | 11.8 | 2.6 | 30.4 | |
| 14-Jan-16 | 12.1 | 2.1 | (2) | 70.8 |
| 22-Jan-16 | 12.1 | 2.0 | (2) | 58.2 |
| 29-Jan-16 | 16.7 | 1.2 | (2) | 38.0 |
| 5-Feb-16 | 77.1 | 10.4 | (2) | 65.6 |
| 11-Feb-16 | 53.4 | 3.9 | (2) | 104.1 |
| 18-Feb-16 | 19.2 | 5.7 | (2) | 83.6 |
| 25-Feb-16 | 10.2 | 3.9 | (2) | 136.2 |
| 4-Mar-16 | 66.8 | 9.7 | (2) | 93.6 |
| 10-Mar-16 | 160.7 | 53.4 | 388.1 | 48.6 |
| 18-Mar-16 | 54.8 | 19.2 | 156.6 | 169.1 |
| 28-Mar-16 | 233.3 | 93.3 | 576.7 | 107.1 |
| 1-Apr-16 | 253.8 | 36.9 | 509.4 | 26.7 |
| 7-Apr-16 | 168.5 | 19.7 | 301.6 | 258.2 |
| 15-Apr-16 | 61.9 | 11.5 | 130.6 | 180.8 |
| 22-Apr-16 | 50.9 | 12.8 | 84.3 | 149.7 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 29-Apr-16 | 41.6 | 8.6 | 36.6 | 230.6 |
| 6-May-16 | 40.3 | 6.7 | 25.4 | 129.0 |
| 13-May-16 | 30.2 | 5.3 | 36.6 | 135.4 |
| 20-May-16 | 23.6 | 5.3 | 20.2 | 183.7 |
| 27-May-16 | 22.7 | 3.9 | 22.6 | 224.5 |
| 2-Jun-16 | 18.8 | 3.9 | 28.5 | 73.1 |
| 10-Jun-16 | 11.7 | 2.7 | 15.4 | 194.2 |
| 17-Jun-16 | 10.4 | 2.2 | 5.2 | 82.9 |
| 24-Jun-16 | 6.3 | 1.7 | 3.9 | 169.4 |
| 28-Jun-16 | 6.9 | 1.8 | 6.2 | 132.0 |
| 5-Jul-16 | 5.0 | | | |
| 8-Jul-16 | 5.0 | 1.6 | 4.3 | 151.9 |
| 15-Jul-16 | 6.6 | 2.6 | 4.7 | 139.7 |
| 22-Jul-16 | 2.7 | 6.2 | 2.1 | 94.1 |
| 29-Jul-16 | 3.1 | 0.2 | 1.1 | 134.5 |
| 5-Aug-16 | 0.8 | 0.5 | (1) | 81.5 |
| 12-Aug-16 | (1) | 0.9 | (1) | 117.1 |
| 19-Aug-16 | 26.9 | 0.6 | | 42.0 |
| 26-Aug-16 | 2.1 | 0.3 | | 85.8 |
| 2-Sep-16 | 0.6 | 1.6 | | 99.0 |
| 9-Sep-16 | 9.6 | 1.3 | | 51.3 |
| 16-Sep-16 | 2.6 | 5.5 | | 131.4 |
| 21-Sep-16 | 3.6 | 0.4 | | 103.4 |
| 30-Sep-16 | 4.4 | 0.6 | | 73.7 |
| 7-Oct-16 | 6.7 | 1.6 | 9.0 | 99.0 |
| 13-Oct-16 | 13.7 | 0.9 | | 112.2 |
| 19-Oct-16 | 13.9 | 1.0 | | 77.8 |
| 24-Oct-16 | | | | |
| 27-Oct-16 | 13.1 | 0.5 | 25.6 | 55.3 |
| 3-Nov-16 | 19.1 | 0.6 | 25.2 | 80.8 |
| 11-Nov-16 | 11.2 | 0.8 | | 46.6 |
| 18-Nov-16 | 2.5 | 0.3 | 8.9 | 51.0 |
| 24-Nov-16 | 7.5 | 0.6 | 12.8 | 79.6 |
| 2-Dec-16 | 24.5 | 0.6 | 55.0 | 40.9 |
| 7-Dec-16 | 28.6 | 0.5 | | 78.7 |
| 16-Dec-16 | 27.4 | 0.8 | 14.1 | 94.3 |
| 22-Dec-16 | (2) | 0.2 | (2) | 60.4 |
| 30-Dec-16 | (2) | 0.7 | (2) | |
| 6-Jan-17 | (2) | 3.4 | (2) | 30.5 |
| 13-Jan-17 | (2) | 2.1 | (2) | 94.8 |
| 20-Jan-17 | 12.8 | 2.5 | (2) | 65.4 |
| 26-Jan-17 | 55.9 | 8.5 | 94.6 | 65.7 |
| 3-Feb-17 | (2) | 0.6 | (2) | 49.5 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 10-Feb-17 | (2) | 0.9 | (2) | 49.0 |
| 17-Feb-17 | (2) | 1.4 | (2) | 61.7 |
| 19-Apr-17 | 53.7 | 8.0 | 58.5 | 160.6 |
| 3-May-17 | | | | 122.8 |
| 9-May-17 | | | | |
| 10-May-17 | | | | |
| 16-May-17 | 95.5 | 4.4 | 99.4 | 136.2 |
| 28-Jun-17 | 34.0 | 3.6 | 53.6 | 141.7 |
| 18-Jul-17 | 8.9 | 2.6 | 40.7 | 63.7 |
| 15-Aug-17 | 14.4 | 1.4 | 36.2 | 107.8 |
| 18-Sep-17 | 21.8 | 0.6 | 26.8 | 53.8 |
| 17-Oct-17 | | | 58.6 | |
| 18-Oct-17 | 37.3 | 2.6 | | 118.8 |
| 14-Nov-17 | | | 44.5 | |
| 15-Nov-17 | 33.2 | 1.1 | | 84.9 |
| 13-Dec-17 | (2) | (2) | (2) | |
| 14-Dec-17 | | | | 71.1 |
| 17-Jan-18 | (2) | 6.3 | (2) | 55.1 |
| 18-Feb-18 | | | 280.5 | (5) |
| 22-Feb-18 | 128.6 | 29.3 | | |
| 23-Feb-18 | | | | |
| 6-Mar-18 | | | | |
| 18-Mar-18 | | | (2) | |
| 20-Mar-18 | (2) | 8.8 | | 77.9 |
| 18-Apr-18 | (2) | 9.3 | (2) | 28.3 |
| 8-May-18 | | | | |
| 9-May-18 | | | | |
| 14-May-18 | | 3.6 | | 73.1 |
| 15-May-18 | 76.2 | | 66.7 | |
| 18-Jun-18 | 3.4 | 1.9 | 6.6 | 73.6 |
| 19-Jul-18 | 1.8 | 1.5 | 1.5 | 53.7 |
| 23-Aug-18 | 54.2 | 5.8 | 39.2 | 69.4 |
| 5-Sep-18 | | | | |
| 19-Sep-18 | 1.1 | 2.4 | 4.5 | 93.8 |
| 24-Oct-18 | 18.1 | 1.7 | 12.5 | 35.3 |
| 21-Nov-18 | | 0.9 | | 59.1 |
| 6-Dec-18 | | | | |
| 12-Dec-18 | (2) | 1.6 | (2) | 39.4 |
| 18-Jan-19 | | 1.5 | | 54.3 |
| 26-Feb-19 | | | | 47.0 |
| 8-Mar-19 | | | | |
| 15-Mar-19 | (2) | (2) | (2) | (2) |
| 24-Apr-19 | 110.3 | 32.7 | 162.7 | 132.4 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 14-May-19 | | | | |
| 17-May-19 | | | | |
| 23-May-19 | 51.7 | 5.6 | 64.7 | 113.5 |
| 18-Jun-19 | 24.4 | 2.5 | 31.3 | 28.6 |
| 29-Jul-19 | (1) | 0.3 | 0.8 | 59.8 |
| 29-Aug-19 | (1) | 1.0 | 0.8 | 69.0 |
| 4-Sep-19 | | | | |
| 26-Sep-19 | (1) | 0.1 | 2.3 | 86.4 |
| 23-Oct-19 | | 0.8 | 13.8 | 89.0 |
| 22-Nov-19 | 57.9 | | | 82.6 |
| 19-Dec-19 | | | | |
| 20-Dec-19 | | | | 76.8 |
| 15-Jan-20 | | 0.8 | | 38.2 |
| 20-Feb-20 | | | | 22.8 |
| 2-Mar-20 | | | | |
| 26-Mar-20 | 114.2 | 4.9 | | 58.9 |
| 27-Apr-20 | 268.3 | 7.5 | 37.9 | 74.4 |
| 19-May-20 | | | | |
| 29-May-20 | 141.7 | 8.5 | 27.8 | 93.1 |
| 11-Jun-20 | | | | |
| 23-Jun-20 | 14.0 | 31.9 | 18.5 | 64.1 |
| 30-Jul-20 | 10.7 | 5.5 | 12.7 | 47.0 |
| 25-Aug-20 | | 0.7 | 9.1 | 25.4 |
| 27-Aug-20 | | | | |
| 25-Sep-20 | (1) | 3.7 | 28.1 | 57.7 |
| 30-Oct-20 | (1) | 1.1 | 10.0 | 60.9 |
| 25-Nov-20 | | | | |
| 26-Nov-20 | (2) | 2.0 | 14.2 | 94.4 |
| 23-Dec-20 | | 0.1 | 4.7 | (4) |
| 27-Jan-21 | (2) | 0.5 | (2) | 35.0 |
| 22-Feb-21 | (2) | (2) | (2) | 19.4 |
| 23-Feb-21 | | | | |
| 29-Mar-21 | 0.2 | 10.5 | 98.9 | 89.5 |
| 27-Apr-21 | 156.2 | 9.8 | 118.5 | 72.8 |
| 26-May-21 | | | | |
| 27-May-21 | 22.6 | 4.6 | 12.1 | 39.0 |
| 22-Jun-21 | (1) | 4.5 | 5.9 | 53.8 |
| 22-Jul-21 | (4) | 3.1 | 73.1 | 172.7 |
| 11-Aug-21 | | | | |
| 25-Aug-21 | 17.1 | 2.7 | 7.3 | 161.0 |
| 28-Sep-21 | 36.6 | 6.4 | | 168.0 |
| 7-Oct-21 | | | | |
| 26-Oct-21 | 59.0 | 35.9 | 57.2 | 162.4 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 23-Nov-21 | (2) | 8.8 | 26.5 | 115.6 |
| 21-Dec-21 | (2) | 0.3 | 5.8 | 75.0 |
| 24-Jan-22 | (2) | (2) | (2) | 51.2 |
| 8-Feb-22 | (2) | (2) | (2) | 43.7 |
| 28-Feb-22 | | | | |
| 16-Mar-22 | 0.1 | 11.0 | (2) | 42.3 |
| 21-Apr-22 | 18.0 | 5.9 | 167.8 | 47.5 |
| 4-May-22 | | | | |
| 24-May-22 | 18.1 | | 21.2 | 81.6 |
| 26-May-22 | | 3.5 | | |
| 24-Jun-22 | 33.7 | | | |
| 25-Jun-22 | | 5.3 | 17.1 | |
| 26-Aug-22 | | 7.8 | 24.3 | |
| 29-Aug-22 | 4.0 | | | |
| 31-Aug-22 | | | | 44.8 |
| 27-Sep-22 | 6.8 | 8.7 | 32.5 | |
| 26-Oct-22 | 10.3 | 2.3 | 10.5 | |
| 28-Oct-22 | | | | 27.1 |
| 21-Nov-22 | 20.1 | 2.0 | 16.3 | |
| 20-Dec-22 | 36.5 | 1.7 | 12.5 | |
| 24-Jan-23 | (2) | 6.1 | (2) | |
| 22-Feb-23 | | 4.9 | (2) | |
| 23-Feb-23 | | | | 0.7 |
| 27-Mar-23 | 94.2 | 20.8 | 912.0 | |
| 21-Apr-23 | 81.0 | 8.8 | 251.8 | |
| 15-May-23 | 93.6 | 9.0 | 95.1 | |
| 17-May-23 | | | | 124.6 |
| 26-Jun-23 | 71.3 | 7.6 | 140.1 | |
| 25-Jul-23 | 46.1 | 7.3 | 96.6 | |
| 28-Aug-23 | 22.9 | 0.8 | 34.5 | |
| 30-Aug-23 | | | | 158.7 |
| 25-Sep-23 | 5.1 | 3.3 | 22.5 | |
| 30-Oct-23 | 29.6 | 1.0 | 150.3 | |
| 31-Oct-23 | | | | 70.4 |
| 29-Nov-23 | 20.1 | 6.8 | (2) | |
| 18-Dec-23 | 39.2 | 2.4 | 73.9 | |
| 31-Jan-24 | (2) | 15.1 | 118.6 | |
| 27-Feb-24 | (2) | 5.8 | 108.7 | 32.3 |
| 27-Mar-24 | 102.4 | 12.7 | 114.9 | |
| 29-Apr-24 | 101.2 | 10.4 | 365.7 | |
| 27-May-24 | | 5.6 | 137.5 | |
| 28-May-24 | 42.9 | | | |
| 29-May-24 | | | | 148.6 |

## Table C-1 Surface Water Flow Summary - Main Quarry Stations

| Date | SW1 | SW2 | SW0-2 | QFSW2 |
|---|---|---|---|---|
| 26-Jun-24 | 35.5 | 7.0 | 58.2 | |
| 29-Jul-24 | | 1.0 | | |
| 30-Jul-24 | 35.9 | | 35.8 | |
| 26-Aug-24 | 22.7 | 1.9 | | 126.3 |
| 27-Aug-24 | | | 67.6 | |
| 24-Sep-24 | 58.9 | 3.5 | 131.7 | |
| 28-Oct-24 | 10.4 | 2.8 | 79.8 | |
| 30-Oct-24 | | | | 248.1 |
| 18-Nov-24 | 29.8 | 5.7 | 122.0 | |
| 16-Dec-24 | | (4) | | |
| 27-Jan-25 | (3) | (2) | | |
| 24-Feb-25 | (2) | (2) | | (2) |
| 24-Mar-25 | 133.2 | 2.1 | | |
| 26-Mar-25 | | | (3) | |
| 28-Apr-25 | 94.7 | 12.3 | 264.3 | |
| 26-May-25 | 54.3 | 11.5 | | |
| 27-May-25 | | | 408.6 | |
| 28-May-25 | | | | 109.9 |
| 23-Jun-25 | | 1.7 | | |
| 25-Jun-25 | (4) | | 33.3 | |
| 28-Jul-25 | 5.2 | 0.2 | | |
| 29-Jul-25 | | | 17.7 | |
| 25-Aug-25 | | 7.5 | | 59.1 |
| 26-Aug-25 | | | 114.1 | |
| 27-Aug-25 | 2.9 | | | |
| 29-Sep-25 | 9.8 | 2.1 | 67.7 | |
| 27-Oct-25 | 22.0 | 1.7 | 104.6 | 79.4 |
| 25-Nov-25 | 70.0 | 0.5 | 193.2 | |
| 15-Dec-25 | (2) | | | |
| 16-Dec-25 | | (3) | (3) | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22-May-03 | | (1) | 164.4 | 0.2 | | 0.6 | 23.0 | (6) | (6) | (6) | (6) |
| 23-Jun-03 | (1) | (1) | 58.3 | (4) | (1) | 0.25 | 3.8 | 0.75 | 1.0 | 0.4 | 0.75 |
| 26-Jun-03 | | | | | | | | | | | |
| 22-Jul-03 | (1) | (1) | 92.5 | (1) | (1) | 1.1 | 0.8 | 1.4 | 0.8 | (1) | 0.8 |
| 20-Aug-03 | (1) | (1) | 57.6 | (1) | (1) | (4) | 3.2 | (1) | 0.35 | (1) | 0.1 |
| 25-Sep-03 | (1) | (1) | 9.0 | (1) | (1) | (4) | 0.98 | 0.1 | 0.1 | (1) | 0.2 |
| 22-Oct-03 | (1) | (1) | 50.8 | (1) | (1) | 0.7 | | 0.2 | 1.3 | 0.1 | 0.1 |
| 23-Oct-03 | | | | | | | | | | | |
| 28-Nov-03 | (1) | (1) | 214.9 | 0.12 | 1.95 | (4) | 6.94 | 0.27 | 0.3 | 0.56 | 0.82 |
| 19-Dec-03 | 0.15 | (1) | 266.5 | (2) | 4.52 | 2.0 | 13.09 | 0.5 | 0.6 | 1.0 | 1.2 |
| 10-Feb-04 | (2) | (1) | (2) | (2) | | | | | | 0.5 | |
| 11-Feb-04 | | | | | | 0.25 | | | | | |
| 12-Feb-04 | | | | | | | | | | | |
| 13-Feb-04 | | | | | 2.08 | | 6.74 | 1.5 | 0.75 | | 0.75 |
| 16-Mar-04 | | | 473.4 | | | | | | | | |
| 17-Mar-04 | | | | | | | | | | | |
| 18-Mar-04 | 2.84 | (1) | | (2) | 5.24 | 0.15 | 22.44 | 1.72 | 0.75 | 0.59 | 0.92 |
| 19-Apr-04 | 14.42 | (1) | 606.6 | | | | | | | | |
| 20-Apr-04 | | | | 0.52 | 7.04 | 1.13 | | | | | |
| 21-Apr-04 | | | | | | | 27.35 | 12.21 | 5.77 | 1.83 | 8.41 |
| 19-May-04 | 0.83 | (1) | 291.5 | 0.23 | 1.41 | 0.21 | 11.08 | 2.7 | 0.9 | 0.61 | 6.72 |
| 24-Jun-04 | (1) | (1) | 185.9 | 0.1 | 0.58 | 0.1 | 3.98 | 0.44 | 0.34 | 0.13 | 0.22 |
| 29-Jul-04 | (1) | (1) | 100.5 | | (1) | (4) | 2.99 | 0.5 | 1.5 | (4) | 1.0 |
| 23-Aug-04 | (1) | (1) | | | (1) | | | (4) | | (1) | (4) |
| 26-Aug-04 | | | 24.9 | | | (4) | 0.2 | | 0.25 | | |
| 21-Sep-04 | (1) | (1) | | | (1) | (4) | | (4) | 0.1 | (1) | |
| 22-Sep-04 | | | 41.3 | | | | 0.21 | | | | (4) |
| 23-Sep-04 | | | | | | | | | | | |
| 20-Oct-04 | | | | | | | | | | | (4) |
| 21-Oct-04 | (1) | (1) | 41.5 | (1) | (1) | (4) | 1.07 | (4) | 0.1 | (1) | |
| 16-Nov-04 | | | 69.8 | | | | | | | | |
| 17-Nov-04 | (1) | (1) | | | (1) | (4) | | (4) | | (1) | |
| 18-Nov-04 | | | | | | | 5.91 | | 0.1 | | (4) |
| 15-Dec-04 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 16-Dec-04 | | | | | | | | | | | |
| 13-Jan-05 | | 63.18 | | | | | | | | | |
| 16-Jan-05 | (2) | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 13-Feb-05 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 27-Mar-05 | | (2) | | (2) | | | | | | | |
| 28-Mar-05 | | | 220.0 | | | | | | | | |
| 29-Mar-05 | | | | | 4.21 | 0.36 | 18.37 | 15.0 | 10.0 | 4.0 | 10.0 |
| 30-Mar-05 | 0.76 | | | | | | | | | | |
| 10-Apr-05 | | (2) | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11-Apr-05 | 31.38 | | 1671.0 | | 41.7 | 3.18 | 62.1 | 12.0 | 10.0 | 8.0 | 5.7 |
| 22-May-05 | (1) | (1) | | | | | | | | | |
| 24-May-05 | | | 286.6 | | | | | | | | |
| 26-May-05 | | | | 0.13 | 1.07 | 0.16 | 10.35 | 5.28 | 2.2 | 1.43 | 2.8 |
| 26-Jun-05 | (1) | (1) | | | (1) | | | | | (1) | |
| 27-Jun-05 | | | | | | | | | | | |
| 28-Jun-05 | | | 123.0 | | | | | | | | |
| 29-Jun-05 | | | | | | 0.1 | 3.2 | (4) | 0.94 | | 0.2 |
| 10-Jul-05 | (1) | (1) | | | (1) | | | | | (1) | |
| 11-Jul-05 | | | 87.5 | | | | | | | | |
| 12-Jul-05 | | | | | | (4) | 5.0 | 1.0 | 2.0 | | 1.5 |
| 21-Aug-05 | (1) | (1) | | | (1) | | 0.88 | | | (1) | |
| 22-Aug-05 | | | 53.2 | | | (4) | | | | | |
| 23-Aug-05 | | | | | | | | 0.1 | 0.4 | | 0.3 |
| 25-Sep-05 | (1) | (1) | | (1) | (1) | 0.1 | | (4) | | (1) | 0.1 |
| 27-Sep-05 | | | 14.7 | | | | | | | | |
| 28-Sep-05 | | | | | | | 0.9 | | | | |
| 23-Oct-05 | (1) | (1) | | | (1) | | | (1) | | (1) | |
| 24-Oct-05 | | | 46.0 | | | | | | | | |
| 25-Oct-05 | | | | | | 0.5 | 0.84 | | 0.1 | | 0.1 |
| 13-Nov-05 | (1) | (1) | | | (1) | | | | | 0.1 | |
| 14-Nov-05 | | | 32.8 | | | | | | | | |
| 15-Nov-05 | | | | | | | | | | | |
| 16-Nov-05 | | | | | | 0.12 | 2.19 | 0.15 | 1.7 | | 1.21 |
| 11-Dec-05 | (1) | (2) | 166.9 | (2) | (1) | | | | | (1) | |
| 12-Dec-05 | | | | | | | | | | | |
| 13-Dec-05 | | | | | | 0.1 | 3.5 | 0.3 | 0.9 | | 0.2 |
| 14-Dec-05 | | | | | | | | | | | |
| 16-Dec-05 | | | | | | | | | | | |
| 15-Jan-06 | | (2) | | (2) | | | | | | | |
| 16-Jan-06 | 2.35 | | 133.0 | | | | | | | | |
| 17-Jan-06 | | | | | | 2.72 | | | | | |
| 18-Jan-06 | | | | | 5.45 | | 20.17 | 7.62 | 6.25 | 9.65 | 9.81 |
| 19-Feb-06 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 19-Mar-06 | | 5.95 | | (2) | | | | | | | |
| 20-Mar-06 | 39.72 | | 966.1 | | | | | | | | |
| 21-Mar-06 | | | | | | | | | | | |
| 22-Mar-06 | | | | | 15.3 | 2.01 | | | | | |
| 24-Mar-06 | | | | | | | 29.22 | 11.37 | 3.48 | 1.71 | 4.23 |
| 31-Mar-06 | | | | | | | | | | | |
| 7-Apr-06 | | | | | | | | | | | |
| 13-Apr-06 | | | | | | | | | | | |
| 16-Apr-06 | | (1) | | | | | 22.11 | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-Apr-06 | 5.16 | | 569.4 | | | | | | | | |
| 19-Apr-06 | | | | 0.25 | 5.6 | 3.78 | | 5.24 | 4.07 | 2.06 | 8.61 |
| 21-May-06 | | (1) | | | | | | | | | |
| 23-May-06 | 0.8 | | 407.6 | | | | | | | | |
| 24-May-06 | | | | 0.13 | 2.42 | (4) | 10.74 | 3.29 | 1.11 | 2.21 | 3.44 |
| 18-Jun-06 | (1) | (1) | | | (1) | | | | | (1) | |
| 20-Jun-06 | | | | | | | | | | | |
| 21-Jun-06 | | | 83.4 | | | | 3.04 | 0.47 | 1.64 | | 0.33 |
| 23-Jun-06 | | | | | | (4) | | | | | |
| 9-Jul-06 | (1) | (1) | | | (1) | | | | | | |
| 10-Jul-06 | | | | | | | | | | | |
| 11-Jul-06 | | | 55.6 | | | | | | | | |
| 12-Jul-06 | | | | | | 0.39 | 2.62 | 0.25 | 2.02 | (4) | 0.43 |
| 20-Aug-06 | (1) | (1) | | | (1) | | | | | (1) | |
| 21-Aug-06 | | | | | | | | | | | |
| 22-Aug-06 | | | 32.0 | | | | | | | | |
| 23-Aug-06 | | | | | | (4) | | | | | |
| 24-Aug-06 | | | | | | | 1.02 | 0.7 | 0.54 | | 0.71 |
| 17-Sep-06 | (1) | (1) | | (1) | (1) | | | | | (1) | |
| 20-Sep-06 | | | 36.4 | | | | | | | | |
| 21-Sep-06 | | | | | | (4) | 1.52 | 0.25 | 0.56 | | 0.17 |
| 25-Sep-06 | | | | | | | | | 0.5 | | |
| 27-Sep-06 | | | | | | | | | | | |
| 28-Sep-06 | | | | | | | | | | | |
| 15-Oct-06 | (1) | (1) | | | (1) | | | | | | |
| 17-Oct-06 | | | | | | | | | | | |
| 18-Oct-06 | | | 124.8 | | | | | | | | |
| 19-Oct-06 | | | | | | (4) | 2.21 | 0.91 | 1.61 | 0.1 | 0.59 |
| 17-Nov-06 | | | | | | | | | | | |
| 19-Nov-06 | (1) | | | | | | | | | | |
| 23-Nov-06 | | | | | | | 16.83 | 3.81 | 1.88 | 3.25 | 4.87 |
| 24-Nov-06 | | | 286.8 | | | | | | | | |
| 27-Nov-06 | | | | | 2.43 | 1.52 | | | | | |
| 17-Dec-06 | 1.25 | (1) | 382.9 | (4) | 3.91 | 0.55 | 19.8 | 5.44 | 7.03 | 3.69 | 2.62 |
| 23-Dec-06 | | | | | | | | | | | |
| 21-Jan-07 | 0.11 | (2) | (2) | (2) | (2) | (2) | 35.0 | 15.0 | 4.0 | 3.0 | 15.0 |
| 18-Feb-07 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 18-Mar-07 | (2) | 9.12 | 492.0 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 15-Apr-07 | 4.33 | | | | | | | | | | |
| 16-Apr-07 | | (1) | 574.2 | 0.97 | 7.17 | 1.71 | | | | | |
| 17-Apr-07 | | | | | | | 26.15 | 6.29 | 4.91 | 1.39 | 3.31 |
| 13-May-07 | | (1) | 170.1 | (4) | 1.99 | 0.2 | 11.09 | 4.55 | 2.27 | 0.62 | 1.55 |
| 15-May-07 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17-Jun-07 | (1) | (1) | 92.8 | (1) | (1) | 0.1 | 2.81 | 0.14 | (4) | 2.09 | 0.4 |
| 18-Jun-07 | | | | | | | | | | | |
| 15-Jul-07 | (1) | (1) | 47.5 | (1) | (1) | (4) | 1.0 | (4) | 0.5 | 0.61 | 0.3 |
| 18-Jul-07 | | | | | | | | | | | |
| 19-Aug-07 | (1) | (1) | 32.1 | (1) | (1) | (4) | 0.56 | (1) | (1) | 0.16 | (4) |
| 22-Aug-07 | | | | | | | | | | | |
| 16-Sep-07 | (1) | (1) | | (1) | (1) | (4) | | (1) | (1) | 1.25 | 0.24 |
| 17-Sep-07 | | | | | | | 0.5 | | | | |
| 18-Sep-07 | | | 14.2 | | | | | | | | |
| 14-Oct-07 | (1) | (1) | | (1) | (1) | 0.1 | | (1) | (1) | (1) | (1) |
| 18-Oct-07 | | | 47.0 | | | | 0.4 | | | | |
| 19-Oct-07 | | | | | | | | | | | |
| 18-Nov-07 | (1) | (1) | | (1) | (1) | | | (1) | (1) | | |
| 19-Nov-07 | | | | | | | 1.4 | | | 1.45 | 0.23 |
| 21-Nov-07 | | | 123.9 | | | 0.2 | | | | | |
| 9-Dec-07 | (2) | (2) | (2) | (2) | (2) | (2) | | | | | |
| 10-Dec-07 | | | | | | | | | | | |
| 11-Dec-07 | | | | | | | 2.8 | 2.53 | 0.6 | 2.45 | 0.89 |
| 12-Dec-07 | | | | | | | | | | | |
| 20-Jan-08 | (2) | (2) | | (2) | (2) | (2) | | | | | |
| 21-Jan-08 | | | 883.4 | | | | | | | | |
| 22-Jan-08 | | | | | | | 73.6 | 1.08 | 7.25 | 5.6 | 8.1 |
| 17-Feb-08 | (2) | (2) | (2) | (2) | (2) | (2) | | | | | |
| 19-Feb-08 | | | | | | | | | | | |
| 20-Feb-08 | | | | | | | 15.3 | 4.25 | 4.66 | 4.1 | 14.45 |
| 16-Mar-08 | (2) | (2) | | (2) | (2) | (2) | | | | | |
| 17-Mar-08 | | | | | | | 2.1 | 1.22 | 7.2 | 2.9 | 12.5 |
| 18-Mar-08 | | | 178.8 | | | | | | | | |
| 19-Mar-08 | | | | | | | | | | | |
| 30-Mar-08 | 12.87 | 8.79 | | (4) | 0.1 | 2.77 | | | | | |
| 1-Apr-08 | | | | | | | | | | | |
| 2-Apr-08 | | | 964.1 | | | | 100.8 | 3.29 | 11.1 | 8.9 | 2.65 |
| 4-Apr-08 | | | | | | | | | | | |
| 7-Apr-08 | | | | | | | | | | | |
| 20-Apr-08 | | (1) | | 0.3 | | | | | | | |
| 21-Apr-08 | | | | | | | | | | | |
| 23-Apr-08 | 11.14 | | | | 12.5 | 0.2 | 32.6 | 2.04 | 6.0 | 3.1 | 3.09 |
| 24-Apr-08 | | | 624.1 | | | | | | | | |
| 6-May-08 | | | | | | | | | | | |
| 18-May-08 | | (1) | | (4) | | | | | | | |
| 20-May-08 | | | | | | 0.4 | | | | | |
| 21-May-08 | 0.43 | | 283.7 | | 2.8 | | | | | | |
| 22-May-08 | | | | | | | 13.1 | 0.54 | 3.76 | 1.4 | 2.27 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-Jun-08 | (1) | (1) | | (1) | (1) | | | | | | 0.15 |
| 17-Jun-08 | | | 158.4 | | | | 13.1 | 0.34 | 4.33 | 1.1 | |
| 18-Jun-08 | | | | | | 0.1 | | | | | |
| 13-Jul-08 | (1) | (1) | | (1) | (1) | (4) | | (4) | | | (1) |
| 15-Jul-08 | | | 56.2 | | | | 0.8 | | 0.4 | 0.5 | |
| 16-Jul-08 | | | | | | | | | | | |
| 17-Aug-08 | (1) | (1) | | (1) | (1) | | | | | | (1) |
| 18-Aug-08 | | | | | | | | | | | |
| 19-Aug-08 | | | 105.1 | | | 0.3 | 7.3 | 0.16 | 0.2 | 0.9 | |
| 12-Sep-08 | | | 60.7 | | | | | | | | |
| 14-Sep-08 | (1) | (1) | | (1) | (1) | 0.3 | | | | | (4) |
| 16-Sep-08 | | | | | | | 7.5 | 1.6 | 1.4 | 1.35 | |
| 17-Sep-08 | | | | | | | | | | | |
| 19-Oct-08 | (1) | (1) | | (1) | (1) | | | 0.16 | | | 0.1 |
| 20-Oct-08 | | | | | | | | | | | |
| 21-Oct-08 | | | | | | 0.4 | | | | | |
| 22-Oct-08 | | | 119.3 | | | | 0.8 | | 1.3 | 1.57 | |
| 23-Nov-08 | (2) | (2) | 357.9 | (2) | (2) | 0.92 | 7.5 | 2.22 | 3.02 | 1.6 | 3.52 |
| 14-Dec-08 | (2) | (1) | 474.6 | (2) | (2) | 0.61 | 17.43 | 1.94 | 5.7 | 10.73 | 2.9 |
| 18-Jan-09 | (2) | (2) | 261.7 | (2) | (2) | (2) | 11.0 | 1.3 | 2.8 | 0.54 | (2) |
| 8-Feb-09 | (2) | (1) | 545.2 | (2) | (2) | 1.77 | 51.1 | 5.25 | 10.8 | 7.5 | 0.9 |
| 15-Mar-09 | 8.8 | 4.4 | 1095.0 | 0.3 | 0.41 | 1.7 | 43.8 | 4.8 | 9.6 | 4.6 | 1.6 |
| 12-Apr-09 | 9.1 | 1.3 | 382.7 | 2.4 | 17.2 | 0.7 | 27.3 | 3.8 | 10.4 | 6.1 | 3.42 |
| 17-May-09 | 0.8 | (1) | 393.6 | 0.3 | 5.9 | 0.2 | 5.1 | 0.2 | 4.5 | 1.8 | 0.8 |
| 14-Jun-09 | (1) | (1) | 155.8 | (1) | (1) | 0.1 | 2.3 | 0.1 | 1.8 | 1.3 | (1) |
| 12-Jul-09 | (1) | (1) | 106.6 | (1) | (1) | (4) | 0.8 | 0.16 | 0.5 | 1.6 | (1) |
| 9-Aug-09 | (1) | (1) | 169.3 | (1) | (1) | 0.2 | 0.8 | 0.12 | 0.45 | 1.2 | (1) |
| 13-Sep-09 | (1) | (1) | 44.4 | (1) | (1) | (4) | 0.8 | (4) | (4) | 0.46 | (1) |
| 11-Oct-09 | (1) | (1) | 150.7 | (1) | (1) | 0.12 | 1.1 | (4) | 0.17 | 0.51 | (1) |
| 15-Nov-09 | (1) | (1) | 123.9 | (1) | (1) | 0.4 | 2.4 | 0.1 | 0.95 | 0.7 | (1) |
| 13-Dec-09 | (2) | (1) | 151.0 | (1) | (2) | (4) | 0.9 | 0.8 | 1.14 | 1.12 | (2) |
| 17-Jan-10 | (2) | (2) | 113.0 | (2) | (2) | (2) | 1.2 | 0.2 | 3.95 | 0.65 | (2) |
| 7-Feb-10 | (2) | (2) | 134.9 | (2) | (2) | (2) | 1.35 | 0.18 | 1.03 | 0.9 | (2) |
| 14-Mar-10 | 26.4 | 8.1 | 1499.6 | (2) | 25.4 | 1.95 | 19.5 | 2.25 | 15.0 | 4.36 | 0.45 |
| 4-Apr-10 | 6.7 | | | | 11.2 | | | | | | |
| 11-Apr-10 | 3.4 | (1) | 303.4 | 0.1 | 8.3 | 0.5 | 9.0 | 0.6 | 6.7 | 2.3 | 0.5 |
| 16-May-10 | 1.3 | (1) | 247.0 | | 5.4 | 0.3 | 12.0 | 0.4 | 4.1 | 0.6 | 0.6 |
| 23-May-10 | (1) | | | | 0.6 | | | | | | |
| 13-Jun-10 | 3.0 | (1) | 240.0 | (1) | 2.6 | 0.65 | 8.0 | 0.55 | 2.5 | 0.45 | 0.63 |
| 18-Jul-10 | 3.1 | | 287.1 | (1) | 1.6 | (4) | 6.2 | 1.5 | 5.5 | 1.8 | 0.3 |
| 19-Jul-10 | | 1.05 | | | | | | | | | |
| 15-Aug-10 | (1) | (1) | 106.9 | (1) | (1) | 0.24 | 1.34 | (4) | 0.42 | 0.45 | (1) |
| 12-Sep-10 | (1) | (1) | 89.1 | (1) | (1) | (4) | 0.24 | (4) | (4) | 0.25 | (1) |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17-Oct-10 | (1) | (1) | 99.5 | (1) | 0.8 | 0.2 | 6.0 | 0.2 | 1.9 | 0.8 | (4) |
| 21-Oct-10 | | | | | | | | | | | |
| 14-Nov-10 | 0.3 | (1) | 276.6 | (1) | 1.7 | 1.4 | 16.9 | 1.4 | 6.2 | 2.7 | 0.4 |
| 19-Dec-10 | (2) | (2) | 241.2 | (2) | (2) | (2) | 5.34 | (2) | (2) | (2) | (2) |
| 15-Jan-11 | | | | | | | | | | | |
| 16-Jan-11 | 1.7 | | 305.3 | | | | 10.3 | 0.5 | | | |
| 20-Feb-11 | (2) | | 418.7 | | | 0.4 | 4.6 | 0.4 | 4.0 | 1.6 | |
| 13-Mar-11 | 6.0 | (2) | 387.8 | (2) | (2) | 0.2 | 9.5 | 1.0 | 5.8 | 1.2 | 0.6 |
| 17-Mar-11 | 11.2 | | | | | | | | | | |
| 18-Mar-11 | 59.8 | | | | | | | | | | |
| 20-Mar-11 | 15.8 | (2) | 962.9 | | 17.1 | | | | | | |
| 22-Mar-11 | | | | | | | | | | | |
| 1-Apr-11 | 4.4 | | | | | | | | | | |
| 5-Apr-11 | 32.4 | | | | | | | | | | |
| 8-Apr-11 | 17.1 | | | | | | | | | | |
| 12-Apr-11 | 48.7 | | | | | | | | | | |
| 15-Apr-11 | 18.0 | | | | | | | | | | |
| 17-Apr-11 | 14.0 | (1) | 699.4 | 0.7 | 45.3 | 0.9 | 8.2 | 0.7 | 6.4 | 2.6 | 1.3 |
| 18-Apr-11 | | | | | | | | | | | |
| 20-Apr-11 | 33.3 | | | | | | | | | | |
| 21-Apr-11 | 20.9 | | | | | | | | | | |
| 26-Apr-11 | 14.0 | | | | | | | | | | |
| 29-Apr-11 | 19.5 | | | | | | | | | | |
| 3-May-11 | 8.4 | | | | | | | | | | |
| 6-May-11 | 4.2 | | | | | | | | | | |
| 10-May-11 | 1.5 | | | | | | | | | | |
| 13-May-11 | 8.1 | | | 0.5 | | | | | | | |
| 15-May-11 | 95.3 | (1) | 577.0 | | 16.9 | 2.1 | 41.7 | 8.2 | 12.8 | 6.5 | 3.3 |
| 16-May-11 | 28.8 | | | | | | | | | | |
| 18-May-11 | 22.5 | | | | | | | | | | |
| 19-May-11 | 23.1 | | | | | | | | | | |
| 20-May-11 | 16.8 | | | | | | | | | | |
| 27-May-11 | 17.8 | | | | | | | | | | |
| 3-Jun-11 | 3.8 | | | | | | | | | | |
| 12-Jun-11 | | (1) | 296.3 | (4) | 1.2 | 0.14 | 3.6 | 0.22 | 3.3 | 1.2 | 0.45 |
| 13-Jun-11 | 1.5 | | | | | | | | | | |
| 17-Jul-11 | (1) | (1) | 89.5 | (1) | (1) | 0.1 | 0.9 | (4) | 0.3 | 0.2 | (4) |
| 14-Aug-11 | (1) | (1) | 61.5 | (1) | (1) | (4) | 0.12 | (4) | (4) | (4) | (1) |
| 18-Sep-11 | (1) | (1) | 42.5 | (1) | (1) | (4) | (4) | (4) | (4) | (4) | (1) |
| 16-Oct-11 | | (1) | 90.1 | (1) | (1) | 2.2 | 7.0 | 0.6 | 4.3 | 0.8 | 0.3 |
| 20-Nov-11 | | | 96.9 | | | 0.1 | 5.2 | 0.2 | 0.7 | 0.1 | (4) |
| 18-Dec-11 | 3.7 | (1) | 284.5 | (2) | (2) | 0.6 | | 0.8 | 1.6 | 1.2 | 0.6 |
| 19-Dec-11 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20-Dec-11 | | | | | | | | | | | |
| 15-Jan-12 | (2) | (2) | 174.6 | (2) | (2) | | 17.6 | (2) | (2) | (2) | (2) |
| 19-Feb-12 | (2) | (2) | 164.9 | (2) | (2) | 0.5 | 4.4 | (2) | (2) | (2) | (2) |
| 18-Mar-12 | 13.7 | (1) | 981.3 | 0.12 | 12.2 | 1.2 | 3.8 | 5.1 | 5.1 | 1.3 | 4.6 |
| 20-Mar-12 | | | | | | | | | | | |
| 15-Apr-12 | (1) | (1) | 200.0 | (1) | 0.3 | 0.4 | 5.8 | 0.3 | 0.7 | 0.2 | (4) |
| 13-May-12 | (1) | (1) | 168.9 | (1) | (4) | 0.7 | 2.5 | 0.2 | 0.9 | 0.1 | 0.3 |
| 17-Jun-12 | (1) | (1) | 81.0 | (1) | (1) | 0.1 | 1.9 | (4) | 0.5 | 0.2 | (1) |
| 15-Jul-12 | (1) | (1) | | (1) | (1) | 0.1 | | (1) | (4) | | (1) |
| 16-Jul-12 | | | 48.1 | | | | 1.1 | | | 0.2 | |
| 12-Aug-12 | (1) | (1) | | (1) | (1) | 0.6 | | 0.2 | 0.4 | | |
| 14-Aug-12 | | | | | | | 1.7 | | | 0.4 | (4) |
| 15-Aug-12 | | | 126.6 | | | | | | | | |
| 16-Sep-12 | (1) | (1) | | (1) | (1) | 0.2 | | (4) | (4) | 0.1 | (1) |
| 18-Sep-12 | | | | | | | 1.3 | | | | |
| 19-Sep-12 | | | 79.3 | | | | | | | | |
| 14-Oct-12 | (1) | (1) | | (1) | (1) | 0.32 | 1.1 | (4) | (4) | (4) | (1) |
| 17-Oct-12 | | | | | | | | | | | |
| 18-Oct-12 | | | 85.1 | | | | | | | | |
| 18-Nov-12 | 4.7 | (1) | | (1) | (1) | 0.3 | 10.1 | 1.0 | 1.3 | 0.9 | 0.2 |
| 20-Nov-12 | | | 245.1 | | | | | | | | |
| 21-Nov-12 | | | | | | | | | | | |
| 12-Dec-12 | | | | | | | | | | | |
| 16-Dec-12 | 5.2 | 2.1 | | (1) | 10.1 | 0.1 | 6.1 | 0.4 | 1.1 | 0.6 | 0.3 |
| 18-Dec-12 | | | | | | | | | | | |
| 20-Dec-12 | | | 257.4 | | | | | | | | |
| 13-Jan-13 | | 0.2 | | (1) | 5.1 | 0.8 | 19.8 | 0.9 | 3.6 | 0.9 | 0.9 |
| 15-Jan-13 | 9.8 | | 557.6 | | | | | | | | |
| 16-Jan-13 | | | | | | | | | | | |
| 17-Feb-13 | (2) | (2) | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 20-Feb-13 | | | 190.7 | | | | | | | | |
| 17-Mar-13 | | (2) | | (2) | (2) | (2) | | | | | |
| 19-Mar-13 | 5.5 | | | | | | 19.8 | 0.3 | 1.3 | 1.2 | 0.5 |
| 20-Mar-13 | | | 363.6 | | | | | | | | |
| 14-Apr-13 | | | | | | | | | | | |
| 15-Apr-13 | 18.3 | 1.3 | | | | | | | | | |
| 16-Apr-13 | | | 901.3 | | 24.4 | | | | | | |
| 17-Apr-13 | | | | 0.1 | | 1.1 | 42.8 | 5.1 | 12.5 | 4.8 | 4.3 |
| 12-May-13 | | (1) | | | | | | | | | 0.3 |
| 13-May-13 | 7.2 | | | (4) | 11.8 | | | | | | |
| 14-May-13 | | | 394.8 | | | 0.1 | 15.3 | 0.2 | 2.6 | 0.4 | |
| 16-Jun-13 | (1) | (1) | | (1) | | | | 0.1 | 0.5 | 0.2 | 0.2 |
| 18-Jun-13 | | | 252.6 | | 0.8 | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations

| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19-Jun-13 | | | | | | (4) | 4.0 | | | | |
| 14-Jul-13 | (1) | (1) | | (1) | (1) | | | (4) | (4) | (4) | (4) |
| 16-Jul-13 | | | | | | (4) | 1.7 | | | | |
| 17-Jul-13 | | | 157.3 | | | | | | | | |
| 18-Aug-13 | (1) | (1) | 63.0 | (1) | (1) | | | (4) | (4) | (4) | (4) |
| 20-Aug-13 | | | | | | | | | | | |
| 21-Aug-13 | | | | | | 0.11 | 1.0 | | | | |
| 15-Sep-13 | (1) | (1) | | (1) | (1) | (4) | | (4) | (4) | (4) | (4) |
| 18-Sep-13 | | | 84.1 | | | | 0.5 | | | | |
| 19-Sep-13 | | | | | | | | | | | |
| 13-Oct-13 | (1) | (1) | | (1) | (1) | | | 0.4 | | | |
| 16-Oct-13 | | | 183.8 | | | 0.7 | 3.2 | | 2.4 | 0.7 | 0.9 |
| 17-Oct-13 | | | | | | | | | | | |
| 17-Nov-13 | | | | (1) | | | | | | | |
| 19-Nov-13 | 6.2 | 1.0 | | | 6.4 | | | | | | |
| 20-Nov-13 | | | 369.5 | | | 4.6 | 5.5 | 0.3 | 2.6 | 0.5 | 1.1 |
| 15-Dec-13 | | (2) | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 17-Dec-13 | | | 262.4 | | | | | | | | |
| 18-Dec-13 | | | | | | | | | | | |
| 19-Jan-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 21-Jan-14 | | | | | | | | | | | |
| 22-Jan-14 | | | | | | | | | | | |
| 16-Feb-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 19-Feb-14 | | | | | | | | | | | |
| 20-Feb-14 | | | | | | | | | | | |
| 16-Mar-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 18-Mar-14 | | | | | | | | | | | |
| 19-Mar-14 | | | | | | | | | | | |
| 13-Apr-14 | | | | (2) | | | | | | | |
| 15-Apr-14 | 50.5 | 14.0 | | | 58.0 | | | | | | |
| 16-Apr-14 | | | 1147.5 | | | | | | | | |
| 17-Apr-14 | | | | | | 6.7 | 47.5 | 1.3 | 10.9 | 23.9 | 2.2 |
| 11-May-14 | | (4) | | | | | | | | | |
| 12-May-14 | 2.4 | | | 0.1 | 6.4 | | | | | | |
| 13-May-14 | | | 413.9 | | | 0.2 | 10.9 | 0.5 | 2.7 | 1.6 | 1.2 |
| 15-Jun-14 | (1) | (1) | | (1) | (1) | | | | | | |
| 17-Jun-14 | | | 113.2 | | | | | | | | |
| 18-Jun-14 | | | | | | 0.5 | 12.5 | 2.6 | 7.1 | 4.5 | 8.0 |
| 13-Jul-14 | (1) | (1) | | (1) | (1) | | | (4) | (4) | (4) | (4) |
| 14-Jul-14 | | | | | | | | | | | |
| 15-Jul-14 | | | 131.8 | | | (4) | | | | | |
| 16-Jul-14 | | | | | | | 1.1 | | | | |
| 17-Aug-14 | (1) | (1) | | (1) | (1) | (1) | | (4) | (4) | (4) | (4) |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-Aug-14 | | | | | | | | | | | |
| 19-Aug-14 | | | 72.4 | | | | 1.0 | | | | |
| 7-Sep-14 | (1) | (1) | | (1) | (1) | (4) | | (4) | (4) | (4) | (4) |
| 8-Sep-14 | | | | | | | | | | | |
| 9-Sep-14 | | | 61.0 | | | | 0.3 | | | | |
| 19-Oct-14 | | | | (1) | | | | (4) | | | |
| 20-Oct-14 | | | | | | | | | | | |
| 21-Oct-14 | | | | | | | | | | | |
| 22-Oct-14 | (1) | 1.1 | 208.0 | | | | | | | | |
| 23-Oct-14 | | | | | 1.5 | (4) | 2.3 | | 0.1 | 0.4 | 0.2 |
| 16-Nov-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 19-Nov-14 | | | | | | | | | | | |
| 14-Dec-14 | | (2) | | (2) | (2) | (2) | | | | | |
| 16-Dec-14 | | | 277.6 | | | | 2.8 | 0.6 | 0.1 | 0.4 | 0.3 |
| 17-Dec-14 | 3.0 | | | | | | | | | | |
| 18-Jan-15 | (2) | (2) | (2) | (2) | (2) | (2) | | (2) | (2) | (2) | (2) |
| 20-Jan-15 | | | | | | | 0.3 | | | | |
| 21-Jan-15 | | | | | | | | | | | |
| 15-Feb-15 | (2) | (2) | (2) | (2) | (2) | (2) | | | | | |
| 15-Mar-15 | (2) | (2) | | (2) | (2) | (2) | | | | | (2) |
| 18-Mar-15 | | | 172.4 | | | | 5.3 | 0.2 | 0.9 | (4) | |
| 19-Mar-15 | | | | | | | | | | | |
| 21-Apr-15 | | | | | | | | | | | |
| 22-Apr-15 | 5.4 | 0.6 | 535.0 | | | | 25.7 | 1.5 | 2.7 | 2.9 | 1.0 |
| 23-Apr-15 | | | | 0.2 | 7.7 | 0.2 | | | | | |
| 17-May-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 19-May-15 | | | 163.3 | | | (4) | 1.5 | 0.1 | 0.5 | 0.1 | 0.3 |
| 20-May-15 | | | | | | | | | | | |
| 14-Jun-15 | | (1) | | (1) | | | | | | | |
| 15-Jun-15 | 2.3 | | | | | 0.1 | 6.6 | 0.3 | 0.6 | 0.4 | 2.5 |
| 16-Jun-15 | | | 233.4 | | 0.8 | | | | | | |
| 19-Jul-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 21-Jul-15 | | | | | | | | | | | |
| 22-Jul-15 | | | 64.2 | | | 0.2 | 5.3 | 0.3 | 0.2 | 0.3 | 0.1 |
| 9-Aug-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 11-Aug-15 | | | | | | 0.3 | 2.7 | (4) | 0.2 | 0.2 | 0.4 |
| 12-Aug-15 | | | 57.4 | | | | | | | | |
| 23-Aug-15 | (1) | | | | (1) | | | | | | |
| 25-Aug-15 | | | 59.4 | | | 0.2 | 0.4 | (4) | (4) | 0.3 | (4) |
| 6-Sep-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 8-Sep-15 | | | 31.3 | | | (4) | 0.8 | 0.3 | 0.2 | 0.1 | 0.2 |
| 9-Sep-15 | | | | | | | | | | | |
| 11-Oct-15 | (1) | (1) | | (1) | (1) | | | 0.2 | 0.3 | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations

| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-Oct-15 | | | 21.7 | | | | 0.6 | | | 0.5 | (4) |
| 16-Oct-15 | | | | | | 0.2 | | | | | |
| 8-Nov-15 | | | | | | | | | | | |
| 10-Nov-15 | | | | | | 0.4 | | | | | |
| 15-Nov-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 18-Nov-15 | | | 110.6 | | | (4) | 1.6 | 0.15 | 0.3 | 0.5 | 0.24 |
| 19-Nov-15 | | | | | | | | | | | |
| 6-Dec-15 | (1) | (1) | | (1) | (1) | | | | | | |
| 8-Dec-15 | | | 101.1 | | | | | | | | |
| 9-Dec-15 | | | | | | 0.3 | 1.1 | 0.1 | 1.0 | 0.3 | 0.1 |
| 17-Jan-16 | | (2) | | (2) | (2) | | | | | | |
| 19-Jan-16 | 22.0 | | 227.6 | | | | 5.2 | 0.4 | 2.4 | 0.6 | 3.4 |
| 20-Jan-16 | | | | | | 0.5 | | | | | |
| 14-Feb-16 | | (2) | (2) | (2) | (2) | | | | | | |
| 17-Feb-16 | 3.0 | | | | | | 8.1 | 1.9 | 2.0 | 1.1 | 3.5 |
| 18-Feb-16 | | | | | | 0.6 | | | | | |
| 13-Mar-16 | | | | | | | | | | | |
| 15-Mar-16 | 48.1 | 10.1 | 951.7 | 0.3 | 30.7 | 3.5 | 51.9 | 3.5 | 2.2 | 5.1 | 12.9 |
| 17-Apr-16 | | | | (4) | | | | | | | |
| 20-Apr-16 | 10.6 | 0.4 | | | 8.5 | | | | | | |
| 21-Apr-16 | | | 409.5 | | | 1.0 | 23.4 | 1.0 | 1.9 | 4.3 | 10.5 |
| 15-May-16 | | | | (1) | | | | | | | |
| 17-May-16 | 4.0 | 0.6 | 302.8 | | 5.5 | | | | | | |
| 18-May-16 | | | | | | 0.1 | 13.3 | 0.2 | 1.8 | 2.1 | 5.4 |
| 19-Jun-16 | (1) | (1) | | (1) | (1) | | | | | | |
| 22-Jun-16 | | | 86.7 | | | | | | | | |
| 23-Jun-16 | | | | | | 0.2 | 4.3 | 0.2 | 1.0 | 0.1 | 0.9 |
| 3-Jul-16 | | | | | | | | | | | |
| 5-Jul-16 | | | | | | 0.2 | 12.2 | 0.1 | 0.8 | 0.1 | 0.4 |
| 17-Jul-16 | (1) | (1) | | (1) | (1) | | | | | | |
| 20-Jul-16 | | | 47.8 | | | | | | | | |
| 21-Jul-16 | | | | | | 0.2 | 2.1 | 0.1 | 0.7 | 0.1 | 0.3 |
| 7-Aug-16 | | | | | | | | | | | |
| 9-Aug-16 | | | | | | (4) | 0.4 | 0.1 | 0.2 | 0.3 | 0.4 |
| 21-Aug-16 | (1) | (1) | | (1) | (1) | | | | | | |
| 24-Aug-16 | | | 38.2 | | | (4) | 0.8 | (4) | 0.4 | 0.3 | 0.3 |
| 25-Aug-16 | | | | | | | | | | | |
| 18-Sep-16 | (1) | (1) | | (1) | (1) | | | (4) | 0.2 | | |
| 19-Sep-16 | | | 30.9 | | | 0.1 | 1.1 | | | 0.4 | 0.3 |
| 16-Oct-16 | (1) | (1) | | (1) | (1) | | | (4) | | | |
| 17-Oct-16 | | | 48.9 | | | | | | | | |
| 18-Oct-16 | | | | | | 0.2 | 0.4 | | (4) | 0.3 | 0.1 |
| 24-Oct-16 | (1) | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25-Oct-16 | | | | | (1) | | | (1) | | | |
| 15-Nov-16 | | | 46.9 | | | 0.2 | | | | | 0.4 |
| 16-Nov-16 | | | | | | | 0.9 | | 0.9 | 0.1 | |
| 18-Nov-16 | (1) | (1) | | (1) | (1) | | | (4) | | | |
| 12-Dec-16 | (1) | (1) | 54.4 | (1) | (1) | 0.9 | 2.49 | 0.1 | 0.7 | 0.5 | 0.1 |
| 12-Jan-17 | | | | | | | | | | | |
| 22-Jan-17 | (2) | | | (2) | | | | | 3.8 | | |
| 24-Jan-17 | | 4.4 | 340.4 | | | | | | | | |
| 25-Jan-17 | | | | | 4.03 | 1.5 | 12.88 | 4.7 | | 1.25 | 10.3 |
| 15-Feb-17 | (2) | (2) | 163.3 | (2) | (2) | | | | | | |
| 16-Feb-17 | | | | | | | | | | | |
| 17-Feb-17 | | | | | | 0.7 | 8.52 | 0.1 | 1.7 | 0.7 | 3.3 |
| 19-Mar-17 | | | | (2) | | | | | | | |
| 21-Mar-17 | 3.2 | 1.0 | 298.7 | | | | | | | | |
| 22-Mar-17 | | | | | 7.7 | 1.6 | 23.42 | 0.6 | 2.6 | 0.5 | 7.5 |
| 16-Apr-17 | | | | (1) | | | | | | | |
| 19-Apr-17 | 7.7 | 0.2 | 380.1 | | 20.1 | 0.5 | 18.78 | 0.6 | 1.6 | 0.9 | 20.7 |
| 8-May-17 | | | | | | | | | | | |
| 9-May-17 | | | | | | | | | | | |
| 14-May-17 | | | | (1) | | | | | | | |
| 16-May-17 | 5.5 | 0.6 | 487.2 | | 5.0 | 1.7 | 33.4 | 0.8 | 0.3 | 2.0 | 14.5 |
| 28-Jun-17 | 2.5 | 1.4 | 457.4 | (1) | 2.1 | 1.7 | 21.5 | 0.2 | 1.4 | 1.1 | 5.5 |
| 7-Jul-17 | | | | | | 0.4 | 2.4 | 0.2 | 3.0 | 0.1 | 0.8 |
| 18-Jul-17 | 1.1 | (1) | 236.7 | (1) | (1) | | | | | | |
| 19-Jul-17 | | | | | | 0.4 | 4.2 | 0.4 | 1.6 | 0.4 | 1.1 |
| 20-Jul-17 | | | | | | | | | | | |
| 27-Jul-17 | | | | | | | | | | | |
| 2-Aug-17 | | | | | | 0.4 | 0.9 | 0.2 | 0.4 | 0.2 | 0.4 |
| 13-Aug-17 | (1) | (1) | | (1) | (1) | | | | | | |
| 15-Aug-17 | | | 148.7 | | | | | | 0.5 | | |
| 16-Aug-17 | | | | | | 0.5 | 2.5 | 0.2 | | 0.7 | 1.0 |
| 17-Sep-17 | (1) | (1) | | (1) | (1) | | | | | | |
| 18-Sep-17 | | | 100.2 | | | 0.2 | 1.31 | 0.1 | 0.4 | 0.4 | 0.2 |
| 19-Sep-17 | | | | | | | | | | | |
| 17-Oct-17 | 2.3 | 2.5 | 204.0 | (1) | (1) | | | | | | |
| 18-Oct-17 | | | | | | 0.5 | 7.4 | 0.2 | 0.7 | 0.7 | 0.3 |
| 14-Nov-17 | 0.9 | 3.1 | 190.9 | (1) | | | | | | | |
| 15-Nov-17 | | | | | 0.2 | 0.5 | 5.5 | 0.1 | 0.9 | 0.3 | 0.8 |
| 12-Dec-17 | (2) | | | (2) | (2) | | | | | | |
| 14-Dec-17 | | | 219.0 | | | 0.2 | 5.71 | 0.5 | 1.7 | 0.8 | 2.0 |
| 17-Jan-18 | (2) | (2) | 381.9 | (2) | (2) | | | | | | |
| 18-Jan-18 | | | | | | 4.9 | 18.2 | 0.5 | 1.6 | 0.9 | 5.1 |
| 18-Feb-18 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations

| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22-Feb-18 | 27.5 | (6) | 1793.4 | | | | | | | | |
| 23-Feb-18 | | | | | | 1.1 | 39.5 | 3.6 | 2.7 | 7.8 | 19.9 |
| 24-Feb-18 | | | | 0.4 | 17.9 | | | | | | |
| 18-Mar-18 | (2) | | | (2) | (2) | | | | | | |
| 20-Mar-18 | | 0.4 | 276.6 | | | | | | | | |
| 21-Mar-18 | | | | | | 0.3 | 13.7 | 0.8 | 0.4 | 0.8 | 4.1 |
| 18-Apr-18 | | 5.4 | 502.4 | (2) | (2) | (2) | | | | | |
| 19-Apr-18 | | | | | | | 16.0 | 0.6 | 2.0 | 1.8 | 7.3 |
| 8-May-18 | | | | | | | | | | | |
| 9-May-18 | | | | | | | | | | | |
| 13-May-18 | | | | (1) | | | | | | | |
| 14-May-18 | 3.6 | | 324.8 | | 20.1 | | | | | | |
| 15-May-18 | | 0.2 | | | | 0.5 | 23.8 | 0.2 | 0.8 | 1.2 | 5.5 |
| 18-Jun-18 | | | 238.2 | | | 0.8 | 3.54 | 0.56 | 0.64 | 0.51 | 0.31 |
| 19-Jun-18 | (1) | | | | (1) | | | | | | |
| 20-Jun-18 | | (1) | | (1) | | | | | | | |
| 4-Jul-18 | | | | | | 0.29 | 1.41 | | 0.33 | 0.37 | 1.56 |
| 18-Jul-18 | (1) | | | | (1) | | | | | | |
| 19-Jul-18 | | (1) | 1008.8 | (1) | | 0.16 | 1.1 | 0.15 | 0.33 | 0.32 | 0.39 |
| 3-Aug-18 | | | | | | 0.13 | 2.13 | (1) | 0.22 | 0.22 | (4) |
| 23-Aug-18 | (1) | (1) | 72.9 | (1) | (1) | | | | | | |
| 24-Aug-18 | | | | | | 0.1 | 1.0 | (1) | 0.2 | 0.2 | 0.2 |
| 19-Sep-18 | (1) | (1) | 26.9 | (1) | (1) | | | | | | |
| 20-Sep-18 | | | | | | | 2.3 | (1) | 0.2 | 0.3 | 0.1 |
| 24-Oct-18 | (1) | (1) | 60.5 | (1) | (1) | | | | | | |
| 25-Oct-18 | | | | | | 0.3 | 0.9 | (1) | 0.1 | 0.2 | |
| 21-Nov-18 | | | 111.1 | (1) | (1) | | | | | | |
| 22-Nov-18 | | | | | | 0.1 | 2.3 | | 0.4 | 0.2 | 0.2 |
| 12-Dec-18 | (1) | | 187.9 | (1) | 0.5 | | | | | | |
| 13-Dec-18 | | | | | | 0.6 | 5.6 | 0.4 | 0.8 | 0.1 | 1.3 |
| 18-Jan-19 | | (2) | 211.4 | (2) | (2) | | | | | | |
| 19-Jan-19 | | | | | | | 6.4 | 0.6 | 0.9 | 1.9 | 2.4 |
| 26-Feb-19 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 28-Feb-19 | | | | | | (2) | 11.8 | (2) | 1.8 | 1.7 | 2.1 |
| 15-Mar-19 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 19-Mar-19 | | | | | | 1.7 | 21.1 | 2.4 | 1.7 | 1.5 | 9.9 |
| 24-Apr-19 | 19.8 | 5.7 | 985.0 | (1) | 5.9 | | | | | | |
| 25-Apr-19 | | | | | | 4.0 | 43.1 | 2.0 | 3.8 | 2.8 | 3.6 |
| 14-May-19 | | | | | | | | | | | |
| 16-May-19 | | | | | | | | | | | |
| 23-May-19 | 5.8 | 0.4 | 337.1 | (1) | 2.4 | | | | | | |
| 27-May-19 | | | | | | 0.7 | 12.0 | 0.9 | 1.0 | 0.7 | 2.6 |
| 18-Jun-19 | 0.1 | (1) | 149.3 | (1) | (1) | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-Jun-19 | | | | | | 0.8 | 5.3 | 0.2 | 0.8 | 0.7 | 1.1 |
| 29-Jul-19 | (1) | (1) | 45.2 | (1) | (1) | | | | | | |
| 30-Jul-19 | | | | | | 0.1 | 0.7 | (1) | 0.3 | 0.3 | 0.3 |
| 29-Aug-19 | (1) | (1) | 38.2 | (1) | (1) | | | | | | |
| 30-Aug-19 | | | | | | | 1.4 | | (1) | (1) | (1) |
| 26-Sep-19 | | (1) | 46.2 | (1) | (1) | | | | | | |
| 27-Sep-19 | | | | | | 0.2 | 1.3 | | (1) | (1) | (1) |
| 22-Oct-19 | | | | | | 0.2 | 2.9 | | (1) | (1) | (1) |
| 23-Oct-19 | (1) | (1) | 62.7 | (1) | (1) | | | | | | |
| 21-Nov-19 | | | | | | (2) | 6.2 | (2) | (2) | (2) | (2) |
| 22-Nov-19 | (2) | (2) | 75.5 | (2) | (2) | | | | | | |
| 20-Dec-19 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 15-Jan-20 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 24-Jan-20 | | | | | | (2) | 5.7 | (2) | (2) | (2) | (2) |
| 20-Feb-20 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 21-Feb-20 | | | | | | (2) | (2) | (2) | (2) | (2) | (2) |
| 25-Mar-20 | | | | | | (2) | (1) | (1) | (1) | (1) | (1) |
| 26-Mar-20 | 9.6 | (1) | 563.3 | (2) | (2) | | | | | | |
| 27-Apr-20 | (1) | (1) | 237.6 | | | | | | | | |
| 28-Apr-20 | | | | | | | 7.1 | | | | |
| 19-May-20 | | | | | | | | | | | |
| 20-May-20 | | | | | | | | | | | |
| 28-May-20 | | | | | | | 14.7 | 0.9 | 1.4 | 0.4 | 2.7 |
| 29-May-20 | 5.0 | (1) | 166.9 | (1) | (1) | | | | | | |
| 23-Jun-20 | 4.3 | (1) | 393.6 | (1) | (1) | | | | | | |
| 24-Jun-20 | | | | | | 1.7 | (1) | (1) | (1) | (1) | (1) |
| 30-Jul-20 | (1) | (1) | 134.5 | (1) | (1) | | | | | | |
| 31-Jul-20 | | | | | | 0.3 | 2.8 | 0.3 | 0.2 | 0.1 | 0.3 |
| 25-Aug-20 | (1) | (1) | | (1) | | | | | | | |
| 26-Aug-20 | | | | | | (1) | 1.5 | | | 0.3 | 0.5 |
| 25-Sep-20 | (1) | (1) | | (1) | | | | | | | |
| 26-Sep-20 | | | | | | (1) | 1.3 | | | 0.2 | 0.4 |
| 29-Oct-20 | | | | | | (1) | 2.5 | | | 0.2 | 0.6 |
| 30-Oct-20 | (1) | (1) | 68.8 | (1) | (1) | | | | | | |
| 26-Nov-20 | (2) | (2) | 66.5 | (2) | (1) | | | | | | |
| 27-Nov-20 | | | | | | (2) | 12.6 | 8.4 | 1.3 | 0.1 | 7.9 |
| 22-Dec-20 | | | | | | (2) | 3.9 | (2) | (2) | (2) | (2) |
| 23-Dec-20 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 27-Jan-21 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 28-Jan-21 | | | | | | (2) | 7.2 | (2) | (2) | (2) | (2) |
| 22-Feb-21 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 23-Feb-21 | | | | | | (2) | 1.2 | (2) | (2) | (2) | (2) |
| 29-Mar-21 | 18.5 | 15.0 | 436.3 | (1) | (2) | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30-Mar-21 | | | | | | 1.4 | 15.7 | 0.9 | 1.6 | 0.9 | 3.6 |
| 27-Apr-21 | 38.8 | 4.6 | 418.5 | (1) | 6.1 | | | | | | |
| 28-Apr-21 | | | | | | (1) | (4) | (4) | (4) | (4) | (4) |
| 26-May-21 | | | | | | 0.6 | 9.4 | 0.3 | 0.2 | (4) | 2.8 |
| 27-May-21 | (4) | 5.8 | 140.1 | (1) | (1) | | | | | | |
| 22-Jun-21 | (1) | (4) | 19.7 | (1) | (1) | | | | | | |
| 23-Jun-21 | | | | | | (1) | 2.1 | 1.9 | 0.2 | (4) | 0.4 |
| 10-Jul-21 | | | | | | (1) | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 |
| 22-Jul-21 | (1) | (4) | 29.7 | (1) | (1) | | | | | | |
| 23-Jul-21 | | | | | | (4) | 1.6 | 0.1 | 0.1 | 0.2 | (1) |
| 11-Aug-21 | | | | | | 0.1 | 0.4 | 0.5 | (4) | (4) | 0.1 |
| 25-Aug-21 | (1) | (4) | 61.6 | (1) | (1) | | | | | | |
| 26-Aug-21 | | | | | | 0.2 | 0.3 | 0.2 | (4) | (4) | 0.1 |
| 27-Sep-21 | | | | | | 0.4 | 5.6 | 1.1 | 0.5 | 0.1 | 2.8 |
| 28-Sep-21 | (1) | 4.6 | 304.1 | (1) | | | | | | | |
| 26-Oct-21 | 1.5 | 8.2 | 250.1 | (1) | (1) | | | | | | |
| 27-Oct-21 | | | | | | 0.4 | 25.8 | 2.2 | 1.0 | (4) | 1.1 |
| 22-Nov-21 | | | | | | (2) | 7.5 | (2) | (2) | (2) | (2) |
| 23-Nov-21 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 21-Dec-21 | (2) | (2) | (2) | (2) | (2) | | | | | | |
| 22-Dec-21 | | | | | | (2) | 4.9 | (2) | (2) | (2) | (2) |
| 24-Jan-22 | (2) | (2) | (2) | (2) | (2) | (2) | 1.21 | (2) | (2) | (2) | (2) |
| 8-Feb-22 | (2) | (2) | (2) | (2) | (2) | (2) | 2.07 | (2) | (2) | (2) | (2) |
| 16-Mar-22 | (2) | (1) | 616.0 | | (2) | (2) | 3.04 | (2) | (2) | (2) | (2) |
| 21-Apr-22 | 0.28 | (1) | 333.3 | | 0.25 | (4) | 12.23 | 0.78 | 1.3 | 1.33 | 0.55 |
| 24-May-22 | | (1) | | (1) | | 0.25 | | | | | |
| 25-May-22 | | | 192.6 | | (1) | | 19.13 | 0.36 | 0.42 | 0.1 | 0.31 |
| 26-May-22 | (1) | | | | | | | | | | |
| 22-Jun-22 | | | | (1) | 4.01 | | | | | | |
| 24-Jun-22 | (1) | | | | | (1) | 5.1 | 1.3 | 0.37 | | 2.68 |
| 25-Jun-22 | | (1) | 27.0 | | | | | | | | |
| 8-Jul-22 | | | | | | (1) | 0.89 | 0.18 | 0.21 | 0.33 | 0.45 |
| 11-Aug-22 | | | | | | (1) | 3.72 | 0.51 | 0.38 | 0.37 | 0.88 |
| 26-Aug-22 | | (1) | 242.5 | (1) | (1) | (1) | | | | | |
| 29-Aug-22 | (1) | | | | | | 12.64 | 0.53 | 0.41 | 1.23 | 0.61 |
| 30-Aug-22 | | | | | | | | | | | |
| 27-Sep-22 | 0.83 | (1) | 100.9 | (1) | (4) | 0.19 | | | | | |
| 29-Sep-22 | | | | | | | (4) | (4) | 0.2 | (4) | (4) |
| 26-Oct-22 | (1) | (1) | | | | | | | | | |
| 27-Oct-22 | | | | | | (4) | 0.33 | (1) | (4) | (4) | (4) |
| 28-Oct-22 | | | 33.8 | (1) | (1) | | | | | | |
| 21-Nov-22 | (1) | (1) | | | | | | | | | |
| 22-Nov-22 | | | | | | | 0.4 | (1) | (4) | 0.11 | (4) |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Nov-22 | | | 38.4 | (1) | (1) | | | | | | |
| 20-Dec-22 | | 0.25 | 82.4 | | | | | | | | |
| 21-Dec-22 | (1) | | | | (1) | | 0.39 | (1) | (4) | 0.17 | (4) |
| 24-Jan-23 | (1) | (4) | 486.0 | | (1) | | | | | | |
| 22-Feb-23 | | 6.0 | 801.5 | | 0.29 | | | | | | |
| 27-Mar-23 | 19.56 | 10.21 | 1452.6 | | 12.63 | | | | | | |
| 28-Mar-23 | | | | | | | | | | | |
| 21-Apr-23 | (4) | 1.1 | 1924.0 | | 7.17 | | | | | | |
| 15-May-23 | | | | | | | | | | | |
| 16-May-23 | (4) | (4) | 915.3 | (1) | (1) | | | | | | |
| 17-May-23 | | | | | | 0.66 | 21.51 | 0.26 | 9.68 | 0.97 | 6.13 |
| 26-Jun-23 | (1) | (1) | 466.4 | | | | 9.35 | (4) | 0.42 | 0.63 | 0.5 |
| 27-Jun-23 | | | | (1) | (1) | 0.27 | | | | | |
| 11-Jul-23 | | | | | | 0.11 | 2.42 | 1.07 | 0.94 | 0.16 | 1.36 |
| 25-Jul-23 | (1) | 7.46 | 582.3 | (1) | (1) | 0.36 | | | | | |
| 26-Jul-23 | | | | | | | 7.62 | 0.28 | 1.48 | 1.92 | 2.05 |
| 14-Aug-23 | | | | | | 0.11 | 4.39 | (4) | 2.74 | 0.43 | 0.68 |
| 28-Aug-23 | (1) | (1) | | | | | | | | | |
| 29-Aug-23 | | | 287.1 | | | | 1.35 | (4) | 0.16 | 1.13 | 0.28 |
| 30-Aug-23 | | | | (1) | (1) | 2.31 | | | | | |
| 31-Aug-23 | | | | | | | | | | | |
| 25-Sep-23 | (1) | (1) | 288.9 | (1) | (1) | | 0.46 | | | 0.31 | (4) |
| 26-Sep-23 | | | | | | | | | | | |
| 30-Oct-23 | (1) | 0.18 | | | | | | | | | |
| 31-Oct-23 | | | | | | (4) | 0.67 | (4) | 0.34 | 0.28 | 0.12 |
| 1-Nov-23 | | | 77.4 | (1) | (1) | | | | | | |
| 29-Nov-23 | (2) | 0.69 | 207.9 | | (1) | | | | | | |
| 18-Dec-23 | (1) | 9.82 | 376.0 | | (1) | | | | | | |
| 31-Jan-24 | (1) | (2) | 751.0 | | (2) | | | | | | |
| 27-Feb-24 | (2) | (2) | 1075.1 | | (2) | | | | | | |
| 27-Mar-24 | 0.46 | 8.44 | 1179.7 | | 17.54 | | | | | | |
| 29-Apr-24 | 0.83 | 7.85 | 1266.7 | | 11.62 | | | | | | |
| 27-May-24 | (1) | (1) | 613.4 | (1) | (1) | 0.7 | | | | | |
| 28-May-24 | | | | | | | 9.1 | 0.26 | 2.13 | 0.72 | 1.44 |
| 26-Jun-24 | (1) | 1.59 | 758.4 | (1) | (1) | (4) | | | | | |
| 27-Jun-24 | | | | | | | 5.97 | 0.3 | 2.0 | 1.15 | 1.9 |
| 16-Jul-24 | | | | | | 0.82 | 23.78 | 0.72 | 12.81 | 1.86 | 2.21 |
| 29-Jul-24 | (1) | | | (1) | (1) | 0.22 | | | | | |
| 30-Jul-24 | | (1) | 349.6 | | | | 5.31 | 0.62 | 3.53 | 2.06 | 2.4 |
| 12-Aug-24 | | | | | | 0.84 | 3.73 | 0.23 | 3.83 | 4.16 | 9.92 |
| 26-Aug-24 | (1) | (1) | | | | (4) | | | | | |
| 27-Aug-24 | | | 463.2 | (1) | (1) | | | | | | |
| 28-Aug-24 | | | | | | | 1.71 | (4) | 0.67 | 0.35 | 0.77 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW3 | SW4 | SW6A | SW8 | SW9 | SW10 | SW11 | SW11A | SW11B | SW11C | SW11D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Sep-24 | (1) | (1) | 207.7 | (1) | (1) | (4) | | | | | |
| 25-Sep-24 | | | | | | | 1.33 | (4) | 0.27 | 0.63 | 0.43 |
| 28-Oct-24 | (1) | (1) | 197.6 | (1) | (1) | (4) | | | | | |
| 29-Oct-24 | | | | | | | 0.75 | (4) | | | 0.31 |
| 18-Nov-24 | (1) | (1) | 13.0 | | (1) | | | | | | |
| 16-Dec-24 | (2) | 1.97 | 326.5 | | (2) | | | | | | |
| 27-Jan-25 | (2) | (2) | | | (2) | | | | | | |
| 24-Feb-25 | (2) | (2) | | | (2) | | | | | | |
| 24-Mar-25 | (3) | 5.6 | | | (3) | | | | | | |
| 28-Apr-25 | 11.2 | 1.08 | | | | | | | | | |
| 29-Apr-25 | | | | | 1.43 | | | | | | |
| 26-May-25 | | (4) | | | | | | | | | |
| 27-May-25 | 1.29 | | | | 0.88 | | | | | | |
| 28-May-25 | | | | | | 0.6 | 25.83 | 3.84 | 4.02 | 1.45 | 8.13 |
| 23-Jun-25 | (1) | (1) | | | (1) | 0.56 | | | | | |
| 24-Jun-25 | | | | | | | 4.07 | (4) | 1.06 | (4) | 0.95 |
| 25-Jun-25 | | | | | | | | | | | |
| 14-Jul-25 | | | | | | (4) | 3.88 | 0.21 | 0.34 | 0.39 | 0.85 |
| 28-Jul-25 | (1) | (1) | | | (1) | 0.24 | | | | | |
| 29-Jul-25 | | | | | | | 4.05 | (4) | 0.17 | 1.12 | 0.34 |
| 11-Aug-25 | | | | | | (4) | 2.97 | (4) | 0.39 | 0.79 | 0.35 |
| 25-Aug-25 | (1) | (1) | | | (1) | 1.17 | | | | | |
| 26-Aug-25 | | | | | | | 3.01 | 0.22 | 0.48 | 0.53 | 0.3 |
| 27-Aug-25 | | | | | | | | | | | |
| 29-Sep-25 | (1) | (1) | | | (1) | (4) | | | | | |
| 30-Sep-25 | | | | | | | 0.59 | (4) | (4) | 0.3 | 0.13 |
| 27-Oct-25 | | (1) | | | | | 1.54 | 0.19 | 0.31 | (4) | 0.18 |
| 28-Oct-25 | (1) | | | | (1) | 1.53 | | | | | |
| 29-Oct-25 | | | | | | | | | | | |
| 24-Nov-25 | | | | | | | | | | | |
| 25-Nov-25 | 0.7 | 1.77 | | | 2.6 | | | | | | |
| 15-Dec-25 | | (4) | | | | | | | | | |
| 16-Dec-25 | (1) | | | | (1) | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22-May-03 | (6) | 6.0 | 15.0 | | 1.0 | 2.2 | 12.0 | 46.0 | 95.6 | 0.3 | |
| 23-Jun-03 | 2.5 | 4.67 | 6.2 | 0.45 | 1.6 | 1.47 | 10.4 | 11.8 | 40.5 | 3.0 | |
| 26-Jun-03 | | | | | | | | | | | |
| 22-Jul-03 | 1.4 | 2.8 | 2.8 | 2.9 | 0.33 | 1.62 | 9.48 | 13.3 | 19.1 | 0.72 | 1.9 |
| 20-Aug-03 | 1.9 | 2.2 | 2.2 | 1.2 | (4) | 0.97 | 4.06 | 4.0 | 38.3 | 0.2 | 1.6 |
| 25-Sep-03 | 0.4 | 1.9 | 3.0 | 0.84 | (4) | 0.11 | 1.89 | 1.6 | 21.3 | (1) | 1.4 |
| 22-Oct-03 | 2.2 | 2.7 | 6.2 | 1.1 | 2.5 | 2.6 | 3.3 | 25.8 | | 0.4 | 2.1 |
| 23-Oct-03 | | | | | | | | | 68.3 | | |
| 28-Nov-03 | 12.54 | 7.98 | 17.06 | 8.18 | 2.5 | 6.89 | 10.6 | 36.7 | 104.2 | 0.33 | 1.83 |
| 19-Dec-03 | 26.52 | 25.0 | 12.77 | 12.87 | 2.0 | 5.03 | 18.46 | 33.7 | | 1.5 | 1.7 |
| 10-Feb-04 | | | 3.03 | (2) | (2) | 1.92 | 9.16 | 47.9 | | 2.0 | |
| 11-Feb-04 | | | | | | | | | | | 0.87 |
| 12-Feb-04 | | | | | | | | | 71.6 | | |
| 13-Feb-04 | 3.5 | 10.0 | | | | | | | | | |
| 16-Mar-04 | | | 48.95 | | | | | 48.7 | 209.3 | 5.0 | |
| 17-Mar-04 | | | | | | 4.33 | 19.44 | | | | 1.0 |
| 18-Mar-04 | 11.87 | 8.0 | | (2) | 2.0 | | | | | | |
| 19-Apr-04 | | | 46.25 | 1.88 | 40.36 | 13.26 | 72.36 | 123.6 | 507.9 | | |
| 20-Apr-04 | | | | | | | | | | | |
| 21-Apr-04 | 21.99 | 30.0 | | | | | | | | 18.93 | 1.42 |
| 19-May-04 | 5.85 | 11.22 | 14.17 | 1.78 | 3.35 | 4.61 | 15.41 | 31.3 | 133.2 | 3.98 | 2.05 |
| 24-Jun-04 | 3.42 | 6.41 | 1.79 | 1.42 | 0.6 | 1.9 | 11.98 | 20.5 | 48.2 | 1.54 | 1.1 |
| 29-Jul-04 | 0.77 | 3.31 | 1.05 | 1.42 | 1.87 | 0.51 | 5.86 | 9.2 | 25.1 | 2.46 | 1.84 |
| 23-Aug-04 | | | | | (4) | | | | | | |
| 26-Aug-04 | 0.26 | 1.6 | 1.6 | 0.69 | | 0.48 | 2.91 | 7.2 | 12.5 | (4) | 1.35 |
| 21-Sep-04 | 0.2 | | | (4) | (4) | | | | | | |
| 22-Sep-04 | | 0.58 | (4) | | | 0.4 | 3.51 | 3.8 | 9.3 | (4) | 0.15 |
| 23-Sep-04 | | | | | | | | | | | |
| 20-Oct-04 | 0.18 | 0.95 | 0.76 | 0.78 | 0.3 | 0.42 | 3.19 | 4.0 | 17.7 | | 0.98 |
| 21-Oct-04 | | | | | | | | | | (1) | |
| 16-Nov-04 | | | 1.3 | | | | 4.26 | 4.6 | | | |
| 17-Nov-04 | | | | 0.95 | 2.26 | 0.45 | | | | (1) | |
| 18-Nov-04 | 0.35 | 1.1 | | | | | | | 28.8 | | 0.98 |
| 15-Dec-04 | | (2) | | | (2) | | | (2) | | (2) | (2) |
| 16-Dec-04 | 1.05 | | 2.53 | 1.52 | | | 5.42 | | 82.1 | | |
| 13-Jan-05 | | | | | | | | | | | |
| 16-Jan-05 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 13-Feb-05 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 27-Mar-05 | | 50.0 | | (2) | | | | (2) | | | |
| 28-Mar-05 | | | | | | | | | | | |
| 29-Mar-05 | 33.0 | | 5.48 | | 4.13 | 3.23 | 14.69 | | 171.4 | 3.26 | 2.0 |
| 30-Mar-05 | | | | | | | | | | | |
| 10-Apr-05 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11-Apr-05 | 61.0 | 80.0 | 70.68 | 5.3 | 26.96 | 17.5 | 68.57 | 207.2 | 700.0 | 19.25 | 3.9 |
| 22-May-05 | | | | | | | | | | | |
| 24-May-05 | 13.4 | | 7.4 | 3.48 | 3.62 | 5.96 | 22.56 | 27.7 | 140.0 | 10.94 | |
| 26-May-05 | | 8.19 | | | | | | | | | 1.32 |
| 26-Jun-05 | | | | | | | | | | | |
| 27-Jun-05 | 2.95 | | | | 0.44 | 2.29 | 7.22 | 11.5 | | | |
| 28-Jun-05 | | | 2.94 | 0.24 | | | | | 29.0 | 2.42 | 0.82 |
| 29-Jun-05 | | 9.97 | | | | | | | | | |
| 10-Jul-05 | | | | | | | | | | | |
| 11-Jul-05 | | | 2.13 | 1.03 | 0.49 | 1.39 | 6.07 | 6.6 | 9.6 | 0.75 | |
| 12-Jul-05 | 6.0 | 5.0 | | | | | | | | | 1.8 |
| 21-Aug-05 | | | | | | | | | | | |
| 22-Aug-05 | | | 1.12 | 1.43 | | 0.2 | 5.19 | 4.4 | 8.1 | 0.5 | |
| 23-Aug-05 | 1.0 | 1.08 | | | | | | | | | 1.74 |
| 25-Sep-05 | | | | | | | | | | | |
| 27-Sep-05 | | | 1.29 | 0.44 | 0.1 | 0.19 | 3.1 | | 9.3 | 0.1 | |
| 28-Sep-05 | | | | | | | | | | | 1.43 |
| 23-Oct-05 | | | | | | | | | | (1) | |
| 24-Oct-05 | | | 1.69 | 1.92 | | 0.24 | 3.58 | 5.9 | | | |
| 25-Oct-05 | 2.0 | 1.5 | | | | | | | 15.5 | | 1.79 |
| 13-Nov-05 | | | | | | | | | | (1) | |
| 14-Nov-05 | | | | | | 0.25 | 2.9 | | 9.1 | | |
| 15-Nov-05 | | | | 0.98 | | | | 7.9 | | | 0.99 |
| 16-Nov-05 | 1.41 | 8.83 | 6.66 | | | | | | | | |
| 11-Dec-05 | | | | | | | | (2) | | | |
| 12-Dec-05 | | | 5.07 | 3.44 | 0.62 | 1.36 | 11.71 | | 27.6 | 0.1 | |
| 13-Dec-05 | 1.4 | 6.49 | | | | | | | | | 2.26 |
| 14-Dec-05 | | | | | | | | | | | |
| 16-Dec-05 | | | | | | 1.93 | | | | | |
| 15-Jan-06 | | | | (2) | | | | | | | |
| 16-Jan-06 | | | | | | | | | 201.8 | | |
| 17-Jan-06 | | | 15.6 | | 13.02 | 3.74 | 17.32 | 31.6 | | 3.35 | 12.11 |
| 18-Jan-06 | 22.4 | 19.58 | | | | | | | | | |
| 19-Feb-06 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 10.0 | (2) | (2) | (2) |
| 19-Mar-06 | | | | (2) | | | | | | | |
| 20-Mar-06 | | | 25.05 | | | | | 78.2 | 429.2 | 11.2 | |
| 21-Mar-06 | | | | | | 13.21 | | | | | |
| 22-Mar-06 | | | | | 12.37 | | 37.2 | | | | 0.99 |
| 24-Mar-06 | 30.37 | 37.33 | | | | | | | | | |
| 31-Mar-06 | | | | | | | | | | | |
| 7-Apr-06 | | | | | | | | | | | |
| 13-Apr-06 | | | | | | | | | | | |
| 16-Apr-06 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-Apr-06 | | | 19.51 | 5.65 | 4.63 | 24.48 | 48.75 | 80.7 | 229.9 | 10.74 | |
| 19-Apr-06 | 29.38 | 30.0 | | | | | | | | | 4.05 |
| 21-May-06 | | | | | | | | | | | |
| 23-May-06 | | | | 3.51 | 3.35 | 6.43 | 17.12 | 44.8 | 144.9 | 5.09 | 3.36 |
| 24-May-06 | 19.91 | 13.81 | 8.81 | | | | | | | | |
| 18-Jun-06 | | | | | | | | | | | |
| 20-Jun-06 | | | | 2.49 | 0.92 | 4.42 | 8.58 | 11.9 | 35.5 | 3.79 | 3.61 |
| 21-Jun-06 | 16.69 | 3.4 | | | | | | | | | |
| 23-Jun-06 | | | 1.6 | | | | | | | | |
| 9-Jul-06 | | | | | | | | | | | |
| 10-Jul-06 | | | | | | | | | 15.2 | | |
| 11-Jul-06 | | | 2.98 | 1.48 | 0.1 | 1.68 | 5.57 | 8.3 | | 2.23 | 2.47 |
| 12-Jul-06 | 3.67 | 2.4 | | | | | | | | | |
| 20-Aug-06 | | | | | (1) | | | | | | |
| 21-Aug-06 | | | | | | | | | | | |
| 22-Aug-06 | | | | | | | | | 3.8 | | |
| 23-Aug-06 | | | 0.38 | 1.01 | | 1.03 | 3.25 | 3.5 | | 0.6 | 2.14 |
| 24-Aug-06 | 1.91 | 0.81 | | | | | | | | | |
| 17-Sep-06 | | | | | (1) | | | | | | |
| 20-Sep-06 | | | 1.88 | 2.22 | | 2.85 | 6.32 | 15.9 | | 0.67 | 4.26 |
| 21-Sep-06 | 1.94 | 0.9 | | | | | | | 15.0 | | |
| 25-Sep-06 | 0.88 | | | | | | | | | | |
| 27-Sep-06 | | | | | | | | 6.3 | | | |
| 28-Sep-06 | | | | | | | | | | | |
| 15-Oct-06 | | | | | | | | | | | |
| 17-Oct-06 | | | | | | | | | | | |
| 18-Oct-06 | | | | | | | | | 66.7 | 0.32 | |
| 19-Oct-06 | 5.21 | 2.15 | 4.95 | 1.75 | 0.56 | 1.4 | 6.53 | 12.9 | | | 4.19 |
| 17-Nov-06 | | | | | | | | | | | |
| 19-Nov-06 | | | | | | | | | | | |
| 23-Nov-06 | 17.15 | 26.49 | | | | | | | | | 1.98 |
| 24-Nov-06 | | | | | | | | | | | |
| 27-Nov-06 | | | 10.59 | 1.46 | 7.13 | 4.36 | 14.07 | 33.5 | 107.5 | 4.03 | |
| 17-Dec-06 | 23.24 | 37.41 | 17.79 | 1.31 | 12.29 | 6.74 | 19.86 | 62.5 | 183.8 | 7.38 | 0.96 |
| 23-Dec-06 | | | | | | | | | | | |
| 21-Jan-07 | 37.0 | 48.0 | (2) | (2) | (2) | 2.44 | 15.46 | (2) | 79.9 | 7.66 | (2) |
| 18-Feb-07 | 6.17 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 2.72 | (2) |
| 18-Mar-07 | 17.51 | (2) | | (2) | | 9.21 | 27.36 | 50.5 | 408.9 | 8.62 | (2) |
| 15-Apr-07 | | | | | | | | | | | |
| 16-Apr-07 | | | | | 10.53 | 28.74 | 34.66 | | 346.6 | 18.97 | 1.23 |
| 17-Apr-07 | 59.27 | 33.78 | 14.3 | 2.12 | | | | 102.5 | | | |
| 13-May-07 | 15.27 | 5.64 | 4.11 | 2.24 | 2.38 | 2.82 | 24.56 | 30.9 | 228.3 | 9.58 | 2.56 |
| 15-May-07 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17-Jun-07 | 0.9 | 5.6 | 1.74 | 1.33 | (4) | 0.56 | 10.5 | 21.0 | 49.5 | 1.88 | 1.48 |
| 18-Jun-07 | | | | | | | | | | | |
| 15-Jul-07 | 0.73 | 3.91 | 0.51 | 0.82 | (1) | 0.31 | 2.89 | 7.1 | 12.8 | 3.61 | 2.77 |
| 18-Jul-07 | | | | | | | | | | | |
| 19-Aug-07 | 3.53 | 1.65 | 1.08 | 0.71 | (1) | 0.13 | 0.93 | 5.4 | 5.3 | 0.43 | 1.11 |
| 22-Aug-07 | | | | | | | | | | | |
| 16-Sep-07 | | | | | (1) | | | | | 0.1 | 1.71 |
| 17-Sep-07 | 2.28 | 1.48 | 1.3 | 0.44 | | 0.25 | 1.18 | 4.3 | 10.2 | | |
| 18-Sep-07 | | | | | | | | | | | |
| 14-Oct-07 | | | | | (1) | | | | | (1) | |
| 18-Oct-07 | 0.6 | 0.18 | 0.31 | | | 0.36 | 2.25 | | | | 0.67 |
| 19-Oct-07 | | | | 0.45 | | | | 3.3 | 21.7 | | |
| 18-Nov-07 | | | | | | | | | | (1) | |
| 19-Nov-07 | 0.33 | 1.58 | | | 0.1 | 0.58 | 2.21 | | | | |
| 21-Nov-07 | | | 6.93 | 1.13 | | | | 33.5 | 228.5 | | 4.32 |
| 9-Dec-07 | | (2) | (2) | | (2) | (2) | | | | (2) | 2.45 |
| 10-Dec-07 | | | | 0.69 | | | 2.6 | | | | |
| 11-Dec-07 | 3.15 | | | | | | | | | | |
| 12-Dec-07 | | | | | | | | 11.3 | 106.9 | | |
| 20-Jan-08 | | (2) | | (2) | | | | | | | |
| 21-Jan-08 | | | 12.63 | | 39.5 | 1.43 | 35.13 | 36.1 | | 22.15 | 1.08 |
| 22-Jan-08 | 10.42 | | | | | | | | 243.1 | | |
| 17-Feb-08 | | | (2) | (2) | | | | | | | |
| 19-Feb-08 | | | | | 16.7 | 7.58 | 21.79 | 77.1 | | 10.83 | 1.16 |
| 20-Feb-08 | 17.41 | 35.3 | | | | | | | 1019.2 | | |
| 16-Mar-08 | | | (2) | (2) | | | | | | | |
| 17-Mar-08 | 12.75 | 20.88 | | | 15.6 | 1.76 | 11.69 | 66.0 | | 6.22 | 2.71 |
| 18-Mar-08 | | | | | | | | | | | |
| 19-Mar-08 | | | | | | | | | 229.2 | | |
| 30-Mar-08 | | | | | | | | | | | |
| 1-Apr-08 | | | | 34.49 | 167.27 | 7.01 | 50.1 | | | 24.49 | 68.81 |
| 2-Apr-08 | 50.16 | 107.8 | 67.11 | | | | | 159.6 | 580.3 | | |
| 4-Apr-08 | | | | | | | | | | | |
| 7-Apr-08 | | | | | | | | | | | |
| 20-Apr-08 | | | | | | | | | | | |
| 21-Apr-08 | | | 41.38 | 1.49 | | | | | | | |
| 23-Apr-08 | 65.41 | 98.04 | | | 34.01 | 5.5 | 35.2 | 178.3 | | 13.86 | 3.49 |
| 24-Apr-08 | | | | | | | | | 427.1 | | |
| 6-May-08 | | | | | | | | | | | |
| 18-May-08 | | | | | | | | | | | |
| 20-May-08 | | | 14.44 | 0.45 | | | | | | 8.71 | |
| 21-May-08 | | | | | 4.54 | 1.28 | 9.58 | 41.5 | 226.4 | | 1.82 |
| 22-May-08 | 20.16 | 36.53 | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-Jun-08 | | | | | | | | | | | |
| 17-Jun-08 | 9.82 | 11.54 | | | | 2.86 | 10.97 | | | 2.96 | 0.5 |
| 18-Jun-08 | | | 4.03 | 0.3 | 1.92 | | | 15.6 | 120.1 | | |
| 13-Jul-08 | | | | (1) | | | | | | | |
| 15-Jul-08 | 0.2 | 3.3 | 0.6 | | 0.4 | 0.2 | 2.4 | 11.7 | 31.0 | 1.05 | 0.1 |
| 16-Jul-08 | | | | | | | | | | | |
| 17-Aug-08 | | | | | | | | | | | |
| 18-Aug-08 | | | | | 0.55 | 1.1 | 5.9 | 14.6 | | 2.6 | |
| 19-Aug-08 | 1.8 | 3.98 | 6.1 | 0.1 | | | | | 74.8 | | 0.19 |
| 12-Sep-08 | | | | | | | | | | | |
| 14-Sep-08 | | | | | | | | | | | |
| 16-Sep-08 | 6.3 | 10.24 | | | | 3.22 | 5.9 | | 202.7 | 0.59 | 1.15 |
| 17-Sep-08 | | | 7.0 | 0.6 | 0.85 | | | 31.6 | | | |
| 19-Oct-08 | | | | | | | | | | | |
| 20-Oct-08 | | | | | 0.72 | | | 13.6 | | 2.72 | |
| 21-Oct-08 | | | | | | 2.67 | 4.12 | | | | 1.38 |
| 22-Oct-08 | 2.2 | 20.4 | 10.2 | 0.52 | | | | | 104.9 | | |
| 23-Nov-08 | 12.2 | 35.6 | 13.35 | | (2) | 5.12 | 24.5 | 44.3 | (2) | 2.7 | 2.99 |
| 14-Dec-08 | 41.0 | 55.75 | 54.0 | (2) | 6.96 | 2.39 | 14.43 | 114.8 | 446.9 | 14.23 | 0.49 |
| 18-Jan-09 | 3.4 | (2) | (2) | (2) | (2) | 1.8 | 35.4 | (2) | (2) | 25.6 | 0.75 |
| 8-Feb-09 | 46.5 | 142.7 | (2) | (2) | 9.65 | 1.88 | 16.4 | 73.7 | (5) | 3.6 | 2.2 |
| 15-Mar-09 | 109.7 | 107.6 | 43.4 | 4.6 | 12.1 | 6.6 | 23.2 | 150.6 | 1522.2 | 13.9 | 2.8 |
| 12-Apr-09 | 55.2 | 60.7 | 44.7 | 5.4 | 8.1 | 6.1 | 16.6 | 203.8 | 794.0 | 29.3 | 2.5 |
| 17-May-09 | 18.1 | 29.9 | 11.2 | 0.3 | 3.2 | 2.7 | 12.5 | 65.3 | 157.1 | 2.6 | 1.6 |
| 14-Jun-09 | 2.1 | 9.8 | 7.1 | (4) | 5.7 | 1.6 | 3.9 | 30.0 | 109.4 | 1.5 | 0.7 |
| 12-Jul-09 | 0.7 | 3.4 | 1.9 | 0.15 | 0.55 | 0.54 | 15.3 | 23.5 | 26.4 | 1.4 | 0.83 |
| 9-Aug-09 | 0.98 | 18.8 | 3.8 | (4) | (1) | 1.0 | 2.5 | 7.0 | 93.3 | 3.0 | 8.1 |
| 13-Sep-09 | 0.18 | 1.3 | 0.54 | (4) | (1) | 1.8 | 1.05 | 4.6 | 6.7 | 0.2 | 0.6 |
| 11-Oct-09 | 3.5 | 8.3 | 3.6 | 0.3 | 1.0 | 1.7 | 2.6 | 13.0 | 164.4 | 0.4 | 1.4 |
| 15-Nov-09 | 0.69 | 4.6 | 0.86 | 0.16 | 4.2 | 3.5 | 5.2 | 8.8 | 71.2 | 2.4 | 1.85 |
| 13-Dec-09 | 1.22 | 4.91 | 6.2 | 0.64 | (2) | 1.1 | 1.8 | 18.1 | 174.8 | 2.4 | 0.21 |
| 17-Jan-10 | 3.6 | | (2) | (2) | (2) | (2) | 0.6 | (2) | 227.8 | 3.9 | (2) |
| 7-Feb-10 | 1.09 | (2) | (2) | (2) | (2) | 0.89 | 2.6 | (2) | (2) | 6.7 | 0.2 |
| 14-Mar-10 | 57.5 | 125.8 | 100.6 | 15.9 | 26.0 | 6.92 | 12.8 | 332.6 | 1785.5 | 4.75 | 7.25 |
| 4-Apr-10 | | | | | | | | | | | |
| 11-Apr-10 | 18.2 | 29.6 | 15.7 | 0.5 | 2.9 | 3.3 | 15.1 | 67.6 | 227.1 | 14.0 | 1.2 |
| 16-May-10 | 21.0 | 36.4 | 28.6 | 0.6 | 5.7 | 4.6 | 26.8 | 128.1 | 299.3 | 7.8 | 1.6 |
| 23-May-10 | | | | | | | | | | | |
| 13-Jun-10 | 10.6 | 24.3 | 27.6 | 0.6 | 6.3 | 4.6 | 10.5 | 78.5 | 441.1 | 8.6 | 1.1 |
| 18-Jul-10 | 21.8 | 31.4 | 45.0 | 0.7 | 7.3 | 2.7 | 7.3 | 58.4 | 101.7 | 3.0 | 2.8 |
| 19-Jul-10 | | | | | | | | | | | |
| 15-Aug-10 | 0.6 | 3.0 | 1.33 | (1) | 0.7 | 2.6 | 6.4 | 10.3 | 26.4 | 7.76 | 0.2 |
| 12-Sep-10 | 0.8 | 2.1 | 0.77 | (1) | (1) | 1.12 | 2.34 | 2.4 | 36.0 | 0.7 | 0.2 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17-Oct-10 | 2.3 | 18.5 | 5.6 | 0.7 | 0.2 | 1.9 | 5.4 | 26.6 | 249.1 | 1.4 | 0.5 |
| 21-Oct-10 | | | | | | | | | | | |
| 14-Nov-10 | 32.1 | 54.9 | 16.6 | 0.5 | 1.0 | 4.1 | 6.2 | 25.2 | 705.7 | 6.6 | 1.4 |
| 19-Dec-10 | 8.7 | (2) | (2) | (2) | 2.4 | 1.1 | 5.5 | 9.3 | 328.4 | 0.8 | (2) |
| 15-Jan-11 | | | | | | | | | | 2.1 | |
| 16-Jan-11 | 3.0 | | | | 6.1 | 4.1 | 12.3 | | | 7.0 | |
| 20-Feb-11 | 4.6 | | | | | | 11.6 | | 361.0 | 10.2 | 0.1 |
| 13-Mar-11 | 22.5 | 72.6 | 38.2 | (2) | 17.4 | 5.7 | 14.1 | 115.1 | 385.2 | 9.1 | 3.6 |
| 17-Mar-11 | | | | | | | | | | | |
| 18-Mar-11 | | | | | | | | | | | |
| 20-Mar-11 | | 76.8 | 47.8 | 5.9 | | 7.8 | 48.3 | 108.6 | 901.9 | | |
| 22-Mar-11 | | | | | | | | | | | |
| 1-Apr-11 | | | | | | | | | | | |
| 5-Apr-11 | | | | | | | | | | | |
| 8-Apr-11 | | | | | | | | | | | |
| 12-Apr-11 | | | | | | | | | | | |
| 15-Apr-11 | | | | | | | | | | | |
| 17-Apr-11 | 28.0 | 28.2 | 31.1 | 0.6 | 4.9 | 2.9 | 29.9 | 102.3 | 1452.8 | 11.0 | 0.8 |
| 18-Apr-11 | | | | | | | | | | | |
| 20-Apr-11 | | | | | | | | 243.0 | | | |
| 21-Apr-11 | | | | | | | | | | | |
| 26-Apr-11 | | | | | | | | | | | |
| 29-Apr-11 | | | | | | | | | | | |
| 3-May-11 | | | | | | | | | | | |
| 6-May-11 | | | | | | | | | | | |
| 10-May-11 | | | | | | | | | | | |
| 13-May-11 | | | | | | | | | | | |
| 15-May-11 | 48.3 | 80.4 | 49.5 | 1.6 | 11.1 | 2.7 | 30.7 | 144.0 | 686.4 | 21.3 | 3.3 |
| 16-May-11 | | | | | | | | | | | |
| 18-May-11 | | | | | | | | | | | |
| 19-May-11 | | | | | | | | | | | |
| 20-May-11 | | | | | | | | | | | |
| 27-May-11 | | | | | | | | | | | |
| 3-Jun-11 | | | | | | | | | | | |
| 12-Jun-11 | 8.1 | 8.6 | 10.0 | 0.4 | 2.7 | 0.5 | 22.1 | 23.8 | 198.1 | 6.6 | 0.8 |
| 13-Jun-11 | | | | | | | | | | | |
| 17-Jul-11 | 1.1 | 6.6 | 1.1 | (1) | 4.0 | 0.3 | 4.7 | 12.0 | 23.4 | 2.1 | (4) |
| 14-Aug-11 | 0.1 | 0.6 | 0.6 | (1) | 3.0 | 0.3 | 0.5 | 3.0 | 14.5 | 0.8 | (4) |
| 18-Sep-11 | 1.0 | 1.3 | 0.5 | (1) | 3.7 | 1.5 | 1.2 | 3.1 | 27.5 | 0.4 | (1) |
| 16-Oct-11 | 42.5 | 131.0 | 98.4 | 0.13 | 1.75 | 2.36 | 1.52 | 9.3 | 101.6 | 0.25 | 0.17 |
| 20-Nov-11 | 2.5 | 12.5 | 3.1 | 0.6 | 2.8 | 1.2 | 4.1 | 8.6 | 87.3 | 0.37 | 0.2 |
| 18-Dec-11 | 15.5 | 36.0 | 23.3 | 0.82 | | 3.1 | 4.5 | 37.4 | 277.9 | 3.1 | 1.5 |
| 19-Dec-11 | | | | | 7.8 | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20-Dec-11 | | | | | | | | | | | |
| 15-Jan-12 | 24.1 | 21.3 | (2) | (2) | (2) | 5.6 | 27.5 | (2) | (2) | | (2) |
| 19-Feb-12 | 11.1 | 12.8 | (2) | (2) | 6.5 | 1.9 | 2.4 | 15.5 | 178.0 | 2.0 | (2) |
| 18-Mar-12 | 47.7 | 71.8 | 37.9 | 1.5 | 15.7 | 11.0 | | 95.4 | 426.3 | 8.8 | 1.6 |
| 20-Mar-12 | | | | | | | 53.6 | | | | |
| 15-Apr-12 | 7.4 | 7.7 | 6.5 | (4) | 3.0 | 1.6 | 14.7 | 29.5 | 105.0 | 2.85 | 0.1 |
| 13-May-12 | 6.3 | 15.4 | 11.6 | (4) | 6.9 | 1.9 | 10.7 | 25.3 | 87.1 | 2.7 | 0.13 |
| 17-Jun-12 | 3.1 | 4.3 | 2.8 | (1) | 1.8 | 0.3 | 6.9 | 15.0 | 40.7 | 0.6 | (1) |
| 15-Jul-12 | | | | (1) | | | | | | | (1) |
| 16-Jul-12 | 1.8 | 2.4 | 1.2 | | 0.5 | 0.2 | 1.7 | 3.8 | 14.4 | 0.3 | |
| 12-Aug-12 | | | | | | | | | | | |
| 14-Aug-12 | 12.9 | 13.2 | 7.7 | 0.6 | 3.5 | 2.8 | 3.1 | 23.2 | | 1.0 | 0.7 |
| 15-Aug-12 | | | | | | | | | 117.3 | | |
| 16-Sep-12 | | | | | | | | | | | |
| 18-Sep-12 | 0.4 | 3.8 | 4.3 | 0.1 | 3.0 | 0.9 | 2.0 | 13.1 | | 0.6 | 0.2 |
| 19-Sep-12 | | | | | | | | | 46.3 | | |
| 14-Oct-12 | 0.5 | | | | | | | | | | |
| 17-Oct-12 | | | 11.08 | 0.33 | 2.8 | 0.9 | 4.5 | 14.6 | | 1.2 | 0.6 |
| 18-Oct-12 | | 4.9 | | | | | | | 82.0 | | |
| 18-Nov-12 | 14.9 | | | | | | | | | | |
| 20-Nov-12 | | 10.9 | 19.6 | 0.8 | 5.1 | 2.3 | 14.5 | 46.3 | | 6.9 | 0.4 |
| 21-Nov-12 | | | | | | | | | 219.4 | | |
| 12-Dec-12 | | | | | | | | | | | |
| 16-Dec-12 | 13.9 | | | | | | 11.0 | | | | |
| 18-Dec-12 | | | 17.5 | 1.2 | 4.5 | 1.9 | | 57.6 | 291.9 | 2.8 | 0.8 |
| 20-Dec-12 | | 15.4 | | | | | | | | | |
| 13-Jan-13 | 29.1 | | | | | | | | | | |
| 15-Jan-13 | | | | 6.8 | | | | | 447.7 | 6.9 | 1.3 |
| 16-Jan-13 | | 111.9 | 35.7 | | 21.8 | 8.0 | 23.4 | 78.1 | | | |
| 17-Feb-13 | (2) | (2) | (2) | (2) | (2) | | | (2) | (2) | | (2) |
| 20-Feb-13 | | | | | | 8.0 | 17.0 | | | 4.0 | |
| 17-Mar-13 | | | | (2) | (2) | | | (2) | | | (2) |
| 19-Mar-13 | 17.9 | 32.8 | 25.1 | | | | | | 288.0 | 6.8 | |
| 20-Mar-13 | | | | | | 4.0 | 36.1 | | | | |
| 14-Apr-13 | | | | | | | | | | | |
| 15-Apr-13 | | | | | | | | | | | |
| 16-Apr-13 | | | | 2.9 | 100.4 | 3.1 | 58.7 | 166.7 | 1180.9 | 11.8 | 1.6 |
| 17-Apr-13 | 47.4 | 131.3 | 66.5 | | | | | | | | |
| 12-May-13 | | | | | | | | | | | |
| 13-May-13 | | | | 0.7 | 1.6 | 2.0 | 27.6 | 25.6 | | 2.8 | 0.7 |
| 14-May-13 | 16.6 | 14.8 | 19.9 | | | | | | 234.5 | | |
| 16-Jun-13 | | | | | | | | | | | |
| 18-Jun-13 | | | | | | | | | | 2.6 | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19-Jun-13 | 7.9 | 8.4 | 17.0 | 0.2 | 1.0 | 0.4 | 5.4 | 28.0 | 120.0 | | 0.5 |
| 14-Jul-13 | | | | (4) | | | | | | | |
| 16-Jul-13 | 1.4 | 6.9 | 10.9 | | 0.9 | 0.3 | 5.7 | 14.1 | | 2.4 | (4) |
| 17-Jul-13 | | | | | | | | | 124.4 | | |
| 18-Aug-13 | | | | (4) | | | | | | | 0.3 |
| 20-Aug-13 | | | | | | | | | 21.3 | | |
| 21-Aug-13 | 2.0 | 0.9 | 3.4 | | 1.4 | 1.3 | 3.4 | 3.3 | | 0.4 | |
| 15-Sep-13 | | | | (1) | | | | | | | 0.1 |
| 18-Sep-13 | 0.9 | 1.2 | 0.9 | | 1.3 | 0.9 | 2.64 | 10.7 | 43.1 | 0.8 | |
| 19-Sep-13 | | | | | | | | | | | |
| 13-Oct-13 | | | | | | | | | | | |
| 16-Oct-13 | 6.5 | 12.4 | 10.9 | 0.8 | 3.4 | 0.7 | 4.3 | 32.2 | | 3.5 | 0.4 |
| 17-Oct-13 | | | | | | | | | 137.6 | | |
| 17-Nov-13 | | | | | | | | | | | |
| 19-Nov-13 | | | | 0.9 | 7.9 | 7.1 | 12.8 | 50.5 | | 9.9 | 4.7 |
| 20-Nov-13 | 19.0 | 28.1 | 20.3 | | | | | | 207.1 | | |
| 15-Dec-13 | | | (2) | (2) | | (2) | | (2) | (2) | | (2) |
| 17-Dec-13 | | | | | | | | | | 1.9 | |
| 18-Dec-13 | 12.9 | 9.2 | | | 3.8 | | 11.3 | | | | |
| 19-Jan-14 | | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) |
| 21-Jan-14 | 9.5 | | | | | | | | | 3.1 | |
| 22-Jan-14 | | | | | | | | | | | |
| 16-Feb-14 | | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) |
| 19-Feb-14 | 3.9 | 11.1 | | | | | | | | | |
| 20-Feb-14 | | | | | | | | | | 10.4 | |
| 16-Mar-14 | | | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | (2) |
| 18-Mar-14 | | | | | | | | | | 1.6 | |
| 19-Mar-14 | 5.5 | 7.1 | | | | | | | | | |
| 13-Apr-14 | | | | | | | | | | | |
| 15-Apr-14 | | | | | | | | | | 17.1 | |
| 16-Apr-14 | | | | 6.7 | 17.2 | 7.2 | 123.5 | 261.7 | 1825.7 | | 4.9 |
| 17-Apr-14 | 51.4 | 108.5 | 108.6 | | | | | | | | |
| 11-May-14 | | | | | | | | | | | |
| 12-May-14 | | | | | | 7.3 | | | | 10.0 | |
| 13-May-14 | 13.5 | 45.5 | 29.3 | 0.4 | 10.3 | | 32.5 | 64.3 | 284.6 | | 0.2 |
| 15-Jun-14 | | | | (1) | | | | | | | (4) |
| 17-Jun-14 | | | | | 0.9 | 1.7 | 8.0 | | | 1.6 | |
| 18-Jun-14 | 10.5 | 6.4 | 2.1 | | | | | 31.7 | 222.2 | | |
| 13-Jul-14 | | | | | | | | | | | 0.13 |
| 14-Jul-14 | | | | | | | | | | 0.7 | |
| 15-Jul-14 | | | 2.6 | (4) | 7.1 | 0.9 | 18.3 | 47.4 | 225.6 | | |
| 16-Jul-14 | 2.3 | 5.2 | | | | | | | | | |
| 17-Aug-14 | | | (1) | | | | | | | | 0.2 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-Aug-14 | | | | | | | | | | 0.5 | |
| 19-Aug-14 | 0.2 | 1.2 | | 3.2 | 1.6 | 0.6 | 2.2 | 6.1 | 52.9 | | |
| 7-Sep-14 | | | | | | | | | | | 0.1 |
| 8-Sep-14 | | | | | | | | | | 0.2 | |
| 9-Sep-14 | 1.1 | 1.5 | 0.6 | 0.1 | 0.2 | 1.0 | 2.3 | 2.3 | 31.5 | | |
| 19-Oct-14 | | | | | | | | | | | 0.5 |
| 20-Oct-14 | | | | | | | | | | | |
| 21-Oct-14 | | | | | | | | | 117.1 | | |
| 22-Oct-14 | | | | 0.1 | | | | | | | |
| 23-Oct-14 | 11.2 | 21.2 | 0.8 | | 1.2 | 2.6 | 3.7 | 16.3 | | 0.1 | |
| 16-Nov-14 | | | (2) | (2) | (2) | (2) | (2) | (2) | | 0.2 | (2) |
| 19-Nov-14 | 5.4 | 4.5 | | | | | | | | | |
| 14-Dec-14 | | | (2) | | | | | | | | |
| 16-Dec-14 | 9.7 | 0.1 | | 1.1 | 1.3 | 1.4 | 7.0 | | | 6.1 | 0.4 |
| 17-Dec-14 | | | | | | | | 61.1 | | | |
| 18-Jan-15 | | | (2) | (2) | (2) | (2) | | (2) | | | (2) |
| 20-Jan-15 | 19.2 | 7.9 | | | | | 4.9 | | | 3.6 | |
| 21-Jan-15 | | | | | | | | | | | |
| 15-Feb-15 | | | | | (2) | | | (2) | | | |
| 15-Mar-15 | | (2) | (2) | (2) | (2) | (2) | | (2) | | | (2) |
| 18-Mar-15 | 19.2 | | | | | | 15.6 | | | 4.6 | |
| 19-Mar-15 | | | | | | | | | | | |
| 21-Apr-15 | | | | | | | | | | 12.7 | |
| 22-Apr-15 | 28.9 | 28.7 | 16.4 | 2.5 | 2.0 | 3.5 | 32.8 | 99.4 | | | 1.5 |
| 23-Apr-15 | | | | | | | | | 556.5 | | |
| 17-May-15 | | | | | | | | | | | |
| 19-May-15 | 25.9 | 3.4 | 6.8 | 1.0 | 0.6 | 2.6 | 7.1 | 40.0 | | 2.6 | (4) |
| 20-May-15 | | | | | | | | | 138.8 | | |
| 14-Jun-15 | | | | | | | | | | | |
| 15-Jun-15 | | | 12.6 | 0.8 | 5.0 | 2.0 | 8.9 | 22.4 | 155.5 | 5.2 | 0.8 |
| 16-Jun-15 | 25.9 | 17.9 | | | | | | | | | |
| 19-Jul-15 | | | | | | | | | | | |
| 21-Jul-15 | 25.9 | | | 0.3 | 0.5 | 0.6 | 8.5 | 13.3 | 78.0 | 1.7 | 0.5 |
| 22-Jul-15 | | 6.1 | 4.3 | | | | | | | | |
| 9-Aug-15 | | | | (1) | | | | | | | |
| 11-Aug-15 | 1.2 | 3.4 | 5.3 | | 0.3 | 1.4 | 3.3 | 8.4 | | 0.6 | (4) |
| 12-Aug-15 | | | | | | | | | 52.4 | | |
| 23-Aug-15 | | | | (1) | | | | | | | |
| 25-Aug-15 | 0.9 | | 1.3 | | 0.3 | 0.8 | 4.8 | 8.2 | | | |
| 6-Sep-15 | | | | (1) | | | | | | | (4) |
| 8-Sep-15 | 0.7 | 3.5 | 1.9 | | 0.4 | 0.7 | 2.2 | 4.4 | | 0.7 | |
| 9-Sep-15 | | | | | | | | | 185.0 | | |
| 11-Oct-15 | | | | (1) | | | | | | | (1) |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-Oct-15 | 0.3 | 0.6 | 0.4 | | 0.3 | 0.9 | 1.2 | 2.5 | | 0.1 | |
| 16-Oct-15 | | | | | | | | | 17.4 | | |
| 8-Nov-15 | | | | | | | | | | | |
| 10-Nov-15 | | | | | | | | | | | |
| 15-Nov-15 | | | | | | | | | | | |
| 18-Nov-15 | 2.7 | 13.9 | 3.85 | 0.4 | 2.5 | 2.2 | 1.8 | 25.5 | | 0.59 | 0.37 |
| 19-Nov-15 | | | | | | | | | 47.6 | | |
| 6-Dec-15 | | | | | | | | | | | |
| 8-Dec-15 | | | | | 4.1 | 1.4 | 3.8 | 11.3 | 120.6 | 0.9 | 0.6 |
| 9-Dec-15 | 2.3 | 3.6 | 2.5 | 0.5 | | | | | | | |
| 17-Jan-16 | | (2) | | | | | | | | | |
| 19-Jan-16 | | | | | 7.8 | 3.1 | 4.2 | | 395.1 | 2.2 | 2.2 |
| 20-Jan-16 | 6.9 | | 11.5 | 1.1 | | | | | | | |
| 14-Feb-16 | | (2) | (2) | (2) | | | | | (2) | | |
| 17-Feb-16 | 5.2 | | | | 2.3 | 2.9 | 13.0 | 39.5 | | 3.6 | 2.1 |
| 18-Feb-16 | | | | | | | | | | | |
| 13-Mar-16 | | | | | | | | | (5) | | |
| 15-Mar-16 | 77.0 | 166.1 | 175.4 | 5.3 | 28.5 | 57.3 | 64.3 | 218.8 | | 20.0 | 1.9 |
| 17-Apr-16 | | | | | | | | | | | |
| 20-Apr-16 | | | | | | | | | | 27.0 | |
| 21-Apr-16 | 35.4 | 74.6 | 64.7 | 1.2 | 14.1 | 3.8 | 29.6 | 136.8 | 514.8 | | 2.0 |
| 15-May-16 | | | | | | | | | | | |
| 17-May-16 | | | | | | | | | 394.9 | 7.2 | |
| 18-May-16 | 11.2 | 19.5 | 30.3 | 0.8 | 9.3 | 2.9 | 25.3 | 57.2 | | | 2.2 |
| 19-Jun-16 | | | | (1) | | | | | | | (4) |
| 22-Jun-16 | | | | | 1.9 | 2.0 | 9.6 | 19.5 | 46.0 | 3.5 | |
| 23-Jun-16 | 17.0 | 7.9 | 1.2 | | | | | | | | |
| 3-Jul-16 | | | | | | | | | | | |
| 5-Jul-16 | 2.0 | | | | | | | | | | |
| 17-Jul-16 | | | | (1) | | | | | | | |
| 20-Jul-16 | | | | | 0.2 | 0.6 | 4.0 | 5.9 | 35.8 | 1.1 | |
| 21-Jul-16 | 2.7 | 1.3 | 3.5 | | | | | | | | 0.1 |
| 7-Aug-16 | | | | | | | | | | | |
| 9-Aug-16 | 1.5 | | | | | | | | | | |
| 21-Aug-16 | | | | | | | | | | | |
| 24-Aug-16 | 1.2 | 2.9 | 1.5 | 0.1 | 1.8 | 0.7 | 6.6 | 5.2 | | 0.5 | 0.7 |
| 25-Aug-16 | | | | | | | | | 11.7 | | |
| 18-Sep-16 | | | | | | | | | | | |
| 19-Sep-16 | 1.0 | 5.4 | 2.3 | 0.5 | 1.4 | 1.9 | 3.2 | 3.6 | 9.4 | 0.4 | 0.7 |
| 16-Oct-16 | | | | | | | | | | | |
| 17-Oct-16 | | | | | | | | | 15.8 | 0.3 | |
| 18-Oct-16 | 1.0 | 1.8 | 1.9 | 0.6 | 4.5 | 0.7 | 4.9 | 5.5 | | | 0.6 |
| 24-Oct-16 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25-Oct-16 | | | | | | | | | | | |
| 15-Nov-16 | | | | 0.5 | 1.2 | 0.8 | 1.8 | 9.3 | 12.5 | 0.2 | |
| 16-Nov-16 | 1.6 | 2.1 | 2.3 | | | | | | | | 1.0 |
| 18-Nov-16 | | | | | | | | | | | |
| 12-Dec-16 | 1.9 | 0.3 | 3.7 | 1.8 | 0.8 | 0.8 | 4.8 | 17.4 | 41.2 | 0.6 | 2.4 |
| 12-Jan-17 | | | | | | | | | | | |
| 22-Jan-17 | | | | | | | | | | | |
| 24-Jan-17 | | | | 3.8 | 7.9 | 4.4 | 21.6 | | 440.5 | 4.9 | |
| 25-Jan-17 | 19.5 | 26.9 | 39.6 | | | | | 76.8 | | | 3.7 |
| 15-Feb-17 | | | (2) | (2) | | | | | | | |
| 16-Feb-17 | | | | | 4.4 | 3.3 | 13.8 | | | 1.9 | |
| 17-Feb-17 | 6.5 | | | | | | | | 131.1 | | |
| 19-Mar-17 | | | | | | | | | | | |
| 21-Mar-17 | | | | 1.2 | 6.3 | 2.6 | 20.6 | 70.7 | | 8.0 | |
| 22-Mar-17 | 10.9 | 3.6 | 19.6 | | | | | | 300.9 | | 3.8 |
| 16-Apr-17 | | | | | | | | | | | |
| 19-Apr-17 | 32.0 | 51.6 | 46.1 | 1.3 | 12.2 | 8.8 | 37.1 | 77.7 | 420.3 | 10.5 | 2.8 |
| 8-May-17 | | | | | | | | | | | |
| 9-May-17 | | | | | | | | | | | |
| 14-May-17 | | | | | | | | | | | |
| 16-May-17 | 19.5 | 13.0 | 23.1 | 1.9 | 2.5 | 19.6 | 45.0 | 79.0 | 200.4 | 14.8 | 4.5 |
| 28-Jun-17 | 17.9 | 34.0 | 43.9 | 2.2 | 5.2 | 14.5 | 55.3 | 49.4 | 210.8 | 9.3 | 1.7 |
| 7-Jul-17 | 8.9 | | | | | | | | | | |
| 18-Jul-17 | | | | | | | | | | 3.2 | |
| 19-Jul-17 | 4.9 | 11.6 | 6.1 | 0.4 | 2.2 | 2.1 | 19.1 | 28.5 | 100.5 | | 1.4 |
| 20-Jul-17 | | | | | | | | | | | |
| 27-Jul-17 | | | | | | | | | | | |
| 2-Aug-17 | 4.3 | | | | | | | | | | |
| 13-Aug-17 | | | | | | | | | | | |
| 15-Aug-17 | | | | | 0.8 | 0.6 | 8.4 | 13.8 | | 2.1 | |
| 16-Aug-17 | 1.8 | 7.2 | 5.8 | 0.3 | | | | | 32.1 | | 1.0 |
| 17-Sep-17 | 1.8 | | | | | | | | 33.1 | 1.1 | |
| 18-Sep-17 | | 6.7 | 10.7 | 0.5 | 1.5 | 0.6 | 7.0 | 10.5 | | | |
| 19-Sep-17 | | | | | | | | | | | 0.9 |
| 17-Oct-17 | | | | | 4.4 | 3.8 | 7.9 | 22.6 | | 1.4 | |
| 18-Oct-17 | 3.1 | 7.3 | 18.4 | 1.9 | | | | | 90.9 | | 2.3 |
| 14-Nov-17 | | | | | 6.3 | 4.0 | 8.7 | 29.3 | 147.1 | 2.3 | |
| 15-Nov-17 | 6.0 | 11.2 | 13.8 | 1.3 | | | | | | | 1.4 |
| 12-Dec-17 | | | | (2) | (2) | | | | | | |
| 14-Dec-17 | 7.8 | 18.7 | 14.5 | | | 6.0 | 16.3 | 27.8 | 119.4 | 2.3 | 2.5 |
| 17-Jan-18 | | | | (2) | (2) | | | | 263.6 | 6.0 | (2) |
| 18-Jan-18 | 21.9 | 26.7 | 29.4 | | | 4.9 | 23.4 | 61.3 | | | |
| 18-Feb-18 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22-Feb-18 | | | | | | | | | | | |
| 23-Feb-18 | 52.6 | 76.9 | 101.6 | 3.5 | | | | | | 17.4 | 2.6 |
| 24-Feb-18 | | | | | 17.8 | 31.2 | 70.5 | 159.0 | 468.9 | | |
| 18-Mar-18 | | | | | | | | | | | |
| 20-Mar-18 | | | | | | | | | 267.7 | 6.1 | |
| 21-Mar-18 | 7.7 | 41.0 | 12.4 | 0.9 | 2.9 | 6.3 | 24.0 | 34.6 | | | 1.0 |
| 18-Apr-18 | | | | | | | | | 598.0 | 10.0 | |
| 19-Apr-18 | 15.3 | 23.4 | 43.8 | 3.5 | 13.6 | 12.1 | 42.8 | 95.1 | | | 2.2 |
| 8-May-18 | | | | | | | | | | | |
| 9-May-18 | | | | | | | | | | | |
| 13-May-18 | | | | | | | | | | | |
| 14-May-18 | | | | | | | | | 251.5 | 5.6 | |
| 15-May-18 | 51.9 | 25.3 | 35.2 | 2.4 | 22.1 | 13.4 | 50.7 | 160.6 | | | 2.2 |
| 18-Jun-18 | 2.67 | 4.16 | 10.43 | 0.47 | 1.32 | 3.6 | 6.84 | 23.8 | 47.1 | 0.49 | 3.48 |
| 19-Jun-18 | | | | | | | | | | | |
| 20-Jun-18 | | | | | | | | | | | |
| 4-Jul-18 | 1.39 | | | | | | | | | | |
| 18-Jul-18 | | | | (1) | | | | | | | |
| 19-Jul-18 | 0.69 | 2.2 | 2.98 | | 2.27 | 1.77 | 13.58 | 4.5 | 13.2 | 1.11 | |
| 3-Aug-18 | 1.11 | | | | | | | | | | |
| 23-Aug-18 | | | 2.5 | 0.1 | 2.1 | 0.4 | 3.8 | 3.8 | 49.5 | | |
| 24-Aug-18 | 0.7 | 2.0 | | | | | | | | 0.4 | 0.3 |
| 19-Sep-18 | | | 0.6 | (1) | 0.8 | 0.4 | 2.4 | 4.7 | 8.6 | 0.1 | |
| 20-Sep-18 | 0.3 | 0.4 | | | | | | | | | |
| 24-Oct-18 | | | | | | | | | 45.7 | | |
| 25-Oct-18 | 1.3 | 1.0 | 4.8 | 0.5 | 2.5 | 27.2 | 3.4 | 6.1 | | 0.1 | 0.4 |
| 21-Nov-18 | | | | | | | | | 60.0 | | |
| 22-Nov-18 | 4.2 | 6.7 | 5.6 | 0.7 | 2.5 | 1.2 | 6.6 | | | 1.3 | (1) |
| 12-Dec-18 | | 13.0 | | | | | | | | | |
| 13-Dec-18 | 7.5 | | | 0.8 | 5.1 | 2.2 | 17.7 | 25.3 | 127.0 | 6.1 | 0.8 |
| 18-Jan-19 | | | | (2) | | | | | | | (2) |
| 19-Jan-19 | 5.9 | | | (2) | | 4.1 | 16.3 | | | 4.2 | (2) |
| 26-Feb-19 | | | | | | | | | (2) | (2) | |
| 28-Feb-19 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | | (2) |
| 15-Mar-19 | | 16.5 | | | | | | | (1) | | |
| 19-Mar-19 | 13.0 | | 42.5 | (1) | (1) | 14.8 | 24.6 | 61.9 | | 15.5 | 1.2 |
| 24-Apr-19 | | | | | | | | | | | |
| 25-Apr-19 | 78.3 | (1) | 189.8 | 31.8 | 84.1 | 32.1 | 145.4 | | | 28.9 | 1.8 |
| 14-May-19 | | | | | | | | | | | |
| 16-May-19 | | | | | | | | | | | |
| 23-May-19 | | | | | | | | | | | |
| 27-May-19 | 12.0 | | 18.1 | 1.0 | 7.4 | 4.8 | 25.2 | 54.9 | 188.8 | 4.7 | 1.4 |
| 18-Jun-19 | | 10.5 | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-Jun-19 | 6.5 | | 9.3 | 0.4 | 6.3 | 2.4 | 13.6 | 27.5 | 82.2 | 2.5 | 1.1 |
| 29-Jul-19 | | 1.8 | | | | | | | | | |
| 30-Jul-19 | 1.3 | | 4.7 | (1) | 2.1 | 0.7 | 4.9 | 9.9 | 3.5 | 0.8 | 0.2 |
| 29-Aug-19 | | 2.2 | | | | | | | | | |
| 30-Aug-19 | 7.5 | | 2.3 | (1) | 1.6 | 0.5 | 2.1 | 4.3 | 6.5 | 0.7 | 0.2 |
| 26-Sep-19 | | 3.6 | | | | | | | | (1) | |
| 27-Sep-19 | 1.0 | | 3.0 | (1) | 1.5 | 1.4 | 3.4 | 8.1 | 7.9 | | 0.2 |
| 22-Oct-19 | 3.3 | | 2.7 | (1) | 0.3 | 2.4 | 3.9 | 2.4 | 10.6 | | 0.3 |
| 23-Oct-19 | | 2.6 | | | | | | | | (1) | |
| 21-Nov-19 | 6.6 | | 3.1 | (2) | 0.3 | 2.2 | 2.4 | 0.9 | 10.4 | (1) | 1.1 |
| 22-Nov-19 | | 0.7 | | | | | | | | | |
| 20-Dec-19 | (2) | (2) | (2) | (2) | 0.1 | (2) | (2) | (2) | (2) | (2) | (2) |
| 15-Jan-20 | | | | | | | | | (2) | (2) | |
| 24-Jan-20 | 8.5 | (2) | (2) | (2) | (2) | 5.1 | 2.4 | (2) | | | (2) |
| 20-Feb-20 | | | | | | | | | (2) | (2) | |
| 21-Feb-20 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | | | (2) |
| 25-Mar-20 | (1) | (2) | (2) | (2) | (1) | 42.3 | 11.8 | (2) | | 9.6 | (2) |
| 26-Mar-20 | | | | | | | | | (1) | | |
| 27-Apr-20 | | 12.0 | | | | | | | | | |
| 28-Apr-20 | 10.4 | | | 27.1 | | 21.7 | 7.4 | 54.5 | 98.9 | 10.3 | |
| 19-May-20 | | | | | | | | | | | |
| 20-May-20 | | | | | | | | | | | |
| 28-May-20 | 10.1 | (1) | 19.5 | 0.9 | 29.9 | 4.1 | 17.0 | 147.3 | 191.1 | 5.5 | (1) |
| 29-May-20 | | | | | | | | | | | |
| 23-Jun-20 | | | | | | | | | | | |
| 24-Jun-20 | (1) | (1) | 81.6 | 0.7 | 6.4 | 8.3 | 12.7 | 7.0 | 201.1 | 2.3 | (1) |
| 30-Jul-20 | | | | | | | | | | | |
| 31-Jul-20 | 3.5 | (1) | 7.2 | 0.1 | 0.4 | 2.7 | 4.4 | 15.6 | 50.4 | 1.5 | |
| 25-Aug-20 | | | | | | | | | | | |
| 26-Aug-20 | 2.7 | | | | (1) | 4.4 | 1.1 | 8.4 | 20.6 | | |
| 25-Sep-20 | | | | | | | | | | 0.9 | |
| 26-Sep-20 | 0.7 | | | 1.3 | 2.3 | 6.3 | 5.9 | 27.6 | 23.2 | | |
| 29-Oct-20 | 1.7 | | 24.3 | 1.4 | 6.1 | 6.8 | 6.3 | 20.1 | 28.2 | 1.4 | 0.3 |
| 30-Oct-20 | | 40.3 | | | | | | | | | |
| 26-Nov-20 | | 53.6 | | | | | | | | (2) | |
| 27-Nov-20 | 25.5 | | 45.4 | 3.9 | 4.3 | 1.1 | 10.7 | 7.6 | | | 0.5 |
| 22-Dec-20 | 13.4 | | 44.8 | 1.1 | (2) | 4.7 | 15.0 | 7.8 | | | 6.1 |
| 23-Dec-20 | | 21.4 | | | | | | | | (2) | |
| 27-Jan-21 | | 11.2 | (2) | (2) | (2) | 3.0 | 1.6 | (2) | (2) | (2) | (2) |
| 28-Jan-21 | 5.1 | | | | | | | | | | |
| 22-Feb-21 | | | (2) | (2) | (2) | (2) | 26.7 | (2) | | (2) | (2) |
| 23-Feb-21 | (2) | | | | | | | | | | |
| 29-Mar-21 | | 16.5 | 26.1 | 13.0 | 11.1 | 4.4 | 84.3 | 69.5 | 204.0 | 13.6 | 2.4 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30-Mar-21 | 12.1 | | | | | | | | | | |
| 27-Apr-21 | | (1) | 12.3 | 11.0 | 16.6 | 19.7 | 83.9 | 72.6 | (1) | 19.3 | 1.4 |
| 28-Apr-21 | 22.6 | | | | | | | | | | |
| 26-May-21 | 6.1 | | | | | | | | | | |
| 27-May-21 | | 8.2 | 9.4 | (4) | (4) | 2.0 | 13.0 | 31.5 | (4) | 2.9 | 0.2 |
| 22-Jun-21 | | 3.4 | 10.6 | (1) | (4) | 7.8 | 7.2 | 40.1 | 17.1 | 0.8 | (1) |
| 23-Jun-21 | 2.1 | | | | | | | | | | |
| 10-Jul-21 | 2.0 | | | | | | | | | | |
| 22-Jul-21 | | 4.5 | 3.4 | 0.4 | 0.6 | 3.6 | 3.8 | | 32.2 | 0.2 | (1) |
| 23-Jul-21 | 1.7 | | | | | | | | | | |
| 11-Aug-21 | 1.4 | | | | | | | | | | |
| 25-Aug-21 | | 4.8 | | | (4) | 1.1 | 3.8 | | (4) | 0.5 | (1) |
| 26-Aug-21 | 1.3 | | | | | | | | | | |
| 27-Sep-21 | 9.5 | | | | | | | | | | |
| 28-Sep-21 | | 9.5 | | | 1.9 | 5.67 | 5.78 | | 162.1 | 2.5 | (1) |
| 26-Oct-21 | | 14.2 | | | 3.5 | 9.0 | 8.4 | | 136.0 | 3.3 | 1.0 |
| 27-Oct-21 | 19.8 | | | | | | | | | | |
| 22-Nov-21 | 19.4 | | | | | | | | | | |
| 23-Nov-21 | | 3.7 | (2) | (2) | (2) | 1.3 | 15.1 | (2) | (2) | (2) | 7.3 |
| 21-Dec-21 | | 2.2 | (2) | | (2) | 4.6 | 8.8 | | | (2) | 5.7 |
| 22-Dec-21 | 13.2 | | | | | | | | | | |
| 24-Jan-22 | 6.76 | (2) | (2) | (2) | (2) | 8.4 | 2.94 | (2) | (3) | (2) | (2) |
| 8-Feb-22 | 3.67 | (2) | (2) | (2) | (2) | 6.24 | 2.63 | (2) | (2) | (2) | (2) |
| 16-Mar-22 | 9.42 | (2) | (2) | (2) | (2) | 7.42 | 4.13 | (2) | | (2) | (2) |
| 21-Apr-22 | 14.28 | 5.15 | 22.99 | 24.49 | 6.49 | 18.39 | 15.9 | 53.0 | 28.1 | 5.1 | 1.68 |
| 24-May-22 | | 1.91 | | | | | | | 43.8 | 1.65 | 0.55 |
| 25-May-22 | 4.49 | | | (1) | (1) | 8.47 | | | | | |
| 26-May-22 | | | 13.37 | | | | 10.41 | 41.9 | | | |
| 22-Jun-22 | | | | | | | | | | | |
| 24-Jun-22 | 19.2 | 11.73 | 7.73 | (1) | (1) | 24.73 | 34.16 | 21.6 | | 2.38 | |
| 25-Jun-22 | | | | | | | | | 78.4 | | 6.07 |
| 8-Jul-22 | 5.57 | | | | | | | | | | |
| 11-Aug-22 | 4.63 | | | | | | | | | | |
| 26-Aug-22 | | | | | | | | | 175.8 | | (1) |
| 29-Aug-22 | 4.91 | 4.76 | 9.56 | (1) | (1) | 7.05 | 11.99 | 30.9 | | 1.65 | |
| 30-Aug-22 | | | | | | | | | | | |
| 27-Sep-22 | | | 1.84 | (1) | 2.71 | | | 35.9 | 18.5 | 2.21 | |
| 29-Sep-22 | 0.6 | 1.79 | | | | 1.32 | 7.8 | | | | (1) |
| 26-Oct-22 | | | | | | | | | | | |
| 27-Oct-22 | 0.43 | (4) | 7.53 | (1) | 0.35 | 1.35 | 1.42 | 1.6 | | (1) | 0.18 |
| 28-Oct-22 | | | | | | | | | 11.7 | | |
| 21-Nov-22 | | | | | | | | | | (1) | |
| 22-Nov-22 | | 1.1 | 2.16 | (1) | | | | 4.8 | 24.1 | | 1.06 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Nov-22 | | | | | 0.67 | 1.74 | 2.05 | | | | |
| 20-Dec-22 | | | 4.1 | 0.22 | | | | 7.7 | | | |
| 21-Dec-22 | | | | | (1) | 1.74 | 1.94 | | | (4) | |
| 24-Jan-23 | | | 15.03 | 0.25 | (2) | 5.76 | 6.7 | 59.2 | | 7.53 | |
| 22-Feb-23 | | | 38.09 | 4.89 | | 6.71 | 19.83 | 79.5 | | 4.19 | |
| 27-Mar-23 | | | 91.05 | 4.94 | | | | 226.0 | | 6.57 | |
| 28-Mar-23 | | | | | 12.18 | 8.9 | 23.88 | | | | |
| 21-Apr-23 | | | 16.96 | 0.37 | 8.76 | 13.67 | 61.21 | 195.6 | | 12.82 | |
| 15-May-23 | | | | (4) | | | | | | | |
| 16-May-23 | | | 10.1 | | | 8.26 | 34.19 | 178.8 | | 10.25 | |
| 17-May-23 | 13.21 | 8.81 | | | | | | | 479.0 | | 0.55 |
| 26-Jun-23 | 18.98 | 5.04 | 2.36 | (1) | 3.06 | 3.6 | 19.06 | 166.2 | | 0.52 | (1) |
| 27-Jun-23 | | | | | | | | | 436.3 | | |
| 11-Jul-23 | 2.42 | | | | | | | | | | |
| 25-Jul-23 | | | 7.67 | (4) | (1) | 4.21 | 35.39 | 137.2 | 679.5 | 10.21 | |
| 26-Jul-23 | 8.27 | 13.99 | | | | | | | | | 10.11 |
| 14-Aug-23 | 2.97 | | | | | | | | | | |
| 28-Aug-23 | | | | | | | | | | | |
| 29-Aug-23 | 0.6 | 2.97 | 4.4 | (1) | (1) | 1.21 | 4.09 | 63.4 | 139.1 | 0.7 | |
| 30-Aug-23 | | | | | | | | | | | |
| 31-Aug-23 | | | | | | | | | | | 1.48 |
| 25-Sep-23 | 0.9 | 0.66 | 0.75 | (1) | (1) | 2.45 | 4.92 | 37.0 | | 0.94 | (1) |
| 26-Sep-23 | | | | | | | | | 52.1 | | |
| 30-Oct-23 | | | | | 0.47 | 2.78 | 6.13 | | | 0.94 | |
| 31-Oct-23 | 1.27 | 2.42 | 1.84 | (1) | | | | 15.8 | | | 0.53 |
| 1-Nov-23 | | | | | | | | | 121.6 | | |
| 29-Nov-23 | | | 3.85 | 0.24 | (1) | 3.06 | 8.5 | 55.6 | | 0.77 | |
| 18-Dec-23 | | | 12.57 | 7.77 | (1) | 7.64 | 23.23 | 90.4 | | 2.6 | |
| 31-Jan-24 | | | 10.69 | 0.8 | (1) | 9.22 | 20.98 | 101.5 | | 36.95 | |
| 27-Feb-24 | | | 49.25 | 24.88 | (1) | 20.55 | 36.83 | 138.9 | | 8.26 | |
| 27-Mar-24 | | | 44.86 | 1.64 | (1) | 17.86 | 54.21 | 290.5 | | 15.14 | |
| 29-Apr-24 | | | 32.66 | 2.95 | | 13.43 | 46.74 | 176.9 | | 25.04 | |
| 27-May-24 | | | 4.99 | (4) | 2.35 | 7.04 | 22.01 | 128.8 | | 6.02 | |
| 28-May-24 | 12.14 | 11.9 | | | | | | | 535.8 | | 3.11 |
| 26-Jun-24 | | | 1.72 | (1) | 3.33 | 3.27 | 8.34 | 171.9 | | 29.75 | |
| 27-Jun-24 | 11.38 | 7.42 | | | | | | | 379.9 | | 1.37 |
| 16-Jul-24 | 35.28 | | | | | | | | | | |
| 29-Jul-24 | | | 2.33 | (1) | (1) | 3.35 | 8.63 | | | 1.87 | |
| 30-Jul-24 | 36.9 | 5.16 | | | | | | 64.1 | 398.4 | | 0.18 |
| 12-Aug-24 | 6.4 | | | | | | | | | | |
| 26-Aug-24 | | | | | 0.2 | 15.65 | 5.62 | | | | |
| 27-Aug-24 | | | 0.69 | (1) | | | | 29.6 | | 2.15 | |
| 28-Aug-24 | 6.97 | 1.74 | | | | | | | 82.9 | | (1) |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW11E | SW13 | SW14 | SW15 | SW16 | SW17 | SW17A | SW18 | SW19 | SW20 | SW21 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Sep-24 | | | 1.08 | (1) | (4) | 11.27 | 3.74 | 46.2 | | 0.93 | |
| 25-Sep-24 | 1.65 | 1.02 | | | | | | | 181.3 | | (4) |
| 28-Oct-24 | | | 0.3 | (1) | 0.11 | 7.96 | 2.58 | 20.8 | | 0.24 | |
| 29-Oct-24 | 3.91 | 3.41 | | | | | | | 159.8 | | (4) |
| 18-Nov-24 | | | 0.82 | (1) | 1.16 | 10.44 | 0.99 | 22.0 | | (4) | |
| 16-Dec-24 | | | 3.02 | 0.6 | 4.78 | 17.54 | 4.52 | 277.2 | | 5.78 | |
| 27-Jan-25 | | | (2) | (4) | (2) | (4) | (4) | (2) | | (4) | |
| 24-Feb-25 | | | (2) | (2) | (2) | (2) | (2) | (3) | | (2) | |
| 24-Mar-25 | | | (3) | 3.0 | 2.81 | 28.71 | (3) | (3) | | 13.08 | |
| 28-Apr-25 | | | 18.01 | (4) | 5.48 | 6.8 | 24.94 | 216.4 | | 23.74 | |
| 29-Apr-25 | | | | | | | | | | | |
| 26-May-25 | | | | | | | | | | | |
| 27-May-25 | | | 13.43 | (4) | 6.48 | 2.82 | 49.0 | 38.6 | 627.7 | 13.93 | |
| 28-May-25 | 22.22 | 16.35 | | | | | | | | | 0.37 |
| 23-Jun-25 | | | | | | | | | | | |
| 24-Jun-25 | 9.34 | 4.68 | | | 4.21 | 5.24 | 16.77 | | | 7.96 | (4) |
| 25-Jun-25 | | | 3.58 | (1) | | | | 43.8 | 131.9 | | |
| 14-Jul-25 | 3.14 | | | | | | | | | | |
| 28-Jul-25 | | | | | | | | | | | |
| 29-Jul-25 | 4.3 | 3.84 | 2.2 | (1) | 1.06 | 1.36 | 14.88 | 13.3 | 41.9 | (3) | (1) |
| 11-Aug-25 | 3.6 | | | | | | | | | | |
| 25-Aug-25 | | | | | | | | | | | |
| 26-Aug-25 | 1.81 | 0.34 | 0.61 | (1) | 0.61 | 1.04 | 5.32 | 11.7 | | 1.14 | (1) |
| 27-Aug-25 | | | | | | | | | 85.0 | | |
| 29-Sep-25 | | | | | 0.64 | 2.28 | 2.61 | | | (4) | |
| 30-Sep-25 | 1.65 | 0.74 | 2.4 | (1) | | | | 5.3 | 80.7 | | (1) |
| 27-Oct-25 | 3.33 | 1.32 | | | | | | | | | 0.98 |
| 28-Oct-25 | | | | | 1.23 | 2.09 | 11.36 | | | (1) | |
| 29-Oct-25 | | | 4.0 | 1.69 | | | | 17.9 | 120.2 | | |
| 24-Nov-25 | | | 13.27 | 0.92 | 5.96 | 8.3 | 6.53 | 23.2 | | 2.78 | |
| 25-Nov-25 | | | | | | | | | | | |
| 15-Dec-25 | | | 4.82 | 1.48 | (3) | 8.02 | 11.78 | 74.9 | | 6.13 | |
| 16-Dec-25 | | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations

| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 22-May-03 | | | | | | | | | | |
| 23-Jun-03 | | | | | 2.0 | | | | | |
| 26-Jun-03 | | | | 1.62 | | | | | | |
| 22-Jul-03 | 1.5 | 1.9 | 2.0 | 1.5 | 1.1 | | 0.82 | | | |
| 20-Aug-03 | 1.5 | 0.89 | 0.75 | 1.2 | 0.5 | | 0.55 | | | |
| 25-Sep-03 | 0.9 | 1.2 | 1.2 | 0.24 | 0.6 | | 0.2 | | | |
| 22-Oct-03 | 1.0 | 1.0 | 2.0 | 0.28 | 1.0 | | 0.4 | | | |
| 23-Oct-03 | | | | | | | | | | |
| 28-Nov-03 | 0.37 | 2.28 | 2.76 | 2.05 | 1.85 | | 1.43 | | | |
| 19-Dec-03 | (2) | 3.01 | 2.0 | 3.21 | 1.62 | | 5.81 | | | |
| 10-Feb-04 | (2) | 3.0 | | | | | 0.9 | | | |
| 11-Feb-04 | | | 2.0 | 2.07 | 2.5 | | | | | |
| 12-Feb-04 | | | | | | | | | | |
| 13-Feb-04 | | | | | | | | | | |
| 16-Mar-04 | | | | | | | | | | |
| 17-Mar-04 | | | 3.0 | 3.76 | 2.2 | | | | | |
| 18-Mar-04 | (2) | (2) | | | | | 2.5 | | | |
| 19-Apr-04 | 0.25 | 0.1 | | | | | | | | |
| 20-Apr-04 | | | | | | | | | | |
| 21-Apr-04 | | | 3.97 | 8.37 | 2.96 | | 3.32 | | | |
| 19-May-04 | 1.79 | 0.77 | 4.81 | 3.92 | 1.88 | | 1.68 | | | |
| 24-Jun-04 | 0.4 | 4.03 | 2.5 | 2.35 | 0.97 | | 1.05 | | | |
| 29-Jul-04 | 0.9 | 4.71 | 1.24 | 1.25 | 0.23 | | 0.85 | | | |
| 23-Aug-04 | | | | | | | | | | |
| 26-Aug-04 | 0.91 | 1.09 | 0.1 | 0.92 | 0.33 | | 0.23 | | | |
| 21-Sep-04 | (1) | | | | | | | | | |
| 22-Sep-04 | | | 0.72 | 0.36 | 0.1 | | 0.33 | | | |
| 23-Sep-04 | | 0.3 | | | | | | | | |
| 20-Oct-04 | 0.16 | 4.21 | 0.67 | 0.34 | 0.28 | | 0.52 | | | |
| 21-Oct-04 | | | | | | | | | | |
| 16-Nov-04 | | | | | | | | | | |
| 17-Nov-04 | | | | 0.33 | 0.21 | | 0.52 | | | |
| 18-Nov-04 | 0.38 | 1.3 | 1.39 | | | | | | | |
| 15-Dec-04 | | (2) | (2) | | (2) | | | | | |
| 16-Dec-04 | 0.69 | | | 0.4 | | | 0.45 | | | |
| 13-Jan-05 | | | | | | | | | | |
| 16-Jan-05 | (2) | (2) | (2) | (2) | (2) | | (2) | | | |
| 13-Feb-05 | (2) | (2) | (2) | (2) | (2) | | (2) | | | |
| 27-Mar-05 | | | | | | | | | | |
| 28-Mar-05 | | | | | | | | | | |
| 29-Mar-05 | 1.24 | 5.07 | 2.78 | 1.59 | 2.17 | | 0.2 | | | |
| 30-Mar-05 | | | | | | | | | | |
| 10-Apr-05 | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 11-Apr-05 | 5.8 | 3.12 | 16.59 | 9.47 | 4.85 | | 7.87 | | | |
| 22-May-05 | | | | | | | | | | |
| 24-May-05 | | | | | | | | | | |
| 26-May-05 | 0.24 | 3.39 | 4.8 | 4.19 | 1.77 | | 1.42 | | | |
| 26-Jun-05 | | 0.1 | | | | | | | | |
| 27-Jun-05 | | | | | | | | | | |
| 28-Jun-05 | (4) | | 2.12 | 2.34 | 1.0 | | 0.49 | | | |
| 29-Jun-05 | | | | | | | | | | |
| 10-Jul-05 | | | | | | | | | | |
| 11-Jul-05 | | | | 1.56 | 0.9 | | 0.35 | | | |
| 12-Jul-05 | 1.32 | 6.0 | 4.5 | | | | | | | |
| 21-Aug-05 | | | | | | | | | | |
| 22-Aug-05 | | | | 1.06 | 0.85 | | 0.12 | | | |
| 23-Aug-05 | 1.03 | 2.74 | 2.63 | | | | | | | |
| 25-Sep-05 | | | | | | | | | | |
| 27-Sep-05 | | | | 0.39 | 0.68 | | | | | |
| 28-Sep-05 | 1.34 | | 1.19 | | | | 0.1 | | | |
| 23-Oct-05 | | | | | | | 0.1 | | | |
| 24-Oct-05 | | | | | | | | | | |
| 25-Oct-05 | 1.98 | 2.2 | 1.24 | 0.29 | 0.17 | | | | | |
| 13-Nov-05 | | | | | | | | | | |
| 14-Nov-05 | | | | | | | | | | |
| 15-Nov-05 | 1.24 | 2.29 | 1.25 | 0.33 | 0.4 | | 0.1 | | | |
| 16-Nov-05 | | | | | | | | | | |
| 11-Dec-05 | | | | | | | | | | |
| 12-Dec-05 | | | | | | | 2.08 | | | |
| 13-Dec-05 | 4.7 | 2.39 | 1.5 | | | | | | | |
| 14-Dec-05 | | | | 0.34 | 0.18 | | | | | |
| 16-Dec-05 | | | | | | | | | | |
| 15-Jan-06 | | | | | | | | | | |
| 16-Jan-06 | | | | | | | | | | |
| 17-Jan-06 | 9.78 | 0.69 | 2.76 | | | | 1.52 | | | |
| 18-Jan-06 | | | | 10.44 | 3.82 | | | | | |
| 19-Feb-06 | (2) | (2) | (2) | (2) | (2) | | (2) | | | |
| 19-Mar-06 | | (2) | | | | | | | | |
| 20-Mar-06 | | | | | | | | | | |
| 21-Mar-06 | | | | 9.44 | 3.48 | | | | | |
| 22-Mar-06 | 0.46 | | 1.69 | | | | 3.0 | | | |
| 24-Mar-06 | | | | | | | | | | |
| 31-Mar-06 | | | | | | | | | | |
| 7-Apr-06 | | | | | | | | | | |
| 13-Apr-06 | | | | | | | | | | |
| 16-Apr-06 | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 18-Apr-06 | | | | | | | 3.72 | | | |
| 19-Apr-06 | 3.44 | 5.57 | 6.38 | 10.91 | 6.04 | | | | | |
| 21-May-06 | | | | | | | | | | |
| 23-May-06 | 4.71 | 2.27 | 3.47 | 3.91 | 1.48 | | | | | |
| 24-May-06 | | | | | | | 12.29 | | | |
| 18-Jun-06 | | | | | | | | | | |
| 20-Jun-06 | 3.75 | 2.47 | 6.05 | 2.85 | 1.38 | | 2.26 | | | |
| 21-Jun-06 | | | | | | | | | | |
| 23-Jun-06 | | | | | | | | | | |
| 9-Jul-06 | | | | | | | | | | |
| 10-Jul-06 | | | | | | | | | | |
| 11-Jul-06 | 3.48 | 1.38 | 3.34 | 1.56 | 1.39 | | 0.51 | | | |
| 12-Jul-06 | | | | | | | | | | |
| 20-Aug-06 | | | | | | | | | | |
| 21-Aug-06 | | | | | | | | | | |
| 22-Aug-06 | | | | | | | | | | |
| 23-Aug-06 | 2.95 | 0.97 | 2.89 | 0.64 | 0.46 | | 0.27 | | | |
| 24-Aug-06 | | | | | | | | | | |
| 17-Sep-06 | | | | | | | | | | |
| 20-Sep-06 | 4.04 | 1.34 | 3.5 | 0.53 | 0.73 | | 0.56 | | | |
| 21-Sep-06 | | | | | | | | | | |
| 25-Sep-06 | | | | | | | | | | |
| 27-Sep-06 | | | | | | | | | | |
| 28-Sep-06 | | 2.73 | | | | | | | | |
| 15-Oct-06 | | | | | | | | | | |
| 17-Oct-06 | | | | | | | | | | |
| 18-Oct-06 | | | | | | | | | | |
| 19-Oct-06 | 2.57 | 3.23 | 1.87 | 0.49 | 0.66 | | 0.33 | | | |
| 17-Nov-06 | | | | | | | | | | |
| 19-Nov-06 | | | | | | | | | | |
| 23-Nov-06 | 2.14 | | 4.64 | 1.55 | 1.51 | | | | | |
| 24-Nov-06 | | | | | | | | | | |
| 27-Nov-06 | | | | | | | 1.27 | | | |
| 17-Dec-06 | 0.71 | 0.79 | 4.15 | 4.65 | 1.86 | | 1.34 | | | |
| 23-Dec-06 | | 1.56 | | | | | | | | |
| 21-Jan-07 | (2) | 3.58 | 2.85 | 3.56 | 4.15 | | 2.21 | | | |
| 18-Feb-07 | (2) | (2) | (2) | 2.18 | (2) | | (2) | | | |
| 18-Mar-07 | (2) | (2) | 4.53 | 3.38 | 3.11 | (2) | 2.46 | | | |
| 15-Apr-07 | | | | | | | | | | |
| 16-Apr-07 | 1.04 | 3.29 | 8.34 | | | | | | | |
| 17-Apr-07 | | | | 7.67 | 1.41 | 11.47 | 5.47 | | | |
| 13-May-07 | 2.52 | 3.4 | 11.39 | 6.46 | 1.53 | | 1.35 | | | |
| 15-May-07 | | | | | | 7.74 | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 17-Jun-07 | 1.18 | 5.96 | 0.6 | 2.01 | 6.77 | | 0.23 | | | |
| 18-Jun-07 | | | | | | 9.78 | | | | |
| 15-Jul-07 | 1.89 | 1.64 | 0.74 | 1.77 | 3.61 | | 0.35 | | | |
| 18-Jul-07 | | | | | | 2.68 | | | | |
| 19-Aug-07 | 0.83 | 1.31 | 0.32 | 1.53 | 0.23 | | 0.38 | | | |
| 22-Aug-07 | | | | | | 1.55 | | | | |
| 16-Sep-07 | 2.44 | | | | | | | | | |
| 17-Sep-07 | | 1.15 | 0.65 | 1.2 | 0.58 | 3.03 | 0.27 | | | |
| 18-Sep-07 | | | | | | | | | | |
| 14-Oct-07 | | | | | | | | | | |
| 18-Oct-07 | 1.38 | 4.13 | 2.65 | 0.23 | 0.33 | 2.18 | 0.22 | | | |
| 19-Oct-07 | | | | | | | | | | |
| 18-Nov-07 | | | | | | | | | | |
| 19-Nov-07 | | | | | | | 2.07 | | | |
| 21-Nov-07 | 0.75 | 3.96 | 1.57 | 1.07 | 1.02 | 4.41 | | | | |
| 9-Dec-07 | 0.17 | 1.77 | 1.98 | | | (2) | | | | |
| 10-Dec-07 | | | | | | | 0.55 | | | |
| 11-Dec-07 | | | | 0.37 | (4) | | | | | |
| 12-Dec-07 | | | | | | | | | | |
| 20-Jan-08 | (2) | | | | 0.55 | | | | | |
| 21-Jan-08 | | 7.76 | 8.04 | | | | 1.47 | | | |
| 22-Jan-08 | | | | 6.95 | | 2.6 | | | | |
| 17-Feb-08 | (2) | | | | | | | | | |
| 19-Feb-08 | | 0.41 | 2.33 | | | | 1.64 | | | |
| 20-Feb-08 | | | | 3.33 | 2.16 | 16.9 | | | | |
| 16-Mar-08 | (2) | (2) | | | | | | | | |
| 17-Mar-08 | | | 0.7 | | | | 0.79 | | | |
| 18-Mar-08 | | | | 1.16 | 1.47 | 5.64 | | | | |
| 19-Mar-08 | | | | | | | | | | |
| 30-Mar-08 | (2) | (2) | | | | | | | | |
| 1-Apr-08 | | | 23.4 | | | | | | | |
| 2-Apr-08 | | | | 7.42 | 2.89 | 17.62 | 0.79 | | | |
| 4-Apr-08 | | | | | | | | | | |
| 7-Apr-08 | | | | | | | | | | |
| 20-Apr-08 | 1.66 | | | | | | | | | |
| 21-Apr-08 | | | | | | | | | | |
| 23-Apr-08 | | 1.35 | 9.92 | 2.0 | 2.53 | 12.4 | 1.87 | | | |
| 24-Apr-08 | | | | | | | | | | |
| 6-May-08 | | | | | | | | | | |
| 18-May-08 | 0.3 | | | | | | | | | |
| 20-May-08 | | | | | | | | | | |
| 21-May-08 | | 1.49 | 6.72 | 7.91 | 2.17 | 3.9 | 1.43 | | | |
| 22-May-08 | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 15-Jun-08 | 0.18 | | | | | | | | | |
| 17-Jun-08 | | 1.2 | 2.26 | 4.33 | 0.39 | 3.1 | 0.37 | | | |
| 18-Jun-08 | | | | | | | | | | |
| 13-Jul-08 | (4) | | | | | | | | | |
| 15-Jul-08 | | 0.37 | 2.21 | | | | 0.3 | | | |
| 16-Jul-08 | | | | 3.24 | 0.7 | 4.1 | | | | |
| 17-Aug-08 | (4) | | | | | | | | | |
| 18-Aug-08 | | | | | | | 1.4 | | | |
| 19-Aug-08 | | 0.4 | 4.5 | 1.79 | 0.9 | 3.1 | | | | |
| 12-Sep-08 | | | | | | | | | | |
| 14-Sep-08 | (4) | | | | | | | | | |
| 16-Sep-08 | | 0.16 | 1.9 | 2.7 | 0.51 | 3.75 | 0.53 | | | |
| 17-Sep-08 | | | | | | | | | | |
| 19-Oct-08 | | | | | | | | | | |
| 20-Oct-08 | | | | | | | | | | |
| 21-Oct-08 | 0.65 | 1.27 | 1.5 | | | | 0.83 | | | |
| 22-Oct-08 | | | | 0.59 | 0.63 | 3.17 | | | | |
| 23-Nov-08 | 0.8 | 0.79 | 4.58 | (2) | 0.25 | 8.33 | 0.6 | | | |
| 14-Dec-08 | 0.17 | 1.42 | 8.76 | 1.9 | 1.76 | 8.58 | 1.8 | | | |
| 18-Jan-09 | (2) | (2) | 5.21 | 2.8 | 1.25 | 3.88 | 3.9 | | | |
| 8-Feb-09 | (2) | (2) | 2.2 | 0.66 | 2.7 | 13.3 | 0.7 | | | |
| 15-Mar-09 | 0.78 | (2) | 7.4 | 3.9 | 3.2 | 26.9 | 1.5 | | | |
| 12-Apr-09 | 0.4 | 0.2 | 3.65 | 3.4 | 1.8 | 21.6 | 3.4 | | | |
| 17-May-09 | 0.1 | 0.2 | 3.7 | 3.7 | 2.3 | 8.2 | 1.0 | | | |
| 14-Jun-09 | (1) | 0.1 | 2.2 | 1.8 | 0.7 | 0.8 | 0.43 | | | |
| 12-Jul-09 | (1) | 0.41 | 1.83 | 0.36 | 0.36 | 1.1 | 0.26 | | | |
| 9-Aug-09 | (1) | 0.1 | 2.2 | 0.54 | 0.9 | 1.7 | 0.4 | | | |
| 13-Sep-09 | 0.33 | 0.99 | 1.6 | 0.27 | (4) | 0.72 | 0.4 | | | |
| 11-Oct-09 | 0.35 | 0.78 | 1.4 | 1.1 | 0.63 | 4.3 | 0.37 | 0.4 | | |
| 15-Nov-09 | (4) | 0.43 | 2.0 | 0.3 | 3.1 | 2.5 | 0.33 | (4) | | |
| 13-Dec-09 | (2) | (2) | 0.4 | 2.4 | 0.74 | 1.2 | 0.14 | (2) | | |
| 17-Jan-10 | (2) | (2) | 0.5 | 0.9 | 0.78 | 0.3 | 1.2 | 0.16 | | |
| 7-Feb-10 | (2) | (2) | 0.74 | 1.2 | 0.65 | 1.7 | 1.2 | 0.2 | | |
| 14-Mar-10 | 0.86 | (2) | 4.3 | 6.5 | 5.0 | 20.8 | 1.5 | 0.67 | | |
| 4-Apr-10 | | | | | | | | | | |
| 11-Apr-10 | 0.5 | 0.9 | 2.3 | 7.1 | 2.1 | 6.4 | 3.9 | 0.5 | | |
| 16-May-10 | 0.3 | 1.4 | 5.6 | 6.4 | 1.5 | 7.8 | 1.5 | 0.2 | | |
| 23-May-10 | | | | | | | | | | |
| 13-Jun-10 | (1) | (4) | 2.2 | 9.5 | 1.5 | 6.5 | 1.0 | 0.34 | | |
| 18-Jul-10 | 0.26 | (4) | 2.2 | 4.4 | 1.5 | 8.0 | 0.4 | 0.58 | | |
| 19-Jul-10 | | | | | | | | | | |
| 15-Aug-10 | (1) | 0.6 | 2.1 | 1.9 | 0.73 | 3.7 | 0.5 | 0.2 | | |
| 12-Sep-10 | 0.13 | 0.36 | 1.95 | 1.2 | 0.58 | (4) | 0.31 | 0.11 | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 17-Oct-10 | (4) | 0.45 | 1.5 | 1.5 | 0.75 | 5.0 | 0.5 | (4) | | |
| 21-Oct-10 | | | | | | | | | | |
| 14-Nov-10 | 0.6 | 0.4 | 2.3 | 5.0 | 1.7 | 13.2 | 0.6 | 0.2 | | |
| 19-Dec-10 | (2) | (2) | 6.2 | 1.9 | 0.6 | 3.0 | 0.8 | (2) | | |
| 15-Jan-11 | | | | | | | | | | |
| 16-Jan-11 | | | 4.5 | 5.5 | 0.5 | 7.6 | 1.5 | (2) | | |
| 20-Feb-11 | | | 1.4 | 2.3 | 1.0 | 5.0 | 1.9 | (2) | | |
| 13-Mar-11 | (2) | (2) | 2.7 | 5.9 | 1.7 | 10.2 | 2.6 | (2) | | |
| 17-Mar-11 | | | | | | | | | | |
| 18-Mar-11 | | | | | | | | | | |
| 20-Mar-11 | | | | 9.3 | 2.7 | 14.0 | | | | |
| 22-Mar-11 | | | | | | | | | | |
| 1-Apr-11 | | | | | | | | | | |
| 5-Apr-11 | | | | | | | | | | |
| 8-Apr-11 | | | | | | | | | | |
| 12-Apr-11 | | | | | | | | | | |
| 15-Apr-11 | | | | | | | | | | |
| 17-Apr-11 | 0.2 | (4) | 3.3 | 6.9 | 2.5 | 21.2 | 1.3 | 0.8 | | |
| 18-Apr-11 | | | | | | | | | | |
| 20-Apr-11 | | | | | | | | | | |
| 21-Apr-11 | | | | | | | | | | |
| 26-Apr-11 | | | | | | | | | | |
| 29-Apr-11 | | | | | | | | | | |
| 3-May-11 | | | | | | | | | | |
| 6-May-11 | | | | | | | | | | |
| 10-May-11 | | | | | | | | | | |
| 13-May-11 | | | | | | | | | | |
| 15-May-11 | 1.1 | 1.4 | 5.4 | 12.8 | 1.4 | 15.1 | 2.9 | 0.5 | | |
| 16-May-11 | | | | | | | | | | |
| 18-May-11 | | | | | | | | | | |
| 19-May-11 | | | | | | | | | | |
| 20-May-11 | | | | | | | | | | |
| 27-May-11 | | | | | | | | | | |
| 3-Jun-11 | | | | | | | | | | |
| 12-Jun-11 | 0.5 | 0.65 | 2.4 | 2.6 | 1.8 | 6.1 | 1.7 | 0.2 | | |
| 13-Jun-11 | | | | | | | | | | |
| 17-Jul-11 | 0.1 | 0.3 | 1.6 | 2.0 | 0.4 | 2.1 | 0.7 | 0.2 | | |
| 14-Aug-11 | 0.15 | 0.16 | 1.0 | 0.3 | 0.2 | 1.9 | 0.4 | 0.2 | | |
| 18-Sep-11 | (1) | 0.2 | 0.8 | 1.2 | 0.3 | 1.4 | 0.1 | 0.1 | | |
| 16-Oct-11 | (4) | 0.24 | 0.8 | 0.3 | 0.3 | 2.9 | 1.1 | 0.1 | | |
| 20-Nov-11 | (4) | 0.11 | 0.5 | 1.3 | 0.5 | 2.5 | 0.7 | 0.13 | | |
| 18-Dec-11 | 0.21 | (2) | | 4.4 | 1.3 | 6.7 | 0.4 | 0.2 | | |
| 19-Dec-11 | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 20-Dec-11 | | | 2.8 | | | | | | | |
| 15-Jan-12 | (2) | (2) | 2.1 | 1.2 | 4.1 | 5.2 | 1.4 | 0.4 | | |
| 19-Feb-12 | (2) | (2) | 2.2 | 1.7 | 1.8 | 5.1 | 0.3 | 0.3 | | |
| 18-Mar-12 | 2.5 | 1.2 | 4.5 | 22.6 | 5.1 | 6.6 | 2.0 | 1.0 | | |
| 20-Mar-12 | | | | | | | | | | |
| 15-Apr-12 | 0.1 | 0.4 | 1.9 | 4.0 | 1.1 | 2.4 | 0.4 | 0.3 | | |
| 13-May-12 | 0.3 | 0.4 | 2.6 | 1.1 | 0.7 | 3.5 | 1.6 | 0.24 | | |
| 17-Jun-12 | (1) | 0.4 | 1.2 | 1.9 | 0.3 | 1.3 | 0.3 | 0.2 | | |
| 15-Jul-12 | (1) | | | | | | | | | |
| 16-Jul-12 | | 0.1 | 1.1 | 1.4 | 0.3 | 2.3 | 0.2 | 0.1 | | |
| 12-Aug-12 | (4) | | | | | | | | | |
| 14-Aug-12 | | 0.1 | 1.5 | | | | 0.9 | 0.1 | | |
| 15-Aug-12 | | | | 1.0 | 1.3 | 3.5 | | | | |
| 16-Sep-12 | 0.1 | | | | | | | | | |
| 18-Sep-12 | | 0.2 | 0.9 | 1.1 | 0.5 | 2.2 | 0.2 | 0.1 | | |
| 19-Sep-12 | | | | | | | | | | |
| 14-Oct-12 | | | | | | | | | | |
| 17-Oct-12 | 0.5 | 0.4 | 1.4 | | | | 0.1 | 0.2 | | |
| 18-Oct-12 | | | | 1.1 | 0.7 | 2.2 | | | | |
| 18-Nov-12 | | | | | | | | | | |
| 20-Nov-12 | 0.2 | 0.1 | 2.6 | | | | 4.8 | 0.3 | | |
| 21-Nov-12 | | | | 0.8 | 1.2 | 8.6 | | | | |
| 12-Dec-12 | | | 2.4 | | | | | | | |
| 16-Dec-12 | | | | | | | | | | |
| 18-Dec-12 | 0.1 | 0.3 | 1.7 | | | | 1.3 | 0.8 | | |
| 20-Dec-12 | | | | 4.1 | 0.7 | 3.8 | | | | |
| 13-Jan-13 | | (2) | | | | | | | | |
| 15-Jan-13 | 1.7 | | | | | | | 0.2 | | |
| 16-Jan-13 | | | 8.5 | 3.9 | 1.2 | 12.1 | 1.8 | | | |
| 17-Feb-13 | (2) | (2) | (2) | | | | | | | |
| 20-Feb-13 | | | | 3.9 | 2.1 | 6.68 | 1.4 | 0.3 | | |
| 17-Mar-13 | (2) | (2) | | | | | | | | |
| 19-Mar-13 | | | | | | | | 0.3 | | |
| 20-Mar-13 | | | 1.0 | 2.8 | 2.2 | 4.8 | 2.7 | | | |
| 14-Apr-13 | | (2) | | | | | | | | |
| 15-Apr-13 | | | | | | | | | | |
| 16-Apr-13 | 0.6 | | 5.6 | | | | 18.4 | 1.3 | | |
| 17-Apr-13 | | | | 7.9 | 5.0 | 15.9 | | | | |
| 12-May-13 | (4) | | | | | | | | | |
| 13-May-13 | | (4) | 7.5 | | | | 0.2 | 0.3 | | |
| 14-May-13 | | | | 2.4 | 0.8 | 2.3 | | | | |
| 16-Jun-13 | 0.5 | | | | | | | | | |
| 18-Jun-13 | | | | | | | | 0.1 | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 19-Jun-13 | | 0.9 | 6.0 | 1.2 | 1.0 | 2.7 | 0.5 | | | |
| 14-Jul-13 | (1) | | | | | | | | | |
| 16-Jul-13 | | 0.1 | 1.3 | | | | 0.3 | (4) | | |
| 17-Jul-13 | | | | 0.6 | 0.2 | 1.4 | | | | |
| 18-Aug-13 | (4) | | | | | (1) | | (4) | | |
| 20-Aug-13 | | 0.11 | | | | | | | | |
| 21-Aug-13 | | | 0.6 | 0.5 | 0.4 | | 0.2 | | | |
| 15-Sep-13 | (4) | | | | | | | (4) | | |
| 18-Sep-13 | | 0.13 | 3.0 | | | | 0.97 | | | |
| 19-Sep-13 | | | | 0.44 | 0.3 | 1.4 | | | | |
| 13-Oct-13 | 0.1 | | | | | | | | | |
| 16-Oct-13 | | 0.1 | 1.7 | | | | 0.8 | 0.1 | | |
| 17-Oct-13 | | | | 1.3 | 2.9 | 4.7 | | | | |
| 17-Nov-13 | 0.2 | 0.1 | | | | | | | | |
| 19-Nov-13 | | | 5.3 | | | | 0.9 | 0.8 | | |
| 20-Nov-13 | | | | 1.9 | 2.6 | 4.8 | | | | |
| 15-Dec-13 | 0.7 | (2) | (2) | (2) | (2) | (2) | | | | |
| 17-Dec-13 | | | | | | | | 0.4 | | |
| 18-Dec-13 | | | | | | | 1.1 | | | |
| 19-Jan-14 | (2) | (2) | (2) | | (2) | | | 0.3 | | |
| 21-Jan-14 | | | | | | | 1.6 | | | |
| 22-Jan-14 | | | | 0.7 | | 1.0 | | | | |
| 16-Feb-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 0.1 | | |
| 19-Feb-14 | | | | | | | | | | |
| 20-Feb-14 | | | | | | | | | | |
| 16-Mar-14 | (2) | (2) | (2) | | (2) | (2) | (2) | | | |
| 18-Mar-14 | | | | | | | | 0.2 | | |
| 19-Mar-14 | | | | 0.7 | | | | | | |
| 13-Apr-14 | | (2) | | | | | | | | |
| 15-Apr-14 | | | | | | | | 1.4 | | |
| 16-Apr-14 | 1.1 | | 14.5 | | | | 3.5 | | | |
| 17-Apr-14 | | | | 24.8 | 2.3 | 16.5 | | | | |
| 11-May-14 | | | | | | | | | | |
| 12-May-14 | | | | | | | | 0.6 | | |
| 13-May-14 | 0.1 | 0.2 | 3.5 | 0.8 | 1.9 | 12.3 | 1.5 | | | |
| 15-Jun-14 | (1) | | | | | | | | | |
| 17-Jun-14 | | 0.1 | 1.4 | 1.5 | 0.2 | 4.8 | 0.2 | 0.1 | | |
| 18-Jun-14 | | | | | | | | | | |
| 13-Jul-14 | (4) | | | | | | | | | |
| 14-Jul-14 | | | | | | | | (4) | | |
| 15-Jul-14 | | 0.4 | 1.7 | 0.25 | 0.14 | 1.5 | 0.3 | | | |
| 16-Jul-14 | | | | | | | | | | |
| 17-Aug-14 | (4) | | | | | | (4) | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 18-Aug-14 | | | | | | | | (4) | | |
| 19-Aug-14 | | 0.1 | 0.5 | 0.3 | 0.14 | 0.6 | | | | |
| 7-Sep-14 | (1) | 0.2 | | | 0.1 | | (4) | | | |
| 8-Sep-14 | | | | | | | | (4) | | |
| 9-Sep-14 | | | 0.5 | 0.1 | | 0.6 | | | | |
| 19-Oct-14 | 0.1 | | | | 0.2 | | | | | |
| 20-Oct-14 | | | | 0.9 | | 1.6 | | | | |
| 21-Oct-14 | | | | | | | | | | |
| 22-Oct-14 | | (4) | 1.6 | | | | | | | |
| 23-Oct-14 | | | | | | | 0.1 | (4) | | |
| 16-Nov-14 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 0.1 | | |
| 19-Nov-14 | | | | | | | | | | |
| 14-Dec-14 | | (4) | | | 2.5 | | | (2) | | |
| 16-Dec-14 | (4) | | 1.4 | | | | 1.4 | | | |
| 17-Dec-14 | | | | 4.0 | | 4.6 | | | | |
| 18-Jan-15 | (2) | (2) | | | | | | (2) | | |
| 20-Jan-15 | | | 0.9 | | | | 0.2 | | | |
| 21-Jan-15 | | | | 3.7 | 0.9 | 16.2 | | | | |
| 15-Feb-15 | | | | | | | | | | |
| 15-Mar-15 | (2) | (2) | | | | (2) | | | | |
| 18-Mar-15 | | | 1.9 | | | | 0.2 | 0.1 | | |
| 19-Mar-15 | | | | 0.8 | 0.6 | | | | | |
| 21-Apr-15 | | | | | | | | 0.9 | | |
| 22-Apr-15 | 0.2 | (4) | 5.6 | | | | 2.4 | | | |
| 23-Apr-15 | | | | 4.6 | 2.5 | 11.2 | | | | |
| 17-May-15 | (1) | (1) | | | | | | | | |
| 19-May-15 | | | 1.9 | | | | 1.2 | 0.1 | | |
| 20-May-15 | | | | 2.5 | 1.7 | 1.6 | | | | |
| 14-Jun-15 | (1) | (1) | | | | | | | | |
| 15-Jun-15 | | | 4.8 | 1.0 | 1.0 | 3.6 | 0.1 | 1.3 | | |
| 16-Jun-15 | | | | | | | | | | |
| 19-Jul-15 | (1) | (1) | | | | | | | | |
| 21-Jul-15 | | | 2.7 | | | | 0.2 | 0.1 | | |
| 22-Jul-15 | | | | 1.2 | 0.2 | 1.4 | | | | |
| 9-Aug-15 | (1) | | | | | | | | | |
| 11-Aug-15 | | 0.3 | 4.7 | | | | 0.1 | 0.1 | | |
| 12-Aug-15 | | | | 0.3 | 0.5 | 1.6 | | | | |
| 23-Aug-15 | | | | | | | | | | |
| 25-Aug-15 | | | 1.1 | | | | 0.3 | (4) | 7.4 | 0.4 |
| 6-Sep-15 | (1) | | | | 0.4 | | | | | |
| 8-Sep-15 | | 0.1 | 2.7 | | | | 0.1 | (4) | | |
| 9-Sep-15 | | | | 0.5 | | 1.2 | | | 8.3 | 7.5 |
| 11-Oct-15 | (1) | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 15-Oct-15 | | (4) | 0.6 | | | | 0.1 | (4) | 0.2 | |
| 16-Oct-15 | | | | 0.3 | 0.2 | 1.6 | | | | 6.0 |
| 8-Nov-15 | | | | | | | | | | |
| 10-Nov-15 | | | | | | | | | | |
| 15-Nov-15 | (1) | | | | | | | | | |
| 18-Nov-15 | | 0.1 | 0.9 | | | | 0.4 | 0.1 | 13.3 | |
| 19-Nov-15 | | | | 0.4 | 1.1 | 3.8 | | | | 6.4 |
| 6-Dec-15 | (1) | | | | | | | | | |
| 8-Dec-15 | | 0.1 | 0.8 | 0.3 | 1.5 | 2.5 | 1.1 | 0.14 | 9.2 | 1.75 |
| 9-Dec-15 | | | | | | | | | | |
| 17-Jan-16 | (2) | (2) | | | | | | | | (2) |
| 19-Jan-16 | | | 2.1 | | | | 1.0 | 0.3 | 30.8 | |
| 20-Jan-16 | | | | 2.1 | 2.3 | 5.3 | | | | |
| 14-Feb-16 | (2) | (2) | | | | | | | | (2) |
| 17-Feb-16 | | | 1.8 | | | | 1.2 | 1.0 | 18.7 | |
| 18-Feb-16 | | | | 1.2 | 1.1 | 7.0 | | | | |
| 13-Mar-16 | | (2) | | | | | | | | |
| 15-Mar-16 | 0.5 | | 7.2 | 20.8 | 11.9 | 29.5 | 4.9 | 2.5 | 148.4 | 192.0 |
| 17-Apr-16 | | (1) | | | | | | | | |
| 20-Apr-16 | | | | | | | | 1.4 | 86.0 | |
| 21-Apr-16 | 0.1 | | 8.1 | 18.3 | 4.3 | 14.5 | 1.8 | | | 41.5 |
| 15-May-16 | (1) | | | | | | | | | |
| 17-May-16 | | | | | | | | 0.7 | 59.4 | 17.3 |
| 18-May-16 | | 0.1 | 2.3 | 5.7 | 2.3 | 6.5 | 0.5 | | | |
| 19-Jun-16 | (1) | | | | | | | | | |
| 22-Jun-16 | | | | 2.8 | 1.2 | 2.4 | 2.4 | 0.2 | 25.5 | 1.4 |
| 23-Jun-16 | | 0.11 | 1.9 | | | | | | | |
| 3-Jul-16 | | | | | | | | | | |
| 5-Jul-16 | | | 1.4 | | | | 0.6 | 0.5 | | |
| 17-Jul-16 | | | | | | | | | | |
| 20-Jul-16 | | | | | | | 0.5 | 0.1 | 11.5 | 0.4 |
| 21-Jul-16 | 0.5 | 1.7 | 1.5 | 1.8 | 0.5 | 2.2 | | | | |
| 7-Aug-16 | | | | | | | | | | |
| 9-Aug-16 | | | 0.3 | | | | 0.1 | 0.5 | | |
| 21-Aug-16 | | | | | | | | | | |
| 24-Aug-16 | 0.5 | 1.0 | 2.3 | | | | 0.4 | 0.1 | 6.3 | |
| 25-Aug-16 | | | | 1.0 | 0.5 | 0.9 | | | | 0.2 |
| 18-Sep-16 | | | | | | | | | | |
| 19-Sep-16 | 1.3 | 2.0 | 1.5 | 0.8 | 0.6 | 1.8 | 0.5 | 0.1 | 8.5 | 0.3 |
| 16-Oct-16 | | | | | | | | | | |
| 17-Oct-16 | | | | 0.5 | 1.4 | | | 0.1 | 6.1 | 0.2 |
| 18-Oct-16 | 2.8 | 0.7 | 3.5 | | | 2.1 | 0.7 | | | |
| 24-Oct-16 | | | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 25-Oct-16 | | | | | | | | | | |
| 15-Nov-16 | | | | 0.5 | 0.1 | 3.2 | 0.4 | 0.5 | 11.1 | 0.4 |
| 16-Nov-16 | 1.9 | 1.1 | 2.0 | | | | | | | |
| 18-Nov-16 | | | | | | | | | | |
| 12-Dec-16 | 2.8 | 3.78 | | 0.2 | 1.5 | 7.8 | 0.2 | 0.34 | 10.54 | 1.2 |
| 12-Jan-17 | | | | | 1.9 | | | | | |
| 22-Jan-17 | | | | | | | | | | |
| 24-Jan-17 | | | | | | | 3.7 | 0.4 | 44.6 | 37.3 |
| 25-Jan-17 | 3.2 | 6.2 | 4.6 | 1.3 | | 8.1 | | | | |
| 15-Feb-17 | | (2) | | | | | | | | (2) |
| 16-Feb-17 | | | | 2.8 | 2.6 | 7.9 | 0.6 | 0.9 | 18.3 | |
| 17-Feb-17 | 0.4 | | 4.6 | | | | | | | |
| 19-Mar-17 | | | | | | | | | | |
| 21-Mar-17 | | | | 6.6 | 0.9 | 13.5 | 0.3 | 0.9 | 40.3 | |
| 22-Mar-17 | 1.3 | 0.33 | 5.1 | | | | | | | 14.6 |
| 16-Apr-17 | | | | | | | | | | |
| 19-Apr-17 | 1.3 | 1.55 | 5.3 | 16.6 | 1.0 | 12.0 | 3.6 | 1.4 | 93.82 | 35.1 |
| 8-May-17 | | | | | | | | | | |
| 9-May-17 | | | | | | | | | | |
| 14-May-17 | | | | | | | | | | |
| 16-May-17 | 2.0 | 1.6 | 3.5 | 3.3 | 12.8 | 9.0 | 1.5 | 0.9 | 77.2 | 17.1 |
| 28-Jun-17 | 2.2 | 1.2 | 1.4 | 6.4 | 2.1 | 6.9 | 1.2 | 0.8 | 60.3 | 25.1 |
| 7-Jul-17 | | | 5.5 | | | | 0.1 | 0.9 | | |
| 18-Jul-17 | | | | | | | | 0.4 | 25.9 | |
| 19-Jul-17 | 0.4 | 0.5 | 3.8 | | | | 1.1 | | | 5.3 |
| 20-Jul-17 | | | | 3.7 | 1.0 | 6.6 | | | | |
| 27-Jul-17 | | | | | | | | | | |
| 2-Aug-17 | | | 2.4 | | | | 0.6 | 0.3 | | |
| 13-Aug-17 | | | | | | | | | | |
| 15-Aug-17 | | | | | | | 0.1 | 0.3 | 24.8 | |
| 16-Aug-17 | 0.9 | 0.9 | 7.2 | 1.9 | 1.1 | 2.8 | | | | 2.3 |
| 17-Sep-17 | | | | | | | 0.2 | 0.2 | 9.9 | 1.1 |
| 18-Sep-17 | | | | | | | | | | |
| 19-Sep-17 | 1.5 | 0.8 | 5.7 | 0.8 | 0.6 | 6.8 | | | | |
| 17-Oct-17 | | | | 0.9 | 1.9 | 5.3 | 0.8 | 0.2 | 27.3 | |
| 18-Oct-17 | 1.0 | 0.6 | 1.1 | | | | | | | 8.8 |
| 14-Nov-17 | | | | | | | 0.2 | 0.3 | 40.1 | 21.4 |
| 15-Nov-17 | 2.6 | 1.5 | 2.4 | 2.1 | 2.6 | 5.3 | | | | |
| 12-Dec-17 | | | | | | | | | | |
| 14-Dec-17 | 0.8 | 1.3 | 5.6 | 3.4 | 2.6 | 7.9 | 0.5 | 0.6 | 37.5 | 11.2 |
| 17-Jan-18 | (2) | (2) | | 5.1 | 2.8 | 5.1 | | 0.2 | 51.3 | |
| 18-Jan-18 | | | 7.4 | | | | 0.5 | | | 25.8 |
| 18-Feb-18 | | (2) | | | | | | | | |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 22-Feb-18 | | | | | | | | | 140.9 | |
| 23-Feb-18 | 2.4 | | 9.0 | 8.5 | 5.2 | 19.4 | | 1.5 | | |
| 24-Feb-18 | | | | | | | 1.3 | | | 55.0 |
| 18-Mar-18 | (2) | | | | | | | | | |
| 20-Mar-18 | | | | 4.6 | 1.2 | 5.4 | | 0.5 | 57.5 | |
| 21-Mar-18 | | | 6.5 | | | | 0.2 | | | |
| 18-Apr-18 | (2) | (2) | | 4.8 | 2.4 | 8.5 | 1.5 | 0.9 | 89.2 | 44.4 |
| 19-Apr-18 | | | 7.4 | | | | | | | |
| 8-May-18 | | | | | | | | | | |
| 9-May-18 | | | | | | | | | | |
| 13-May-18 | | | | | | | | | | |
| 14-May-18 | | | | | | 6.3 | | 1.4 | 50.4 | 18.0 |
| 15-May-18 | 1.0 | (4) | 5.5 | 11.9 | 3.4 | | 2.2 | | | |
| 18-Jun-18 | 0.98 | 1.2 | 4.33 | 5.59 | 1.36 | 2.29 | 1.29 | (4) | 38.2 | 1.66 |
| 19-Jun-18 | | | | | | | | | | |
| 20-Jun-18 | | | | | | | | | | |
| 4-Jul-18 | | | 3.33 | | | | 0.45 | 0.44 | | |
| 18-Jul-18 | | | | 1.45 | 1.34 | 1.83 | | | | |
| 19-Jul-18 | 0.82 | (4) | 1.73 | | | | 0.96 | 0.17 | 11.19 | 0.23 |
| 3-Aug-18 | | | 2.1 | | | | 0.38 | 0.18 | | |
| 23-Aug-18 | | | | 0.7 | 1.6 | 2.6 | | 0.7 | 26.5 | 0.8 |
| 24-Aug-18 | 0.5 | 0.3 | 4.9 | | | | 0.4 | | | |
| 19-Sep-18 | | | | | 0.5 | 1.8 | | 0.2 | 25.9 | 0.2 |
| 20-Sep-18 | 0.1 | 0.2 | 1.2 | 0.2 | | | 0.5 | | | |
| 24-Oct-18 | | | | 0.7 | 0.4 | 3.1 | | 0.2 | 13.0 | 0.7 |
| 25-Oct-18 | 0.1 | 0.1 | 2.4 | | | | 0.9 | | | |
| 21-Nov-18 | | | | 0.6 | 0.1 | 2.0 | | (1) | 19.2 | 6.7 |
| 22-Nov-18 | 0.7 | | 1.9 | | | | 0.5 | | | |
| 12-Dec-18 | | | | 1.6 | 1.6 | | | 1.1 | 43.8 | 18.7 |
| 13-Dec-18 | 0.5 | 0.3 | 3.1 | | | 3.8 | 1.9 | | | |
| 18-Jan-19 | (2) | (2) | | 2.7 | 7.8 | | | (2) | | |
| 19-Jan-19 | (2) | (2) | 6.0 | | | 4.0 | 1.2 | | | |
| 26-Feb-19 | | | | 2.1 | (2) | (2) | | (2) | (2) | (2) |
| 28-Feb-19 | (2) | (2) | (2) | | | | (2) | | | |
| 15-Mar-19 | | | | 2.6 | 5.3 | | | 1.4 | (2) | (2) |
| 19-Mar-19 | (1) | (1) | 12.6 | | | 24.7 | 1.9 | | | |
| 24-Apr-19 | | | | 22.9 | 4.9 | | | 0.5 | 158.2 | 66.5 |
| 25-Apr-19 | 3.4 | (1) | 17.1 | | | 15.6 | 5.0 | | | |
| 14-May-19 | | | | | | | | | | |
| 16-May-19 | | | | | | | | | | |
| 23-May-19 | | | | 7.9 | 2.2 | | | 1.2 | 77.8 | 21.0 |
| 27-May-19 | 0.1 | (1) | 7.0 | | | 7.7 | 1.8 | | | |
| 18-Jun-19 | | | | 2.9 | 2.6 | | | 1.0 | 25.2 | 4.4 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 21-Jun-19 | | (1) | 3.8 | | | 5.5 | 0.5 | | | |
| 29-Jul-19 | | | | 0.5 | 0.3 | | | (4) | 10.9 | 1.1 |
| 30-Jul-19 | 0.1 | 0.3 | 3.5 | | | 4.5 | 0.5 | | | |
| 29-Aug-19 | | | | 4.0 | 1.1 | | | | 8.7 | 0.2 |
| 30-Aug-19 | 1.9 | 1.9 | (1) | | | 2.4 | 0.4 | | | |
| 26-Sep-19 | | | | 42.7 | 0.7 | | | (1) | 13.0 | 3.1 |
| 27-Sep-19 | 1.7 | 1.6 | (1) | | | 2.6 | 0.4 | | | |
| 22-Oct-19 | 2.1 | 0.8 | (1) | | | 3.3 | 0.6 | | | |
| 23-Oct-19 | | | | 2.7 | 1.3 | | | (1) | 12.6 | 0.2 |
| 21-Nov-19 | 3.0 | 0.9 | (2) | | | 2.6 | (2) | | | |
| 22-Nov-19 | | | | 2.4 | 0.9 | | | (2) | 12.2 | 0.1 |
| 20-Dec-19 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 8.7 | (2) |
| 15-Jan-20 | | | | (2) | (2) | (2) | | (2) | 12.7 | 0.5 |
| 24-Jan-20 | (2) | (2) | 2.7 | | | | (2) | | | |
| 20-Feb-20 | | | | (2) | (2) | (2) | | (2) | (2) | (2) |
| 21-Feb-20 | (2) | (2) | (2) | | | | (2) | | | |
| 25-Mar-20 | (2) | (2) | (2) | | | | (2) | | | |
| 26-Mar-20 | | | | (2) | (2) | (2) | | (2) | (2) | 44.8 |
| 27-Apr-20 | | | | | 1.9 | | | (1) | 84.0 | 34.3 |
| 28-Apr-20 | | | 4.4 | | | 10.0 | | | | |
| 19-May-20 | | | | | | | | | | |
| 20-May-20 | | | | | | | | | | |
| 28-May-20 | (1) | (1) | 4.2 | | | 5.1 | 0.5 | | | |
| 29-May-20 | | | | 6.4 | 3.0 | | | 0.3 | 13.3 | 7.4 |
| 23-Jun-20 | | | | 1.2 | 34.1 | | | 3.9 | 79.1 | 3.1 |
| 24-Jun-20 | (1) | (1) | (1) | | | 3.9 | | | | |
| 30-Jul-20 | | | | 1.2 | 1.2 | | | | 32.8 | 1.1 |
| 31-Jul-20 | | (1) | 3.3 | | | 0.8 | 1.3 | | | |
| 25-Aug-20 | | | | 0.7 | 1.1 | | | 2.7 | 7.3 | 0.5 |
| 26-Aug-20 | | (1) | 1.7 | | | 1.0 | 0.6 | | | |
| 25-Sep-20 | | | | 0.7 | 1.1 | | | 0.2 | 6.7 | 0.6 |
| 26-Sep-20 | | (1) | 1.5 | | | 1.0 | 0.7 | | | |
| 29-Oct-20 | 3.4 | (1) | 1.5 | | | 1.4 | 0.8 | | | |
| 30-Oct-20 | | | | 0.9 | 1.3 | | | 0.3 | 9.0 | 2.1 |
| 26-Nov-20 | | | | 5.5 | 4.3 | | | (2) | 15.2 | 11.4 |
| 27-Nov-20 | 6.5 | (1) | 4.1 | | | 1.7 | 1.8 | | | |
| 22-Dec-20 | 1.6 | (2) | 2.8 | (2) | (2) | (2) | 5.5 | (2) | | |
| 23-Dec-20 | | | | | | | | | 37.9 | 9.9 |
| 27-Jan-21 | (2) | (2) | | (2) | (2) | (2) | | | 10.6 | 0.4 |
| 28-Jan-21 | | | 2.5 | | | | (2) | (2) | | |
| 22-Feb-21 | (2) | (2) | | (2) | (2) | (2) | | | 1.3 | (2) |
| 23-Feb-21 | | | 0.5 | | | | (2) | (2) | | |
| 29-Mar-21 | (4) | 19.0 | | 5.9 | 2.3 | 1.2 | | | 7.7 | 8.9 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 30-Mar-21 | | | 6.4 | | | | 3.5 | 2.1 | | |
| 27-Apr-21 | (4) | (1) | | 4.2 | 1.8 | | | | 76.8 | 45.4 |
| 28-Apr-21 | | | 5.0 | | | | 0.7 | 3.2 | | |
| 26-May-21 | | | 7.8 | | | | | 0.7 | | |
| 27-May-21 | (1) | (1) | | 1.7 | 1.1 | 5.0 | | | 29.0 | 2.5 |
| 22-Jun-21 | (1) | (1) | | 3.3 | 1.4 | 0.6 | | | 12.5 | 1.4 |
| 23-Jun-21 | | | 2.7 | | | | 1.9 | 1.6 | | |
| 10-Jul-21 | | | 0.9 | | | | 0.2 | 0.2 | | |
| 22-Jul-21 | (1) | (1) | | 1.2 | 0.6 | 0.7 | | | | 1.8 |
| 23-Jul-21 | | | 4.0 | | | | 0.8 | 0.3 | | |
| 11-Aug-21 | | | 0.1 | | | | 0.5 | 0.11 | | |
| 25-Aug-21 | (1) | (1) | | 1.1 | 0.4 | 0.7 | | | 6.7 | 1.4 |
| 26-Aug-21 | | | 0.6 | | | | (4) | (4) | | |
| 27-Sep-21 | | | 4.9 | | | | 1.8 | 0.3 | | |
| 28-Sep-21 | (1) | (1) | | 4.5 | 2.0 | 3.4 | | | 33.5 | 13.2 |
| 26-Oct-21 | 0.7 | (1) | | 1.6 | 3.5 | 4.9 | | | 34.6 | 42.4 |
| 27-Oct-21 | | | 6.7 | | | | 1.7 | 0.6 | | |
| 22-Nov-21 | | | 6.5 | | | | 6.0 | (2) | | |
| 23-Nov-21 | 1.9 | (2) | | (2) | (2) | (2) | | | 37.5 | 16.4 |
| 21-Dec-21 | 1.5 | (2) | | (2) | (2) | (2) | | | 38.9 | 8.7 |
| 22-Dec-21 | | | 4.8 | | | | 4.9 | (2) | | |
| 24-Jan-22 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 8-Feb-22 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) |
| 16-Mar-22 | (2) | (2) | (2) | (2) | (2) | (2) | (2) | (2) | 191.06 | 51.84 |
| 21-Apr-22 | 4.52 | | 6.39 | 4.1 | 0.75 | 0.87 | 2.36 | 0.87 | 52.41 | 24.4 |
| 24-May-22 | (1) | (1) | | 1.81 | 0.29 | 0.66 | | | 60.08 | 3.96 |
| 25-May-22 | | | 3.53 | | | | 1.0 | 0.57 | | |
| 26-May-22 | | | | | | | | | | |
| 22-Jun-22 | | | | | | | | | | |
| 24-Jun-22 | | | 8.56 | 5.42 | 3.27 | 3.2 | 3.47 | 2.68 | | |
| 25-Jun-22 | 4.41 | 6.26 | | | | | | | 2.56 | 2.21 |
| 8-Jul-22 | | | 2.24 | | | | 0.57 | 0.77 | | |
| 11-Aug-22 | | | 1.62 | | | | 1.06 | 0.24 | | |
| 26-Aug-22 | | | | | | | | | 46.12 | 6.19 |
| 29-Aug-22 | (1) | (1) | 2.25 | | | | 1.93 | 0.86 | | |
| 30-Aug-22 | | | | 6.27 | 1.98 | 3.41 | | | | |
| 27-Sep-22 | | | | 8.62 | | 6.72 | 0.92 | 0.81 | 20.22 | 9.74 |
| 29-Sep-22 | (1) | (4) | 0.4 | | 5.81 | | | | | |
| 26-Oct-22 | | | | | | | | | | |
| 27-Oct-22 | (1) | (4) | 0.75 | | | | 0.41 | (4) | | |
| 28-Oct-22 | | | | 0.36 | 0.5 | 7.43 | | | 8.56 | 1.18 |
| 21-Nov-22 | | | | | | | | (4) | | |
| 22-Nov-22 | (1) | (4) | | | | | | | 8.1 | 1.34 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations

| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 23-Nov-22 | | | | 0.21 | 0.19 | 12.12 | 0.45 | | | |
| 20-Dec-22 | | | | | | | | | 10.28 | |
| 21-Dec-22 | | | | | | | | | | 3.04 |
| 24-Jan-23 | | | | | | | | | 14.02 | 9.71 |
| 22-Feb-23 | | | | | | | | | 22.24 | 19.29 |
| 27-Mar-23 | | | | | | | | | | |
| 28-Mar-23 | | | | | | | | | 33.24 | 59.2 |
| 21-Apr-23 | | | | | | | | | 50.94 | 21.83 |
| 15-May-23 | | | | | | | | | | |
| 16-May-23 | | | | 3.71 | 4.54 | 22.9 | 10.44 | 0.2 | | |
| 17-May-23 | (1) | 0.18 | 7.19 | | | | | | 33.7 | 13.76 |
| 26-Jun-23 | (1) | (1) | 3.41 | | | | 1.67 | 0.47 | | |
| 27-Jun-23 | | | | 0.41 | 1.36 | (4) | | | 9.32 | 18.47 |
| 11-Jul-23 | | | 3.55 | | | | 2.15 | 0.18 | | |
| 25-Jul-23 | | | | | | | 13.91 | 0.38 | | |
| 26-Jul-23 | (1) | (1) | 10.05 | 2.86 | 3.81 | 6.8 | | | 27.38 | 3.19 |
| 14-Aug-23 | | | 6.18 | | | | 6.73 | 0.13 | | |
| 28-Aug-23 | | (1) | | | | | | | | |
| 29-Aug-23 | | (1) | 1.79 | | | | 0.77 | (4) | | |
| 30-Aug-23 | | | | 0.54 | 0.88 | 3.03 | | | 15.37 | 7.08 |
| 31-Aug-23 | (1) | | | | | | | | | |
| 25-Sep-23 | (1) | (1) | 6.25 | | | | 1.12 | (4) | | |
| 26-Sep-23 | | | | 0.24 | 0.9 | 1.77 | | | 4.27 | 0.38 |
| 30-Oct-23 | | | | | | | 1.28 | 0.1 | | |
| 31-Oct-23 | (1) | (1) | 21.95 | 0.58 | 0.65 | 3.94 | | | 8.03 | |
| 1-Nov-23 | | | | | | | | | | 1.67 |
| 29-Nov-23 | | | | | | | | | 13.54 | 1.21 |
| 18-Dec-23 | | | | | | | | | 17.48 | 16.08 |
| 31-Jan-24 | | | | | | | | | 24.68 | 23.76 |
| 27-Feb-24 | | | | | | | | | 130.76 | 56.26 |
| 27-Mar-24 | | | | | | | | | 53.62 | 57.01 |
| 29-Apr-24 | | | | | | | | | 96.53 | 66.78 |
| 27-May-24 | | | | | | | 7.01 | 0.45 | | |
| 28-May-24 | (1) | (1) | 9.67 | 1.73 | 2.14 | 35.16 | | | 44.57 | 5.54 |
| 26-Jun-24 | | | | | | | 4.87 | 0.31 | | |
| 27-Jun-24 | (1) | (1) | 6.71 | 0.68 | 1.25 | 11.73 | | | 68.2 | 11.22 |
| 16-Jul-24 | | | 12.86 | | | | 17.13 | 0.22 | | |
| 29-Jul-24 | | | | | | | 2.16 | 0.23 | | |
| 30-Jul-24 | (1) | (1) | 13.3 | 2.0 | 1.32 | 10.2 | | | 117.87 | 4.04 |
| 12-Aug-24 | | | 5.91 | | | | 4.05 | 0.16 | | |
| 26-Aug-24 | | | | | | | 2.93 | | | |
| 27-Aug-24 | | | | | | | | (4) | | |
| 28-Aug-24 | (1) | | 4.56 | 0.32 | 0.37 | 5.55 | | | 28.64 | 0.79 |

## Table C-2 Surface Water Flow Summary - Extension Quarry Stations



| Date | SW21A | SW21B | SW21C | SW22 | SW22A | SW22C | SW24A | SW77 | PR Control | BC Control |
|---|---|---|---|---|---|---|---|---|---|---|
| 24-Sep-24 | | | | | | | 0.86 | (4) | | |
| 25-Sep-24 | (1) | 0.14 | 6.17 | 0.62 | 1.15 | 8.7 | | | 14.72 | 1.16 |
| 28-Oct-24 | | | | | | | 0.36 | (4) | | |
| 29-Oct-24 | (1) | 0.66 | 2.77 | 0.34 | 0.6 | 42.22 | | | 54.83 | 3.34 |
| 18-Nov-24 | | | | | | | | | 21.74 | 2.44 |
| 16-Dec-24 | | | | | | | | | 0.74 | (4) |
| 27-Jan-25 | | | | | | | | | (3) | (3) |
| 24-Feb-25 | | | | | | | | | (2) | (2) |
| 24-Mar-25 | | | | | | | | | (3) | (3) |
| 28-Apr-25 | | | | | | | | | | |
| 29-Apr-25 | | | | | | | | | 9.19 | 18.13 |
| 26-May-25 | | | | 1.98 | 0.75 | 12.2 | | | | |
| 27-May-25 | | | | | | | 4.07 | 1.09 | 120.13 | 8.61 |
| 28-May-25 | (1) | (4) | 8.8 | | | | | | | |
| 23-Jun-25 | | | | | | | | | | |
| 24-Jun-25 | (1) | (1) | 7.35 | | | | 4.04 | 0.36 | | |
| 25-Jun-25 | | | | 1.81 | 1.85 | 10.88 | | | 44.58 | 1.59 |
| 14-Jul-25 | | | 7.99 | | | | 3.66 | 0.81 | | |
| 28-Jul-25 | | | | | | | | | | |
| 29-Jul-25 | (1) | (4) | 10.43 | (4) | 0.78 | 0.64 | (3) | (3) | 9.86 | 0.82 |
| 11-Aug-25 | | | 8.03 | | | | (3) | 0.14 | | |
| 25-Aug-25 | | | | | | | | | | |
| 26-Aug-25 | (1) | (4) | 9.93 | 0.24 | 1.25 | 4.46 | 2.68 | (4) | | |
| 27-Aug-25 | | | | | | | | | 28.46 | 0.81 |
| 29-Sep-25 | | | | 0.15 | 0.35 | 2.69 | | (4) | | |
| 30-Sep-25 | (1) | (1) | 8.82 | | | | 1.32 | | 20.13 | 0.43 |
| 27-Oct-25 | 1.65 | 3.21 | 2.6 | | | | 2.75 | | | |
| 28-Oct-25 | | | | 0.65 | 1.4 | 13.36 | | 0.48 | | |
| 29-Oct-25 | | | | | | | | | 35.33 | 0.97 |
| 24-Nov-25 | | | | | | | | | 13.71 | 8.64 |
| 25-Nov-25 | | | | | | | | | | |
| 15-Dec-25 | | | | | | | | | | |
| 16-Dec-25 | | | | | | | | | 44.97 | (3) |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 | 22-May-03 | | | 10.0 | |
| | 29-May-03 (1) | | | | |
| | 23-Jun-03 | | | 16.8 | |
| | 15-Aug-03 (1) | | | | |
| | 20-Aug-03 (1) | | | | |
| | 5-Sep-03 (1) | | | | |
| | 9-Oct-03 (1) | | | | |
| | 12-Feb-04 | | 436 | 2.4 | |
| | 4-Mar-04 | | 652 | 3.5 | |
| | 19-Mar-04 | | 629 | 3.5 | 10.6 |
| | 2-Apr-04 | 7.8 | 281 | 4.8 | |
| | 8-Apr-04 | 7.7 | 286 | 4.3 | |
| | 7-May-04 | 8.1 | 521 | 11.4 | |
| | 14-May-04 | 7.9 | 609 | 17.7 | |
| | 20-May-04 | 8.0 | 592 | 13.3 | |
| | 28-May-04 | 7.9 | 497 | 10.4 | 11.0 |
| | 4-Jun-04 | 7.8 | 555 | 12.3 | |
| | 11-Jun-04 | 7.8 | 630 | 14.6 | |
| | 17-Jun-04 | 7.7 | 666 | 14.6 | |
| | 24-Jun-04 (1) | | | | |
| | 1-Jul-04 | 7.9 | 717 | 15.1 | 8.7 |
| | 9-Jul-04 (1) | | | | |
| | 16-Jul-04 | 7.8 | 644 | 15.7 | 9.2 |
| | 22-Jul-04 | 7.9 | | 20.4 | 8.5 |
| | 29-Jul-04 | 7.7 | 647 | 15.8 | |
| | 6-Aug-04 (1) | | | | |
| | 12-Aug-04 (1) | | | | |
| | 19-Aug-04 | 7.7 | 731 | 15.8 | |
| | 26-Aug-04 | 7.8 | 713 | 17.8 | |
| | 3-Sep-04 (1) | | | | |
| | 9-Sep-04 | 8.1 | 705 | 14.7 | 7.9 |
| | 17-Sep-04 | 7.7 | 764 | 14.7 | 7.7 |
| | 23-Sep-04 (1) | | | | |
| | 26-Sep-04 (1) | | | | |
| | 1-Oct-04 (1) | | | | |
| | 7-Oct-04 (1) | | | | |
| | 14-Oct-04 (1) | | | | |
| | 20-Oct-04 (1) | | | | |
| | 28-Oct-04 (1) | | | | |
| | 7-Nov-04 | 7.8 | 604 | 7.1 | 11.4 |
| | 11-Nov-04 (1) | | | | |
| | 19-Nov-04 (1) | | | | |
| | 25-Nov-04 (1) | | | | |
| | 2-Dec-04 (1) | | | | |
| | 9-Dec-04 (1) | | | | |
| | 17-Dec-04 | 7.8 | 472 | 1.1 | |
| | 29-Dec-04 | 7.6 | 600 | 3.4 | |
| | 5-Jan-05 | 7.7 | 467 | 3.0 | 12.7 |
| | 13-Jan-05 (1) | | | | |
| | 20-Jan-05 | 7.5 | 409 | 1.0 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 28-Jan-05 | 7.5 | 422 | 0.7 | |
| **(cont'd)** | 3-Feb-05 | 7.5 | 450 | 2.7 | |
| | 10-Feb-05 (1) | | | | |
| | 16-Feb-05 | 7.8 | 454 | 3.3 | 12.3 |
| | 24-Feb-05 | 8.0 | 440 | 1.1 | |
| | 3-Mar-05 | 7.6 | 415 | 0.4 | 12.9 |
| | 10-Mar-05 (1) | | | | |
| | 24-Mar-05 | 7.4 | 448 | 3.9 | 12.4 |
| | 30-Mar-05 | 7.7 | 470 | 6.2 | |
| | 7-Apr-05 | 7.5 | 356 | 3.3 | 12.1 |
| | 15-Apr-05 | 6.9 | 330 | 1.5 | 9.1 |
| | 21-Apr-05 | 7.5 | 451 | 10.4 | 11.1 |
| | 28-Apr-05 | 7.5 | 398 | 7.0 | |
| | 6-May-05 | 7.7 | 610 | 14.6 | |
| | 13-May-05 | 8.2 | 514 | 11.0 | |
| | 20-May-05 | 7.2 | 522 | 10.1 | 7.8 |
| | 27-May-05 | 7.7 | 653 | 18.6 | |
| | 3-Jun-05 | 7.3 | 662 | 18.0 | 7.5 |
| | 10-Jun-05 (1) | | | | |
| | 17-Jun-05 | 7.2 | 601 | 15.2 | 7.7 |
| | 24-Jun-05 | 7.7 | 776 | 22.7 | |
| | 30-Jun-05 | 7.5 | 835 | 23.4 | 7.6 |
| | 7-Jul-05 | 6.6 | 731 | 20.4 | |
| | 15-Jul-05 | 7.1 | 1,148 | 23.6 | 6.4 |
| | 21-Jul-05 | 7.6 | 1,524 | 24.1 | |
| | 28-Jul-05 (1) | | | | |
| | 2-Aug-05 (1) | | | | |
| | 12-Aug-05 (1) | | | | |
| | 19-Aug-05 (1) | | | | |
| | 24-Aug-05 (1) | | | | |
| | 1-Sep-05 (1) | | | | |
| | 9-Sep-05 (1) | | | | |
| | 16-Sep-05 (1) | | | | |
| | 23-Sep-05 (1) | | | | |
| | 30-Sep-05 (1) | | | | |
| | 7-Oct-05 (1) | | | | |
| | 14-Oct-05 (1) | | | | |
| | 21-Oct-05 (1) | | | | |
| | 28-Oct-05 (1) | | | | |
| | 4-Nov-05 (1) | | | | |
| | 11-Nov-05 (1) | | | | |
| | 18-Nov-05 | 8.5 | 943 | 4.1 | |
| | 25-Nov-05 | 8.3 | 524 | 2.5 | 12.0 |
| | 2-Dec-05 | 8.9 | 545 | 4.1 | 10.9 |
| | 9-Dec-05 | 9.4 | 538 | 3.8 | 11.0 |
| | 16-Dec-05 | 8.3 | 602 | 3.6 | 11.8 |
| | 22-Dec-05 | 8.2 | 592 | 2.8 | 12.8 |
| | 6-Jan-06 | 8.4 | 929 | 2.3 | |
| | 13-Jan-06 (1) | | | | |
| | 20-Jan-06 | 7.5 | 507 | 3.3 | 11.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 | 27-Jan-06 | 6.9 | 547 | 3.5 | 13.3 |
| (cont'd) | 3-Feb-06 | 8.2 | 503 | 3.7 | |
| | 10-Feb-06 | 8.3 | 495 | 2.9 | 13.4 |
| | 20-Feb-06 | 8.3 | 493 | 2.4 | |
| | 24-Feb-06 | 8.2 | 485 | 2.3 | |
| | 3-Mar-06 | 8.1 | 534 | 2.7 | |
| | 10-Mar-06 | 8.1 | 483 | 3.3 | 13.1 |
| | 17-Mar-06 | 8.2 | 471 | 2.8 | 12.9 |
| | 24-Mar-06 | 8.2 | 440 | 4.3 | |
| | 31-Mar-06 | 8.2 | 601 | 7.5 | |
| | 7-Apr-06 | 8.1 | 596 | 5.3 | |
| | 10-Apr-06 | 8.1 | 591 | 9.1 | |
| | 13-Apr-06 | 8.2 | 594 | 10.7 | |
| | 21-Apr-06 | 8.3 | 602 | 11.3 | |
| | 26-Apr-06 | 8.6 | 627 | 9.5 | |
| | 5-May-06 | 8.2 | 655 | 10.8 | |
| | 12-May-06 | 8.5 | 735 | 10.6 | |
| | 19-May-06 | 8.0 | 705 | 10.1 | |
| | 25-May-06 | 7.8 | 732 | 11.1 | |
| | 2-Jun-06 | 7.8 | 754 | 12.5 | |
| | 9-Jun-06 | 7.9 | 604 | 12.3 | |
| | 16-Jun-06 | 8.0 | 805 | 14.6 | |
| | 23-Jun-06 | 8.0 | 794 | 15.2 | |
| | 30-Jun-06 (1) | | | | |
| | 14-Jul-06 (1) | | | | |
| | 21-Jul-06 (1) | | | | |
| | 28-Jul-06 (1) | | | | |
| | 4-Aug-06 | 7.8 | 736 | 19.7 | |
| | 11-Aug-06 (1) | | | | |
| | 18-Aug-06 (1) | | | | |
| | 25-Aug-06 | 7.5 | 896 | 16.2 | |
| | 1-Sep-06 | 7.6 | 871 | 19.0 | |
| | 8-Sep-06 | 7.7 | 877 | 18.2 | |
| | 15-Sep-06 | 7.4 | 897 | 15.3 | |
| | 21-Sep-06 | 7.5 | 895 | 12.3 | |
| | 28-Sep-06 | 7.5 | 924 | 11.6 | |
| | 20-Oct-06 | 7.6 | 908 | 9.3 | |
| | 3-Nov-06 | 7.7 | 898 | 6.7 | 10.9 |
| | 10-Nov-06 | 7.8 | 874 | 8.0 | |
| | 17-Nov-06 | 7.8 | 867 | 6.7 | 10.7 |
| | 24-Nov-06 | 7.9 | 867 | 6.1 | 10.8 |
| | 4-Dec-06 | 7.7 | 853 | 3.9 | 11.9 |
| | 8-Dec-06 | 7.7 | 841 | 4.1 | 12.7 |
| | 14-Dec-06 | 7.8 | 886 | 5.5 | |
| | 21-Dec-06 | 7.9 | 852 | 4.8 | 12.0 |
| | 28-Dec-06 | 7.9 | 862 | 4.8 | 11.9 |
| | 5-Jan-07 | 7.9 | 853 | 5.6 | 10.7 |
| | 12-Jan-07 | 7.8 | 783 | 4.6 | 10.7 |
| | 19-Jan-07 | 8.1 | 791 | 3.0 | 12.2 |
| | 26-Jan-07 | 8.2 | 797 | 1.9 | 13.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 (cont'd) | 2-Feb-07 | 8.0 | 768 | 3.4 | 11.7 |
| | 9-Feb-07 | 8.1 | 707 | 3.5 | 12.2 |
| | 16-Feb-07 | 8.1 | 808 | 3.2 | 11.9 |
| | 22-Feb-07 | 8.0 | 805 | 3.6 | 11.2 |
| | 2-Mar-07 | 8.1 | 800 | 3.4 | 12.0 |
| | 9-Mar-07 | 8.0 | 668 | 4.4 | 12.4 |
| | 16-Mar-07 | 7.9 | 709 | 3.6 | 12.0 |
| | 23-Mar-07 | 7.9 | 719 | 5.2 | 11.6 |
| | 30-Mar-07 | 8.0 | 669 | 5.7 | 12.4 |
| | 5-Apr-07 | 7.6 | 328 | 3.1 | |
| | 13-Apr-07 | 8.1 | 652 | 4.0 | 13.1 |
| | 20-Apr-07 | 8.2 | 613 | 9.0 | |
| | 28-Apr-07 | 8.1 | 598 | 9.6 | 10.9 |
| | 4-May-07 | 8.2 | 582 | 11.0 | |
| | 11-May-07 | 8.0 | 677 | 10.7 | |
| | 18-May-07 | 8.1 | 667 | 10.6 | 11.1 |
| | 25-May-07 | 7.9 | 645 | 11.7 | 10.6 |
| | 1-Jun-07 | 8.0 | 676 | 14.6 | 7.3 |
| | 8-Jun-07 | 8.1 | 757 | 15.4 | 9.4 |
| | 14-Jun-07 | 8.2 | 768 | 14.0 | 9.2 |
| | 22-Jun-07 (1) | | | | |
| | 29-Jun-07 | 8.0 | 706 | 15.9 | 8.2 |
| | 6-Jul-07 | 7.9 | 745 | 15.5 | 9.4 |
| | 13-Jul-07 (1) | | | | |
| | 20-Jul-07 | 7.6 | 751 | 15.0 | 9.0 |
| | 27-Jul-07 | 7.5 | 694 | 14.6 | 7.6 |
| | 3-Aug-07 (1) | | | | |
| | 17-Aug-07 | 7.5 | 797 | 14.4 | 7.3 |
| | 24-Aug-07 | 7.9 | 810 | 17.4 | 6.2 |
| | 30-Aug-07 | 7.9 | 813 | 15.4 | 7.5 |
| | 7-Sep-07 | 7.5 | 822 | 16.3 | 7.6 |
| | 14-Sep-07 | 7.5 | 782 | 13.9 | 7.3 |
| | 21-Sep-07 | 7.8 | 793 | 15.4 | 8.1 |
| | 28-Sep-07 | 8.5 | 820 | 13.6 | 8.2 |
| | 5-Oct-07 | 7.5 | 884 | 13.6 | 8.1 |
| | 12-Oct-07 (1) | | | | |
| | 19-Oct-07 | 7.7 | 803 | 13.9 | 7.7 |
| | 26-Oct-07 | 7.2 | 801 | 11.9 | 7.6 |
| | 2-Nov-07 | 7.6 | 836 | 10.1 | 8.7 |
| | 9-Nov-07 | 7.5 | 819 | 8.4 | 9.0 |
| | 16-Nov-07 | 7.4 | 862 | 6.9 | 9.7 |
| | 23-Nov-07 | 7.9 | 863 | 4.7 | 10.0 |
| | 7-Dec-07 | 7.9 | 784 | 3.9 | 10.9 |
| | 14-Dec-07 | 7.8 | 781 | 4.0 | 10.9 |
| | 20-Dec-07 | 7.7 | 769 | 3.8 | 10.8 |
| | 28-Dec-07 | 6.8 | | 5.3 | 7.7 |
| | 4-Jan-08 | 7.0 | 832 | 2.3 | 11.4 |
| | 11-Jan-08 | 7.3 | 719 | 3.5 | 10.3 |
| | 18-Jan-08 | 6.9 | 684 | 1.2 | 12.4 |
| | 25-Jan-08 | 8.0 | 689 | 1.2 | 12.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 | 1-Feb-08 | 7.2 | 706 | 1.3 | 12.2 |
| (cont'd) | 8-Feb-08 | 6.9 | 735 | 2.6 | 12.1 |
| | 15-Feb-08 | 6.6 | 728 | 1.7 | 12.5 |
| | 22-Feb-08 | 6.9 | 731 | 2.0 | |
| | 29-Feb-08 | 7.0 | 738 | 1.9 | |
| | 7-Mar-08 | 7.0 | 721 | 2.3 | 13.2 |
| | 14-Mar-08 | 6.6 | 713 | 2.4 | |
| | 20-Mar-08 | 7.6 | 711 | 2.4 | 13.4 |
| | 28-Mar-08 | 7.3 | 592 | 3.4 | |
| | 4-Apr-08 | 7.1 | 629 | 3.9 | 12.5 |
| | 11-Apr-08 | 7.2 | 496 | 3.0 | 11.5 |
| | 15-Apr-08 | 7.1 | 563 | 6.5 | |
| | 18-Apr-08 | 6.8 | 374 | 6.0 | |
| | 25-Apr-08 | 7.7 | 581 | 9.2 | 8.8 |
| | 2-May-08 | 6.7 | 607 | 7.8 | 8.8 |
| | 8-May-08 | 7.1 | 651 | 8.7 | 11.4 |
| | 15-May-08 | 7.7 | 663 | 13.1 | 10.4 |
| | 23-May-08 | 7.5 | 610 | 10.4 | 9.4 |
| | 30-May-08 | 7.1 | 723 | 10.8 | 8.1 |
| | 6-Jun-08 | 7.1 | 748 | 17.0 | 6.8 |
| | 13-Jun-08 | 6.7 | 693 | 13.9 | 6.5 |
| | 20-Jun-08 (1) | | | | |
| | 27-Jun-08 | 7.1 | 815 | 14.4 | 7.9 |
| | 4-Jul-08 (1) | | | | |
| | 11-Jul-08 (1) | | | | |
| | 18-Jul-08 | 7.2 | 857 | 16.5 | 5.4 |
| | 25-Jul-08 | 7.5 | 891 | 16.2 | 5.1 |
| | 1-Aug-08 | 7.5 | 845 | 17.2 | 4.9 |
| | 8-Aug-08 (1) | | | | |
| | 15-Aug-08 | 6.8 | 949 | 16.3 | 5.2 |
| | 22-Aug-08 (1) | | | | |
| | 28-Aug-08 | 7.6 | | 16.4 | 6.2 |
| | 5-Sep-08 | 7.8 | 864 | 17.2 | 6.2 |
| | 12-Sep-08 | 7.8 | 869 | 15.3 | 4.9 |
| | 19-Sep-08 (1) | | | | |
| | 26-Sep-08 | 7.6 | 870 | 14.0 | 5.1 |
| | 3-Oct-08 | 7.5 | 863 | 10.4 | 6.7 |
| | 10-Oct-08 | 7.2 | 864 | 11.2 | 7.0 |
| | 17-Oct-08 | 7.2 | 800 | 9.6 | 5.6 |
| | 24-Oct-08 | 7.8 | 804 | 7.7 | 5.9 |
| | 31-Oct-08 | 7.8 | 815 | 7.5 | 5.4 |
| | 2-Nov-08 | 6.7 | 478 | 9.2 | 7.0 |
| | 9-Nov-08 | 7.8 | 678 | 8.3 | 7.1 |
| | 16-Nov-08 | 7.4 | 828 | 1.2 | 10.7 |
| | 23-Nov-08 | | 647 | 3.4 | 7.5 |
| | 30-Nov-08 | | 487 | 1.2 | 12.0 |
| | 7-Dec-08 | | 738 | 3.1 | 9.1 |
| | 19-Dec-08 | 7.4 | 639 | 1.2 | 8.7 |
| | 23-Dec-08 | 8.1 | 649 | 2.5 | 9.5 |
| | 29-Dec-08 | 8.3 | 549 | 0.5 | 12.2 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 9-Jan-09 | | 616 | 1.3 | 9.7 |
| **(cont'd)** | 16-Jan-09 | 8.1 | 684 | 0.7 | 10.0 |
| | 23-Jan-09 | 8.1 | 657 | 1.3 | 7.4 |
| | 30-Jan-09 | 8.1 | 663 | 2.1 | 8.8 |
| | 13-Feb-09 | 8.2 | 578 | 1.1 | 7.6 |
| | 20-Feb-09 | 8.3 | 606 | 2.0 | |
| | 27-Feb-09 | 8.1 | 570 | 2.9 | |
| | 6-Mar-09 | | 556 | 4.7 | 12.1 |
| | 13-Mar-09 | 8.5 | 557 | 0.6 | |
| | 20-Mar-09 | 8.4 | 540 | 2.5 | |
| | 27-Mar-09 | 7.4 | 624 | 4.2 | |
| | 3-Apr-09 | 7.7 | 588 | 5.7 | |
| | 9-Apr-09 | 7.8 | 535 | 3.1 | |
| | 17-Apr-09 | 8.3 | 590 | 6.4 | |
| | 24-Apr-09 | 8.2 | 585 | 7.4 | |
| | 1-May-09 | 8.5 | 435 | 10.9 | 10.8 |
| | 8-May-09 | 7.9 | 564 | 11.8 | 9.4 |
| | 15-May-09 | 8.1 | 483 | 11.5 | 10.5 |
| | 22-May-09 | 8.1 | 511 | 10.9 | 9.0 |
| | 29-May-09 | 7.4 | 621 | 11.0 | 9.9 |
| | 5-Jun-09 | 7.9 | 582 | 11.6 | 10.1 |
| | 12-Jun-09 | 8.0 | 556 | 12.5 | 9.5 |
| | 19-Jun-09 | 7.7 | 1,277 | 12.7 | 9.8 |
| | 26-Jun-09 | 8.3 | 707 | 16.0 | 10.0 |
| | 2-Jul-09 | 7.6 | 621 | 13.9 | 8.8 |
| | 10-Jul-09 | | 1,179 | 14.0 | 8.5 |
| | 17-Jul-09 | 8.9 | 713 | 13.2 | 8.0 |
| | 24-Jul-09 | 7.9 | 738 | 14.8 | 9.4 |
| | 31-Jul-09 | 7.6 | 760 | 14.7 | 6.8 |
| | 7-Aug-09 | 7.7 | 776 | 14.4 | 6.5 |
| | 14-Aug-09 | 8.3 | 729 | 15.7 | 7.8 |
| | 21-Aug-09 | 8.4 | 820 | 16.6 | 4.6 |
| | 28-Aug-09 | 8.4 | 746 | 14.5 | 8.3 |
| | 4-Sep-09 (1) | | | | |
| | 11-Sep-09 (1) | | | | |
| | 18-Sep-09 (1) | | | | |
| | 25-Sep-09 (1) | | | | |
| | 2-Oct-09 | 8.1 | 858 | 10.8 | |
| | 9-Oct-09 | 6.4 | 881 | 11.0 | 10.6 |
| | 16-Oct-09 | 7.8 | 861 | 6.1 | 11.5 |
| | 23-Oct-09 | 6.7 | 776 | 7.8 | 11.1 |
| | 30-Oct-09 | 7.5 | 795 | 9.0 | 10.5 |
| | 6-Nov-09 | 6.4 | 793 | 7.1 | |
| | 13-Nov-09 | 7.3 | 860 | 7.1 | |
| | 20-Nov-09 | 7.3 | 731 | 7.0 | 11.9 |
| | 27-Nov-09 | 7.6 | 747 | 6.4 | 11.5 |
| | 11-Dec-09 | 7.7 | 632 | 1.4 | 11.9 |
| | 18-Dec-09 | 7.4 | 765 | 2.4 | 12.3 |
| | 22-Dec-09 | 7.9 | 734 | 3.0 | 13.6 |
| | 28-Dec-09 | 7.6 | 793 | 2.8 | 11.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 (cont'd) | 8-Jan-10 | 7.8 | 694 | 2.2 | 12.1 |
| | 15-Jan-10 | 7.7 | 744 | 3.8 | 10.8 |
| | 22-Jan-10 | 8.1 | 768 | 2.3 | 12.2 |
| | 29-Jan-10 | 7.8 | 781 | 0.5 | 12.2 |
| | 5-Feb-10 | 6.5 | 494 | 3.1 | 11.6 |
| | 12-Feb-10 | 7.0 | 486 | 3.2 | 11.6 |
| | 19-Feb-10 | 8.2 | 586 | 2.0 | 11.8 |
| | 1-Mar-10 | 7.3 | 647 | 3.2 | 11.8 |
| | 5-Mar-10 | 7.4 | 631 | 5.6 | 11.4 |
| | 12-Mar-10 | 7.3 | 707 | 5.0 | 12.2 |
| | 19-Mar-10 | 7.5 | 667 | 8.8 | 12.5 |
| | 26-Mar-10 | 7.1 | 565 | 3.1 | 12.6 |
| | 2-Apr-10 | 6.9 | 569 | 8.4 | 12.0 |
| | 9-Apr-10 | 7.4 | 659 | 6.7 | 12.8 |
| | 16-Apr-10 | 8.0 | 500 | 10.2 | 11.2 |
| | 23-Apr-10 | 8.0 | 471 | 9.0 | 11.5 |
| | 30-Apr-10 | 7.9 | 464 | 9.9 | 10.7 |
| | 7-May-10 | 8.0 | 456 | 10.2 | 11.4 |
| | 14-May-10 | 7.8 | 389 | 10.2 | 9.1 |
| | 21-May-10 | 7.9 | 513 | 11.9 | 10.0 |
| | 28-May-10 | 7.9 | 503 | 15.4 | 8.8 |
| | 4-Jun-10 | 7.8 | 549 | 13.7 | 6.5 |
| | 11-Jun-10 | 7.9 | 476 | 13.4 | 6.7 |
| | 18-Jun-10 | 7.9 | 587 | 14.4 | 11.2 |
| | 25-Jun-10 | 7.9 | 560 | 14.4 | 9.4 |
| | 1-Jul-10 | 7.8 | 508 | 13.4 | 8.7 |
| | 9-Jul-10 | 7.6 | 545 | 18.4 | 8.3 |
| | 15-Jul-10 | 7.8 | 689 | 19.3 | 7.7 |
| | 23-Jul-10 | 7.1 | 606 | 17.8 | 8.4 |
| | 30-Jul-10 | 7.8 | 530 | 16.7 | 8.3 |
| | 13-Aug-10 (1) | | | | |
| | 20-Aug-10 (1) | | | | |
| | 27-Aug-10 (1) | | | | |
| | 3-Sep-10 (1) | | | | |
| | 10-Sep-10 (1) | | | | |
| | 17-Sep-10 (1) | | | | |
| | 24-Sep-10 | 7.9 | | 16.2 | 7.2 |
| | 1-Oct-10 | 7.7 | 611 | 12.1 | 7.1 |
| | 8-Oct-10 | 7.7 | 599 | 11.2 | 7.6 |
| | 15-Oct-10 | 7.6 | 569 | 11.2 | 7.6 |
| | 22-Oct-10 | 7.8 | 566 | 6.9 | 9.4 |
| | 29-Oct-10 | 7.8 | 490 | 7.8 | 9.1 |
| | 5-Nov-10 | 7.9 | 453 | 4.1 | 9.4 |
| | 12-Nov-10 | 7.8 | 588 | 6.3 | 9.6 |
| | 19-Nov-10 | 8.0 | 474 | 4.8 | 11.4 |
| | 26-Nov-10 | 7.9 | 428 | 3.1 | 11.4 |
| | 3-Dec-10 | 7.8 | 428 | 2.8 | 10.2 |
| | 9-Dec-10 | 7.8 | 352 | 0.5 | 15.4 |
| | 17-Dec-10 | 7.6 | 335 | 0.5 | 12.0 |
| | 23-Dec-10 | 8.1 | 380 | 1.9 | 11.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 30-Dec-10 | 7.9 | 431 | 3.3 | 10.9 |
| **(cont'd)** | 7-Jan-11 | 7.8 | 369 | 1.8 | 12.1 |
| | 14-Jan-11 | 7.8 | 356 | 2.7 | 11.8 |
| | 21-Jan-11 | 7.7 | 355 | 1.3 | 11.0 |
| | 28-Jan-11 | 8.0 | 392 | 3.1 | 11.2 |
| | 4-Feb-11 | 7.9 | 335 | 0.4 | 11.6 |
| | 11-Feb-11 | 7.7 | 411 | 2.1 | 11.5 |
| | 18-Feb-11 | 7.7 | 379 | 3.0 | 12.3 |
| | 25-Feb-11 | 7.8 | 388 | 3.0 | 12.1 |
| | 4-Mar-11 | 7.7 | 371 | 2.5 | 12.3 |
| | 11-Mar-11 | 7.7 | 304 | 0.7 | 12.6 |
| | 18-Mar-11 | 7.8 | 266 | 2.7 | 15.1 |
| | 25-Mar-11 | 7.9 | 398 | 4.8 | 13.2 |
| | 1-Apr-11 | 7.8 | 359 | 4.3 | 12.0 |
| | 8-Apr-11 | 7.6 | 359 | 4.2 | 12.4 |
| | 15-Apr-11 | 7.7 | 288 | 4.4 | 10.4 |
| | 21-Apr-11 | 8.1 | 366 | 4.2 | 12.3 |
| | 29-Apr-11 | 7.2 | 372 | 5.7 | |
| | 6-May-11 | 8.2 | 318 | 7.7 | 10.4 |
| | 13-May-11 | 8.0 | 485 | 10.6 | 11.9 |
| | 20-May-11 | 8.0 | 399 | 11.5 | 10.1 |
| | 27-May-11 | 8.0 | 387 | 10.3 | 8.4 |
| | 3-Jun-11 | 7.9 | 459 | 13.9 | 8.0 |
| | 10-Jun-11 | 7.8 | 534 | 14.5 | 8.5 |
| | 17-Jun-11 | 7.9 | 483 | 13.8 | 9.6 |
| | 24-Jun-11 | 7.8 | 571 | 15.1 | 7.2 |
| | 30-Jun-11 | 7.7 | 507 | 14.9 | 10.0 |
| | 8-Jul-11 (1) | | | | |
| | 14-Jul-11 (1) | | | | |
| | 22-Jul-11 (1) | | | | |
| | 29-Jul-11 (1) | | | | |
| | 5-Aug-11 (1) | | | | |
| | 12-Aug-11 (1) | | | | |
| | 19-Aug-11 (1) | | | | |
| | 26-Aug-11 (1) | | | | |
| | 2-Sep-11 (1) | | | | |
| | 9-Sep-11 (1) | | | | |
| | 16-Sep-11 | 8.1 | 529 | 12.0 | 8.3 |
| | 23-Sep-11 (1) | | | | |
| | 30-Sep-11 (1) | | | | |
| | 6-Oct-11 | 8.0 | 692 | 10.6 | 9.0 |
| | 14-Oct-11 (1) | | | | |
| | 21-Oct-11 | 8.0 | 593 | 9.4 | 9.6 |
| | 28-Oct-11 | 8.3 | 492 | 8.6 | 9.9 |
| | 4-Nov-11 | 8.1 | 518 | 7.9 | 10.1 |
| | 11-Nov-11 | 7.6 | 558 | 5.9 | 4.8 |
| | 18-Nov-11 | 7.5 | 547 | 5.7 | 11.0 |
| | 25-Nov-11 | 7.5 | 557 | 6.8 | 9.6 |
| | 2-Dec-11 | 8.1 | 484 | 5.1 | 11.6 |
| | 9-Dec-11 | 7.4 | 424 | 4.8 | 9.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 | 16-Dec-11 | 7.6 | 396 | 4.0 | 12.8 |
| (cont'd) | 23-Dec-11 | 7.5 | 369 | 3.5 | 4.8 |
| | 30-Dec-11 | 9.2 | 355 | 3.5 | 11.3 |
| | 6-Jan-12 | 7.5 | 432 | 4.0 | 13.7 |
| | 13-Jan-12 | 8.1 | 344 | 2.9 | |
| | 20-Jan-12 | 8.0 | 344 | 2.2 | 10.5 |
| | 27-Jan-12 | 8.1 | 309 | 8.4 | 12.8 |
| | 3-Feb-12 | 7.9 | 274 | 3.6 | 11.2 |
| | 10-Feb-12 | 7.9 | 308 | 2.6 | 13.7 |
| | 17-Feb-12 | 7.7 | 370 | 3.5 | 14.0 |
| | 24-Feb-12 | 8.1 | 320 | 1.0 | 14.2 |
| | 1-Mar-12 | 7.8 | 359 | 2.6 | |
| | 9-Mar-12 | 8.0 | 212 | 1.4 | 12.9 |
| | 16-Mar-12 | 7.5 | 300 | 4.4 | 10.9 |
| | 23-Mar-12 | 7.6 | | 10.5 | 6.3 |
| | 30-Mar-12 | 8.0 | 369 | 5.2 | 12.4 |
| | 6-Apr-12 | 8.3 | 420 | 7.7 | 6.1 |
| | 13-Apr-12 | 8.0 | 408 | 6.4 | 9.0 |
| | 20-Apr-12 | 8.0 | 452 | 8.5 | 7.9 |
| | 27-Apr-12 | 8.4 | 350 | 4.5 | 12.4 |
| | 4-May-12 | 8.0 | 482 | 12.4 | 6.9 |
| | 11-May-12 | 7.8 | 285 | 9.2 | 9.5 |
| | 18-May-12 | 7.9 | 492 | 10.8 | 7.5 |
| | 25-May-12 | 7.3 | 570 | 14.8 | 6.7 |
| | 1-Jun-12 | 7.8 | 5 | 11.0 | 6.1 |
| | 8-Jun-12 | 8.2 | 547 | 14.0 | 7.8 |
| | 15-Jun-12 | 8.0 | 633 | 14.7 | 5.9 |
| | 22-Jun-12 | 7.9 | 664 | 16.2 | 6.4 |
| | 28-Jun-12 | 8.1 | 660 | 16.6 | 6.4 |
| | 6-Jul-12 | 8.0 | 769 | 17.9 | 5.6 |
| | 13-Jul-12 (1) | | | | |
| | 20-Jul-12 (1) | | | | |
| | 27-Jul-12 (1) | | | | |
| | 3-Aug-12 (1) | | | | |
| | 10-Aug-12 | 8.1 | 542 | 16.2 | 5.8 |
| | 17-Aug-12 | 8.2 | 520 | 16.3 | 5.7 |
| | 24-Aug-12 (1) | | | | |
| | 31-Aug-12 | 7.6 | 749 | 18.0 | 6.7 |
| | 7-Sep-12 (1) | | | | |
| | 14-Sep-12 | 7.4 | 661 | 14.8 | 5.5 |
| | 21-Sep-12 (1) | | | | |
| | 28-Sep-12 | 6.8 | 723 | 10.6 | 8.3 |
| | 5-Oct-12 | 7.3 | 808 | 13.5 | 8.6 |
| | 12-Oct-12 | 7.8 | 638 | 7.4 | 10.0 |
| | 19-Oct-12 | 8.5 | 613 | 10.8 | 7.2 |
| | 26-Oct-12 | 7.0 | 615 | 10.7 | 9.2 |
| | 2-Nov-12 | 5.8 | 567 | 4.2 | 6.6 |
| | 9-Nov-12 | 6.3 | 444 | 5.0 | 9.8 |
| | 16-Nov-12 | 7.2 | 541 | 5.4 | 9.1 |
| | 23-Nov-12 | 7.6 | 511 | 7.5 | 7.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 30-Nov-12 | 8.7 | 515 | 5.3 | 5.0 |
| **(cont'd)** | 7-Dec-12 | 7.6 | 536 | 5.3 | 6.6 |
| | 14-Dec-12 | 8.3 | 462 | 3.8 | 9.1 |
| | 21-Dec-12 | 7.6 | 494 | 4.2 | 10.2 |
| | 28-Dec-12 | 7.5 | 434 | 3.8 | 12.1 |
| | 4-Jan-13 | 7.6 | 5 | 2.1 | 9.9 |
| | 11-Jan-13 | 7.7 | 547 | 3.7 | 9.1 |
| | 17-Jan-13 | 7.7 | 463 | 2.3 | 10.6 |
| | 25-Jan-13 | 7.7 | 458 | 1.6 | 4.5 |
| | 1-Feb-13 | 7.9 | 308 | 0.4 | 11.7 |
| | 8-Feb-13 | 7.6 | 322 | 0.7 | 13.4 |
| | 15-Feb-13 | 7.6 | 653 | 2.4 | 12.2 |
| | 22-Feb-13 | 7.3 | 335 | 2.0 | 8.6 |
| | 1-Mar-13 | 7.6 | 484 | 1.9 | 9.8 |
| | 8-Mar-13 | 7.9 | 381 | 5.2 | 12.1 |
| | 15-Mar-13 | | | 2.0 | |
| | 22-Mar-13 | 7.8 | 405 | 2.1 | 12.5 |
| | 28-Mar-13 | 7.9 | 370 | 4.8 | 11.5 |
| | 5-Apr-13 | 7.9 | 358 | 3.0 | 6.5 |
| | 12-Apr-13 | 7.4 | 382 | 2.9 | 3.8 |
| | 19-Apr-13 | 7.5 | 219 | 7.5 | 6.7 |
| | 26-Apr-13 | 7.6 | 288 | 4.8 | 9.3 |
| | 3-May-13 | 7.6 | 389 | 13.4 | 8.3 |
| | 9-May-13 | 7.8 | 439 | 10.4 | 9.5 |
| | 16-May-13 | 7.9 | 408 | 10.0 | 7.3 |
| | 24-May-13 | 7.7 | 439 | 8.2 | 8.2 |
| | 31-May-13 | 7.9 | 490 | 15.2 | 8.4 |
| | 7-Jun-13 | | 411 | 10.2 | 6.5 |
| | 14-Jun-13 | 7.9 | 497 | 15.1 | 6.4 |
| | 21-Jun-13 | 7.9 | 530 | 13.1 | 7.7 |
| | 27-Jun-13 | 7.9 | 486 | 15.8 | 8.2 |
| | 5-Jul-13 | 7.7 | 584 | 14.9 | 7.8 |
| | 12-Jul-13 | 7.7 | 621 | 16.4 | 5.2 |
| | 19-Jul-13 | 7.7 | 621 | 19.7 | 5.2 |
| | 25-Jul-13 | 7.6 | 570 | 14.4 | 7.9 |
| | 2-Aug-13 | 8.1 | 587 | 16.3 | 9.0 |
| | 8-Aug-13 | 7.5 | 538 | 16.4 | 8.4 |
| | 16-Aug-13 | 7.9 | 621 | 13.8 | 4.9 |
| | 23-Aug-13 (1) | | | | |
| | 30-Aug-13 | 7.9 | 613 | 14.3 | 4.8 |
| | 6-Sep-13 | 7.8 | 598 | 13.4 | 5.0 |
| | 13-Sep-13 | 8.4 | 530 | 12.5 | 8.1 |
| | 20-Sep-13 | 8.3 | 556 | 15.1 | 4.1 |
| | 27-Sep-13 | 7.9 | 491 | 11.8 | 6.9 |
| | 4-Oct-13 | 7.8 | 483 | 10.2 | 5.9 |
| | 11-Oct-13 | 7.6 | 458 | 9.2 | 3.9 |
| | 18-Oct-13 | 7.5 | 426 | 9.2 | 4.0 |
| | 25-Oct-13 | 7.6 | 438 | 7.3 | 4.3 |
| | 31-Oct-13 | 7.6 | 421 | 9.7 | 4.3 |
| | 8-Nov-13 | 7.4 | 403 | 7.0 | 4.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 14-Nov-13 | 7.4 | 415 | 2.9 | 4.1 |
| **(cont'd)** | 22-Nov-13 | 7.4 | 405 | 3.5 | 4.1 |
| | 29-Nov-13 | 8.4 | 393 | 3.9 | 7.5 |
| | 6-Dec-13 | 7.8 | 340 | 3.0 | 5.4 |
| | 13-Dec-13 | 8.3 | 256 | 7.6 | 4.6 |
| | 19-Dec-13 | 8.8 | 386 | 3.5 | 6.3 |
| | 27-Dec-13 | 8.6 | 382 | 2.9 | 5.2 |
| | 3-Jan-14 | 8.5 | 360 | 0.9 | 3.2 |
| | 10-Jan-14 | 7.5 | 360 | (1) | 4.1 |
| | 17-Jan-14 | 8.1 | 356 | 1.5 | 4.3 |
| | 24-Jan-14 | 7.5 | 369 | 0.8 | 11.4 |
| | 31-Jan-14 | 7.1 | 398 | 1.7 | 4.0 |
| | 7-Feb-14 | 7.1 | 382 | 0.6 | 3.9 |
| | 14-Feb-14 | 7.4 | 254 | 1.9 | 4.4 |
| | 21-Feb-14 | 7.1 | 399 | 2.0 | 9.1 |
| | 7-Mar-14 | 7.4 | 389 | 0.1 | 7.8 |
| | 14-Mar-14 | 6.5 | 408 | 1.5 | 11.9 |
| | 21-Mar-14 | 7.3 | 408 | 1.4 | 3.8 |
| | 28-Mar-14 | 7.4 | 421 | 3.7 | 11.5 |
| | 4-Apr-14 | 7.8 | 403 | 3.2 | 11.2 |
| | 11-Apr-14 | 7.8 | 297 | 1.7 | 9.7 |
| | 17-Apr-14 | 7.7 | 485 | 3.8 | 9.0 |
| | 25-Apr-14 | 7.6 | 480 | 3.6 | 7.0 |
| | 1-May-14 | 7.5 | 473 | 4.2 | 5.8 |
| | 9-May-14 | 7.8 | 425 | 11.1 | 10.4 |
| | 16-May-14 | 7.2 | 328 | 10.2 | 10.3 |
| | 23-May-14 | 7.2 | 382 | 11.0 | 10.1 |
| | 30-May-14 | 7.3 | 375 | 11.0 | 10.0 |
| | 6-Jun-14 | 7.2 | 392 | 11.0 | 8.0 |
| | 13-Jun-14 | 7.2 | 402 | 11.2 | 8.1 |
| | 20-Jun-14 | 7.2 | 412 | 12.5 | 8.1 |
| | 27-Jun-14 | 7.2 | 423 | 12.5 | 8.1 |
| | 4-Jul-14 | 7.5 | 481 | 12.7 | 7.4 |
| | 11-Jul-14 | 7.3 | 424 | 14.3 | 6.9 |
| | 18-Jul-14 | 8.4 | 598 | 13.2 | |
| | 25-Jul-14 | 8.7 | 603 | 13.1 | |
| | 1-Aug-14 | 8.5 | 485 | 13.9 | 6.2 |
| | 8-Aug-14 | 8.5 | 460 | 13.8 | 6.2 |
| | 15-Aug-14 | 8.5 | 423 | 12.2 | 6.2 |
| | 22-Aug-14 | 8.8 | 693 | 14.3 | |
| | 29-Aug-14 | 8.7 | 682 | 14.0 | |
| | 5-Sep-14 | 8.9 | 717 | 16.3 | |
| | 12-Sep-14 | 7.5 | 645 | 11.8 | 6.9 |
| | 19-Sep-14 | 7.9 | 422 | 9.2 | 6.1 |
| | 26-Sep-14 | 7.9 | 429 | 10.7 | 6.4 |
| | 3-Oct-14 | 7.7 | 473 | 13.8 | 6.0 |
| | 10-Oct-14 | 7.5 | 470 | 10.1 | 6.3 |
| | 16-Oct-14 | 7.9 | 666 | 12.8 | 6.3 |
| | 24-Oct-14 | 8.0 | 571 | 7.2 | 6.5 |
| | 31-Oct-14 | 7.9 | 423 | 6.0 | 6.0 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW1 | 7-Nov-14 | 7.3 | 456 | 0.5 | 6.9 |
| (cont'd) | 14-Nov-14 | 7.3 | 446 | (2) | 6.6 |
| | 20-Nov-14 | 7.2 | 420 | (3) | 6.2 |
| | 28-Nov-14 | 7.3 | 423 | (1) | 7.0 |
| | 5-Dec-14 | 7.3 | 425 | 0.3 | 4.3 |
| | 12-Dec-14 | 7.2 | 467 | 0.9 | 6.9 |
| | 19-Dec-14 | 7.2 | 453 | (1) | 6.9 |
| | 26-Dec-14 | 7.3 | 413 | 1.9 | 6.3 |
| | 2-Jan-15 | 7.2 | 418 | (1) | 7.0 |
| | 8-Jan-15 (2) | | | | |
| | 14-Jan-15 | 7.2 | 428 | (0) | 6.3 |
| | 23-Jan-15 | 7.1 | 420 | (0) | 6.3 |
| | 30-Jan-15 | 8.1 | 283 | (0) | 11.9 |
| | 6-Feb-15 | 8.1 | 570 | 1.0 | 12.5 |
| | 12-Feb-15 | 7.9 | 545 | 0.0 | 11.9 |
| | 27-Feb-15 | 8.0 | 577 | 1.5 | (6) |
| | 6-Mar-15 | 8.1 | 576 | 1.4 | 12.6 |
| | 13-Mar-15 | 8.1 | 569 | 6.4 | 11.9 |
| | 20-Mar-15 | 8.0 | 364 | 7.2 | 11.9 |
| | 26-Mar-15 | 8.1 | 331 | 4.4 | 12.3 |
| | 2-Apr-15 | 7.9 | 369 | 8.3 | 10.8 |
| | 10-Apr-15 | 7.8 | 260 | 5.2 | 9.5 |
| | 17-Apr-15 | 8.4 | 353 | 7.8 | |
| | 23-Apr-15 | 8.1 | 369 | 3.6 | 14.2 |
| | 1-May-15 | 7.7 | 482 | 9.8 | 7.5 |
| | 8-May-15 | 9.1 | 555 | 18.5 | |
| | 15-May-15 | 7.6 | 437 | 11.9 | 7.7 |
| | 21-May-15 | 7.7 | 432 | 11.0 | 9.4 |
| | 28-May-15 | 7.7 | 519 | 16.1 | 7.3 |
| | 4-Jun-15 | 7.6 | 519 | 15.2 | 7.3 |
| | 12-Jun-15 | 7.5 | 551 | 13.1 | 5.1 |
| | 18-Jun-15 | 7.5 | 517 | 18.4 | 5.7 |
| | 26-Jun-15 | 8.1 | 617 | 26.0 | |
| | 1-Jul-15 | 7.8 | 463 | 15.2 | |
| | 10-Jul-15 | 7.7 | 595 | 18.5 | |
| | 17-Jul-15 | 8.1 | 558 | 12.7 | |
| | 22-Jul-15 | 7.8 | 665 | 14.5 | |
| | 30-Jul-15 | 8.1 | 749 | 23.9 | |
| | 5-Aug-15 | 7.4 | 564 | 15.4 | 6.0 |
| | 13-Aug-15 | 7.6 | 647 | 13.2 | 5.7 |
| | 21-Aug-15 | 7.3 | 608 | 17.4 | 4.7 |
| | 28-Aug-15 | 8.2 | 598 | | |
| | 3-Sep-15 | 7.6 | 741 | 16.5 | 5.9 |
| | 10-Sep-15 | 7.6 | 705 | 18.2 | 5.6 |
| | 18-Sep-15 (1) | | | | |
| | 25-Sep-15 | 7.6 | 640 | 14.0 | 7.6 |
| | 2-Oct-15 | 7.5 | 522 | 7.6 | 8.2 |
| | 9-Oct-15 | 7.3 | 558 | 10.7 | 6.2 |
| | 16-Oct-15 | 7.7 | 514 | 8.5 | 8.6 |
| | 23-Oct-15 | 7.6 | 523 | 7.1 | 9.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 30-Oct-15 | 7.5 | 480 | 7.1 | 10.8 |
| **(cont'd)** | 5-Nov-15 | 7.8 | 572 | 10.9 | 7.6 |
| | 10-Nov-15 | 7.5 | 468 | 4.3 | 9.3 |
| | 13-Nov-15 | 7.3 | 432 | 5.2 | 6.7 |
| | 19-Nov-15 | 7.7 | 586 | 9.1 | 13.0 |
| | 26-Nov-15 | 7.3 | 443 | 0.8 | 11.1 |
| | 4-Dec-15 | 7.6 | 482 | 2.3 | 15.9 |
| | 10-Dec-15 | 7.6 | 538 | 5.7 | 12.8 |
| | 17-Dec-15 | 7.8 | 420 | 3.7 | 11.5 |
| | 23-Dec-15 | 7.6 | 445 | 5.1 | 13.9 |
| | 30-Dec-15 | 7.4 | 391 | 0.5 | 10.4 |
| | 8-Jan-16 | 7.4 | 410 | 1.5 | 11.9 |
| | 14-Jan-16 | 7.2 | 383 | 0.2 | 10.8 |
| | 22-Jan-16 | 7.3 | 431 | (0) | 9.8 |
| | 29-Jan-16 | 7.2 | 401 | (0) | 8.8 |
| | 5-Feb-16 | 7.4 | 392 | 0.5 | 11.5 |
| | 11-Feb-16 | 7.3 | 416 | (0) | 8.7 |
| | 18-Feb-16 | 7.3 | 407 | 0.2 | 11.0 |
| | 25-Feb-16 | 7.5 | 255 | (0) | 6.4 |
| | 4-Mar-16 | 7.1 | 376 | 0.1 | 9.1 |
| | 10-Mar-16 | 7.3 | 244 | 0.5 | 9.4 |
| | 18-Mar-16 | 7.7 | 299 | 1.3 | 10.6 |
| | 28-Mar-16 | 7.3 | 189 | 4.4 | 9.4 |
| | 7-Apr-16 | 7.3 | 254 | 1.2 | 10.1 |
| | 15-Apr-16 | 7.4 | 265 | 2.9 | 11.9 |
| | 22-Apr-16 | 7.9 | 434 | 10.8 | 6.7 |
| | 29-Apr-16 | 8.0 | 380 | 5.5 | 10.8 |
| | 6-May-16 | 8.0 | 460 | 10.1 | 7.0 |
| | 13-May-16 | 7.7 | 598 | 14.5 | |
| | 20-May-16 | 7.8 | 616 | 14.8 | 9.0 |
| | 27-May-16 | 7.5 | 602 | 17.3 | 2.7 |
| | 2-Jun-16 | 7.5 | 593 | 16.9 | 2.3 |
| | 10-Jun-16 | 7.6 | 696 | 10.6 | 4.6 |
| | 17-Jun-16 | 7.5 | 655 | 14.8 | 3.9 |
| | 24-Jun-16 | 7.4 | 521 | 13.2 | 4.1 |
| | 28-Jun-16 | 7.5 | 667 | 16.6 | 3.8 |
| | 5-Jul-16 | 7.6 | 665 | 17.4 | 6.6 |
| | 8-Jul-16 | 7.6 | 648 | 19.2 | 4.3 |
| | 15-Jul-16 | 7.6 | 623 | 18.7 | 4.1 |
| | 22-Jul-16 | 7.4 | 820 | 20.0 | 3.7 |
| | 29-Jul-16 | 7.6 | 744 | 17.9 | 4.2 |
| | 5-Aug-16 | 7.5 | 747 | 20.6 | 2.4 |
| | 12-Aug-16 (1) | | | | |
| | 19-Aug-16 | 7.6 | 595 | 17.4 | 2.7 |
| | 26-Aug-16 | 7.4 | 781 | 18.3 | 2.7 |
| | 2-Sep-16 | 7.1 | 653 | 15.3 | 3.8 |
| | 9-Sep-16 | 7.4 | 619 | 17.7 | 3.0 |
| | 16-Sep-16 | 7.7 | 618 | 10.9 | 5.6 |
| | 21-Sep-16 | 7.1 | 635 | 15.7 | 5.8 |
| | 30-Sep-16 | 7.4 | 620 | 11.9 | 4.8 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 7-Oct-16 | 7.4 | 657 | 14.0 | 5.5 |
| **(cont'd)** | 13-Oct-16 | 7.0 | 506 | 10.4 | 6.1 |
| | 19-Oct-16 | 7.6 | 676 | 13.6 | 9.0 |
| | 24-Oct-16 | 7.3 | 544 | 6.2 | 10.0 |
| | 27-Oct-16 | 7.2 | 418 | 1.5 | 10.4 |
| | 3-Nov-16 | 7.7 | 556 | 8.0 | 8.3 |
| | 11-Nov-16 | 7.3 | 450 | 4.8 | 10.2 |
| | 18-Nov-16 | 7.3 | 789 | 5.7 | 8.0 |
| | 24-Nov-16 | 7.2 | 412 | 0.1 | 10.8 |
| | 2-Dec-16 | 7.9 | 373 | 1.9 | 7.9 |
| | 7-Dec-16 | 7.6 | 364 | 0.1 | 7.9 |
| | 16-Dec-16 | 7.5 | 518 | (0) | 8.7 |
| | 22-Dec-16 (2) | | | | |
| | 30-Dec-16 (2) | | | | |
| | 6-Jan-17 (2) | | | | |
| | 13-Jan-17 (2) | | | | |
| | 20-Jan-17 | 7.4 | 405 | 0.1 | 8.1 |
| | 26-Jan-17 | 7.5 | 400 | (1) | 6.7 |
| | 3-Feb-17 (2) | | | | |
| | 10-Feb-17 (2) | | | | |
| | 17-Feb-17 (2) | | | | |
| | 19-Apr-17 | 7.4 | 457 | 11.5 | 12.8 |
| | 9-May-17 | 8.3 | 352 | 9.5 | 14.1 |
| | 16-May-17 | 7.9 | 636 | 11.4 | 7.9 |
| | 28-Jun-17 | 7.6 | 620 | 17.3 | 3.2 |
| | 18-Jul-17 | 7.4 | 737 | 20.2 | 2.5 |
| | 15-Aug-17 | 7.8 | 557 | 16.1 | 1.2 |
| | 18-Sep-17 | 6.6 | 735 | 16.3 | 2.2 |
| | 18-Oct-17 | 7.7 | 525 | 8.3 | 4.3 |
| | 15-Nov-17 | 7.7 | 447 | 0.7 | 10.4 |
| | 13-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 22-Feb-18 | 7.3 | 220 | (0) | 8.7 |
| | 20-Mar-18 (2) | 7.6 | 361 | 7.0 | 10.7 |
| | 18-Apr-18 (2) | 7.9 | 518 | (1) | 4.8 |
| | 8-May-18 | 7.4 | 533 | 9.8 | 3.7 |
| | 15-May-18 | 7.5 | 570 | 13.2 | 4.9 |
| | 18-Jun-18 | 7.3 | 660 | 18.4 | 2.3 |
| | 19-Jul-18 | 7.2 | 735 | 17.5 | 1.8 |
| | 23-Aug-18 | 7.4 | 606 | 15.5 | 1.9 |
| | 19-Sep-18 | 7.5 | | 14.9 | 4.0 |
| | 24-Oct-18 | 7.5 | 694 | 2.4 | 7.5 |
| | 12-Dec-18 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.6 | 390 | 5.0 | 6.5 |
| | 14-May-19 | 7.7 | 447 | 6.3 | 8.9 |
| | 23-May-19 | 7.5 | 507 | 11.2 | 3.1 |
| | 18-Jun-19 | 7.4 | 569 | 16.5 | 2.5 |
| | 29-Jul-19 (1) | | | | |
| | 29-Aug-19 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 26-Sep-19 (1) | | | | |
| **(cont'd)** | 22-Nov-19 | 7.4 | 91 | 0.0 | 5.7 |
| | 26-Mar-20 | 7.5 | 565 | 1.6 | 7.5 |
| | 27-Apr-20 | 7.7 | 609 | 2.3 | 13.1 |
| | 19-May-20 | 7.9 | 620 | 10.1 | 6.4 |
| | 29-May-20 | 7.8 | 583 | 20.8 | 2.0 |
| | 23-Jun-20 | 7.3 | 654 | 20.4 | 0.8 |
| | 30-Jul-20 | 7.3 | 734 | 19.6 | 1.0 |
| | 25-Aug-20 (3) | | | | |
| | 25-Sep-20 (1) | | | | |
| | 30-Oct-20 (1) | | | | |
| | 26-Nov-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.5 | 477 | 7.0 | 8.1 |
| | 27-Apr-21 | 7.5 | 512 | 8.3 | 7.1 |
| | 26-May-21 | 7.2 | 763 | 18.7 | 1.3 |
| | 27-May-21 | 7.2 | 763 | 18.7 | 1.3 |
| | 22-Jun-21 (1) | | | | |
| | 22-Jul-21 | 7.3 | 776 | 16.3 | 1.8 |
| | 25-Aug-21 | 7.1 | 854 | 20.1 | 0.9 |
| | 28-Sep-21 | 7.5 | 684 | 12.2 | 2.9 |
| | 26-Oct-21 | 7.4 | 631 | 6.8 | 5.5 |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 | 8.3 | 603 | 1.1 | 8.8 |
| | 21-Apr-22 | 8.0 | 892 | 5.2 | 6.7 |
| | 4-May-22 | | | (6) | 7.1 |
| | 24-May-22 | 7.1 | 731 | 16.5 | 2.4 |
| | 24-Jun-22 | 7.1 | 710 | 14.5 | 11.0 |
| | 29-Aug-22 | 6.7 | 815 | 17.2 | 11.8 |
| | 27-Sep-22 | 7.1 | 987 | 14.2 | 12.0 |
| | 26-Oct-22 | 7.5 | 733 | 10.2 | 2.3 |
| | 21-Nov-22 | 7.9 | 641 | 0.0 | 3.7 |
| | 20-Dec-22 | 7.6 | 437 | 0.0 | 1.4 |
| | 24-Jan-23 (2) | 7.3 | 755 | (0) | 3.5 |
| | 22-Feb-23 | 7.3 | 726 | 0.0 | 7.2 |
| | 27-Mar-23 | 8.9 | 560 | 0.5 | 7.4 |
| | 21-Apr-23 | 7.6 | 518 | 12.5 | 8.5 |
| | 15-May-23 | 7.5 | 596 | 17.2 | 5.3 |
| | 26-Jun-23 | 7.5 | 780 | 20.7 | 9.4 |
| | 25-Jul-23 | 7.3 | 585 | 19.0 | 1.2 |
| | 28-Aug-23 | 7.6 | 764 | 17.8 | 2.0 |
| | 25-Sep-23 | 7.3 | 784 | 13.6 | 1.8 |
| | 30-Oct-23 | 8.3 | 596 | 6.0 | 7.6 |
| | 29-Nov-23 | 7.1 | 965 | 0.0 | 5.6 |
| | 18-Dec-23 | 7.2 | 859 | 1.5 | 8.4 |
| | 31-Jan-24 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW1** | 27-Feb-24 (2) | | | | |
| **(cont'd)** | 27-Mar-24 | 7.6 | 586 | 3.1 | 8.8 |
| | 29-Apr-24 | 7.4 | 666 | 10.6 | 5.9 |
| | 28-May-24 | 7.4 | 810 | 14.8 | 2.6 |
| | 26-Jun-24 | 6.9 | 778 | 18.6 | 2.9 |
| | 30-Jul-24 | 7.0 | 726 | 20.4 | 1.4 |
| | 26-Aug-24 | 7.4 | 840 | 17.9 | 3.1 |
| | 24-Sep-24 | 6.9 | 843 | 16.6 | 0.9 |
| | 28-Oct-24 | 6.8 | 900 | 6.3 | 6.7 |
| | 18-Nov-24 | 7.6 | 956 | 5.7 | 8.0 |
| | 16-Dec-24 | 7.3 | 835 | 0.0 | 7.3 |
| | 27-Jan-25 (3) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | 7.1 | 296 | 0.5 | 6.4 |
| | 28-Apr-25 | 7.6 | 446 | 10.9 | 2.9 |
| | 26-May-25 | 8.1 | 455 | 21.3 | 8.5 |
| | 25-Jun-25 | 7.4 | 816 | 25.0 | 1.6 |
| | 28-Jul-25 | 7.5 | 885 | 20.4 | 2.3 |
| | 27-Aug-25 | 7.4 | 790 | 12.4 | 4.5 |
| | 29-Sep-25 | 7.4 | 843 | 12.2 | 5.0 |
| | 27-Oct-25 | 7.5 | 781 | 3.3 | 9.9 |
| | 25-Nov-25 | 7.8 | 699 | 3.2 | 11.0 |
| | 15-Dec-25 (2) | | | | |
| **SW2** | 22-May-03 | | | 8.0 | |
| | 12-Feb-04 | | 394 | 5.4 | 11.6 |
| | 19-Mar-04 | | 571 | 5.1 | 9.3 |
| | 7-May-04 | 7.5 | 406 | 8.8 | |
| | 14-May-04 | 7.6 | 419 | 8.6 | |
| | 20-May-04 | 7.6 | 409 | 7.3 | |
| | 28-May-04 | 7.5 | 358 | 7.1 | |
| | 4-Jun-04 | 7.5 | 393 | 9.0 | |
| | 11-Jun-04 | 7.6 | 425 | 9.3 | |
| | 17-Jun-04 | 7.4 | 410 | 8.2 | |
| | 24-Jun-04 | 7.7 | 442 | 9.9 | 11.2 |
| | 1-Jul-04 | 7.6 | 439 | 9.8 | 10.5 |
| | 16-Jul-04 | 7.5 | 458 | 10.0 | 10.2 |
| | 22-Jul-04 | 7.6 | | 14.6 | 8.5 |
| | 29-Jul-04 | 7.6 | 422 | 10.3 | |
| | 6-Aug-04 | 7.8 | 491 | 13.6 | 10.1 |
| | 12-Aug-04 | 7.6 | 445 | 10.2 | |
| | 19-Aug-04 | 7.5 | 463 | 10.8 | 10.8 |
| | 26-Aug-04 | | 478 | 13.7 | |
| | 3-Sep-04 | 7.6 | 426 | 13.7 | 7.7 |
| | 9-Sep-04 | 8.0 | 460 | 11.7 | 9.2 |
| | 17-Sep-04 | 7.4 | 450 | 10.9 | 8.1 |
| | 23-Sep-04 | 7.4 | 481 | 13.2 | 6.8 |
| | 1-Oct-04 | 7.4 | 469 | 11.6 | 7.3 |
| | 7-Oct-04 | 7.3 | 468 | 12.2 | 7.2 |
| | 14-Oct-04 | 7.4 | 446 | 10.6 | 8.0 |
| | 20-Oct-04 | 7.4 | 447 | 9.7 | 7.4 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 28-Oct-04 | 7.3 | 509 | 9.8 | 6.9 |
| **(cont'd)** | 4-Nov-04 | 7.5 | 390 | 7.5 | 10.0 |
| | 11-Nov-04 | 7.3 | 435 | 8.2 | 7.8 |
| | 19-Nov-04 | 7.2 | 460 | 8.5 | 7.6 |
| | 25-Nov-04 | 7.3 | 454 | 6.0 | 7.7 |
| | 2-Dec-04 | 7.3 | 419 | 4.5 | 10.1 |
| | 9-Dec-04 | 7.6 | 427 | 6.0 | 10.8 |
| | 17-Dec-04 (2) | | | | |
| | 29-Dec-04 (2) | | | | |
| | 5-Jan-05 | 7.4 | 404 | 6.3 | 11.5 |
| | 13-Jan-05 | 7.2 | 375 | 6.1 | 11.5 |
| | 10-Feb-05 | 7.4 | 411 | 6.1 | |
| | 16-Feb-05 | 7.8 | 406 | 6.4 | 12.2 |
| | 24-Feb-05 | 8.0 | 398 | 4.4 | |
| | 3-Mar-05 | 7.6 | 392 | 4.4 | |
| | 10-Mar-05 | 7.5 | 430 | 6.9 | 12.0 |
| | 17-Mar-05 | 7.5 | 404 | 6.5 | 12.4 |
| | 24-Mar-05 | 7.5 | 449 | 7.4 | 11.8 |
| | 30-Mar-05 | 7.6 | 521 | 7.7 | 11.9 |
| | 7-Apr-05 | 7.3 | 406 | 4.8 | 12.3 |
| | 15-Apr-05 | 7.1 | 341 | 5.8 | 12.5 |
| | 21-Apr-05 | 7.0 | 323 | 7.0 | 11.7 |
| | 29-Apr-05 | 7.3 | 329 | 6.0 | 12.1 |
| | 6-May-05 | 6.8 | 506 | 8.1 | |
| | 13-May-05 | 8.6 | 377 | 6.4 | 12.1 |
| | 20-May-05 | 7.7 | 392 | 7.1 | 12.1 |
| | 27-May-05 | 6.6 | 420 | 8.9 | |
| | 3-Jun-05 | 6.9 | 443 | 9.7 | |
| | 10-Jun-05 | 7.1 | 449 | 10.3 | |
| | 17-Jun-05 | 6.8 | 472 | 8.6 | 10.9 |
| | 24-Jun-05 | 7.1 | 511 | 13.1 | |
| | 30-Jun-05 | 7.0 | 487 | 11.2 | |
| | 7-Jul-05 | 5.0 | 454 | 10.7 | 9.9 |
| | 15-Jul-05 | 6.9 | 674 | 12.8 | 9.7 |
| | 21-Jul-05 | 6.3 | 959 | 14.8 | 9.3 |
| | 28-Jul-05 | 7.3 | 874 | 11.1 | 9.4 |
| | 2-Aug-05 | 8.8 | 511 | 12.4 | 9.4 |
| | 12-Aug-05 | 7.7 | 798 | 12.5 | |
| | 19-Aug-05 | 7.6 | 488 | 12.2 | 9.5 |
| | 24-Aug-05 | 7.4 | 480 | 11.1 | 9.3 |
| | 1-Sep-05 | | 475 | 12.0 | 8.9 |
| | 9-Sep-05 | 6.7 | 473 | 11.8 | 8.0 |
| | 16-Sep-05 | 7.3 | 555 | 13.1 | |
| | 23-Sep-05 | 7.5 | 505 | 12.4 | 7.5 |
| | 30-Sep-05 | 7.5 | 520 | 12.2 | 7.9 |
| | 7-Oct-05 | 7.6 | 657 | 11.5 | |
| | 14-Oct-05 | 7.6 | 535 | 12.0 | 7.9 |
| | 21-Oct-05 | 8.4 | 510 | 10.5 | 8.4 |
| | 28-Oct-05 | 7.5 | 541 | 9.5 | 8.4 |
| | 4-Nov-05 | 7.5 | 552 | 10.6 | 7.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 11-Nov-05 | 7.6 | 549 | 9.5 | 7.3 |
| **(cont'd)** | 18-Nov-05 | 7.6 | 777 | 5.4 | |
| | 25-Nov-05 | 7.5 | 506 | 6.8 | 7.2 |
| | 2-Dec-05 | 8.6 | 467 | 5.9 | 10.0 |
| | 9-Dec-05 | 8.7 | 447 | 5.3 | 10.0 |
| | 16-Dec-05 | 7.8 | 484 | 5.0 | 10.9 |
| | 22-Dec-05 | 8.0 | 469 | 4.0 | 11.6 |
| | 6-Jan-06 | 7.8 | 426 | 5.3 | |
| | 13-Jan-06 | 7.7 | 443 | 7.4 | 10.9 |
| | 20-Jan-06 | 7.5 | 428 | 6.7 | 11.4 |
| | 27-Jan-06 | 6.9 | 441 | 6.3 | 12.0 |
| | 3-Feb-06 | 7.7 | 421 | 6.4 | 11.6 |
| | 10-Feb-06 | 7.9 | 419 | 6.1 | |
| | 20-Feb-06 | 8.8 | 422 | 6.2 | |
| | 24-Feb-06 | 7.9 | 397 | 4.4 | |
| | 3-Mar-06 | 8.3 | 410 | 4.3 | |
| | 10-Mar-06 | 6.9 | 419 | 5.5 | 11.6 |
| | 17-Mar-06 | 7.4 | 364 | 4.8 | 12.2 |
| | 24-Mar-06 | 7.9 | 378 | 5.9 | |
| | 31-Mar-06 | 7.7 | 517 | 7.3 | |
| | 7-Apr-06 | 7.7 | 461 | 5.3 | |
| | 10-Apr-06 | 7.8 | 460 | 7.5 | |
| | 13-Apr-06 | 7.7 | 439 | 7.4 | |
| | 21-Apr-06 | 7.8 | 466 | 7.6 | |
| | 26-Apr-06 | 8.4 | 493 | 6.6 | |
| | 5-May-06 | 7.8 | 507 | 8.2 | |
| | 12-May-06 | 8.1 | 605 | 8.9 | |
| | 19-May-06 | 7.6 | 572 | 8.4 | |
| | 25-May-06 | 7.8 | 594 | 7.9 | |
| | 2-Jun-06 | 8.0 | 591 | 7.9 | |
| | 9-Jun-06 | 7.8 | 480 | 9.3 | |
| | 16-Jun-06 | 7.7 | 570 | 9.6 | |
| | 23-Jun-06 | 7.6 | 613 | 9.8 | |
| | 30-Jun-06 | 8.7 | 623 | 11.2 | |
| | 7-Jul-06 | 8.2 | 554 | 13.9 | |
| | 14-Jul-06 | 7.8 | 546 | 12.0 | |
| | 21-Jul-06 | 7.8 | 563 | 15.9 | |
| | 28-Jul-06 | 7.7 | 598 | 17.4 | |
| | 4-Aug-06 | 7.9 | 551 | 17.3 | |
| | 11-Aug-06 | 8.2 | 526 | 11.7 | |
| | 18-Aug-06 | 7.3 | 549 | 13.9 | |
| | 25-Aug-06 | 7.3 | 542 | 12.8 | |
| | 1-Sep-06 | 7.2 | 542 | 14.2 | |
| | 8-Sep-06 | 7.4 | 563 | 14.1 | |
| | 15-Sep-06 | 7.1 | 575 | 12.3 | |
| | 21-Sep-06 | 7.4 | 595 | 11.2 | |
| | 28-Sep-06 | 7.2 | 617 | 10.5 | |
| | 6-Oct-06 | 7.3 | 634 | 11.5 | |
| | 13-Oct-06 | 7.1 | 643 | 7.3 | |
| | 20-Oct-06 | 7.3 | 668 | 9.0 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 26-Oct-06 | 7.7 | 711 | 9.0 | |
| (cont'd) | 3-Nov-06 | 7.6 | 634 | 8.1 | 11.0 |
| | 10-Nov-06 | 7.3 | 588 | 9.2 | |
| | 17-Nov-06 | 7.5 | 595 | 8.3 | 10.4 |
| | 24-Nov-06 | 7.7 | 582 | 7.6 | 11.6 |
| | 4-Dec-06 | 7.6 | 588 | 7.1 | 11.9 |
| | 8-Dec-06 | 7.4 | 588 | 6.8 | 12.1 |
| | 14-Dec-06 | 7.5 | 602 | 7.8 | |
| | 21-Dec-06 | 7.6 | 604 | 7.2 | 11.9 |
| | 28-Dec-06 | 7.6 | 619 | 7.4 | 11.5 |
| | 5-Jan-07 | 7.6 | 620 | 7.5 | 11.0 |
| | 12-Jan-07 | 7.6 | 587 | 6.8 | 11.1 |
| | 19-Jan-07 | 7.8 | 580 | 5.2 | 12.1 |
| | 26-Jan-07 | 8.1 | 584 | 4.4 | 11.1 |
| | 2-Feb-07 | 8.0 | 559 | 5.5 | |
| | 9-Feb-07 | 8.0 | 510 | 5.7 | |
| | 16-Feb-07 | 8.0 | 576 | 4.3 | 12.6 |
| | 22-Feb-07 | 8.1 | 575 | 5.4 | 11.8 |
| | 2-Mar-07 | 8.7 | 568 | 5.3 | |
| | 9-Mar-07 | 8.0 | 479 | 4.4 | 12.7 |
| | 16-Mar-07 | 7.0 | 521 | 6.0 | 11.9 |
| | 23-Mar-07 | 7.6 | 532 | 5.6 | |
| | 30-Mar-07 | 7.7 | 492 | 5.6 | 12.6 |
| | 5-Apr-07 | 7.1 | 520 | 5.1 | 12.5 |
| | 13-Apr-07 | 7.8 | 549 | 5.2 | |
| | 20-Apr-07 | 7.8 | 493 | 7.1 | |
| | 28-Apr-07 | 8.0 | 517 | 6.5 | |
| | 4-May-07 | 7.6 | 470 | 7.1 | |
| | 11-May-07 | 7.6 | 549 | 7.4 | |
| | 18-May-07 | 8.2 | 555 | 8.0 | |
| | 25-May-07 | 7.9 | 510 | 8.8 | |
| | 1-Jun-07 | 7.9 | 524 | 9.5 | |
| | 8-Jun-07 | 7.6 | 603 | 9.7 | 10.7 |
| | 14-Jun-07 | 7.6 | 597 | 8.6 | 11.0 |
| | 22-Jun-07 | 7.6 | 554 | 8.2 | 10.6 |
| | 29-Jun-07 | 8.4 | 547 | 13.5 | 9.4 |
| | 6-Jul-07 | 8.0 | 584 | 11.5 | 10.3 |
| | 13-Jul-07 | 8.9 | 575 | 10.9 | 9.6 |
| | 20-Jul-07 | 8.4 | 629 | 11.0 | 10.4 |
| | 27-Jul-07 | 7.4 | 530 | 11.1 | 9.3 |
| | 3-Aug-07 | 7.6 | 562 | 13.1 | 8.3 |
| | 10-Aug-07 | 7.3 | 556 | 11.7 | 8.9 |
| | 17-Aug-07 | 7.3 | 615 | 11.2 | 8.5 |
| | 24-Aug-07 | 7.9 | 598 | 13.4 | 7.8 |
| | 30-Aug-07 | 7.7 | 624 | 12.7 | 7.4 |
| | 7-Sep-07 | 7.4 | 629 | 12.9 | 6.4 |
| | 14-Sep-07 | 7.2 | 630 | 11.9 | 7.6 |
| | 21-Sep-07 | 8.4 | 619 | 12.1 | 7.4 |
| | 28-Sep-07 | 8.5 | 615 | 12.3 | 6.4 |
| | 5-Oct-07 | 7.1 | 671 | 12.2 | 2.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 12-Oct-07 | 7.1 | 687 | 10.6 | 7.4 |
| **(cont'd)** | 19-Oct-07 | 7.7 | 669 | 12.4 | 6.2 |
| | 26-Oct-07 | 7.7 | 670 | 12.0 | 6.4 |
| | 2-Nov-07 | 7.3 | 732 | 10.9 | 5.8 |
| | 9-Nov-07 | 7.3 | 752 | 9.1 | 7.0 |
| | 16-Nov-07 | 7.1 | 852 | 8.0 | 7.7 |
| | 23-Nov-07 | 8.2 | 781 | 3.8 | 10.5 |
| | 30-Nov-07 (3) | | | | |
| | 7-Dec-07 | 8.2 | 640 | 5.2 | 11.1 |
| | 14-Dec-07 | 8.0 | 646 | 4.6 | 11.6 |
| | 20-Dec-07 (2) | | | | |
| | 28-Dec-07 | 6.4 | | 6.6 | 9.7 |
| | 4-Jan-08 | 7.0 | 612 | 4.8 | 12.5 |
| | 11-Jan-08 | 7.1 | 418 | 5.6 | 12.0 |
| | 18-Jan-08 | 7.1 | 525 | 5.0 | 12.2 |
| | 25-Jan-08 | 7.7 | 517 | 5.2 | 11.9 |
| | 1-Feb-08 | 7.3 | 533 | 5.0 | 11.7 |
| | 8-Feb-08 | 6.8 | 563 | 5.7 | 11.9 |
| | 15-Feb-08 | 7.3 | 564 | 4.9 | |
| | 22-Feb-08 | 7.2 | 535 | 5.5 | |
| | 29-Feb-08 | 7.0 | 511 | 4.1 | |
| | 7-Mar-08 | 6.8 | 454 | 5.3 | |
| | 14-Mar-08 | 6.0 | 552 | 5.1 | |
| | 20-Mar-08 | 7.7 | 578 | 5.1 | 11.9 |
| | 28-Mar-08 | 7.3 | 485 | 5.3 | |
| | 4-Apr-08 | 6.9 | 476 | 4.7 | 12.5 |
| | 11-Apr-08 | 6.9 | 412 | 4.4 | 12.9 |
| | 15-Apr-08 | 7.7 | 427 | 5.5 | 12.2 |
| | 18-Apr-08 | 6.5 | 434 | 6.1 | 10.1 |
| | 25-Apr-08 | 8.3 | 463 | 6.5 | 11.1 |
| | 2-May-08 | 7.3 | 560 | 6.3 | 11.4 |
| | 8-May-08 | 6.7 | 544 | 6.4 | |
| | 15-May-08 | 7.4 | 551 | 9.8 | 10.5 |
| | 23-May-08 | 8.0 | 497 | 7.6 | 9.4 |
| | 30-May-08 | 6.7 | 700 | 13.7 | 7.3 |
| | 6-Jun-08 | 6.7 | 611 | 11.9 | 7.6 |
| | 13-Jun-08 | 6.2 | 518 | 9.0 | 9.2 |
| | 20-Jun-08 | 8.2 | 540 | 8.7 | 8.6 |
| | 27-Jun-08 | 6.7 | 587 | 9.3 | 8.1 |
| | 4-Jul-08 | 7.4 | 609 | 9.2 | 7.5 |
| | 11-Jul-08 | 6.9 | 565 | 9.9 | 8.9 |
| | 18-Jul-08 | 7.2 | 593 | 10.7 | 6.8 |
| | 25-Jul-08 | 7.9 | 628 | 9.4 | 7.1 |
| | 1-Aug-08 | 7.8 | 580 | 10.2 | 7.0 |
| | 8-Aug-08 | 7.3 | 599 | 10.8 | 6.2 |
| | 15-Aug-08 | 7.1 | 657 | 9.6 | 7.0 |
| | 22-Aug-08 | 6.1 | 651 | 12.9 | 5.2 |
| | 28-Aug-08 | 6.9 | | 10.5 | 8.8 |
| | 5-Sep-08 | 7.5 | 570 | 11.6 | 7.8 |
| | 12-Sep-08 | 7.6 | 575 | 11.0 | 6.2 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 19-Sep-08 | 7.9 | 401 | 9.8 | 5.6 |
| (cont'd) | 26-Sep-08 | 7.5 | 585 | 10.0 | 5.8 |
| | 3-Oct-08 | 7.2 | 604 | 9.0 | 8.6 |
| | 10-Oct-08 | 7.3 | 598 | 9.2 | 8.7 |
| | 17-Oct-08 | 7.4 | 536 | 8.7 | 6.0 |
| | 24-Oct-08 | 7.7 | 549 | 7.9 | 6.2 |
| | 31-Oct-08 | 8.4 | 520 | 8.6 | 7.1 |
| | 7-Nov-08 | 6.6 | 526 | 9.5 | 9.2 |
| | 14-Nov-08 | 7.3 | 475 | 9.2 | 9.0 |
| | 21-Nov-08 (2) | | | | |
| | 28-Nov-08 (2) | | | | |
| | 30-Nov-08 (2) | | | | |
| | 12-Dec-08 | 8.7 | 548 | 6.7 | 9.4 |
| | 23-Dec-08 | 7.8 | 475 | 4.5 | 7.9 |
| | 29-Dec-08 | 7.6 | 449 | 5.1 | 9.9 |
| | 16-Jan-09 | 7.8 | 542 | 4.7 | 9.7 |
| | 23-Jan-09 | 7.8 | 530 | 5.5 | 8.9 |
| | 30-Jan-09 | 8.0 | 526 | 4.9 | 9.1 |
| | 6-Feb-09 | | 477 | 4.8 | 9.6 |
| | 13-Feb-09 | 7.8 | 444 | 5.0 | 6.2 |
| | 20-Feb-09 | 8.0 | 476 | 5.1 | |
| | 27-Feb-09 | 7.9 | 515 | 4.5 | |
| | 6-Mar-09 | | 503 | 6.0 | |
| | 13-Mar-09 | 7.9 | 441 | 4.3 | |
| | 20-Mar-09 | 7.8 | 442 | 4.5 | |
| | 27-Mar-09 | | 544 | | |
| | 3-Apr-09 | 7.4 | 493 | 5.5 | |
| | 9-Apr-09 | 7.6 | 458 | 4.7 | |
| | 17-Apr-09 | 7.8 | 513 | 5.2 | |
| | 24-Apr-09 | 7.7 | 507 | 5.8 | |
| | 1-May-09 | 7.3 | 396 | 8.2 | 11.6 |
| | 8-May-09 | 7.4 | 509 | 7.4 | |
| | 15-May-09 | 7.7 | 440 | 7.7 | 11.5 |
| | 22-May-09 | 8.1 | 344 | 7.0 | 11.6 |
| | 29-May-09 | 7.7 | 556 | 7.3 | |
| | 5-Jun-09 | 7.0 | 496 | 7.5 | 11.9 |
| | 12-Jun-09 | 8.2 | 564 | 8.5 | 11.6 |
| | 19-Jun-09 | 7.5 | 1,022 | 8.9 | 11.7 |
| | 26-Jun-09 | 7.6 | 565 | 13.0 | 10.0 |
| | 2-Jul-09 | 7.6 | 490 | 8.8 | 11.3 |
| | 10-Jul-09 | | | 9.1 | 11.6 |
| | 17-Jul-09 | 9.4 | 544 | 9.1 | 10.2 |
| | 24-Jul-09 | 8.1 | 551 | 10.7 | 9.9 |
| | 31-Jul-09 | 7.7 | 545 | 10.1 | 10.8 |
| | 7-Aug-09 | 8.0 | 597 | 10.1 | 8.5 |
| | 14-Aug-09 | 9.0 | 554 | 10.4 | 10.4 |
| | 21-Aug-09 | 8.2 | 621 | 12.1 | 9.6 |
| | 28-Aug-09 | 8.5 | 559 | 10.7 | 9.2 |
| | 4-Sep-09 | 8.3 | 580 | 10.5 | 9.0 |
| | 11-Sep-09 | 8.8 | 538 | 11.4 | 9.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 18-Sep-09 | 8.1 | 611 | 11.2 | 8.1 |
| (cont'd) | 25-Sep-09 | 7.4 | 542 | 11.3 | 9.3 |
| | 2-Oct-09 | 8.8 | 676 | 9.4 | |
| | 9-Oct-09 | 7.8 | 659 | 9.9 | 11.0 |
| | 16-Oct-09 | 8.1 | 636 | 6.5 | 12.2 |
| | 23-Oct-09 | 8.0 | 587 | 7.3 | 10.9 |
| | 30-Oct-09 | 7.9 | 595 | 9.2 | 11.5 |
| | 6-Nov-09 | 7.2 | 623 | 7.3 | |
| | 13-Nov-09 | 7.7 | 634 | 7.8 | |
| | 20-Nov-09 | 7.7 | 544 | 7.7 | |
| | 27-Nov-09 | 7.8 | 523 | 7.0 | |
| | 4-Dec-09 | 7.5 | 524 | 6.5 | 11.7 |
| | 11-Dec-09 | 7.9 | 483 | 4.8 | |
| | 18-Dec-09 | 7.9 | 561 | 4.2 | 12.1 |
| | 22-Dec-09 | 8.7 | 557 | 4.5 | |
| | 28-Dec-09 | 7.6 | 585 | 5.0 | |
| | 8-Jan-10 | 8.5 | 512 | 2.4 | 12.1 |
| | 15-Jan-10 | 8.8 | 487 | 5.5 | 12.7 |
| | 22-Jan-10 | 8.3 | 548 | 3.8 | 12.7 |
| | 29-Jan-10 | 8.2 | 581 | 3.7 | 12.7 |
| | 5-Feb-10 | 6.4 | 553 | 5.2 | 12.6 |
| | 12-Feb-10 | 6.6 | 562 | 5.3 | 12.6 |
| | 19-Feb-10 | 7.6 | 504 | 4.9 | 11.3 |
| | 1-Mar-10 | 8.2 | 377 | 4.7 | 12.4 |
| | 5-Mar-10 | 7.4 | 522 | 5.6 | 11.7 |
| | 12-Mar-10 | 7.9 | 659 | 6.2 | 12.1 |
| | 19-Mar-10 | 7.6 | 464 | 5.4 | 12.8 |
| | 26-Mar-10 | 7.5 | 423 | 4.6 | 12.6 |
| | 2-Apr-10 | 7.0 | 440 | 6.0 | |
| | 9-Apr-10 | 7.2 | 543 | 5.6 | 12.2 |
| | 16-Apr-10 | 7.6 | 370 | 6.5 | 12.4 |
| | 23-Apr-10 | 7.7 | 344 | 6.1 | 12.7 |
| | 30-Apr-10 | 7.6 | 346 | 7.0 | 12.1 |
| | 7-May-10 | 7.7 | 348 | 7.2 | |
| | 14-May-10 | 7.7 | 345 | 10.0 | 11.4 |
| | 21-May-10 | 7.6 | 357 | 7.9 | 11.8 |
| | 28-May-10 | 7.6 | 339 | 9.0 | 11.8 |
| | 4-Jun-10 | 7.7 | 395 | 7.9 | 7.8 |
| | 11-Jun-10 | 7.6 | 337 | 8.1 | 8.3 |
| | 18-Jun-10 | 7.6 | 407 | 8.3 | 13.8 |
| | 25-Jun-10 | 7.7 | 391 | 8.7 | 11.5 |
| | 1-Jul-10 | 7.7 | 362 | 8.6 | 11.4 |
| | 9-Jul-10 | 7.7 | 441 | 9.8 | 10.8 |
| | 15-Jul-10 | 7.6 | 434 | 10.9 | 10.4 |
| | 23-Jul-10 | 7.6 | 449 | 10.2 | 13.5 |
| | 30-Jul-10 | 7.6 | 366 | 9.9 | 10.5 |
| | 6-Aug-10 | 7.7 | 423 | 10.3 | |
| | 13-Aug-10 | 7.6 | 436 | 10.5 | 7.8 |
| | 20-Aug-10 | 7.5 | 435 | 10.4 | 9.5 |
| | 27-Aug-10 | 7.5 | 306 | 10.9 | 9.6 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 3-Sep-10 | 7.7 | 452 | 12.4 | 9.3 |
| (cont'd) | 10-Sep-10 | 7.6 | 367 | 11.3 | 9.8 |
| | 17-Sep-10 | 7.6 | 385 | 10.3 | 9.5 |
| | 24-Sep-10 | 7.6 | | 12.4 | 9.1 |
| | 1-Oct-10 | 7.6 | 443 | 10.2 | 9.9 |
| | 8-Oct-10 | 7.4 | 446 | 10.1 | 9.1 |
| | 15-Oct-10 | 7.4 | 436 | 10.1 | 9.2 |
| | 22-Oct-10 | 7.6 | 429 | 7.8 | 10.3 |
| | 29-Oct-10 | 7.5 | 376 | 8.9 | 9.3 |
| | 5-Nov-10 | 7.6 | 477 | 7.9 | 10.3 |
| | 12-Nov-10 | 7.5 | 484 | 9.1 | 10.5 |
| | 19-Nov-10 | 7.7 | 385 | 8.6 | 10.9 |
| | 26-Nov-10 | 7.5 | 377 | 7.7 | 10.8 |
| | 3-Dec-10 | 7.5 | 399 | 7.8 | 10.1 |
| | 9-Dec-10 | 7.5 | 337 | 6.8 | 10.8 |
| | 17-Dec-10 | 7.7 | 406 | 7.1 | 11.3 |
| | 23-Dec-10 | 8.0 | 339 | 5.0 | 11.0 |
| | 30-Dec-10 | 7.9 | 385 | 7.0 | 10.5 |
| | 7-Jan-11 | 7.7 | 307 | 6.1 | 12.2 |
| | 14-Jan-11 | 7.5 | 321 | 6.3 | 11.5 |
| | 21-Jan-11 | 7.6 | 318 | 5.0 | 10.4 |
| | 28-Jan-11 | 7.8 | 333 | 5.9 | 11.3 |
| | 4-Feb-11 | 7.8 | 290 | 2.3 | 10.4 |
| | 11-Feb-11 | 7.8 | 310 | 2.3 | 10.6 |
| | 18-Feb-11 | 7.8 | 329 | 2.5 | 11.3 |
| | 25-Feb-11 | 7.6 | 316 | 4.2 | 12.3 |
| | 4-Mar-11 | 7.5 | 332 | 5.9 | 12.1 |
| | 11-Mar-11 | 7.5 | 341 | 5.0 | 12.5 |
| | 18-Mar-11 | 7.6 | 298 | 5.6 | |
| | 22-Mar-11 | 7.7 | 356 | 5.3 | 10.8 |
| | 25-Mar-11 | 7.7 | 342 | 5.8 | 12.3 |
| | 1-Apr-11 | 7.4 | 327 | 5.4 | 12.4 |
| | 8-Apr-11 | 7.4 | 320 | 5.2 | 12.8 |
| | 15-Apr-11 | 7.4 | 249 | 5.4 | 10.8 |
| | 21-Apr-11 | 7.8 | 338 | 5.3 | 10.6 |
| | 29-Apr-11 | | 328 | 5.5 | 13.2 |
| | 6-May-11 | 8.0 | 265 | 6.4 | 11.6 |
| | 13-May-11 | 8.0 | 274 | 7.6 | 11.8 |
| | 20-May-11 | 7.6 | 298 | 7.1 | 12.0 |
| | 27-May-11 | | 299 | 7.1 | 12.1 |
| | 3-Jun-11 | 7.6 | 309 | 7.9 | 13.6 |
| | 10-Jun-11 | 8.4 | 362 | 7.7 | 11.3 |
| | 17-Jun-11 | 6.7 | 321 | 8.7 | 11.3 |
| | 24-Jun-11 | 7.6 | 386 | 8.7 | 12.4 |
| | 30-Jun-11 | 7.6 | 289 | 9.0 | 11.9 |
| | 8-Jul-11 | 7.5 | 400 | 10.1 | 12.0 |
| | 14-Jul-11 | 6.3 | 403 | 9.3 | 10.8 |
| | 22-Jul-11 | 7.8 | 415 | 11.3 | 13.0 |
| | 29-Jul-11 | 6.7 | 385 | 11.4 | 10.2 |
| | 5-Aug-11 | 6.9 | 416 | 12.0 | 10.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 (cont'd) | 12-Aug-11 | 7.9 | 435 | 10.9 | 9.1 |
| | 19-Aug-11 | 8.0 | 246 | 11.4 | 8.6 |
| | 26-Aug-11 | 7.7 | 388 | 12.2 | 8.2 |
| | 2-Sep-11 | 7.8 | 398 | 3.3 | 8.7 |
| | 9-Sep-11 | 7.7 | 421 | 11.7 | 7.8 |
| | 16-Sep-11 | 7.6 | 374 | 10.5 | 7.8 |
| | 23-Sep-11 | 7.9 | 396 | 11.7 | 5.9 |
| | 30-Sep-11 | 8.0 | 416 | 11.6 | 9.6 |
| | 6-Oct-11 | 7.8 | 490 | 10.0 | 8.7 |
| | 14-Oct-11 | 7.8 | 402 | 11.9 | 7.9 |
| | 21-Oct-11 | 7.8 | 461 | 9.9 | 9.5 |
| | 28-Oct-11 | 9.8 | 433 | 9.7 | 9.6 |
| | 4-Nov-11 | 7.8 | 365 | 8.7 | 9.8 |
| | 11-Nov-11 | 7.6 | 409 | 7.9 | 4.5 |
| | 18-Nov-11 | 8.3 | 401 | 6.8 | 10.8 |
| | 25-Nov-11 | 7.8 | 410 | 7.7 | 9.8 |
| | 2-Dec-11 | 8.2 | 373 | 8.0 | 12.1 |
| | 9-Dec-11 | 7.6 | 309 | 7.9 | 9.3 |
| | 16-Dec-11 | 7.4 | 327 | 7.6 | 11.9 |
| | 23-Dec-11 | 8.2 | 299 | 6.8 | 5.1 |
| | 30-Dec-11 | 8.4 | 280 | 7.0 | 11.1 |
| | 6-Jan-12 | 7.4 | 357 | 7.4 | 12.4 |
| | 20-Jan-12 | 8.0 | 293 | 5.5 | 10.1 |
| | 27-Jan-12 | 8.1 | 265 | 6.5 | 11.9 |
| | 3-Feb-12 | 7.8 | 233 | 6.5 | 11.3 |
| | 10-Feb-12 | 8.1 | 292 | 6.0 | 11.6 |
| | 17-Feb-12 | 7.7 | 320 | 6.2 | 13.3 |
| | 24-Feb-12 | 8.3 | 273 | 4.0 | 12.4 |
| | 1-Mar-12 | 8.0 | 323 | 5.6 | |
| | 9-Mar-12 | 7.8 | 283 | 6.7 | 11.3 |
| | 16-Mar-12 | 7.8 | 283 | 6.7 | 11.3 |
| | 23-Mar-12 | 7.3 | 268 | 6.3 | 12.4 |
| | 30-Mar-12 | 8.4 | 328 | 6.2 | 12.8 |
| | 6-Apr-12 | 8.6 | 363 | 7.5 | 5.6 |
| | 13-Apr-12 | 8.0 | 358 | 6.6 | 10.5 |
| | 20-Apr-12 | 8.1 | 367 | 7.4 | 9.1 |
| | 27-Apr-12 | 7.9 | 349 | 6.4 | 12.4 |
| | 4-May-12 | 7.9 | 416 | 8.3 | 9.0 |
| | 11-May-12 | 7.6 | 232 | 7.4 | 12.0 |
| | 18-May-12 | 7.7 | 356 | 8.7 | 10.0 |
| | 25-May-12 | 6.5 | 383 | 10.0 | 8.6 |
| | 1-Jun-12 | 7.6 | 334 | 7.9 | 8.3 |
| | 8-Jun-12 | 8.1 | 354 | 9.1 | 9.5 |
| | 15-Jun-12 | 7.6 | 346 | 9.6 | 8.0 |
| | 22-Jun-12 | 7.9 | 486 | 7.0 | 9.1 |
| | 28-Jun-12 | 7.8 | 547 | 10.6 | 6.8 |
| | 6-Jul-12 | 7.7 | 345 | 11.1 | 6.2 |
| | 13-Jul-12 | 8.3 | 409 | 10.7 | 6.1 |
| | 20-Jul-12 | 7.9 | 440 | 11.3 | 6.9 |
| | 27-Jul-12 | 7.8 | 465 | 11.4 | 6.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 (cont'd) | 3-Aug-12 | 7.5 | 460 | 12.0 | 7.4 |
| | 10-Aug-12 | 7.7 | 480 | 13.1 | 7.5 |
| | 17-Aug-12 | 7.9 | 414 | 11.0 | 6.6 |
| | 24-Aug-12 | 7.9 | 430 | 11.4 | 9.6 |
| | 31-Aug-12 | 7.3 | 468 | 12.2 | 6.7 |
| | 7-Sep-12 | 6.9 | 456 | 11.7 | 6.7 |
| | 14-Sep-12 | 7.0 | 466 | 11.7 | 8.5 |
| | 21-Sep-12 | 7.1 | 486 | 10.9 | 8.8 |
| | 28-Sep-12 | 6.6 | 497 | 9.8 | 9.3 |
| | 5-Oct-12 | 7.1 | 535 | 12.0 | 7.7 |
| | 12-Oct-12 | 8.3 | 487 | 8.4 | 9.8 |
| | 19-Oct-12 | 8.4 | 5 | 9.6 | 9.9 |
| | 26-Oct-12 | 7.4 | 460 | 10.0 | 10.2 |
| | 2-Nov-12 | 6.5 | 410 | 8.7 | 6.9 |
| | 9-Nov-12 | 8.2 | 378 | 8.9 | 9.8 |
| | 16-Nov-12 | 8.3 | 403 | 8.9 | 10.1 |
| | 23-Nov-12 | 7.6 | 388 | 8.7 | 7.1 |
| | 30-Nov-12 | 7.5 | 363 | 8.4 | 6.0 |
| | 7-Dec-12 | 7.4 | 452 | 7.9 | 6.8 |
| | 14-Dec-12 | 7.7 | 384 | 7.8 | 10.6 |
| | 21-Dec-12 | 7.3 | 424 | 6.7 | 11.7 |
| | 28-Dec-12 | 7.4 | 381 | 6.8 | 11.4 |
| | 4-Jan-13 | 7.6 | 422 | 5.9 | 10.1 |
| | 11-Jan-13 | 7.5 | 623 | 5.4 | 9.9 |
| | 17-Jan-13 | 7.7 | 400 | 6.0 | 10.4 |
| | 25-Jan-13 | 7.7 | 416 | 6.2 | 4.0 |
| | 1-Feb-13 | 7.9 | 298 | 5.5 | 12.0 |
| | 8-Feb-13 | 7.6 | 314 | 4.9 | 13.1 |
| | 15-Feb-13 | 7.5 | 509 | 5.0 | 11.7 |
| | 22-Feb-13 | 7.5 | 331 | 4.6 | 9.4 |
| | 1-Mar-13 | 7.7 | 413 | 5.8 | 9.0 |
| | 8-Mar-13 | 7.7 | 362 | 6.7 | 11.8 |
| | 15-Mar-13 | | 342 | 5.4 | 9.5 |
| | 22-Mar-13 | 7.6 | 411 | 4.9 | 12.5 |
| | 28-Mar-13 | 7.7 | 340 | 6.1 | 11.8 |
| | 5-Apr-13 | 7.7 | 389 | 5.3 | 10.0 |
| | 12-Apr-13 | 7.7 | 373 | 5.3 | 10.0 |
| | 19-Apr-13 | 7.3 | 311 | 6.8 | 5.9 |
| | 26-Apr-13 | 7.4 | 309 | 5.8 | 10.1 |
| | 3-May-13 | 7.9 | 312 | 7.8 | 9.9 |
| | 9-May-13 | 7.6 | 358 | 7.0 | |
| | 16-May-13 | 7.6 | 342 | 7.4 | 11.3 |
| | 24-May-13 | 7.7 | 393 | 6.3 | 10.4 |
| | 31-May-13 | 7.7 | 364 | 8.4 | 8.5 |
| | 7-Jun-13 | | 330 | 7.5 | 9.5 |
| | 14-Jun-13 | 7.7 | 393 | 10.3 | 8.5 |
| | 21-Jun-13 | 7.9 | 409 | 8.6 | 12.6 |
| | 27-Jun-13 | 7.9 | 423 | 8.6 | 11.1 |
| | 5-Jul-13 | 7.6 | 427 | 9.5 | 10.7 |
| | 12-Jul-13 | 7.5 | 447 | 9.6 | 10.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 19-Jul-13 | 7.5 | 456 | 9.5 | 10.0 |
| **(cont'd)** | 25-Jul-13 | 7.5 | 451 | 9.4 | 8.5 |
| | 2-Aug-13 | 7.5 | 502 | 9.3 | 9.1 |
| | 8-Aug-13 | 7.6 | 508 | 9.2 | 8.6 |
| | 16-Aug-13 | 7.7 | 512 | 9.3 | 8.3 |
| | 23-Aug-13 | 7.6 | 523 | 9.2 | 8.3 |
| | 30-Aug-13 | 7.6 | 546 | 9.3 | 8.1 |
| | 6-Sep-13 | 7.5 | 523 | 9.2 | 8.0 |
| | 13-Sep-13 | 7.5 | 506 | 7.6 | 8.1 |
| | 20-Sep-13 | 7.6 | 523 | 9.3 | 8.1 |
| | 27-Sep-13 | 7.6 | 523 | 9.4 | 7.9 |
| | 4-Oct-13 | 7.5 | 521 | 9.0 | 7.6 |
| | 11-Oct-13 | 7.6 | 530 | 9.5 | 8.0 |
| | 18-Oct-13 | 7.5 | 525 | 9.2 | 7.0 |
| | 25-Oct-13 | 7.4 | 521 | 8.0 | 3.9 |
| | 31-Oct-13 | 7.3 | 516 | 7.6 | 3.8 |
| | 8-Nov-13 | 7.2 | 510 | 7.6 | 5.3 |
| | 14-Nov-13 | 7.2 | 503 | 6.7 | 5.1 |
| | 22-Nov-13 | 7.1 | 510 | 6.8 | 4.9 |
| | 29-Nov-13 | 8.3 | 389 | 7.1 | 2.5 |
| | 6-Dec-13 | 7.6 | 396 | 7.3 | 3.7 |
| | 13-Dec-13 (2) | | | | |
| | 19-Dec-13 (2) | | | | |
| | 27-Dec-13 (2) | | | | |
| | 3-Jan-14 | | | | |
| | 10-Jan-14 | 8.2 | 350 | 4.3 | 4.1 |
| | 17-Jan-14 | 7.8 | 276 | 5.4 | 7.1 |
| | 31-Jan-14 | 7.1 | 380 | 2.7 | 4.3 |
| | 7-Feb-14 | 7.0 | 394 | 4.6 | 3.3 |
| | 21-Feb-14 | | | | |
| | 28-Feb-14 | | | | |
| | 7-Mar-14 | 7.3 | 370 | 2.0 | 7.0 |
| | 14-Mar-14 | 6.3 | 402 | 3.6 | 9.3 |
| | 21-Mar-14 | 7.3 | 276 | 4.1 | 5.4 |
| | 28-Mar-14 | 6.8 | 591 | 4.6 | 11.6 |
| | 4-Apr-14 | 7.6 | 387 | 4.8 | 10.8 |
| | 11-Apr-14 | 7.5 | 429 | 5.2 | 11.5 |
| | 17-Apr-14 | 7.6 | 533 | 5.4 | 9.9 |
| | 25-Apr-14 | 7.5 | 530 | 5.3 | 9.9 |
| | 1-May-14 | 7.5 | 486 | 5.6 | 10.0 |
| | 9-May-14 | 7.2 | 473 | 7.6 | 6.9 |
| | 16-May-14 | 7.2 | 456 | 7.5 | 6.2 |
| | 23-May-14 | 7.2 | 463 | 7.6 | 6.3 |
| | 30-May-14 | 7.6 | 450 | 7.8 | 6.8 |
| | 6-Jun-14 | 7.2 | 461 | 9.0 | 6.2 |
| | 13-Jun-14 | 7.2 | 460 | 8.9 | 6.4 |
| | 20-Jun-14 | 7.2 | 456 | 8.9 | 7.0 |
| | 28-Jun-14 | 7.1 | 450 | 9.8 | 7.6 |
| | 4-Jul-14 | 7.1 | 448 | 9.8 | 7.8 |
| | 11-Jul-14 | 7.1 | 426 | 9.9 | 7.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 18-Jul-14 | 8.4 | 535 | 9.7 | |
| (cont'd) | 25-Jul-14 | 8.7 | 532 | 10.2 | |
| | 1-Aug-14 | 8.6 | 478 | 10.2 | 7.9 |
| | 8-Aug-14 | 8.5 | 463 | 10.2 | 7.6 |
| | 15-Aug-14 | 8.2 | 456 | 10.0 | 7.5 |
| | 22-Aug-14 | 8.7 | 598 | 11.1 | |
| | 29-Aug-14 | 8.5 | 608 | 11.1 | |
| | 5-Sep-14 | 8.8 | 635 | 12.7 | |
| | 12-Sep-14 | 8.1 | 625 | 10.5 | 6.2 |
| | 19-Sep-14 | 8.0 | 420 | 10.0 | 6.2 |
| | 26-Sep-14 | 8.1 | 427 | 10.0 | 6.9 |
| | 3-Oct-14 | 7.6 | 463 | 9.9 | 4.9 |
| | 10-Oct-14 | 7.5 | 460 | 10.2 | 5.6 |
| | 16-Oct-14 | 7.5 | 456 | 9.9 | 5.9 |
| | 24-Oct-14 | 7.6 | 416 | 7.9 | 6.9 |
| | 31-Oct-14 | 7.4 | 423 | 7.6 | 6.0 |
| | 7-Nov-14 | 7.2 | 428 | 0.5 | 4.0 |
| | 14-Nov-14 | 7.3 | 431 | 1.0 | 4.2 |
| | 20-Nov-14 | 7.2 | 420 | 0.2 | 4.1 |
| | 28-Nov-14 | 7.2 | 416 | 0.1 | 5.3 |
| | 5-Dec-14 | 7.3 | 425 | 4.4 | 7.0 |
| | 12-Dec-14 | 7.2 | 431 | 3.3 | 6.9 |
| | 19-Dec-14 | 7.2 | 425 | 3.5 | 6.2 |
| | 26-Dec-14 | 7.2 | 469 | 4.5 | 7.9 |
| | 2-Jan-15 | 7.2 | 432 | 1.4 | 7.9 |
| | 8-Jan-15 | 7.3 | 432 | 1.3 | 6.9 |
| | 14-Jan-15 | 7.2 | 416 | 2.3 | 7.1 |
| | 23-Jan-15 | 7.2 | 402 | 3.4 | 7.1 |
| | 30-Jan-15 | 8.0 | 503 | 2.7 | 12.5 |
| | 6-Feb-15 | 7.9 | 513 | 4.0 | 11.7 |
| | 12-Feb-15 | 7.6 | 508 | 2.0 | 11.5 |
| | 27-Feb-15 | 7.8 | 379 | 3.2 | 13.0 |
| | 6-Mar-15 | 7.7 | 509 | 2.3 | 11.9 |
| | 13-Mar-15 | 7.7 | 361 | 6.1 | 10.3 |
| | 20-Mar-15 | 7.8 | 431 | 7.1 | 10.1 |
| | 26-Mar-15 | 7.9 | 409 | 5.9 | 10.8 |
| | 2-Apr-15 | 7.8 | 406 | 5.8 | 11.4 |
| | 10-Apr-15 | 7.6 | 270 | 6.2 | 11.5 |
| | 17-Apr-15 | 8.5 | 299 | 5.7 | |
| | 23-Apr-15 | 7.8 | 386 | 5.0 | 13.9 |
| | 1-May-15 | 7.6 | 257 | 6.1 | 12.8 |
| | 8-May-15 | 8.9 | 400 | 8.5 | |
| | 15-May-15 | 7.7 | 358 | 7.9 | 12.6 |
| | 21-May-15 | 7.8 | 355 | 7.2 | 14.4 |
| | 28-May-15 | 7.7 | 390 | 9.0 | 11.5 |
| | 4-Jun-15 | 7.8 | 389 | 8.8 | 11.3 |
| | 12-Jun-15 | 7.6 | 440 | 8.8 | 9.5 |
| | 18-Jun-15 | 7.7 | 494 | 10.2 | 9.4 |
| | 26-Jun-15 | 7.5 | 495 | 13.5 | |
| | 1-Jul-15 | 7.6 | 420 | 9.0 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 10-Jul-15 | 7.7 | 409 | 9.1 | |
| (cont'd) | 17-Jul-15 | 7.9 | 401 | 9.2 | |
| | 22-Jul-15 | 7.5 | 478 | 12.2 | |
| | 30-Jul-15 | 7.9 | 463 | 14.3 | |
| | 5-Aug-15 | 7.6 | 492 | 10.4 | 9.0 |
| | 13-Aug-15 | 8.0 | 497 | 11.4 | 9.1 |
| | 21-Aug-15 | 7.6 | 431 | 11.9 | 8.8 |
| | 28-Aug-15 | 8.4 | 444 | | |
| | 3-Sep-15 | 8.1 | 487 | 12.0 | 11.6 |
| | 10-Sep-15 | 7.5 | 513 | 12.5 | 9.4 |
| | 18-Sep-15 | 7.5 | 484 | 11.5 | 9.7 |
| | 25-Sep-15 | 7.5 | 487 | 11.4 | 9.0 |
| | 2-Oct-15 | 7.1 | 461 | 10.8 | 8.0 |
| | 9-Oct-15 | 7.1 | 457 | 11.0 | 7.0 |
| | 16-Oct-15 | 7.5 | 454 | 10.7 | 7.8 |
| | 23-Oct-15 | 7.3 | 467 | 10.5 | 8.0 |
| | 30-Oct-15 | 7.1 | 556 | 10.0 | 7.7 |
| | 5-Nov-15 | 7.9 | 518 | 10.3 | 7.5 |
| | 13-Nov-15 | 7.3 | 230 | 8.2 | 8.0 |
| | 19-Nov-15 | 7.4 | 563 | 9.6 | 10.5 |
| | 26-Nov-15 | 7.2 | 523 | 6.5 | 12.5 |
| | 4-Dec-15 | 7.3 | 460 | 7.2 | 12.2 |
| | 10-Dec-15 | 7.1 | 526 | 7.8 | 9.9 |
| | 17-Dec-15 | 7.6 | 460 | 7.3 | 10.9 |
| | 23-Dec-15 | 7.5 | 470 | 8.2 | 11.3 |
| | 30-Dec-15 | 7.5 | 439 | 6.5 | 12.1 |
| | 8-Jan-16 | 7.3 | 427 | 6.0 | 12.3 |
| | 14-Jan-16 | 7.2 | 360 | 5.6 | 12.2 |
| | 22-Jan-16 | 7.5 | 443 | 1.1 | 13.0 |
| | 29-Jan-16 | 7.3 | 430 | 3.5 | 12.1 |
| | 5-Feb-16 | 7.2 | 458 | 6.0 | 12.0 |
| | 11-Feb-16 | 7.4 | 438 | 4.0 | 12.9 |
| | 18-Feb-16 | 7.7 | 474 | 5.8 | 13.0 |
| | 25-Feb-16 | 7.6 | 450 | 4.5 | 12.4 |
| | 4-Mar-16 | 7.1 | 430 | 3.4 | 12.7 |
| | 10-Mar-16 | 7.2 | 243 | 6.0 | 12.4 |
| | 18-Mar-16 | 7.5 | 379 | 5.5 | 13.1 |
| | 28-Mar-16 | 6.9 | 229 | 4.2 | 11.8 |
| | 1-Apr-16 | 7.2 | 234 | 5.5 | 11.5 |
| | 7-Apr-16 | 7.2 | 313 | 5.1 | 10.9 |
| | 15-Apr-16 | 7.2 | 314 | 6.1 | 11.9 |
| | 22-Apr-16 | 7.8 | 344 | 6.5 | 12.1 |
| | 29-Apr-16 | 7.9 | 397 | 6.2 | 13.6 |
| | 6-May-16 | 7.9 | 397 | 7.3 | 11.9 |
| | 13-May-16 | 7.8 | 546 | 9.0 | |
| | 20-May-16 (3) | 7.8 | 546 | 9.0 | |
| | 27-May-16 | 7.8 | 423 | 9.0 | 10.1 |
| | 2-Jun-16 | 7.8 | 427 | 9.1 | 9.6 |
| | 10-Jun-16 | 7.7 | 587 | 7.9 | 10.5 |
| | 17-Jun-16 | 7.6 | 486 | 12.1 | 9.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 24-Jun-16 | 7.5 | 445 | 8.8 | 9.3 |
| **(cont'd)** | 28-Jun-16 | 7.6 | 460 | 9.6 | 14.0 |
| | 8-Jul-16 | 7.5 | 491 | 9.3 | 12.0 |
| | 15-Jul-16 | 7.7 | 405 | 9.7 | 9.7 |
| | 22-Jul-16 | 7.4 | 475 | 10.1 | 9.5 |
| | 29-Jul-16 | 7.4 | 453 | 10.3 | 9.2 |
| | 5-Aug-16 | 7.9 | 209 | 12.0 | 9.9 |
| | 12-Aug-16 | 7.6 | 489 | 11.1 | 9.0 |
| | 19-Aug-16 | 7.6 | 486 | 11.2 | 7.9 |
| | 26-Aug-16 | 7.6 | 468 | 11.5 | 8.5 |
| | 2-Sep-16 | 7.1 | 126 | 12.1 | 4.0 |
| | 9-Sep-16 | 7.6 | 444 | 11.8 | 8.0 |
| | 16-Sep-16 | 7.6 | 436 | 11.6 | 8.5 |
| | 21-Sep-16 | 7.3 | 346 | 11.9 | 9.5 |
| | 30-Sep-16 | 7.5 | 437 | 11.8 | 8.2 |
| | 7-Oct-16 | 7.5 | 439 | 11.9 | 8.9 |
| | 13-Oct-16 | 7.5 | 400 | 11.5 | 9.5 |
| | 19-Oct-16 | 7.7 | 486 | 11.6 | 11.8 |
| | 24-Oct-16 | 7.4 | 496 | 11.0 | 8.6 |
| | 27-Oct-16 | 7.8 | 433 | 10.4 | 8.3 |
| | 3-Nov-16 | 7.6 | 595 | 10.7 | 10.4 |
| | 11-Nov-16 | 6.1 | 421 | 9.7 | 11.2 |
| | 18-Nov-16 | 7.6 | 616 | 10.1 | 9.3 |
| | 24-Nov-16 | 7.6 | 448 | 9.2 | 9.7 |
| | 2-Dec-16 | 7.7 | 540 | 9.2 | 5.9 |
| | 7-Dec-16 | 7.7 | 520 | 8.8 | 6.2 |
| | 16-Dec-16 | 7.6 | 719 | 8.3 | 10.5 |
| | 22-Dec-16 | 7.2 | 7 | 7.9 | 10.9 |
| | 30-Dec-16 | 7.1 | 600 | 7.5 | 10.4 |
| | 6-Jan-17 | 7.6 | 256 | 4.3 | 11.7 |
| | 13-Jan-17 | 7.5 | 498 | 5.6 | 11.6 |
| | 20-Jan-17 | 7.8 | 520 | 4.7 | 12.6 |
| | 26-Jan-17 | 7.8 | 544 | 6.3 | 11.8 |
| | 3-Feb-17 | 7.9 | 460 | 3.8 | 12.5 |
| | 10-Feb-17 | 7.8 | 424 | 4.0 | 13.5 |
| | 17-Feb-17 | 7.9 | 510 | 3.3 | 12.8 |
| | 19-Apr-17 | 7.0 | 461 | 8.6 | 15.2 |
| | 9-May-17 | 8.1 | 328 | 8.1 | 14.9 |
| | 16-May-17 | 7.9 | 612 | 8.3 | 11.6 |
| | 28-Jun-17 | 7.6 | 456 | 9.4 | 10.1 |
| | 18-Jul-17 | 7.7 | 496 | 11.8 | 12.3 |
| | 15-Aug-17 | 8.2 | 403 | 10.6 | 9.7 |
| | 18-Sep-17 | 6.5 | 513 | 10.8 | 8.9 |
| | 18-Oct-17 | 7.7 | 509 | 9.8 | 9.1 |
| | 15-Nov-17 | 7.6 | 498 | 7.7 | 8.9 |
| | 13-Dec-17 (2) | | | | |
| | 17-Jan-18 | 7.7 | 410 | 4.6 | 10.5 |
| | 22-Feb-18 | 7.6 | 350 | 6.2 | 10.7 |
| | 20-Mar-18 | 7.6 | 418 | 3.1 | 15.7 |
| | 18-Apr-18 | 8.1 | 695 | 4.9 | 12.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW2 | 8-May-18 | 7.3 | 633 | 5.9 | 10.3 |
| (cont'd) | 14-May-18 | 7.5 | 633 | 7.9 | 10.6 |
| | 18-Jun-18 | 7.5 | 649 | 9.2 | 9.2 |
| | 19-Jul-18 | 7.3 | 643 | 9.6 | 9.2 |
| | 23-Aug-18 | 7.4 | 704 | 11.2 | 7.8 |
| | 19-Sep-18 | 7.5 | 622 | 11.7 | 8.4 |
| | 24-Oct-18 | 7.6 | 655 | 10.1 | 8.4 |
| | 21-Nov-18 | 7.4 | | 5.8 | 9.5 |
| | 12-Dec-18 | 7.8 | 696 | 6.3 | 10.2 |
| | 18-Jan-19 | 7.7 | 662 | 4.2 | 11.3 |
| | 26-Feb-19 | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.7 | 538 | 5.2 | 11.0 |
| | 14-May-19 | 7.8 | 554 | 6.7 | 11.2 |
| | 23-May-19 | 7.7 | 538 | 7.7 | 10.1 |
| | 18-Jun-19 | 7.7 | 583 | 9.3 | 9.8 |
| | 29-Jul-19 | 7.5 | 585 | 10.0 | 8.9 |
| | 29-Aug-19 | 7.5 | 1,120 | 10.7 | 8.7 |
| | 26-Sep-19 | 7.1 | 565 | 11.4 | 8.2 |
| | 23-Oct-19 | 8.0 | 600 | 10.4 | 8.0 |
| | 22-Nov-19 | | | | |
| | 20-Dec-19 | | | | |
| | 15-Jan-20 | 8.0 | 456 | 1.2 | 7.6 |
| | 20-Feb-20 | | | | |
| | 26-Mar-20 | 7.6 | 601 | 6.1 | 11.4 |
| | 27-Apr-20 | 7.7 | 457 | 6.7 | 10.7 |
| | 19-May-20 | 8.0 | (6) | | |
| | 29-May-20 | 8.4 | 588 | 9.2 | 9.8 |
| | 23-Jun-20 | 7.7 | 610 | 8.7 | 9.3 |
| | 30-Jul-20 | 7.9 | 712 | 11.0 | 8.2 |
| | 25-Aug-20 | 7.2 | 631 | 11.3 | 8.3 |
| | 25-Sep-20 | 7.8 | 530 | 11.0 | 9.6 |
| | 30-Oct-20 | 7.8 | 510 | 9.4 | 7.1 |
| | 26-Nov-20 | 7.8 | 545 | 5.3 | 12.1 |
| | 23-Dec-20 | 7.5 | 675 | 5.5 | 8.6 |
| | 27-Jan-21 | 8.0 | 358 | 0.1 | 7.6 |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.6 | 547 | 7.0 | 13.3 |
| | 27-Apr-21 | 7.6 | 538 | 7.4 | 13.0 |
| | 27-May-21 | 7.4 | 640 | 8.4 | 13.7 |
| | 22-Jun-21 | 7.6 | 672 | 8.8 | 9.5 |
| | 22-Jul-21 | 7.8 | 742 | 10.3 | 8.9 |
| | 25-Aug-21 | 7.3 | 738 | 11.9 | 10.5 |
| | 28-Sep-21 | 7.3 | 714 | 9.6 | |
| | 26-Oct-21 | 7.4 | 659 | 10.3 | 9.4 |
| | 23-Nov-21 | 7.3 | 451 | 5.7 | (6) |
| | 21-Dec-21 | 7.6 | 498 | 5.5 | 8.1 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 | 8.4 | 589 | 6.1 | 12.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW2** | 21-Apr-22 | 8.0 | 546 | 0.1 | 10.5 |
| **(cont'd)** | 26-May-22 | 7.5 | 692 | 10.2 | 9.4 |
| | 25-Jun-22 | 7.4 | 687 | 7.8 | 6.7 |
| | 26-Aug-22 | 7.5 | 702 | 13.5 | 6.1 |
| | 27-Sep-22 | 7.4 | 759 | 12.0 | 4.7 |
| | 26-Oct-22 | 7.7 | 612 | 10.6 | 8.0 |
| | 21-Nov-22 | 8.0 | 600 | 6.3 | 8.9 |
| | 20-Dec-22 | 7.8 | 461 | 5.6 | 8.3 |
| | 24-Jan-23 | 7.2 | 744 | 4.5 | 11.8 |
| | 22-Feb-23 | 7.5 | 740 | 3.6 | 12.7 |
| | 27-Mar-23 | 8.7 | 749 | 6.2 | 10.7 |
| | 21-Apr-23 | 6.3 | 608 | 10.7 | 11.8 |
| | 15-May-23 | 7.5 | 631 | 11.5 | 10.0 |
| | 26-Jun-23 | 7.8 | 748 | 10.2 | 6.8 |
| | 25-Jul-23 | 7.5 | 622 | 9.8 | 8.9 |
| | 28-Aug-23 | 7.5 | 618 | 12.9 | 7.6 |
| | 25-Sep-23 | 7.5 | 670 | 11.3 | 8.6 |
| | 30-Oct-23 | 8.2 | 566 | 9.2 | 12.7 |
| | 29-Nov-23 | 7.1 | 796 | 5.9 | 10.5 |
| | 18-Dec-23 | 7.3 | 776 | 7.4 | 10.0 |
| | 31-Jan-24 | 7.4 | 805 | 6.0 | 11.1 |
| | 27-Feb-24 | 7.7 | 826 | 6.6 | 10.8 |
| | 27-Mar-24 | 7.5 | 712 | 6.5 | 11.3 |
| | 29-Apr-24 | 7.5 | 731 | 7.1 | 10.4 |
| | 27-May-24 | 7.4 | 740 | 8.7 | 9.6 |
| | 26-Jun-24 | 7.3 | 802 | 10.1 | 9.3 |
| | 29-Jul-24 | 7.2 | 658 | 11.4 | 9.0 |
| | 26-Aug-24 | 7.6 | 760 | 12.7 | 9.2 |
| | 24-Sep-24 | 7.2 | 775 | 12.5 | 8.8 |
| | 28-Oct-24 | 7.1 | 790 | 10.1 | 9.6 |
| | 18-Nov-24 | 7.4 | 792 | 9.5 | 9.4 |
| | 16-Dec-24 | 7.1 | 796 | 6.8 | 10.3 |
| | 27-Jan-25 (2) | 7.4 | 7 | 4.5 | 11.7 |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | 7.3 | 423 | 5.6 | 7.8 |
| | 28-Apr-25 | 7.1 | 495 | 7.4 | 4.5 |
| | 26-May-25 | 7.8 | 505 | 11.5 | 9.9 |
| | 23-Jun-25 | 7.9 | 737 | 10.3 | 10.2 |
| | 28-Jul-25 | 7.9 | 831 | 11.0 | 9.8 |
| | 25-Aug-25 | 7.6 | 736 | 12.0 | 9.6 |
| | 29-Sep-25 | 7.5 | 812 | 11.3 | 9.6 |
| | 27-Oct-25 | 7.4 | 802 | 10.8 | 9.3 |
| | 25-Nov-25 | 7.6 | 662 | 8.8 | 11.0 |
| | 16-Dec-25 (3) | 7.7 | 694 | 6.1 | 11.6 |
| **SW0-2** | 16-Jul-04 | 7.7 | 769 | 25.4 | 5.7 |
| | 22-Jul-04 | 8.0 | | 29.2 | 7.2 |
| | 29-Jul-04 | 7.9 | 768 | 24.2 | |
| | 6-Aug-04 | 8.2 | 774 | 21.6 | 8.1 |
| | 12-Aug-04 | 8.1 | 683 | 15.5 | |
| | 20-Aug-04 | 8.0 | 801 | 20.0 | 6.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 26-Aug-04 | 8.0 | 785 | 21.5 | |
| **(cont'd)** | 3-Sep-04 | 7.9 | 742 | 23.1 | 6.0 |
| | 9-Sep-04 | 8.3 | 716 | 15.8 | 7.9 |
| | 17-Sep-04 | 7.7 | 691 | 11.9 | 7.9 |
| | 1-Oct-04 | 8.0 | 825 | 17.1 | 8.8 |
| | 7-Oct-04 | 7.9 | 755 | 14.3 | 7.0 |
| | 14-Oct-04 | 7.8 | 709 | 10.2 | 7.9 |
| | 20-Oct-04 | 7.8 | 636 | 7.8 | 11.9 |
| | 28-Oct-04 | 8.0 | 803 | 11.7 | 9.3 |
| | 4-Nov-04 | 7.8 | 493 | 4.1 | 13.0 |
| | 11-Nov-04 | 7.8 | 528 | 3.4 | |
| | 19-Nov-04 | 7.9 | 624 | 7.7 | |
| | 25-Nov-04 (1) | | | | |
| | 2-Dec-04 | 7.4 | 436 | 0.1 | 11.3 |
| | 9-Dec-04 | 7.6 | 402 | 0.1 | 12.1 |
| | 17-Dec-04 | 7.3 | 441 | 0.1 | 10.3 |
| | 29-Dec-04 (2) | | | | |
| | 5-Jan-05 | 7.3 | 388 | 0.1 | 10.7 |
| | 13-Jan-05 | 7.2 | 197 | 0.1 | |
| | 20-Jan-05 (2) | | | | |
| | 28-Jan-05 (2) | | | | |
| | 3-Feb-05 (2) | | | | |
| | 10-Feb-05 (2) | | | | |
| | 16-Feb-05 (2) | | | | |
| | 24-Feb-05 (2) | | | | |
| | 3-Mar-05 (2) | | | | |
| | 10-Mar-05 (2) | | | | |
| | 17-Mar-05 (2) | | | | |
| | 24-Mar-05 (2) | | | | |
| | 30-Mar-05 | 7.8 | 373 | 2.6 | |
| | 7-Apr-05 (5) | | | | |
| | 15-Apr-05 (5) | 7.1 | 307 | 3.1 | 11.8 |
| | 21-Apr-05 | 7.6 | 370 | 9.8 | |
| | 29-Apr-05 | 7.5 | 323 | 6.4 | |
| | 6-May-05 | 7.7 | 560 | 17.4 | |
| | 13-May-05 | 8.4 | 494 | 11.8 | |
| | 20-May-05 | 7.2 | 478 | 9.8 | 9.3 |
| | 27-May-05 | 7.7 | 679 | 20.8 | 8.4 |
| | 3-Jun-05 | 7.6 | 670 | 19.8 | 9.1 |
| | 10-Jun-05 | 8.0 | 764 | 23.8 | 6.0 |
| | 17-Jun-05 | 7.2 | 535 | 15.7 | 6.7 |
| | 24-Jun-05 | 8.0 | 770 | 25.4 | |
| | 30-Jun-05 | 7.9 | 808 | 23.7 | |
| | 7-Jul-05 | 6.8 | 803 | 23.0 | 5.0 |
| | 15-Jul-05 (1) | | | | |
| | 21-Jul-05 (1) | | | | |
| | 28-Jul-05 (1) | | | | |
| | 2-Aug-05 (1) | | | | |
| | 12-Aug-05 (1) | | | | |
| | 19-Aug-05 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 24-Aug-05 (1) | | | | |
| **(cont'd)** | 1-Sep-05 (1) | | | | |
| | 9-Sep-05 (1) | | | | |
| | 16-Sep-05 (1) | | | | |
| | 23-Sep-05 (1) | | | | |
| | 30-Sep-05 (1) | | | | |
| | 7-Oct-05 (1) | | | | |
| | 21-Oct-05 | 8.1 | 630 | 10.0 | 11.0 |
| | 28-Oct-05 | 7.9 | 564 | 6.5 | 12.3 |
| | 4-Nov-05 | 7.7 | 654 | 11.1 | 9.4 |
| | 11-Nov-05 | 7.8 | 515 | 5.0 | 12.3 |
| | 18-Nov-05 | 7.1 | 850 | 0.3 | |
| | 2-Dec-05 | 8.5 | 437 | 0.1 | 11.3 |
| | 9-Dec-05 | 8.9 | 476 | 0.1 | 8.1 |
| | 16-Dec-05 | 7.8 | 490 | 0.1 | 9.1 |
| | 22-Dec-05 | 7.6 | 481 | 0.1 | 6.7 |
| | 20-Feb-06 (2) | | | | |
| | 24-Feb-06 (2) | | | | |
| | 3-Mar-06 (2) | | | | |
| | 8-Dec-06 (2) | | | | |
| | 28-Dec-06 | 7.8 | 842 | 0.3 | 13.3 |
| | 5-Jan-07 | 7.9 | 770 | 4.7 | 12.1 |
| | 12-Jan-07 | 7.8 | 740 | 0.1 | |
| | 19-Jan-07 (2) | | | | |
| | 26-Jan-07 (2) | | | | |
| | 2-Feb-07 (2) | | | | |
| | 9-Feb-07 (2) | | | | |
| | 16-Feb-07 (2) | | | | |
| | 22-Feb-07 (2) | | | | |
| | 2-Mar-07 (2) | | | | |
| | 9-Mar-07 (2) | | | | |
| | 16-Mar-07 | 7.8 | 526 | 0.1 | 7.3 |
| | 23-Mar-07 | 7.6 | 490 | 0.5 | 10.6 |
| | 30-Mar-07 | 7.9 | 596 | 4.6 | 12.1 |
| | 5-Apr-07 | 7.2 | 372 | 0.1 | 12.0 |
| | 13-Apr-07 | 8.0 | 561 | 1.1 | 13.7 |
| | 20-Apr-07 | 8.1 | 572 | 11.5 | |
| | 28-Apr-07 | 8.3 | 550 | 10.3 | 10.3 |
| | 4-May-07 | 8.2 | 576 | 14.2 | 10.3 |
| | 11-May-07 | 8.0 | 644 | 15.6 | 8.6 |
| | 18-May-07 | 8.0 | 612 | 12.9 | 9.8 |
| | 25-May-07 | 7.7 | 644 | 18.9 | 7.1 |
| | 1-Jun-07 | 7.7 | 670 | 20.5 | 5.6 |
| | 8-Jun-07 | 7.6 | 743 | 20.3 | 5.4 |
| | 14-Jun-07 | 7.6 | 761 | 19.6 | 5.7 |
| | 22-Jun-07 (1) | | | | |
| | 29-Jun-07 | 8.0 | 743 | 20.5 | 6.4 |
| | 6-Jul-07 | 8.0 | 743 | 20.5 | 6.4 |
| | 13-Jul-07 | 8.2 | 785 | 18.0 | 8.2 |
| | 20-Jul-07 | 7.4 | 756 | 17.1 | 8.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW0-2 (cont'd) | 27-Jul-07 (1) | | | | |
| | 3-Aug-07 (1) | | | | |
| | 10-Aug-07 (1) | | | | |
| | 17-Aug-07 (1) | | | | |
| | 24-Aug-07 | 7.8 | 913 | 18.9 | 6.5 |
| | 30-Aug-07 | 7.8 | 872 | 18.0 | 7.1 |
| | 7-Sep-07 | 7.4 | 860 | 19.4 | 6.5 |
| | 14-Sep-07 | 7.4 | 740 | 13.4 | 7.9 |
| | 21-Sep-07 | 8.1 | 793 | 15.4 | 8.2 |
| | 28-Sep-07 | 8.4 | 817 | 13.3 | 7.9 |
| | 5-Oct-07 | 7.4 | 876 | 13.0 | 8.1 |
| | 12-Oct-07 | 7.2 | 713 | 8.6 | 8.5 |
| | 19-Oct-07 | 7.7 | 779 | 14.4 | 7.5 |
| | 26-Oct-07 | 7.3 | 757 | 8.6 | 10.8 |
| | 2-Nov-07 | 7.5 | 819 | 5.7 | 10.9 |
| | 9-Nov-07 | 7.4 | 776 | 2.5 | 12.0 |
| | 16-Nov-07 | 7.3 | 790 | 1.5 | 13.0 |
| | 23-Nov-07 (2) | | | | |
| | 30-Nov-07 (2) | | | | |
| | 7-Dec-07 (2) | | | | |
| | 14-Dec-07 (3) | | | | |
| | 20-Dec-07 (2) | | | | |
| | 28-Dec-07 (2) | | | | |
| | 4-Jan-08 (2) | | | | |
| | 11-Jan-08 | 7.1 | 478 | 0.4 | 10.7 |
| | 18-Jan-08 (2) | | | | |
| | 25-Jan-08 (2) | | | | |
| | 1-Feb-08 (2) | | | | |
| | 8-Feb-08 (2) | | | | |
| | 15-Feb-08 (2) | | | | |
| | 22-Feb-08 (2) | | | | |
| | 29-Feb-08 (2) | | | | |
| | 7-Mar-08 (2) | | | | |
| | 14-Mar-08 (2) | | | | |
| | 20-Mar-08 (2) | | | | |
| | 28-Mar-08 (2) | | | | |
| | 4-Apr-08 | 7.2 | 485 | 0.3 | |
| | 11-Apr-08 | 7.0 | 431 | 2.1 | 11.8 |
| | 15-Apr-08 (3) | | | | |
| | 18-Apr-08 | 6.8 | 494 | 10.2 | 8.5 |
| | 25-Apr-08 | 7.8 | 552 | 10.5 | 7.1 |
| | 2-May-08 | 7.0 | 617 | 8.1 | 9.4 |
| | 8-May-08 | 6.7 | 584 | 8.5 | 9.9 |
| | 15-May-08 | 7.5 | 683 | 12.2 | 8.1 |
| | 23-May-08 | 7.8 | 557 | 10.9 | 7.8 |
| | 30-May-08 | 6.3 | 566 | 8.1 | 10.5 |
| | 6-Jun-08 | 7.0 | 627 | 24.2 | 5.4 |
| | 13-Jun-08 | 7.0 | 655 | 18.5 | 5.1 |
| | 20-Jun-08 | 7.8 | 723 | 14.3 | 5.7 |
| | 27-Jun-08 | 6.7 | 815 | 20.5 | 4.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW0-2 | 4-Jul-08 | 6.8 | 778 | 16.3 | 6.5 |
| (cont'd) | 11-Jul-08 | 6.9 | 773 | 17.3 | 5.2 |
| | 18-Jul-08 | 7.4 | 879 | 21.1 | 3.9 |
| | 25-Jul-08 | 7.3 | 707 | 18.4 | 4.3 |
| | 1-Aug-08 | 7.2 | 701 | 18.3 | 3.9 |
| | 8-Aug-08 | 7.4 | 549 | 17.1 | 4.2 |
| | 15-Aug-08 | 6.4 | 732 | 15.8 | 4.0 |
| | 22-Aug-08 | 7.3 | 740 | 20.2 | 4.7 |
| | 28-Aug-08 | 7.3 | | 16.0 | 6.1 |
| | 5-Sep-08 | 7.6 | 874 | 17.5 | 5.6 |
| | 12-Sep-08 | 7.6 | 851 | 13.8 | 5.4 |
| | 19-Sep-08 | 7.9 | 568 | 10.9 | 6.0 |
| | 26-Sep-08 | 7.4 | 854 | 12.8 | 5.7 |
| | 3-Oct-08 | 7.3 | 665 | 7.4 | 7.7 |
| | 10-Oct-08 | 6.8 | 791 | 7.4 | 8.5 |
| | 17-Oct-08 | 6.5 | 748 | 7.9 | 5.9 |
| | 24-Oct-08 | 7.6 | 670 | 3.3 | 6.8 |
| | 31-Oct-08 | 8.1 | 720 | 2.5 | 9.1 |
| | 7-Nov-08 | 9.9 | 451 | 8.2 | 5.7 |
| | 14-Nov-08 | 8.8 | 609 | 6.3 | 8.1 |
| | 21-Nov-08 (2) | | | | |
| | 28-Nov-08 (2) | | | | |
| | 30-Nov-08 (2) | | | | |
| | 7-Dec-08 (2) | | | | |
| | 19-Dec-08 (2) | | | | |
| | 23-Dec-08 (2) | | | | |
| | 29-Dec-08 (2) | | | | |
| | 9-Jan-09 (2) | | | | |
| | 16-Jan-09 (2) | | | | |
| | 23-Jan-09 (2) | | | | |
| | 30-Jan-09 (2) | | | | |
| | 6-Feb-09 (2) | | | | |
| | 13-Feb-09 (2) | | | | |
| | 20-Feb-09 (2) | | | | |
| | 27-Feb-09 (2) | | | | |
| | 6-Mar-09 (2) | | | | |
| | 13-Mar-09 (2) | | | | |
| | 20-Mar-09 | 8.4 | 526 | 0.2 | 11.2 |
| | 27-Mar-09 | 7.1 | 566 | 2.3 | |
| | 3-Apr-09 | 7.5 | 498 | 6.4 | 10.3 |
| | 9-Apr-09 (2) | | | | |
| | 17-Apr-09 | 7.8 | 529 | 5.8 | 11.8 |
| | 24-Apr-09 | 8.0 | 530 | 7.4 | 11.7 |
| | 1-May-09 | 7.8 | 378 | 14.5 | 8.5 |
| | 8-May-09 | 7.5 | 555 | 13.9 | 6.8 |
| | 15-May-09 | 7.9 | 470 | 12.5 | 10.2 |
| | 22-May-09 | 7.7 | 517 | 14.5 | 3.3 |
| | 29-May-09 | 7.7 | 559 | 13.1 | 6.7 |
| | 5-Jun-09 | 7.5 | 546 | 13.7 | 3.5 |
| | 12-Jun-09 | 7.8 | 623 | 15.8 | 7.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 19-Jun-09 | 7.2 | 1,214 | 16.6 | 7.5 |
| **(cont'd)** | 26-Jun-09 | 7.7 | 687 | 25.1 | 5.6 |
| | 2-Jul-09 | 7.5 | 584 | 16.4 | 6.2 |
| | 10-Jul-09 | | | 17.8 | 6.2 |
| | 17-Jul-09 | 8.8 | 740 | 14.8 | 6.1 |
| | 24-Jul-09 | 7.7 | 732 | 17.5 | 6.2 |
| | 31-Jul-09 | 7.5 | 742 | 17.2 | 5.8 |
| | 7-Aug-09 | 7.6 | 782 | 14.9 | 5.0 |
| | 14-Aug-09 | 8.9 | 707 | 15.8 | 8.5 |
| | 21-Aug-09 | 8.0 | 788 | 18.8 | 5.6 |
| | 28-Aug-09 | 8.3 | 734 | 14.1 | 8.1 |
| | 4-Sep-09 | 8.4 | 654 | 13.1 | 9.2 |
| | 11-Sep-09 | 8.0 | 752 | 13.6 | 7.8 |
| | 18-Sep-09 | 7.7 | 826 | 12.5 | 7.5 |
| | 25-Sep-09 | 7.8 | 678 | 12.3 | 8.2 |
| | 9-Oct-09 | 7.5 | 764 | 9.4 | 10.4 |
| | 16-Oct-09 | 7.9 | 774 | 2.0 | 12.2 |
| | 23-Oct-09 | | | 4.2 | 7.9 |
| | 30-Oct-09 | 7.9 | 735 | 3.1 | 9.1 |
| | 6-Nov-09 | 7.3 | 711 | 2.2 | 12.4 |
| | 13-Nov-09 | 7.5 | 786 | 2.5 | 7.5 |
| | 20-Nov-09 | 7.2 | 350 | 5.7 | 10.9 |
| | 27-Nov-09 | | 682 | 3.6 | 11.6 |
| | 4-Dec-09 | 7.2 | 605 | 0.8 | 13.0 |
| | 11-Dec-09 (2) | | | | |
| | 18-Dec-09 (2) | | | | |
| | 22-Dec-09 (2) | | | | |
| | 28-Dec-09 (2) | | | | |
| | 8-Jan-10 (2) | | | | |
| | 15-Jan-10 (2) | | | | |
| | 22-Jan-10 (2) | | | | |
| | 29-Jan-10 (2) | | | | |
| | 5-Feb-10 (2) | | | | |
| | 12-Feb-10 (2) | | | | |
| | 19-Feb-10 (2) | | | | |
| | 1-Mar-10 (2) | | | | |
| | 5-Mar-10 (2) | | | | |
| | 12-Mar-10 (2) | | | | |
| | 19-Mar-10 | 7.5 | 464 | 7.6 | 9.4 |
| | 26-Mar-10 | 7.2 | 535 | 0.6 | 11.2 |
| | 2-Apr-10 | 6.6 | 451 | 10.7 | 9.2 |
| | 9-Apr-10 | 7.3 | 582 | 4.8 | 12.4 |
| | 16-Apr-10 | 7.6 | 494 | 12.2 | 8.5 |
| | 23-Apr-10 | 7.8 | 443 | 7.9 | 9.5 |
| | 30-Apr-10 | 7.7 | 458 | 10.7 | 8.4 |
| | 7-May-10 | 7.8 | 396 | 10.4 | 9.1 |
| | 14-May-10 | 7.8 | 346 | 11.1 | 10.8 |
| | 21-May-10 | 7.8 | 578 | 17.7 | 7.1 |
| | 28-May-10 | 7.7 | 607 | 23.2 | 5.5 |
| | 4-Jun-10 | 7.7 | 427 | 17.0 | 5.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 11-Jun-10 | 7.8 | 471 | 15.8 | 5.7 |
| **(cont'd)** | 18-Jun-10 | 7.2 | 604 | 18.2 | 8.8 |
| | 25-Jun-10 | 7.7 | 585 | 18.6 | 7.6 |
| | 9-Jul-10 | 7.2 | 532 | 20.0 | 4.7 |
| | 15-Jul-10 | 7.8 | 722 | 23.4 | 2.4 |
| | 23-Jul-10 | 7.6 | 573 | 10.4 | 7.3 |
| | 30-Jul-10 | 7.8 | 552 | 18.8 | 7.1 |
| | 6-Aug-10 | 7.7 | 636 | 18.6 | 8.6 |
| | 13-Aug-10 | 7.7 | 703 | 21.2 | 4.3 |
| | 20-Aug-10 | 7.6 | 651 | 16.1 | 6.5 |
| | 27-Aug-10 | 7.5 | 407 | 14.8 | 6.2 |
| | 30-Aug-10 | 7.6 | 632 | 17.8 | 4.6 |
| | 1-Sep-10 | 7.7 | 706 | 20.2 | 4.1 |
| | 3-Sep-10 | 7.7 | 720 | 19.8 | 3.9 |
| | 7-Sep-10 | 7.6 | 521 | 15.9 | 5.2 |
| | 10-Sep-10 | 7.8 | 510 | 13.1 | 6.8 |
| | 17-Sep-10 | 7.6 | 475 | 11.2 | 7.4 |
| | 24-Sep-10 | 7.8 | | 16.2 | 6.1 |
| | 1-Oct-10 | 7.6 | 523 | 11.3 | 7.0 |
| | 8-Oct-10 | 7.6 | 563 | 9.5 | 8.2 |
| | 15-Oct-10 | 7.6 | 561 | 9.4 | 8.3 |
| | 22-Oct-10 | 7.7 | 441 | 3.1 | 10.3 |
| | 29-Oct-10 | 7.6 | 416 | 6.4 | 5.1 |
| | 5-Nov-10 | 7.8 | 413 | 1.5 | 11.2 |
| | 12-Nov-10 | 7.8 | 469 | 3.1 | 10.7 |
| | 19-Nov-10 | 8.1 | 357 | 1.3 | 12.3 |
| | 26-Nov-10 | 7.8 | 345 | 0.3 | 11.8 |
| | 3-Dec-10 | 7.8 | 334 | 0.2 | 10.3 |
| | 9-Dec-10 (2) | | | | |
| | 17-Dec-10 (2) | | | | |
| | 23-Dec-10 (2) | | | | |
| | 30-Dec-10 (2) | | | | |
| | 7-Jan-11 (2) | | | | |
| | 14-Jan-11 (2) | | | | |
| | 21-Jan-11 (2) | | | | |
| | 28-Jan-11 (2) | | | | |
| | 4-Feb-11 (2) | | | | |
| | 11-Feb-11 (2) | | | | |
| | 18-Feb-11 (2) | | | | |
| | 25-Feb-11 (2) | | | | |
| | 4-Mar-11 (2) | | | | |
| | 11-Mar-11 (2) | | | | |
| | 18-Mar-11 (2) | | | | |
| | 22-Mar-11 (3) | | | | |
| | 25-Mar-11 (2) | | | | |
| | 1-Apr-11 | 7.3 | 301 | 2.0 | 11.2 |
| | 8-Apr-11 | 7.4 | 299 | 2.7 | 9.2 |
| | 15-Apr-11 | 7.7 | 252 | 3.4 | 11.7 |
| | 21-Apr-11 | 8.0 | 287 | 2.8 | 13.1 |
| | 29-Apr-11 | | 309 | 5.1 | 12.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW0-2 (cont'd) | 6-May-11 | 8.1 | 307 | 8.6 | 9.3 |
| | 13-May-11 | 8.2 | 347 | 10.3 | 9.3 |
| | 20-May-11 | 7.9 | 349 | 14.1 | 8.6 |
| | 27-May-11 | 8.1 | 320 | 10.9 | 9.0 |
| | 3-Jun-11 | 7.8 | 448 | 15.5 | 9.9 |
| | 10-Jun-11 | 7.9 | 482 | 16.5 | 9.4 |
| | 17-Jun-11 | 7.8 | 514 | 16.7 | 8.1 |
| | 24-Jun-11 | 7.9 | 538 | 16.8 | 6.8 |
| | 30-Jun-11 | 7.8 | 505 | 15.7 | 10.3 |
| | 8-Jul-11 | 8.0 | 652 | 20.1 | 8.2 |
| | 14-Jul-11 | 7.8 | 633 | 17.6 | 6.9 |
| | 22-Jul-11 | 7.7 | 707 | 22.2 | 8.1 |
| | 29-Jul-11 | 7.7 | 567 | 20.6 | 5.6 |
| | 12-Aug-11 | 8.0 | 689 | 17.8 | 6.0 |
| | 19-Aug-11 | 8.0 | 478 | 18.0 | 5.9 |
| | 26-Aug-11 | 8.0 | 741 | 19.1 | 6.1 |
| | 2-Sep-11 | 7.8 | 398 | 20.9 | 8.7 |
| | 9-Sep-11 | 8.0 | 640 | 15.9 | 6.2 |
| | 16-Sep-11 | 7.7 | 475 | 9.7 | 8.3 |
| | 23-Sep-11 | 7.7 | 557 | 12.9 | 5.4 |
| | 30-Sep-11 | 8.2 | 552 | 13.7 | 8.3 |
| | 6-Oct-11 | 8.2 | 453 | 8.1 | 5.9 |
| | 14-Oct-11 | 7.8 | 486 | 14.3 | 6.3 |
| | 21-Oct-11 | 7.8 | 401 | 8.7 | 9.6 |
| | 28-Oct-11 | 8.6 | 475 | 5.4 | 11.2 |
| | 4-Nov-11 | 8.0 | 435 | 4.3 | 11.2 |
| | 11-Nov-11 | 7.6 | 498 | 3.3 | 5.3 |
| | 18-Nov-11 | 7.6 | 445 | 0.8 | 12.6 |
| | 25-Nov-11 | 7.9 | 449 | 3.8 | 8.4 |
| | 2-Dec-11 | 7.9 | 346 | 0.6 | 14.6 |
| | 9-Dec-11 | 7.3 | 327 | 0.2 | 11.4 |
| | 16-Dec-11 | 7.5 | 280 | 1.3 | 14.0 |
| | 23-Dec-11 (2) | | | | |
| | 30-Dec-11 (2) | | | | |
| | 6-Jan-12 (2) | | | | |
| | 13-Jan-12 (2) | | | | |
| | 20-Jan-12 (2) | | | | |
| | 27-Jan-12 (2) | | | | |
| | 3-Feb-12 (2) | | | | |
| | 10-Feb-12 (2) | | | | |
| | 17-Feb-12 (2) | | | | |
| | 24-Feb-12 (2) | | | | |
| | 1-Mar-12 (2) | | | | |
| | 9-Mar-12 (2) | | | | |
| | 16-Mar-12 | 7.5 | 250 | 6.0 | 11.6 |
| | 23-Mar-12 | 7.5 | | 10.6 | 7.6 |
| | 30-Mar-12 | 7.8 | 290 | 2.5 | 8.1 |
| | 6-Apr-12 (3) | | | | |
| | 13-Apr-12 | 8.0 | 340 | 5.4 | 10.9 |
| | 20-Apr-12 | 7.9 | 401 | 8.6 | 4.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 27-Apr-12 | 8.0 | 288 | 3.0 | 12.3 |
| **(cont'd)** | 4-May-12 | 7.8 | 452 | 13.9 | 3.6 |
| | 11-May-12 | 7.8 | 298 | 9.0 | 10.6 |
| | 18-May-12 | 8.0 | 489 | 10.8 | 8.5 |
| | 25-May-12 | 7.5 | 501 | 11.5 | 9.0 |
| | 1-Jun-12 | 8.2 | 467 | 10.6 | 8.5 |
| | 8-Jun-12 | 8.1 | 558 | 16.8 | 7.9 |
| | 15-Jun-12 | 8.1 | 562 | 18.2 | 7.9 |
| | 22-Jun-12 | 8.0 | 726 | 20.0 | 7.4 |
| | 28-Jun-12 | 8.2 | 648 | 18.7 | 6.3 |
| | 6-Jul-12 | 8.0 | 853 | 22.4 | 5.3 |
| | 13-Jul-12 | 8.1 | 683 | 18.8 | 5.6 |
| | 20-Jul-12 | 7.9 | 781 | 19.2 | 4.9 |
| | 27-Jul-12 | 7.9 | 691 | 18.9 | 5.9 |
| | 3-Aug-12 | 7.9 | 720 | 18.6 | 4.0 |
| | 10-Aug-12 | 7.8 | 524 | 16.2 | 6.0 |
| | 17-Aug-12 | 7.9 | 461 | 17.3 | 5.3 |
| | 24-Aug-12 | 8.2 | 667 | 16.7 | 8.6 |
| | 31-Aug-12 | 7.7 | 757 | 18.5 | 7.2 |
| | 7-Sep-12 | 8.2 | 716 | 16.3 | 4.2 |
| | 14-Sep-12 | 7.0 | 593 | 15.2 | 1.9 |
| | 21-Sep-12 | 8.0 | 534 | 10.8 | 8.7 |
| | 28-Sep-12 | 6.5 | 648 | 7.8 | 9.8 |
| | 5-Oct-12 | 7.1 | 736 | 14.3 | 7.2 |
| | 12-Oct-12 | 8.0 | 574 | 4.7 | 11.3 |
| | 19-Oct-12 | 8.4 | 724 | 12.2 | 4.4 |
| | 26-Oct-12 | 7.3 | 615 | 10.4 | 4.7 |
| | 2-Nov-12 | 6.3 | 386 | 1.8 | 6.9 |
| | 9-Nov-12 | 7.6 | 363 | 2.2 | 11.2 |
| | 16-Nov-12 | 8.1 | 438 | 2.8 | 8.0 |
| | 23-Nov-12 | 7.7 | 443 | 6.4 | 7.4 |
| | 30-Nov-12 | 7.6 | 433 | 5.2 | 7.3 |
| | 7-Dec-12 | 7.5 | 386 | 1.1 | 8.9 |
| | 14-Dec-12 | 7.7 | 365 | 0.8 | 12.3 |
| | 21-Dec-12 | 7.4 | 404 | 0.1 | 12.2 |
| | 28-Dec-12 (2) | | | | |
| | 4-Jan-13 (2) | | | | |
| | 11-Jan-13 (2) | | | | |
| | 17-Jan-13 (2) | | | | |
| | 25-Jan-13 (2) | | | | |
| | 1-Feb-13 (2) | | | | |
| | 8-Feb-13 (2) | | | | |
| | 15-Feb-13 (2) | | | | |
| | 22-Feb-13 (2) | | | | |
| | 1-Mar-13 (2) | | | | |
| | 8-Mar-13 (2) | | | | |
| | 15-Mar-13 (2) | | | | |
| | 22-Mar-13 (2) | | | | |
| | 28-Mar-13 | 7.9 | 303 | 1.5 | 9.8 |
| | 5-Apr-13 | 8.0 | 250 | 0.0 | 6.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW0-2 | 12-Apr-13 | 8.2 | 230 | 1.7 | 7.0 |
| (cont'd) | 19-Apr-13 | 7.6 | 277 | 11.2 | 8.7 |
| | 26-Apr-13 | 7.8 | 262 | 4.7 | 6.1 |
| | 3-May-13 | 7.8 | 293 | 15.2 | 10.5 |
| | 9-May-13 | 7.8 | 475 | 13.6 | 7.5 |
| | 16-May-13 | 7.8 | 410 | 11.3 | 8.2 |
| | 24-May-13 | 7.7 | 322 | 5.9 | 8.4 |
| | 31-May-13 | 7.7 | 509 | 19.5 | 8.5 |
| | 7-Jun-13 | | 351 | 11.6 | 6.2 |
| | 14-Jun-13 | 7.9 | 517 | 19.5 | 5.4 |
| | 21-Jun-13 | 7.8 | 539 | 14.9 | 8.1 |
| | 27-Jun-13 | 7.9 | 536 | 15.2 | 8.1 |
| | 5-Jul-13 | 7.7 | 621 | 19.2 | 6.3 |
| | 12-Jul-13 | 7.6 | 582 | 14.7 | 7.0 |
| | 19-Jul-13 | 7.8 | 556 | 19.6 | 5.6 |
| | 25-Jul-13 | 7.7 | 523 | 14.6 | 8.9 |
| | 2-Aug-13 | 8.1 | 576 | 18.2 | 8.6 |
| | 8-Aug-13 | 8.1 | 565 | 19.0 | 8.5 |
| | 16-Aug-13 | 8.0 | 560 | 19.2 | 8.4 |
| | 23-Aug-13 | 8.1 | 562 | 19.2 | 8.5 |
| | 30-Aug-13 | 8.2 | 548 | 19.2 | 8.3 |
| | 6-Sep-13 | 8.1 | 530 | 18.7 | 8.1 |
| | 13-Sep-13 | 8.2 | 530 | 12.9 | 8.6 |
| | 20-Sep-13 | 8.2 | 556 | 17.4 | 8.1 |
| | 27-Sep-13 | 7.8 | 550 | 12.6 | 8.2 |
| | 4-Oct-13 | 7.6 | 545 | 10.2 | 8.2 |
| | 11-Oct-13 | 7.5 | 540 | 10.2 | 8.0 |
| | 18-Oct-13 | 7.5 | 539 | 9.8 | 9.0 |
| | 25-Oct-13 | 7.6 | 423 | 7.6 | 3.9 |
| | 31-Oct-13 | 7.5 | 406 | 7.4 | 3.9 |
| | 8-Nov-13 | 7.3 | 398 | 7.4 | 3.8 |
| | 14-Nov-13 | 7.4 | 350 | 3.3 | 3.0 |
| | 22-Nov-13 | 7.3 | 360 | 3.7 | 3.2 |
| | 29-Nov-13 | | | | |
| | 6-Dec-13 | 7.6 | 258 | (0) | 7.3 |
| | 13-Dec-13 (2) | | | | |
| | 19-Dec-13 (2) | | | | |
| | 27-Dec-13 (2) | | | | |
| | 3-Jan-14 | | | | |
| | 10-Jan-14 | | | | |
| | 17-Jan-14 | | | | |
| | 24-Jan-14 | | | | |
| | 31-Jan-14 | | | | |
| | 7-Feb-14 | | | | |
| | 14-Feb-14 | | | | |
| | 21-Feb-14 | | | | |
| | 28-Feb-14 | | | | |
| | 7-Mar-14 | | | | |
| | 14-Mar-14 | | | | |
| | 21-Mar-14 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 28-Mar-14 | | | | |
| **(cont'd)** | 4-Apr-14 | | | | |
| | 11-Apr-14 | | | | |
| | 17-Apr-14 | 7.8 | 491 | 4.2 | 8.0 |
| | 25-Apr-14 | 7.8 | 486 | 4.0 | 8.2 |
| | 1-May-14 | 7.6 | 480 | 4.3 | 8.2 |
| | 9-May-14 | 7.6 | 421 | 11.0 | 4.3 |
| | 16-May-14 | 7.1 | 450 | 10.0 | 8.2 |
| | 23-May-14 | 7.1 | 432 | 9.9 | 8.7 |
| | 30-May-14 | 7.1 | 423 | 10.1 | 8.8 |
| | 6-Jun-14 | 7.1 | 430 | 11.3 | 8.6 |
| | 13-Jun-14 | 7.2 | 432 | 12.5 | 8.5 |
| | 20-Jun-14 | 7.2 | 442 | 13.2 | 8.5 |
| | 27-Jun-14 | 7.2 | 421 | 14.2 | 7.9 |
| | 4-Jul-14 | 7.1 | 406 | 14.6 | 7.8 |
| | 11-Jul-14 | 7.1 | 413 | 14.6 | 7.8 |
| | 18-Jul-14 | 8.4 | 600 | 15.1 | |
| | 25-Jul-14 | 8.7 | 608 | 14.9 | |
| | 1-Aug-14 | 8.6 | 565 | 15.0 | 4.9 |
| | 8-Aug-14 | 8.5 | 562 | 15.3 | 4.9 |
| | 15-Aug-14 | 8.5 | 486 | 13.2 | 5.2 |
| | 22-Aug-14 | 8.6 | 639 | 16.1 | 7.5 |
| | 29-Aug-14 | 8.6 | 659 | 14.9 | |
| | 5-Sep-14 (3) | | | | |
| | 12-Sep-14 | 7.8 | 623 | 12.0 | 6.2 |
| | 19-Sep-14 | 7.9 | 449 | 10.3 | 4.9 |
| | 26-Sep-14 | 7.9 | 440 | 10.3 | 5.0 |
| | 3-Oct-14 | 7.7 | 425 | 12.9 | 4.7 |
| | 10-Oct-14 | 7.6 | 420 | 11.9 | 4.5 |
| | 16-Oct-14 | 7.5 | 430 | 12.1 | 4.0 |
| | 24-Oct-14 | 7.6 | 489 | 7.6 | 6.9 |
| | 31-Oct-14 | 7.6 | 423 | 7.0 | 6.0 |
| | 7-Nov-14 | 7.3 | 431 | 0.5 | 7.0 |
| | 14-Nov-14 | 7.2 | 428 | 0.2 | 6.8 |
| | 20-Nov-14 | 7.3 | 432 | (1) | 6.2 |
| | 28-Nov-14 (2) | | | | |
| | 5-Dec-14 (2) | | | | |
| | 12-Dec-14 (2) | | | | |
| | 19-Dec-14 (2) | | | | |
| | 26-Dec-14 | 7.2 | 418 | 1.3 | 7.0 |
| | 2-Jan-15 (2) | | | | |
| | 8-Jan-15 (2) | | | | |
| | 14-Jan-15 (2) | | | | |
| | 22-Jan-15 (2) | | | | |
| | 30-Jan-15 (2) | | | | |
| | 6-Feb-15 (2) | | | | |
| | 12-Feb-15 (2) | | | | |
| | 27-Feb-15 (2) | | | | |
| | 6-Mar-15 (2) | | | | |
| | 13-Mar-15 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW0-2 | 20-Mar-15 (2) | | | | |
| (cont'd) | 26-Mar-15 (2) | | | | |
| | 2-Apr-15 | 7.6 | 281 | 2.8 | 9.8 |
| | 10-Apr-15 (5) | | | | |
| | 17-Apr-15 (5) | | | | |
| | 23-Apr-15 | 8.0 | 343 | 2.5 | 13.2 |
| | 1-May-15 | 8.0 | 447 | 8.1 | 9.1 |
| | 8-May-15 | 9.2 | 523 | 17.3 | |
| | 15-May-15 | 7.8 | 413 | 11.4 | 9.2 |
| | 21-May-15 | 8.0 | 420 | 11.2 | 11.4 |
| | 28-May-15 | 7.9 | 506 | 16.7 | 8.7 |
| | 4-Jun-15 | 8.1 | 507 | 15.5 | 9.5 |
| | 12-Jun-15 | 7.7 | 523 | 14.1 | 7.3 |
| | 18-Jun-15 | 7.8 | 579 | 17.8 | 6.9 |
| | 26-Jun-15 (3) | | | | |
| | 1-Jul-15 (3) | | | | |
| | 10-Jul-15 | 7.9 | 545 | 15.9 | |
| | 17-Jul-15 | 8.0 | 541 | 15.5 | |
| | 22-Jul-15 | 7.8 | 683 | 20.5 | 7.7 |
| | 30-Jul-15 | 8.1 | 743 | 24.6 | |
| | 5-Aug-15 | 7.6 | 541 | 14.7 | 6.1 |
| | 13-Aug-15 | 7.9 | 611 | | |
| | 21-Aug-15 | 8.0 | 543 | 13.7 | 7.2 |
| | 28-Aug-15 | 8.1 | 565 | 14.6 | 7.8 |
| | 3-Sep-15 | 8.0 | 710 | 19.6 | 7.6 |
| | 10-Sep-15 | 7.7 | 621 | 18.6 | 7.1 |
| | 18-Sep-15 | 7.7 | 654 | 16.4 | 8.3 |
| | 25-Sep-15 | 7.6 | 583 | 14.0 | 9.6 |
| | 2-Oct-15 | 7.6 | 501 | 6.9 | 10.6 |
| | 9-Oct-15 | 7.7 | 530 | 10.4 | 8.5 |
| | 16-Oct-15 | 7.8 | 483 | 10.5 | 10.5 |
| | 23-Oct-15 | 7.6 | 464 | 5.9 | 10.8 |
| | 30-Oct-15 | 7.5 | 424 | 6.5 | 10.0 |
| | 5-Nov-15 | 7.5 | 445 | 9.9 | 6.3 |
| | 13-Nov-15 | 7.3 | 358 | 5.2 | 8.1 |
| | 19-Nov-15 | 7.7 | 535 | 9.8 | 12.1 |
| | 26-Nov-15 | 7.3 | 362 | 1.0 | 15.3 |
| | 4-Dec-15 | 7.5 | 390 | 2.0 | 15.5 |
| | 10-Dec-15 | 7.4 | 465 | 4.7 | 11.4 |
| | 17-Dec-15 | 7.7 | 370 | 3.6 | 11.3 |
| | 23-Dec-15 | 7.4 | 378 | 5.1 | 10.9 |
| | 30-Dec-15 | 7.4 | 321 | (0) | 11.4 |
| | 8-Jan-16 | 7.2 | 355 | 0.1 | 12.1 |
| | 14-Jan-16 (2) | | | | |
| | 22-Jan-16 (2) | | | | |
| | 29-Jan-16 (2) | | | | |
| | 5-Feb-16 (2) | | | | |
| | 11-Feb-16 (2) | | | | |
| | 18-Feb-16 (2) | | | | |
| | 25-Feb-16 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 4-Mar-16 (2) | | | | |
| **(cont'd)** | 10-Mar-16 | 6.9 | 210 | (0) | 10.4 |
| | 18-Mar-16 | 7.4 | 289 | 0.9 | 10.8 |
| | 28-Mar-16 | 6.6 | 132 | 1.0 | 11.5 |
| | 1-Apr-16 | 7.3 | 170 | 4.7 | 9.6 |
| | 7-Apr-16 | 7.4 | 219 | 0.2 | 12.5 |
| | 15-Apr-16 | 7.0 | 256 | 2.7 | 12.9 |
| | 22-Apr-16 | 7.9 | 426 | 10.7 | 8.6 |
| | 29-Apr-16 | 7.4 | 352 | 4.7 | 11.2 |
| | 6-May-16 | 7.9 | 424 | 9.2 | 8.5 |
| | 13-May-16 | 8.1 | 566 | 13.8 | |
| | 20-May-16 | 8.0 | 570 | 13.5 | 8.7 |
| | 27-May-16 | 7.8 | 543 | 16.5 | 6.4 |
| | 2-Jun-16 | 7.9 | 544 | 15.9 | 6.5 |
| | 10-Jun-16 | 7.9 | 629 | 10.5 | 9.1 |
| | 17-Jun-16 | 7.9 | 581 | 14.4 | 8.0 |
| | 24-Jun-16 | 7.9 | 573 | 13.7 | 8.8 |
| | 28-Jun-16 | 8.0 | 609 | 16.0 | 10.7 |
| | 8-Jul-16 | 8.0 | 661 | 18.3 | 8.0 |
| | 15-Jul-16 | 7.9 | 562 | 18.0 | 6.9 |
| | 22-Jul-16 | 7.6 | 636 | 19.0 | 5.4 |
| | 29-Jul-16 | 7.8 | 606 | 16.4 | 5.9 |
| | 5-Aug-16 (1) | | | | |
| | 12-Aug-16 (1) | | | | |
| | 19-Aug-16 (3) | | | | |
| | 26-Aug-16 (3) | | | | |
| | 2-Sep-16 (3) | | | | |
| | 9-Sep-16 (3) | | | | |
| | 16-Sep-16 (3) | | | | |
| | 21-Sep-16 (3) | | | | |
| | 30-Sep-16 (3) | | | | |
| | 7-Oct-16 | 7.9 | 576 | 13.9 | 9.1 |
| | 13-Oct-16 (3) | | | | |
| | 19-Oct-16 (3) | | | | |
| | 24-Oct-16 | 7.5 | 529 | 7.0 | 11.0 |
| | 27-Oct-16 | 8.0 | 396 | 1.7 | 12.0 |
| | 3-Nov-16 | 7.6 | 504 | 8.1 | 10.8 |
| | 11-Nov-16 (3) | 7.8 | 409 | 5.0 | 12.2 |
| | 18-Nov-16 | 7.8 | 695 | 6.7 | 11.3 |
| | 24-Nov-16 | 7.4 | 369 | 1.5 | 11.8 |
| | 2-Dec-16 | 7.5 | 340 | 2.3 | 7.2 |
| | 7-Dec-16 (3) | | | | |
| | 16-Dec-16 | 7.7 | 334 | (0) | 4.5 |
| | 22-Dec-16 (2) | | | | |
| | 30-Dec-16 (2) | | | | |
| | 6-Jan-17 (2) | | | | |
| | 13-Jan-17 (2) | | | | |
| | 20-Jan-17 (2) | | | | |
| | 26-Jan-17 | 7.5 | 362 | (0) | 10.1 |
| | 3-Feb-17 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 10-Feb-17 (2) | | | | |
| **(cont'd)** | 17-Feb-17 (2) | | | | |
| | 19-Apr-17 | 7.2 | 423 | 11.2 | 11.5 |
| | 10-May-17 | 8.3 | 353 | 11.4 | 12.8 |
| | 16-May-17 | 8.2 | 483 | 17.4 | 7.8 |
| | 28-Jun-17 | 7.6 | 535 | 14.5 | 7.4 |
| | 18-Jul-17 | 6.1 | 666 | 19.6 | 9.2 |
| | 15-Aug-17 | 8.3 | 505 | 16.0 | 7.0 |
| | 18-Sep-17 | 7.7 | 649 | 14.2 | 7.7 |
| | 17-Oct-17 | 7.8 | 443 | 6.8 | 9.7 |
| | 14-Nov-17 | 7.7 | 413 | 0.5 | 12.8 |
| | 13-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 22-Feb-18 | 7.5 | 235 | (0) | 8.7 |
| | 18-Mar-18 (2) | | | | |
| | 20-Mar-18 | 7.5 | 358 | (0) | 11.4 |
| | 18-Apr-18 (2) | | | | |
| | 8-May-18 | 7.5 | 527 | 9.3 | 5.1 |
| | 15-May-18 | 7.6 | 555 | 12.5 | 5.2 |
| | 18-Jun-18 | 7.7 | 641 | 18.8 | 6.3 |
| | 19-Jul-18 | 7.7 | 712 | 15.6 | 6.3 |
| | 23-Aug-18 | 7.6 | 628 | 15.2 | 4.5 |
| | 19-Sep-18 | 7.6 | 734 | 14.6 | 6.1 |
| | 24-Oct-18 | 7.5 | 641 | 2.9 | 10.0 |
| | 21-Nov-18 | 7.6 | 674 | 0.0 | 9.1 |
| | 12-Dec-18 (2) | 8.1 | 637 | 0.3 | 9.9 |
| | 18-Jan-19 | | | | |
| | 26-Feb-19 | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.6 | 421 | 4.8 | 6.3 |
| | 14-May-19 | 7.7 | 381 | 6.1 | 8.9 |
| | 23-May-19 | 7.6 | 497 | 10.8 | 4.0 |
| | 18-Jun-19 | 7.5 | 542 | 17.7 | 5.0 |
| | 29-Jul-19 | 7.8 | 637 | 18.9 | 6.9 |
| | 29-Aug-19 | 7.7 | 1,332 | 15.2 | 6.4 |
| | 26-Sep-19 | 7.2 | 685 | 13.4 | 5.1 |
| | 23-Oct-19 | 7.4 | 743 | 7.3 | 7.3 |
| | 22-Nov-19 | | | | |
| | 20-Dec-19 | | | | |
| | 15-Jan-20 | | | | |
| | 20-Feb-20 | | | | |
| | 26-Mar-20 | | | | |
| | 27-Apr-20 | 7.7 | 511 | 6.2 | 8.1 |
| | 19-May-20 | 7.9 | 570 | 8.9 | 6.7 |
| | 29-May-20 | 8.1 | 569 | 18.8 | 3.3 |
| | 23-Jun-20 | 7.7 | 616 | 19.0 | 4.2 |
| | 30-Jul-20 | 7.4 | 728 | 18.8 | 3.0 |
| | 25-Aug-20 | 7.3 | 709 | 19.2 | 4.7 |
| | 25-Sep-20 | 7.8 | 530 | 10.4 | 5.3 |
| | 30-Oct-20 | 7.3 | 654 | 7.0 | 7.0 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2** | 26-Nov-20 | 7.4 | 662 | 4.9 | 11.8 |
| **(cont'd)** | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.3 | 533 | 5.0 | 7.5 |
| | 27-Apr-21 | 7.4 | 556 | 7.7 | 6.9 |
| | 26-May-21 | 7.4 | 699 | 17.6 | 5.2 |
| | 27-May-21 | 7.4 | 699 | 17.6 | 5.2 |
| | 22-Jun-21 | 7.6 | 712 | 14.7 | 6.6 |
| | 22-Jul-21 | 7.4 | 697 | 17.2 | 3.1 |
| | 25-Aug-21 | 7.1 | 830 | 19.3 | 2.3 |
| | 28-Sep-21 (3) | | | | |
| | 26-Oct-21 | 7.4 | 633 | 6.2 | 8.5 |
| | 23-Nov-21 | 7.5 | 649 | 4.4 | 8.6 |
| | 21-Dec-21 | 7.5 | 635 | 4.1 | 8.7 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.7 | 647 | 4.6 | 11.7 |
| | 24-May-22 | 7.6 | 726 | 15.3 | 7.0 |
| | 25-Jun-22 | 7.2 | 854 | 10.4 | 13.1 |
| | 26-Aug-22 | 7.6 | 875 | 16.5 | 12.0 |
| | 27-Sep-22 | 7.3 | 724 | 13.7 | 11.9 |
| | 26-Oct-22 | 7.7 | 651 | 10.0 | 5.2 |
| | 21-Nov-22 | 7.9 | 522 | 0.0 | 5.9 |
| | 20-Dec-22 | 7.5 | 414 | 0.2 | 6.7 |
| | 24-Jan-23 (2) | 6.7 | 722 | 0.0 | 6.2 |
| | 22-Feb-23 (2) | | | | |
| | 27-Mar-23 | 8.4 | 569 | 0.1 | 6.5 |
| | 21-Apr-23 | 6.2 | 534 | 10.1 | 8.1 |
| | 15-May-23 | 7.6 | 647 | 15.2 | 7.0 |
| | 26-Jun-23 | 7.7 | 779 | 18.7 | 7.8 |
| | 25-Jul-23 | 7.7 | 620 | 17.7 | 17.7 |
| | 28-Aug-23 | 6.8 | 658 | 15.6 | 4.8 |
| | 25-Sep-23 | 7.4 | 709 | 13.1 | 3.7 |
| | 30-Oct-23 | 8.2 | 527 | 6.2 | 6.7 |
| | 29-Nov-23 (2) | 7.0 | 866 | 0.3 | 5.7 |
| | 18-Dec-23 | 7.3 | 756 | 1.5 | 10.1 |
| | 31-Jan-24 | 7.7 | 779 | 0.0 | 8.4 |
| | 27-Feb-24 | 7.5 | 770 | 0.2 | 6.1 |
| | 27-Mar-24 | 7.6 | 546 | 1.9 | 11.1 |
| | 29-Apr-24 | 7.4 | 650 | 10.2 | 6.5 |
| | 27-May-24 | 7.4 | 780 | 16.0 | 4.6 |
| | 26-Jun-24 | 6.9 | 727 | 17.5 | 3.6 |
| | 30-Jul-24 | 7.1 | 741 | 20.3 | 3.3 |
| | 27-Aug-24 | 6.9 | 637 | 19.4 | 3.8 |
| | 24-Sep-24 | 6.9 | 798 | 15.6 | 4.5 |
| | 28-Oct-24 | 8.3 | 1,010 | 5.0 | 8.9 |
| | 18-Nov-24 | 7.5 | 839 | 4.9 | 9.0 |
| | 16-Dec-24 | 7.3 | 764 | 0.0 | 9.3 |
| | 26-Mar-25 (3) | 6.7 | 345 | 0.1 | 7.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW0-2 (cont'd)** | 28-Apr-25 | 7.0 | 444 | 8.5 | 3.6 |
| | 27-May-25 | 8.0 | 671 | 13.5 | 5.6 |
| | 25-Jun-25 | 7.7 | 822 | 21.3 | 1.9 |
| | 29-Jul-25 | 7.7 | 875 | 19.2 | 3.0 |
| | 26-Aug-25 | 7.4 | 739 | 14.2 | 5.3 |
| | 29-Sep-25 | 7.4 | 809 | 11.9 | 5.1 |
| | 27-Oct-25 | 7.6 | 774 | 3.3 | 9.9 |
| | 25-Nov-25 | 7.7 | 656 | 2.1 | 11.4 |
| | 16-Dec-25 (3) | 7.5 | 406 | 0.0 | 9.0 |
| **QFSW2** | 24-Feb-04 | 7.8 | 482 | 4.1 | 10.8 |
| | 8-Apr-04 (5) | | | | |
| | 16-Apr-04 (5) | | | | |
| | 23-Apr-04 | 7.8 | 374 | 5.9 | |
| | 30-Apr-04 | 8.1 | 640 | 11.9 | |
| | 7-May-04 (3) | | | | |
| | 14-May-04 | 7.8 | 538 | 11.8 | |
| | 20-May-04 | 7.9 | 559 | 11.2 | |
| | 28-May-04 | 7.9 | 477 | 9.7 | |
| | 4-Jun-04 | 7.8 | 590 | 15.7 | |
| | 11-Jun-04 | 7.8 | 652 | 16.0 | |
| | 17-Jun-04 | 7.7 | 649 | 14.0 | |
| | 23-Jun-04 | 7.9 | 701 | 15.2 | |
| | 1-Jul-04 | 7.7 | 662 | 13.1 | |
| | 9-Jul-04 (3) | | | | |
| | 22-Jul-04 | 7.8 | | 19.6 | |
| | 29-Jul-04 | 7.6 | 659 | 16.3 | |
| | 6-Aug-04 | 7.8 | 708 | 16.6 | |
| | 12-Aug-04 | 7.8 | 712 | 15.5 | |
| | 19-Aug-04 | 7.7 | 757 | 17.3 | |
| | 26-Aug-04 | 7.7 | 712 | 17.0 | |
| | 3-Sep-04 | 7.8 | 679 | 17.2 | |
| | 9-Sep-04 | 8.0 | 713 | 14.3 | |
| | 17-Sep-04 | 7.7 | 732 | 13.7 | |
| | 23-Sep-04 | 7.6 | 803 | 16.3 | |
| | 1-Oct-04 | 7.6 | 783 | 14.6 | |
| | 7-Oct-04 | 7.8 | 774 | 14.3 | |
| | 14-Oct-04 | 7.6 | 712 | 11.4 | |
| | 20-Oct-04 | 7.7 | 692 | 9.8 | |
| | 28-Oct-04 | 7.7 | 809 | 10.7 | |
| | 4-Nov-04 | 7.6 | 595 | 8.0 | |
| | 11-Nov-04 | 7.7 | 611 | 7.3 | |
| | 19-Nov-04 | 7.6 | 641 | 7.9 | 10.7 |
| | 25-Nov-04 | 7.6 | 624 | 5.4 | 10.5 |
| | 2-Dec-04 | 7.6 | 564 | 5.9 | 10.8 |
| | 9-Dec-04 | 7.5 | 477 | 4.6 | 10.6 |
| | 17-Dec-04 | 7.6 | 814 | 3.3 | |
| | 29-Dec-04 (2) | | | | |
| | 5-Jan-05 | 7.5 | 492 | 4.6 | 11.0 |
| | 13-Jan-05 | 7.3 | 373 | 3.4 | 11.3 |
| | 20-Jan-05 | 7.1 | 430 | 2.7 | 11.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 28-Jan-05 | 7.3 | 447 | 3.0 | 10.3 |
| | 3-Feb-05 | 7.3 | 452 | 3.2 | 10.6 |
| | 10-Feb-05 | 7.1 | 477 | 4.4 | 10.3 |
| | 16-Feb-05 | 7.6 | 467 | 3.9 | 10.8 |
| | 3-Mar-05 | 7.2 | 469 | 2.9 | 10.8 |
| | 10-Mar-05 | 7.4 | 500 | 4.5 | 10.7 |
| | 17-Mar-05 | 7.2 | 457 | 4.1 | 10.3 |
| | 24-Mar-05 | 7.2 | 477 | 4.9 | 10.3 |
| | 30-Mar-05 | 7.5 | 477 | 6.1 | 10.4 |
| | 7-Apr-05 | 7.4 | 376 | 4.2 | 10.5 |
| | 15-Apr-05 | 6.9 | 410 | 4.9 | 10.5 |
| | 21-Apr-05 | 7.1 | 417 | 5.6 | 9.2 |
| | 29-Apr-05 | 7.2 | 414 | 6.1 | 10.4 |
| | 6-May-05 | 7.0 | 634 | 9.9 | |
| | 13-May-05 | 7.9 | 509 | 8.8 | 10.0 |
| | 20-May-05 | 7.6 | 530 | 10.9 | 9.6 |
| | 27-May-05 | 7.3 | 570 | 12.2 | 9.1 |
| | 3-Jun-05 | 6.7 | 585 | 12.3 | 8.5 |
| | 10-Jun-05 | 7.3 | 626 | 14.9 | 8.4 |
| | 17-Jun-05 | 7.2 | 610 | 13.0 | 7.7 |
| | 24-Jun-05 | 7.6 | 701 | 18.0 | 9.4 |
| | 30-Jun-05 | 7.2 | 690 | 17.1 | |
| | 7-Jul-05 | 6.6 | 852 | 16.9 | 8.0 |
| | 15-Jul-05 | 6.5 | 977 | 18.1 | 7.6 |
| | 21-Jul-05 | 8.1 | 1,361 | 19.1 | 7.1 |
| | 28-Jul-05 | 6.9 | 1,270 | 17.1 | 7.3 |
| | 2-Aug-05 | 8.1 | 802 | 17.8 | 5.7 |
| | 12-Aug-05 | 7.0 | 1,176 | 17.6 | 9.5 |
| | 19-Aug-05 | 7.5 | 729 | 18.0 | |
| | 24-Aug-05 | 7.7 | 734 | 18.1 | 8.8 |
| | 1-Sep-05 | | 712 | 17.9 | 8.7 |
| | 9-Sep-05 | 6.9 | 722 | 18.5 | 9.0 |
| | 16-Sep-05 | 7.3 | 739 | 17.4 | |
| | 23-Sep-05 | 7.8 | 718 | 17.9 | 9.0 |
| | 30-Sep-05 | 8.0 | 701 | 16.1 | 9.1 |
| | 7-Oct-05 | 8.6 | 815 | 14.9 | |
| | 14-Oct-05 | 8.2 | 695 | 15.0 | 9.0 |
| | 21-Oct-05 | 8.4 | 689 | 13.7 | |
| | 4-Nov-05 | 8.2 | 708 | 11.0 | |
| | 11-Nov-05 | 8.4 | 681 | 9.4 | 10.6 |
| | 18-Nov-05 | 8.6 | 943 | 6.4 | |
| | 25-Nov-05 | 8.4 | 592 | 6.3 | 10.0 |
| | 2-Dec-05 | 9.2 | 583 | 5.8 | 10.3 |
| | 9-Dec-05 | 9.1 | 583 | 5.5 | 9.8 |
| | 16-Dec-05 (5) | 8.2 | 620 | 4.7 | 9.4 |
| | 22-Dec-05 | 8.2 | 635 | 4.6 | 10.7 |
| | 6-Jan-06 | 8.1 | 592 | 5.7 | 10.7 |
| | 13-Jan-06 | 7.0 | 553 | 5.9 | 10.4 |
| | 20-Jan-06 | 7.2 | 524 | 4.9 | 10.3 |
| | 27-Jan-06 | 7.5 | 582 | 5.0 | 10.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 | 3-Feb-06 | 7.7 | 526 | 4.8 | 10.9 |
| (cont'd) | 10-Feb-06 | 8.1 | 530 | 4.4 | 11.1 |
| | 20-Feb-06 | 8.6 | 539 | 4.6 | |
| | 24-Feb-06 | 8.0 | 519 | 3.7 | |
| | 3-Mar-06 | 7.9 | 523 | 2.0 | |
| | 10-Mar-06 | 8.1 | 447 | 3.4 | 12.6 |
| | 20-Mar-06 | 8.3 | 703 | 3.2 | |
| | 24-Mar-06 | 8.1 | 463 | 5.0 | |
| | 31-Mar-06 | 8.0 | 617 | 7.7 | |
| | 7-Apr-06 (5) | | | | |
| | 13-Apr-06 | 8.0 | 623 | 8.2 | |
| | 21-Apr-06 | 8.1 | 634 | 9.0 | |
| | 26-Apr-06 | 8.2 | 693 | 8.6 | |
| | 5-May-06 | 8.0 | 662 | 9.9 | |
| | 12-May-06 | 8.6 | 724 | 10.2 | |
| | 19-May-06 | 7.4 | 854 | 9.5 | |
| | 25-May-06 | 7.9 | 756 | 11.6 | |
| | 2-Jun-06 | 7.8 | 741 | 12.6 | |
| | 9-Jun-06 | 7.9 | 609 | 12.8 | |
| | 19-Jun-06 | 7.8 | 654 | 12.1 | |
| | 23-Jun-06 | 7.9 | 672 | 12.5 | |
| | 30-Jun-06 | 8.5 | 787 | 17.6 | |
| | 7-Jul-06 | 8.3 | 765 | 17.5 | |
| | 14-Jul-06 | 7.8 | 779 | 18.5 | |
| | 21-Jul-06 | 8.0 | 781 | 17.9 | |
| | 28-Jul-06 | 7.8 | 815 | 19.9 | |
| | 4-Aug-06 | 7.9 | 599 | 21.1 | |
| | 11-Aug-06 | 7.7 | 783 | 19.8 | |
| | 18-Aug-06 | 7.9 | 870 | 19.2 | |
| | 25-Aug-06 | 7.4 | 917 | 16.7 | |
| | 1-Sep-06 | 7.5 | 902 | 18.4 | |
| | 8-Sep-06 | 7.5 | 888 | 18.1 | |
| | 15-Sep-06 | 7.5 | 895 | 16.5 | |
| | 21-Sep-06 | 7.7 | 885 | 15.4 | |
| | 28-Sep-06 | 7.5 | 933 | 13.1 | |
| | 6-Oct-06 | 7.7 | 889 | 14.2 | |
| | 13-Oct-06 | 7.6 | 907 | 10.2 | |
| | 20-Oct-06 | 7.7 | 911 | 9.9 | |
| | 26-Oct-06 | 7.8 | 931 | 9.9 | |
| | 28-Oct-06 | 7.9 | 705 | 11.6 | 10.7 |
| | 3-Nov-06 | 8.6 | 903 | 8.6 | 10.7 |
| | 10-Nov-06 | 7.9 | 872 | 9.3 | |
| | 17-Nov-06 | 7.8 | 829 | 7.5 | 10.4 |
| | 24-Nov-06 | 8.4 | 865 | 8.0 | 11.0 |
| | 4-Dec-06 (5) | 7.6 | 853 | 6.0 | 10.4 |
| | 8-Dec-06 | 7.2 | 840 | 5.7 | 11.2 |
| | 14-Dec-06 | 7.7 | 889 | 5.9 | 12.3 |
| | 21-Dec-06 | 7.9 | 859 | 5.6 | 11.4 |
| | 28-Dec-06 | 7.7 | 876 | 5.0 | 11.3 |
| | 5-Jan-07 | 7.5 | 873 | 5.4 | 10.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 12-Jan-07 | 7.3 | 795 | 4.8 | 11.5 |
| | 19-Jan-07 | 7.6 | 790 | 4.4 | 11.2 |
| | 26-Jan-07 | 8.1 | 796 | 4.6 | 10.3 |
| | 2-Feb-07 | 7.8 | 779 | 4.6 | 10.4 |
| | 9-Feb-07 | 7.7 | 723 | 4.6 | 9.9 |
| | 16-Feb-07 | 7.6 | 816 | 4.2 | 10.0 |
| | 22-Feb-07 | 8.1 | 816 | 4.6 | 9.4 |
| | 2-Mar-07 | 8.1 | 824 | 4.6 | 10.2 |
| | 9-Mar-07 | 7.3 | 673 | 5.3 | 9.6 |
| | 16-Mar-07 (5) | | | | |
| | 23-Mar-07 | 7.5 | 749 | 5.1 | 9.9 |
| | 30-Mar-07 (5) | 7.7 | 671 | 6.1 | 10.7 |
| | 5-Apr-07 (5) | | | | |
| | 13-Apr-07 | 7.7 | 657 | 4.2 | 12.0 |
| | 20-Apr-07 | 7.7 | 630 | 6.6 | 11.1 |
| | 28-Apr-07 | 8.1 | 690 | 6.7 | 9.1 |
| | 4-May-07 | 7.9 | 635 | 8.1 | 8.9 |
| | 11-May-07 | 7.9 | 767 | 8.4 | 8.1 |
| | 18-May-07 | 8.2 | 674 | 9.1 | 8.2 |
| | 25-May-07 | 7.8 | 663 | 9.5 | 8.4 |
| | 1-Jun-07 | 7.7 | 703 | 10.5 | 7.7 |
| | 8-Jun-07 | 7.8 | 738 | 12.3 | 7.2 |
| | 14-Jun-07 | 8.0 | 753 | 12.3 | 7.4 |
| | 22-Jun-07 | 7.9 | 693 | 11.7 | 8.9 |
| | 29-Jun-07 | 8.1 | 697 | 14.1 | 8.5 |
| | 6-Jul-07 | 8.1 | 729 | 14.7 | 8.5 |
| | 13-Jul-07 | 8.2 | 746 | 14.5 | 8.2 |
| | 20-Jul-07 | 7.8 | 749 | 14.5 | 8.0 |
| | 27-Jul-07 | 7.6 | 683 | 14.2 | 8.1 |
| | 3-Aug-07 | 7.7 | 794 | 17.2 | 8.2 |
| | 10-Aug-07 | 7.6 | 728 | 16.5 | 8.0 |
| | 17-Aug-07 | 7.6 | 784 | 15.6 | 7.9 |
| | 24-Aug-07 | 7.9 | 803 | 15.9 | 7.5 |
| | 30-Aug-07 | 7.9 | 793 | 16.8 | 7.9 |
| | 7-Sep-07 | 7.7 | 803 | 16.9 | 8.2 |
| | 14-Sep-07 | 7.6 | 760 | 16.0 | 7.9 |
| | 21-Sep-07 | 7.8 | 770 | 16.1 | 8.6 |
| | 28-Sep-07 | 8.3 | 821 | 14.1 | 8.2 |
| | 5-Oct-07 | 7.5 | 865 | 15.1 | 8.6 |
| | 12-Oct-07 | 7.4 | 784 | 13.1 | 7.7 |
| | 19-Oct-07 | 8.1 | 598 | 13.5 | 7.6 |
| | 26-Oct-07 | 7.2 | 789 | 11.7 | 8.4 |
| | 2-Nov-07 | 7.4 | 813 | 11.1 | 9.4 |
| | 9-Nov-07 | 7.2 | 797 | 9.2 | 8.2 |
| | 16-Nov-07 | 7.4 | 838 | 8.3 | 7.8 |
| | 23-Nov-07 | 8.0 | 840 | 7.9 | 8.9 |
| | 7-Dec-07 | 7.8 | 758 | 7.0 | 8.3 |
| | 14-Dec-07 | 7.3 | 763 | 6.6 | 7.9 |
| | 20-Dec-07 | 7.3 | 786 | 4.5 | |
| | 28-Dec-07 (3) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 | 4-Jan-08 | 7.2 | 807 | 6.2 | 9.1 |
| (cont'd) | 11-Jan-08 | 7.5 | 676 | 5.1 | 11.3 |
| | 18-Jan-08 | 7.2 | 651 | 3.4 | 12.2 |
| | 25-Jan-08 | 7.7 | 667 | 3.5 | 12.4 |
| | 1-Feb-08 | 7.4 | 703 | 3.5 | 12.0 |
| | 8-Feb-08 | 7.2 | 713 | 3.9 | 11.6 |
| | 15-Feb-08 | 7.2 | 650 | 2.9 | 12.0 |
| | 22-Feb-08 | 7.4 | 752 | 3.5 | |
| | 29-Feb-08 | 7.4 | 723 | 3.6 | |
| | 7-Mar-08 | 7.4 | 737 | 3.3 | |
| | 14-Mar-08 | 7.1 | 725 | 3.7 | |
| | 20-Mar-08 | 7.7 | 732 | 3.2 | 12.8 |
| | 28-Mar-08 | 7.4 | 608 | 4.1 | |
| | 4-Apr-08 (3) | | | | |
| | 11-Apr-08 (3) | | | | |
| | 15-Apr-08 (3) | | | | |
| | 18-Apr-08 (3) | | | | |
| | 25-Apr-08 | 7.9 | 559 | 9.3 | 8.9 |
| | 2-May-08 | 6.9 | 530 | 7.5 | 8.2 |
| | 8-May-08 | 7.3 | 638 | 9.0 | |
| | 15-May-08 | 7.6 | 648 | 17.9 | 8.6 |
| | 23-May-08 | 7.7 | 576 | 10.4 | 8.4 |
| | 30-May-08 | 7.3 | 698 | 10.5 | 8.1 |
| | 6-Jun-08 | 7.3 | 798 | 15.5 | 6.6 |
| | 13-Jun-08 | 7.7 | 686 | 13.8 | 6.5 |
| | 20-Jun-08 | 7.7 | 726 | 13.2 | 6.4 |
| | 27-Jun-08 | 7.1 | 781 | 14.9 | 6.8 |
| | 4-Jul-08 | 7.1 | 783 | 14.2 | |
| | 11-Jul-08 | 7.0 | 763 | 15.4 | 7.1 |
| | 18-Jul-08 | 7.7 | 826 | 16.2 | 5.2 |
| | 25-Jul-08 | 7.0 | 843 | 16.8 | 5.8 |
| | 1-Aug-08 | 6.9 | 827 | 17.2 | 5.6 |
| | 8-Aug-08 | 7.4 | 814 | 16.3 | 4.8 |
| | 15-Aug-08 | 7.3 | 936 | 16.4 | 5.5 |
| | 22-Aug-08 | 7.5 | 937 | 17.4 | 4.7 |
| | 28-Aug-08 | 7.4 | | 16.1 | 6.5 |
| | 5-Sep-08 | 7.8 | 852 | 16.4 | 6.3 |
| | 12-Sep-08 | 7.9 | 864 | 15.5 | 5.6 |
| | 19-Sep-08 | 8.0 | 882 | 15.0 | |
| | 26-Sep-08 | 7.5 | 859 | 15.0 | 5.7 |
| | 3-Oct-08 | 7.7 | 835 | 12.1 | 6.7 |
| | 10-Oct-08 | 7.2 | 850 | 12.2 | 7.6 |
| | 17-Oct-08 | | 785 | 11.8 | 5.3 |
| | 24-Oct-08 | 7.9 | 820 | 10.0 | 5.4 |
| | 31-Oct-08 | 7.7 | 814 | 9.5 | 5.8 |
| | 7-Nov-08 | 7.5 | 467 | 9.7 | 8.3 |
| | 14-Nov-08 | | 584 | 8.6 | 8.8 |
| | 21-Nov-08 (3) | | | | |
| | 28-Nov-08 | | 412 | 5.5 | 7.1 |
| | 30-Nov-08 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 12-Dec-08 | 6.4 | 759 | 4.6 | 8.8 |
| | 19-Dec-08 (3) | | | | |
| | 23-Dec-08 | 8.0 | 654 | 4.0 | 8.1 |
| | 29-Dec-08 (3) | | | | |
| | 9-Jan-09 (5) | | | | |
| | 16-Jan-09 | | 656 | 3.7 | 9.7 |
| | 23-Jan-09 | 8.0 | 666 | 3.9 | 8.3 |
| | 30-Jan-09 (3) | | | | |
| | 6-Feb-09 | | 611 | 4.2 | 8.8 |
| | 13-Feb-09 (5) | | | | |
| | 20-Feb-09 | 8.1 | 610 | 3.3 | 13.3 |
| | 27-Feb-09 | 8.1 | 599 | 2.7 | 13.5 |
| | 6-Mar-09 | | 519 | 3.7 | 12.6 |
| | 13-Mar-09 | 8.4 | 552 | 3.4 | |
| | 20-Mar-09 | 8.3 | 554 | 4.3 | |
| | 27-Mar-09 | 7.4 | 640 | 5.0 | |
| | 3-Apr-09 | 7.5 | 583 | 5.5 | |
| | 9-Apr-09 | 7.8 | 530 | 4.4 | |
| | 17-Apr-09 | 8.3 | 596 | 6.4 | |
| | 24-Apr-09 | 8.1 | 589 | 7.5 | |
| | 1-May-09 | 8.2 | 431 | 10.5 | 10.5 |
| | 8-May-09 | 7.5 | 575 | 11.1 | 10.0 |
| | 15-May-09 | 8.1 | 480 | 11.9 | 10.5 |
| | 22-May-09 | 8.1 | 497 | 11.4 | 9.5 |
| | 29-May-09 | 8.0 | 627 | 11.4 | |
| | 5-Jun-09 | 7.1 | 569 | 11.8 | 10.3 |
| | 12-Jun-09 | 8.3 | 575 | 12.1 | 9.6 |
| | 19-Jun-09 | 7.6 | 1,229 | 13.3 | 9.7 |
| | 2-Jul-09 | 7.6 | 609 | 13.4 | 9.3 |
| | 10-Jul-09 | | | 14.3 | 9.6 |
| | 17-Jul-09 | 9.1 | 693 | 14.1 | 9.1 |
| | 24-Jul-09 | 7.9 | 714 | 13.7 | 8.8 |
| | 26-Jul-09 | 7.9 | 692 | 14.9 | 9.2 |
| | 31-Jul-09 | 8.0 | 739 | 14.8 | 8.9 |
| | 7-Aug-09 | 7.9 | 760 | 14.5 | 7.6 |
| | 14-Aug-09 | 8.3 | 675 | 17.5 | 6.1 |
| | 21-Aug-09 | 9.0 | 801 | 16.0 | 8.6 |
| | 28-Aug-09 | 8.4 | 738 | 15.4 | 8.8 |
| | 4-Sep-09 | 8.9 | 763 | 15.5 | 8.6 |
| | 11-Sep-09 | 8.3 | 737 | 14.8 | 8.8 |
| | 18-Sep-09 | 7.7 | 829 | 13.9 | 6.9 |
| | 25-Sep-09 | 7.7 | 731 | 13.7 | 9.9 |
| | 2-Oct-09 | 8.4 | 851 | 12.0 | 9.7 |
| | 9-Oct-09 | 7.7 | 894 | 10.8 | 11.2 |
| | 16-Oct-09 | 8.2 | 846 | 9.4 | |
| | 23-Oct-09 | 7.6 | 767 | 8.6 | 10.9 |
| | 30-Oct-09 | 7.7 | 804 | 9.0 | |
| | 6-Nov-09 | 6.5 | 808 | 7.1 | |
| | 13-Nov-09 | 7.4 | 858 | 8.2 | |
| | 20-Nov-09 | 7.4 | 737 | 7.2 | 12.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 27-Nov-09 | 7.5 | 739 | 7.5 | 11.0 |
| | 4-Dec-09 | 7.6 | 707 | 4.8 | 12.9 |
| | 11-Dec-09 | 7.6 | 662 | 4.8 | 11.0 |
| | 18-Dec-09 | 7.6 | 758 | 4.8 | 11.2 |
| | 22-Dec-09 | 7.6 | 757 | 4.9 | 11.5 |
| | 28-Dec-09 (3) | | | | |
| | 8-Jan-10 (3) | | | | |
| | 15-Jan-10 | 7.6 | 741 | 5.0 | 10.6 |
| | 22-Jan-10 | 7.5 | 756 | 4.5 | 10.6 |
| | 29-Jan-10 (3) | | | | |
| | 5-Feb-10 | 7.0 | 742 | 5.0 | 8.4 |
| | 12-Feb-10 | 7.0 | 736 | 4.8 | 9.4 |
| | 19-Feb-10 | 7.9 | 738 | 4.9 | 10.3 |
| | 1-Mar-10 | 7.3 | 649 | 5.1 | 10.5 |
| | 5-Mar-10 | 7.4 | 542 | 5.9 | 9.2 |
| | 12-Mar-10 | 7.2 | 721 | 5.4 | 9.6 |
| | 19-Mar-10 | 7.6 | 622 | 7.3 | 10.8 |
| | 26-Mar-10 | 7.2 | 566 | 5.4 | 10.6 |
| | 2-Apr-10 (3) | | | | |
| | 9-Apr-10 | 7.5 | 666 | 7.2 | 11.9 |
| | 16-Apr-10 | 8.0 | 484 | 9.3 | 10.1 |
| | 23-Apr-10 | 7.0 | 471 | 8.7 | 11.2 |
| | 30-Apr-10 | 7.9 | 463 | 9.9 | 10.5 |
| | 7-May-10 | 7.9 | 448 | 9.7 | 10.1 |
| | 14-May-10 | 7.9 | 454 | 10.3 | 10.0 |
| | 21-May-10 | 7.8 | 498 | 11.1 | 9.4 |
| | 28-May-10 | 7.8 | 484 | 13.7 | 9.2 |
| | 4-Jun-10 | 7.8 | 541 | 13.2 | 6.2 |
| | 11-Jun-10 | 7.8 | 465 | 12.8 | 6.1 |
| | 18-Jun-10 | 7.7 | 565 | 13.5 | 11.3 |
| | 25-Jun-10 | 7.8 | 543 | 14.0 | 9.2 |
| | 1-Jul-10 (3) | | | | |
| | 9-Jul-10 | 7.7 | 541 | 15.7 | 8.8 |
| | 15-Jul-10 | 7.7 | 627 | 16.4 | 8.0 |
| | 23-Jul-10 | 7.6 | 614 | 15.6 | 9.1 |
| | 30-Jul-10 | 7.7 | 529 | 16.3 | 7.5 |
| | 6-Aug-10 | 7.6 | 606 | 15.7 | 10.8 |
| | 13-Aug-10 | 7.6 | 640 | 16.4 | 8.5 |
| | 20-Aug-10 | 7.6 | 654 | 15.7 | 6.7 |
| | 27-Aug-10 | 7.3 | 606 | 15.4 | 6.4 |
| | 3-Sep-10 | 7.7 | 674 | 16.3 | 7.7 |
| | 10-Sep-10 | 7.7 | 555 | 15.1 | 8.9 |
| | 17-Sep-10 | 7.7 | 563 | 14.3 | 8.0 |
| | 24-Sep-10 | 7.7 | | 14.7 | 7.5 |
| | 1-Oct-10 | 7.7 | 631 | 13.2 | 7.5 |
| | 8-Oct-10 | 7.8 | 636 | 12.8 | 8.7 |
| | 15-Oct-10 | 7.6 | 596 | 11.0 | 8.3 |
| | 22-Oct-10 | 7.7 | 625 | 10.4 | 8.4 |
| | 29-Oct-10 | 7.8 | 523 | 10.2 | 7.5 |
| | 5-Nov-10 | 7.6 | 599 | 7.6 | 8.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 12-Nov-10 | 7.6 | 630 | 8.6 | 8.4 |
| | 19-Nov-10 | 8.0 | 516 | 7.7 | 9.4 |
| | 26-Nov-10 | 7.6 | 469 | 6.2 | 10.1 |
| | 3-Dec-10 | 7.7 | 485 | 0.1 | 8.8 |
| | 9-Dec-10 | 7.6 | 413 | 4.7 | 13.0 |
| | 17-Dec-10 | 8.1 | 485 | 5.2 | 10.8 |
| | 23-Dec-10 | 8.1 | 414 | 4.8 | 8.3 |
| | 30-Dec-10 (3) | | | | |
| | 7-Jan-11 | 7.8 | 404 | 3.6 | 12.5 |
| | 14-Jan-11 | 7.7 | 380 | 4.6 | 10.2 |
| | 21-Jan-11 | 8.1 | 378 | 3.7 | 9.3 |
| | 28-Jan-11 | 7.7 | 372 | 4.5 | 8.7 |
| | 4-Feb-11 | 7.7 | 372 | 3.9 | 8.8 |
| | 11-Feb-11 | 8.0 | 443 | 4.8 | 9.1 |
| | 18-Feb-11 | 8.3 | 429 | 4.6 | 10.1 |
| | 25-Feb-11 | 7.4 | 404 | 4.4 | 12.7 |
| | 4-Mar-11 | 7.5 | 400 | 4.9 | 10.9 |
| | 11-Mar-11 | 7.6 | 362 | 2.4 | 11.6 |
| | 18-Mar-11 | 8.2 | 209 | 2.4 | |
| | 22-Mar-11 (3) | | | | |
| | 25-Mar-11 | 8.4 | 402 | 5.4 | 12.0 |
| | 1-Apr-11 | 7.2 | 362 | 4.6 | 10.7 |
| | 8-Apr-11 | 7.9 | 376 | 4.6 | 9.7 |
| | 15-Apr-11 | 8.1 | 321 | 5.4 | 12.0 |
| | 21-Apr-11 | 8.1 | 373 | 4.9 | 12.1 |
| | 29-Apr-11 | | | | |
| | 6-May-11 | 8.4 | 314 | 7.4 | 10.9 |
| | 13-May-11 | 8.2 | 474 | 9.7 | 12.6 |
| | 20-May-11 | 7.9 | 395 | 10.2 | 11.0 |
| | 27-May-11 | | | | |
| | 3-Jun-11 | 7.9 | 432 | 12.9 | 9.1 |
| | 10-Jun-11 | 7.7 | 501 | 13.1 | 7.8 |
| | 17-Jun-11 | 6.6 | 481 | 13.3 | 7.9 |
| | 24-Jun-11 | 7.8 | 527 | 13.1 | 7.3 |
| | 30-Jun-11 | 7.5 | 486 | 13.8 | 9.2 |
| | 8-Jul-11 | 7.7 | 589 | 15.2 | 7.4 |
| | 14-Jul-11 | 8.0 | 593 | 15.1 | 7.3 |
| | 22-Jul-11 | 7.7 | 629 | 17.4 | 9.5 |
| | 29-Jul-11 | 7.9 | 542 | 15.4 | 6.3 |
| | 5-Aug-11 | 7.7 | 613 | 16.6 | 8.5 |
| | 12-Aug-11 | 7.9 | 644 | 15.5 | 6.8 |
| | 19-Aug-11 | 8.0 | 458 | 15.5 | 6.8 |
| | 26-Aug-11 | 7.8 | 661 | 15.2 | 7.2 |
| | 2-Sep-11 | 7.4 | 552 | 15.6 | 7.4 |
| | 9-Sep-11 | 8.3 | 632 | 15.6 | 7.2 |
| | 16-Sep-11 | 8.5 | 557 | 13.3 | 6.7 |
| | 23-Sep-11 (3) | | | | |
| | 30-Sep-11 | 8.2 | 618 | 12.9 | 8.0 |
| | 6-Oct-11 | 7.9 | 694 | 11.3 | 8.0 |
| | 14-Oct-11 | 7.7 | 580 | 13.3 | 8.6 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 21-Oct-11 | 8.1 | 643 | 10.0 | 9.4 |
| | 28-Oct-11 | 7.7 | 594 | 9.6 | 8.2 |
| | 4-Nov-11 | 8.1 | 520 | 8.2 | 9.8 |
| | 11-Nov-11 | 8.0 | 591 | 7.7 | 4.0 |
| | 18-Nov-11 (3) | | | | |
| | 25-Nov-11 | 8.7 | 554 | 7.4 | 7.8 |
| | 2-Dec-11 (3) | | | | |
| | 9-Dec-11 | 8.1 | 438 | 6.6 | 7.4 |
| | 16-Dec-11 | 7.3 | 422 | 6.2 | 10.9 |
| | 23-Dec-11 (3) | | | | |
| | 30-Dec-11 (3) | | | | |
| | 6-Jan-12 | 7.3 | 448 | 5.5 | 10.7 |
| | 13-Jan-12 | | | | |
| | 20-Jan-12 | 8.4 | 368 | 4.7 | 8.0 |
| | 27-Jan-12 | 9.0 | 315 | 4.6 | 11.7 |
| | 3-Feb-12 | 8.2 | 284 | 4.8 | 9.2 |
| | 10-Feb-12 | 8.5 | 360 | 4.2 | 10.6 |
| | 17-Feb-12 | 8.6 | 372 | 4.7 | 11.4 |
| | 24-Feb-12 (3) | | | | |
| | 1-Mar-12 | 8.9 | 216 | 4.7 | |
| | 9-Mar-12 (5) | | | | |
| | 16-Mar-12 | | | | |
| | 23-Mar-12 | 7.6 | | 7.4 | 8.6 |
| | 30-Mar-12 | 9.0 | 379 | 6.1 | 9.8 |
| | 6-Apr-12 (3) | | | | |
| | 13-Apr-12 | 8.5 | 409 | 6.7 | 10.1 |
| | 20-Apr-12 | 8.8 | 445 | 7.8 | 6.8 |
| | 27-Apr-12 | 8.7 | 345 | 6.0 | 9.0 |
| | 4-May-12 | 8.1 | 515 | 8.4 | 6.8 |
| | 11-May-12 | 7.7 | 315 | 9.1 | 9.4 |
| | 18-May-12 | 7.6 | 449 | 9.1 | 6.1 |
| | 25-May-12 | 6.4 | 512 | 11.4 | 5.5 |
| | 1-Jun-12 | 7.8 | 581 | 13.2 | 7.3 |
| | 8-Jun-12 | 8.3 | 545 | 13.2 | 7.8 |
| | 15-Jun-12 | 7.7 | 587 | 13.1 | 5.4 |
| | 22-Jun-12 | 7.7 | 580 | 13.2 | 7.4 |
| | 28-Jun-12 | 8.0 | 640 | 14.7 | 6.1 |
| | 6-Jul-12 | 7.8 | 688 | 15.1 | 5.5 |
| | 13-Jul-12 | 8.3 | 627 | 14.7 | 4.4 |
| | 20-Jul-12 | 8.1 | 739 | 17.4 | 6.8 |
| | 27-Jul-12 | 7.9 | 686 | 14.9 | 5.3 |
| | 3-Aug-12 | 7.8 | 741 | 17.3 | 7.9 |
| | 10-Aug-12 | 8.3 | 375 | 15.2 | 7.3 |
| | 17-Aug-12 | 8.8 | 450 | 14.2 | 5.3 |
| | 24-Aug-12 | 7.7 | 660 | 15.9 | 8.2 |
| | 31-Aug-12 | 7.3 | 723 | 16.3 | 6.9 |
| | 7-Sep-12 | 7.7 | 722 | 15.8 | 6.0 |
| | 14-Sep-12 | 7.0 | 715 | 14.6 | 7.4 |
| | 21-Sep-12 | 7.5 | 671 | 12.6 | 6.7 |
| | 28-Sep-12 | 7.6 | 722 | 11.9 | 7.6 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 | 5-Oct-12 | 8.1 | 769 | 13.1 | 8.5 |
| (cont'd) | 12-Oct-12 | 8.5 | 666 | 9.8 | 6.8 |
| | 19-Oct-12 | 8.6 | 672 | 9.3 | 6.8 |
| | 26-Oct-12 | 7.6 | 710 | 10.7 | 10.6 |
| | 2-Nov-12 | 8.3 | 632 | 7.4 | 6.4 |
| | 9-Nov-12 | 8.7 | 408 | 8.3 | 9.5 |
| | 16-Nov-12 | 8.1 | 569 | 8.5 | 9.2 |
| | 23-Nov-12 | 8.0 | 515 | 8.1 | 6.0 |
| | 30-Nov-12 | 8.7 | 408 | 6.0 | 4.3 |
| | 7-Dec-12 | 8.1 | 542 | 6.5 | 6.8 |
| | 14-Dec-12 | 8.1 | 463 | 6.4 | 9.8 |
| | 21-Dec-12 | 7.7 | 516 | 5.6 | 10.9 |
| | 28-Dec-12 (3) | | | | |
| | 4-Jan-13 | 7.7 | 509 | 4.8 | 8.6 |
| | 11-Jan-13 | 7.7 | 450 | 4.3 | 8.7 |
| | 17-Jan-13 | 7.8 | 489 | 4.2 | 10.2 |
| | 25-Jan-13 | 7.9 | 492 | 4.3 | 6.9 |
| | 1-Feb-13 (3) | | | | |
| | 8-Feb-13 (3) | | | | |
| | 15-Feb-13 | 7.7 | 648 | 3.5 | 9.8 |
| | 22-Feb-13 | 7.5 | 372 | 3.6 | 7.3 |
| | 1-Mar-13 | 7.6 | 486 | 3.3 | 8.5 |
| | 8-Mar-13 | 7.5 | 387 | 5.2 | 10.1 |
| | 15-Mar-13 | | 374 | 3.6 | 8.6 |
| | 22-Mar-13 | 7.7 | 431 | 3.6 | 10.4 |
| | 28-Mar-13 | 7.5 | 370 | 4.4 | 9.4 |
| | 5-Apr-13 | 7.7 | 375 | 3.8 | 11.3 |
| | 12-Apr-13 | 7.7 | 382 | 3.3 | 12.4 |
| | 19-Apr-13 | | | | |
| | 26-Apr-13 | 7.6 | 343 | 5.2 | 10.1 |
| | 3-May-13 | 7.6 | 350 | 8.9 | 9.0 |
| | 9-May-13 | 7.8 | 449 | 10.6 | 10.1 |
| | 16-May-13 | 8.0 | 410 | 9.1 | 10.3 |
| | 24-May-13 | 7.7 | 439 | 8.2 | 8.2 |
| | 31-May-13 | 7.8 | 466 | 12.7 | 8.0 |
| | 7-Jun-13 (3) | | | | |
| | 14-Jun-13 | 7.9 | 509 | 14.5 | 6.5 |
| | 21-Jun-13 | 8.0 | 528 | 12.4 | 11.3 |
| | 27-Jun-13 | 8.1 | 532 | 12.6 | 10.9 |
| | 5-Jul-13 | 7.7 | 588 | 14.4 | 7.9 |
| | 12-Jul-13 | 7.7 | 538 | 17.5 | 5.0 |
| | 19-Jul-13 | 7.8 | 525 | 16.9 | 7.7 |
| | 25-Jul-13 | 7.5 | 565 | 14.1 | 9.0 |
| | 2-Aug-13 | 8.1 | 596 | 15.6 | 9.2 |
| | 8-Aug-13 | 8.1 | 548 | 16.0 | 8.2 |
| | 16-Aug-13 | 8.2 | 646 | 14.8 | 8.9 |
| | 23-Aug-13 | 8.0 | 573 | 15.9 | 6.7 |
| | 30-Aug-13 | 7.9 | 570 | 16.0 | 6.0 |
| | 6-Sep-13 | 7.8 | 560 | 15.7 | 6.6 |
| | 13-Sep-13 | 7.7 | 541 | 13.3 | 8.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 20-Sep-13 | 7.9 | 529 | 12.9 | 8.1 |
| | 27-Sep-13 | 7.8 | 520 | 12.8 | 8.1 |
| | 4-Oct-13 (3) | | | | |
| | 11-Oct-13 | 7.6 | 502 | 11.3 | 7.6 |
| | 18-Oct-13 | 7.5 | 500 | 10.7 | 5.7 |
| | 25-Oct-13 | 7.5 | 423 | 8.6 | 3.9 |
| | 31-Oct-13 | 7.3 | 406 | 8.3 | 3.8 |
| | 8-Nov-13 | 7.2 | 400 | 3.5 | 5.0 |
| | 14-Nov-13 | 7.2 | 420 | 2.1 | 4.9 |
| | 22-Nov-13 | 7.9 | 449 | 7.5 | 4.0 |
| | 29-Nov-13 | 8.4 | 427 | 6.6 | 10.7 |
| | 6-Dec-13 | 8.0 | 404 | 5.2 | 8.1 |
| | 13-Dec-13 (3) | | | | |
| | 19-Dec-13 | 8.2 | 414 | 6.0 | 5.1 |
| | 27-Dec-13 (3) | | | | |
| | 3-Jan-14 | 7.8 | 530 | 2.3 | 3.3 |
| | 10-Jan-14 | 8.4 | 404 | 5.0 | 4.6 |
| | 17-Jan-14 | 8.5 | 394 | 4.7 | 10.5 |
| | 31-Jan-14 | 7.3 | 436 | 4.5 | 8.5 |
| | 7-Feb-14 | 7.8 | 426 | 3.5 | 3.9 |
| | 14-Feb-14 | 7.2 | 447 | 5.0 | 6.0 |
| | 21-Feb-14 | 7.3 | 435 | 4.4 | 8.3 |
| | 28-Feb-14 | 7.3 | 437 | 4.2 | 8.5 |
| | 7-Mar-14 | 7.3 | 439 | 4.4 | 8.5 |
| | 14-Mar-14 | 6.4 | 443 | 4.1 | 7.0 |
| | 21-Mar-14 | 7.2 | 449 | 4.2 | 4.9 |
| | 28-Mar-14 | 7.6 | 389 | 4.0 | 9.9 |
| | 4-Apr-14 | 6.9 | 416 | 3.7 | 9.0 |
| | 11-Apr-14 | 7.6 | 363 | 3.6 | 10.4 |
| | 17-Apr-14 | 8.0 | 631 | 4.6 | 11.0 |
| | 25-Apr-14 | 7.9 | 603 | 4.3 | 10.3 |
| | 1-May-14 | 7.8 | 580 | 4.7 | 9.2 |
| | 9-May-14 | 7.6 | 418 | 12.2 | 5.6 |
| | 16-May-14 | 7.1 | 450 | 10.0 | 8.2 |
| | 23-May-14 | 7.5 | 382 | 11.9 | 6.2 |
| | 30-May-14 | 7.2 | 375 | 12.0 | 6.1 |
| | 6-Jun-14 | 7.3 | 391 | 12.5 | 7.6 |
| | 13-Jun-14 | 7.2 | 398 | 12.7 | 7.5 |
| | 20-Jun-14 | 7.9 | 416 | 13.2 | 8.1 |
| | 27-Jun-14 | 7.2 | 420 | 14.4 | 8.2 |
| | 4-Jul-14 | 8.0 | 492 | 13.3 | 8.7 |
| | 11-Jul-14 | 7.9 | 482 | 14.3 | 7.2 |
| | 18-Jul-14 | 8.4 | 575 | 12.6 | |
| | 25-Jul-14 | 8.8 | 615 | 13.1 | |
| | 1-Aug-14 | 8.6 | 575 | 13.2 | 6.8 |
| | 8-Aug-14 | 8.5 | 523 | 13.8 | 6.6 |
| | 15-Aug-14 | 8.3 | 520 | 12.5 | 7.3 |
| | 22-Aug-14 | 8.9 | 662 | 13.1 | |
| | 29-Aug-14 | 9.0 | 663 | 13.5 | |
| | 5-Sep-14 | 9.0 | 672 | 14.1 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 12-Sep-14 | 8.0 | 639 | 10.2 | 5.8 |
| | 19-Sep-14 | 8.0 | 423 | 10.2 | 6.2 |
| | 26-Sep-14 | 8.0 | 418 | 10.1 | 6.2 |
| | 3-Oct-14 | 7.5 | 431 | 12.8 | 6.8 |
| | 10-Oct-14 | 7.6 | 419 | 12.6 | 7.0 |
| | 16-Oct-14 | 8.2 | 656 | 11.7 | 7.4 |
| | 24-Oct-14 | 8.5 | 427 | 9.4 | 6.3 |
| | 31-Oct-14 | 8.4 | 420 | 6.4 | 6.3 |
| | 7-Nov-14 | 7.3 | 447 | 0.4 | 8.0 |
| | 14-Nov-14 | 7.4 | 423 | (1) | 6.7 |
| | 20-Nov-14 | 7.3 | 416 | (1) | 6.7 |
| | 28-Nov-14 | 7.3 | 413 | (1) | 5.2 |
| | 5-Dec-14 | 7.2 | 418 | (0) | 6.9 |
| | 12-Dec-14 | 7.2 | 412 | (0) | 6.6 |
| | 19-Dec-14 | 7.2 | 427 | (1) | 6.1 |
| | 26-Dec-14 | | | | |
| | 2-Jan-15 (3) | | | | |
| | 8-Jan-15 | 7.2 | 470 | 5.5 | 8.5 |
| | 14-Jan-15 | 7.4 | 446 | 0.9 | 7.3 |
| | 23-Jan-15 | 7.2 | 420 | (0) | 7.9 |
| | 30-Jan-15 (3) | | | | |
| | 6-Feb-15 | 7.8 | 570 | 4.3 | 8.6 |
| | 12-Feb-15 (3) | | | | |
| | 27-Feb-15 | 7.8 | 577 | 4.6 | 8.2 |
| | 6-Mar-15 | 7.6 | 576 | 4.5 | 8.7 |
| | 13-Mar-15 | 7.6 | 569 | 5.1 | 8.2 |
| | 20-Mar-15 | 7.6 | 349 | 5.5 | 8.4 |
| | 26-Mar-15 | 7.7 | 337 | 4.6 | 8.9 |
| | 2-Apr-15 | 7.7 | 341 | 4.9 | 9.0 |
| | 10-Apr-15 | 7.9 | 288 | 6.4 | 9.9 |
| | 17-Apr-15 | 9.2 | 372 | 5.7 | 12.6 |
| | 23-Apr-15 | 7.9 | 419 | 5.2 | 10.2 |
| | 1-May-15 | 7.6 | 466 | 7.1 | 10.2 |
| | 8-May-15 | 9.2 | 472 | 10.2 | |
| | 15-May-15 | 7.8 | 414 | 8.7 | 9.3 |
| | 21-May-15 | 7.8 | 420 | 8.9 | 10.6 |
| | 28-May-15 | 7.8 | 485 | 11.8 | 8.8 |
| | 4-Jun-15 | 7.7 | 478 | 11.2 | 8.7 |
| | 12-Jun-15 | 7.6 | 535 | 10.8 | 7.0 |
| | 18-Jun-15 | 7.8 | 548 | 12.8 | 7.1 |
| | 26-Jun-15 | 7.7 | 495 | 13.6 | |
| | 1-Jul-15 (3) | | | | |
| | 10-Jul-15 | 7.9 | 557 | 13.0 | |
| | 17-Jul-15 | 7.9 | 557 | 13.0 | |
| | 22-Jul-15 | 8.1 | 558 | 12.7 | |
| | 30-Jul-15 | 8.0 | 665 | 16.4 | |
| | 5-Aug-15 | 7.6 | 586 | 12.8 | 6.8 |
| | 13-Aug-15 | 7.7 | 703 | 14.9 | 6.9 |
| | 21-Aug-15 | 8.2 | 635 | 15.0 | |
| | 28-Aug-15 | 8.2 | 605 | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 3-Sep-15 | 7.6 | 700 | 16.9 | 7.7 |
| | 10-Sep-15 | 7.8 | 682 | 17.0 | 7.9 |
| | 18-Sep-15 | 7.6 | 626 | 13.8 | 7.6 |
| | 25-Sep-15 | 7.7 | 632 | 14.3 | 9.1 |
| | 2-Oct-15 | 7.3 | 544 | 9.7 | 7.2 |
| | 9-Oct-15 | 7.4 | 561 | 11.0 | 7.8 |
| | 16-Oct-15 | 7.8 | 549 | 10.3 | 8.5 |
| | 23-Oct-15 | 7.5 | 558 | 9.3 | 8.2 |
| | 30-Oct-15 | 7.5 | 576 | 8.8 | 8.7 |
| | 5-Nov-15 | 7.9 | 596 | 11.0 | 7.5 |
| | 13-Nov-15 | 7.5 | 549 | 8.7 | 5.2 |
| | 19-Nov-15 | 7.8 | 648 | 9.6 | 11.9 |
| | 26-Nov-15 | 7.6 | 558 | 7.0 | 10.3 |
| | 4-Dec-15 | 7.4 | 564 | 6.6 | 10.4 |
| | 10-Dec-15 | 7.4 | 574 | 7.5 | 8.3 |
| | 17-Dec-15 | 7.7 | 492 | 6.9 | 7.4 |
| | 23-Dec-15 | 7.6 | 499 | 7.3 | 7.3 |
| | 30-Dec-15 | 7.4 | 466 | 5.3 | 8.4 |
| | 14-Jan-16 | 7.1 | 441 | 4.3 | 8.4 |
| | 22-Jan-16 | 7.9 | 504 | 5.0 | 7.9 |
| | 29-Jan-16 | 7.5 | 472 | 3.6 | 9.0 |
| | 5-Feb-16 | 7.5 | 466 | 4.5 | 9.0 |
| | 11-Feb-16 | 7.6 | 466 | 3.7 | 9.2 |
| | 18-Feb-16 | 7.5 | 484 | 5.4 | 8.8 |
| | 25-Feb-16 | 7.1 | 442 | 3.3 | 9.2 |
| | 4-Mar-16 | 7.6 | 448 | 4.5 | 9.0 |
| | 10-Mar-16 | 7.0 | 276 | 1.6 | 11.8 |
| | 18-Mar-16 | 7.7 | 388 | 4.7 | 10.8 |
| | 28-Mar-16 | 7.5 | 99 | 1.3 | 12.7 |
| | 1-Apr-16 | 7.3 | 237 | 3.7 | 10.4 |
| | 7-Apr-16 | 7.1 | 271 | 3.7 | 10.7 |
| | 15-Apr-16 | 7.5 | 340 | 6.9 | 10.3 |
| | 22-Apr-16 | 8.0 | 449 | 8.8 | 10.2 |
| | 29-Apr-16 | 8.3 | 439 | 6.9 | 11.1 |
| | 6-May-16 | 8.1 | 528 | 10.5 | 9.3 |
| | 13-May-16 | 7.8 | 632 | 12.5 | |
| | 20-May-16 | 8.2 | 650 | 13.0 | 8.8 |
| | 27-May-16 | 8.1 | 581 | 14.7 | 7.7 |
| | 2-Jun-16 | 8.0 | 531 | 13.5 | 6.5 |
| | 10-Jun-16 | 8.1 | 733 | 12.1 | 8.6 |
| | 17-Jun-16 | 8.0 | 695 | 17.0 | 8.6 |
| | 24-Jun-16 | 7.9 | 561 | 13.4 | 7.9 |
| | 28-Jun-16 | 8.1 | 626 | 14.1 | 11.1 |
| | 8-Jul-16 | 8.1 | 587 | 16.7 | 9.8 |
| | 15-Jul-16 | 8.2 | 582 | 16.0 | 7.7 |
| | 22-Jul-16 | 7.8 | 769 | 18.0 | 8.0 |
| | 29-Jul-16 | 8.1 | 691 | 15.5 | 8.4 |
| | 5-Aug-16 | 8.3 | 674 | 16.8 | 8.0 |
| | 12-Aug-16 | 8.1 | 832 | 18.0 | 8.0 |
| | 19-Aug-16 | 7.9 | 661 | 16.4 | 7.0 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 | 26-Aug-16 | 7.9 | 676 | 14.8 | 7.6 |
| (cont'd) | 2-Sep-16 | 7.5 | 586 | 13.1 | 7.3 |
| | 9-Sep-16 | 7.9 | 587 | 14.7 | 7.5 |
| | 16-Sep-16 | 8.1 | 612 | 12.4 | 8.3 |
| | 21-Sep-16 | 8.0 | 623 | 15.5 | 10.1 |
| | 30-Sep-16 | 8.3 | 604 | 12.0 | 9.7 |
| | 7-Oct-16 | 7.4 | 621 | 12.5 | 7.0 |
| | 13-Oct-16 | 8.0 | 532 | 11.2 | 9.5 |
| | 19-Oct-16 | 7.5 | 645 | 12.4 | 9.8 |
| | 27-Oct-16 | 8.0 | 492 | 6.6 | 7.2 |
| | 3-Nov-16 | 7.8 | 592 | 9.5 | 7.3 |
| | 11-Nov-16 | 6.1 | 496 | 8.1 | 9.0 |
| | 18-Nov-16 | 7.7 | 751 | 9.2 | 7.2 |
| | 24-Nov-16 | 7.3 | 516 | 7.5 | 8.4 |
| | 2-Dec-16 | 7.8 | 468 | 6.8 | 4.9 |
| | 7-Dec-16 | 7.9 | 453 | 5.8 | 5.9 |
| | 16-Dec-16 | 7.5 | 768 | 4.9 | 9.2 |
| | 22-Dec-16 | 7.7 | 750 | 5.6 | 8.8 |
| | 30-Dec-16 (3) | | | | |
| | 6-Jan-17 | 7.7 | 412 | 4.5 | 9.4 |
| | 13-Jan-17 | 7.8 | 439 | 4.0 | 9.7 |
| | 20-Jan-17 | 7.8 | 470 | 4.8 | 8.7 |
| | 26-Jan-17 | 7.8 | 494 | 4.8 | 8.8 |
| | 3-Feb-17 | 7.8 | 440 | 3.5 | 8.6 |
| | 10-Feb-17 | 7.8 | 413 | 4.0 | 7.8 |
| | 17-Feb-17 | 7.7 | 492 | 4.0 | 8.9 |
| | 19-Apr-17 | 6.9 | 449 | 9.3 | 11.2 |
| | 3-May-17 | 7.1 | 374 | 7.8 | 9.6 |
| | 16-May-17 | 8.2 | 548 | 14.5 | 8.4 |
| | 28-Jun-17 | 7.9 | 625 | 14.8 | 6.8 |
| | 18-Jul-17 | 8.0 | 705 | 17.4 | 7.9 |
| | 15-Aug-17 | 8.3 | 557 | 15.1 | 6.4 |
| | 18-Sep-17 | 6.4 | 679 | 14.1 | 5.7 |
| | 18-Oct-17 | 7.9 | 626 | 11.1 | 7.3 |
| | 15-Nov-17 | 7.8 | 550 | 6.9 | 9.1 |
| | 14-Dec-17 | 7.9 | 495 | 4.3 | 3.3 |
| | 17-Jan-18 | 7.4 | 445 | 3.1 | 8.6 |
| | 18-Feb-18 (5) | | | | |
| | 23-Feb-18 | 7.9 | 334 | 2.3 | 8.0 |
| | 6-Mar-18 | 7.6 | 562 | 3.7 | |
| | 20-Mar-18 | 7.5 | 406 | 3.6 | 12.1 |
| | 18-Apr-18 | 7.8 | 624 | 3.2 | 15.7 |
| | 9-May-18 | 7.9 | 564 | 11.2 | 8.2 |
| | 14-May-18 | 7.7 | 597 | 10.3 | 7.9 |
| | 18-Jun-18 | 7.8 | 654 | 16.4 | 6.4 |
| | 19-Jul-18 | 7.6 | 683 | 15.5 | 5.1 |
| | 23-Aug-18 | 7.7 | 674 | 15.9 | 5.2 |
| | 5-Sep-18 | 8.0 | 700 | 18.8 | 6.8 |
| | 19-Sep-18 | 7.5 | 737 | 14.9 | 3.8 |
| | 24-Oct-18 | 7.8 | 714 | 8.6 | 5.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| QFSW2 (cont'd) | 21-Nov-18 | 7.6 | 699 | 4.6 | 7.3 |
| | 6-Dec-18 | 7.6 | 687 | 5.5 | 8.2 |
| | 12-Dec-18 | 7.8 | 697 | 6.1 | 7.5 |
| | 18-Jan-19 | 7.6 | 422 | 5.1 | 7.2 |
| | 26-Feb-19 | 7.8 | 608 | 2.5 | 9.9 |
| | 8-Mar-19 | 7.8 | 670 | 2.7 | 8.7 |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.9 | 484 | 7.7 | 8.5 |
| | 17-May-19 | 8.0 | 496 | 9.6 | 8.3 |
| | 23-May-19 | 8.1 | 525 | 12.0 | 8.4 |
| | 18-Jun-19 | 7.8 | 607 | 13.6 | 7.3 |
| | 29-Jul-19 | 7.8 | 671 | 18.2 | 6.3 |
| | 29-Aug-19 | 8.0 | 578 | 18.1 | 6.6 |
| | 4-Sep-19 | | | | |
| | 26-Sep-19 | 7.4 | 700 | 15.0 | 6.3 |
| | 23-Oct-19 | 7.5 | 698 | 8.5 | 6.3 |
| | 22-Nov-19 | 7.6 | 583 | 2.1 | 7.0 |
| | 19-Dec-19 | | | | |
| | 20-Dec-19 | 7.6 | 423 | 0.1 | 7.2 |
| | 15-Jan-20 | 7.7 | 703 | 5.4 | 7.6 |
| | 20-Feb-20 | 7.6 | 716 | 5.0 | 8.0 |
| | 2-Mar-20 | | | | |
| | 26-Mar-20 | 7.6 | 628 | 5.8 | 8.6 |
| | 27-Apr-20 | 7.3 | 556 | 8.2 | 8.3 |
| | 29-May-20 | 8.3 | 645 | 14.0 | 6.0 |
| | 11-Jun-20 | | | | |
| | 23-Jun-20 | 8.6 | 574 | 14.4 | 8.1 |
| | 30-Jul-20 | 8.0 | 716 | 20.0 | 5.5 |
| | 25-Aug-20 | 8.2 | 779 | 20.8 | 7.1 |
| | 27-Aug-20 | 8.2 | 779 | | 7.1 |
| | 25-Sep-20 | 8.1 | 660 | 13.0 | 8.6 |
| | 30-Oct-20 | 7.4 | 670 | 8.1 | 7.4 |
| | 25-Nov-20 | 7.9 | 821 | | 7.1 |
| | 26-Nov-20 | 7.7 | 807 | 6.5 | 7.1 |
| | 23-Dec-20 | 7.7 | 821 | 3.8 | 7.1 |
| | 27-Jan-21 | 7.6 | 690 | 3.5 | 8.2 |
| | 22-Feb-21 | 7.3 | 385 | 1.1 | 12.1 |
| | 23-Feb-21 | 7.3 | 385 | 1.1 | 12.1 |
| | 29-Mar-21 | 8.2 | 598 | 8.0 | 8.1 |
| | 27-Apr-21 | 7.7 | 526 | 8.0 | 8.1 |
| | 27-May-21 | 7.8 | 776 | 15.0 | 8.5 |
| | 22-Jun-21 | 7.8 | 663 | 16.8 | 6.8 |
| | 22-Jul-21 | 8.2 | 859 | 19.7 | 8.4 |
| | 11-Aug-21 | 8.2 | 754 | 20.1 | 8.6 |
| | 25-Aug-21 | 8.2 | 754 | 20.1 | 8.6 |
| | 28-Sep-21 | 7.7 | 800 | 14.1 | 7.8 |
| | 7-Oct-21 | 7.7 | 816 | 10.1 | 8.7 |
| | 26-Oct-21 | 7.7 | 816 | 10.1 | 8.7 |
| | 23-Nov-21 | 7.8 | 810 | 5.6 | 8.6 |
| | 21-Dec-21 | 7.9 | 809 | 4.1 | 8.1 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **QFSW2** | 24-Jan-22 | 8.0 | 752 | 0.4 | 8.0 |
| **(cont'd)** | 8-Feb-22 | 7.5 | 812 | 4.2 | 8.7 |
| | 28-Feb-22 | | | | 11.0 |
| | 16-Mar-22 | 7.9 | 625 | 2.4 | 9.1 |
| | 21-Apr-22 | 7.6 | 594 | 2.4 | 12.5 |
| | 24-May-22 | 7.2 | 465 | 12.6 | 11.0 |
| | 31-Aug-22 | 7.4 | 671 | 18.6 | 6.4 |
| | 28-Oct-22 | 7.6 | 754 | 8.9 | 6.4 |
| | 23-Feb-23 | 7.5 | 945 | 0.9 | 9.8 |
| | 17-May-23 | 7.8 | 703 | 9.3 | 6.9 |
| | 30-Aug-23 | 7.6 | 616 | 14.7 | 4.5 |
| | 31-Oct-23 | 8.1 | 715 | 9.6 | 7.9 |
| | 27-Feb-24 | 7.5 | 771 | 4.3 | 6.9 |
| | 29-May-24 | 7.8 | 950 | 13.9 | 8.4 |
| | 26-Aug-24 | 7.6 | 880 | 19.0 | 8.0 |
| | 30-Oct-24 | 7.7 | 1,000 | 11.9 | 7.3 |
| | 24-Feb-25 (2) | 8.9 | 730 | 5.1 | 6.5 |
| | 28-May-25 | 7.8 | 720 | 12.9 | 8.1 |
| | 25-Aug-25 | 7.5 | 798 | 14.3 | 5.1 |
| | 27-Oct-25 | 7.6 | 799 | 9.2 | 6.7 |
| **SW3** | 22-May-03 | | | 10.0 | |
| | 23-Jun-03 (1) | | | | |
| | 22-Jul-03 (1) | | | | |
| | 20-Aug-03 (1) | | | | |
| | 25-Sep-03 (1) | | | | |
| | 22-Oct-03 (1) | | | | |
| | 28-Nov-03 (1) | | | | |
| | 10-Feb-04 (2) | | | | |
| | 18-Mar-04 | | 340 | 0.6 | 4.4 |
| | 19-Apr-04 | 7.4 | 239 | 8.7 | 10.3 |
| | 19-May-04 | 7.5 | 378 | 14.6 | 5.3 |
| | 24-Jun-04 (1) | | | | |
| | 29-Jul-04 (1) | | | | |
| | 23-Aug-04 (1) | | | | |
| | 21-Sep-04 (1) | | | | |
| | 21-Oct-04 (1) | | | | |
| | 17-Nov-04 (1) | | | | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 30-Mar-05 | 7.0 | 236 | 1.1 | 7.5 |
| | 11-Apr-05 | 6.1 | 154 | 1.5 | 7.5 |
| | 22-May-05 (1) | | | | |
| | 26-Jun-05 (1) | | | | |
| | 10-Jul-05 (1) | | | | |
| | 21-Aug-05 (1) | | | | |
| | 25-Sep-05 (1) | | | | |
| | 23-Oct-05 (1) | | | | |
| | 13-Nov-05 (1) | | | | |
| | 11-Dec-05 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW3 | 16-Jan-06 | 7.8 | 602 | 0.8 | 6.3 |
| (cont'd) | 19-Feb-06 (2) | | | | |
| | 20-Mar-06 | 7.8 | 209 | 0.5 | |
| | 18-Apr-06 | 7.7 | 339 | 10.1 | |
| | 23-May-06 | 7.5 | 426 | 8.5 | |
| | 18-Jun-06 (1) | | | | |
| | 9-Jul-06 (1) | | | | |
| | 20-Aug-06 (1) | | | | |
| | 17-Sep-06 (1) | | | | |
| | 15-Oct-06 (1) | | | | |
| | 19-Nov-06 (1) | | | | |
| | 27-Nov-06 | 7.6 | 737 | 6.1 | 7.6 |
| | 17-Dec-06 | 7.5 | 353 | 1.4 | |
| | 21-Jan-07 | 7.6 | 452 | 2.5 | 6.5 |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 15-Apr-07 | 8.1 | 351 | 1.7 | 10.8 |
| | 13-May-07 | 8.0 | 849 | 13.2 | 7.0 |
| | 17-Jun-07 (1) | | | | |
| | 15-Jul-07 (1) | | | | |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |
| | 18-Nov-07 (1) | | | | |
| | 9-Dec-07 (2) | | | | |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 4-Apr-08 | 7.7 | 275 | 0.1 | 8.2 |
| | 23-Apr-08 | 7.8 | 329 | 18.7 | 5.8 |
| | 21-May-08 | 6.9 | 365 | 14.7 | 4.9 |
| | 15-Jun-08 (1) | | | | |
| | 13-Jul-08 (1) | | | | |
| | 17-Aug-08 (1) | | | | |
| | 14-Sep-08 (1) | | | | |
| | 19-Oct-08 (1) | | | | |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 (2) | | | | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 7.7 | 295 | 2.0 | 10.4 |
| | 12-Apr-09 | 7.3 | 354 | 12.5 | 10.6 |
| | 17-May-09 | 7.7 | 351 | 20.5 | 4.5 |
| | 14-Jun-09 (1) | | | | |
| | 12-Jul-09 (1) | | | | |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 (1) | | | | |
| | 11-Oct-09 (1) | | | | |
| | 15-Nov-09 (1) | | | | |
| | 13-Dec-09 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW3 (cont'd) | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.7 | 265 | 1.3 | 9.9 |
| | 11-Apr-10 | 7.8 | 373 | 8.2 | 11.3 |
| | 16-May-10 | 7.6 | 219 | 15.3 | 5.4 |
| | 23-May-10 (1) | | | | |
| | 13-Jun-10 | 7.5 | 334 | 18.5 | 6.2 |
| | 18-Jul-10 | 7.4 | 308 | 19.8 | 5.9 |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 (1) | | | | |
| | 14-Nov-10 | 7.3 | 365 | 6.0 | 10.6 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | 8.8 | 218 | 0.2 | 7.6 |
| | 20-Feb-11 (2) | | | | |
| | 13-Mar-11 | 8.1 | 209 | 0.3 | 7.1 |
| | 17-Mar-11 | 8.0 | 141 | 0.5 | 5.9 |
| | 22-Mar-11 | 7.9 | 204 | 0.5 | 8.2 |
| | 1-Apr-11 | 7.4 | 197 | 1.2 | 7.3 |
| | 5-Apr-11 | 8.0 | 166 | 0.4 | 12.3 |
| | 8-Apr-11 | 7.9 | 185 | 1.8 | 9.3 |
| | 12-Apr-11 | 6.3 | 164 | 4.4 | 10.8 |
| | 15-Apr-11 | 7.8 | 140 | 3.0 | 10.1 |
| | 18-Apr-11 | 7.8 | 200 | 2.1 | 11.7 |
| | 20-Apr-11 | 8.0 | 182 | 2.5 | 8.8 |
| | 21-Apr-11 | 8.1 | 185 | 2.3 | 12.5 |
| | 26-Apr-11 | 6.6 | 232 | 7.1 | 9.6 |
| | 29-Apr-11 | 7.6 | 225 | 5.2 | 11.2 |
| | 6-May-11 | 8.2 | 213 | 8.2 | 7.3 |
| | 15-May-11 | 8.4 | 252 | 10.7 | 9.3 |
| | 16-May-11 | 7.2 | 209 | 10.8 | 9.8 |
| | 18-May-11 | 8.2 | 228 | 12.2 | 7.0 |
| | 19-May-11 | 8.4 | 264 | 17.1 | 10.3 |
| | 20-May-11 | 7.8 | 256 | 15.5 | 6.7 |
| | 27-May-11 | | 242 | 11.1 | 7.6 |
| | 3-Jun-11 | 7.6 | 304 | 13.7 | 5.9 |
| | 13-Jun-11 | 7.0 | 316 | 13.4 | 5.1 |
| | 17-Jul-11 (1) | | | | |
| | 14-Aug-11 (1) | | | | |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 | 7.4 | 296 | 9.9 | 8.0 |
| | 20-Nov-11 | | | | |
| | 18-Dec-11 | 8.2 | 146 | 1.0 | 9.0 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.5 | 215 | 12.8 | 5.9 |
| | 15-Apr-12 (1) | | | | |
| | 13-May-12 (1) | | | | |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW3 (cont'd) | 12-Aug-12 | (1) | | | | |
| | 16-Sep-12 | (1) | | | | |
| | 14-Oct-12 | (1) | | | | |
| | 18-Nov-12 | | 7.4 | 227 | 4.9 | 6.3 |
| | 16-Dec-12 | | 7.4 | 215 | 1.2 | 10.8 |
| | 15-Jan-13 | | 7.6 | 218 | 0.1 | 5.4 |
| | 17-Feb-13 | (2) | | | | |
| | 19-Mar-13 | | 7.7 | 185 | 0.2 | 6.7 |
| | 15-Apr-13 | | 7.5 | 236 | 8.9 | 6.8 |
| | 13-May-13 | | 7.6 | 257 | 7.4 | 7.0 |
| | 16-Jun-13 | (1) | | | | |
| | 14-Jul-13 | (1) | | | | |
| | 18-Aug-13 | (1) | | | | |
| | 15-Sep-13 | (1) | | | | |
| | 13-Oct-13 | (1) | | | | |
| | 19-Nov-13 | | 8.0 | 218 | 0.9 | 3.2 |
| | 15-Dec-13 | | | | | |
| | 19-Jan-14 | (2) | | | | |
| | 16-Feb-14 | (2) | | | | |
| | 16-Mar-14 | (2) | | | | |
| | 15-Apr-14 | | 7.6 | 161 | 0.4 | 7.0 |
| | 12-May-14 | | 7.1 | 350 | 17.0 | 4.6 |
| | 15-Jun-14 | (1) | | | | |
| | 13-Jul-14 | (1) | | | | |
| | 17-Aug-14 | (1) | | | | |
| | 7-Sep-14 | (1) | | | | |
| | 22-Oct-14 | (1) | 7.2 | 418 | 9.4 | 4.9 |
| | 16-Nov-14 | (2) | | | | |
| | 17-Dec-14 | | 8.9 | 262 | 0.2 | |
| | 18-Jan-15 | (2) | | | | |
| | 15-Feb-15 | (2) | | | | |
| | 15-Mar-15 | (2) | | | | |
| | 22-Apr-15 | | 7.8 | 229 | 9.2 | 7.5 |
| | 17-May-15 | (1) | | | | |
| | 15-Jun-15 | | 7.6 | 342 | 18.8 | 1.7 |
| | 19-Jul-15 | (1) | | | | |
| | 9-Aug-15 | (1) | | | | |
| | 23-Aug-15 | (1) | | | | |
| | 6-Sep-15 | (1) | | | | |
| | 11-Oct-15 | (1) | | | | |
| | 8-Nov-15 | | | | | |
| | 15-Nov-15 | (1) | | | | |
| | 6-Dec-15 | (1) | | | | |
| | 19-Jan-16 | | 7.1 | 219 | 0.0 | 11.0 |
| | 17-Feb-16 | | 7.1 | 243 | 0.1 | 9.8 |
| | 15-Mar-16 | | 7.4 | 173 | 2.6 | 10.6 |
| | 20-Apr-16 | | 7.6 | 299 | 15.8 | 7.4 |
| | 17-May-16 | | 7.8 | 319 | 8.0 | 8.4 |
| | 19-Jun-16 | (1) | | | | |
| | 3-Jul-16 | | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW3 (cont'd) | 17-Jul-16 (1) | | | | |
| | 7-Aug-16 | | | | |
| | 21-Aug-16 (1) | | | | |
| | 18-Sep-16 (1) | | | | |
| | 16-Oct-16 (1) | | | | |
| | 24-Oct-16 (1) | | | | |
| | 18-Nov-16 (1) | | | | |
| | 12-Dec-16 (1) | | | | |
| | 22-Jan-17 (2) | | | | |
| | 15-Feb-17 (2) | | | | |
| | 21-Mar-17 | | 280 | 1.3 | 5.8 |
| | 19-Apr-17 | 7.5 | 263 | 8.2 | 8.0 |
| | 9-May-17 | 7.9 | 188 | 7.0 | 10.8 |
| | 16-May-17 | 7.9 | 415 | 10.8 | 3.5 |
| | 28-Jun-17 | 7.7 | 344 | 14.5 | 4.7 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 | 5.6 | 446 | 16.2 | |
| | 27-Jul-17 | | | | |
| | 13-Aug-17 (1) | | | | |
| | 17-Sep-17 (1) | | | | |
| | 17-Oct-17 | 7.7 | 458 | 9.7 | 7.3 |
| | 14-Nov-17 | 7.9 | 489 | 4.8 | 14.7 |
| | 12-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 22-Feb-18 | 7.3 | 160 | 0.0 | 6.2 |
| | 18-Mar-18 (2) | | | | |
| | 18-Apr-18 | 7.7 | 370 | (0) | 5.8 |
| | 8-May-18 | 7.5 | 407 | 10.4 | 6.2 |
| | 14-May-18 | 7.4 | 675 | 14.1 | 6.2 |
| | 19-Jun-18 (1) | | | | |
| | 18-Jul-18 (1) | | | | |
| | 23-Aug-18 (1) | | | | |
| | 19-Sep-18 (1) | | | | |
| | 24-Oct-18 (1) | | | | |
| | 21-Nov-18 | 7.7 | 713 | 0.0 | 9.0 |
| | 12-Dec-18 (1) | | | | |
| | 18-Jan-19 | 7.5 | 402 | 1.2 | 8.6 |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.5 | 282 | 4.6 | 6.6 |
| | 14-May-19 | 7.7 | 325 | 7.1 | 7.5 |
| | 23-May-19 | 7.6 | 350 | 10.8 | 5.4 |
| | 18-Jun-19 | 7.5 | 435 | 15.9 | 5.0 |
| | 29-Jul-19 (1) | | | | |
| | 29-Aug-19 (1) | | | | |
| | 23-Oct-19 (1) | | | | |
| | 22-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW3 | 26-Mar-20 | | 7.4 | 322 | 4.1 | 8.2 |
| (cont'd) | 27-Apr-20 | (1) | | | | |
| | 19-May-20 | | 7.9 | 390 | 7.3 | 6.3 |
| | 29-May-20 | | 8.0 | 352 | 13.9 | 5.0 |
| | 23-Jun-20 | | 7.7 | 334 | 15.0 | 4.5 |
| | 30-Jul-20 | (1) | 8.5 | 624 | 18.8 | 6.8 |
| | 25-Aug-20 | (1) | | | | |
| | 25-Sep-20 | (1) | | | | |
| | 30-Oct-20 | (1) | | | | |
| | 26-Nov-20 | (2) | | | | |
| | 23-Dec-20 | (2) | | | | |
| | 27-Jan-21 | (2) | | | | |
| | 22-Feb-21 | (2) | | | | |
| | 29-Mar-21 | | 7.5 | 239 | 4.4 | 8.6 |
| | 27-Apr-21 | | 7.6 | 320 | 6.2 | 8.8 |
| | 27-May-21 | | 7.8 | 699 | 10.9 | 7.4 |
| | 22-Jun-21 | (1) | | | | |
| | 22-Jul-21 | (1) | | | | |
| | 25-Aug-21 | (1) | | | | |
| | 28-Sep-21 | (1) | | | | |
| | 26-Oct-21 | | 7.4 | 377 | 7.6 | 6.9 |
| | 23-Nov-21 | (2) | | | | |
| | 21-Dec-21 | (2) | | | | |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (2) | | | | |
| | 21-Apr-22 | | 7.2 | 321 | 2.9 | 8.7 |
| | 26-May-22 | (1) | 7.2 | 802 | 13.0 | 4.1 |
| | 24-Jun-22 | (1) | 7.5 | 864 | 15.6 | 2.5 |
| | 29-Aug-22 | (1) | 7.6 | 1,006 | 18.1 | 1.6 |
| | 27-Sep-22 | | 7.7 | 953 | 14.5 | 4.1 |
| | 26-Oct-22 | (1) | | | | |
| | 21-Nov-22 | (1) | | | | |
| | 21-Dec-22 | (1) | | | | |
| | 24-Jan-23 | (1) | 7.3 | 1,822 | 0.0 | 3.5 |
| | 22-Feb-23 | | 7.4 | 393 | 2.6 | 8.3 |
| | 27-Mar-23 | | 8.8 | 365 | 0.9 | 6.0 |
| | 21-Apr-23 | | 6.5 | 333 | 9.3 | 6.0 |
| | 16-May-23 | | 7.2 | 734 | 9.7 | 4.0 |
| | 26-Jun-23 | (1) | | | | |
| | 25-Jul-23 | (1) | | | | |
| | 28-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 30-Oct-23 | (1) | | | | |
| | 29-Nov-23 | (2) | 7.8 | 1,537 | 0.2 | 11.2 |
| | 18-Dec-23 | (1) | | | | |
| | 31-Jan-24 | (1) | | | | |
| | 27-Feb-24 | (2) | | | | |
| | 27-Mar-24 | | 7.6 | 382 | 3.8 | 9.4 |
| | 29-Apr-24 | | 7.6 | 406 | 10.7 | 7.3 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW3** | 27-May-24 | (1) | | | | |
| **(cont'd)** | 26-Jun-24 | (1) | | | | |
| | 29-Jul-24 | (1) | | | | |
| | 26-Aug-24 | (1) | | | | |
| | 24-Sep-24 | (1) | | | | |
| | 28-Oct-24 | (1) | | | | |
| | 18-Nov-24 | (1) | | | | |
| | 16-Dec-24 | (2) | | | | |
| | 27-Jan-25 | (2) | | | | |
| | 24-Feb-25 | (2) | | | | |
| | 24-Mar-25 | (3) | | | | |
| | 28-Apr-25 | | 7.6 | 309 | 11.5 | 2.5 |
| | 27-May-25 | | 8.0 | 301 | 14.9 | 8.0 |
| | 23-Jun-25 | (1) | | | | |
| | 28-Jul-25 | (1) | | | | |
| | 25-Aug-25 | (1) | | | | |
| | 29-Sep-25 | (1) | | | | |
| | 28-Oct-25 | (1) | | | | |
| | 25-Nov-25 | | 7.5 | 952 | 5.8 | 7.9 |
| | 16-Dec-25 | (1) | | | | |
| **SW4** | 22-May-03 | (1) | | | | |
| | 23-Jun-03 | (1) | | | | |
| | 22-Jul-03 | (1) | | | | |
| | 20-Aug-03 | (1) | | | | |
| | 25-Sep-03 | (1) | | | | |
| | 22-Oct-03 | (1) | | | | |
| | 28-Nov-03 | (1) | | | | |
| | 19-Dec-03 | (1) | | | | |
| | 10-Feb-04 | (1) | | | | |
| | 18-Mar-04 | (1) | | | | |
| | 19-Apr-04 | (1) | | | | |
| | 19-May-04 | (1) | | | | |
| | 24-Jun-04 | (1) | | | | |
| | 29-Jul-04 | (1) | | | | |
| | 23-Aug-04 | (1) | | | | |
| | 21-Sep-04 | (1) | | | | |
| | 21-Oct-04 | (1) | | | | |
| | 17-Nov-04 | (1) | | | | |
| | 15-Dec-04 | (2) | | | | |
| | 13-Jan-05 | | 7.2 | 125 | 0.9 | 13.6 |
| | 13-Feb-05 | (2) | | | | |
| | 27-Mar-05 | (2) | | | | |
| | 10-Apr-05 | (2) | | | | |
| | 22-May-05 | (1) | | | | |
| | 26-Jun-05 | (1) | | | | |
| | 10-Jul-05 | (1) | | | | |
| | 21-Aug-05 | (1) | | | | |
| | 25-Sep-05 | (1) | | | | |
| | 23-Oct-05 | (1) | | | | |
| | 13-Nov-05 | (1) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 11-Dec-05 | (2) | | | | |
| **(cont'd)** | 15-Jan-06 | (2) | | | | |
| | 19-Feb-06 | (2) | | | | |
| | 31-Mar-06 | | 7.2 | 360 | 6.0 | |
| | 7-Apr-06 | | 7.9 | 463 | 6.6 | |
| | 13-Apr-06 | | 8.6 | 538 | 15.5 | |
| | 16-Apr-06 | (1) | | | | |
| | 21-May-06 | (1) | | | | |
| | 18-Jun-06 | (1) | | | | |
| | 9-Jul-06 | (1) | | | | |
| | 20-Aug-06 | (1) | | | | |
| | 17-Sep-06 | (1) | | | | |
| | 15-Oct-06 | (1) | | | | |
| | 17-Nov-06 | | 7.4 | 509 | 4.4 | 9.3 |
| | 17-Dec-06 | (1) | | | | |
| | 21-Jan-07 | (2) | | | | |
| | 18-Feb-07 | (2) | | | | |
| | 18-Mar-07 | | 8.0 | 338 | 1.5 | 11.4 |
| | 16-Apr-07 | (1) | | | | |
| | 13-May-07 | (1) | | | | |
| | 17-Jun-07 | (1) | | | | |
| | 15-Jul-07 | (1) | | | | |
| | 19-Aug-07 | (1) | | | | |
| | 16-Sep-07 | (1) | | | | |
| | 14-Oct-07 | (1) | | | | |
| | 18-Nov-07 | (1) | | | | |
| | 9-Dec-07 | (2) | | | | |
| | 20-Jan-08 | (2) | | | | |
| | 17-Feb-08 | (2) | | | | |
| | 16-Mar-08 | (2) | | | | |
| | 7-Apr-08 | | 7.5 | 316 | 2.8 | 8.8 |
| | 20-Apr-08 | (1) | | | | |
| | 18-May-08 | (1) | | | | |
| | 15-Jun-08 | (1) | | | | |
| | 13-Jul-08 | (1) | | | | |
| | 17-Aug-08 | (1) | | | | |
| | 14-Sep-08 | (1) | | | | |
| | 19-Oct-08 | (1) | | | | |
| | 23-Nov-08 | (2) | | | | |
| | 14-Dec-08 | (1) | | | | |
| | 18-Jan-09 | (2) | | | | |
| | 8-Feb-09 | (1) | | | | |
| | 15-Mar-09 | | 7.6 | 356 | 2.0 | 6.0 |
| | 12-Apr-09 | | 8.1 | 558 | 11.0 | |
| | 17-May-09 | (1) | | | | |
| | 14-Jun-09 | (1) | | | | |
| | 12-Jul-09 | (1) | | | | |
| | 9-Aug-09 | (1) | | | | |
| | 13-Sep-09 | (1) | | | | |
| | 11-Oct-09 | (1) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 15-Nov-09 (1) | | | | |
| **(cont'd)** | 13-Dec-09 (1) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 8.0 | 383 | 2.3 | 8.4 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 (1) | | | | |
| | 16-May-10 (1) | | | | |
| | 23-May-10 | | | | |
| | 13-Jun-10 (1) | | | | |
| | 19-Jul-10 | 7.3 | 303 | 20.6 | 5.0 |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 (1) | | | | |
| | 14-Nov-10 (1) | | | | |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 (2) | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 (1) | | | | |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 (1) | | | | |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 (1) | | | | |
| | 17-Jul-11 (1) | | | | |
| | 14-Aug-11 (1) | | | | |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 (1) | | | | |
| | 20-Nov-11 | | | | |
| | 18-Dec-11 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 15-Jan-12 (2) | | | | |
| **(cont'd)** | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 (1) | | | | |
| | 15-Apr-12 (1) | | | | |
| | 13-May-12 (1) | | | | |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 12-Aug-12 (1) | | | | |
| | 16-Sep-12 (1) | | | | |
| | 14-Oct-12 (1) | | | | |
| | 18-Nov-12 (1) | | | | |
| | 16-Dec-12 | 6.9 | 308 | 1.4 | 5.7 |
| | 13-Jan-13 | 7.4 | 370 | 0.3 | 4.3 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 15-Apr-13 | 7.5 | 349 | 8.6 | 6.0 |
| | 12-May-13 (1) | | | | |
| | 16-Jun-13 (1) | | | | |
| | 14-Jul-13 (1) | | | | |
| | 18-Aug-13 (1) | | | | |
| | 15-Sep-13 (1) | | | | |
| | 13-Oct-13 (1) | | | | |
| | 19-Nov-13 | 8.0 | 338 | 2.6 | 1.4 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 15-Apr-14 | 7.5 | 161 | 3.7 | 2.7 |
| | 15-Jun-14 (1) | | | | |
| | 13-Jul-14 (1) | | | | |
| | 17-Aug-14 (1) | | | | |
| | 7-Sep-14 (1) | | | | |
| | 22-Oct-14 | 7.5 | 421 | 8.6 | 7.0 |
| | 16-Nov-14 (2) | | | | |
| | 14-Dec-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 7.5 | 565 | 5.7 | 1.7 |
| | 17-May-15 (1) | | | | |
| | 14-Jun-15 (1) | | | | |
| | 19-Jul-15 (1) | | | | |
| | 9-Aug-15 (1) | | | | |
| | 23-Aug-15 | | | | |
| | 6-Sep-15 (1) | | | | |
| | 11-Oct-15 (1) | | | | |
| | 8-Nov-15 | | | | |
| | 15-Nov-15 (1) | | | | |
| | 6-Dec-15 (1) | | | | |
| | 17-Jan-16 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 14-Feb-16 (2) | | | | |
| **(cont'd)** | 15-Mar-16 | 7.1 | 327 | 3.2 | 4.4 |
| | 20-Apr-16 | 7.9 | 467 | 16.8 | 8.5 |
| | 17-May-16 | 7.7 | 472 | 8.5 | 3.9 |
| | 19-Jun-16 (1) | | | | |
| | 3-Jul-16 | | | | |
| | 17-Jul-16 (1) | | | | |
| | 7-Aug-16 | | | | |
| | 21-Aug-16 (1) | | | | |
| | 18-Sep-16 (1) | | | | |
| | 16-Oct-16 (1) | | | | |
| | 18-Nov-16 (1) | | | | |
| | 12-Dec-16 (1) | | | | |
| | 24-Jan-17 | 7.2 | 327 | (0) | 3.0 |
| | 15-Feb-17 (2) | | | | |
| | 21-Mar-17 | 7.5 | 356 | 1.1 | 6.9 |
| | 19-Apr-17 | 7.4 | 401 | 7.4 | 8.6 |
| | 16-May-17 | 7.9 | 523 | 10.8 | 13.7 |
| | 28-Jun-17 | 7.0 | 425 | 13.9 | 2.6 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 (1) | | | | |
| | 27-Jul-17 | | | | |
| | 13-Aug-17 (1) | | | | |
| | 17-Sep-17 (1) | | | | |
| | 17-Oct-17 | 7.2 | 335 | 7.4 | 6.7 |
| | 14-Nov-17 | 7.3 | 441 | 2.3 | 12.3 |
| | 14-Dec-17 | 7.2 | 510 | 0.9 | 7.1 |
| | 17-Jan-18 (2) | | | | |
| | 22-Feb-18 | 7.1 | 196 | (0) | 1.0 |
| | 20-Mar-18 | 7.4 | 404 | 0.4 | 9.0 |
| | 18-Apr-18 | 7.4 | 639 | (0) | 2.2 |
| | 15-May-18 | 7.8 | 711 | 15.9 | 6.9 |
| | 20-Jun-18 (1) | | | | |
| | 19-Jul-18 (1) | | | | |
| | 23-Aug-18 (1) | | | | |
| | 19-Sep-18 (1) | | | | |
| | 24-Oct-18 (1) | | | | |
| | 21-Nov-18 | 7.5 | 698 | 0.1 | 6.7 |
| | 12-Dec-18 | 7.5 | 673 | 0.9 | 4.4 |
| | 18-Jan-19 (2) | | | | |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.5 | 657 | 6.0 | 0.9 |
| | 23-May-19 | 7.7 | 665 | 11.2 | 2.3 |
| | 18-Jun-19 (1) | | | | |
| | 29-Jul-19 (1) | | | | |
| | 29-Aug-19 (1) | | | | |
| | 26-Sep-19 (1) | | | | |
| | 23-Oct-19 (1) | | | | |
| | 22-Nov-19 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 20-Dec-19 | (2) | | | | |
| **(cont'd)** | 15-Jan-20 | (2) | | | | |
| | 20-Feb-20 | (2) | | | | |
| | 26-Mar-20 | (1) | | | | |
| | 27-Apr-20 | (1) | | | | |
| | 29-May-20 | (1) | | | | |
| | 23-Jun-20 | (1) | 7.7 | 684 | 20.2 | 0.7 |
| | 30-Jul-20 | (1) | 7.4 | 665 | 18.0 | 0.9 |
| | 25-Aug-20 | (1) | 6.9 | 591 | 22.2 | 1.9 |
| | 25-Sep-20 | (1) | 7.0 | 585 | 12.6 | 2.9 |
| | 30-Oct-20 | (1) | 7.0 | 563 | 9.8 | 2.1 |
| | 26-Nov-20 | (2) | | | | |
| | 23-Dec-20 | (2) | | | | |
| | 27-Jan-21 | (2) | | | | |
| | 22-Feb-21 | (2) | | | | |
| | 29-Mar-21 | | 7.6 | 622 | 7.7 | 0.9 |
| | 27-Apr-21 | | 7.5 | 593 | 14.0 | 5.2 |
| | 22-Jun-21 | | 7.1 | 649 | 14.4 | 1.5 |
| | 22-Jul-21 | | 7.3 | 712 | 15.8 | 2.2 |
| | 25-Aug-21 | | 6.7 | 712 | 17.8 | 1.5 |
| | 28-Sep-21 | | 7.3 | 498 | 12.9 | 1.8 |
| | 26-Oct-21 | | 7.3 | 477 | 6.4 | 4.0 |
| | 23-Nov-21 | (2) | | | | |
| | 21-Dec-21 | (2) | | | | |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (1) | 8.2 | 597 | 1.4 | 4.8 |
| | 21-Apr-22 | (1) | 7.9 | 136 | 4.8 | 1.2 |
| | 24-May-22 | (1) | 7.9 | 887 | 14.9 | 1.0 |
| | 25-Jun-22 | (1) | 7.6 | 987 | 6.5 | 2.0 |
| | 26-Aug-22 | (1) | 7.9 | 1,102 | 7.8 | 1.0 |
| | 27-Sep-22 | (1) | 7.1 | 481 | 12.1 | 2.7 |
| | 26-Oct-22 | (1) | | | | |
| | 21-Nov-22 | (1) | | | | |
| | 20-Dec-22 | | 7.6 | 358 | 1.0 | 2.7 |
| | 24-Jan-23 | | 7.1 | 638 | 0.4 | 2.6 |
| | 22-Feb-23 | | 7.1 | 534 | 0.2 | 2.4 |
| | 27-Mar-23 | | 8.6 | 565 | 0.4 | 1.4 |
| | 21-Apr-23 | | 8.2 | 459 | 13.0 | 15.0 |
| | 16-May-23 | | 7.8 | 780 | 11.9 | 7.1 |
| | 26-Jun-23 | (1) | | | | |
| | 25-Jul-23 | | 7.6 | 499 | 20.2 | 1.3 |
| | 28-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 30-Oct-23 | | 7.2 | 477 | 6.5 | 3.9 |
| | 29-Nov-23 | | 7.5 | 689 | 0.0 | 10.9 |
| | 18-Dec-23 | | 7.2 | 654 | 2.3 | 13.0 |
| | 31-Jan-24 | (2) | | | | |
| | 27-Feb-24 | (2) | 7.0 | 800 | 1.0 | 1.0 |
| | 27-Mar-24 | | 7.6 | 576 | 4.1 | 8.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW4** | 29-Apr-24 | 7.4 | 525 | 11.0 | 10.2 |
| **(cont'd)** | 27-May-24 (1) | | | | |
| | 26-Jun-24 | 6.9 | 493 | 19.0 | 1.9 |
| | 30-Jul-24 (1) | | | | |
| | 26-Aug-24 (1) | | | | |
| | 24-Sep-24 (1) | | | | |
| | 28-Oct-24 (1) | | | | |
| | 18-Nov-24 (1) | | | | |
| | 16-Dec-24 | 7.4 | 482 | 0.8 | 7.6 |
| | 27-Jan-25 (2) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | 7.1 | 261 | 2.9 | 3.3 |
| | 28-Apr-25 | 8.0 | 437 | 15.4 | 3.0 |
| | 26-May-25 | 8.5 | 369 | 16.6 | 10.6 |
| | 23-Jun-25 (1) | | | | |
| | 28-Jul-25 (1) | | | | |
| | 25-Aug-25 (1) | | | | |
| | 29-Sep-25 (1) | | | | |
| | 27-Oct-25 (1) | | | | |
| | 25-Nov-25 | 7.5 | 404 | 3.6 | 4.1 |
| | 15-Dec-25 | 7.6 | 486 | 0.1 | 3.1 |
| **SW6A** | 22-Oct-03 | 6.6 | 461 | 5.1 | |
| | 10-Feb-04 (2) | | | | |
| | 16-Mar-04 | 6.1 | 435 | 0.3 | 10.2 |
| | 19-Apr-04 | 7.6 | 303 | 9.0 | 11.5 |
| | 19-May-04 | 7.7 | 432 | 15.4 | 7.8 |
| | 24-Jun-04 | 7.7 | 433 | 14.8 | 7.2 |
| | 29-Jul-04 | 7.7 | 867 | 17.7 | 6.4 |
| | 26-Aug-04 | 7.8 | 432 | 15.2 | |
| | 22-Sep-04 | 7.7 | 417 | 11.7 | 8.0 |
| | 21-Oct-04 | 7.7 | 356 | 6.9 | 9.3 |
| | 16-Nov-04 | 7.6 | 339 | 2.1 | 12.0 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 28-Mar-05 | 7.4 | 303 | 0.6 | 12.4 |
| | 11-Apr-05 | 6.4 | 196 | 1.8 | 10.9 |
| | 24-May-05 | 7.3 | 407 | 12.5 | 8.4 |
| | 28-Jun-05 | 7.7 | 528 | 21.5 | 6.4 |
| | 11-Jul-05 | 6.1 | 503 | 19.6 | 5.8 |
| | 22-Aug-05 | 6.9 | 460 | 15.8 | 6.8 |
| | 27-Sep-05 | 7.3 | 382 | 11.7 | 7.6 |
| | 24-Oct-05 | 8.1 | 448 | 6.3 | 10.8 |
| | 14-Nov-05 | 7.8 | 356 | 5.5 | 11.0 |
| | 16-Jan-06 | 7.1 | 285 | 0.1 | 10.8 |
| | 19-Feb-06 (2) | | | | |
| | 20-Mar-06 | 8.3 | 276 | 0.4 | 11.0 |
| | 18-Apr-06 | 7.9 | 414 | 10.1 | 9.1 |
| | 23-May-06 | 8.5 | 493 | 7.2 | 10.1 |
| | 21-Jun-06 | 7.8 | 460 | 18.9 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A** | 11-Jul-06 | 7.9 | 463 | 19.0 | |
| **(cont'd)** | 22-Aug-06 | 7.6 | 501 | 19.2 | |
| | 20-Sep-06 | 7.6 | 469 | 11.9 | |
| | 18-Oct-06 | 7.5 | 443 | 9.4 | |
| | 24-Nov-06 | 7.9 | 521 | 1.8 | 13.4 |
| | 17-Dec-06 | 7.8 | 521 | 1.2 | 14.1 |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 7.8 | 511 | 0.4 | 9.6 |
| | 16-Apr-07 | 8.1 | 460 | 3.1 | 11.5 |
| | 13-May-07 | 8.2 | 483 | 17.9 | 8.3 |
| | 17-Jun-07 | 8.1 | 535 | 20.3 | 5.5 |
| | 15-Jul-07 | 7.8 | 508 | 18.5 | 6.8 |
| | 19-Aug-07 | 8.0 | 523 | 17.0 | 7.9 |
| | 18-Sep-07 | 7.9 | 476 | 12.2 | 8.4 |
| | 18-Oct-07 | 7.8 | 489 | 12.2 | 8.0 |
| | 21-Nov-07 | 7.8 | 556 | 2.5 | 10.9 |
| | 9-Dec-07 (2) | | | | |
| | 21-Jan-08 | 6.5 | 460 | 0.1 | 2.7 |
| | 17-Feb-08 (2) | | | | |
| | 18-Mar-08 | 7.6 | 506 | 0.3 | 11.9 |
| | 2-Apr-08 | 7.5 | 369 | 0.4 | 9.6 |
| | 24-Apr-08 | 7.6 | 452 | 12.5 | 6.1 |
| | 21-May-08 | 7.7 | 439 | 10.3 | 8.4 |
| | 17-Jun-08 | 7.7 | 348 | 16.8 | 6.3 |
| | 15-Jul-08 | 7.3 | 525 | 18.6 | 5.8 |
| | 19-Aug-08 | 7.8 | 556 | 17.8 | 4.1 |
| | 12-Sep-08 | 7.8 | 515 | 13.5 | 5.2 |
| | 22-Oct-08 | 7.5 | 466 | 3.1 | 8.1 |
| | 23-Nov-08 | 7.6 | 540 | 0.5 | 7.3 |
| | 14-Dec-08 | 6.8 | 436 | 0.1 | 4.9 |
| | 18-Jan-09 | 7.5 | 529 | 0.1 | 6.7 |
| | 8-Feb-09 | | 412 | 0.5 | 7.0 |
| | 15-Mar-09 | 8.0 | 339 | 1.9 | 13.1 |
| | 12-Apr-09 | 8.8 | 447 | 9.8 | 10.6 |
| | 17-May-09 | 7.9 | 402 | 14.5 | 7.5 |
| | 14-Jun-09 | 8.5 | 947 | 14.4 | 8.6 |
| | 12-Jul-09 | 8.2 | 474 | 17.6 | 9.1 |
| | 9-Aug-09 | 8.2 | 484 | 16.3 | 7.5 |
| | 13-Sep-09 | 6.9 | 492 | 16.0 | 9.1 |
| | 11-Oct-09 | 8.1 | 530 | 6.4 | 12.0 |
| | 15-Nov-09 | 7.4 | 495 | 2.1 | |
| | 13-Dec-09 | 7.5 | 553 | 0.2 | 13.5 |
| | 17-Jan-10 | 8.0 | 549 | 1.2 | 12.5 |
| | 7-Feb-10 | 7.4 | 548 | 0.2 | 12.8 |
| | 14-Mar-10 | 7.5 | 364 | 2.8 | 10.9 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 494 | 11.1 | 12.2 |
| | 16-May-10 | 8.0 | 362 | 13.1 | 8.8 |
| | 23-May-10 | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A** | 13-Jun-10 | 8.0 | 426 | 19.6 | 10.6 |
| **(cont'd)** | 18-Jul-10 | 7.8 | 400 | 18.4 | 9.3 |
| | 15-Aug-10 | 8.1 | 481 | 20.2 | 7.9 |
| | 12-Sep-10 | 8.2 | 433 | 13.0 | 9.9 |
| | 17-Oct-10 | 8.1 | 377 | 8.9 | 10.4 |
| | 14-Nov-10 | 8.0 | 253 | 4.5 | 10.0 |
| | 19-Dec-10 | 8.0 | 260 | 0.5 | 11.3 |
| | 16-Jan-11 | 7.9 | 273 | 0.1 | 9.6 |
| | 20-Feb-11 | 7.9 | 275 | 0.4 | 6.7 |
| | 13-Mar-11 | 7.9 | 269 | 2.1 | 8.8 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 7.8 | 251 | 0.7 | 10.2 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.0 | 248 | 3.7 | 10.0 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.8 | 287 | 11.6 | 8.4 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.9 | 345 | 13.6 | 8.4 |
| | 17-Jul-11 | 8.4 | 491 | 22.1 | 8.1 |
| | 14-Aug-11 | 8.2 | 309 | 21.2 | 7.7 |
| | 18-Sep-11 | 8.6 | 380 | 15.2 | 9.3 |
| | 16-Oct-11 | 7.8 | 347 | 7.8 | 11.3 |
| | 20-Nov-11 | 8.4 | 229 | 1.6 | 13.2 |
| | 18-Dec-11 | 8.4 | 248 | 1.0 | 14.6 |
| | 15-Jan-12 | 8.0 | 237 | 0.6 | 11.9 |
| | 19-Feb-12 | 8.5 | 253 | 0.6 | 13.4 |
| | 18-Mar-12 | 7.6 | 297 | 13.1 | 7.2 |
| | 15-Apr-12 | 8.6 | 321 | 6.0 | 13.8 |
| | 13-May-12 | 8.1 | 444 | 19.7 | 8.3 |
| | 17-Jun-12 | 8.4 | 558 | 25.2 | 12.8 |
| | 16-Jul-12 | 8.4 | 522 | 23.4 | 7.3 |
| | 15-Aug-12 | 8.3 | 417 | 16.4 | 6.0 |
| | 19-Sep-12 | 7.9 | 407 | 12.6 | 9.3 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A** | 18-Oct-12 | 8.6 | 347 | 10.4 | 8.5 |
| **(cont'd)** | 20-Nov-12 | 7.6 | 321 | 4.2 | 8.8 |
| | 20-Dec-12 | 7.3 | 609 | 0.6 | 12.4 |
| | 15-Jan-13 | 7.5 | 264 | 0.2 | 9.2 |
| | 20-Feb-13 | 7.9 | 266 | 0.2 | 12.7 |
| | 20-Mar-13 | 7.7 | 246 | 0.4 | 13.3 |
| | 16-Apr-13 | 8.0 | 268 | 8.3 | 8.5 |
| | 14-May-13 | 7.9 | 300 | 8.1 | 9.9 |
| | 18-Jun-13 | 7.9 | 430 | 19.5 | 6.2 |
| | 17-Jul-13 | 7.7 | 453 | 22.6 | 7.2 |
| | 18-Sep-13 | 8.2 | 385 | 13.6 | 10.6 |
| | 16-Oct-13 | 8.5 | 354 | 12.7 | 5.0 |
| | 20-Nov-13 | 7.8 | 259 | 0.5 | 7.2 |
| | 17-Dec-13 | 8.7 | 269 | 0.3 | 7.2 |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 7.9 | 201 | 0.6 | 11.5 |
| | 13-May-14 | 7.8 | 366 | 15.2 | 8.0 |
| | 17-Jun-14 | 8.0 | 425 | 17.3 | 8.3 |
| | 15-Jul-14 | 7.6 | 440 | 16.6 | 10.6 |
| | 19-Aug-14 | 8.5 | 445 | 14.5 | 7.1 |
| | 9-Sep-14 | 8.6 | 474 | 16.0 | 4.8 |
| | 22-Oct-14 | 7.2 | 463 | 9.9 | 5.9 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.2 | 323 | 0.7 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 18-Mar-15 | 7.8 | 238 | 1.8 | 11.1 |
| | 22-Apr-15 | 7.8 | 322 | 6.0 | 10.9 |
| | 19-May-15 | 8.1 | 377 | 15.5 | 10.8 |
| | 16-Jun-15 | 7.8 | 434 | 19.6 | 6.9 |
| | 22-Jul-15 | 8.0 | 476 | 18.9 | 8.3 |
| | 12-Aug-15 | 8.0 | 454 | 17.8 | |
| | 25-Aug-15 | 8.2 | 398 | 17.3 | 6.3 |
| | 8-Sep-15 | 7.8 | 473 | 20.5 | 8.0 |
| | 15-Oct-15 | 7.7 | 346 | 9.4 | 9.6 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.2 | 349 | 5.3 | 11.3 |
| | 8-Dec-15 | 8.0 | 339 | 2.7 | 17.2 |
| | 19-Jan-16 | 7.3 | | (0) | 11.1 |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 7.5 | 226 | 2.4 | 11.7 |
| | 21-Apr-16 | 7.8 | 352 | 9.5 | 8.9 |
| | 17-May-16 | 8.1 | 347 | 7.5 | 10.7 |
| | 22-Jun-16 | 8.2 | 445 | 16.4 | 7.6 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.3 | 450 | 17.2 | 8.1 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.2 | 430 | 18.4 | 7.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A** | 19-Sep-16 | 7.7 | 508 | 15.2 | 8.2 |
| **(cont'd)** | 17-Oct-16 | 8.0 | 404 | 13.2 | 8.3 |
| | 25-Oct-16 | 7.9 | 363 | 4.8 | 12.9 |
| | 15-Nov-16 | 7.5 | 360 | 4.8 | 12.7 |
| | 12-Dec-16 | 7.4 | 502 | 0.2 | 14.4 |
| | 24-Jan-17 | 7.5 | 281 | 0.3 | 11.5 |
| | 15-Feb-17 | 7.8 | 312 | 0.0 | 14.2 |
| | 21-Mar-17 | 7.8 | 311 | 0.9 | 12.4 |
| | 19-Apr-17 | 7.6 | 334 | 8.3 | 11.4 |
| | 8-May-17 | 8.0 | 243 | 9.0 | 12.5 |
| | 16-May-17 | 8.0 | 494 | 11.6 | 9.9 |
| | 28-Jun-17 | 7.7 | 389 | 13.7 | 8.2 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 | 7.5 | 447 | 17.3 | 9.2 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.5 | 359 | 16.3 | 8.5 |
| | 18-Sep-17 | 7.9 | 447 | 15.1 | 8.5 |
| | 17-Oct-17 | 7.7 | 276 | 7.6 | 10.1 |
| | 14-Nov-17 | 7.6 | 325 | 1.9 | 14.1 |
| | 14-Dec-17 | 7.5 | 305 | (0) | 16.8 |
| | 17-Jan-18 | 7.4 | 283 | (0) | 6.9 |
| | 22-Feb-18 | 7.7 | 164 | (0) | 8.9 |
| | 20-Mar-18 | 7.9 | 313 | 1.1 | 15.4 |
| | 18-Apr-18 | 7.8 | 418 | 0.2 | 9.8 |
| | 8-May-18 | 7.8 | 464 | 11.2 | 7.6 |
| | 14-May-18 | 7.9 | 479 | 14.1 | 8.3 |
| | 18-Jun-18 | 8.2 | 493 | 20.3 | 8.1 |
| | 19-Jul-18 | 8.2 | 484 | 21.5 | 7.7 |
| | 23-Aug-18 | 8.1 | 467 | 19.4 | 7.2 |
| | 19-Sep-18 | 7.7 | 487 | 17.6 | 2.8 |
| | 24-Oct-18 | 8.3 | 523 | 4.0 | 12.2 |
| | 21-Nov-18 | 7.8 | | 0.1 | 12.3 |
| | 12-Dec-18 | 7.7 | | 0.4 | 11.6 |
| | 18-Jan-19 | 7.7 | 517 | 0.1 | 10.8 |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 7.9 | 366 | 7.4 | 9.4 |
| | 14-May-19 | 7.9 | 381 | 7.0 | 8.9 |
| | 23-May-19 | 8.0 | 413 | 11.6 | 8.4 |
| | 18-Jun-19 | 8.1 | 436 | 17.7 | 9.0 |
| | 29-Jul-19 | 8.1 | 432 | 22.6 | 7.2 |
| | 29-Aug-19 | 8.1 | 401 | 17.8 | 8.8 |
| | 26-Sep-19 | 7.8 | 411 | 15.3 | 7.5 |
| | 23-Oct-19 | 7.9 | 422 | 8.5 | 7.8 |
| | 22-Nov-19 | 7.9 | 382 | 1.2 | 7.8 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 | 7.6 | 398 | 1.9 | 10.4 |
| | 27-Apr-20 | 8.0 | 407 | 6.7 | 10.3 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A** | 19-May-20 | 8.1 | 460 | 10.2 | 9.5 |
| **(cont'd)** | 29-May-20 | 8.5 | 458 | 20.5 | 6.8 |
| | 23-Jun-20 | 7.9 | 358 | 16.2 | 5.6 |
| | 30-Jul-20 | 8.3 | 507 | 20.0 | 7.6 |
| | 25-Aug-20 | 8.1 | 447 | 22.0 | 7.5 |
| | 25-Sep-20 | 7.3 | 520 | 11.7 | 5.8 |
| | 30-Oct-20 | 7.5 | 321 | 7.6 | 8.0 |
| | 26-Nov-20 | 7.6 | 538 | 5.1 | 11.4 |
| | 23-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.0 | 426 | 8.0 | 7.1 |
| | 27-Apr-21 | 7.4 | 437 | 13.5 | 8.9 |
| | 27-May-21 | 8.1 | 492 | 16.9 | 8.7 |
| | 22-Jun-21 | 8.2 | 468 | 16.3 | 8.8 |
| | 22-Jul-21 | 8.0 | 482 | 17.3 | 8.2 |
| | 25-Aug-21 | 7.5 | 598 | 19.6 | 7.9 |
| | 28-Sep-21 | 7.7 | 469 | 12.1 | 7.5 |
| | 26-Oct-21 | 7.6 | 458 | 7.5 | 9.6 |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 | 7.9 | 406 | 0.8 | 10.2 |
| | 21-Apr-22 | 8.0 | 647 | 6.2 | 9.5 |
| | 25-May-22 | 8.1 | 501 | 16.5 | 9.4 |
| | 25-Jun-22 | 7.6 | 555 | 6.6 | 7.0 |
| | 26-Aug-22 | 7.9 | 654 | 7.8 | 7.1 |
| | 27-Sep-22 | 7.7 | 429 | 12.4 | 8.5 |
| | 28-Oct-22 | 7.9 | 422 | 7.3 | 9.6 |
| | 23-Nov-22 | 8.6 | 386 | 2.5 | 11.2 |
| | 20-Dec-22 | 8.4 | 291 | 1.1 | 10.9 |
| | 24-Jan-23 | 7.8 | 512 | 0.8 | 13.2 |
| | 22-Feb-23 | 7.5 | 536 | 0.2 | 12.6 |
| | 27-Mar-23 | 9.0 | 448 | 1.7 | 11.3 |
| | 21-Apr-23 | 7.1 | 444 | 11.4 | 9.8 |
| | 16-May-23 | 7.9 | 492 | 12.3 | 8.9 |
| | 26-Jun-23 | 8.0 | 193 | 18.4 | 9.6 |
| | 25-Jul-23 | 8.0 | 461 | 17.6 | 7.7 |
| | 29-Aug-23 | 7.9 | 463 | 17.4 | 8.6 |
| | 25-Sep-23 | 8.1 | 534 | 13.1 | 8.5 |
| | 1-Nov-23 | 8.2 | 341 | 3.5 | 13.8 |
| | 29-Nov-23 | 7.6 | 601 | 0.2 | 12.1 |
| | 18-Dec-23 | 7.0 | 568 | 2.7 | 11.0 |
| | 31-Jan-24 | 7.7 | 556 | 1.2 | 11.9 |
| | 27-Feb-24 | 7.6 | 583 | 2.1 | 11.4 |
| | 27-Mar-24 | 7.7 | 447 | 3.2 | 10.9 |
| | 29-Apr-24 | 7.6 | 530 | 10.1 | 8.0 |
| | 27-May-24 | 7.5 | 536 | 15.7 | 7.4 |
| | 26-Jun-24 | 7.5 | 534 | 18.2 | 7.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW6A (cont'd)** | 30-Jul-24 | 7.6 | 483 | 20.4 | 7.0 |
| | 27-Aug-24 | 7.8 | 502 | 20.0 | 7.9 |
| | 24-Sep-24 | 7.6 | 518 | 16.3 | 8.1 |
| | 28-Oct-24 | 7.5 | 560 | 6.1 | 11.2 |
| | 18-Nov-24 | 7.8 | 565 | 5.7 | 11.4 |
| | 16-Dec-24 | 7.5 | 569 | 0.9 | 12.2 |
| **SW8** | 22-May-03 | | | 8.0 | |
| | 22-Jul-03 (1) | | | | |
| | 20-Aug-03 (1) | | | | |
| | 25-Sep-03 (1) | | | | |
| | 22-Oct-03 (1) | | | | |
| | 19-Dec-03 (2) | | | | |
| | 10-Feb-04 (2) | | | | |
| | 18-Mar-04 (2) | | | | |
| | 20-Apr-04 | 7.8 | 441 | 11.9 | |
| | 19-May-04 | 7.7 | 591 | 17.4 | |
| | 24-Jun-04 | 7.6 | 617 | 18.9 | |
| | 29-Jul-04 | 7.7 | 491 | 21.9 | |
| | 26-Aug-04 | 7.9 | 441 | 20.5 | |
| | 23-Sep-04 | 8.1 | 403 | 17.3 | |
| | 21-Oct-04 (1) | | | | |
| | 18-Nov-04 | 8.5 | 273 | 6.0 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 27-Mar-05 (2) | | | | |
| | 11-Apr-05 | 7.0 | 513 | 8.5 | |
| | 26-May-05 | 7.8 | 549 | 19.3 | |
| | 29-Jun-05 | 7.9 | 637 | 24.4 | |
| | 12-Jul-05 | 7.7 | 589 | 25.0 | |
| | 22-Aug-05 | 8.7 | 449 | 20.6 | 8.2 |
| | 25-Sep-05 (1) | | | | |
| | 25-Oct-05 | 7.8 | 434 | 6.7 | 3.6 |
| | 16-Nov-05 | 7.7 | 305 | 5.8 | 11.1 |
| | 11-Dec-05 (2) | | | | |
| | 15-Jan-06 (2) | | | | |
| | 19-Feb-06 (2) | | | | |
| | 19-Mar-06 (2) | | | | |
| | 19-Apr-06 | 7.8 | 538 | 11.3 | |
| | 24-May-06 | 7.8 | 560 | 11.8 | |
| | 20-Jun-06 | 7.8 | 470 | 22.1 | |
| | 12-Jul-06 | 7.8 | 355 | 22.5 | |
| | 21-Aug-06 | 7.3 | 381 | 21.6 | |
| | 17-Sep-06 (1) | | | | |
| | 17-Oct-06 | 8.2 | 282 | 7.6 | |
| | 27-Nov-06 | 8.4 | 301 | 5.6 | 11.8 |
| | 17-Dec-06 | 7.7 | 405 | 3.8 | 9.5 |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW8** | 16-Apr-07 | 7.9 | 572 | 4.8 | |
| **(cont'd)** | 13-May-07 | 8.1 | 509 | 14.9 | |
| | 17-Jun-07 (1) | | | | |
| | 15-Jul-07 (1) | | | | |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |
| | 18-Nov-07 (1) | | | | |
| | 9-Dec-07 (2) | | | | |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 4-Apr-08 | 7.2 | 496 | 0.4 | 10.8 |
| | 15-Jun-08 (1) | | | | |
| | 13-Jul-08 (1) | | | | |
| | 17-Aug-08 (1) | | | | |
| | 14-Sep-08 (1) | | | | |
| | 19-Oct-08 (1) | | | | |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 (2) | | | | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 7.7 | 295 | 7.5 | |
| | 12-Apr-09 | 8.1 | 515 | 9.6 | |
| | 17-May-09 | 7.7 | 423 | 15.4 | |
| | 14-Jun-09 (1) | | | | |
| | 12-Jul-09 (1) | | | | |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 (1) | | | | |
| | 11-Oct-09 (1) | | | | |
| | 15-Nov-09 (1) | | | | |
| | 13-Dec-09 (1) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 (2) | | | | |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.7 | 507 | 12.3 | 12.5 |
| | 13-Jun-10 (1) | | | | |
| | 18-Jul-10 (1) | | | | |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 (1) | | | | |
| | 14-Nov-10 (1) | | | | |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW8 (cont'd) | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 7.9 | 338 | 5.6 | 13.7 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 15-May-11 | 7.6 | 297 | 11.6 | 12.0 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 17-Jul-11 (1) | | | | |
| | 14-Aug-11 (1) | | | | |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 (1) | | | | |
| | 20-Nov-11 | | | | |
| | 18-Dec-11 (2) | | | | |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 20-Mar-12 | 7.7 | 384 | 17.6 | 8.4 |
| | 15-Apr-12 (1) | | | | |
| | 13-May-12 (1) | | | | |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 12-Aug-12 (1) | | | | |
| | 16-Sep-12 (1) | | | | |
| | 14-Oct-12 (1) | | | | |
| | 18-Nov-12 (1) | | | | |
| | 16-Dec-12 (1) | | | | |
| | 13-Jan-13 (1) | | | | |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 17-Apr-13 | 7.7 | 386 | 9.4 | 10.9 |
| | 13-May-13 | 7.6 | 246 | 7.2 | 10.1 |
| | 16-Jun-13 (1) | | | | |
| | 14-Jul-13 (1) | | | | |
| | 18-Aug-13 (1) | | | | |
| | 15-Sep-13 (1) | | | | |
| | 13-Oct-13 (1) | | | | |
| | 17-Nov-13 (1) | | | | |
| | 15-Dec-13 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW8** | 19-Jan-14 | (2) | | | | |
| **(cont'd)** | 16-Feb-14 | (2) | | | | |
| | 16-Mar-14 | (2) | | | | |
| | 13-Apr-14 | (2) | | | | |
| | 12-May-14 | | 7.1 | 391 | 18.6 | 3.4 |
| | 15-Jun-14 | (1) | | | | |
| | 13-Jul-14 | (1) | | | | |
| | 17-Aug-14 | (1) | | | | |
| | 7-Sep-14 | (1) | | | | |
| | 19-Oct-14 | (1) | | | | |
| | 16-Nov-14 | (2) | | | | |
| | 14-Dec-14 | (2) | | | | |
| | 18-Jan-15 | (2) | | | | |
| | 15-Feb-15 | (2) | | | | |
| | 15-Mar-15 | (2) | | | | |
| | 23-Apr-15 | | 7.8 | 150 | 7.4 | 11.9 |
| | 17-May-15 | (1) | | | | |
| | 14-Jun-15 | (1) | | | | |
| | 19-Jul-15 | (1) | | | | |
| | 9-Aug-15 | (1) | | | | |
| | 23-Aug-15 | | | | | |
| | 6-Sep-15 | (1) | | | | |
| | 11-Oct-15 | (1) | | | | |
| | 8-Nov-15 | | | | | |
| | 15-Nov-15 | (1) | | | | |
| | 6-Dec-15 | (1) | | | | |
| | 17-Jan-16 | (2) | | | | |
| | 14-Feb-16 | (2) | | | | |
| | 15-Mar-16 | | 6.8 | 135 | 0.9 | 7.3 |
| | 15-May-16 | (1) | | | | |
| | 19-Jun-16 | (1) | | | | |
| | 3-Jul-16 | | | | | |
| | 17-Jul-16 | (1) | | | | |
| | 7-Aug-16 | | | | | |
| | 21-Aug-16 | (1) | | | | |
| | 18-Sep-16 | (1) | | | | |
| | 16-Oct-16 | (1) | | | | |
| | 18-Nov-16 | (1) | | | | |
| | 12-Dec-16 | (1) | | | | |
| | 22-Jan-17 | (2) | | | | |
| | 15-Feb-17 | (2) | | | | |
| | 19-Mar-17 | (2) | | | | |
| | 16-Apr-17 | (1) | | | | |
| | 14-May-17 | (1) | | | | |
| | 28-Jun-17 | (1) | | | | |
| | 7-Jul-17 | | | | | |
| | 18-Jul-17 | (1) | | | | |
| | 27-Jul-17 | | | | | |
| | 13-Aug-17 | (1) | | | | |
| | 17-Sep-17 | (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW8** | 17-Oct-17 | (1) | | | | |
| **(cont'd)** | 14-Nov-17 | (1) | | | | |
| | 12-Dec-17 | (2) | | | | |
| | 17-Jan-18 | (2) | | | | |
| | 24-Feb-18 | | 7.9 | 158 | 0.3 | 8.6 |
| | 18-Mar-18 | (2) | | | | |
| | 18-Apr-18 | (2) | | | | |
| | 13-May-18 | (1) | | | | |
| | 20-Jun-18 | (1) | | | | |
| | 19-Jul-18 | (1) | | | | |
| | 23-Aug-18 | (1) | | | | |
| | 19-Sep-18 | (1) | | | | |
| | 24-Oct-18 | (1) | | | | |
| | 21-Nov-18 | (1) | | | | |
| | 12-Dec-18 | (1) | | | | |
| | 18-Jan-19 | (2) | | | | |
| | 26-Feb-19 | (2) | | | | |
| | 15-Mar-19 | (2) | | | | |
| | 24-Apr-19 | (1) | | | | |
| | 23-May-19 | (1) | | | | |
| | 18-Jun-19 | (1) | | | | |
| | 29-Jul-19 | (1) | | | | |
| | 29-Aug-19 | (1) | | | | |
| | 26-Sep-19 | (1) | | | | |
| | 23-Oct-19 | (1) | | | | |
| | 22-Nov-19 | (2) | | | | |
| | 20-Dec-19 | (2) | | | | |
| | 15-Jan-20 | (2) | | | | |
| | 20-Feb-20 | (2) | | | | |
| | 26-Mar-20 | (2) | | | | |
| | 27-Apr-20 | | | | | |
| | 29-May-20 | (1) | | | | |
| | 23-Jun-20 | (1) | | | | |
| | 30-Jul-20 | (1) | | | | |
| | 25-Aug-20 | (1) | | | | |
| | 25-Sep-20 | (1) | | | | |
| | 30-Oct-20 | (1) | | | | |
| | 26-Nov-20 | (2) | | | | |
| | 23-Dec-20 | (2) | | | | |
| | 27-Jan-21 | (2) | | | | |
| | 22-Feb-21 | (2) | | | | |
| | 29-Mar-21 | (1) | | | | |
| | 27-Apr-21 | (1) | | | | |
| | 27-May-21 | (1) | | | | |
| | 22-Jun-21 | (1) | | | | |
| | 22-Jul-21 | (1) | | | | |
| | 25-Aug-21 | (1) | | | | |
| | 28-Sep-21 | (1) | | | | |
| | 26-Oct-21 | (1) | | | | |
| | 23-Nov-21 | (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW8** | 21-Dec-21 | (2) | | | | |
| **(cont'd)** | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (1) | | | | |
| | 21-Apr-22 | (1) | | | | |
| | 24-May-22 | (1) | | | | |
| | 22-Jun-22 | (1) | | | | |
| | 26-Aug-22 | (1) | | | | |
| | 27-Sep-22 | (1) | | | | |
| | 28-Oct-22 | (1) | | | | |
| | 23-Nov-22 | (1) | | | | |
| | 16-May-23 | (1) | | | | |
| | 27-Jun-23 | (1) | | | | |
| | 25-Jul-23 | (1) | | | | |
| | 30-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 1-Nov-23 | (1) | | | | |
| | 27-May-24 | (1) | | | | |
| | 26-Jun-24 | (1) | | | | |
| | 29-Jul-24 | (1) | | | | |
| | 27-Aug-24 | (1) | | | | |
| | 24-Sep-24 | (1) | | | | |
| | 28-Oct-24 | (1) | | | 9.8 | |
| | 26-May-25 | | | | 14.8 | |
| | 23-Jun-25 | | | | 23.4 | |
| | 28-Jul-25 | | | | 21.2 | |
| | 25-Aug-25 | | | | 14.9 | |
| | 29-Sep-25 | | | | 20.5 | |
| | 28-Oct-25 | | | | 6.5 | |
| **SW9** | 22-May-03 | | | | 8.0 | |
| | 23-Jun-03 | (1) | | | | |
| | 22-Jul-03 | (1) | | | | |
| | 20-Aug-03 | (1) | | | | |
| | 25-Sep-03 | (1) | | | | |
| | 22-Oct-03 | (1) | | | | |
| | 13-Feb-04 | | | 314 | 1.0 | 9.3 |
| | 18-Mar-04 | | | 393 | 0.5 | 7.1 |
| | 20-Apr-04 | | 7.6 | 259 | 8.3 | 10.8 |
| | 19-May-04 | | 7.6 | 416 | 15.3 | 7.4 |
| | 24-Jun-04 | | 7.7 | 483 | 16.4 | 8.3 |
| | 29-Jul-04 | (1) | | | | |
| | 23-Aug-04 | (1) | | | | |
| | 21-Sep-04 | (1) | | | | |
| | 21-Oct-04 | (1) | | | | |
| | 17-Nov-04 | (1) | | | | |
| | 15-Dec-04 | (2) | | | | |
| | 16-Jan-05 | (2) | | | | |
| | 13-Feb-05 | (2) | | | | |
| | 29-Mar-05 | | 7.5 | 279 | 1.9 | 10.5 |
| | 11-Apr-05 | | 6.7 | 179 | 0.9 | 11.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 26-May-05 | 7.7 | 415 | 16.9 | 7.4 |
| **(cont'd)** | 26-Jun-05 (1) | | | | |
| | 10-Jul-05 (1) | | | | |
| | 21-Aug-05 (1) | | | | |
| | 25-Sep-05 (1) | | | | |
| | 23-Oct-05 (1) | | | | |
| | 13-Nov-05 (1) | | | | |
| | 11-Dec-05 (1) | | | | |
| | 18-Jan-06 | 7.4 | 231 | 1.5 | 10.3 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.0 | 219 | 0.5 | 13.4 |
| | 19-Apr-06 | 7.8 | 360 | 7.5 | |
| | 24-May-06 | 7.9 | 420 | 9.3 | |
| | 18-Jun-06 (1) | | | | |
| | 9-Jul-06 (1) | | | | |
| | 20-Aug-06 (1) | | | | |
| | 17-Sep-06 (1) | | | | |
| | 15-Oct-06 (1) | | | | |
| | 27-Nov-06 | 7.7 | 424 | 5.5 | 8.4 |
| | 17-Dec-06 | 7.6 | 423 | 0.9 | 10.9 |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 16-Apr-07 | 8.0 | 386 | 0.8 | 11.3 |
| | 13-May-07 | 8.2 | 415 | 11.7 | 9.4 |
| | 17-Jun-07 (1) | | | | |
| | 15-Jul-07 (1) | | | | |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |
| | 18-Nov-07 (1) | | | | |
| | 9-Dec-07 (2) | | | | |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 4-Apr-08 | 7.4 | 353 | 3.7 | 7.1 |
| | 23-Apr-08 | 7.8 | 361 | 13.7 | |
| | 21-May-08 | 7.7 | 372 | 9.0 | 9.4 |
| | 15-Jun-08 (1) | | | | |
| | 13-Jul-08 (1) | | | | |
| | 17-Aug-08 (1) | | | | |
| | 14-Sep-08 (1) | | | | |
| | 19-Oct-08 (1) | | | | |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 (2) | | | | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 7.7 | 342 | 10.4 | 5.4 |
| | 12-Apr-09 | 7.9 | 393 | 8.4 | 11.1 |
| | 17-May-09 | 7.4 | 340 | 11.2 | 8.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 14-Jun-09 (1) | | | | |
| **(cont'd)** | 12-Jul-09 (1) | | | | |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 (1) | | | | |
| | 11-Oct-09 (1) | | | | |
| | 15-Nov-09 (1) | | | | |
| | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.3 | 323 | 0.5 | 12.9 |
| | 11-Apr-10 | 8.2 | 367 | 9.0 | 13.1 |
| | 16-May-10 | 7.7 | 274 | 10.6 | 8.6 |
| | 23-May-10 | 7.3 | 346 | 18.3 | 7.8 |
| | 13-Jun-10 | 7.7 | 333 | 15.0 | 10.4 |
| | 18-Jul-10 | 7.9 | 4 | 19.2 | 11.1 |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 | 8.0 | 286 | 6.4 | 10.1 |
| | 14-Nov-10 | 7.8 | 244 | 5.3 | 9.6 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 7.9 | 200 | 0.7 | 10.9 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.2 | 217 | 2.1 | 10.5 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.6 | 220 | 8.7 | 9.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.7 | 315 | 16.1 | 7.9 |
| | 17-Jul-11 (1) | | | | |
| | 14-Aug-11 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 18-Sep-11 (1) | | | | |
| **(cont'd)** | 16-Oct-11 (1) | | | | |
| | 20-Nov-11 | | | | |
| | 18-Dec-11 (2) | | | | |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.7 | 231 | 12.7 | 8.2 |
| | 15-Apr-12 | 8.5 | 278 | 7.5 | 10.3 |
| | 13-May-12 | 8.2 | 320 | 21.6 | 7.4 |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 12-Aug-12 (1) | | | | |
| | 16-Sep-12 (1) | | | | |
| | 14-Oct-12 (1) | | | | |
| | 18-Nov-12 (1) | | | | |
| | 16-Dec-12 | 7.1 | 348 | 1.9 | 8.1 |
| | 13-Jan-13 | 7.7 | 222 | 0.2 | 9.0 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 16-Apr-13 | 8.3 | 167 | | 9.1 |
| | 13-May-13 | 7.2 | 231 | 7.6 | 11.0 |
| | 18-Jun-13 | 7.9 | 343 | 16.0 | 5.7 |
| | 14-Jul-13 (1) | | | | |
| | 18-Aug-13 (1) | | | | |
| | 15-Sep-13 (1) | | | | |
| | 13-Oct-13 (1) | | | | |
| | 19-Nov-13 | 8.3 | 235 | 2.5 | 1.9 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 15-Apr-14 | 7.7 | 149 | 0.2 | 11.2 |
| | 12-May-14 | 7.7 | 306 | 15.5 | 4.1 |
| | 15-Jun-14 (1) | | | | |
| | 13-Jul-14 (1) | | | | |
| | 17-Aug-14 (1) | | | | |
| | 7-Sep-14 (1) | | | | |
| | 23-Oct-14 | | 345 | 8.3 | 11.0 |
| | 16-Nov-14 (2) | | | | |
| | 14-Dec-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 23-Apr-15 | 7.8 | 206 | 2.4 | 11.8 |
| | 17-May-15 (1) | | | | |
| | 16-Jun-15 | 7.8 | 372 | 14.6 | 6.7 |
| | 19-Jul-15 (1) | | | | |
| | 9-Aug-15 (1) | | | | |
| | 23-Aug-15 (1) | | | | |
| | 6-Sep-15 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 11-Oct-15 (1) | | | | |
| **(cont'd)** | 8-Nov-15 | | | | |
| | 15-Nov-15 (1) | | | | |
| | 6-Dec-15 (1) | | | | |
| | 17-Jan-16 (2) | | | | |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 6.9 | 167 | 1.0 | 11.9 |
| | 20-Apr-16 | 7.5 | 246 | 7.9 | 8.5 |
| | 17-May-16 | 7.9 | 318 | 11.0 | 8.7 |
| | 19-Jun-16 (1) | | | | |
| | 3-Jul-16 | | | | |
| | 17-Jul-16 (1) | | | | |
| | 7-Aug-16 | | | | |
| | 21-Aug-16 (1) | | | | |
| | 18-Sep-16 (1) | | | | |
| | 16-Oct-16 (1) | | | | |
| | 25-Oct-16 (1) | | | | |
| | 18-Nov-16 (1) | | | | |
| | 12-Dec-16 (1) | | | | |
| | 25-Jan-17 | 7.9 | 218 | 1.4 | 10.7 |
| | 15-Feb-17 (2) | | | | |
| | 22-Mar-17 | 7.6 | 530 | 0.1 | 7.7 |
| | 19-Apr-17 | 7.1 | 254 | 9.1 | 9.6 |
| | 8-May-17 | 8.2 | 189 | 8.3 | 12.2 |
| | 16-May-17 | 8.0 | 310 | 14.3 | 7.0 |
| | 28-Jun-17 | 7.8 | 356 | 13.2 | 7.4 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 (1) | | | | |
| | 27-Jul-17 | | | | |
| | 13-Aug-17 (1) | | | | |
| | 17-Sep-17 (1) | | | | |
| | 17-Oct-17 (1) | | | | |
| | 15-Nov-17 | 7.9 | 285 | 3.2 | 7.7 |
| | 12-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 24-Feb-18 | 7.8 | 185 | (0) | 13.6 |
| | 18-Mar-18 (2) | | | | |
| | 18-Apr-18 (2) | | | | |
| | 8-May-18 | 7.8 | 364 | 14.2 | 8.6 |
| | 14-May-18 | 7.6 | 349 | 11.4 | 6.8 |
| | 19-Jun-18 (1) | | | | |
| | 18-Jul-18 (1) | | | | |
| | 23-Aug-18 (1) | | | | |
| | 19-Sep-18 (1) | | | | |
| | 24-Oct-18 (1) | | | | |
| | 21-Nov-18 (1) | | | | |
| | 12-Dec-18 | 7.7 | 376 | 2.6 | 7.6 |
| | 18-Jan-19 (2) | | | | |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 24-Apr-19 | 7.8 | 285 | 4.4 | 9.9 |
| **(cont'd)** | 14-May-19 | 7.8 | 297 | 6.6 | 8.7 |
| | 23-May-19 | 7.7 | 344 | 11.2 | 6.9 |
| | 18-Jun-19 (1) | | | | |
| | 29-Jul-19 (1) | | | | |
| | 29-Aug-19 (1) | | | | |
| | 26-Sep-19 (1) | | | | |
| | 23-Oct-19 (1) | | | | |
| | 22-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |
| | 27-Apr-20 | | | | |
| | 19-May-20 | 7.9 | 390 | 7.3 | 10.5 |
| | 29-May-20 (1) | | | | |
| | 23-Jun-20 (1) | | | | |
| | 30-Jul-20 (1) | | | | |
| | 30-Oct-20 (1) | | | | |
| | 26-Nov-20 (1) | | | | |
| | 23-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 (2) | | | | |
| | 27-Apr-21 | 7.3 | 331 | 10.0 | 8.8 |
| | 27-May-21 (1) | | | | |
| | 22-Jun-21 (1) | | | | |
| | 22-Jul-21 (1) | | | | |
| | 25-Aug-21 (1) | | | | |
| | 28-Sep-21 (3) | | | | |
| | 26-Oct-21 (1) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.4 | 594 | 0.0 | 12.4 |
| | 25-May-22 (1) | | | | |
| | 22-Jun-22 | 7.5 | 610 | 9.8 | 7.0 |
| | 26-Aug-22 (1) | | | | |
| | 27-Sep-22 | 7.5 | 436 | 11.7 | 10.3 |
| | 28-Oct-22 (1) | | | | |
| | 23-Nov-22 (1) | | | | |
| | 21-Dec-22 (1) | | | | |
| | 24-Jan-23 (1) | | | | |
| | 22-Feb-23 | 7.6 | 336 | 0.0 | 10.5 |
| | 27-Mar-23 | 8.8 | 328 | 2.3 | 10.4 |
| | 21-Apr-23 | 6.2 | 316 | 10.9 | 7.5 |
| | 16-May-23 (1) | | | | |
| | 27-Jun-23 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW9** | 25-Jul-23 (1) | | | | |
| **(cont'd)** | 30-Aug-23 (1) | | | | |
| | 25-Sep-23 (1) | | | | |
| | 1-Nov-23 (1) | | | | |
| | 29-Nov-23 (1) | | | | |
| | 18-Dec-23 (1) | | | | |
| | 31-Jan-24 (2) | | | | |
| | 27-Feb-24 (2) | | | | |
| | 27-Mar-24 | 7.7 | 333 | 1.3 | 10.9 |
| | 29-Apr-24 | 7.9 | 374 | 8.3 | 8.1 |
| | 27-May-24 (1) | | | | |
| | 26-Jun-24 (1) | | | | |
| | 29-Jul-24 (1) | | | | |
| | 27-Aug-24 (1) | | | | |
| | 24-Sep-24 (1) | | | | |
| | 28-Oct-24 (1) | | | | |
| | 18-Nov-24 (1) | | | | |
| | 16-Dec-24 (2) | | | | |
| | 27-Jan-25 (2) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 (3) | | | | |
| | 29-Apr-25 | 7.6 | 295 | 14.1 | 2.2 |
| | 27-May-25 | 8.1 | 283 | 11.3 | 9.3 |
| | 23-Jun-25 (1) | | | | |
| | 28-Jul-25 (1) | | | | |
| | 25-Aug-25 (1) | | | | |
| | 29-Sep-25 (1) | | | | |
| | 28-Oct-25 (1) | | | | |
| | 25-Nov-25 | 7.7 | 328 | 4.6 | 8.5 |
| | 16-Dec-25 (1) | | | | |
| **SW10** | 22-May-03 | | | 15.0 | |
| | 22-Oct-03 | 7.5 | 523 | 6.2 | |
| | 11-Feb-04 | | 306 | 1.2 | |
| | 18-Mar-04 | | 448 | 2.9 | 7.7 |
| | 20-Apr-04 | 8.0 | 261 | 8.5 | |
| | 19-May-04 | 8.0 | 386 | 10.8 | |
| | 24-Jun-04 | 8.0 | 434 | 13.0 | |
| | 29-Jul-04 | 8.0 | 452 | 16.0 | 8.9 |
| | 26-Aug-04 | 8.1 | 477 | 16.5 | |
| | 21-Sep-04 | 8.2 | 486 | 15.9 | 8.2 |
| | 21-Oct-04 | 7.7 | 367 | 7.9 | 6.8 |
| | 17-Nov-04 | 7.7 | 384 | 8.5 | 9.2 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.8 | 314 | 4.5 | |
| | 11-Apr-05 | 7.3 | 229 | 5.5 | |
| | 26-May-05 | 6.8 | 386 | 11.3 | 10.2 |
| | 29-Jun-05 | 7.9 | 503 | 15.9 | 9.7 |
| | 12-Jul-05 | 7.8 | 528 | 17.8 | 6.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 22-Aug-05 | 8.9 | 394 | 14.9 | 8.6 |
| **(cont'd)** | 25-Sep-05 | 7.9 | 443 | 14.2 | 8.7 |
| | 25-Oct-05 | 7.9 | 471 | 7.3 | 10.4 |
| | 16-Nov-05 | 8.3 | 349 | 7.2 | 10.0 |
| | 13-Dec-05 | 7.5 | 248 | 0.1 | 6.1 |
| | 17-Jan-06 | 6.8 | 242 | 1.7 | 12.9 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.4 | 266 | 3.8 | |
| | 19-Apr-06 | 8.2 | 361 | 7.7 | |
| | 24-May-06 | 8.0 | 457 | 10.5 | |
| | 23-Jun-06 | 7.9 | 497 | 14.0 | |
| | 12-Jul-06 | 8.1 | 464 | 15.6 | |
| | 23-Aug-06 | 7.9 | 512 | 17.5 | |
| | 21-Sep-06 | 7.9 | 461 | 11.0 | |
| | 19-Oct-06 | 7.5 | 457 | 9.5 | |
| | 27-Nov-06 | 8.5 | 488 | 6.0 | |
| | 17-Dec-06 | 8.2 | 493 | 3.0 | |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 16-Apr-07 | 8.2 | 420 | 3.2 | |
| | 13-May-07 | 8.4 | 440 | 11.5 | |
| | 21-Nov-07 | 8.0 | 431 | 5.6 | |
| | 9-Dec-07 (2) | | | | |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 4-Apr-08 | 7.4 | 376 | 4.6 | |
| | 23-Apr-08 | 8.0 | 347 | 10.4 | |
| | 20-May-08 | 7.2 | 408 | 10.6 | |
| | 18-Jun-08 | 8.0 | 451 | 12.9 | |
| | 19-Aug-08 | 7.8 | 559 | 12.4 | |
| | 21-Oct-08 | 7.7 | 442 | 8.0 | |
| | 23-Nov-08 | 7.7 | 471 | 3.8 | |
| | 14-Dec-08 | 7.1 | 378 | 3.6 | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 | | 329 | 2.2 | 9.7 |
| | 15-Mar-09 | 8.1 | 333 | 4.4 | |
| | 12-Apr-09 | 9.0 | 406 | 5.9 | |
| | 17-May-09 | 8.2 | 382 | 15.6 | 8.1 |
| | 14-Jun-09 | 8.3 | 900 | 12.6 | 9.4 |
| | 12-Jul-09 | 9.6 | 506 | 14.1 | 7.7 |
| | 9-Aug-09 | 8.2 | 485 | 16.8 | 8.5 |
| | 11-Oct-09 | 7.9 | 474 | 5.5 | 11.5 |
| | 15-Nov-09 | 7.7 | 409 | 5.9 | 10.6 |
| | 13-Dec-09 | 7.8 | 458 | 0.1 | 12.7 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.8 | 435 | 5.2 | 14.7 |
| | 4-Apr-10 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 11-Apr-10 | 8.1 | 443 | 9.1 | |
| **(cont'd)** | 16-May-10 | 8.2 | 312 | 9.2 | 10.6 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.1 | 357 | 12.7 | 12.5 |
| | 18-Jul-10 | 8.1 | 330 | 17.9 | 11.4 |
| | 15-Aug-10 | 8.3 | 318 | 15.4 | 9.3 |
| | 12-Sep-10 | 8.2 | 415 | 13.4 | 8.6 |
| | 17-Oct-10 | 7.9 | 352 | 10.3 | 8.4 |
| | 14-Nov-10 | 8.0 | 251 | 6.0 | 10.3 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | 8.3 | 248 | 1.1 | 11.6 |
| | 13-Mar-11 | 8.4 | 247 | 3.4 | 13.4 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 22-Mar-11 | 8.4 | 306 | 4.0 | 13.0 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.3 | 277 | 6.6 | 13.2 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.6 | 301 | 10.3 | 12.0 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.2 | 298 | 12.0 | 9.2 |
| | 17-Jul-11 | 8.4 | 498 | 16.1 | 10.8 |
| | 18-Sep-11 | 8.6 | 296 | 13.4 | 8.4 |
| | 16-Oct-11 | 7.8 | 302 | 11.2 | 9.4 |
| | 20-Nov-11 | 8.7 | 290 | 5.7 | 11.0 |
| | 18-Dec-11 | 8.4 | 250 | 3.8 | 12.3 |
| | 15-Jan-12 | | | | |
| | 19-Feb-12 | 7.9 | 231 | 2.5 | 12.1 |
| | 18-Mar-12 | 7.9 | 253 | 11.4 | 7.5 |
| | 15-Apr-12 | 8.5 | 316 | 9.6 | 9.7 |
| | 13-May-12 | 7.9 | 356 | 14.9 | 7.1 |
| | 17-Jun-12 | 8.4 | 388 | 18.3 | 6.3 |
| | 15-Jul-12 | 8.4 | 479 | 21.3 | 6.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 12-Aug-12 | 8.4 | 464 | 15.7 | 6.6 |
| **(cont'd)** | 16-Sep-12 | 7.7 | 367 | 12.6 | 9.0 |
| | 14-Oct-12 | 8.9 | 269 | 10.3 | 7.0 |
| | 18-Nov-12 | 7.8 | 329 | 6.4 | 8.4 |
| | 16-Dec-12 | 8.0 | 609 | 2.2 | |
| | 13-Jan-13 | 8.2 | 256 | 2.6 | 11.0 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 17-Apr-13 | 7.9 | 239 | 5.5 | 12.2 |
| | 14-May-13 | 8.1 | 283 | 7.9 | 6.9 |
| | 19-Jun-13 | 8.4 | 340 | 11.4 | 10.9 |
| | 16-Jul-13 | 8.2 | 426 | 17.7 | 7.9 |
| | 21-Aug-13 | 8.4 | 426 | 16.5 | 10.4 |
| | 16-Oct-13 | 8.5 | 360 | 12.0 | 6.0 |
| | 20-Nov-13 | 8.5 | 204 | 4.2 | 3.0 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.1 | 412 | 5.4 | 10.7 |
| | 13-May-14 | 7.2 | 322 | 9.6 | 10.6 |
| | 18-Jun-14 | 8.3 | 362 | 12.7 | 10.5 |
| | 15-Jul-14 | 7.8 | 416 | 13.1 | 8.7 |
| | 17-Aug-14 (1) | | | | |
| | 23-Oct-14 | 7.9 | 390 | 7.7 | 6.0 |
| | 16-Nov-14 (2) | | | | |
| | 14-Dec-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 23-Apr-15 | 8.3 | 303 | 5.1 | 13.8 |
| | 19-May-15 | 8.4 | 315 | 10.5 | 13.6 |
| | 15-Jun-15 | 8.0 | 388 | 13.1 | 9.7 |
| | 22-Jul-15 | 8.2 | 428 | 14.1 | 8.1 |
| | 11-Aug-15 | 8.3 | 446 | 16.3 | 8.6 |
| | 25-Aug-15 | | | 14.0 | |
| | 8-Sep-15 | 8.0 | 445 | 20.0 | 5.6 |
| | 16-Oct-15 | 8.3 | 142 | 8.6 | 7.5 |
| | 10-Nov-15 | 7.0 | 309 | 8.4 | 6.6 |
| | 18-Nov-15 | 7.9 | 344 | 8.1 | 11.3 |
| | 9-Dec-15 | 7.9 | 331 | 5.3 | 12.7 |
| | 20-Jan-16 | 7.8 | 286 | 1.4 | 11.0 |
| | 18-Feb-16 | 7.6 | 281 | 0.6 | 14.4 |
| | 15-Mar-16 | 7.6 | 269 | 4.6 | 13.0 |
| | 21-Apr-16 | 7.8 | 299 | 7.8 | 13.4 |
| | 18-May-16 | 8.5 | 222 | 10.3 | 11.2 |
| | 23-Jun-16 | 8.4 | 389 | 13.0 | 9.5 |
| | 5-Jul-16 | 8.2 | 322 | 17.1 | 11.7 |
| | 21-Jul-16 | 8.3 | 275 | 20.4 | 4.9 |
| | 9-Aug-16 | 8.3 | 538 | 22.0 | 5.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 24-Aug-16 | 8.4 | 404 | 19.4 | 5.7 |
| **(cont'd)** | 19-Sep-16 | 8.3 | 506 | 18.3 | 6.4 |
| | 18-Oct-16 | 8.2 | 415 | 16.1 | 8.9 |
| | 24-Oct-16 | 8.0 | 331 | 7.9 | 9.8 |
| | 15-Nov-16 | 7.9 | 323 | 8.4 | 7.5 |
| | 12-Dec-16 | 7.6 | 395 | 0.2 | 13.3 |
| | 25-Jan-17 | 8.1 | 278 | 2.3 | 12.1 |
| | 17-Feb-17 | 8.3 | 309 | 1.2 | 15.7 |
| | 22-Mar-17 | 8.1 | 343 | (0) | 14.4 |
| | 19-Apr-17 | 8.3 | 216 | 5.8 | 14.5 |
| | 8-May-17 | 8.0 | 206 | 6.8 | 12.7 |
| | 16-May-17 | 8.3 | 312 | 8.6 | 10.4 |
| | 28-Jun-17 | 8.3 | 389 | 11.8 | 9.4 |
| | 7-Jul-17 | 8.2 | 386 | 13.5 | 8.5 |
| | 19-Jul-17 | 8.2 | 313 | 15.8 | 9.6 |
| | 2-Aug-17 | 8.4 | 366 | 16.3 | 9.1 |
| | 16-Aug-17 | 8.5 | 440 | 15.8 | 7.8 |
| | 18-Sep-17 | 8.1 | 3 | 15.0 | 7.8 |
| | 18-Oct-17 | 8.2 | 361 | 12.5 | 5.5 |
| | 15-Nov-17 | 8.4 | 337 | 5.0 | 10.7 |
| | 14-Dec-17 | 8.4 | 283 | 1.4 | 12.6 |
| | 18-Jan-18 | 8.0 | 273 | 1.0 | 10.1 |
| | 23-Feb-18 | 8.2 | 238 | 4.1 | 11.8 |
| | 21-Mar-18 | 8.3 | 260 | 1.4 | 11.5 |
| | 18-Apr-18 (2) | | | | |
| | 9-May-18 | 8.2 | 424 | 11.8 | 10.3 |
| | 15-May-18 | 8.1 | 433 | 10.1 | 10.4 |
| | 18-Jun-18 | 8.2 | 474 | 8.2 | 9.1 |
| | 19-Jul-18 | 8.3 | 478 | 16.4 | 8.8 |
| | 24-Aug-18 | 8.3 | 479 | 18.1 | 8.1 |
| | 20-Sep-18 | 8.2 | 443 | 14.1 | 9.4 |
| | 25-Oct-18 | 8.1 | 468 | 7.2 | 9.0 |
| | 22-Nov-18 | 8.2 | 731 | 1.5 | 11.9 |
| | 13-Dec-18 | 8.3 | 468 | 2.4 | 12.4 |
| | 19-Jan-19 | 7.9 | 515 | 0.5 | 12.9 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.3 | 415 | 2.6 | 12.8 |
| | 25-Apr-19 | 8.0 | 337 | 6.3 | 10.6 |
| | 16-May-19 | 8.2 | 379 | 7.5 | 11.1 |
| | 27-May-19 | 8.2 | 382 | 9.1 | 10.4 |
| | 21-Jun-19 | 8.0 | 423 | 11.6 | 9.5 |
| | 30-Jul-19 | 8.3 | 451 | 16.9 | 8.3 |
| | 30-Aug-19 | 8.3 | 388 | 15.4 | 9.0 |
| | 27-Sep-19 | 8.2 | 397 | 12.7 | 9.5 |
| | 22-Oct-19 | 8.1 | 379 | 10.2 | 9.0 |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 28-Apr-20 | | | | |
| **(cont'd)** | 20-May-20 | | | | |
| | 28-May-20 (3) | | | | |
| | 24-Jun-20 | 8.4 | 376 | 12.6 | 9.2 |
| | 31-Jul-20 | 8.6 | 233 | 18.1 | 8.3 |
| | 26-Aug-20 (1) | | | | |
| | 26-Sep-20 (1) | | | | |
| | 29-Oct-20 (1) | | | | |
| | 27-Nov-20 (2) | | | | |
| | 22-Dec-20 (2) | | | | |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.1 | 362 | 5.9 | 12.0 |
| | 28-Apr-21 (1) | | | | |
| | 26-May-21 | 7.8 | 450 | 9.8 | 10.1 |
| | 27-May-21 | 7.8 | 450 | 9.8 | 10.1 |
| | 23-Jun-21 (1) | | | | |
| | 10-Jul-21 (1) | | | | |
| | 23-Jul-21 | 8.5 | 489 | 16.4 | 9.4 |
| | 11-Aug-21 | | | 20.6 | |
| | 26-Aug-21 | 8.2 | 481 | 21.0 | 8.1 |
| | 27-Sep-21 | 8.1 | 480 | 11.8 | 10.3 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 (2) | | | | |
| | 22-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.2 | 1,007 | 0.1 | 6.5 |
| | 24-May-22 | 8.1 | 479 | 12.0 | 9.7 |
| | 24-Jun-22 (1) | 7.8 | 1,006 | 11.2 | 11.1 |
| | 8-Jul-22 (1) | | | | |
| | 11-Aug-22 (1) | | | | |
| | 26-Aug-22 (1) | | | | |
| | 27-Sep-22 | | | 12.8 | |
| | 27-Oct-22 | | | 7.9 | |
| | 17-May-23 | 8.0 | 428 | 7.9 | 10.7 |
| | 27-Jun-23 | | | 14.1 | |
| | 11-Jul-23 | | | 14.8 | |
| | 25-Jul-23 | | | 14.7 | |
| | 14-Aug-23 | 7.8 | 392 | 14.9 | 13.6 |
| | 30-Aug-23 | 7.8 | 392 | 13.8 | 13.6 |
| | 25-Sep-23 | | | 15.7 | |
| | 31-Oct-23 | | | 8.0 | |
| | 27-May-24 | 7.7 | 490 | 13.2 | 9.2 |
| | 26-Jun-24 | | | 15.7 | |
| | 16-Jul-24 | | | 15.2 | |
| | 29-Jul-24 | | | 17.5 | |
| | 12-Aug-24 | | | 16.6 | |
| | 26-Aug-24 | | | 19.0 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW10** | 24-Sep-24 | | | 16.3 | |
| **(cont'd)** | 28-Oct-24 | | | 9.4 | |
| | 28-May-25 | 8.2 | 438 | 12.0 | 11.2 |
| | 23-Jun-25 | | | 17.7 | |
| | 14-Jul-25 (1) | | | 21.6 | |
| | 28-Jul-25 | | | 19.4 | |
| | 11-Aug-25 | | | 22.4 | |
| | 25-Aug-25 | | | 14.2 | |
| | 29-Sep-25 (1) | | | 18.7 | |
| | 28-Oct-25 | | | 8.8 | |
| **SW11** | 22-May-03 | | | 8.0 | |
| | 22-Oct-03 | | | | |
| | 13-Feb-04 | | 309 | 3.8 | |
| | 18-Mar-04 | | 410 | 4.3 | |
| | 21-Apr-04 | 8.0 | 213 | 5.4 | |
| | 19-May-04 | 8.0 | 317 | 7.8 | |
| | 24-Jun-04 | 8.0 | 357 | 8.7 | |
| | 29-Jul-04 | 8.1 | 404 | 12.7 | |
| | 26-Aug-04 | 8.2 | 389 | 14.2 | |
| | 22-Sep-04 | 8.2 | 391 | 14.1 | 10.1 |
| | 21-Oct-04 | 7.9 | 323 | 7.0 | 11.2 |
| | 18-Nov-04 | 7.9 | 370 | 8.0 | 10.8 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.8 | 305 | 6.4 | |
| | 11-Apr-05 | 6.8 | 207 | 4.6 | |
| | 26-May-05 | 7.4 | 311 | 8.3 | |
| | 29-Jun-05 | 7.9 | 368 | 10.3 | |
| | 12-Jul-05 | 7.7 | 371 | 11.5 | 10.8 |
| | 28-Sep-05 | 7.9 | 443 | 11.4 | 8.7 |
| | 25-Oct-05 | 8.0 | 393 | 6.2 | 10.9 |
| | 16-Nov-05 | 7.8 | 268 | 6.3 | 11.2 |
| | 13-Dec-05 | 8.2 | 299 | 0.3 | 13.4 |
| | 18-Jan-06 | 7.2 | 260 | 5.1 | 12.7 |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.3 | 250 | 4.9 | |
| | 24-May-06 | 8.1 | 418 | 7.7 | |
| | 21-Jun-06 | 8.1 | 426 | 9.9 | |
| | 12-Jul-06 | 8.1 | 364 | 11.9 | |
| | 24-Aug-06 | 7.9 | 428 | 13.6 | |
| | 21-Sep-06 | 8.3 | 404 | 11.8 | |
| | 19-Oct-06 | 7.9 | 433 | 9.1 | |
| | 23-Nov-06 | 7.9 | 425 | 6.1 | |
| | 17-Dec-06 | 8.0 | 436 | 5.1 | |
| | 21-Jan-07 | 8.3 | 438 | 2.8 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.2 | 382 | 4.1 | |
| | 13-May-07 | 8.2 | 400 | 6.0 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW11 | 17-Jun-07 | 8.4 | 428 | 9.5 | |
| (cont'd) | 15-Jul-07 | 8.1 | 454 | 12.7 | |
| | 19-Aug-07 | 8.0 | 449 | 13.3 | 9.4 |
| | 17-Sep-07 | 8.3 | 426 | 12.7 | 8.8 |
| | 18-Oct-07 | 8.0 | 422 | 12.8 | 8.5 |
| | 19-Nov-07 | 7.8 | 464 | 3.6 | 11.4 |
| | 11-Dec-07 | 7.9 | 440 | 4.3 | 11.8 |
| | 22-Jan-08 | 7.8 | 361 | 3.9 | 12.7 |
| | 20-Feb-08 | 8.0 | 378 | 3.7 | |
| | 17-Mar-08 | 7.8 | 400 | 4.5 | |
| | 2-Apr-08 | 7.8 | 312 | 4.3 | |
| | 23-Apr-08 | 7.7 | 300 | 6.1 | 10.9 |
| | 22-May-08 | 7.4 | 374 | 5.6 | 11.2 |
| | 17-Jun-08 | 7.8 | 434 | 8.7 | 11.0 |
| | 15-Jul-08 | 7.3 | 465 | 12.6 | 8.6 |
| | 19-Aug-08 | 7.4 | 526 | 11.8 | 6.3 |
| | 16-Sep-08 | 8.1 | 477 | 10.1 | 8.2 |
| | 22-Oct-08 | 7.9 | 428 | 6.9 | 6.8 |
| | 23-Nov-08 | 8.0 | 428 | 5.7 | 8.7 |
| | 14-Dec-08 | 8.4 | 336 | 4.8 | 8.8 |
| | 18-Jan-09 | 8.1 | 317 | 3.9 | 9.0 |
| | 8-Feb-09 | | 344 | 3.9 | 8.0 |
| | 15-Mar-09 | 8.3 | 308 | 4.2 | |
| | 12-Apr-09 | 8.0 | 352 | 4.6 | |
| | 17-May-09 | 8.4 | 317 | 8.2 | |
| | 14-Jun-09 | 7.8 | 809 | 9.4 | |
| | 12-Jul-09 | 8.6 | 446 | 9.7 | 11.5 |
| | 9-Aug-09 | 8.6 | 444 | 12.9 | 10.0 |
| | 13-Sep-09 | 7.6 | 413 | 10.0 | |
| | 11-Oct-09 | 8.2 | 487 | 6.7 | 11.5 |
| | 15-Nov-09 | 8.3 | 341 | 5.6 | 12.2 |
| | 13-Dec-09 | 7.7 | 454 | 3.3 | 12.3 |
| | 17-Jan-10 | 8.0 | 388 | 4.7 | 12.6 |
| | 7-Feb-10 | 7.8 | 431 | 3.3 | 12.0 |
| | 14-Mar-10 | 7.4 | 349 | 4.9 | 13.1 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 373 | 6.8 | |
| | 16-May-10 | 8.0 | 254 | 6.7 | 12.3 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.0 | 276 | 8.3 | |
| | 18-Jul-10 | 8.0 | 324 | 9.3 | 15.2 |
| | 15-Aug-10 | 8.2 | 332 | 13.1 | 10.6 |
| | 12-Sep-10 | 8.3 | 352 | 10.3 | 10.6 |
| | 17-Oct-10 | 7.9 | 317 | 7.3 | 11.3 |
| | 14-Nov-10 | 7.9 | 241 | 6.3 | 10.6 |
| | 19-Dec-10 | 8.4 | 182 | 4.8 | 11.4 |
| | 16-Jan-11 | 8.3 | 251 | 4.8 | 12.6 |
| | 20-Feb-11 | 8.1 | 251 | 4.6 | 11.8 |
| | 13-Mar-11 | 8.2 | 242 | 4.9 | 13.5 |
| | 17-Mar-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11** | 18-Mar-11 | | | | |
| **(cont'd)** | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 227 | 5.4 | 12.7 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.8 | 209 | 5.6 | 13.5 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.2 | 152 | 8.6 | 11.1 |
| | 17-Jul-11 | 8.3 | 280 | 14.2 | 9.7 |
| | 14-Aug-11 | 8.6 | 260 | 15.0 | 9.9 |
| | 18-Sep-11 | 8.9 | 279 | 12.4 | 10.2 |
| | 16-Oct-11 | 7.7 | 279 | 9.2 | 11.9 |
| | 20-Nov-11 | 7.9 | 288 | 5.3 | 12.0 |
| | 18-Mar-12 | 8.0 | 194 | 6.1 | 9.3 |
| | 15-Apr-12 | 8.7 | 279 | 9.1 | 12.4 |
| | 13-May-12 | 8.0 | 279 | 9.3 | 11.5 |
| | 17-Jun-12 | 8.2 | 333 | 12.1 | 13.5 |
| | 16-Jul-12 | 8.2 | 375 | 16.0 | 7.1 |
| | 14-Aug-12 | 7.8 | 495 | 10.0 | 7.4 |
| | 18-Sep-12 | 7.7 | 335 | 11.0 | 9.9 |
| | 14-Oct-12 | 6.7 | 184 | 10.3 | 7.8 |
| | 18-Nov-12 | 7.8 | 280 | 6.8 | 9.2 |
| | 16-Dec-12 | 7.7 | 568 | 5.0 | 10.3 |
| | 13-Jan-13 | 8.1 | 279 | 4.9 | 11.2 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.3 | 203 | 4.2 | 9.1 |
| | 17-Apr-13 | 7.9 | 198 | 4.8 | 10.2 |
| | 14-May-13 | 8.0 | 237 | 5.7 | 10.7 |
| | 19-Jun-13 | 8.1 | 281 | 8.3 | 12.7 |
| | 16-Jul-13 | 8.1 | 338 | 11.0 | 11.4 |
| | 21-Aug-13 | 8.4 | 313 | 13.4 | 9.9 |
| | 18-Sep-13 | 8.0 | 328 | 10.8 | 11.3 |
| | 16-Oct-13 | 8.2 | 312 | 9.6 | 5.8 |
| | 20-Nov-13 | 7.5 | 273 | 6.2 | 3.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11** | 15-Dec-13 (2) | | | | |
| **(cont'd)** | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.1 | 215 | 4.5 | 11.0 |
| | 13-May-14 | 6.6 | 256 | 8.6 | 12.4 |
| | 18-Jun-14 | 8.0 | 281 | 7.8 | 10.5 |
| | 16-Jul-14 | 7.9 | 244 | 9.8 | 8.6 |
| | 19-Aug-14 | 8.8 | 388 | 12.0 | 10.5 |
| | 9-Sep-14 | 9.0 | 398 | 13.0 | 4.1 |
| | 23-Oct-14 | 8.0 | 391 | 8.0 | 5.0 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.5 | 315 | 5.0 | |
| | 20-Jan-15 | | 293 | 2.5 | 0.1 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.3 | 179 | 2.5 | 13.4 |
| | 22-Apr-15 | 8.0 | 259 | 4.8 | 13.7 |
| | 19-May-15 | 8.3 | 253 | 7.1 | |
| | 15-Jun-15 | 8.2 | 305 | 7.2 | 11.7 |
| | 22-Jul-15 | 7.9 | 321 | 9.8 | |
| | 11-Aug-15 | 8.3 | 352 | 11.0 | 11.4 |
| | 25-Aug-15 | 8.3 | 317 | 11.7 | 9.5 |
| | 8-Sep-15 | 8.0 | 362 | 13.6 | 9.0 |
| | 15-Oct-15 | 8.3 | 311 | 9.4 | 9.9 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.0 | 367 | 8.4 | 11.5 |
| | 9-Dec-15 | 7.7 | 315 | 5.2 | 13.3 |
| | 19-Jan-16 | 7.9 | 247 | 3.3 | 14.5 |
| | 17-Feb-16 | 7.7 | 276 | 4.1 | 14.0 |
| | 15-Mar-16 | 7.8 | 201 | 4.5 | 13.6 |
| | 21-Apr-16 | 8.0 | 227 | 4.6 | 14.8 |
| | 18-May-16 | 8.2 | 294 | 7.2 | 13.2 |
| | 23-Jun-16 | 8.4 | 304 | 8.7 | 11.8 |
| | 5-Jul-16 | 8.4 | 298 | 12.7 | 15.7 |
| | 21-Jul-16 | 8.2 | 365 | 13.9 | 10.3 |
| | 9-Aug-16 | 8.5 | 336 | 16.3 | 11.4 |
| | 24-Aug-16 | 8.4 | 215 | 16.6 | 10.0 |
| | 19-Sep-16 | 8.4 | 366 | 14.9 | 9.8 |
| | 18-Oct-16 | 8.3 | 367 | 13.8 | 11.6 |
| | 16-Nov-16 | 7.9 | 253 | 6.7 | 9.6 |
| | 12-Dec-16 | 8.7 | 467 | 1.9 | 14.8 |
| | 25-Jan-17 | 8.1 | 265 | 5.1 | 12.0 |
| | 17-Feb-17 | 8.2 | 290 | 3.5 | 14.6 |
| | 22-Mar-17 | 8.3 | 279 | 3.3 | 12.9 |
| | 19-Apr-17 | 7.3 | 231 | 4.6 | 15.6 |
| | 8-May-17 | 8.0 | 179 | 5.5 | 14.7 |
| | 16-May-17 | 7.8 | 262 | 8.0 | 13.2 |
| | 28-Jun-17 | 7.9 | 300 | 8.0 | 12.4 |
| | 7-Jul-17 | 7.4 | 301 | 9.3 | 13.7 |
| | 19-Jul-17 | 8.1 | 336 | 9.7 | 11.9 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11** | 2-Aug-17 | 8.1 | 323 | 10.6 | 10.9 |
| **(cont'd)** | 16-Aug-17 | 8.2 | 348 | 10.6 | 11.2 |
| | 18-Sep-17 | 8.1 | 340 | 10.8 | 10.7 |
| | 18-Oct-17 | 8.2 | 361 | 8.9 | 11.1 |
| | 15-Nov-17 | 8.3 | 335 | 6.2 | 7.1 |
| | 14-Dec-17 | 8.5 | 284 | 3.1 | 11.1 |
| | 18-Jan-18 | 7.9 | 264 | 4.1 | 8.7 |
| | 23-Feb-18 | 8.1 | 225 | 4.3 | 8.9 |
| | 21-Mar-18 | 8.3 | 268 | 3.9 | 13.0 |
| | 19-Apr-18 | 8.2 | 243 | 3.9 | 10.1 |
| | 9-May-18 | 8.0 | 360 | 6.1 | 12.2 |
| | 15-May-18 | 8.0 | 358 | 5.9 | 11.9 |
| | 18-Jun-18 | 8.2 | 431 | 8.2 | 10.9 |
| | 19-Jul-18 | | 245 | 11.9 | 10.1 |
| | 24-Aug-18 | 8.4 | 435 | 13.8 | 9.8 |
| | 20-Sep-18 | 8.5 | 439 | 13.1 | 9.7 |
| | 25-Oct-18 | 8.2 | 430 | 4.9 | 11.0 |
| | 22-Nov-18 | 8.3 | | 2.3 | 12.9 |
| | 13-Dec-18 | 8.3 | 412 | 4.9 | 12.2 |
| | 19-Jan-19 | 8.2 | 396 | 3.6 | 12.8 |
| | 28-Feb-19 | 8.4 | 341 | 3.9 | 12.8 |
| | 19-Mar-19 | 8.2 | 350 | 4.6 | 12.4 |
| | 25-Apr-19 | 8.1 | 267 | 4.2 | 11.9 |
| | 16-May-19 | 8.2 | 321 | 5.7 | 12.5 |
| | 27-May-19 | 8.3 | 353 | 7.9 | 12.0 |
| | 21-Jun-19 | 8.3 | 384 | 8.1 | 11.4 |
| | 30-Jul-19 | 8.3 | 392 | 12.8 | 9.8 |
| | 30-Aug-19 | 8.4 | 374 | 13.1 | 9.8 |
| | 27-Sep-19 | 8.5 | 358 | 12.4 | 9.1 |
| | 22-Oct-19 | 8.3 | 352 | 10.1 | 9.5 |
| | 21-Nov-19 | 7.9 | 378 | 0.1 | 9.8 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 | 8.2 | 366 | 4.9 | 12.2 |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | 8.3 | 340 | 8.0 | 11.3 |
| | 20-May-20 | | | | |
| | 28-May-20 | 8.8 | 359 | 7.0 | 11.4 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 8.6 | 417 | 11.4 | 10.3 |
| | 26-Aug-20 | 8.3 | 391 | 12.6 | 10.1 |
| | 26-Sep-20 | 8.2 | 390 | 10.5 | |
| | 29-Oct-20 | 8.1 | 347 | 9.8 | 9.0 |
| | 27-Nov-20 | 8.0 | 416 | 6.1 | 11.8 |
| | 22-Dec-20 | 8.1 | 410 | 5.2 | 12.3 |
| | 28-Jan-21 | 8.0 | 425 | 2.1 | 13.0 |
| | 23-Feb-21 | 7.9 | 403 | 0.1 | 12.6 |
| | 30-Mar-21 | 8.2 | 366 | 4.0 | 10.1 |
| | 28-Apr-21 (1) | | | | |
| | 26-May-21 | 8.1 | 403 | 7.4 | 11.7 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11** | 23-Jun-21 | 8.1 | 385 | 9.9 | 10.8 |
| **(cont'd)** | 10-Jul-21 | 8.0 | 420 | 10.3 | 10.3 |
| | 23-Jul-21 | 8.2 | 448 | 11.4 | 10.6 |
| | 11-Aug-21 | | | 14.2 | |
| | 26-Aug-21 | 8.0 | 453 | 14.8 | 9.8 |
| | 27-Sep-21 | 7.9 | 453 | 8.9 | 11.4 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 | 7.8 | 462 | 3.7 | 12.3 |
| | 22-Dec-21 | 8.0 | 443 | 2.9 | 12.1 |
| | 24-Jan-22 | 7.9 | 406 | 0.3 | 10.5 |
| | 8-Feb-22 | 7.9 | 673 | 0.0 | 11.4 |
| | 16-Mar-22 | 7.8 | 425 | 1.1 | 9.1 |
| | 21-Apr-22 | 8.2 | 452 | 0.1 | 12.0 |
| | 25-May-22 | 8.3 | 399 | 8.2 | 11.9 |
| | 24-Jun-22 | | | 9.3 | |
| | 8-Jul-22 | | | 13.1 | |
| | 11-Aug-22 | | | 13.1 | |
| | 29-Aug-22 | | | 10.1 | |
| | 29-Sep-22 | | | 9.9 | |
| | 27-Oct-22 | | | 7.8 | |
| | 22-Nov-22 | | | 1.0 | |
| | 21-Dec-22 | | | 0.9 | |
| | 17-May-23 | 8.3 | 373 | 6.9 | 11.6 |
| | 26-Jun-23 | | | 12.3 | |
| | 11-Jul-23 | | | 10.7 | |
| | 26-Jul-23 | | | 9.6 | |
| | 14-Aug-23 | | | 10.8 | |
| | 29-Aug-23 | | | 12.6 | |
| | 25-Sep-23 | | | 12.1 | |
| | 31-Oct-23 | | | 5.9 | |
| | 28-May-24 | 8.0 | 444 | 8.4 | 11.1 |
| | 27-Jun-24 | | | 10.0 | |
| | 16-Jul-24 | | | 9.8 | |
| | 30-Jul-24 | | | 12.5 | |
| | 12-Aug-24 | | | 12.1 | |
| | 28-Aug-24 | | | 13.4 | |
| | 25-Sep-24 | | | 15.2 | |
| | 29-Oct-24 | | | 9.0 | |
| | 28-May-25 | 8.5 | 389 | 8.6 | 12.1 |
| | 24-Jun-25 | | | 11.8 | |
| | 14-Jul-25 | | | 12.9 | |
| | 29-Jul-25 | | | 13.6 | |
| | 11-Aug-25 | | | 14.5 | |
| | 26-Aug-25 | | | 12.6 | |
| | 30-Sep-25 | | | 13.2 | |
| | 27-Oct-25 | | | 8.0 | |
| **SW11A** | 22-May-03 | | | 8.0 | |
| | 20-Aug-03 (1) | | | | |
| | 13-Feb-04 | | 325 | 4.8 | |
| | 18-Mar-04 | | 436 | 4.7 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 21-Apr-04 | 7.8 | 223 | 4.4 | |
| **(cont'd)** | 19-May-04 | 7.8 | 308 | 6.0 | |
| | 24-Jun-04 | 7.6 | 345 | 6.9 | |
| | 29-Jul-04 | 7.5 | 383 | 9.1 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.8 | 308 | 5.2 | |
| | 11-Apr-05 | 7.0 | 208 | 4.3 | |
| | 26-May-05 | 7.4 | 291 | 6.0 | |
| | 29-Jun-05 | 8.2 | 347 | 7.6 | |
| | 12-Jul-05 | 7.8 | 352 | 8.5 | |
| | 23-Aug-05 | 7.4 | 373 | 11.0 | 11.0 |
| | 23-Oct-05 (1) | | | | |
| | 16-Nov-05 | 8.2 | 306 | 7.8 | 11.4 |
| | 13-Dec-05 | 8.3 | 365 | 5.6 | 11.3 |
| | 18-Jan-06 | 7.3 | 230 | 5.7 | 12.5 |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.2 | 249 | 4.5 | |
| | 19-Apr-06 | 8.0 | 337 | 5.4 | |
| | 24-May-06 | 7.9 | 427 | 6.7 | |
| | 21-Jun-06 | 7.6 | 430 | 8.6 | |
| | 12-Jul-06 | 7.6 | 396 | 9.7 | |
| | 24-Aug-06 | 7.2 | 429 | 12.7 | |
| | 21-Sep-06 | 7.7 | 419 | 12.1 | |
| | 19-Oct-06 | 7.5 | 470 | 9.1 | |
| | 23-Nov-06 | 7.9 | 423 | 6.4 | |
| | 17-Dec-06 | 7.7 | 406 | 5.8 | |
| | 21-Jan-07 | 7.9 | 442 | 4.8 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.2 | 384 | 4.2 | |
| | 13-May-07 | 8.0 | 414 | 5.5 | |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |
| | 18-Nov-07 (1) | | | | |
| | 11-Dec-07 | 7.9 | 459 | 7.0 | 11.4 |
| | 22-Jan-08 | 7.8 | 290 | 5.2 | |
| | 20-Feb-08 | 8.1 | 380 | 4.6 | |
| | 17-Mar-08 | 7.8 | 409 | 4.7 | |
| | 2-Apr-08 | 7.7 | 310 | 4.2 | 12.9 |
| | 23-Apr-08 | 7.8 | 330 | 4.5 | 12.7 |
| | 22-May-08 | 8.1 | 381 | 5.6 | 10.5 |
| | 17-Jun-08 | 8.0 | 444 | 6.5 | 8.7 |
| | 19-Aug-08 | 7.7 | 542 | 8.0 | 8.3 |
| | 16-Sep-08 | 8.0 | 492 | 8.9 | 8.2 |
| | 23-Nov-08 | 8.2 | 427 | 5.8 | |
| | 14-Dec-08 | 8.1 | 337 | 5.7 | 8.2 |
| | 18-Jan-09 | 8.3 | 399 | 4.2 | 9.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 8-Feb-09 | | 348 | 4.8 | 8.9 |
| **(cont'd)** | 15-Mar-09 | 8.1 | 310 | 4.1 | |
| | 12-Apr-09 | 8.1 | 355 | 4.0 | |
| | 17-May-09 | 8.1 | 321 | 6.4 | |
| | 14-Jun-09 | 7.9 | 796 | 12.1 | |
| | 12-Jul-09 | 8.4 | 418 | 8.8 | |
| | 9-Aug-09 | 7.9 | 432 | 16.0 | |
| | 11-Oct-09 | 7.6 | 512 | 8.6 | |
| | 13-Dec-09 | 7.7 | 473 | 5.1 | 12.3 |
| | 17-Jan-10 | 8.0 | 439 | 4.8 | 11.7 |
| | 7-Feb-10 | 7.7 | 433 | 4.6 | 12.1 |
| | 14-Mar-10 | 7.6 | 357 | 4.9 | 13.3 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.9 | 201 | 5.2 | 12.0 |
| | 16-May-10 | 7.8 | 201 | 5.8 | 12.0 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.8 | 319 | 8.0 | 15.3 |
| | 18-Jul-10 | 7.8 | 319 | 8.0 | 15.3 |
| | 15-Aug-10 | 7.9 | 308 | 9.0 | 10.3 |
| | 17-Oct-10 | 7.9 | 343 | 7.8 | 11.6 |
| | 14-Nov-10 | 7.8 | 241 | 6.8 | 10.1 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | 8.2 | 182 | 5.5 | 11.9 |
| | 20-Feb-11 | 8.2 | 201 | 5.2 | 12.4 |
| | 13-Mar-11 | 8.4 | 247 | 5.1 | 13.6 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.0 | 229 | 4.5 | 13.1 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.1 | 209 | 5.5 | 13.2 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.0 | 248 | 7.3 | 12.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 16-Oct-11 | 7.6 | 270 | 9.8 | 11.7 |
| **(cont'd)** | 20-Nov-11 | 7.7 | 238 | 7.0 | 11.1 |
| | 18-Dec-11 | 8.1 | 226 | 6.3 | 13.3 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.9 | 192 | 5.3 | 10.1 |
| | 15-Apr-12 | 8.8 | 259 | 5.9 | 15.9 |
| | 13-May-12 | 8.0 | 257 | 6.1 | 17.2 |
| | 15-Jul-12 (1) | | | | |
| | 12-Aug-12 | 7.8 | 415 | 9.1 | 7.4 |
| | 18-Nov-12 | 7.5 | 147 | 6.9 | 9.2 |
| | 16-Dec-12 | 7.6 | 589 | 6.1 | 10.0 |
| | 13-Jan-13 | 7.9 | 292 | 5.6 | 10.8 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.2 | 199 | 4.6 | 9.5 |
| | 17-Apr-13 | 8.0 | 191 | 4.5 | 10.4 |
| | 14-May-13 | 8.0 | 289 | 5.5 | 10.6 |
| | 20-Nov-13 | 7.8 | 281 | 6.7 | 3.7 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.1 | 207 | 4.7 | 10.9 |
| | 13-May-14 | 7.1 | 240 | 5.7 | 10.1 |
| | 18-Jun-14 | 8.1 | 284 | 6.9 | 10.6 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.4 | 331 | 6.0 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.1 | 242 | 4.8 | 13.1 |
| | 22-Apr-15 | 7.8 | 266 | 4.8 | 13.9 |
| | 19-May-15 | 8.1 | 254 | 5.8 | |
| | 15-Jun-15 | 7.9 | 308 | 6.4 | 11.5 |
| | 22-Jul-15 | 7.8 | 310 | 7.5 | |
| | 11-Aug-15 | 8.0 | 344 | 8.8 | 11.7 |
| | 25-Aug-15 | | | 9.9 | |
| | 8-Sep-15 | 7.8 | 347 | 11.9 | 9.7 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.8 | 348 | 8.5 | 13.4 |
| | 9-Dec-15 | 7.5 | 351 | 7.0 | 12.3 |
| | 19-Jan-16 | 7.7 | 268 | 5.7 | 13.3 |
| | 17-Feb-16 | 7.7 | 292 | 5.4 | 13.1 |
| | 15-Mar-16 | 7.5 | 201 | 4.9 | 13.3 |
| | 21-Apr-16 | 8.0 | 230 | 4.4 | 14.3 |
| | 18-May-16 | 8.0 | 283 | 5.2 | 13.0 |
| | 23-Jun-16 | 8.0 | 296 | 7.0 | 12.3 |
| | 5-Jul-16 | 8.6 | 299 | 12.3 | 13.5 |
| | 21-Jul-16 | 7.8 | 375 | 15.0 | 6.6 |
| | 9-Aug-16 | 8.1 | 468 | 22.2 | 6.3 |
| | 24-Aug-16 | 7.9 | 354 | 16.9 | 3.3 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 25-Oct-16 (1) | | | | |
| **(cont'd)** | 12-Dec-16 | 8.5 | 447 | 5.4 | 11.4 |
| | 25-Jan-17 | 8.0 | 280 | 5.7 | 11.6 |
| | 17-Feb-17 | 8.2 | 306 | 5.1 | 13.0 |
| | 22-Mar-17 | 8.1 | 290 | 4.0 | 12.2 |
| | 19-Apr-17 | 7.2 | 224 | 5.0 | 14.5 |
| | 8-May-17 | 7.8 | 166 | 5.2 | 15.0 |
| | 16-May-17 | 7.9 | 247 | 6.0 | 12.8 |
| | 28-Jun-17 | 7.8 | 300 | 7.0 | 12.2 |
| | 7-Jul-17 | 7.4 | 292 | 7.6 | 11.9 |
| | 19-Jul-17 | 8.0 | 326 | 7.8 | 12.1 |
| | 2-Aug-17 | 7.7 | 306 | 7.8 | 11.5 |
| | 16-Aug-17 | 7.8 | 336 | 8.8 | 11.4 |
| | 18-Sep-17 | 7.8 | 347 | 10.4 | 10.5 |
| | 18-Oct-17 | 7.9 | 373 | 9.1 | 11.5 |
| | 15-Nov-17 | 8.1 | 351 | 7.2 | 6.6 |
| | 14-Dec-17 | 8.3 | 318 | 6.0 | 7.6 |
| | 18-Jan-18 | 7.8 | 275 | 5.1 | 8.4 |
| | 23-Feb-18 | 8.0 | 166 | 5.0 | 6.9 |
| | 21-Mar-18 | 8.1 | 276 | 4.7 | 13.7 |
| | 19-Apr-18 | 8.0 | 249 | 4.5 | 9.0 |
| | 9-May-18 | 7.8 | 372 | 5.0 | 12.0 |
| | 15-May-18 | 7.7 | 386 | 5.3 | 11.7 |
| | 18-Jun-18 | 7.8 | 438 | 7.8 | 11.7 |
| | 19-Jul-18 | 7.8 | 298 | 10.1 | 10.2 |
| | 3-Aug-18 (1) | | | | |
| | 24-Aug-18 (1) | | | | |
| | 20-Sep-18 (1) | | | | |
| | 25-Oct-18 (1) | | | | |
| | 22-Nov-18 | 8.3 | | 2.7 | 12.5 |
| | 13-Dec-18 | 8.2 | 414 | 5.9 | 11.7 |
| | 19-Jan-19 | 8.0 | 397 | 5.5 | 12.1 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.1 | 349 | 5.0 | 12.1 |
| | 25-Apr-19 | 7.9 | 304 | 4.8 | 11.8 |
| | 16-May-19 | 7.9 | 326 | 5.4 | 12.2 |
| | 27-May-19 | 7.9 | 361 | 5.7 | 11.9 |
| | 21-Jun-19 | 8.0 | 384 | 6.7 | 11.6 |
| | 30-Jul-19 (1) | | | | |
| | 30-Aug-19 | 7.8 | 386 | 10.4 | 10.5 |
| | 27-Sep-19 | 7.7 | 388 | 11.9 | 11.2 |
| | 22-Oct-19 | 8.0 | 391 | 9.4 | 10.2 |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.1 | 390 | 5.3 | 12.1 |
| | 28-May-20 | 8.6 | 370 | 5.8 | 11.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 24-Jun-20 | (1) | | | | |
| **(cont'd)** | 31-Jul-20 | | 8.1 | 416 | 8.1 | 11.5 |
| | 26-Aug-20 | (1) | | | | |
| | 26-Sep-20 | (1) | | | | |
| | 29-Oct-20 | (1) | | | | |
| | 27-Nov-20 | | 7.9 | 303 | 6.5 | 11.8 |
| | 22-Dec-20 | (2) | | | | |
| | 28-Jan-21 | (2) | | | | |
| | 23-Feb-21 | (2) | | | | |
| | 30-Mar-21 | | 8.5 | 354 | 3.9 | 10.5 |
| | 28-Apr-21 | (1) | | | | |
| | 26-May-21 | | 7.9 | 406 | 6.2 | 12.0 |
| | 23-Jun-21 | | 7.7 | 433 | 7.9 | 6.3 |
| | 10-Jul-21 | | 7.8 | 448 | 8.5 | 11.3 |
| | 23-Jul-21 | | 7.6 | 464 | 9.0 | 11.1 |
| | 11-Aug-21 | | | | 8.9 | |
| | 26-Aug-21 | | 7.5 | 241 | 10.6 | 10.6 |
| | 27-Sep-21 | | 7.5 | 463 | 8.3 | 11.3 |
| | 27-Oct-21 | (3) | | | | |
| | 22-Nov-21 | (2) | | | | |
| | 22-Dec-21 | (2) | | | | |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (2) | | | | |
| | 21-Apr-22 | | 7.3 | 564 | 0.0 | 11.1 |
| | 25-May-22 | | 7.8 | 438 | 6.7 | 12.1 |
| | 24-Jun-22 | | | | 8.5 | |
| | 8-Jul-22 | | | | 12.6 | |
| | 11-Aug-22 | | | | 12.6 | |
| | 29-Aug-22 | | | | 9.1 | |
| | 29-Sep-22 | | | | 10.8 | |
| | 27-Oct-22 | (1) | | | 8.2 | |
| | 22-Nov-22 | (1) | | | | |
| | 21-Dec-22 | (1) | | | | |
| | 17-May-23 | | 7.8 | 386 | 6.2 | 11.5 |
| | 26-Jun-23 | | | | 9.6 | |
| | 11-Jul-23 | | | | 8.3 | |
| | 26-Jul-23 | | | | 8.1 | |
| | 14-Aug-23 | | | | 8.6 | |
| | 29-Aug-23 | | | | 11.2 | |
| | 25-Sep-23 | | | | 12.8 | |
| | 31-Oct-23 | | | | 7.8 | |
| | 28-May-24 | | 7.6 | 457 | 6.9 | 11.3 |
| | 27-Jun-24 | | | | 8.4 | |
| | 16-Jul-24 | | | | 8.3 | |
| | 30-Jul-24 | | | | 9.1 | |
| | 12-Aug-24 | | | | 10.0 | |
| | 28-Aug-24 | | | | 11.2 | |
| | 25-Sep-24 | | | | 12.7 | |
| | 29-Oct-24 | | | | 10.0 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11A** | 28-May-25 | 8.2 | 399 | 6.1 | 12.0 |
| **(cont'd)** | 24-Jun-25 | | | 10.2 | |
| | 14-Jul-25 | | | 12.1 | |
| | 29-Jul-25 | | | 11.7 | |
| | 11-Aug-25 | | | 14.0 | |
| | 26-Aug-25 | | | 12.5 | |
| | 30-Sep-25 (1) | | | 12.1 | |
| | 27-Oct-25 | | | 10.0 | |
| **SW11B** | 22-May-03 | | | 8.0 | |
| | 13-Feb-04 | | 325 | 4.9 | 12.3 |
| | 18-Mar-04 | | 431 | 4.4 | 8.9 |
| | 21-Apr-04 | 7.8 | 221 | 4.2 | |
| | 19-May-04 | 7.7 | 305 | 5.8 | |
| | 24-Jun-04 | 7.5 | 347 | 6.9 | |
| | 29-Jul-04 | 7.4 | 367 | 7.6 | |
| | 26-Aug-04 | 7.6 | 332 | 7.8 | |
| | 18-Nov-04 | 7.6 | 370 | 6.4 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.7 | 301 | 4.8 | |
| | 11-Apr-05 | 7.0 | 208 | 3.9 | |
| | 26-May-05 | 7.2 | 302 | 6.1 | |
| | 29-Jun-05 | 7.9 | 162 | 7.3 | |
| | 12-Jul-05 | 7.8 | 253 | 7.5 | |
| | 23-Aug-05 | 7.5 | 331 | 8.5 | |
| | 25-Oct-05 | 8.1 | 439 | 8.1 | |
| | 16-Nov-05 | 7.9 | 328 | 7.1 | 12.0 |
| | 13-Dec-05 | 8.3 | 378 | 5.7 | 11.5 |
| | 18-Jan-06 | 7.7 | 260 | 5.4 | 12.4 |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.2 | 247 | 4.4 | |
| | 19-Apr-06 | 8.0 | 336 | 5.3 | |
| | 24-May-06 | 7.8 | 422 | 6.9 | |
| | 21-Jun-06 | 7.5 | 450 | 8.1 | |
| | 12-Jul-06 | 7.6 | 400 | 8.9 | |
| | 24-Aug-06 | 7.3 | 430 | 10.9 | |
| | 21-Sep-06 | 7.7 | 451 | 10.7 | |
| | 25-Sep-06 | 7.6 | 341 | 9.1 | 10.8 |
| | 19-Oct-06 | 7.6 | 488 | 7.8 | |
| | 23-Nov-06 | 7.8 | 254 | 6.3 | 11.8 |
| | 17-Dec-06 | 7.7 | 440 | 5.7 | |
| | 21-Jan-07 | 8.0 | 438 | 5.1 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.1 | 384 | 4.1 | 13.1 |
| | 13-May-07 | 7.9 | 336 | 5.5 | 12.6 |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11B** | 18-Nov-07 (1) | | | | |
| **(cont'd)** | 11-Dec-07 | 8.0 | 335 | 6.2 | 11.3 |
| | 22-Jan-08 | 7.8 | 365 | 5.1 | 12.5 |
| | 20-Feb-08 | 8.2 | | 4.7 | |
| | 17-Mar-08 | 7.8 | 408 | 4.6 | |
| | 2-Apr-08 | 7.7 | 309 | 4.5 | |
| | 23-Apr-08 | 7.9 | 331 | 4.9 | 11.8 |
| | 22-May-08 | 7.8 | 382 | 5.8 | |
| | 17-Jun-08 | 7.8 | 442 | 7.5 | 11.8 |
| | 15-Jul-08 | 7.5 | 479 | 9.1 | 9.0 |
| | 19-Aug-08 | 7.3 | 544 | 9.2 | 7.0 |
| | 16-Sep-08 | 7.8 | 490 | 7.5 | 9.2 |
| | 22-Oct-08 | 7.8 | 439 | 7.0 | 7.3 |
| | 23-Nov-08 | | 427 | 6.3 | 8.2 |
| | 14-Dec-08 | 8.1 | 338 | 5.7 | 8.3 |
| | 18-Jan-09 | 8.3 | 410 | 2.6 | 8.6 |
| | 8-Feb-09 | | 351 | 4.8 | 8.0 |
| | 15-Mar-09 | 8.4 | 304 | 4.1 | |
| | 12-Apr-09 | 7.6 | 346 | 3.9 | |
| | 17-May-09 | 8.2 | 324 | 6.4 | |
| | 14-Jun-09 | 8.4 | 846 | 6.3 | |
| | 12-Jul-09 | 8.4 | 402 | 7.9 | |
| | 9-Aug-09 | 8.9 | 454 | 9.5 | |
| | 11-Oct-09 | 8.0 | 512 | 7.5 | |
| | 15-Nov-09 | 7.7 | 431 | 6.3 | |
| | 13-Dec-09 | 7.8 | 462 | 5.3 | 12.1 |
| | 17-Jan-10 | 8.0 | 435 | 5.0 | 12.0 |
| | 7-Feb-10 | 7.5 | 428 | 5.0 | 11.9 |
| | 14-Mar-10 | 7.5 | 355 | 4.9 | 13.3 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.8 | 386 | 5.4 | |
| | 16-May-10 | 7.8 | 246 | 5.8 | 12.1 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.9 | 231 | 7.7 | 15.5 |
| | 18-Jul-10 | 7.7 | 322 | 8.1 | 15.4 |
| | 15-Aug-10 | | 330 | 9.6 | 11.6 |
| | 17-Oct-10 | 7.9 | 337 | 7.5 | 11.2 |
| | 14-Nov-10 | 7.8 | 226 | 7.0 | 10.5 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | 8.1 | 260 | 5.3 | 11.3 |
| | 13-Mar-11 | 8.2 | 199 | 4.9 | 13.2 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11B** | 17-Apr-11 | 8.0 | 221 | 4.7 | 12.9 |
| **(cont'd)** | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.9 | 210 | 5.5 | 13.1 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.9 | 250 | 7.4 | 11.4 |
| | 16-Oct-11 | 7.5 | 315 | 8.3 | 12.3 |
| | 20-Nov-11 | 8.0 | 302 | 6.4 | 11.1 |
| | 18-Dec-11 | 8.7 | 226 | 6.1 | 13.2 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.9 | 198 | 5.5 | 8.4 |
| | 15-Apr-12 | 8.6 | 265 | 6.6 | 15.2 |
| | 13-May-12 | 7.7 | 262 | 6.4 | 13.1 |
| | 17-Jun-12 | 8.0 | 300 | 8.0 | 12.9 |
| | 12-Aug-12 | 7.6 | 491 | 8.6 | 7.3 |
| | 18-Nov-12 | 7.5 | 228 | 6.8 | 9.1 |
| | 16-Dec-12 | 7.6 | 533 | 6.1 | 9.7 |
| | 13-Jan-13 | 7.9 | 292 | 5.7 | 11.3 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.2 | 190 | 3.7 | 9.9 |
| | 17-Apr-13 | 7.8 | 196 | 4.5 | 10.1 |
| | 14-May-13 | 7.8 | 238 | 5.6 | 10.1 |
| | 16-Oct-13 | 8.1 | 304 | 8.3 | 6.1 |
| | 20-Nov-13 | 7.9 | 283 | 6.9 | 3.8 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.0 | 216 | 4.8 | 10.2 |
| | 13-May-14 | 7.5 | 244 | 6.0 | 10.7 |
| | 18-Jun-14 | 7.9 | 288 | 6.8 | 10.2 |
| | 23-Oct-14 | 7.9 | 395 | 7.5 | 4.2 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.5 | 327 | 5.8 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.3 | 243 | 4.9 | 12.2 |
| | 22-Apr-15 | 7.8 | 267 | 5.0 | 13.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11B** | 19-May-15 | 8.1 | 257 | 6.0 | |
| **(cont'd)** | 15-Jun-15 | 7.8 | 308 | 6.4 | 11.2 |
| | 22-Jul-15 | 7.7 | 309 | 7.3 | |
| | 11-Aug-15 | 7.8 | 337 | 8.3 | 11.8 |
| | 25-Aug-15 | | | 8.7 | |
| | 8-Sep-15 | 7.6 | 312 | 10.0 | 9.8 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.8 | 362 | 7.4 | 13.3 |
| | 9-Dec-15 | 7.6 | 324 | 6.1 | 13.1 |
| | 19-Jan-16 | 7.9 | 269 | 5.6 | 13.7 |
| | 17-Feb-16 | 7.8 | 292 | 5.4 | 13.2 |
| | 15-Mar-16 | 7.6 | 202 | 4.7 | 13.6 |
| | 21-Apr-16 | 7.9 | 225 | 4.5 | 14.0 |
| | 18-May-16 | 8.0 | 281 | 5.4 | 13.1 |
| | 23-Jun-16 | 7.9 | 298 | 7.0 | 12.2 |
| | 5-Jul-16 | 8.3 | 294 | 10.0 | 14.5 |
| | 21-Jul-16 | 7.7 | 375 | 9.5 | 11.7 |
| | 9-Aug-16 | 8.1 | 371 | 14.4 | 11.6 |
| | 24-Aug-16 | 7.9 | 340 | 11.6 | 11.2 |
| | 18-Oct-16 | 8.1 | 347 | 10.9 | 13.6 |
| | 24-Oct-16 | 7.6 | 328 | 9.3 | 11.0 |
| | 16-Nov-16 | 7.8 | 331 | 7.8 | 9.2 |
| | 12-Dec-16 | 8.4 | 466 | 4.2 | 12.4 |
| | 17-Feb-17 | 8.1 | 300 | 4.6 | 13.9 |
| | 22-Mar-17 | 8.4 | 289 | 4.6 | 12.6 |
| | 19-Apr-17 | 7.1 | 142 | 5.1 | 14.3 |
| | 8-May-17 | 7.7 | 164 | 5.1 | 15.0 |
| | 16-May-17 | 7.9 | 221 | 6.1 | 12.8 |
| | 28-Jun-17 | 7.7 | 300 | 7.4 | 12.0 |
| | 7-Jul-17 | 7.7 | 281 | 7.7 | 12.5 |
| | 19-Jul-17 | 7.9 | 325 | 7.3 | 12.2 |
| | 2-Aug-17 | 7.7 | 252 | 8.3 | 11.5 |
| | 15-Aug-17 | 7.6 | 266 | 8.5 | 11.5 |
| | 18-Sep-17 | 7.7 | 315 | 8.6 | 11.4 |
| | 18-Oct-17 | 7.9 | 264 | 8.1 | 11.6 |
| | 15-Nov-17 | 8.1 | 346 | 6.7 | 7.0 |
| | 14-Dec-17 | 8.4 | 314 | 5.8 | 7.6 |
| | 18-Jan-18 | 7.9 | 272 | 4.8 | 8.6 |
| | 23-Feb-18 | 8.0 | 219 | 4.7 | 6.8 |
| | 21-Mar-18 | 8.2 | 275 | 4.5 | 12.1 |
| | 19-Apr-18 | 8.0 | 238 | 4.3 | 9.1 |
| | 9-May-18 | 7.8 | 372 | 5.1 | 11.9 |
| | 15-May-18 | 7.8 | 387 | 5.6 | 11.7 |
| | 18-Jun-18 | 7.7 | 440 | 7.7 | 11.2 |
| | 19-Jul-18 | 7.7 | 432 | 9.5 | 10.5 |
| | 24-Aug-18 | 7.8 | 438 | 11.3 | 9.6 |
| | 20-Sep-18 | 7.8 | 438 | 11.6 | 9.5 |
| | 25-Oct-18 | 8.2 | 421 | 8.0 | 10.2 |
| | 22-Nov-18 | 8.4 | | 4.7 | 11.8 |
| | 13-Dec-18 | 8.3 | 414 | 5.9 | 11.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11B** | 19-Jan-19 | 8.1 | 397 | 5.2 | 12.1 |
| **(cont'd)** | 28-Feb-19 | 8.2 | 392 | 5.2 | 12.3 |
| | 19-Mar-19 | 8.1 | 348 | 4.9 | 12.1 |
| | 25-Apr-19 | 7.9 | 302 | 4.8 | 11.7 |
| | 16-May-19 | 7.9 | 322 | 5.7 | 12.3 |
| | 27-May-19 | 7.9 | 354 | 6.1 | 11.8 |
| | 21-Jun-19 | 7.8 | 391 | 6.7 | 11.5 |
| | 30-Jul-19 | 7.9 | 397 | 9.7 | 10.2 |
| | 30-Aug-19 (1) | | | | |
| | 27-Sep-19 (1) | | | | |
| | 22-Oct-19 (1) | | | | |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.0 | 390 | 5.6 | 11.9 |
| | 28-May-20 | 8.5 | 341 | 6.8 | 11.4 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 8.1 | 271 | 8.1 | 11.1 |
| | 26-Aug-20 (1) | | | | |
| | 26-Sep-20 (1) | | | | |
| | 29-Oct-20 (1) | | | | |
| | 27-Nov-20 | 7.9 | 418 | 6.4 | 12.0 |
| | 22-Dec-20 (2) | | | | |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.1 | 345 | 3.5 | 10.4 |
| | 28-Apr-21 (1) | | | | |
| | 26-May-21 | 7.9 | 408 | 6.6 | 12.1 |
| | 23-Jun-21 | 7.6 | 405 | 7.8 | 11.3 |
| | 10-Jul-21 | 7.8 | 277 | 8.9 | 11.1 |
| | 23-Jul-21 | 7.6 | 456 | 9.2 | 5.3 |
| | 11-Aug-21 | | | 9.5 | |
| | 26-Aug-21 | 7.1 | 469 | 10.7 | 5.5 |
| | 27-Sep-21 | 7.5 | 461 | 8.7 | 10.7 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 (2) | | | | |
| | 22-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.8 | 523 | 0.1 | 11.5 |
| | 25-May-22 | 7.6 | 436 | 6.6 | 11.8 |
| | 24-Jun-22 | | | 9.4 | |
| | 8-Jul-22 | | | 11.2 | |
| | 11-Aug-22 | | | 13.0 | |
| | 29-Aug-22 | | | 9.3 | |
| | 29-Sep-22 | | | 10.4 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11B** | 27-Oct-22 | | | 8.4 | |
| **(cont'd)** | 22-Nov-22 | | | 6.8 | |
| | 21-Dec-22 | | | 3.0 | |
| | 17-May-23 | 8.0 | 387 | 6.2 | 11.7 |
| | 26-Jun-23 | | | 8.2 | |
| | 11-Jul-23 | | | 8.1 | |
| | 26-Jul-23 | | | 10.2 | |
| | 14-Aug-23 | | | 8.7 | |
| | 29-Aug-23 | | | 9.6 | |
| | 25-Sep-23 | | | 9.9 | |
| | 31-Oct-23 | | | 8.3 | |
| | 28-May-24 | 7.6 | 457 | 7.0 | 11.2 |
| | 27-Jun-24 | | | 8.7 | |
| | 16-Jul-24 | | | 8.4 | |
| | 30-Jul-24 | | | 9.0 | |
| | 12-Aug-24 | | | 9.5 | |
| | 28-Aug-24 | | | 11.2 | |
| | 25-Sep-24 | | | 13.0 | |
| | 29-Oct-24 | | | 10.1 | |
| | 28-May-25 | 8.1 | 421 | 8.0 | 11.7 |
| | 24-Jun-25 | | | 8.9 | |
| | 14-Jul-25 | | | 11.4 | |
| | 29-Jul-25 | | | 11.9 | |
| | 11-Aug-25 | | | 12.6 | |
| | 26-Aug-25 | | | 12.5 | |
| | 30-Sep-25 (1) | | | 12.7 | |
| | 27-Oct-25 | | | 9.9 | |
| **SW11C** | 22-May-03 | | | 8.0 | |
| | 22-Jul-03 (1) | | | | |
| | 20-Aug-03 (1) | | | | |
| | 25-Sep-03 (1) | | | | |
| | 18-Mar-04 | | 431 | 4.4 | 9.0 |
| | 21-Apr-04 | 7.8 | 221 | 4.3 | |
| | 19-May-04 | 7.6 | 307 | 5.9 | |
| | 24-Jun-04 | 7.8 | 354 | 8.0 | |
| | 23-Aug-04 (1) | | | | |
| | 21-Sep-04 (1) | | | | |
| | 21-Oct-04 (1) | | | | |
| | 17-Nov-04 (1) | | | | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.6 | 301 | 4.7 | 12.9 |
| | 11-Apr-05 | 7.1 | 203 | 4.1 | |
| | 26-May-05 | 7.2 | 300 | 6.1 | |
| | 26-Jun-05 (1) | | | | |
| | 10-Jul-05 (1) | | | | |
| | 21-Aug-05 (1) | | | | |
| | 25-Sep-05 (1) | | | | |
| | 23-Oct-05 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW11C | 11-Dec-05 (1) | | | | |
| (cont'd) | 18-Jan-06 | 7.3 | 267 | 5.5 | 12.3 |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.1 | 245 | 4.4 | |
| | 19-Apr-06 | 8.0 | 330 | 5.4 | |
| | 24-May-06 | 7.9 | 421 | 6.4 | |
| | 18-Jun-06 (1) | | | | |
| | 12-Jul-06 | 7.4 | 448 | 15.4 | |
| | 20-Aug-06 (1) | | | | |
| | 17-Sep-06 (1) | | | | |
| | 19-Oct-06 | 7.5 | 428 | 9.7 | |
| | 23-Nov-06 | 7.7 | 431 | 6.3 | 11.8 |
| | 17-Dec-06 | 7.6 | 440 | 5.6 | |
| | 21-Jan-07 | 8.0 | 443 | 5.1 | 12.4 |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.0 | 384 | 4.1 | 12.8 |
| | 13-May-07 | 8.0 | 403 | 5.5 | 12.7 |
| | 14-Oct-07 (1) | | | | |
| | 19-Nov-07 | 7.8 | 487 | 6.5 | 10.8 |
| | 11-Dec-07 | 7.8 | 461 | 5.7 | 11.7 |
| | 22-Jan-08 | 7.7 | 359 | 4.9 | 12.4 |
| | 20-Feb-08 | 8.0 | 381 | 4.3 | |
| | 17-Mar-08 | | 404 | 4.4 | |
| | 2-Apr-08 | 7.7 | 311 | 3.7 | 13.1 |
| | 23-Apr-08 | 7.7 | 325 | 6.5 | 10.4 |
| | 22-May-08 | 7.6 | 381 | 5.7 | 11.1 |
| | 17-Jun-08 | 7.8 | 440 | 10.6 | 8.9 |
| | 15-Jul-08 | 7.2 | 462 | 7.5 | 10.1 |
| | 19-Aug-08 | 7.5 | 535 | 7.5 | 7.8 |
| | 16-Sep-08 | 7.8 | 486 | 8.5 | 9.2 |
| | 22-Oct-08 | 7.9 | 439 | 7.1 | 7.3 |
| | 23-Nov-08 | | 357 | 6.1 | 8.2 |
| | 14-Dec-08 | 8.1 | 337 | 5.4 | 8.9 |
| | 18-Jan-09 | 8.3 | 240 | 4.3 | 9.9 |
| | 8-Feb-09 | | 341 | 4.1 | 8.2 |
| | 15-Mar-09 | 8.3 | 205 | 3.7 | |
| | 12-Apr-09 | 8.0 | 356 | 4.3 | |
| | 17-May-09 | 8.1 | 308 | 5.7 | 12.5 |
| | 14-Jun-09 | 8.1 | 828 | 6.8 | |
| | 12-Jul-09 | 8.8 | 448 | 8.7 | |
| | 9-Aug-09 | 8.6 | 458 | 12.7 | |
| | 13-Sep-09 | 7.1 | 426 | 8.0 | |
| | 11-Oct-09 | 8.1 | 363 | 6.5 | 12.3 |
| | 15-Nov-09 | 8.1 | 424 | 6.1 | |
| | 13-Dec-09 | 7.6 | 430 | 3.9 | 11.7 |
| | 17-Jan-10 | 8.0 | 447 | 5.2 | 12.1 |
| | 7-Feb-10 | 7.8 | 436 | 4.8 | 12.1 |
| | 14-Mar-10 | 7.5 | 355 | 4.2 | 13.6 |
| | 4-Apr-10 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11C** | 11-Apr-10 | 7.8 | 377 | 5.6 | |
| **(cont'd)** | 16-May-10 | 7.9 | 247 | 5.6 | 12.2 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.8 | 274 | 7.2 | 15.4 |
| | 18-Jul-10 | 7.7 | 321 | 8.6 | 15.2 |
| | 15-Aug-10 | 7.8 | 300 | 10.4 | 11.0 |
| | 12-Sep-10 | 8.1 | 314 | 8.8 | 11.4 |
| | 17-Oct-10 | 7.8 | 335 | 7.5 | 11.5 |
| | 14-Nov-10 | 7.7 | 256 | 6.7 | 10.5 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | 8.1 | 195 | 4.7 | 12.7 |
| | 13-Mar-11 | 8.1 | 243 | 4.6 | 13.4 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 7.9 | 220 | 4.4 | 13.1 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.9 | 212 | 5.5 | 13.3 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.8 | 227 | 8.2 | 11.3 |
| | 16-Oct-11 | 7.5 | 320 | 8.9 | 11.6 |
| | 20-Nov-11 | 8.1 | 288 | 6.3 | 11.3 |
| | 18-Dec-11 | 8.7 | 222 | 5.9 | 13.4 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.9 | 194 | 4.9 | 7.1 |
| | 15-Apr-12 | 8.6 | 251 | 5.4 | 15.8 |
| | 13-May-12 | 7.7 | 213 | 6.3 | 13.1 |
| | 17-Jun-12 | 7.8 | 220 | 7.9 | 12.7 |
| | 16-Jul-12 | 7.9 | 318 | 8.8 | 7.5 |
| | 14-Aug-12 | 7.6 | 420 | 9.1 | 7.3 |
| | 16-Sep-12 | 7.5 | 321 | 8.9 | 10.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11C** | 18-Nov-12 | 7.5 | 280 | 6.7 | 9.1 |
| **(cont'd)** | 16-Dec-12 | 7.5 | 586 | 5.9 | 9.9 |
| | 13-Jan-13 | 7.9 | 285 | 5.2 | 11.2 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.1 | 206 | 4.3 | 10.0 |
| | 17-Apr-13 | 7.8 | 196 | 4.1 | 10.1 |
| | 14-May-13 | 8.0 | 236 | 5.5 | 10.0 |
| | 16-Oct-13 | 7.8 | 307 | 8.6 | 5.8 |
| | 20-Nov-13 | 7.4 | 280 | 6.4 | 3.7 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 7.8 | 423 | 4.4 | 10.3 |
| | 13-May-14 | 7.5 | 235 | 6.3 | 10.8 |
| | 18-Jun-14 | 8.1 | 277 | 7.9 | 10.0 |
| | 23-Oct-14 | 7.9 | 357 | 7.7 | 4.3 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.4 | 324 | 5.5 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.2 | 231 | 3.9 | 12.1 |
| | 22-Apr-15 | 7.8 | 260 | 4.3 | 13.7 |
| | 19-May-15 | 7.9 | 256 | 6.1 | |
| | 15-Jun-15 | 7.7 | 312 | 7.0 | 11.1 |
| | 22-Jul-15 | 7.5 | 245 | 7.9 | |
| | 11-Aug-15 | 7.7 | 341 | 8.6 | 11.5 |
| | 25-Aug-15 | 8.2 | 304 | 8.6 | 10.0 |
| | 8-Sep-15 | 7.6 | 329 | 8.1 | 11.0 |
| | 15-Oct-15 | 7.8 | 295 | 8.3 | 11.1 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.7 | 363 | 6.8 | 12.5 |
| | 9-Dec-15 | 7.5 | 339 | 5.9 | 13.1 |
| | 19-Jan-16 | 7.9 | 264 | 5.1 | 13.6 |
| | 17-Feb-16 | 7.8 | 282 | 4.4 | 12.8 |
| | 15-Mar-16 | 7.6 | 204 | 4.3 | 13.4 |
| | 21-Apr-16 | 8.0 | 227 | 4.2 | 14.5 |
| | 18-May-16 | 8.0 | 283 | 5.3 | 10.0 |
| | 23-Jun-16 | 7.8 | 294 | 7.1 | 12.3 |
| | 5-Jul-16 | 7.8 | 307 | 7.7 | 18.0 |
| | 21-Jul-16 | 7.6 | 321 | 8.7 | 11.4 |
| | 9-Aug-16 | 7.8 | 471 | 8.7 | 14.3 |
| | 24-Aug-16 | 7.7 | 308 | 9.3 | 11.8 |
| | 19-Sep-16 | 7.6 | 329 | 9.1 | 11.5 |
| | 18-Oct-16 | 7.7 | 297 | 8.8 | 14.7 |
| | 24-Oct-16 | 7.8 | 336 | 8.5 | 11.0 |
| | 16-Nov-16 | 7.7 | 319 | 7.3 | 11.0 |
| | 12-Dec-16 | 8.2 | 471 | 5.6 | 13.3 |
| | 25-Jan-17 | 7.9 | 218 | 5.2 | 11.7 |
| | 17-Feb-17 | 8.1 | 304 | 4.7 | 13.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11C** | 22-Mar-17 | 8.0 | 287 | 4.3 | 12.7 |
| **(cont'd)** | 19-Apr-17 | 7.0 | 237 | 4.9 | 14.3 |
| | 8-May-17 | 7.8 | 175 | 4.9 | 14.8 |
| | 16-May-17 | 7.9 | 248 | 5.8 | 12.7 |
| | 28-Jun-17 | 7.8 | 298 | 7.4 | 11.9 |
| | 7-Jul-17 | 7.5 | 294 | 8.8 | 13.1 |
| | 19-Jul-17 | 7.9 | 231 | 8.3 | 11.3 |
| | 2-Aug-17 | 7.7 | 314 | 8.5 | 11.3 |
| | 16-Aug-17 | 7.5 | 341 | 8.8 | 10.5 |
| | 18-Sep-17 | 7.6 | 344 | 8.5 | 11.5 |
| | 18-Oct-17 | 7.7 | 367 | 8.5 | 11.0 |
| | 15-Nov-17 | 8.1 | 341 | 6.7 | 7.0 |
| | 14-Dec-17 | 8.2 | 310 | 5.3 | 8.1 |
| | 18-Jan-18 | 7.8 | 269 | 4.6 | 9.0 |
| | 23-Feb-18 | 8.0 | 207 | 4.0 | 7.1 |
| | 21-Mar-18 | 8.1 | 238 | 4.0 | 12.4 |
| | 19-Apr-18 | 7.9 | 245 | 3.9 | 9.6 |
| | 9-May-18 | 7.8 | 371 | 5.0 | 12.0 |
| | 15-May-18 | 7.7 | 386 | 5.5 | 11.7 |
| | 18-Jun-18 | 7.6 | 444 | 7.6 | 11.1 |
| | 19-Jul-18 | 7.6 | 438 | 8.5 | 11.0 |
| | 24-Aug-18 | 7.6 | 451 | 9.6 | 10.7 |
| | 20-Sep-18 | 7.6 | 451 | 9.6 | 10.5 |
| | 25-Oct-18 | 8.1 | 454 | 7.7 | 11.3 |
| | 22-Nov-18 | 8.2 | | 6.2 | 12.4 |
| | 13-Dec-18 | 8.2 | 418 | 5.8 | 11.9 |
| | 19-Jan-19 | 8.0 | 391 | 5.1 | 12.3 |
| | 28-Feb-19 | 8.2 | 385 | 4.7 | 12.4 |
| | 19-Mar-19 | 8.0 | 350 | 4.3 | 12.3 |
| | 25-Apr-19 | 7.9 | 216 | 4.5 | 11.8 |
| | 16-May-19 | 7.3 | 325 | 5.2 | 12.2 |
| | 27-May-19 | 7.8 | 360 | 5.9 | 11.8 |
| | 21-Jun-19 | 7.8 | 393 | 7.0 | 11.4 |
| | 30-Jul-19 | 8.0 | 404 | 8.5 | 10.7 |
| | 30-Aug-19 (1) | | | | |
| | 27-Sep-19 (1) | | | | |
| | 22-Oct-19 (1) | | | | |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.0 | 390 | 5.2 | 12.3 |
| | 28-May-20 | 8.4 | 371 | 6.2 | 11.4 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 7.8 | 428 | 8.9 | 10.6 |
| | 26-Aug-20 | 7.3 | 380 | 8.9 | 10.4 |
| | 26-Sep-20 | 8.1 | 400 | 9.1 | |
| | 29-Oct-20 | 8.2 | 354 | 8.5 | 7.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11C** | 27-Nov-20 | 7.8 | 430 | 6.5 | 11.8 |
| **(cont'd)** | 22-Dec-20 (2) | | | | |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.1 | 387 | 3.7 | 10.6 |
| | 28-Apr-21 (1) | | | | |
| | 26-May-21 | 7.8 | 413 | 6.6 | 11.9 |
| | 23-Jun-21 | 7.7 | 225 | 7.9 | 11.3 |
| | 10-Jul-21 | 7.7 | 266 | 8.5 | 11.2 |
| | 23-Jul-21 | 7.7 | 464 | 8.8 | 11.1 |
| | 11-Aug-21 | | | 8.9 | |
| | 26-Aug-21 | 7.1 | 458 | 9.7 | 11.0 |
| | 27-Sep-21 | 7.5 | 462 | 8.8 | 11.0 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 (2) | | | | |
| | 22-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.0 | 256 | 0.0 | 11.3 |
| | 25-May-22 | 7.7 | 438 | 6.5 | 11.9 |
| | 24-Jun-22 | | | 6.4 | |
| | 8-Jul-22 | | | 11.4 | |
| | 11-Aug-22 | | | 12.3 | |
| | 29-Aug-22 | | | 9.3 | |
| | 29-Sep-22 | | | 9.3 | |
| | 27-Oct-22 | | | 7.8 | |
| | 22-Nov-22 | | | 5.7 | |
| | 21-Dec-22 | | | 5.2 | |
| | 17-May-23 | 7.9 | 382 | 6.2 | 11.6 |
| | 26-Jun-23 | | | 7.9 | |
| | 11-Jul-23 | | | 8.9 | |
| | 26-Jul-23 | | | 9.0 | |
| | 14-Aug-23 | | | 8.9 | |
| | 29-Aug-23 | | | 9.3 | |
| | 25-Sep-23 | | | 9.1 | |
| | 31-Oct-23 | | | 8.1 | |
| | 28-May-24 | 7.4 | 458 | 7.3 | 11.0 |
| | 27-Jun-24 | | | 8.3 | |
| | 16-Jul-24 | | | 8.8 | |
| | 30-Jul-24 | | | 9.3 | |
| | 12-Aug-24 | | | 9.9 | |
| | 28-Aug-24 | | | 10.1 | |
| | 25-Sep-24 | | | 11.2 | |
| | 29-Oct-24 | | | 9.5 | |
| | 28-May-25 | 8.0 | 404 | 7.0 | 11.9 |
| | 24-Jun-25 | | | 8.5 | |
| | 14-Jul-25 | | | 9.7 | |
| | 29-Jul-25 | | | 10.0 | |
| | 11-Aug-25 | | | 10.2 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW11C (cont'd) | 26-Aug-25 | | | 10.7 | |
| | 30-Sep-25 | | | 9.7 | |
| | 27-Oct-25 | | | 8.8 | |
| SW11D | 22-May-03 | | | 8.0 | |
| | 13-Feb-04 | | 311 | 3.9 | 11.9 |
| | 18-Mar-04 | | 421 | 3.7 | 9.5 |
| | 21-Apr-04 | 7.9 | 212 | 4.1 | |
| | 19-May-04 | 8.2 | 240 | 3.1 | |
| | 24-Jun-04 | 7.8 | 326 | 6.3 | |
| | 29-Jul-04 | 8.0 | 327 | 9.7 | |
| | 22-Sep-04 | 7.9 | 354 | 12.0 | 9.4 |
| | 20-Oct-04 | 7.9 | 302 | 7.2 | 10.8 |
| | 18-Nov-04 | 7.9 | 302 | 6.2 | 11.2 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.7 | 294 | 4.2 | |
| | 11-Apr-05 | 7.2 | 211 | 3.1 | |
| | 26-May-05 | 7.2 | 271 | 4.5 | |
| | 29-Jun-05 | 7.9 | 309 | 8.6 | |
| | 12-Jul-05 | 7.5 | 319 | 9.9 | 9.4 |
| | 23-Aug-05 | 7.7 | 341 | 11.6 | 9.1 |
| | 25-Sep-05 | 7.6 | 342 | 11.4 | 7.6 |
| | 25-Oct-05 | 8.0 | 393 | 7.3 | 10.9 |
| | 16-Nov-05 | 7.8 | 297 | 7.0 | 11.0 |
| | 13-Dec-05 | 7.5 | 264 | 1.1 | 11.6 |
| | 18-Jan-06 | 7.0 | 266 | 5.5 | 12.6 |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.1 | 245 | 4.3 | |
| | 19-Apr-06 | 8.1 | 329 | 5.0 | |
| | 24-May-06 | 7.9 | 415 | 6.0 | |
| | 21-Jun-06 | 8.0 | 379 | 8.3 | |
| | 12-Jul-06 | 8.2 | 362 | 10.8 | |
| | 24-Aug-06 | 7.8 | 412 | 12.8 | |
| | 21-Sep-06 | 7.9 | 396 | 11.6 | |
| | 19-Oct-06 | 8.1 | 393 | 8.8 | |
| | 23-Nov-06 | 7.8 | 425 | 6.2 | 11.8 |
| | 17-Dec-06 | 7.8 | 440 | 5.6 | |
| | 21-Jan-07 | 8.1 | 434 | 4.6 | 12.9 |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.1 | 385 | 4.0 | |
| | 13-May-07 | 8.1 | 379 | 3.6 | |
| | 17-Jun-07 | 8.5 | 325 | 7.4 | 11.9 |
| | 19-Aug-07 | 8.0 | 423 | 12.1 | 9.1 |
| | 14-Oct-07 (1) | | | | |
| | 19-Nov-07 | 7.9 | 457 | 4.2 | 10.8 |
| | 11-Dec-07 | 7.9 | 378 | 3.1 | 11.9 |
| | 22-Jan-08 | 7.7 | 367 | 4.5 | 12.5 |
| | 20-Feb-08 | 8.0 | 383 | 3.7 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11D** | 17-Mar-08 | 7.7 | 402 | 4.2 | |
| **(cont'd)** | 2-Apr-08 | 7.7 | 315 | 4.1 | |
| | 23-Apr-08 | 7.8 | 326 | 4.7 | 10.9 |
| | 22-May-08 | 7.5 | 381 | 5.7 | 10.2 |
| | 13-Jul-08 (1) | | | | |
| | 17-Aug-08 (1) | | | | |
| | 23-Nov-08 | 8.1 | 411 | 3.5 | 7.7 |
| | 14-Dec-08 | 8.1 | 337 | 5.4 | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 | | 324 | 3.6 | 8.2 |
| | 15-Mar-09 | 8.0 | 310 | 3.8 | |
| | 12-Apr-09 | 7.7 | 350 | 3.4 | |
| | 17-May-09 | 8.2 | 320 | 7.2 | |
| | 14-Jun-09 (1) | | | | |
| | 12-Jul-09 (1) | | | | |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 (1) | | | | |
| | 11-Oct-09 (1) | | | | |
| | 15-Nov-09 (1) | | | | |
| | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.5 | 346 | 2.3 | 13.4 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.8 | 385 | 5.1 | |
| | 16-May-10 | 7.8 | 252 | 5.9 | 11.7 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.9 | 270 | 6.9 | 13.2 |
| | 18-Jul-10 | 7.7 | 321 | 8.4 | 15.2 |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 | 8.7 | 352 | 7.3 | 8.0 |
| | 14-Nov-10 | 7.8 | 258 | 6.7 | 9.8 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.0 | 240 | 4.3 | 12.9 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 7.9 | 221 | 4.3 | 12.7 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11D** | 3-May-11 | | | | |
| **(cont'd)** | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.8 | 126 | 5.5 | 13.5 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.0 | 239 | 7.0 | 11.9 |
| | 14-Aug-11 (1) | | | | |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 | 7.4 | 341 | 10.0 | 10.8 |
| | 20-Nov-11 | 8.0 | 293 | 6.0 | 11.9 |
| | 18-Dec-11 | 8.6 | 229 | 6.1 | 13.0 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.8 | 192 | 5.2 | 9.8 |
| | 15-Apr-12 | 8.6 | 222 | 5.6 | 15.9 |
| | 13-May-12 | 7.8 | 256 | 6.2 | 11.8 |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 14-Aug-12 | 7.5 | 498 | 9.0 | 7.7 |
| | 16-Sep-12 (1) | | | | |
| | 14-Oct-12 (1) | | | | |
| | 18-Nov-12 | 7.5 | 283 | 6.7 | 9.1 |
| | 16-Dec-12 | 7.5 | 589 | 6.0 | 9.8 |
| | 13-Jan-13 | 7.8 | 283 | 5.2 | 10.9 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.1 | 208 | 4.6 | 9.8 |
| | 17-Apr-13 | 7.8 | 194 | 4.2 | 9.9 |
| | 16-Oct-13 | 7.8 | 300 | 7.8 | 6.0 |
| | 20-Nov-13 | 7.4 | 280 | 6.7 | 3.7 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 7.7 | 423 | 4.4 | 10.2 |
| | 13-May-14 | 7.5 | 245 | 5.7 | 10.0 |
| | 18-Jun-14 | 7.9 | 273 | 7.8 | 10.7 |
| | 23-Oct-14 | 7.9 | 393 | 7.6 | 4.3 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.4 | 326 | 5.6 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 7.7 | 243 | 4.6 | 13.3 |
| | 19-May-15 | 8.1 | 249 | 5.8 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW11D | 15-Jun-15 | 7.5 | 310 | 6.6 | 11.1 |
| (cont'd) | 22-Jul-15 | 7.9 | 271 | 7.7 | |
| | 11-Aug-15 | 8.0 | 309 | 9.4 | 11.1 |
| | 25-Aug-15 | | | 11.7 | |
| | 8-Sep-15 | 7.8 | 306 | 12.0 | 9.3 |
| | 15-Oct-15 | 8.1 | 283 | 8.5 | 10.7 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.8 | 327 | 7.3 | 12.5 |
| | 9-Dec-15 | 7.7 | 297 | 4.8 | 13.1 |
| | 19-Jan-16 | 7.9 | 248 | 4.5 | 13.8 |
| | 17-Feb-16 | 7.8 | 277 | 4.3 | 13.4 |
| | 15-Mar-16 | 7.7 | 203 | 4.4 | 13.4 |
| | 21-Apr-16 | 8.0 | 224 | 4.1 | 14.1 |
| | 18-May-16 | 8.1 | 272 | 4.6 | 13.1 |
| | 23-Jun-16 | 8.3 | 266 | 6.9 | 11.6 |
| | 5-Jul-16 | 8.1 | 281 | 8.8 | 16.9 |
| | 21-Jul-16 | 7.7 | 321 | 10.5 | 10.2 |
| | 9-Aug-16 | 8.4 | 351 | 12.1 | 12.9 |
| | 24-Aug-16 | 8.1 | 194 | 12.6 | 9.2 |
| | 19-Sep-16 | 8.1 | 331 | 12.2 | 11.5 |
| | 18-Oct-16 | 8.0 | 302 | 11.5 | 12.6 |
| | 24-Oct-16 | 8.0 | 222 | 8.0 | 11.3 |
| | 15-Nov-16 | 8.0 | 292 | 6.8 | 10.6 |
| | 12-Dec-16 | 8.3 | 448 | 0.8 | 13.4 |
| | 25-Jan-17 | 7.9 | 276 | 5.3 | 11.6 |
| | 17-Feb-17 | 8.1 | 296 | 4.1 | 13.5 |
| | 22-Mar-17 | 8.0 | 265 | 4.2 | 12.7 |
| | 19-Apr-17 | 7.1 | 232 | 4.4 | 14.6 |
| | 8-May-17 | 7.9 | 153 | 4.6 | 14.9 |
| | 16-May-17 | 8.0 | 243 | 6.0 | 12.8 |
| | 28-Jun-17 | 7.9 | 289 | 6.9 | 12.3 |
| | 7-Jul-17 | 7.4 | 294 | 7.8 | 12.1 |
| | 19-Jul-17 | 8.2 | 314 | 8.3 | 11.7 |
| | 2-Aug-17 | 8.0 | 292 | 9.8 | 10.6 |
| | 16-Aug-17 | 7.8 | 328 | 10.3 | 10.2 |
| | 18-Sep-17 | 7.8 | 325 | 11.0 | 9.1 |
| | 18-Oct-17 | 8.0 | 334 | 9.1 | 10.8 |
| | 15-Nov-17 | 8.1 | 332 | 6.4 | 7.2 |
| | 14-Dec-17 | 8.3 | 289 | 4.6 | 8.5 |
| | 18-Jan-18 | 7.7 | 271 | 4.9 | 9.0 |
| | 23-Feb-18 | 8.1 | 210 | 4.2 | 10.2 |
| | 21-Mar-18 | 8.1 | 268 | 3.7 | 11.3 |
| | 19-Apr-18 | 8.0 | 243 | 4.0 | 10.1 |
| | 9-May-18 | 7.9 | 363 | 4.9 | 12.1 |
| | 15-May-18 | 7.9 | 373 | 4.8 | 11.9 |
| | 18-Jun-18 | 8.1 | 410 | 8.1 | 10.8 |
| | 19-Jul-18 | 7.6 | 384 | 10.1 | 4.0 |
| | 24-Aug-18 | 8.1 | 406 | 11.6 | 9.5 |
| | 20-Sep-18 | 7.7 | 395 | 12.9 | 3.0 |
| | 25-Oct-18 | 7.9 | 403 | 5.2 | 10.9 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11D** | 22-Nov-18 | 8.1 | | 3.4 | 11.8 |
| **(cont'd)** | 13-Dec-18 | 8.2 | 413 | 5.4 | 11.8 |
| | 19-Jan-19 | 8.0 | 397 | 4.7 | 12.2 |
| | 28-Feb-19 | 8.2 | 393 | 4.7 | 12.2 |
| | 19-Mar-19 | 8.1 | 350 | 4.0 | 12.1 |
| | 25-Apr-19 | 8.1 | 278 | 3.6 | 12.1 |
| | 16-May-19 | 7.9 | 360 | 5.6 | 11.9 |
| | 27-May-19 | 7.9 | 360 | 5.6 | 11.9 |
| | 21-Jun-19 | 8.0 | 391 | 6.7 | 11.4 |
| | 30-Jul-19 | 8.2 | 387 | 11.5 | 6.4 |
| | 30-Aug-19 (1) | | | | |
| | 27-Sep-19 (1) | | | | |
| | 22-Oct-19 (1) | | | | |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.1 | 380 | 5.4 | 12.1 |
| | 28-May-20 | 8.6 | 359 | 5.4 | 11.7 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 7.9 | 405 | 11.8 | 10.5 |
| | 26-Aug-20 | 8.1 | 415 | 11.7 | 9.8 |
| | 26-Sep-20 | 8.1 | 380 | 10.7 | |
| | 29-Oct-20 | 7.6 | 374 | 8.7 | 7.1 |
| | 27-Nov-20 | 7.8 | 421 | 6.3 | 11.9 |
| | 22-Dec-20 (2) | | | | |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.2 | 349 | 5.1 | 10.8 |
| | 28-Apr-21 (1) | | | | |
| | 26-May-21 | 8.2 | 366 | 5.8 | 12.2 |
| | 23-Jun-21 | 8.0 | 334 | 8.0 | 9.7 |
| | 10-Jul-21 | 8.2 | 399 | 11.3 | 10.9 |
| | 23-Jul-21 (1) | | | | |
| | 11-Aug-21 | | | 12.6 | |
| | 26-Aug-21 | 7.7 | 419 | 13.9 | 0.5 |
| | 27-Sep-21 | 7.6 | 460 | 8.0 | 11.3 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 (2) | | | | |
| | 22-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.0 | 1,018 | 0.1 | 12.0 |
| | 25-May-22 | 8.2 | 399 | 5.1 | 12.5 |
| | 24-Jun-22 | | | 9.7 | |
| | 8-Jul-22 | | | 12.8 | |
| | 11-Aug-22 | | | 11.9 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11D** | 29-Aug-22 | | | 8.7 | |
| **(cont'd)** | 29-Sep-22 | | | 9.7 | |
| | 27-Oct-22 | | | 9.2 | |
| | 22-Nov-22 | | | 2.6 | |
| | 21-Dec-22 | | | 0.4 | |
| | 17-May-23 | 7.9 | 384 | 6.5 | 11.1 |
| | 26-Jun-23 | | | 10.2 | |
| | 11-Jul-23 | | | 9.2 | |
| | 26-Jul-23 | | | 10.5 | |
| | 14-Aug-23 | | | 10.3 | |
| | 29-Aug-23 | | | 11.3 | |
| | 25-Sep-23 | | | 11.3 | |
| | 31-Oct-23 | | | 6.6 | |
| | 28-May-24 | 7.5 | 377 | 7.4 | 11.0 |
| | 27-Jun-24 | | | 9.1 | |
| | 16-Jul-24 | | | 8.5 | |
| | 30-Jul-24 | | | 11.3 | |
| | 12-Aug-24 | | | 12.4 | |
| | 28-Aug-24 | | | 13.8 | |
| | 25-Sep-24 | | | 14.1 | |
| | 29-Oct-24 | | | 9.2 | |
| | 28-May-25 | 8.4 | 408 | 7.6 | 9.7 |
| | 24-Jun-25 | | | 10.9 | |
| | 14-Jul-25 | | | 13.3 | |
| | 29-Jul-25 | | | 12.3 | |
| | 11-Aug-25 | | | 13.8 | |
| | 26-Aug-25 | | | 12.7 | |
| | 30-Sep-25 | | | 12.5 | |
| | 27-Oct-25 | | | 8.2 | |
| **SW11E** | 22-May-03 | | | 8.0 | |
| | 13-Feb-04 | | 294 | 2.6 | 12.9 |
| | 18-Mar-04 | | 421 | 4.2 | 9.3 |
| | 21-Apr-04 | 8.2 | 210 | 6.7 | |
| | 19-May-04 | 8.3 | 325 | 9.4 | |
| | 24-Jun-04 | 8.3 | 368 | 10.6 | |
| | 29-Jul-04 | 8.2 | 399 | 13.3 | |
| | 26-Aug-04 | 8.2 | 354 | 13.1 | |
| | 20-Oct-04 | 8.1 | 318 | 7.0 | |
| | 18-Nov-04 | 8.1 | 358 | 7.5 | |
| | 16-Dec-04 | 8.2 | 294 | 2.0 | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 8.1 | 308 | 7.8 | |
| | 11-Apr-05 | 7.2 | 212 | 5.3 | |
| | 24-May-05 | 7.7 | 329 | 10.3 | |
| | 27-Jun-05 | 8.0 | 385 | 12.6 | |
| | 12-Jul-05 | 7.7 | 387 | 13.8 | 9.6 |
| | 23-Aug-05 | 7.9 | 371 | 13.3 | 10.0 |
| | 25-Oct-05 | 8.1 | 403 | 6.7 | |
| | 16-Nov-05 | 8.1 | 275 | 6.5 | 11.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 13-Dec-05 | 8.1 | 324 | 1.2 | 12.4 |
| **(cont'd)** | 18-Jan-06 | 7.0 | 251 | 4.6 | |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.3 | 246 | 5.4 | |
| | 19-Apr-06 | 8.5 | 319 | 8.8 | |
| | 24-May-06 | 8.3 | 399 | 9.2 | |
| | 21-Jun-06 | 8.3 | 419 | 11.3 | |
| | 12-Jul-06 | 8.2 | 356 | 13.4 | |
| | 24-Aug-06 | 8.1 | 412 | 14.8 | |
| | 21-Sep-06 | 8.2 | 397 | 11.6 | |
| | 25-Sep-06 | 7.9 | 270 | 12.5 | 9.7 |
| | 19-Oct-06 | 8.2 | 425 | 9.4 | |
| | 23-Nov-06 | 8.2 | 421 | 5.9 | |
| | 17-Dec-06 | 8.2 | 433 | 4.7 | |
| | 21-Jan-07 | 8.5 | 433 | 2.0 | |
| | 18-Feb-07 | 8.5 | 448 | 3.3 | |
| | 18-Mar-07 | 8.4 | 381 | 3.8 | |
| | 17-Apr-07 | 8.4 | 377 | 4.3 | |
| | 13-May-07 | 8.3 | 395 | 6.7 | |
| | 17-Jun-07 | 8.4 | 449 | 11.4 | 10.6 |
| | 15-Jul-07 | 8.1 | 436 | 13.8 | 9.5 |
| | 19-Aug-07 | 8.0 | 418 | 13.7 | 9.2 |
| | 17-Sep-07 | 8.0 | 405 | 11.0 | |
| | 18-Oct-07 | 8.0 | 408 | 11.8 | 9.2 |
| | 19-Nov-07 | 7.9 | 455 | 2.2 | 12.4 |
| | 11-Dec-07 | 8.0 | 433 | 2.9 | 12.5 |
| | 22-Jan-08 | 7.9 | 358 | 3.6 | 13.3 |
| | 20-Feb-08 | 8.1 | 377 | 3.3 | |
| | 17-Mar-08 | 8.1 | 398 | 4.2 | 13.3 |
| | 2-Apr-08 | 7.8 | 313 | 4.3 | |
| | 23-Apr-08 | 7.9 | 304 | 7.4 | |
| | 22-May-08 | 7.3 | 359 | 5.8 | |
| | 17-Jun-08 | 7.9 | 425 | 9.3 | 9.3 |
| | 15-Jul-08 | 7.3 | 454 | 13.2 | 7.3 |
| | 19-Aug-08 | 7.7 | 512 | 12.0 | |
| | 16-Sep-08 | 8.2 | 468 | 10.8 | 9.0 |
| | 22-Oct-08 | 8.0 | 419 | 6.5 | 7.9 |
| | 23-Nov-08 | 8.1 | 421 | 5.3 | 9.0 |
| | 14-Dec-08 | 8.5 | 330 | 4.3 | 9.4 |
| | 18-Jan-09 | 8.1 | 412 | 3.1 | 4.6 |
| | 8-Feb-09 | | 339 | 3.9 | 7.9 |
| | 15-Mar-09 | 8.6 | 298 | 4.5 | |
| | 12-Apr-09 | 8.2 | 331 | 5.2 | |
| | 17-May-09 | 8.3 | 328 | 10.4 | 10.5 |
| | 14-Jun-09 | 8.2 | 764 | 10.9 | |
| | 12-Jul-09 | 8.7 | 431 | 10.9 | 11.0 |
| | 9-Aug-09 | 8.7 | 433 | 14.0 | 9.3 |
| | 13-Sep-09 | 7.6 | 403 | 11.8 | 10.4 |
| | 11-Oct-09 | 8.3 | 474 | 6.3 | 12.0 |
| | 15-Nov-09 | 8.3 | 412 | 4.5 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 13-Dec-09 | 8.1 | 450 | 1.9 | 12.4 |
| **(cont'd)** | 17-Jan-10 | 8.2 | 427 | 3.5 | 12.9 |
| | 7-Feb-10 | 7.7 | 428 | 2.1 | 12.3 |
| | 14-Mar-10 | 7.9 | 344 | 5.2 | 13.0 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.1 | 365 | 8.6 | |
| | 16-May-10 | 8.3 | 258 | 7.7 | 11.7 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.4 | 284 | 9.7 | 14.6 |
| | 18-Jul-10 | 8.3 | 330 | 10.6 | 14.5 |
| | 15-Aug-10 | 8.4 | 248 | 13.7 | 10.0 |
| | 12-Sep-10 | 8.4 | 340 | 10.6 | 10.7 |
| | 17-Oct-10 | 8.2 | 312 | 7.3 | 11.8 |
| | 14-Nov-10 | 8.4 | 235 | 6.3 | 10.8 |
| | 19-Dec-10 | 8.5 | 237 | 4.1 | 10.5 |
| | 16-Jan-11 | 8.2 | 243 | 4.4 | 12.6 |
| | 20-Feb-11 | 8.3 | 240 | 3.7 | 12.5 |
| | 13-Mar-11 | 8.3 | 242 | 5.4 | 13.3 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 230 | 5.8 | 12.6 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.0 | 211 | 6.1 | 13.1 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 263 | 10.5 | 10.0 |
| | 17-Jul-11 | 8.4 | 230 | 16.2 | 10.5 |
| | 14-Aug-11 | 8.4 | 256 | 15.3 | 8.1 |
| | 18-Sep-11 | 8.5 | 268 | 12.3 | 8.5 |
| | 16-Oct-11 | 7.9 | 280 | 9.5 | 11.9 |
| | 20-Nov-11 | 8.0 | 222 | 4.0 | 12.7 |
| | 18-Dec-11 | 8.6 | 214 | 5.6 | 13.5 |
| | 15-Jan-12 | 8.4 | 185 | 3.6 | 11.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 19-Feb-12 | 8.2 | 179 | 4.3 | 12.7 |
| **(cont'd)** | 18-Mar-12 | 8.4 | 202 | 7.5 | 10.0 |
| | 15-Apr-12 | 8.9 | 277 | 9.1 | 12.6 |
| | 13-May-12 | 8.3 | 288 | 11.3 | 10.2 |
| | 17-Jun-12 | 8.2 | 348 | 14.4 | 13.8 |
| | 16-Jul-12 | 8.5 | 381 | 17.1 | 6.6 |
| | 14-Aug-12 | 8.4 | 302 | 10.9 | 7.3 |
| | 18-Sep-12 | 7.8 | 334 | 12.0 | 9.5 |
| | 14-Oct-12 | 8.3 | 298 | 9.2 | 8.5 |
| | 18-Nov-12 | 8.1 | 279 | 6.8 | 9.1 |
| | 16-Dec-12 | 7.9 | 552 | 4.4 | 10.5 |
| | 13-Jan-13 | 8.2 | 279 | 4.6 | 11.5 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.3 | 200 | 3.9 | 10.2 |
| | 17-Apr-13 | 8.1 | 201 | 5.6 | 10.1 |
| | 14-May-13 | 8.2 | 236 | 6.1 | 8.7 |
| | 19-Jun-13 | 8.3 | 277 | 9.7 | 12.9 |
| | 16-Jul-13 | 8.3 | 346 | 13.8 | 9.8 |
| | 21-Aug-13 | 8.3 | 344 | 14.1 | 9.4 |
| | 18-Sep-13 | 8.2 | 312 | 10.6 | 10.3 |
| | 16-Oct-13 | 8.6 | 314 | 10.4 | 5.7 |
| | 20-Nov-13 | 7.9 | 260 | 5.5 | 3.6 |
| | 18-Dec-13 | 8.1 | 217 | 4.0 | 7.5 |
| | 21-Jan-14 | 7.7 | 296 | 0.9 | 3.9 |
| | 19-Feb-14 | 7.0 | 268 | 1.7 | 3.6 |
| | 19-Mar-14 | 7.6 | 268 | 1.6 | 5.3 |
| | 17-Apr-14 | 8.0 | 219 | 4.8 | 10.7 |
| | 13-May-14 | 6.8 | 268 | 11.0 | 10.5 |
| | 18-Jun-14 | 8.6 | 291 | 9.5 | 10.7 |
| | 16-Jul-14 | 8.9 | 348 | 10.4 | 8.3 |
| | 19-Aug-14 | 8.8 | 380 | 12.6 | 8.1 |
| | 9-Sep-14 | 8.8 | 386 | 13.6 | 4.2 |
| | 23-Oct-14 | 8.1 | 387 | 8.2 | 5.0 |
| | 19-Nov-14 | 7.5 | 307 | 3.8 | 6.9 |
| | 16-Dec-14 | 8.6 | 304 | 4.5 | |
| | 20-Jan-15 | 7.9 | 275 | 1.7 | 1.9 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.5 | 227 | 3.6 | 13.6 |
| | 22-Apr-15 | 8.2 | 257 | 4.7 | 14.3 |
| | 19-May-15 | 8.6 | 261 | 9.4 | |
| | 16-Jun-15 | 8.4 | 315 | 9.2 | 10.8 |
| | 21-Jul-15 | 8.3 | 333 | 12.3 | |
| | 11-Aug-15 | 8.3 | 357 | 12.9 | 11.0 |
| | 25-Aug-15 | 8.7 | 307 | 12.7 | 9.3 |
| | 8-Sep-15 | 7.9 | 363 | 16.1 | 8.1 |
| | 15-Oct-15 | 8.2 | 296 | 9.1 | 10.4 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.2 | 345 | 7.4 | 13.2 |
| | 9-Dec-15 | 8.0 | 315 | 4.7 | 13.9 |
| | 20-Jan-16 | 7.9 | 214 | 2.4 | 14.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 17-Feb-16 | 8.0 | 255 | 1.7 | 14.5 |
| **(cont'd)** | 15-Mar-16 | 7.7 | 190 | 4.2 | 13.8 |
| | 21-Apr-16 | 8.0 | 232 | 5.9 | 14.6 |
| | 18-May-16 | 8.6 | 305 | 9.3 | 12.0 |
| | 23-Jun-16 | 8.5 | 314 | 10.7 | 11.4 |
| | 5-Jul-16 | 8.5 | 328 | 14.4 | 14.6 |
| | 21-Jul-16 | 8.4 | 368 | 16.0 | 9.3 |
| | 9-Aug-16 | 8.5 | 416 | 16.4 | 11.4 |
| | 24-Aug-16 | 8.5 | 361 | 16.3 | 10.0 |
| | 19-Sep-16 | 8.1 | 44 | 15.3 | 8.4 |
| | 18-Oct-16 | 8.2 | 357 | 14.1 | 12.6 |
| | 24-Oct-16 | 7.9 | 311 | 7.8 | 12.5 |
| | 16-Nov-16 | 8.2 | 301 | 6.5 | 11.4 |
| | 12-Dec-16 | 8.1 | 454 | 1.3 | 15.7 |
| | 25-Jan-17 | 8.3 | 272 | 4.9 | 12.1 |
| | 17-Feb-17 | 8.5 | 282 | 2.9 | 15.7 |
| | 22-Mar-17 | 8.5 | 260 | 2.8 | 12.9 |
| | 19-Apr-17 | 7.7 | 221 | 4.8 | 14.4 |
| | 9-May-17 | 8.5 | 190 | 6.4 | 15.5 |
| | 16-May-17 | 8.1 | 247 | 6.0 | 12.5 |
| | 28-Jun-17 | 8.2 | 299 | 8.2 | 12.1 |
| | 7-Jul-17 | 8.0 | 306 | 10.6 | 10.5 |
| | 19-Jul-17 | 8.3 | 350 | 11.7 | 11.2 |
| | 2-Aug-17 | 8.4 | 327 | 11.9 | 10.5 |
| | 16-Aug-17 | 8.4 | 261 | 11.9 | 10.7 |
| | 17-Sep-17 | 8.2 | 341 | 12.2 | 9.7 |
| | 18-Oct-17 | 8.5 | 359 | 9.7 | 8.1 |
| | 15-Nov-17 | 8.6 | 325 | 5.7 | 11.2 |
| | 14-Dec-17 | 8.5 | 276 | 2.3 | 11.8 |
| | 18-Jan-18 | 8.2 | 257 | 3.6 | 8.0 |
| | 23-Feb-18 | 8.4 | 218 | 4.3 | 13.5 |
| | 21-Mar-18 | 8.4 | 262 | 3.6 | 11.9 |
| | 19-Apr-18 | 8.4 | 233 | 3.9 | 9.6 |
| | 9-May-18 | 8.3 | 357 | 6.9 | 11.8 |
| | 15-May-18 | 8.3 | 352 | 6.5 | 11.6 |
| | 18-Jun-18 | 8.4 | 423 | 8.4 | 10.2 |
| | 19-Jul-18 | 8.3 | 422 | 13.5 | 9.5 |
| | 24-Aug-18 | 8.4 | 427 | 14.7 | 9.3 |
| | 20-Sep-18 | 8.4 | 420 | 13.8 | 9.2 |
| | 25-Oct-18 | 8.4 | 417 | 5.0 | 11.8 |
| | 22-Nov-18 | 8.4 | | 0.7 | 13.5 |
| | 13-Dec-18 | 8.5 | 409 | 3.8 | 12.7 |
| | 19-Jan-19 | 8.3 | 393 | 2.3 | 13.5 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.4 | 348 | 4.4 | 12.4 |
| | 25-Apr-19 | 8.2 | 269 | 4.6 | 11.8 |
| | 16-May-19 | 8.5 | 315 | 6.6 | 12.0 |
| | 27-May-19 | 8.5 | 347 | 9.5 | 11.1 |
| | 21-Jun-19 | 8.5 | 377 | 9.7 | 10.8 |
| | 30-Jul-19 | 8.4 | 378 | 14.6 | 9.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 30-Aug-19 | 8.3 | 364 | 14.0 | 9.2 |
| **(cont'd)** | 27-Sep-19 | 8.1 | 359 | 13.5 | 9.5 |
| | 22-Oct-19 | 8.3 | 392 | 8.9 | 7.9 |
| | 21-Nov-19 | 8.3 | 382 | 1.1 | 8.0 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 | 8.4 | 363 | 4.3 | 12.5 |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | | | | |
| | 28-Apr-20 | 8.5 | 310 | 5.8 | 12.2 |
| | 20-May-20 | 8.3 | 380 | 10.8 | 10.8 |
| | 28-May-20 | 9.0 | 351 | 8.2 | 11.1 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 8.8 | 410 | 12.8 | 9.8 |
| | 26-Aug-20 | 8.4 | 379 | 13.1 | 9.7 |
| | 26-Sep-20 | 8.2 | 380 | 11.0 | |
| | 29-Oct-20 | 8.1 | 386 | 8.4 | 7.5 |
| | 27-Nov-20 | 8.4 | 405 | 6.1 | 12.1 |
| | 22-Dec-20 | 8.3 | 407 | 4.8 | 12.8 |
| | 28-Jan-21 | 8.2 | 401 | 2.5 | 13.0 |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.3 | 375 | 5.5 | 11.0 |
| | 28-Apr-21 | 8.3 | 348 | 6.7 | 11.4 |
| | 26-May-21 | 8.3 | 397 | 9.0 | 11.0 |
| | 23-Jun-21 | 8.3 | 415 | 10.4 | 10.6 |
| | 10-Jul-21 | | | 10.1 | |
| | 23-Jul-21 | 8.4 | 437 | 12.6 | 8.9 |
| | 11-Aug-21 | | | 14.6 | |
| | 26-Aug-21 | 8.2 | 394 | 16.2 | 9.3 |
| | 27-Sep-21 | 8.3 | 448 | 9.5 | 11.2 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 | 8.1 | 463 | 3.6 | 11.7 |
| | 22-Dec-21 | 8.3 | 459 | 2.6 | 11.7 |
| | 24-Jan-22 | 8.2 | 445 | 0.4 | 10.5 |
| | 8-Feb-22 | 7.3 | 544 | 0.1 | 12.0 |
| | 16-Mar-22 | 7.7 | 513 | | 10.3 |
| | 21-Apr-22 | 8.1 | 404 | 1.0 | 11.8 |
| | 25-May-22 | 8.4 | 412 | 9.5 | 11.4 |
| | 24-Jun-22 | | | 6.1 | |
| | 8-Jul-22 | | | 11.7 | |
| | 11-Aug-22 | | | 13.2 | |
| | 29-Aug-22 | | | 9.0 | |
| | 29-Sep-22 | | | 10.0 | |
| | 27-Oct-22 | | | 8.4 | |
| | 17-May-23 | 8.4 | 369 | 7.3 | 11.4 |
| | 26-Jun-23 | | | 13.8 | |
| | 11-Jul-23 | | | 12.2 | |
| | 26-Jul-23 | | | 10.8 | |
| | 14-Aug-23 | | | 12.1 | |
| | 29-Aug-23 | | | 13.3 | |
| | 25-Sep-23 | | | 12.6 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW11E** | 31-Oct-23 | | | 6.2 | |
| **(cont'd)** | 28-May-24 | 8.1 | 437 | 9.3 | 10.7 |
| | 27-Jun-24 | | | 10.9 | |
| | 16-Jul-24 | | | 10.3 | |
| | 30-Jul-24 | | | 13.4 | |
| | 12-Aug-24 | | | 12.7 | |
| | 28-Aug-24 | | | 14.5 | |
| | 25-Sep-24 | | | 15.6 | |
| | 29-Oct-24 | | | 8.9 | |
| | 28-May-25 | 8.7 | 382 | 9.4 | 11.3 |
| | 24-Jun-25 | | | 14.1 | |
| | 14-Jul-25 | | | 14.1 | |
| | 29-Jul-25 | | | 15.8 | |
| | 11-Aug-25 | | | 16.9 | |
| | 26-Aug-25 | | | 13.4 | |
| | 30-Sep-25 | | | 13.6 | |
| | 27-Oct-25 | | | 6.6 | |
| **SW13** | 22-May-03 | | | 13.0 | |
| | 13-Feb-04 | | 287 | 0.8 | 12.8 |
| | 21-Apr-04 | 8.3 | 259 | 8.2 | |
| | 19-May-04 | 8.3 | 390 | 15.2 | |
| | 24-Jun-04 | 8.4 | 413 | 18.1 | |
| | 29-Jul-04 | 8.2 | 434 | 21.8 | |
| | 26-Aug-04 | 8.2 | 394 | 20.7 | 8.1 |
| | 22-Sep-04 | 8.2 | 392 | 22.6 | 8.0 |
| | 20-Oct-04 | 8.0 | 288 | 8.6 | 11.5 |
| | 18-Nov-04 | 8.0 | 282 | 6.1 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 11-Apr-05 | 7.3 | 243 | 5.1 | |
| | 26-May-05 | 8.1 | 373 | 15.4 | |
| | 29-Jun-05 | 8.1 | 491 | 22.2 | |
| | 12-Jul-05 | 7.8 | 474 | 23.3 | 7.9 |
| | 23-Aug-05 | 7.6 | 430 | 19.9 | 6.8 |
| | 28-Sep-05 | 7.9 | 362 | 15.8 | 7.4 |
| | 25-Oct-05 | 8.9 | 382 | 8.4 | 11.6 |
| | 16-Nov-05 | 8.2 | 267 | 5.8 | |
| | 13-Dec-05 | 8.0 | 455 | 0.8 | |
| | 18-Jan-06 | 7.7 | 270 | 2.4 | |
| | 19-Feb-06 (2) | | | | |
| | 24-Mar-06 | 8.4 | 255 | 3.3 | |
| | 19-Apr-06 | 8.4 | 342 | 8.7 | |
| | 24-May-06 | 8.3 | 420 | 10.2 | |
| | 21-Jun-06 | 8.3 | 424 | 19.0 | |
| | 12-Jul-06 | 8.4 | 350 | 20.8 | |
| | 24-Aug-06 | 7.9 | 382 | 20.2 | |
| | 21-Sep-06 | 8.1 | 358 | 16.2 | |
| | 19-Oct-06 | 8.2 | 370 | 9.7 | |
| | 23-Nov-06 | 8.1 | 445 | 4.6 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW13** | 17-Dec-06 | 8.2 | 489 | 3.3 | |
| **(cont'd)** | 21-Jan-07 | 8.4 | 475 | 1.7 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.5 | 427 | 3.8 | |
| | 13-May-07 | 8.4 | 404 | 10.5 | 11.1 |
| | 17-Jun-07 | 8.4 | 442 | 20.5 | 9.0 |
| | 15-Jul-07 | 8.1 | 434 | 23.3 | 7.3 |
| | 19-Aug-07 | 7.9 | 428 | 19.0 | 6.4 |
| | 17-Sep-07 | 7.9 | 379 | 15.9 | 7.2 |
| | 18-Oct-07 | 7.9 | 373 | 13.3 | 8.1 |
| | 19-Nov-07 | 8.1 | 400 | 3.9 | 12.6 |
| | 9-Dec-07 (2) | | | | |
| | 20-Jan-08 (2) | | | | |
| | 20-Feb-08 | 8.1 | 420 | 2.2 | |
| | 17-Mar-08 | 8.0 | 423 | 2.1 | |
| | 2-Apr-08 | 7.9 | 372 | 3.2 | |
| | 23-Apr-08 | 7.9 | 320 | 9.4 | 10.5 |
| | 22-May-08 | 7.8 | 377 | 8.8 | 11.1 |
| | 17-Jun-08 | 7.9 | 403 | 16.6 | 8.4 |
| | 15-Jul-08 | 7.5 | 425 | 22.0 | 5.8 |
| | 19-Aug-08 | 8.0 | 501 | 21.9 | 4.4 |
| | 16-Sep-08 | 8.4 | 418 | 17.6 | 6.4 |
| | 22-Oct-08 | 8.0 | 437 | 7.4 | 7.1 |
| | 23-Nov-08 | 8.5 | 462 | 3.9 | 9.0 |
| | 14-Dec-08 | 8.4 | 369 | 3.1 | 9.5 |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 | | 385 | 2.5 | 8.2 |
| | 15-Mar-09 | 8.6 | 362 | 4.5 | |
| | 12-Apr-09 | 8.0 | 403 | 5.6 | |
| | 17-May-09 | 8.5 | 338 | 15.0 | 10.1 |
| | 14-Jun-09 | 7.9 | 803 | 19.6 | |
| | 12-Jul-09 | 8.2 | 420 | 18.2 | 9.5 |
| | 9-Aug-09 | 8.0 | 341 | 22.3 | 8.2 |
| | 13-Sep-09 | 7.7 | 374 | 16.8 | 8.6 |
| | 11-Oct-09 | 8.4 | 441 | 8.5 | 11.1 |
| | 15-Nov-09 | 8.5 | 429 | 5.6 | |
| | 13-Dec-09 | 7.7 | 477 | 1.4 | 12.7 |
| | 17-Jan-10 | 8.1 | 463 | 1.0 | 12.2 |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.9 | 410 | 4.1 | 13.5 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 395 | 8.2 | |
| | 16-May-10 | 8.4 | 317 | 12.4 | 10.4 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.4 | 356 | 16.7 | 12.9 |
| | 18-Jul-10 | 8.2 | 395 | 19.1 | 11.7 |
| | 15-Aug-10 | 8.4 | 403 | 21.5 | 7.9 |
| | 12-Sep-10 | 8.3 | 391 | 15.4 | 8.0 |
| | 17-Oct-10 | 8.1 | 338 | 8.9 | 10.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW13** | 19-Dec-10 (2) | | | | |
| **(cont'd)** | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.4 | 260 | 3.4 | 13.9 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.3 | 277 | 3.6 | 13.4 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.4 | 240 | 5.6 | 12.5 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.4 | 248 | 7.6 | 12.9 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.6 | 305 | 17.5 | 8.7 |
| | 17-Jul-11 | 8.5 | 423 | 26.0 | 8.9 |
| | 14-Aug-11 | 8.5 | 286 | 22.6 | 6.4 |
| | 18-Sep-11 | 8.7 | 200 | 17.6 | 7.1 |
| | 16-Oct-11 | 7.8 | 274 | 10.1 | 11.3 |
| | 20-Nov-11 | 8.1 | 285 | 4.1 | 11.9 |
| | 18-Dec-11 | 8.9 | 244 | 4.0 | 14.5 |
| | 15-Jan-12 | 8.5 | 207 | 2.2 | 12.0 |
| | 19-Feb-12 | 8.2 | 222 | 2.2 | 13.2 |
| | 18-Mar-12 | 8.3 | 233 | 9.1 | 9.2 |
| | 15-Apr-12 | 8.8 | 285 | 10.6 | 12.5 |
| | 13-May-12 | 8.4 | 331 | 16.0 | 10.9 |
| | 17-Jun-12 | 8.6 | 424 | 24.3 | 11.9 |
| | 16-Jul-12 | 8.6 | 406 | 26.9 | 6.3 |
| | 14-Aug-12 | 8.5 | 337 | 16.7 | 7.0 |
| | 18-Sep-12 | 7.9 | 364 | 16.1 | 8.6 |
| | 18-Oct-12 | 8.4 | 287 | 9.8 | 8.9 |
| | 20-Nov-12 | 8.0 | 297 | 5.3 | 9.7 |
| | 20-Dec-12 | 7.8 | 591 | 3.1 | 10.6 |
| | 16-Jan-13 | 8.1 | 259 | 3.4 | 11.6 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.3 | 215 | 2.3 | 10.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW13** | 17-Apr-13 | 8.0 | 189 | 5.2 | 10.2 |
| **(cont'd)** | 14-May-13 | 8.2 | 254 | 7.4 | 7.9 |
| | 19-Jun-13 | 8.4 | 355 | 16.9 | 9.5 |
| | 16-Jul-13 | 8.3 | 369 | 25.3 | 6.4 |
| | 21-Aug-13 | 8.4 | 401 | 21.3 | 7.2 |
| | 18-Sep-13 | 8.2 | 335 | 16.7 | 9.5 |
| | 16-Oct-13 | 8.6 | 347 | 12.1 | 5.5 |
| | 20-Nov-13 | 8.6 | 276 | 4.2 | 3.9 |
| | 18-Dec-13 | 7.9 | 255 | 1.9 | 8.0 |
| | 21-Jan-14 | 7.5 | 220 | 0.8 | 4.7 |
| | 19-Feb-14 | 7.8 | 242 | 0.6 | 3.7 |
| | 19-Mar-14 | 7.3 | 232 | 0.6 | 8.4 |
| | 17-Apr-14 | 8.2 | 236 | 3.5 | 8.7 |
| | 13-May-14 | 7.5 | 277 | 12.4 | 11.6 |
| | 18-Jun-14 | 7.5 | 219 | 12.9 | 11.0 |
| | 16-Jul-14 | 7.8 | 400 | 18.2 | 8.8 |
| | 19-Aug-14 | 8.8 | 424 | 20.1 | 6.9 |
| | 9-Sep-14 | 8.8 | 418 | 19.1 | 11.9 |
| | 23-Oct-14 | 8.1 | 415 | 9.6 | 9.0 |
| | 19-Nov-14 | 7.4 | 314 | 2.3 | 6.3 |
| | 16-Dec-14 | 8.6 | 314 | 3.0 | |
| | 20-Jan-15 | 7.8 | 194 | 1.1 | 2.1 |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 8.3 | 292 | 6.0 | 13.1 |
| | 19-May-15 | 8.1 | 317 | 14.8 | 12.2 |
| | 16-Jun-15 | 8.2 | 359 | 16.0 | 8.3 |
| | 22-Jul-15 | 8.6 | 403 | 20.8 | |
| | 11-Aug-15 | 8.1 | 396 | 19.5 | 7.1 |
| | 23-Aug-15 | | | | |
| | 8-Sep-15 | 7.9 | 396 | 22.4 | 6.1 |
| | 15-Oct-15 | 8.1 | 297 | 12.1 | 8.5 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.1 | 309 | 6.0 | 13.3 |
| | 9-Dec-15 | 8.8 | 305 | 3.6 | 12.3 |
| | 17-Jan-16 (2) | | | | |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 7.7 | 238 | 4.2 | 13.6 |
| | 21-Apr-16 | 8.0 | 266 | 7.5 | 13.8 |
| | 18-May-16 | 8.6 | 318 | 9.2 | 11.9 |
| | 23-Jun-16 | 8.3 | 396 | 19.1 | 6.6 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 7.6 | 453 | 22.6 | 2.2 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.3 | 372 | 23.6 | 8.2 |
| | 19-Sep-16 | 8.2 | 384 | 20.8 | 6.9 |
| | 18-Oct-16 | 8.3 | 318 | 15.1 | 10.4 |
| | 16-Nov-16 | 8.3 | 270 | 6.4 | 11.4 |
| | 12-Dec-16 | 8.1 | 433 | 1.3 | 11.6 |
| | 25-Jan-17 | 8.2 | 299 | 3.4 | 12.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW13** | 17-Feb-17 | 8.4 | 284 | 1.1 | 14.9 |
| **(cont'd)** | 22-Mar-17 | 8.4 | 295 | 2.8 | 11.6 |
| | 19-Apr-17 | 7.8 | 279 | 6.9 | 13.6 |
| | 16-May-17 | 8.5 | 252 | 10.3 | 10.7 |
| | 28-Jun-17 | 8.5 | 362 | 12.2 | 11.1 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.6 | 436 | 20.4 | 9.1 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.3 | 388 | 19.6 | 8.6 |
| | 18-Sep-17 | 8.2 | 333 | 17.6 | 9.1 |
| | 18-Oct-17 | 8.2 | 345 | 11.3 | 9.0 |
| | 15-Nov-17 | 8.5 | 324 | 3.8 | 14.0 |
| | 14-Dec-17 | 8.4 | 286 | 1.6 | 13.9 |
| | 18-Jan-18 | 8.0 | 275 | 1.8 | 10.2 |
| | 23-Feb-18 | 8.3 | 225 | 3.0 | 15.3 |
| | 21-Mar-18 | 8.4 | 268 | 2.1 | 12.2 |
| | 19-Apr-18 | 8.4 | 259 | 2.4 | 12.5 |
| | 15-May-18 | 8.3 | 394 | 10.5 | 11.1 |
| | 18-Jun-18 | 8.3 | 429 | 7.5 | 8.2 |
| | 19-Jul-18 | 8.3 | 417 | 23.7 | 7.3 |
| | 24-Aug-18 | 8.3 | 368 | 20.4 | 8.2 |
| | 20-Sep-18 | 8.4 | 344 | 18.8 | 8.8 |
| | 25-Oct-18 | 8.6 | 361 | 6.2 | 11.8 |
| | 22-Nov-18 | 8.4 | 453 | 2.1 | 12.6 |
| | 12-Dec-18 | 8.4 | 470 | 2.0 | 13.0 |
| | 18-Jan-19 | 8.2 | 444 | 1.4 | 13.7 |
| | 28-Feb-19 (2) | | | | |
| | 15-Mar-19 | 8.3 | 405 | 2.6 | 12.9 |
| | 25-Apr-19 (1) | | | | |
| | 23-May-19 | 8.5 | 371 | 12.7 | 10.9 |
| | 18-Jun-19 | 8.5 | 373 | 17.0 | 10.1 |
| | 29-Jul-19 | 8.3 | 377 | 23.3 | 7.2 |
| | 29-Aug-19 | 8.2 | 487 | 18.2 | 7.2 |
| | 26-Sep-19 | 8.3 | 479 | 15.3 | 7.4 |
| | 23-Oct-19 | 8.0 | 473 | 9.2 | 7.3 |
| | 22-Nov-19 | 8.2 | 402 | 0.6 | 7.6 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 27-Apr-20 | 8.7 | 329 | 6.9 | 12.6 |
| | 28-May-20 (1) | | | | |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 (1) | | | | |
| | 26-Aug-20 (3) | | | | |
| | 26-Sep-20 (3) | | | | |
| | 30-Oct-20 | 8.0 | 461 | 8.4 | 7.3 |
| | 26-Nov-20 | 8.0 | 483 | 4.4 | 11.2 |
| | 23-Dec-20 | 8.3 | 455 | 3.5 | 13.0 |
| | 27-Jan-21 | 8.2 | 468 | 2.7 | 13.0 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW13** | 22-Feb-21 (3) | | | | |
| **(cont'd)** | 29-Mar-21 | 8.1 | 421 | 8.4 | 12.6 |
| | 27-Apr-21 (1) | | | | |
| | 27-May-21 | 8.1 | 419 | 16.9 | 9.5 |
| | 22-Jun-21 | 8.1 | 433 | 19.2 | 8.2 |
| | 22-Jul-21 | 8.3 | 430 | 19.8 | 8.7 |
| | 25-Aug-21 | 8.1 | 8 | 23.7 | (6) |
| | 28-Sep-21 | 8.4 | 487 | 12.2 | 10.8 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 | 8.2 | 502 | 3.8 | 11.6 |
| | 21-Dec-21 | 8.5 | 494 | 3.7 | 11.5 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.2 | 516 | 5.4 | 9.3 |
| | 24-May-22 | 8.4 | 413 | 14.8 | 10.8 |
| | 24-Jun-22 | | | 10.9 | |
| | 29-Aug-22 | | | 15.1 | |
| | 29-Sep-22 | | | 14.0 | |
| | 27-Oct-22 | | | 9.6 | |
| | 22-Nov-22 | | | 0.9 | |
| | 17-May-23 | | | 10.3 | |
| | 26-Jun-23 | | | 22.1 | |
| | 26-Jul-23 | | | 16.6 | |
| | 29-Aug-23 | | | 19.9 | |
| | 25-Sep-23 | | | 17.5 | |
| | 31-Oct-23 | | | 8.2 | |
| | 28-May-24 | | | 16.6 | |
| | 27-Jun-24 | | | 19.1 | |
| | 30-Jul-24 | | | 21.9 | |
| | 28-Aug-24 | | | 19.9 | |
| | 25-Sep-24 | | | 18.9 | |
| | 29-Oct-24 | | | 10.9 | |
| | 28-May-25 | | | 13.4 | |
| | 24-Jun-25 | | | 23.1 | |
| | 29-Jul-25 | | | 23.9 | |
| | 26-Aug-25 | | | 18.3 | |
| | 30-Sep-25 | | | 17.2 | |
| | 27-Oct-25 | | | 10.0 | |
| **SW14** | 22-May-03 | | | 15.0 | |
| | 10-Feb-04 | | 292 | 0.8 | 11.0 |
| | 16-Mar-04 | 8.0 | 435 | 1.5 | 11.9 |
| | 19-Apr-04 | 8.4 | 253 | 9.5 | |
| | 19-May-04 | 8.3 | 385 | 14.6 | |
| | 24-Jun-04 | 8.3 | 385 | 15.8 | 9.3 |
| | 29-Jul-04 | 8.0 | 389 | 18.0 | 7.7 |
| | 26-Aug-04 | 7.9 | 370 | 16.0 | |
| | 22-Sep-04 | 7.7 | 355 | 14.7 | 8.1 |
| | 20-Oct-04 | 7.5 | 313 | 7.0 | 10.3 |
| | 16-Nov-04 | 7.5 | 294 | 3.4 | 12.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 16-Dec-04 | 7.8 | 235 | 0.4 | |
| **(cont'd)** | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 8.0 | 301 | 3.5 | |
| | 11-Apr-05 | 7.1 | 249 | 5.6 | |
| | 24-May-05 | 7.7 | 352 | 12.2 | 10.5 |
| | 28-Jun-05 | 8.4 | 488 | 21.8 | |
| | 11-Jul-05 | 7.2 | 471 | 21.6 | |
| | 22-Aug-05 | 7.8 | 383 | 16.0 | 8.2 |
| | 27-Sep-05 | 7.6 | 355 | 13.2 | 9.0 |
| | 24-Oct-05 | 7.6 | 580 | 7.9 | 9.6 |
| | 16-Nov-05 | 7.6 | 301 | 6.0 | 11.7 |
| | 12-Dec-05 | 8.3 | 255 | 0.2 | 3.0 |
| | 17-Jan-06 | 7.8 | 243 | 0.6 | |
| | 19-Feb-06 (2) | | | | |
| | 20-Mar-06 | 8.3 | 278 | 3.3 | |
| | 18-Apr-06 | 6.4 | 345 | 10.5 | |
| | 24-May-06 | 8.4 | 423 | 11.7 | |
| | 23-Jun-06 | 7.8 | 362 | 17.6 | |
| | 11-Jul-06 | 8.5 | 356 | 18.1 | |
| | 23-Aug-06 | 7.6 | 414 | 17.0 | |
| | 20-Sep-06 | 7.4 | 539 | 12.5 | |
| | 19-Oct-06 | 7.7 | 421 | 9.8 | |
| | 27-Nov-06 | 8.2 | 451 | 6.4 | 12.4 |
| | 17-Dec-06 | 8.1 | 505 | 2.9 | |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 429 | 2.5 | |
| | 17-Apr-07 | 8.5 | 425 | 5.4 | |
| | 13-May-07 | 8.0 | 409 | 10.2 | 11.1 |
| | 17-Jun-07 | 8.3 | 451 | 19.1 | 8.1 |
| | 15-Jul-07 | 8.3 | 447 | 19.3 | 7.2 |
| | 19-Aug-07 | 8.1 | 416 | 19.2 | 6.5 |
| | 17-Sep-07 | 7.8 | 402 | 13.4 | 8.1 |
| | 18-Oct-07 | 7.7 | 488 | 12.7 | 6.4 |
| | 21-Nov-07 | 7.8 | 475 | 3.8 | 10.8 |
| | 9-Dec-07 (2) | | | | |
| | 21-Jan-08 | 7.3 | 385 | 1.2 | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 2-Apr-08 | 7.8 | 336 | 2.1 | |
| | 21-Apr-08 | 7.5 | 325 | 11.2 | 9.8 |
| | 20-May-08 | 7.4 | 379 | 13.6 | 9.5 |
| | 18-Jun-08 | 8.1 | 379 | 15.0 | 7.4 |
| | 15-Jul-08 | 7.6 | 442 | 18.5 | 5.5 |
| | 19-Aug-08 | 7.7 | 513 | 16.4 | 4.6 |
| | 17-Sep-08 | 8.6 | 444 | 13.9 | 6.1 |
| | 22-Oct-08 | 8.0 | 444 | 5.5 | 8.7 |
| | 23-Nov-08 | | 472 | 3.9 | 8.8 |
| | 14-Dec-08 | 7.3 | 374 | 2.8 | 8.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 18-Jan-09 (2) | | | | |
| **(cont'd)** | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 8.6 | 386 | 4.1 | |
| | 12-Apr-09 | 8.4 | 346 | 6.8 | |
| | 17-May-09 | 8.3 | 342 | 15.5 | 10.0 |
| | 14-Jun-09 | 8.6 | 822 | 15.8 | 8.9 |
| | 12-Jul-09 | 9.2 | 366 | 17.5 | 8.8 |
| | 9-Aug-09 | 8.7 | 384 | 20.5 | 9.0 |
| | 13-Sep-09 | 6.5 | 387 | 16.1 | 9.2 |
| | 11-Oct-09 | 7.7 | 471 | 5.1 | 11.5 |
| | 15-Nov-09 | 7.3 | 446 | 3.6 | |
| | 13-Dec-09 | 7.5 | 489 | 1.6 | 11.9 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 8.0 | 339 | 3.5 | 13.5 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.3 | 400 | 9.4 | 11.5 |
| | 16-May-10 | 8.4 | 323 | 12.9 | 10.4 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.3 | 317 | 14.0 | 13.0 |
| | 18-Jul-10 | 8.2 | 364 | 18.6 | 11.9 |
| | 15-Aug-10 | 8.3 | 387 | 17.2 | 8.9 |
| | 12-Sep-10 | 8.2 | 368 | 14.1 | 9.2 |
| | 17-Oct-10 | 8.0 | 348 | 8.2 | 11.0 |
| | 14-Nov-10 | 8.3 | 288 | 6.4 | 12.4 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.1 | 241 | 3.3 | 11.5 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.3 | 275 | 3.3 | 13.0 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.4 | 247 | 5.9 | 12.2 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.2 | 248 | 8.0 | 12.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 20-May-11 | | | | |
| **(cont'd)** | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.4 | 314 | 16.7 | 9.8 |
| | 17-Jul-11 | 8.3 | 393 | 21.8 | 8.6 |
| | 14-Aug-11 | 8.6 | 264 | 18.7 | 8.4 |
| | 18-Sep-11 | 8.8 | 265 | 14.3 | 9.5 |
| | 16-Oct-11 | 7.7 | 251 | 10.0 | 12.7 |
| | 20-Nov-11 | 8.0 | 284 | 2.8 | 12.9 |
| | 18-Dec-11 | 9.2 | 241 | 3.4 | 13.6 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 8.3 | 247 | 10.4 | 8.5 |
| | 15-Apr-12 | 8.9 | 275 | 8.0 | 12.9 |
| | 13-May-12 | 8.4 | 327 | 16.8 | 9.2 |
| | 17-Jun-12 | 8.4 | 400 | 21.0 | 13.0 |
| | 16-Jul-12 | 8.5 | 378 | 24.0 | 6.8 |
| | 14-Aug-12 | 8.6 | 447 | 16.7 | 7.0 |
| | 18-Sep-12 | 7.8 | 354 | 14.8 | 8.4 |
| | 17-Oct-12 | 7.2 | 320 | 11.1 | 7.7 |
| | 20-Nov-12 | 8.1 | 304 | 5.8 | 10.7 |
| | 18-Dec-12 | 7.7 | 623 | 4.2 | 9.7 |
| | 20-Dec-12 | 7.9 | 585 | 2.6 | 11.4 |
| | 16-Jan-13 | 8.3 | 295 | 3.1 | 11.5 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.3 | 218 | 2.3 | 10.5 |
| | 17-Apr-13 | 8.3 | 241 | 6.2 | 10.4 |
| | 14-May-13 | 8.2 | 247 | 7.3 | 8.9 |
| | 19-Jun-13 | 8.4 | 315 | 15.2 | 10.1 |
| | 16-Jul-13 | 8.3 | 424 | 22.1 | 7.6 |
| | 21-Aug-13 | 8.3 | 419 | 22.2 | 7.4 |
| | 18-Sep-13 | 8.3 | 323 | 12.9 | 10.2 |
| | 16-Oct-13 | 8.9 | 360 | 12.7 | 5.4 |
| | 20-Nov-13 | 8.2 | 277 | 4.0 | 3.9 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.2 | 447 | 4.0 | 10.3 |
| | 13-May-14 | 7.0 | 318 | 15.5 | 10.3 |
| | 18-Jun-14 | 7.5 | 232 | 14.2 | 8.9 |
| | 15-Jul-14 | 8.9 | 391 | 15.7 | 6.9 |
| | 17-Aug-14 (1) | | | | |
| | 9-Sep-14 | 8.7 | 427 | 16.7 | 4.3 |
| | 23-Oct-14 | 8.7 | 421 | 10.2 | 4.2 |
| | 16-Nov-14 (2) | | | | |
| | 14-Dec-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 22-Apr-15 | 8.3 | 297 | 6.2 | 13.2 |
| **(cont'd)** | 19-May-15 | 8.5 | 286 | 14.0 | |
| | 15-Jun-15 | 8.2 | 351 | 16.0 | 8.7 |
| | 22-Jul-15 | 8.5 | 391 | 18.8 | |
| | 11-Aug-15 | 8.2 | 398 | 17.7 | 8.6 |
| | 25-Aug-15 | 8.2 | 338 | 16.6 | 7.0 |
| | 8-Sep-15 | 7.9 | 403 | 20.3 | 6.1 |
| | 15-Oct-15 | 7.9 | 310 | 10.1 | 9.7 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.9 | 346 | 7.8 | 12.7 |
| | 9-Dec-15 | 7.8 | 269 | 3.8 | 13.6 |
| | 20-Jan-16 | 7.7 | 268 | (0) | 15.0 |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 8.3 | 236 | 4.7 | 14.1 |
| | 21-Apr-16 | 7.7 | 275 | 8.2 | 13.4 |
| | 18-May-16 | 8.6 | 340 | 11.0 | 11.3 |
| | 23-Jun-16 | 8.4 | 367 | 15.0 | 9.7 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 7.8 | 397 | 19.4 | 8.6 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 5.1 | 376 | 19.7 | 7.5 |
| | 19-Sep-16 | 8.0 | 447 | 17.4 | 8.2 |
| | 18-Oct-16 | 7.8 | 405 | 15.4 | 11.1 |
| | 24-Oct-16 | 7.5 | 464 | 7.7 | 10.1 |
| | 16-Nov-16 | 7.8 | 315 | 7.1 | 10.4 |
| | 12-Dec-16 | 8.2 | 465 | 0.6 | 16.1 |
| | 25-Jan-17 | 8.2 | 300 | 3.2 | 13.0 |
| | 15-Feb-17 (2) | | | | |
| | 22-Mar-17 | 8.5 | 292 | 1.2 | 14.0 |
| | 19-Apr-17 | 7.8 | 272 | 6.6 | 14.4 |
| | 9-May-17 | 8.3 | 223 | 7.0 | 15.1 |
| | 16-May-17 | 8.0 | 303 | 10.5 | 11.4 |
| | 28-Jun-17 | 8.3 | 375 | 12.7 | 10.5 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.2 | 430 | 18.8 | 8.9 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.2 | 368 | 17.1 | 8.4 |
| | 18-Sep-17 | 7.9 | 366 | 16.3 | 8.1 |
| | 18-Oct-17 | 8.2 | 354 | 11.1 | 8.9 |
| | 15-Nov-17 | 8.3 | 341 | 4.2 | 12.6 |
| | 14-Dec-17 | 8.4 | 281 | (0) | |
| | 18-Jan-18 | 7.8 | 271 | 0.9 | 10.0 |
| | 23-Feb-18 | 8.3 | 234 | 3.1 | 8.3 |
| | 21-Mar-18 | 8.3 | 260 | 0.6 | 14.6 |
| | 19-Apr-18 | 8.4 | 263 | 2.5 | 11.7 |
| | 8-May-18 | 8.4 | 390 | 10.3 | 11.0 |
| | 15-May-18 | 8.2 | 398 | 11.2 | 10.1 |
| | 18-Jun-18 | 8.3 | 438 | 17.2 | 8.7 |
| | 19-Jul-18 | 8.2 | 431 | 16.8 | 8.4 |
| | 23-Aug-18 | 8.1 | 422 | 17.9 | 8.1 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 19-Sep-18 | 8.0 | 396 | 14.5 | 8.4 |
| **(cont'd)** | 25-Oct-18 | 7.9 | 436 | 5.3 | 11.0 |
| | 22-Nov-18 | 8.1 | 423 | 0.0 | 13.5 |
| | 13-Dec-18 | 8.4 | 475 | 1.9 | 13.3 |
| | 19-Jan-19 | 8.1 | 432 | (0) | 14.3 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.4 | 411 | 1.8 | 13.1 |
| | 25-Apr-19 | 8.2 | 263 | 6.4 | 11.2 |
| | 14-May-19 | 8.5 | 339 | 6.9 | 11.7 |
| | 27-May-19 | 8.5 | 373 | 10.8 | 10.7 |
| | 21-Jun-19 | 8.4 | 393 | 13.6 | 9.6 |
| | 30-Jul-19 | 8.2 | 407 | 19.9 | 7.5 |
| | 30-Aug-19 | 8.0 | 365 | 15.2 | 8.1 |
| | 27-Sep-19 | 7.8 | 392 | 15.1 | 8.2 |
| | 22-Oct-19 | 7.9 | 359 | 7.9 | 8.1 |
| | 21-Nov-19 | 7.6 | 349 | 1.1 | 7.5 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.2 | 400 | 9.5 | 10.8 |
| | 28-May-20 | 9.0 | 394 | 11.5 | 10.3 |
| | 24-Jun-20 | 8.6 | 342 | 15.6 | 9.1 |
| | 31-Jul-20 | 8.6 | 435 | 20.6 | 7.7 |
| | 26-Aug-20 | 8.1 | 409 | 20.3 | 7.3 |
| | 26-Sep-20 | 8.0 | 420 | 12.1 | 10.1 |
| | 29-Oct-20 | 7.6 | 326 | 8.6 | 8.0 |
| | 27-Nov-20 | 8.3 | 450 | 4.8 | 11.6 |
| | 22-Dec-20 | 8.3 | 465 | 3.0 | 13.2 |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.1 | 381 | 6.8 | 9.1 |
| | 27-Apr-21 | 8.2 | 376 | 7.2 | 8.1 |
| | 27-May-21 | 8.2 | 342 | 14.1 | 10.3 |
| | 22-Jun-21 | 8.1 | 445 | 15.0 | 9.4 |
| | 22-Jul-21 | 8.2 | 447 | 17.7 | 8.7 |
| | 25-Aug-21 (3) | | | | |
| | 28-Sep-21 (3) | | | | |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.0 | 422 | 6.5 | 9.0 |
| | 26-May-22 | 8.2 | 414 | 17.0 | 9.5 |
| | 24-Jun-22 | 8.1 | 605 | 17.2 | 10.3 |
| | 29-Aug-22 | 8.2 | 541 | 17.2 | 10.3 |
| | 27-Sep-22 | 7.2 | 385 | 13.1 | 9.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW14** | 27-Oct-22 | 7.7 | 317 | 8.6 | 9.0 |
| **(cont'd)** | 22-Nov-22 | 8.5 | 282 | 0.7 | 12.4 |
| | 20-Dec-22 | 8.5 | 225 | 0.2 | 11.2 |
| | 24-Jan-23 | 8.2 | 426 | 1.1 | 14.0 |
| | 22-Feb-23 | 8.0 | 445 | 1.0 | 14.4 |
| | 27-Mar-23 | 9.0 | 411 | 4.1 | 12.5 |
| | 21-Apr-23 | 8.8 | 358 | 7.3 | 11.4 |
| | 16-May-23 | 8.4 | 400 | 13.3 | 9.9 |
| | 26-Jun-23 | 8.1 | 333 | 19.9 | 8.9 |
| | 25-Jul-23 | 8.5 | 398 | 17.7 | 9.0 |
| | 29-Aug-23 | 7.9 | 382 | 17.3 | 8.8 |
| | 25-Sep-23 | 8.4 | 404 | 14.6 | 9.5 |
| | 31-Oct-23 | 8.2 | 309 | 5.6 | 10.6 |
| | 29-Nov-23 | 8.0 | 497 | 0.5 | 13.4 |
| | 18-Dec-23 | 7.8 | 492 | 3.8 | 11.9 |
| | 31-Jan-24 | 7.9 | 504 | 2.8 | 12.9 |
| | 27-Feb-24 | 8.1 | 291 | 1.3 | 12.7 |
| | 27-Mar-24 | 8.1 | 402 | 5.3 | 12.2 |
| | 29-Apr-24 | 8.2 | 444 | 9.5 | 11.0 |
| | 27-May-24 | 7.9 | 441 | 17.0 | 9.0 |
| | 26-Jun-24 | 7.9 | 461 | 18.9 | 8.6 |
| | 29-Jul-24 | 8.1 | 392 | 22.4 | 8.5 |
| | 27-Aug-24 | 8.1 | 398 | 22.0 | 8.6 |
| | 24-Sep-24 | 7.7 | 408 | 17.2 | 9.1 |
| | 28-Oct-24 | 7.7 | 431 | 8.4 | 11.6 |
| | 18-Nov-24 | 7.7 | 440 | 6.8 | 11.4 |
| | 16-Dec-24 | 7.6 | 448 | 2.2 | 13.1 |
| | 27-Jan-25 (2) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 (3) | | | | |
| | 28-Apr-25 | 8.4 | 314 | 12.7 | 2.9 |
| | 27-May-25 | 8.6 | 396 | 13.4 | 11.7 |
| | 25-Jun-25 | 8.5 | 400 | 20.3 | 9.6 |
| | 29-Jul-25 | 8.5 | 346 | 19.8 | 9.4 |
| | 26-Aug-25 | 8.2 | 357 | 15.7 | 11.2 |
| | 30-Sep-25 | 8.0 | 339 | 13.7 | 11.0 |
| | 29-Oct-25 | 8.0 | 374 | 3.9 | 31.9 |
| | 24-Nov-25 | 8.2 | 408 | 3.6 | 14.3 |
| | 15-Dec-25 | 8.2 | 680 | 0.3 | 15.3 |
| **SW15** | 10-Feb-04 (2) | | | | |
| | 18-Mar-04 (2) | | | | |
| | 19-May-04 | 8.2 | 421 | 18.2 | 9.1 |
| | 24-Jun-04 | 8.1 | 412 | 18.9 | 8.3 |
| | 29-Jul-04 | 8.0 | 398 | 20.5 | 7.5 |
| | 26-Aug-04 | 8.1 | 402 | 18.0 | 9.0 |
| | 20-Oct-04 | 8.0 | 316 | 7.9 | 11.7 |
| | 17-Nov-04 | 7.9 | 330 | 6.5 | 12.0 |
| | 16-Dec-04 | 7.9 | 134 | 0.1 | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 27-Mar-05 (2) | | | | |
| **(cont'd)** | 11-Apr-05 | 7.5 | 340 | 11.2 | |
| | 24-May-05 | 7.7 | 389 | 15.2 | |
| | 28-Jun-05 | 8.3 | 484 | 23.0 | |
| | 11-Jul-05 | 7.2 | 471 | 23.8 | |
| | 22-Aug-05 | 8.7 | 383 | 18.4 | |
| | 27-Sep-05 | 7.6 | 348 | 14.4 | |
| | 24-Oct-05 | 7.9 | 400 | 8.6 | |
| | 15-Nov-05 | 7.9 | 285 | 4.5 | |
| | 12-Dec-05 | 8.3 | 243 | 0.1 | |
| | 15-Jan-06 (2) | | | | |
| | 19-Feb-06 (2) | | | | |
| | 19-Mar-06 (2) | | | | |
| | 18-Apr-06 | 8.4 | 388 | 17.9 | |
| | 23-May-06 | 8.1 | 420 | 16.3 | |
| | 20-Jun-06 | 8.0 | 399 | 20.1 | |
| | 11-Jul-06 | 8.0 | 376 | 21.5 | |
| | 23-Aug-06 | 7.8 | 378 | 18.7 | |
| | 20-Sep-06 | 7.9 | 345 | 13.6 | |
| | 19-Oct-06 | 7.8 | 390 | 10.1 | |
| | 27-Nov-06 | 8.0 | 490 | 6.8 | 11.9 |
| | 17-Dec-06 | 8.0 | 556 | 1.6 | |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.5 | 441 | 8.5 | |
| | 13-May-07 | 8.1 | 388 | 12.0 | 10.5 |
| | 17-Jun-07 | 8.2 | 422 | 21.9 | 7.0 |
| | 15-Jul-07 | 8.1 | 419 | 21.8 | 7.2 |
| | 19-Aug-07 | 8.0 | 390 | 21.5 | 6.6 |
| | 17-Sep-07 | 8.0 | 330 | 16.2 | 8.3 |
| | 19-Oct-07 | 8.2 | 371 | 15.2 | 7.7 |
| | 21-Nov-07 | 7.9 | 446 | 4.2 | |
| | 10-Dec-07 | 7.7 | 428 | 0.9 | 11.3 |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 1-Apr-08 | 7.4 | 218 | 1.0 | 14.0 |
| | 21-Apr-08 | 7.7 | 406 | 21.1 | 6.8 |
| | 20-May-08 | 7.6 | 394 | 18.8 | 6.6 |
| | 18-Jun-08 | 8.2 | 830 | 16.5 | 6.9 |
| | 13-Jul-08 (1) | | | | |
| | 19-Aug-08 | 7.9 | 404 | 15.2 | 4.8 |
| | 17-Sep-08 | 8.4 | 471 | 13.9 | 6.2 |
| | 22-Oct-08 | 7.7 | 429 | 5.9 | 8.0 |
| | 23-Nov-08 | 7.6 | 518 | 1.9 | 8.7 |
| | 14-Dec-08 (2) | | | | |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 8.2 | 384 | 6.3 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 12-Apr-09 | 8.4 | 373 | 11.8 | |
| **(cont'd)** | 17-May-09 | 8.0 | 373 | 19.4 | 8.2 |
| | 14-Jun-09 | 8.4 | 826 | 15.7 | 9.6 |
| | 12-Jul-09 | 8.8 | 486 | 15.9 | 9.3 |
| | 9-Aug-09 | 8.0 | 400 | 19.8 | 8.2 |
| | 13-Sep-09 | 6.5 | 319 | 16.7 | |
| | 11-Oct-09 | 7.5 | 419 | 6.2 | 11.6 |
| | 15-Nov-09 | 7.4 | 407 | 5.2 | |
| | 13-Dec-09 | 7.5 | 508 | 0.5 | 12.2 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.7 | 274 | 3.3 | 13.0 |
| | 4-Apr-10 | | | | |
| | 16-May-10 | 8.2 | 408 | 19.3 | 8.5 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.0 | 340 | 17.4 | 10.6 |
| | 18-Jul-10 | 8.0 | 443 | 21.4 | 10.8 |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 | 7.9 | 360 | 8.2 | 10.5 |
| | 14-Nov-10 | 8.1 | 303 | 6.9 | 11.7 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.0 | 245 | 2.3 | 11.9 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 321 | 8.5 | 10.9 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.0 | 321 | 12.8 | 12.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.2 | 345 | 19.6 | 8.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 17-Jul-11 | (1) | | | | |
| **(cont'd)** | 14-Aug-11 | (1) | | | | |
| | 18-Sep-11 | (1) | | | | |
| | 16-Oct-11 | | 7.8 | 368 | 10.8 | 9.0 |
| | 20-Nov-11 | | 8.0 | 297 | 3.4 | 12.0 |
| | 18-Dec-11 | | 8.5 | 209 | 2.0 | 11.4 |
| | 15-Jan-12 | (2) | | | | |
| | 19-Feb-12 | (2) | | | | |
| | 18-Mar-12 | | 8.0 | 369 | 16.9 | 7.8 |
| | 15-Apr-12 | | 8.4 | 338 | 7.4 | 11.5 |
| | 13-May-12 | | 8.0 | 383 | 13.7 | 9.4 |
| | 17-Jun-12 | (1) | | | | |
| | 15-Jul-12 | (1) | | | | |
| | 14-Aug-12 | | 8.1 | 489 | 18.5 | 5.7 |
| | 18-Sep-12 | | 7.7 | 426 | 14.8 | 7.4 |
| | 17-Oct-12 | | 7.3 | 315 | 10.6 | 6.9 |
| | 20-Nov-12 | | 7.7 | 350 | 6.1 | 8.6 |
| | 18-Dec-12 | | 7.3 | 720 | 3.8 | 8.9 |
| | 15-Jan-13 | | 7.7 | 642 | 1.8 | 10.9 |
| | 17-Feb-13 | (2) | | | | |
| | 17-Mar-13 | (2) | | | | |
| | 16-Apr-13 | | 8.0 | 292 | 8.9 | 9.5 |
| | 13-May-13 | | 8.0 | 367 | 11.7 | 5.7 |
| | 19-Jun-13 | | 8.1 | 400 | 15.8 | 8.6 |
| | 15-Sep-13 | (1) | | | | |
| | 16-Oct-13 | | 8.6 | 377 | 13.8 | 4.8 |
| | 19-Nov-13 | | 8.3 | 334 | 4.1 | 2.0 |
| | 15-Dec-13 | (2) | | | | |
| | 19-Jan-14 | (2) | | | | |
| | 16-Feb-14 | (2) | | | | |
| | 16-Mar-14 | (2) | | | | |
| | 16-Apr-14 | | 8.0 | 307 | 5.7 | 10.8 |
| | 13-May-14 | | 7.7 | 398 | 13.8 | 10.0 |
| | 15-Jun-14 | (1) | | | | |
| | 15-Jul-14 | | 8.8 | 472 | 15.2 | |
| | 19-Aug-14 | | 8.7 | 289 | 17.6 | 5.1 |
| | 9-Sep-14 | | 8.6 | 560 | 16.0 | 4.5 |
| | 22-Oct-14 | | 7.3 | 416 | 10.1 | 6.9 |
| | 16-Nov-14 | (2) | | | | |
| | 16-Dec-14 | | 8.3 | 253 | 0.4 | |
| | 18-Jan-15 | (2) | | | | |
| | 15-Feb-15 | (3) | | | | |
| | 15-Mar-15 | (2) | | | | |
| | 22-Apr-15 | | 7.9 | 409 | 8.1 | 12.0 |
| | 19-May-15 | | 8.2 | 404 | 12.6 | |
| | 15-Jun-15 | | 7.8 | 515 | 16.7 | 7.8 |
| | 21-Jul-15 | | 8.2 | 475 | 18.3 | |
| | 9-Aug-15 | (1) | | | | |
| | 23-Aug-15 | (1) | | | | |
| | 6-Sep-15 | (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 11-Oct-15 (1) | | | | |
| **(cont'd)** | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.0 | 372 | 7.6 | 10.8 |
| | 9-Dec-15 | 7.6 | 341 | 4.5 | 12.3 |
| | 20-Jan-16 | 7.6 | 317 | 0.4 | 14.0 |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 7.9 | 321 | 6.4 | 12.4 |
| | 21-Apr-16 | 7.9 | 345 | 7.3 | 10.6 |
| | 18-May-16 | 8.1 | 421 | 9.6 | 9.2 |
| | 19-Jun-16 (1) | | | | |
| | 3-Jul-16 | | | | |
| | 17-Jul-16 (1) | | | | |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.4 | 469 | 17.8 | 9.3 |
| | 19-Sep-16 | 7.9 | 395 | 16.9 | 7.2 |
| | 18-Oct-16 | 8.1 | 356 | 14.8 | 11.5 |
| | 24-Oct-16 | 7.7 | 323 | 9.5 | 9.8 |
| | 15-Nov-16 | 7.1 | 309 | 7.7 | 10.6 |
| | 12-Dec-16 | 7.5 | 481 | 1.6 | 15.8 |
| | 24-Jan-17 | 8.0 | 307 | 2.4 | 12.2 |
| | 15-Feb-17 (2) | | | | |
| | 21-Mar-17 | 7.7 | 333 | 0.6 | 13.0 |
| | 19-Apr-17 | 6.2 | 348 | 7.4 | 12.3 |
| | 9-May-17 | 8.4 | 320 | 12.2 | 11.5 |
| | 16-May-17 | 8.6 | 429 | 18.0 | 7.2 |
| | 28-Jun-17 | 8.2 | 429 | 17.1 | 7.8 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.2 | 456 | 18.3 | 7.2 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.0 | 386 | 16.7 | 7.4 |
| | 18-Sep-17 | 8.0 | 384 | 16.5 | 6.7 |
| | 18-Oct-17 | 8.1 | 357 | 11.5 | 9.3 |
| | 15-Nov-17 | 8.1 | 348 | 4.3 | 8.2 |
| | 12-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 23-Feb-18 | 7.9 | 254 | 0.7 | 9.9 |
| | 21-Mar-18 | 8.1 | 300 | (0) | 13.7 |
| | 19-Apr-18 | 8.1 | 281 | 0.6 | 12.6 |
| | 8-May-18 | 8.0 | 504 | 14.0 | 9.2 |
| | 15-May-18 | 7.9 | 477 | 13.5 | 8.7 |
| | 18-Jun-18 | 8.2 | 526 | 15.9 | 9.3 |
| | 18-Jul-18 (1) | | | | |
| | 23-Aug-18 | 8.1 | 487 | 17.8 | 8.5 |
| | 19-Sep-18 (1) | | | | |
| | 25-Oct-18 | 8.1 | 471 | 6.6 | 10.7 |
| | 22-Nov-18 | 8.2 | 736 | 2.1 | 13.2 |
| | 13-Dec-18 | 8.0 | 530 | 2.3 | 11.7 |
| | 18-Jan-19 (2) | | | | |
| | 19-Jan-19 (2) | | | | |
| | 28-Feb-19 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 19-Mar-19 | (1) | | | | |
| **(cont'd)** | 25-Apr-19 | | 8.0 | 253 | 7.2 | 10.3 |
| | 14-May-19 | | 8.1 | 433 | 9.1 | 10.0 |
| | 27-May-19 | | 8.0 | 464 | 11.0 | 9.5 |
| | 21-Jun-19 | | 8.0 | 504 | 13.8 | 9.1 |
| | 30-Jul-19 | (1) | | | | |
| | 30-Aug-19 | (1) | | | | |
| | 27-Sep-19 | (1) | | | | |
| | 22-Oct-19 | (1) | | | | |
| | 21-Nov-19 | (2) | | | | |
| | 20-Dec-19 | (2) | | | | |
| | 24-Jan-20 | (2) | | | | |
| | 21-Feb-20 | (2) | | | | |
| | 25-Mar-20 | (2) | | | | |
| | 28-Apr-20 | | 8.5 | 340 | 8.0 | 11.3 |
| | 20-May-20 | | 8.1 | 500 | 10.1 | 10.1 |
| | 28-May-20 | | 8.6 | 491 | 13.8 | 8.8 |
| | 24-Jun-20 | | 8.2 | 493 | 17.2 | 8.0 |
| | 31-Jul-20 | | 8.3 | 554 | 19.6 | 7.9 |
| | 26-Aug-20 | | 8.0 | 543 | 17.4 | 8.7 |
| | 26-Sep-20 | | 7.9 | 430 | 12.1 | 9.6 |
| | 29-Oct-20 | | 7.5 | 338 | 8.1 | 7.6 |
| | 27-Nov-20 | | 8.1 | 529 | 5.2 | 11.6 |
| | 22-Dec-20 | | 8.0 | 529 | 2.1 | 12.9 |
| | 27-Jan-21 | (2) | | | | |
| | 22-Feb-21 | (2) | | | | |
| | 29-Mar-21 | | 8.0 | 436 | 6.9 | 8.6 |
| | 27-Apr-21 | | 8.4 | 358 | 8.1 | 10.5 |
| | 27-May-21 | | 8.0 | 553 | 11.8 | 10.5 |
| | 22-Jun-21 | (1) | | | | |
| | 22-Jul-21 | | 8.1 | 592 | 17.6 | 9.0 |
| | 25-Aug-21 | (3) | | | | |
| | 28-Sep-21 | (3) | | | | |
| | 26-Oct-21 | (3) | | | | |
| | 23-Nov-21 | (2) | | | | |
| | 21-Dec-21 | (3) | | | | |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (2) | | | | |
| | 21-Apr-22 | | 7.5 | 594 | 4.2 | 9.1 |
| | 25-May-22 | (1) | | | | |
| | 24-Jun-22 | (1) | | | | |
| | 29-Aug-22 | (1) | | | | |
| | 27-Sep-22 | (1) | | | | |
| | 27-Oct-22 | (1) | | | | |
| | 22-Nov-22 | (1) | | | | |
| | 20-Dec-22 | | 8.3 | 270 | 1.6 | 10.5 |
| | 24-Jan-23 | | 7.8 | 496 | 1.4 | 13.0 |
| | 22-Feb-23 | | 7.7 | 509 | 0.9 | 13.1 |
| | 27-Mar-23 | | 8.9 | 396 | 3.3 | 11.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW15** | 21-Apr-23 | 7.9 | 468 | 7.8 | 10.3 |
| **(cont'd)** | 15-May-23 | 8.0 | 517 | 12.4 | 9.7 |
| | 26-Jun-23 (1) | | | | |
| | 25-Jul-23 | 8.1 | 477 | 18.7 | 8.1 |
| | 29-Aug-23 (1) | | | | |
| | 25-Sep-23 (1) | | | | |
| | 31-Oct-23 (1) | | | | |
| | 29-Nov-23 | 7.7 | 559 | 2.0 | 12.2 |
| | 18-Dec-23 | 7.7 | 588 | 4.4 | 10.9 |
| | 31-Jan-24 | 7.6 | 587 | 2.5 | 11.7 |
| | 27-Feb-24 | 7.6 | 255 | 1.2 | 12.0 |
| | 27-Mar-24 | 7.9 | 489 | 6.1 | 11.3 |
| | 29-Apr-24 | 7.9 | 534 | 10.7 | 10.0 |
| | 27-May-24 | 7.5 | 585 | 14.8 | 7.6 |
| | 26-Jun-24 (1) | | | | |
| | 29-Jul-24 (1) | | | | |
| | 27-Aug-24 (1) | | | | |
| | 24-Sep-24 (1) | | | | |
| | 28-Oct-24 (1) | | | | |
| | 18-Nov-24 (1) | | | | |
| | 16-Dec-24 | 7.6 | 467 | 2.8 | 12.1 |
| | 27-Jan-25 | 7.7 | 562 | 0.9 | 12.9 |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | 7.8 | 312 | 3.2 | 8.5 |
| | 28-Apr-25 | 8.0 | 232 | 13.0 | 2.6 |
| | 27-May-25 | 7.7 | 559 | 14.6 | |
| | 25-Jun-25 (1) | | | | |
| | 29-Jul-25 (1) | | | | |
| | 26-Aug-25 (1) | | | | |
| | 30-Sep-25 (1) | | | | |
| | 29-Oct-25 | 7.9 | 332 | 16.9 | 12.2 |
| | 24-Nov-25 | 7.9 | 431 | 4.1 | 13.0 |
| | 15-Dec-25 | 7.9 | 451 | 1.6 | 13.9 |
| **SW16** | 22-May-03 | | | 15.0 | |
| | 23-Jun-03 | | | 19.4 | |
| | 10-Feb-04 (2) | | | | |
| | 19-Apr-04 | 8.0 | 251 | 12.6 | |
| | 19-May-04 | 7.6 | 372 | 12.4 | 7.7 |
| | 24-Jun-04 | 7.3 | 423 | 14.9 | 3.5 |
| | 29-Jul-04 | 7.3 | 481 | 16.4 | 5.1 |
| | 20-Oct-04 | 7.4 | 386 | 7.9 | 8.2 |
| | 17-Nov-04 | 7.2 | 337 | 5.9 | 8.6 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.6 | 344 | 2.9 | 11.9 |
| | 11-Apr-05 | 7.5 | 232 | 8.5 | |
| | 24-May-05 | 7.5 | 359 | 12.3 | 8.9 |
| | 27-Jun-05 | 7.6 | 488 | 19.1 | 7.8 |
| | 11-Jul-05 | 6.8 | 524 | 20.0 | 5.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 22-Aug-05 | 8.3 | 492 | 15.2 | 7.2 |
| **(cont'd)** | 27-Sep-05 | 7.5 | 563 | 13.2 | 7.0 |
| | 24-Oct-05 | 8.9 | 1,065 | 8.6 | 8.4 |
| | 14-Nov-05 | 8.2 | 527 | 5.7 | 10.7 |
| | 12-Dec-05 | 8.0 | 303 | 2.0 | 9.1 |
| | 17-Jan-06 | 6.4 | 180 | 0.4 | 13.4 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.4 | 227 | 1.4 | |
| | 18-Apr-06 | 8.0 | 334 | 11.5 | |
| | 23-May-06 | 7.8 | 417 | 11.5 | |
| | 20-Jun-06 | 7.4 | 529 | 16.1 | |
| | 11-Jul-06 | 7.5 | 577 | 18.3 | |
| | 20-Aug-06 (1) | | | | |
| | 17-Sep-06 (1) | | | | |
| | 19-Oct-06 | 7.6 | 277 | 10.4 | |
| | 27-Nov-06 | 7.6 | 440 | 6.4 | 8.2 |
| | 17-Dec-06 | 7.7 | 451 | 2.5 | 12.4 |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.1 | 409 | 0.2 | 13.6 |
| | 16-Apr-07 | 8.3 | 397 | 2.8 | 12.4 |
| | 13-May-07 | 8.0 | 432 | 10.1 | 7.0 |
| | 15-Jul-07 (1) | | | | |
| | 19-Aug-07 (1) | | | | |
| | 16-Sep-07 (1) | | | | |
| | 14-Oct-07 (1) | | | | |
| | 19-Nov-07 | 7.8 | 576 | 4.6 | 8.4 |
| | 9-Dec-07 (2) | | | | |
| | 21-Jan-08 | 7.4 | 355 | 0.1 | 6.0 |
| | 19-Feb-08 | 7.7 | 115 | 0.2 | 10.7 |
| | 17-Mar-08 | 6.6 | 433 | 0.5 | 14.3 |
| | 1-Apr-08 | 7.3 | 207 | 0.7 | |
| | 23-Apr-08 | 8.0 | 324 | 13.0 | |
| | 21-May-08 | 7.7 | 394 | 8.9 | 6.4 |
| | 18-Jun-08 | 7.6 | 466 | 13.7 | 4.4 |
| | 15-Jul-08 | 7.1 | 537 | 15.2 | 4.0 |
| | 18-Aug-08 | 7.5 | 590 | 10.1 | 3.0 |
| | 17-Sep-08 | 8.3 | 497 | 12.2 | 5.6 |
| | 20-Oct-08 | 7.2 | 445 | 8.8 | 6.5 |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 | 7.8 | 349 | 1.1 | 8.7 |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 | 8.4 | 385 | 0.8 | 10.6 |
| | 15-Mar-09 | 8.5 | 343 | 3.5 | |
| | 12-Apr-09 | 8.8 | 346 | 12.2 | |
| | 17-May-09 | 8.1 | 352 | 20.4 | 7.1 |
| | 14-Jun-09 | 7.7 | 865 | 16.5 | 6.6 |
| | 12-Jul-09 | 8.2 | 484 | 12.1 | 7.8 |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 11-Oct-09 | 7.2 | 478 | 6.9 | 11.0 |
| **(cont'd)** | 15-Nov-09 | 7.4 | 424 | 3.7 | |
| | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 8.0 | 357 | 1.5 | 13.7 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.7 | 406 | 11.7 | 11.1 |
| | 16-May-10 | 8.2 | 339 | 15.1 | 9.0 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.0 | 371 | 16.6 | 9.7 |
| | 18-Jul-10 | 8.0 | 366 | 17.0 | 10.4 |
| | 15-Aug-10 | 7.6 | 421 | 16.2 | 4.9 |
| | 12-Sep-10 (1) | | | | |
| | 17-Oct-10 | 7.7 | 328 | 7.4 | 7.9 |
| | 14-Nov-10 | 7.8 | 269 | 5.8 | 10.1 |
| | 19-Dec-10 | 8.1 | 151 | 0.8 | 11.9 |
| | 16-Jan-11 | 8.2 | 225 | 0.3 | 11.7 |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.1 | 185 | 1.1 | 11.8 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 240 | 3.4 | 14.2 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.0 | 240 | 8.8 | 12.5 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.0 | 298 | 13.8 | 8.3 |
| | 17-Jul-11 | 8.2 | 423 | 20.0 | 8.3 |
| | 14-Aug-11 | 8.2 | 296 | 16.1 | 5.6 |
| | 18-Sep-11 | 8.3 | 302 | 12.8 | 6.2 |
| | 16-Oct-11 | 7.7 | 193 | 9.5 | 7.3 |
| | 20-Nov-11 | 8.0 | 273 | 2.3 | 11.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 19-Dec-11 | 7.5 | 134 | 0.3 | 11.5 |
| **(cont'd)** | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 | 7.9 | 204 | 1.0 | 13.2 |
| | 18-Mar-12 | 8.1 | 168 | 15.8 | 8.2 |
| | 15-Apr-12 | 8.3 | 285 | 6.6 | 10.4 |
| | 13-May-12 | 8.2 | 333 | 14.2 | 7.7 |
| | 17-Jun-12 | 8.2 | 443 | 9.4 | 8.9 |
| | 16-Jul-12 | 8.4 | 401 | 20.7 | 1.8 |
| | 14-Aug-12 | 8.2 | 320 | 15.4 | 6.1 |
| | 18-Sep-12 | 7.4 | 380 | 13.9 | 6.7 |
| | 17-Oct-12 | 6.7 | 321 | 10.6 | 6.7 |
| | 20-Nov-12 | 7.7 | 293 | 6.0 | 7.6 |
| | 18-Dec-12 | 7.2 | | 4.0 | 8.0 |
| | 16-Jan-13 | 7.8 | 207 | 0.2 | 10.7 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 16-Apr-13 | 8.1 | 227 | 6.6 | 10.0 |
| | 13-May-13 | 8.2 | 266 | 11.3 | 5.6 |
| | 19-Jun-13 | 7.9 | 301 | 13.3 | 7.3 |
| | 16-Jul-13 | 8.1 | 440 | 18.0 | 4.9 |
| | 21-Aug-13 | 8.5 | 400 | 17.0 | 1.1 |
| | 18-Sep-13 | 8.9 | 344 | 11.3 | 8.4 |
| | 16-Oct-13 | 8.8 | 368 | 13.1 | 5.0 |
| | 19-Nov-13 | 8.0 | 263 | 2.7 | 2.5 |
| | 18-Dec-13 | 8.1 | 241 | 0.8 | 5.6 |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 7.9 | 131 | (0) | 12.6 |
| | 13-May-14 | 8.0 | 302 | 13.2 | 10.1 |
| | 17-Jun-14 | 7.5 | 400 | 15.5 | 8.0 |
| | 15-Jul-14 | 8.8 | 259 | 14.0 | 4.4 |
| | 19-Aug-14 | 8.3 | 428 | 13.2 | 7.5 |
| | 9-Sep-14 | 8.4 | 474 | 14.8 | 4.5 |
| | 23-Oct-14 | 8.0 | 369 | 6.8 | 6.9 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.6 | 250 | 1.1 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 8.2 | 281 | 6.5 | 12.2 |
| | 19-May-15 | 7.8 | 322 | 13.7 | 13.2 |
| | 15-Jun-15 | 7.7 | 381 | 14.9 | 6.4 |
| | 21-Jul-15 | 7.9 | 419 | 16.3 | |
| | 11-Aug-15 | 7.6 | 428 | 15.3 | 5.8 |
| | 25-Aug-15 | 8.2 | 368 | 15.5 | 5.2 |
| | 8-Sep-15 | 7.5 | 469 | 18.3 | 3.9 |
| | 15-Oct-15 | 7.4 | 344 | 9.7 | 6.4 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.5 | 352 | 7.4 | 9.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 8-Dec-15 | 7.7 | 312 | 3.7 | 16.5 |
| **(cont'd)** | 19-Jan-16 | 7.6 | 234 | (0) | 13.2 |
| | 17-Feb-16 | 7.6 | 162 | 0.0 | 13.4 |
| | 15-Mar-16 | 7.9 | 220 | 4.6 | 13.1 |
| | 21-Apr-16 | 8.0 | 263 | 6.7 | 11.8 |
| | 18-May-16 | 8.2 | 345 | 9.0 | 8.4 |
| | 22-Jun-16 | 7.7 | 413 | 14.9 | 4.8 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 7.9 | 481 | 15.8 | 4.3 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 7.8 | 483 | 17.2 | 2.8 |
| | 19-Sep-16 | 7.4 | 452 | 15.1 | 2.9 |
| | 18-Oct-16 | 7.5 | 434 | 14.0 | 5.6 |
| | 25-Oct-16 | 7.5 | 283 | 4.2 | 9.9 |
| | 15-Nov-16 | 7.6 | 337 | 6.8 | 6.6 |
| | 12-Dec-16 | 7.3 | 412 | 0.5 | 10.8 |
| | 24-Jan-17 | 8.2 | 260 | 2.2 | 12.2 |
| | 16-Feb-17 | 8.0 | 272 | 0.1 | 14.2 |
| | 21-Mar-17 | 8.3 | 285 | 3.7 | 11.5 |
| | 19-Apr-17 | 7.8 | 305 | 11.1 | 11.1 |
| | 9-May-17 | 8.3 | 283 | 9.2 | 11.8 |
| | 16-May-17 | 8.0 | 392 | 11.5 | 6.6 |
| | 28-Jun-17 | 8.0 | 398 | 13.9 | 8.8 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 7.9 | 454 | 15.7 | 4.6 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.5 | 356 | 15.8 | 5.2 |
| | 18-Sep-17 | 7.9 | 425 | 15.6 | 4.9 |
| | 17-Oct-17 | 8.0 | 365 | 10.1 | 8.1 |
| | 14-Nov-17 | 8.2 | 299 | 4.2 | 8.3 |
| | 12-Dec-17 (2) | | | | |
| | 17-Jan-18 (2) | | | | |
| | 24-Feb-18 | 8.0 | 199 | 0.6 | 15.6 |
| | 21-Mar-18 | 7.7 | 262 | (0) | 14.8 |
| | 19-Apr-18 | 7.6 | 230 | 0.4 | 13.3 |
| | 8-May-18 | 8.1 | 388 | 13.8 | 8.8 |
| | 15-May-18 | 7.9 | 334 | 12.1 | 8.6 |
| | 18-Jun-18 | 7.6 | 485 | 12.9 | 4.8 |
| | 19-Jul-18 | 7.5 | 483 | 13.5 | 5.4 |
| | 23-Aug-18 | 7.6 | 465 | 15.6 | 5.3 |
| | 19-Sep-18 | 7.6 | 468 | 14.2 | 5.2 |
| | 25-Oct-18 | 7.6 | 461 | 4.2 | 10.9 |
| | 22-Nov-18 | 7.8 | 437 | 0.2 | 11.8 |
| | 13-Dec-18 | 8.1 | | 0.9 | 12.0 |
| | 19-Jan-19 | 7.9 | 447 | 0.0 | 12.1 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 (1) | | | | |
| | 25-Apr-19 | 8.2 | 210 | 6.6 | 10.8 |
| | 14-May-19 | 8.4 | 319 | 8.9 | 10.7 |
| | 27-May-19 | 8.0 | 370 | 11.0 | 8.8 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 21-Jun-19 | 7.8 | 413 | 12.3 | 6.8 |
| **(cont'd)** | 30-Jul-19 | 7.6 | 422 | 17.7 | 4.2 |
| | 30-Aug-19 | 7.7 | 442 | 19.1 | 5.6 |
| | 27-Sep-19 | 7.5 | 389 | 18.3 | 6.8 |
| | 22-Oct-19 | 7.6 | 398 | 10.2 | 5.9 |
| | 21-Nov-19 | 8.0 | 401 | 0.9 | 8.3 |
| | 20-Dec-19 | 8.1 | 416 | 0.3 | 8.8 |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (1) | 7.9 | 348 | 6.7 | 11.8 |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.1 | 420 | 10.3 | 9.3 |
| | 28-May-20 | 8.5 | 263 | 16.1 | 7.8 |
| | 24-Jun-20 | 8.1 | 376 | 15.5 | 7.4 |
| | 31-Jul-20 | 7.8 | 480 | 18.8 | 4.6 |
| | 26-Aug-20 (1) | 7.4 | 459 | 18.6 | 3.8 |
| | 26-Sep-20 | 7.8 | 360 | 10.9 | 4.4 |
| | 29-Oct-20 | 7.3 | 378 | 9.3 | 6.3 |
| | 27-Nov-20 | 8.1 | 450 | 5.2 | 11.1 |
| | 22-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.3 | 362 | 7.8 | 11.4 |
| | 27-Apr-21 | 8.3 | 342 | 7.8 | 12.3 |
| | 26-May-21 | 7.5 | 471 | 16.5 | 6.3 |
| | 27-May-21 | 7.5 | 471 | 16.5 | 6.3 |
| | 22-Jun-21 | 7.5 | 501 | 15.3 | 5.8 |
| | 22-Jul-21 | 7.8 | 478 | 16.1 | 6.1 |
| | 25-Aug-21 | 7.2 | 518 | 19.0 | 3.9 |
| | 28-Sep-21 | 7.9 | 488 | 12.7 | 8.4 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.4 | 359 | 1.6 | 9.2 |
| | 25-May-22 (1) | 7.6 | 471 | 11.8 | 8.3 |
| | 24-Jun-22 (1) | 7.2 | 557 | 13.1 | 9.9 |
| | 29-Aug-22 (1) | 7.5 | 503 | 13.1 | 10.0 |
| | 27-Sep-22 | 7.6 | 568 | 12.7 | 7.5 |
| | 27-Oct-22 | 7.6 | 371 | 8.7 | 4.1 |
| | 23-Nov-22 | 7.9 | 307 | 2.2 | 6.7 |
| | 21-Dec-22 (1) | | | | |
| | 24-Jan-23 (2) | 7.9 | 249 | 0.2 | 12.7 |
| | 22-Feb-23 | 8.1 | 152 | 0.0 | 12.8 |
| | 28-Mar-23 | 8.9 | 383 | 1.1 | 11.6 |
| | 21-Apr-23 | 7.7 | 375 | 8.5 | 10.2 |
| | 16-May-23 | 8.0 | 405 | 14.9 | 8.0 |
| | 26-Jun-23 | 8.3 | 326 | 23.3 | 5.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW16** | 25-Jul-23 | (1) | | | | |
| **(cont'd)** | 29-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 30-Oct-23 | | 8.2 | 337 | 7.3 | 2.2 |
| | 29-Nov-23 | (1) | | | | |
| | 18-Dec-23 | (1) | | | | |
| | 31-Jan-24 | (1) | | | | |
| | 27-Feb-24 | (1) | | | | |
| | 27-Mar-24 | (1) | | | | |
| | 29-Apr-24 | (3) | | | | |
| | 27-May-24 | | 7.7 | 490 | 15.6 | 6.1 |
| | 26-Jun-24 | | 7.5 | 450 | 18.7 | 4.3 |
| | 29-Jul-24 | (1) | 7.2 | 451 | 20.9 | 3.2 |
| | 26-Aug-24 | | 7.3 | 480 | 19.8 | 3.5 |
| | 24-Sep-24 | | 6.9 | 426 | 16.6 | 1.9 |
| | 28-Oct-24 | | 6.9 | 456 | 7.1 | 5.1 |
| | 18-Nov-24 | | 7.7 | 431 | 5.8 | 7.5 |
| | 16-Dec-24 | | 7.5 | 412 | 1.9 | 10.9 |
| | 27-Jan-25 | (2) | | | | |
| | 24-Feb-25 | (2) | | | | |
| | 24-Mar-25 | | 7.9 | 211 | 1.7 | 9.7 |
| | 28-Apr-25 | | 8.1 | 319 | 17.1 | 2.5 |
| | 27-May-25 | | 8.0 | 417 | 16.6 | 7.6 |
| | 24-Jun-25 | | 7.7 | 475 | 21.1 | 3.8 |
| | 29-Jul-25 | | 7.6 | 542 | 20.6 | 0.1 |
| | 26-Aug-25 | | 7.7 | 412 | 14.8 | 8.7 |
| | 29-Sep-25 | | 7.6 | 426 | 15.7 | 7.7 |
| | 28-Oct-25 | | 7.4 | 438 | 6.2 | 8.8 |
| | 24-Nov-25 | | 7.8 | 359 | 3.5 | 12.5 |
| | 15-Dec-25 | (3) | 8.0 | 386 | 0.5 | 13.6 |
| **SW17** | 22-May-03 | | | | 15.0 | |
| | 10-Feb-04 | | | 315 | 1.0 | 11.6 |
| | 17-Mar-04 | | | 432 | 2.5 | 10.3 |
| | 19-Apr-04 | | 8.2 | 276 | 9.9 | |
| | 19-May-04 | | 8.2 | 386 | 15.6 | |
| | 24-Jun-04 | | 8.1 | 430 | 17.8 | 8.2 |
| | 29-Jul-04 | | 7.9 | 436 | 19.3 | 7.4 |
| | 26-Aug-04 | | 7.9 | 435 | 17.2 | |
| | 22-Sep-04 | | 7.9 | 417 | 16.5 | 8.7 |
| | 20-Oct-04 | | 7.9 | 336 | 8.3 | 11.3 |
| | 17-Nov-04 | | 7.8 | 320 | 5.3 | |
| | 16-Jan-05 | (2) | | | | |
| | 13-Feb-05 | (2) | | | | |
| | 29-Mar-05 | | 7.8 | 297 | 2.7 | |
| | 11-Apr-05 | | 7.5 | 284 | 7.2 | |
| | 24-May-05 | | 7.7 | 350 | 13.4 | 9.6 |
| | 27-Jun-05 | | 7.5 | 452 | 21.4 | 8.5 |
| | 11-Jul-05 | | 6.8 | 477 | 22.3 | 6.6 |
| | 22-Aug-05 | | 8.4 | 431 | 18.5 | 7.8 |
| | 27-Sep-05 | | 7.4 | 409 | 15.4 | 8.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 24-Oct-05 | 7.9 | 475 | 8.4 | 11.6 |
| **(cont'd)** | 14-Nov-05 | 7.8 | 353 | 6.3 | 11.2 |
| | 12-Dec-05 | 8.5 | 324 | 1.4 | 12.3 |
| | 16-Dec-05 | 8.0 | 264 | 1.5 | |
| | 17-Jan-06 | 7.0 | 275 | 2.4 | 13.6 |
| | 19-Feb-06 (2) | | | | |
| | 21-Mar-06 | 8.5 | 348 | 3.5 | |
| | 18-Apr-06 | 8.4 | 341 | 10.2 | |
| | 23-May-06 | 8.1 | 419 | 10.1 | |
| | 20-Jun-06 | 7.8 | 387 | 18.9 | |
| | 11-Jul-06 | 7.8 | 369 | 20.4 | |
| | 23-Aug-06 | 7.3 | 409 | 17.2 | |
| | 20-Sep-06 | 7.4 | 414 | 14.3 | |
| | 19-Oct-06 | 7.3 | 413 | 10.8 | |
| | 27-Nov-06 | 8.1 | 470 | 6.0 | |
| | 17-Dec-06 | 7.9 | 512 | 4.7 | |
| | 21-Jan-07 | 7.7 | 504 | 1.8 | 13.6 |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 431 | 2.3 | |
| | 16-Apr-07 | 8.4 | 411 | 4.4 | |
| | 13-May-07 | 8.3 | 405 | 13.3 | 10.1 |
| | 17-Jun-07 | 8.1 | 472 | 21.1 | 7.0 |
| | 15-Jul-07 | 7.8 | 499 | 19.7 | 6.9 |
| | 19-Aug-07 | 7.8 | 520 | 18.1 | 6.4 |
| | 17-Sep-07 | 7.7 | 397 | 14.0 | 8.1 |
| | 18-Oct-07 | 7.8 | 400 | 12.8 | 8.3 |
| | 19-Nov-07 | 7.9 | 515 | 3.8 | 11.7 |
| | 9-Dec-07 (2) | | | | |
| | 21-Jan-08 | 7.5 | 423 | 2.8 | 12.7 |
| | 19-Feb-08 | 7.9 | 431 | 2.2 | |
| | 17-Mar-08 | 6.9 | 462 | 1.8 | |
| | 1-Apr-08 | 7.7 | 301 | 2.6 | |
| | 23-Apr-08 | 7.8 | 362 | 12.0 | 8.5 |
| | 6-May-08 | 6.7 | 411 | 9.6 | 10.6 |
| | 21-May-08 | 7.3 | 374 | 10.6 | 9.3 |
| | 17-Jun-08 | 7.6 | 406 | 16.4 | 6.9 |
| | 15-Jul-08 | 6.9 | 563 | 14.9 | 7.0 |
| | 18-Aug-08 | 7.3 | 456 | 21.2 | 4.1 |
| | 16-Sep-08 | 8.0 | 419 | 15.1 | 7.1 |
| | 21-Oct-08 | 7.9 | 424 | 7.7 | 8.6 |
| | 23-Nov-08 | 7.8 | 486 | 3.5 | 9.8 |
| | 14-Dec-08 | 7.6 | 365 | 2.6 | 7.6 |
| | 18-Jan-09 | 8.5 | | | |
| | 8-Feb-09 | 8.5 | 430 | 1.6 | 9.9 |
| | 15-Mar-09 | 8.8 | 379 | 4.5 | |
| | 12-Apr-09 | 8.4 | 407 | 8.7 | |
| | 17-May-09 | 8.2 | 349 | 16.0 | 9.2 |
| | 14-Jun-09 | 7.7 | 802 | 17.0 | 8.5 |
| | 12-Jul-09 | 8.0 | 437 | 16.9 | 8.1 |
| | 9-Aug-09 | 5.7 | 424 | 19.7 | 6.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 13-Sep-09 | 8.4 | 411 | 17.3 | 8.3 |
| **(cont'd)** | 11-Oct-09 | 7.2 | 457 | 7.9 | |
| | 15-Nov-09 | 7.4 | 439 | 4.6 | |
| | 13-Dec-09 | 7.7 | 443 | 1.4 | 12.9 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 | 7.8 | 425 | 0.0 | 11.5 |
| | 14-Mar-10 | 7.9 | 424 | 3.6 | 13.7 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 415 | 7.9 | |
| | 16-May-10 | 8.2 | 313 | 12.3 | 10.1 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.1 | 359 | 17.1 | 11.2 |
| | 18-Jul-10 | 8.1 | 404 | 19.5 | 11.0 |
| | 15-Aug-10 | 8.1 | 421 | 19.8 | 7.7 |
| | 12-Sep-10 | 7.9 | 381 | 14.9 | 8.4 |
| | 17-Oct-10 | 7.9 | 320 | 8.7 | 10.3 |
| | 14-Nov-10 | 8.2 | 274 | 5.1 | 12.9 |
| | 19-Dec-10 | 8.4 | 244 | 1.7 | 11.8 |
| | 16-Jan-11 | 8.0 | 255 | 1.6 | 12.7 |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.3 | 253 | 2.4 | 12.8 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.3 | 291 | 3.6 | 12.4 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.3 | 264 | 4.7 | 13.7 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.6 | 241 | 9.0 | 12.0 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.1 | 303 | 14.9 | 4.4 |
| | 17-Jul-11 | 7.8 | 415 | 22.9 | 8.1 |
| | 14-Aug-11 | 8.2 | 285 | 18.5 | 7.3 |
| | 18-Sep-11 | 8.1 | 261 | 13.4 | 8.3 |
| | 16-Oct-11 | 8.0 | 300 | 10.2 | 9.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 20-Nov-11 | 7.6 | 271 | 3.1 | 13.2 |
| **(cont'd)** | 18-Dec-11 | 8.2 | 218 | 2.9 | 12.6 |
| | 15-Jan-12 | 8.3 | 201 | 1.6 | 13.4 |
| | 19-Feb-12 | 8.1 | 226 | 1.6 | 13.7 |
| | 18-Mar-12 | 8.2 | 276 | 11.0 | 10.5 |
| | 15-Apr-12 | 8.5 | 301 | 9.2 | 10.3 |
| | 13-May-12 | 8.0 | 322 | 14.0 | 9.2 |
| | 17-Jun-12 | 8.1 | 419 | 20.8 | 12.6 |
| | 16-Jul-12 | 8.1 | 450 | 23.0 | 5.5 |
| | 14-Aug-12 | 8.0 | 279 | 18.6 | 7.0 |
| | 18-Sep-12 | 7.3 | 336 | 15.9 | 7.2 |
| | 17-Oct-12 | 6.7 | 264 | 8.7 | 7.6 |
| | 20-Nov-12 | 7.9 | 299 | 4.6 | 9.3 |
| | 18-Dec-12 | 7.4 | 634 | 4.0 | 11.1 |
| | 16-Jan-13 | 7.8 | 326 | 3.6 | 10.2 |
| | 20-Feb-13 | 7.9 | 258 | 1.8 | 14.6 |
| | 20-Mar-13 | 8.0 | 251 | 2.3 | 6.0 |
| | 16-Apr-13 | 7.9 | 259 | 5.8 | 9.7 |
| | 13-May-13 | 8.2 | 232 | 10.6 | 8.9 |
| | 19-Jun-13 | 8.2 | 344 | 16.4 | 8.1 |
| | 16-Jul-13 | 8.0 | 416 | 22.3 | 5.9 |
| | 21-Aug-13 | 8.2 | 378 | 19.5 | 6.0 |
| | 18-Sep-13 | 8.0 | 322 | 13.6 | 8.9 |
| | 16-Oct-13 | 8.3 | 365 | 11.3 | 5.7 |
| | 19-Nov-13 | 8.2 | 293 | 4.2 | 2.6 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.1 | 274 | 3.2 | 10.4 |
| | 12-May-14 | 8.0 | 346 | 11.0 | 10.0 |
| | 17-Jun-14 | 8.1 | 366 | 17.9 | 10.6 |
| | 15-Jul-14 | 8.7 | 398 | 18.3 | 4.3 |
| | 19-Aug-14 | 8.4 | 412 | 16.0 | 5.7 |
| | 9-Sep-14 | 8.5 | 430 | 17.8 | 2.1 |
| | 23-Oct-14 | 8.6 | 381 | 8.2 | 8.3 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.2 | 317 | 2.5 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 8.1 | 328 | 7.6 | 12.2 |
| | 19-May-15 | 8.3 | 404 | 15.1 | |
| | 15-Jun-15 | 8.0 | 387 | 17.7 | 7.5 |
| | 21-Jul-15 | 8.4 | 403 | 19.5 | |
| | 11-Aug-15 | 8.1 | 416 | 19.0 | 7.9 |
| | 25-Aug-15 | 8.1 | 373 | 18.8 | 7.0 |
| | 8-Sep-15 | 7.8 | 436 | 21.6 | 5.6 |
| | 15-Oct-15 | 7.9 | 321 | 11.2 | 9.4 |
| | 8-Nov-15 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 18-Nov-15 | 8.0 | 330 | 5.6 | 11.5 |
| **(cont'd)** | 8-Dec-15 | 8.2 | 313 | 3.0 | 21.2 |
| | 19-Jan-16 | 8.1 | 270 | 1.1 | 15.8 |
| | 17-Feb-16 | 8.0 | 301 | 1.6 | 14.9 |
| | 15-Mar-16 | 8.0 | 273 | 5.1 | 13.6 |
| | 21-Apr-16 | 7.9 | 298 | 9.2 | 11.9 |
| | 18-May-16 | 8.4 | 339 | 10.9 | 11.3 |
| | 22-Jun-16 | 8.2 | 393 | 19.4 | 8.1 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.4 | 420 | 20.6 | 7.7 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.2 | 389 | 20.6 | 7.8 |
| | 19-Sep-16 | 7.9 | 382 | 18.3 | 7.7 |
| | 18-Oct-16 | 7.6 | 337 | 14.5 | 12.5 |
| | 25-Oct-16 | 7.9 | 309 | 8.4 | 11.5 |
| | 15-Nov-16 | 7.9 | 464 | 6.6 | 11.5 |
| | 12-Dec-16 | 8.0 | 398 | 1.6 | 13.8 |
| | 24-Jan-17 | 8.0 | 295 | 2.5 | 13.7 |
| | 16-Feb-17 | 8.1 | 311 | 1.5 | 15.3 |
| | 21-Mar-17 | 8.4 | 333 | 4.2 | 12.1 |
| | 19-Apr-17 | 7.9 | 306 | 9.1 | 13.3 |
| | 9-May-17 | 8.3 | 234 | 7.1 | 14.1 |
| | 16-May-17 | 8.8 | 367 | 16.4 | 9.6 |
| | 28-Jun-17 | 8.2 | 377 | 15.6 | 9.2 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 7.9 | 428 | 18.9 | 7.8 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.6 | 340 | 19.0 | 7.3 |
| | 18-Sep-17 | 8.1 | 378 | 17.6 | 7.8 |
| | 17-Oct-17 | 8.1 | 355 | 11.6 | 9.9 |
| | 14-Nov-17 | 8.3 | 325 | 3.4 | 9.4 |
| | 14-Dec-17 | 8.0 | 327 | 2.2 | 14.6 |
| | 18-Jan-18 | 7.8 | 304 | 2.0 | 9.4 |
| | 24-Feb-18 | 8.0 | 264 | 3.1 | 13.1 |
| | 21-Mar-18 | 8.2 | 286 | 2.5 | 14.8 |
| | 19-Apr-18 | 8.0 | 264 | 2.2 | 12.3 |
| | 8-May-18 | 8.3 | 413 | 12.3 | 10.3 |
| | 15-May-18 | 8.2 | 411 | 13.8 | 9.2 |
| | 18-Jun-18 | 8.1 | 435 | 18.7 | 7.4 |
| | 19-Jul-18 | 8.0 | 445 | 20.1 | 7.0 |
| | 23-Aug-18 | 8.0 | 429 | 19.6 | 7.4 |
| | 19-Sep-18 | 7.8 | 444 | 17.1 | 7.1 |
| | 25-Oct-18 | 8.0 | 442 | 5.9 | 10.8 |
| | 22-Nov-18 | 7.9 | | 2.4 | 11.9 |
| | 13-Dec-18 | 8.0 | 497 | 3.5 | 11.6 |
| | 19-Jan-19 | 8.0 | 490 | 2.6 | 12.3 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.3 | 432 | 2.5 | 12.7 |
| | 25-Apr-19 | 8.4 | 353 | 8.2 | 10.7 |
| | 14-May-19 | 8.4 | 362 | 8.8 | 10.8 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 27-May-19 | 8.3 | 373 | 12.1 | 9.7 |
| **(cont'd)** | 21-Jun-19 | 8.1 | 407 | 15.0 | 8.2 |
| | 30-Jul-19 | 7.8 | 423 | 21.5 | 6.6 |
| | 30-Aug-19 | 7.9 | 405 | 18.4 | 7.0 |
| | 27-Sep-19 | 8.0 | 405 | 16.8 | 5.6 |
| | 22-Oct-19 | 8.0 | 413 | 10.7 | 5.9 |
| | 21-Nov-19 | 7.7 | 438 | 2.2 | 6.3 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 | 8.2 | 446 | 3.3 | 12.5 |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 | 8.3 | 407 | 7.5 | 11.5 |
| | 28-Apr-20 | 8.5 | 368 | 6.2 | 12.0 |
| | 20-May-20 | 8.2 | 450 | 11.1 | 10.3 |
| | 28-May-20 | 8.6 | 375 | 17.8 | 8.3 |
| | 24-Jun-20 | 8.4 | 368 | 18.4 | 7.8 |
| | 31-Jul-20 | 8.4 | 432 | 22.1 | 6.9 |
| | 26-Aug-20 | 8.3 | 398 | 15.0 | 9.6 |
| | 26-Sep-20 | 8.2 | 370 | 12.9 | 10.1 |
| | 29-Oct-20 | 8.0 | 402 | 7.4 | 5.9 |
| | 27-Nov-20 | 8.0 | 500 | 4.9 | 11.5 |
| | 22-Dec-20 | 7.9 | 505 | 3.7 | 11.9 |
| | 27-Jan-21 | 7.7 | 458 | 1.1 | 12.8 |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.0 | 371 | 6.6 | 11.8 |
| | 27-Apr-21 | 8.2 | 367 | 7.3 | 12.5 |
| | 26-May-21 | 8.2 | 428 | 18.3 | 8.4 |
| | 27-May-21 | 8.2 | 428 | 18.3 | 8.4 |
| | 22-Jun-21 | 8.2 | 447 | 19.2 | 7.9 |
| | 22-Jul-21 | 8.1 | 435 | 20.2 | 7.9 |
| | 25-Aug-21 | 7.1 | 441 | 23.0 | 7.1 |
| | 28-Sep-21 | 7.9 | 449 | 12.5 | 9.8 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 | 7.7 | 477 | | 11.1 |
| | 21-Dec-21 | 7.8 | 469 | 3.8 | 12.2 |
| | 24-Jan-22 | 7.6 | 447 | 0.0 | 11.1 |
| | 8-Feb-22 | 7.9 | 581 | 0.1 | 10.4 |
| | 16-Mar-22 | 7.6 | 564 | 0.1 | 10.9 |
| | 21-Apr-22 | 8.1 | 479 | 2.5 | 11.6 |
| | 25-May-22 | 8.1 | 444 | 14.5 | 9.4 |
| | 24-Jun-22 | 7.9 | 549 | 10.5 | 10.2 |
| | 29-Aug-22 | 8.2 | 541 | 15.6 | 10.3 |
| | 29-Sep-22 | 8.2 | 374 | 13.1 | 9.7 |
| | 27-Oct-22 | 8.3 | 328 | 9.1 | 8.9 |
| | 23-Nov-22 | 8.4 | 315 | 2.9 | 10.4 |
| | 21-Dec-22 | 8.5 | 223 | 1.0 | 12.5 |
| | 24-Jan-23 | 8.1 | 532 | 1.8 | 13.4 |
| | 22-Feb-23 | 7.5 | 463 | 1.6 | 13.8 |
| | 28-Mar-23 | 8.9 | 436 | 2.5 | 12.7 |
| | 21-Apr-23 | 7.6 | 386 | 8.7 | 10.6 |
| | 16-May-23 | 8.2 | 412 | 13.3 | 9.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17** | 26-Jun-23 | 7.9 | 361 | 20.2 | 8.7 |
| **(cont'd)** | 25-Jul-23 | 8.1 | 387 | 18.2 | 8.0 |
| | 29-Aug-23 | 7.9 | 386 | 17.4 | 7.2 |
| | 25-Sep-23 | 8.1 | 381 | 15.5 | 8.2 |
| | 30-Oct-23 | 8.3 | 315 | 9.1 | 10.5 |
| | 29-Nov-23 | 7.9 | 465 | 2.4 | 12.4 |
| | 18-Dec-23 | 7.9 | 499 | 3.4 | 11.8 |
| | 31-Jan-24 | 8.0 | 496 | 2.5 | 12.6 |
| | 27-Feb-24 | 7.9 | 498 | 2.0 | 12.6 |
| | 27-Mar-24 | 8.0 | 380 | 4.5 | 12.2 |
| | 29-Apr-24 | 8.3 | 445 | 10.0 | 10.5 |
| | 27-May-24 | 7.6 | 434 | 11.8 | 8.3 |
| | 26-Jun-24 | 7.7 | 415 | 19.9 | 7.6 |
| | 29-Jul-24 | 7.6 | 378 | 21.7 | 7.5 |
| | 26-Aug-24 | 8.0 | 400 | 21.7 | 7.7 |
| | 24-Sep-24 | 7.7 | 379 | 18.1 | 8.1 |
| | 28-Oct-24 | 7.5 | 400 | 9.3 | 10.4 |
| | 18-Nov-24 | 8.1 | 409 | 6.0 | 5.1 |
| | 16-Dec-24 | 7.6 | 441 | 1.8 | 12.6 |
| | 27-Jan-25 | 8.4 | 474 | 0.0 | 13.0 |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | 8.0 | 274 | 4.4 | 8.9 |
| | 28-Apr-25 | 8.2 | 311 | 11.8 | 3.1 |
| | 27-May-25 | 8.4 | 406 | 14.2 | 9.2 |
| | 24-Jun-25 | 8.3 | 388 | 22.9 | 8.2 |
| | 29-Jul-25 | 8.3 | 371 | 23.4 | 7.8 |
| | 26-Aug-25 | 7.9 | 335 | 17.4 | 9.1 |
| | 29-Sep-25 | 7.9 | 328 | 17.6 | 8.9 |
| | 28-Oct-25 | 7.9 | 379 | 8.1 | 10.9 |
| | 24-Nov-25 | 8.2 | 381 | 3.9 | 13.8 |
| | 15-Dec-25 | 8.1 | 427 | 1.4 | 14.1 |
| **SW17A** | 22-May-03 | | | 11.0 | |
| | 23-Jun-03 | | | 12.7 | |
| | 10-Feb-04 | | 295 | 2.3 | 11.3 |
| | 17-Mar-04 | | 434 | 4.3 | 9.6 |
| | 19-Apr-04 | 8.2 | 266 | 10.8 | |
| | 19-May-04 | 8.2 | 341 | 11.0 | |
| | 24-Jun-04 | 8.2 | 338 | 11.2 | |
| | 29-Jul-04 | 8.1 | 332 | 11.9 | 10.7 |
| | 26-Aug-04 | 8.2 | 341 | 12.1 | |
| | 22-Sep-04 | 8.1 | 353 | 12.6 | |
| | 20-Oct-04 | 8.1 | 318 | 6.9 | |
| | 16-Nov-04 | 8.0 | 310 | 4.4 | |
| | 16-Dec-04 | 8.1 | 272 | 1.5 | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 8.0 | 315 | 6.8 | |
| | 11-Apr-05 | 7.6 | 275 | 8.9 | |
| | 24-May-05 | 7.7 | 324 | 9.2 | |
| | 27-Jun-05 | 7.7 | 382 | 13.5 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17A** | 11-Jul-05 | 6.8 | 381 | 14.2 | 10.1 |
| **(cont'd)** | 22-Aug-05 | 8.6 | 360 | 12.7 | |
| | 27-Sep-05 | 7.7 | 350 | 11.8 | 10.7 |
| | 24-Oct-05 | 7.8 | 427 | 7.4 | |
| | 14-Nov-05 | 8.6 | 323 | 6.3 | 12.4 |
| | 12-Dec-05 | 8.6 | 295 | 0.2 | 13.6 |
| | 17-Jan-06 | 7.7 | 267 | 2.4 | 13.2 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.7 | 264 | 5.5 | |
| | 18-Apr-06 | 8.4 | 365 | 10.9 | |
| | 23-May-06 | 8.3 | 424 | 10.0 | |
| | 20-Jun-06 | 8.3 | 422 | 12.2 | |
| | 11-Jul-06 | 8.3 | 409 | 13.9 | |
| | 23-Aug-06 | 8.1 | 419 | 12.8 | |
| | 20-Sep-06 | 8.1 | 391 | 11.2 | |
| | 19-Oct-06 | 8.1 | 432 | 9.9 | |
| | 27-Nov-06 | 8.2 | 450 | 7.4 | 11.9 |
| | 17-Dec-06 | 8.1 | 496 | 4.5 | |
| | 21-Jan-07 | 7.9 | 473 | 1.0 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 430 | 3.6 | |
| | 16-Apr-07 | 8.4 | 404 | 4.6 | |
| | 13-May-07 | 8.3 | 408 | 9.0 | |
| | 17-Jun-07 | 8.3 | 452 | 13.3 | 10.4 |
| | 15-Jul-07 | 8.1 | 451 | 13.5 | 9.8 |
| | 19-Aug-07 | 8.3 | 422 | 14.9 | 9.1 |
| | 17-Sep-07 | 8.0 | 418 | 10.9 | 10.0 |
| | 18-Oct-07 | 8.0 | 432 | 11.2 | 9.6 |
| | 19-Nov-07 | 8.1 | 473 | 3.6 | |
| | 10-Dec-07 | 8.1 | 429 | 2.9 | 12.9 |
| | 21-Jan-08 | 7.6 | 395 | 3.3 | |
| | 19-Feb-08 | 7.9 | 434 | 2.6 | |
| | 17-Mar-08 | 6.6 | 450 | 1.5 | |
| | 1-Apr-08 | 7.6 | 355 | 4.4 | |
| | 23-Apr-08 | 7.9 | 324 | 10.4 | 8.3 |
| | 6-May-08 | 6.8 | 407 | 7.2 | |
| | 21-May-08 | 7.3 | 386 | 7.1 | 10.6 |
| | 17-Jun-08 | 7.7 | 425 | 9.0 | 9.4 |
| | 15-Jul-08 | 7.0 | 454 | 11.2 | 8.4 |
| | 18-Aug-08 | 7.4 | 488 | 14.5 | 5.2 |
| | 16-Sep-08 | 8.2 | 331 | 10.2 | 8.4 |
| | 21-Oct-08 | 7.7 | 423 | 5.8 | 8.2 |
| | 23-Nov-08 | 7.8 | 458 | 4.7 | 9.6 |
| | 14-Dec-08 | 7.7 | 398 | 3.4 | 8.5 |
| | 18-Jan-09 | 8.6 | 445 | 1.9 | 11.3 |
| | 8-Feb-09 | 8.8 | 417 | 3.7 | 9.8 |
| | 15-Mar-09 | 8.8 | 366 | 5.9 | |
| | 12-Apr-09 | 8.4 | 396 | 10.9 | |
| | 17-May-09 | 8.3 | 338 | 16.3 | |
| | 14-Jun-09 | 7.7 | 808 | 12.4 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW17A | 12-Jul-09 | 8.4 | 441 | 10.5 | |
| (cont'd) | 9-Aug-09 | 6.1 | 443 | 12.9 | 10.3 |
| | 13-Sep-09 | 8.6 | 401 | 12.1 | |
| | 11-Oct-09 | 7.5 | 460 | 6.9 | |
| | 15-Nov-09 | 7.3 | 414 | 4.1 | |
| | 13-Dec-09 | 7.8 | 443 | 1.9 | |
| | 17-Jan-10 | 8.2 | 449 | 2.4 | 14.0 |
| | 7-Feb-10 | 8.3 | 459 | 1.3 | 11.3 |
| | 14-Mar-10 | 8.0 | 434 | 4.9 | 13.2 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 405 | 6.3 | |
| | 16-May-10 | 8.3 | 320 | 11.0 | 10.9 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.3 | 333 | 12.5 | 13.8 |
| | 18-Jul-10 | 8.2 | 351 | 12.8 | 12.0 |
| | 15-Aug-10 | 8.3 | 348 | 12.8 | 10.6 |
| | 12-Sep-10 | 8.2 | 333 | 11.0 | 10.5 |
| | 17-Oct-10 | 8.1 | 314 | 7.5 | 11.8 |
| | 14-Nov-10 | 8.3 | 276 | 5.6 | 9.1 |
| | 19-Dec-10 | 8.2 | 248 | 2.2 | 12.8 |
| | 16-Jan-11 | 8.4 | 263 | 3.3 | 12.7 |
| | 20-Feb-11 | 8.1 | 254 | 1.5 | 12.2 |
| | 13-Mar-11 | 8.2 | 262 | 4.0 | 11.9 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.2 | 302 | 6.2 | 12.1 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.4 | 255 | 6.6 | 12.4 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.5 | 233 | 7.2 | 13.0 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 271 | 10.2 | 8.2 |
| | 17-Jul-11 | 8.0 | 250 | 13.9 | 8.4 |
| | 14-Aug-11 | 8.5 | 245 | 13.1 | 10.3 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17A** | 18-Sep-11 | 8.1 | 276 | 11.4 | 10.3 |
| **(cont'd)** | 16-Oct-11 | 8.2 | 320 | 8.7 | 10.7 |
| | 20-Nov-11 | 7.5 | 278 | 3.1 | 14.1 |
| | 18-Dec-11 | 8.4 | 226 | 3.3 | 11.5 |
| | 15-Jan-12 | 8.5 | 216 | 2.0 | 13.7 |
| | 19-Feb-12 | 8.1 | 240 | 3.5 | 13.8 |
| | 20-Mar-12 | 8.3 | 258 | 12.1 | 10.0 |
| | 15-Apr-12 | 8.6 | 280 | 5.9 | 12.0 |
| | 13-May-12 | 8.3 | 311 | 10.6 | 11.5 |
| | 17-Jun-12 | 8.3 | 358 | 14.0 | 10.8 |
| | 16-Jul-12 | 8.7 | 381 | 16.0 | 7.3 |
| | 14-Aug-12 | 8.0 | 304 | 12.8 | 7.8 |
| | 18-Sep-12 | 7.2 | 340 | 11.8 | 9.8 |
| | 17-Oct-12 | 6.7 | 303 | 8.9 | 8.1 |
| | 20-Nov-12 | 7.9 | 317 | 6.7 | 9.4 |
| | 16-Dec-12 | 7.6 | 664 | 5.5 | 10.7 |
| | 16-Jan-13 | 8.1 | 318 | 3.0 | 11.9 |
| | 20-Feb-13 | 8.1 | 245 | 1.4 | 15.7 |
| | 20-Mar-13 | 8.2 | 246 | 3.3 | 6.6 |
| | 16-Apr-13 | 7.9 | 259 | 5.8 | 9.7 |
| | 13-May-13 | 8.4 | 277 | 9.0 | 6.4 |
| | 19-Jun-13 | 8.2 | 276 | 10.2 | 11.6 |
| | 16-Jul-13 | 8.0 | 360 | 13.8 | 9.5 |
| | 21-Aug-13 | 8.2 | 345 | 13.8 | 9.7 |
| | 18-Sep-13 | 7.9 | 314 | 9.7 | 11.9 |
| | 16-Oct-13 | 8.5 | 330 | 10.7 | 6.7 |
| | 19-Nov-13 | 7.9 | 298 | 3.9 | 2.4 |
| | 18-Dec-13 | 8.4 | 257 | 1.8 | 4.3 |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.0 | 237 | 4.0 | 10.5 |
| | 13-May-14 | 8.2 | 285 | 9.8 | 10.3 |
| | 17-Jun-14 | 8.3 | 312 | 11.5 | 13.3 |
| | 15-Jul-14 | 8.8 | 324 | 12.0 | 7.0 |
| | 19-Aug-14 | 8.5 | 358 | 11.0 | 8.5 |
| | 9-Sep-14 | 8.5 | 375 | 12.5 | 4.4 |
| | 23-Oct-14 | 8.0 | 375 | 6.9 | 8.1 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 8.6 | 334 | 3.9 | |
| | 20-Jan-15 | 7.7 | 171 | 0.8 | 0.1 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.3 | 229 | 2.1 | 13.5 |
| | 22-Apr-15 | 8.2 | 302 | 6.7 | 12.7 |
| | 19-May-15 | 8.4 | 304 | 11.5 | |
| | 15-Jun-15 | 8.1 | 365 | 12.0 | 9.8 |
| | 21-Jul-15 | 8.1 | 356 | 13.7 | |
| | 11-Aug-15 | 8.2 | 372 | 13.0 | 10.2 |
| | 25-Aug-15 | 8.2 | 323 | 12.8 | 10.5 |
| | 8-Sep-15 | 8.0 | 370 | 14.6 | 8.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17A** | 15-Oct-15 | 8.1 | 320 | 9.8 | 10.7 |
| **(cont'd)** | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.1 | 365 | 7.8 | 12.8 |
| | 8-Dec-15 | 8.2 | 339 | 5.0 | 20.5 |
| | 19-Jan-16 | 8.1 | 272 | 2.0 | 15.4 |
| | 17-Feb-16 | 8.0 | 292 | 3.0 | 14.1 |
| | 15-Mar-16 | 8.1 | 282 | 6.6 | 12.8 |
| | 21-Apr-16 | 8.1 | 264 | 6.1 | 13.3 |
| | 18-May-16 | 8.4 | 334 | 7.9 | 12.7 |
| | 22-Jun-16 | 8.4 | 367 | 14.0 | 10.8 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.5 | 368 | 15.1 | 10.6 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.5 | 376 | 16.0 | 10.6 |
| | 19-Sep-16 | 8.2 | 384 | 15.1 | 9.8 |
| | 18-Oct-16 | 7.8 | 335 | 13.2 | 13.5 |
| | 25-Oct-16 | 8.0 | 294 | 5.3 | 13.3 |
| | 15-Nov-16 | 8.2 | 326 | 7.2 | 12.5 |
| | 12-Dec-16 | 7.9 | 422 | 2.6 | 13.9 |
| | 24-Jan-17 | 8.3 | 320 | 4.1 | 13.0 |
| | 16-Feb-17 | 8.3 | 310 | 1.6 | 15.5 |
| | 21-Mar-17 | 8.4 | 353 | 7.1 | 11.7 |
| | 19-Apr-17 | 8.0 | 311 | 9.4 | 13.2 |
| | 9-May-17 | 8.4 | 238 | 8.7 | 13.5 |
| | 16-May-17 | 8.8 | 332 | 12.6 | 10.8 |
| | 28-Jun-17 | 8.3 | 350 | 10.6 | 11.6 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.1 | 363 | 11.2 | 11.4 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.8 | 287 | 11.8 | 11.8 |
| | 18-Sep-17 | 8.2 | 368 | 13.1 | 10.9 |
| | 17-Oct-17 | 8.3 | 357 | 9.4 | 11.3 |
| | 14-Nov-17 | 8.3 | 349 | 5.8 | 8.7 |
| | 14-Dec-17 | 8.1 | 315 | 2.2 | 14.8 |
| | 18-Jan-18 | 7.9 | 299 | 1.9 | 10.0 |
| | 24-Feb-18 | 8.1 | 269 | 3.8 | 13.0 |
| | 21-Mar-18 | 8.2 | 212 | 1.6 | 14.8 |
| | 19-Apr-18 | 8.2 | 277 | 2.8 | 12.4 |
| | 8-May-18 | 8.4 | 393 | 12.1 | 10.3 |
| | 15-May-18 | 8.2 | 413 | 9.2 | 10.8 |
| | 18-Jun-18 | 8.3 | 453 | 9.8 | 10.7 |
| | 19-Jul-18 | 8.2 | 449 | 9.8 | 10.5 |
| | 23-Aug-18 | 8.4 | 452 | 13.0 | 10.1 |
| | 19-Sep-18 | 8.3 | 448 | 12.1 | 10.0 |
| | 25-Oct-18 | 8.3 | 474 | 5.4 | 11.9 |
| | 22-Nov-18 | 8.2 | 486 | 1.7 | 13.4 |
| | 13-Dec-18 | 8.3 | 484 | 3.3 | 12.7 |
| | 19-Jan-19 | 8.3 | 476 | 1.2 | 13.6 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.5 | 433 | 3.3 | 12.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17A** | 25-Apr-19 | 8.4 | 313 | 6.1 | 11.5 |
| **(cont'd)** | 14-May-19 | 8.5 | 371 | 7.8 | 11.3 |
| | 27-May-19 | 8.5 | 384 | 8.4 | 11.2 |
| | 21-Jun-19 | 8.4 | 411 | 9.7 | 11.0 |
| | 30-Jul-19 | 8.2 | 412 | 13.3 | 9.7 |
| | 30-Aug-19 | 8.3 | 385 | 12.6 | 10.0 |
| | 27-Sep-19 | 8.2 | 442 | 14.2 | 8.9 |
| | 22-Oct-19 | 8.1 | 432 | 8.9 | 9.3 |
| | 21-Nov-19 | 8.1 | 397 | 1.9 | 7.1 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 | 8.1 | 431 | 2.0 | 13.0 |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 | 8.2 | 417 | 5.9 | 11.9 |
| | 28-Apr-20 | 8.4 | 355 | 7.9 | 11.0 |
| | 20-May-20 | 8.3 | 440 | 9.6 | 11.1 |
| | 28-May-20 | 9.0 | 375 | 12.5 | 9.8 |
| | 24-Jun-20 | 8.6 | 421 | 11.5 | 10.2 |
| | 31-Jul-20 | 8.7 | 434 | 14.0 | 9.7 |
| | 26-Aug-20 | 8.1 | 405 | 22.0 | 6.9 |
| | 26-Sep-20 | 8.2 | 410 | 12.9 | 7.7 |
| | 29-Oct-20 | 7.8 | 417 | 8.1 | 8.2 |
| | 27-Nov-20 | 8.4 | 489 | 6.0 | 12.0 |
| | 22-Dec-20 | 12.8 | 492 | 3.9 | 8.3 |
| | 27-Jan-21 | 8.0 | 434 | 1.2 | 11.1 |
| | 22-Feb-21 | 7.6 | 405 | 0.1 | 11.9 |
| | 29-Mar-21 | 8.3 | 350 | 7.0 | 12.1 |
| | 27-Apr-21 | 8.4 | 359 | 8.4 | 11.8 |
| | 26-May-21 | 8.3 | 437 | 11.7 | 10.7 |
| | 27-May-21 | 8.3 | 437 | 11.7 | 10.7 |
| | 22-Jun-21 | 8.0 | 449 | 11.6 | 10.7 |
| | 22-Jul-21 | 8.4 | 457 | 13.2 | 10.4 |
| | 25-Aug-21 | 8.0 | 458 | 16.2 | 9.7 |
| | 28-Sep-21 | 8.1 | 489 | 10.0 | 11.2 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 | 8.1 | 469 | 4.0 | 10.5 |
| | 21-Dec-21 | 8.2 | 453 | 3.9 | 11.9 |
| | 24-Jan-22 | 8.1 | 425 | 0.0 | 10.5 |
| | 8-Feb-22 | 7.6 | 345 | 0.1 | 10.1 |
| | 16-Mar-22 | 7.6 | 531 | 1.0 | 10.3 |
| | 21-Apr-22 | 7.8 | 542 | 0.1 | 9.0 |
| | 26-May-22 | 8.3 | 453 | 10.4 | 11.2 |
| | 24-Jun-22 | 7.8 | 487 | 9.8 | 10.6 |
| | 29-Aug-22 | 8.2 | 467 | 12.4 | 10.6 |
| | 29-Sep-22 | 8.4 | 433 | 9.9 | 11.3 |
| | 27-Oct-22 | 8.4 | 357 | 7.9 | 10.0 |
| | 23-Nov-22 | 8.7 | 340 | 4.0 | 10.7 |
| | 21-Dec-22 | 8.8 | 243 | 1.2 | 12.7 |
| | 24-Jan-23 | 8.2 | 435 | 3.1 | 13.3 |
| | 22-Feb-23 | 7.7 | 467 | 1.6 | 14.1 |
| | 28-Mar-23 | 9.0 | 448 | 3.5 | 12.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW17A** | 21-Apr-23 | 7.6 | 381 | 8.6 | 10.9 |
| **(cont'd)** | 16-May-23 | 8.3 | 409 | 10.5 | 10.4 |
| | 26-Jun-23 | 8.3 | 361 | 13.3 | 9.6 |
| | 25-Jul-23 | 8.4 | 409 | 12.4 | 10.0 |
| | 29-Aug-23 | 7.8 | 344 | 11.8 | 10.2 |
| | 25-Sep-23 | 8.5 | 424 | 12.0 | 10.1 |
| | 30-Oct-23 | 8.2 | 343 | 7.6 | 11.4 |
| | 29-Nov-23 | 7.9 | 511 | 2.4 | 12.8 |
| | 18-Dec-23 | 8.1 | 512 | 5.3 | 11.6 |
| | 31-Jan-24 | 8.1 | 495 | 4.0 | 12.4 |
| | 27-Feb-24 | 8.1 | 501 | 2.3 | 12.5 |
| | 27-Mar-24 | 8.1 | 437 | 6.5 | 11.8 |
| | 29-Apr-24 | 8.4 | 464 | 8.3 | 11.2 |
| | 27-May-24 | 7.9 | 456 | 11.4 | 10.2 |
| | 26-Jun-24 | 8.0 | 480 | 13.0 | 9.9 |
| | 29-Jul-24 | 8.0 | 410 | 15.0 | 9.6 |
| | 26-Aug-24 | 8.2 | 470 | 14.5 | 10.2 |
| | 24-Sep-24 | 8.0 | 445 | 13.7 | 10.0 |
| | 28-Oct-24 | 7.8 | 460 | 8.3 | 11.5 |
| | 18-Nov-24 | 8.0 | 468 | 7.3 | 11.2 |
| | 16-Dec-24 | 7.8 | 458 | 4.5 | 12.4 |
| | 27-Jan-25 | 8.4 | 470 | 1.9 | 13.1 |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 (3) | 8.0 | | 5.0 | 8.6 |
| | 28-Apr-25 | 8.4 | 323 | 12.9 | 2.8 |
| | 27-May-25 | 8.5 | 422 | 12.3 | 10.2 |
| | 24-Jun-25 | 8.5 | 419 | 15.9 | 10.7 |
| | 29-Jul-25 | 8.6 | 419 | 15.5 | 10.6 |
| | 26-Aug-25 | 8.1 | 412 | 12.5 | 11.4 |
| | 29-Sep-25 | 8.1 | 409 | 14.8 | 10.6 |
| | 28-Oct-25 | 8.2 | 453 | 7.2 | 11.9 |
| | 24-Nov-25 | 8.2 | 429 | 5.0 | 13.7 |
| | 15-Dec-25 | 8.2 | 426 | 3.1 | 14.2 |
| **SW18** | 22-May-03 | | | 15.0 | |
| | 23-Jun-03 | | | 15.7 | |
| | 20-Aug-03 | | | 16.4 | |
| | 22-Oct-03 | 7.2 | 485 | 5.7 | |
| | 10-Feb-04 | | 289 | 0.9 | |
| | 16-Mar-04 | 8.0 | 399 | 1.0 | 12.9 |
| | 19-Apr-04 | 8.3 | 272 | 11.1 | |
| | 19-May-04 | 8.2 | 365 | 13.4 | |
| | 24-Jun-04 | 8.2 | 335 | 13.6 | |
| | 29-Jul-04 | 8.2 | 355 | 15.9 | |
| | 26-Aug-04 | 8.2 | 341 | 15.2 | |
| | 22-Sep-04 | 8.2 | 350 | 14.7 | 10.1 |
| | 20-Oct-04 | 8.1 | 321 | 6.7 | |
| | 16-Nov-04 | 8.0 | 312 | 3.7 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW18** | 27-Mar-05 (2) | | | | |
| **(cont'd)** | 11-Apr-05 | 7.6 | 272 | 8.4 | |
| | 24-May-05 | 7.5 | 339 | 10.8 | |
| | 27-Jun-05 | 8.0 | 413 | 17.5 | |
| | 11-Jul-05 | 7.1 | 401 | 18.8 | 8.8 |
| | 22-Aug-05 | 8.7 | 344 | 15.0 | 9.6 |
| | 24-Oct-05 | 8.0 | 482 | 7.6 | |
| | 15-Nov-05 | 8.0 | 290 | 3.7 | 12.9 |
| | 11-Dec-05 (2) | | | | |
| | 17-Jan-06 | 7.7 | 234 | 0.2 | |
| | 20-Mar-06 | 8.1 | 275 | 3.4 | |
| | 18-Apr-06 | 8.5 | 346 | 12.1 | |
| | 23-May-06 | 8.3 | 427 | 10.7 | |
| | 20-Jun-06 | 7.9 | 417 | 14.7 | |
| | 11-Jul-06 | 8.3 | 391 | 17.3 | |
| | 23-Aug-06 | 8.1 | 376 | 15.9 | |
| | 20-Sep-06 | 8.1 | 370 | 11.9 | |
| | 27-Sep-06 | 7.7 | 374 | 13.0 | 10.1 |
| | 19-Oct-06 | 8.3 | 463 | 10.3 | |
| | 27-Nov-06 | 8.2 | 461 | 7.0 | 11.9 |
| | 17-Dec-06 | 8.2 | 487 | 2.8 | |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 421 | 2.6 | |
| | 17-Apr-07 | 8.5 | 403 | 6.6 | |
| | 13-May-07 | 8.2 | 413 | 8.4 | |
| | 17-Jun-07 | 8.3 | 439 | 16.3 | 9.4 |
| | 15-Jul-07 | 8.2 | 426 | 17.7 | 8.8 |
| | 19-Aug-07 | 8.2 | 394 | 19.3 | 8.0 |
| | 17-Sep-07 | 8.0 | 404 | 13.4 | 9.3 |
| | 19-Oct-07 | 8.3 | 437 | 14.9 | 7.1 |
| | 21-Nov-07 | 8.6 | 478 | 4.3 | 12.3 |
| | 12-Dec-07 | 8.0 | 435 | 0.9 | 14.1 |
| | 21-Jan-08 | 7.4 | 406 | 1.1 | |
| | 19-Feb-08 | 7.8 | 411 | 0.6 | |
| | 17-Mar-08 | 8.0 | 430 | 2.5 | |
| | 2-Apr-08 | 7.7 | 356 | 1.4 | |
| | 23-Apr-08 | 7.8 | 334 | 14.3 | 8.8 |
| | 6-May-08 | 7.4 | 415 | 8.6 | 11.2 |
| | 21-May-08 | 7.6 | 387 | 12.8 | 9.2 |
| | 18-Jun-08 | 8.0 | 325 | 12.9 | 8.4 |
| | 15-Jul-08 | 7.5 | 447 | 15.6 | 6.7 |
| | 18-Aug-08 | 7.8 | 492 | 18.8 | 4.5 |
| | 17-Sep-08 | 8.5 | 484 | 12.3 | 6.7 |
| | 20-Oct-08 | 7.8 | 440 | 9.0 | 7.7 |
| | 23-Nov-08 | 8.6 | 483 | 3.5 | 9.8 |
| | 14-Dec-08 | 7.0 | 379 | 2.1 | 8.2 |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 | | 339 | 2.3 | 9.4 |
| | 15-Mar-09 | 8.7 | 353 | 6.4 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW18** | 12-Apr-09 | 8.5 | 356 | 11.1 | |
| **(cont'd)** | 17-May-09 | 8.5 | 345 | 15.0 | 10.3 |
| | 14-Jun-09 | 7.9 | 814 | 12.6 | |
| | 12-Jul-09 | 8.5 | 437 | 12.2 | |
| | 9-Aug-09 | 9.3 | 420 | 16.3 | 9.4 |
| | 13-Sep-09 | 8.0 | 385 | 14.7 | 10.3 |
| | 11-Oct-09 | 7.3 | 492 | 7.2 | |
| | 15-Nov-09 | 7.4 | 433 | 4.0 | |
| | 13-Dec-09 | 7.9 | 490 | 2.2 | 12.4 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 8.2 | 322 | 5.4 | 12.6 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.8 | 419 | 10.9 | 12.7 |
| | 16-May-10 | 8.4 | 311 | 9.8 | 11.2 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.3 | 347 | 14.0 | 12.9 |
| | 18-Jul-10 | 8.2 | 406 | 17.9 | 12.1 |
| | 15-Aug-10 | 8.3 | 370 | 15.5 | 10.2 |
| | 12-Sep-10 | 8.3 | 362 | 12.5 | 10.2 |
| | 17-Oct-10 | 8.2 | 340 | 7.6 | 12.1 |
| | 14-Nov-10 | 8.3 | 279 | 5.7 | 13.1 |
| | 19-Dec-10 | 8.3 | 249 | 1.9 | 14.1 |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 | 8.2 | 227 | 3.2 | 12.5 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.2 | 279 | 3.5 | 13.0 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.2 | 253 | 5.0 | 11.7 |
| | 20-Apr-11 | 8.2 | 197 | 3.6 | 10.7 |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.2 | 257 | 9.6 | 13.2 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW18** | 12-Jun-11 | 8.4 | 284 | 12.1 | 11.7 |
| **(cont'd)** | 17-Jul-11 | 8.4 | 337 | 18.4 | 8.2 |
| | 14-Aug-11 | 8.4 | 251 | 16.1 | 9.5 |
| | 18-Sep-11 | 8.5 | 290 | 12.8 | 10.1 |
| | 16-Oct-11 | 8.2 | 330 | 9.4 | 9.8 |
| | 20-Nov-11 | 7.7 | 266 | 1.7 | 15.0 |
| | 18-Dec-11 | 8.4 | 210 | 3.0 | 13.3 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 | 7.7 | 221 | 1.7 | 13.4 |
| | 18-Mar-12 | 8.3 | 284 | 14.1 | 9.9 |
| | 15-Apr-12 | 8.5 | 234 | 6.8 | 12.0 |
| | 13-May-12 | 8.3 | 325 | 12.8 | 10.7 |
| | 17-Jun-12 | 8.3 | 376 | 17.9 | 8.2 |
| | 16-Jul-12 | 8.4 | 400 | 20.7 | 6.9 |
| | 14-Aug-12 | 8.3 | 442 | 16.1 | 7.6 |
| | 18-Sep-12 | 7.7 | 356 | 14.0 | 9.2 |
| | 17-Oct-12 | 6.9 | 328 | 10.1 | 8.2 |
| | 20-Nov-12 | 7.8 | 315 | 6.6 | 9.6 |
| | 18-Dec-12 | 7.6 | 635 | 4.5 | 10.9 |
| | 16-Jan-13 | 8.2 | 301 | 1.8 | 10.9 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 16-Apr-13 | 8.3 | 263 | 8.7 | 10.0 |
| | 13-May-13 | 8.4 | 290 | 10.7 | 9.2 |
| | 19-Jun-13 | 8.3 | 324 | 12.6 | 10.9 |
| | 16-Jul-13 | 8.2 | 383 | 17.6 | 8.5 |
| | 21-Aug-13 | 8.2 | 365 | 17.0 | 8.7 |
| | 18-Sep-13 | 8.4 | 321 | 11.0 | 11.2 |
| | 16-Oct-13 | 8.5 | 336 | 12.5 | 5.8 |
| | 19-Nov-13 | 8.6 | 293 | 3.8 | 2.8 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.3 | 249 | 3.0 | 10.5 |
| | 13-May-14 | 8.0 | 309 | 12.2 | 11.0 |
| | 18-Jun-14 | 8.2 | 338 | 15.7 | 10.2 |
| | 15-Jul-14 | 7.8 | 325 | | 7.9 |
| | 19-Aug-14 | 8.7 | 387 | 13.5 | 7.0 |
| | 9-Sep-14 | 8.8 | 412 | 15.3 | 4.2 |
| | 23-Oct-14 | 8.3 | 416 | 8.0 | 6.9 |
| | 16-Nov-14 (2) | | | | |
| | 17-Dec-14 | 8.9 | 295 | 2.4 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (2) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 8.2 | 320 | 7.1 | 13.0 |
| | 19-May-15 | 8.5 | 314 | 12.8 | |
| | 15-Jun-15 | 8.2 | 405 | 14.8 | 9.4 |
| | 21-Jul-15 | 8.4 | 379 | 16.5 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW18 | 11-Aug-15 | 8.2 | 393 | 15.9 | 8.7 |
| (cont'd) | 25-Aug-15 | 8.7 | 330 | 15.5 | 7.6 |
| | 8-Sep-15 | 8.0 | 383 | 18.9 | 7.2 |
| | 15-Oct-15 | 8.2 | 315 | 9.7 | 10.3 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.2 | 373 | 8.0 | 13.0 |
| | 8-Dec-15 | 8.3 | 331 | 4.1 | 22.5 |
| | 19-Jan-16 | 8.1 | 266 | (0) | 9.0 |
| | 17-Feb-16 | 8.2 | 289 | 1.3 | 15.0 |
| | 15-Mar-16 | 8.2 | 264 | 5.1 | 13.7 |
| | 21-Apr-16 | 8.2 | 276 | 7.0 | 13.2 |
| | 18-May-16 | 8.6 | 344 | 8.9 | 12.0 |
| | 22-Jun-16 | 8.5 | 364 | 14.7 | 10.3 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.6 | 373 | 16.4 | 9.7 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.6 | 373 | 18.0 | 8.9 |
| | 19-Sep-16 | 8.3 | 391 | 16.1 | 7.9 |
| | 18-Oct-16 | 8.4 | 411 | 15.1 | 12.7 |
| | 24-Oct-16 | 7.9 | 341 | 7.3 | 11.5 |
| | 15-Nov-16 | 8.2 | 339 | 7.1 | 11.7 |
| | 12-Dec-16 | 8.2 | 439 | 1.2 | 14.9 |
| | 25-Jan-17 | 8.3 | 288 | 2.6 | 14.0 |
| | 16-Feb-17 | 8.3 | 154 | (0) | 16.1 |
| | 21-Mar-17 | 8.4 | 330 | 5.5 | 12.3 |
| | 19-Apr-17 | 8.1 | 316 | 10.0 | 13.1 |
| | 9-May-17 | 8.5 | 248 | 8.8 | 13.3 |
| | 16-May-17 | 8.4 | 441 | 10.6 | 9.9 |
| | 28-Jun-17 | 8.2 | 385 | 13.2 | 10.7 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.3 | 404 | 14.8 | 10.3 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.9 | 321 | 15.4 | 10.6 |
| | 18-Sep-17 | 8.3 | 394 | 15.9 | 9.7 |
| | 17-Oct-17 | 8.3 | 404 | 10.9 | 10.6 |
| | 14-Nov-17 | 8.4 | 351 | 5.1 | 8.8 |
| | 14-Dec-17 | 8.1 | 282 | 0.3 | 8.9 |
| | 18-Jan-18 | 7.9 | 284 | 0.5 | 10.8 |
| | 24-Feb-18 | 8.4 | 274 | 4.0 | 14.0 |
| | 21-Mar-18 | 8.3 | 272 | 0.6 | 14.4 |
| | 19-Apr-18 | 8.3 | 230 | 1.8 | 12.9 |
| | 8-May-18 | 8.4 | 406 | 12.3 | 10.3 |
| | 15-May-18 | 8.3 | 394 | 11.4 | 10.2 |
| | 18-Jun-18 | 8.4 | 449 | 13.7 | 9.8 |
| | 19-Jul-18 | 8.3 | 424 | 15.0 | 9.5 |
| | 23-Aug-18 | 8.4 | 448 | 17.0 | 9.3 |
| | 19-Sep-18 | 8.4 | 430 | 14.0 | 9.5 |
| | 25-Oct-18 | 8.4 | 465 | 5.7 | 11.8 |
| | 22-Nov-18 | 8.2 | 103 | 0.0 | 14.9 |
| | 13-Dec-18 | 8.4 | 470 | 2.5 | 13.2 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW18** | 19-Jan-19 | 8.1 | 408 | 0.5 | 13.6 |
| **(cont'd)** | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.4 | 425 | 1.1 | 13.6 |
| | 25-Apr-19 | 8.3 | 262 | 6.7 | 11.3 |
| | 14-May-19 | 8.5 | 361 | 7.9 | 11.4 |
| | 27-May-19 | 8.5 | 383 | 10.0 | 10.9 |
| | 21-Jun-19 | 8.5 | 415 | 11.8 | 10.4 |
| | 30-Jul-19 | 8.4 | 420 | 17.3 | 8.8 |
| | 30-Aug-19 | 8.3 | 369 | 14.5 | 9.5 |
| | 27-Sep-19 | 8.2 | 367 | 13.8 | 10.4 |
| | 22-Oct-19 | 8.2 | 386 | 9.1 | 9.9 |
| | 21-Nov-19 | 8.3 | 405 | 1.7 | 8.6 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | 8.5 | 360 | 7.8 | 11.6 |
| | 20-May-20 | 8.3 | 440 | 9.4 | 11.1 |
| | 28-May-20 | 8.9 | 312 | 15.8 | 9.3 |
| | 24-Jun-20 | 8.6 | 414 | 14.7 | 9.4 |
| | 31-Jul-20 | 8.7 | 432 | 18.0 | 8.8 |
| | 26-Aug-20 | 8.5 | 389 | 18.3 | 8.7 |
| | 26-Sep-20 | 8.1 | 410 | 11.2 | 9.0 |
| | 29-Oct-20 | 8.0 | 364 | 8.2 | 8.6 |
| | 27-Nov-20 | 7.9 | 496 | 5.4 | 11.2 |
| | 22-Dec-20 | 8.3 | 484 | 2.8 | 13.5 |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.2 | 324 | 6.7 | 8.6 |
| | 27-Apr-21 | 8.4 | 358 | 7.2 | 11.6 |
| | 27-May-21 | 8.0 | 432 | 12.2 | 10.7 |
| | 22-Jun-21 | 8.3 | 441 | 13.7 | 10.2 |
| | 22-Jul-21 (3) | | | | |
| | 25-Aug-21 (3) | | | | |
| | 28-Sep-21 (3) | | | | |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (3) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.3 | 438 | 5.0 | 9.7 |
| | 26-May-22 | 8.2 | 446 | 15.7 | 9.9 |
| | 24-Jun-22 | 8.0 | 549 | 9.6 | 10.6 |
| | 29-Aug-22 | | | 16.3 | |
| | 27-Sep-22 | | 455 | 12.0 | 11.6 |
| | 27-Oct-22 | 7.8 | 369 | 8.7 | 7.9 |
| | 22-Nov-22 | 8.2 | 316 | 0.5 | 11.4 |
| | 20-Dec-22 | 8.8 | 242 | 0.9 | 9.6 |
| | 24-Jan-23 | 8.2 | 427 | 1.6 | 14.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW18** | 22-Feb-23 | 8.0 | 456 | 1.1 | 14.4 |
| **(cont'd)** | 27-Mar-23 | 8.4 | 407 | 4.8 | 11.3 |
| | 21-Apr-23 | 8.4 | 348 | 7.4 | 11.3 |
| | 16-May-23 | | | 12.8 | |
| | 26-Jun-23 | 8.3 | 347 | 17.0 | 9.4 |
| | 25-Jul-23 | 8.3 | 413 | 15.5 | 9.3 |
| | 29-Aug-23 | 7.9 | 397 | 15.5 | 4.0 |
| | 25-Sep-23 | 8.5 | 417 | 13.0 | 9.8 |
| | 31-Oct-23 | 8.3 | 339 | 5.8 | 12.3 |
| | 29-Nov-23 | 8.0 | 513 | 0.6 | 13.4 |
| | 18-Dec-23 | 8.1 | 518 | 4.4 | 11.9 |
| | 31-Jan-24 | 8.0 | 500 | 2.9 | 12.8 |
| | 27-Feb-24 | 8.2 | 377 | 2.0 | 12.7 |
| | 27-Mar-24 | 8.1 | 415 | 5.9 | 12.0 |
| | 29-Apr-24 | 8.4 | 452 | 9.3 | 11.0 |
| | 27-May-24 | | | 14.2 | |
| | 26-Jun-24 | 7.8 | 471 | 17.9 | 8.7 |
| | 30-Jul-24 | 7.6 | 400 | 19.9 | 8.9 |
| | 27-Aug-24 | 8.1 | 413 | 20.0 | 8.9 |
| | 24-Sep-24 | 8.0 | 441 | 16.2 | 8.6 |
| | 28-Oct-24 | 7.7 | 465 | 8.4 | 11.6 |
| | 18-Nov-24 | 8.1 | 477 | 7.0 | 11.4 |
| | 16-Dec-24 | 7.6 | 472 | 3.2 | 12.9 |
| | 27-Jan-25 (2) | | | | |
| | 24-Feb-25 (3) | | | | |
| | 24-Mar-25 (3) | 8.2 | 237 | 3.3 | 9.4 |
| | 28-Apr-25 | 8.5 | 341 | 14.7 | 2.6 |
| | 27-May-25 | | | 14.1 | |
| | 25-Jun-25 | 8.6 | 416 | 17.9 | 10.2 |
| | 29-Jul-25 | 8.5 | 582 | 18.8 | 9.6 |
| | 26-Aug-25 | 8.3 | 428 | 14.5 | 11.5 |
| | 30-Sep-25 | 8.2 | 397 | 13.3 | 11.1 |
| | 29-Oct-25 | 8.2 | 436 | 3.6 | 14.1 |
| | 24-Nov-25 | 8.2 | 410 | 3.5 | 14.5 |
| | 15-Dec-25 | 8.3 | 426 | 0.8 | 15.4 |
| **SW19** | 22-May-03 | | | 15.0 | |
| | 23-Jun-03 | | | 18.5 | |
| | 20-Aug-03 | | | 21.5 | |
| | 23-Oct-03 | 7.4 | 531 | 5.6 | |
| | 19-Dec-03 | | | | |
| | 12-Feb-04 | | 318 | 0.8 | 13.0 |
| | 16-Mar-04 | 8.1 | 434 | 0.0 | 13.4 |
| | 19-May-04 | 8.3 | 431 | 15.1 | |
| | 24-Jun-04 | 7.8 | 405 | 12.8 | |
| | 29-Jul-04 | 8.1 | 410 | 15.4 | |
| | 26-Aug-04 | 8.2 | 408 | 16.7 | |
| | 22-Sep-04 | 8.1 | 393 | 13.1 | |
| | 20-Oct-04 | 8.1 | 370 | 7.6 | |
| | 18-Nov-04 | 8.1 | 394 | 8.3 | |
| | 16-Dec-04 | 8.0 | 127 | 0.1 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW19** | 16-Jan-05 (2) | | | | |
| **(cont'd)** | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 8.0 | 322 | 2.5 | |
| | 11-Apr-05 | 7.4 | 290 | 8.0 | |
| | 24-May-05 | 8.0 | 388 | 11.3 | |
| | 28-Jun-05 | 8.4 | 504 | 22.2 | |
| | 11-Jul-05 | 7.6 | 493 | 22.7 | |
| | 22-Aug-05 | 8.6 | 417 | 16.8 | |
| | 27-Sep-05 | 7.9 | 413 | 14.2 | |
| | 25-Oct-05 | 8.2 | 481 | 6.6 | |
| | 14-Nov-05 | 8.1 | 364 | 5.5 | |
| | 12-Dec-05 | 8.6 | 245 | 0.1 | 1.5 |
| | 16-Jan-06 | 8.2 | | 0.1 | 1.6 |
| | 19-Feb-06 (2) | | | | |
| | 20-Mar-06 | 8.5 | 289 | 1.5 | |
| | 18-Apr-06 | 8.5 | 380 | 11.0 | |
| | 23-May-06 | 8.4 | 463 | 12.1 | |
| | 20-Jun-06 | 8.2 | 455 | 17.6 | |
| | 10-Jul-06 | 8.2 | 428 | 17.9 | |
| | 22-Aug-06 | 7.9 | 438 | 20.3 | |
| | 21-Sep-06 | 8.0 | 461 | 10.0 | |
| | 18-Oct-06 | 8.2 | 497 | 11.3 | |
| | 27-Nov-06 | 8.3 | 502 | 6.9 | |
| | 17-Dec-06 | 8.3 | 523 | 2.9 | |
| | 21-Jan-07 | 8.3 | 413 | 0.1 | 8.5 |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 461 | 0.1 | |
| | 16-Apr-07 | 8.4 | 452 | 3.3 | |
| | 13-May-07 | 8.6 | 444 | 16.0 | 9.9 |
| | 17-Jun-07 | 8.3 | 498 | 18.9 | 9.0 |
| | 15-Jul-07 | 8.0 | 488 | 16.5 | 9.6 |
| | 19-Aug-07 | 8.1 | 481 | 16.3 | 9.1 |
| | 17-Sep-07 | 8.1 | 503 | 12.1 | 9.5 |
| | 19-Oct-07 | 8.0 | 465 | 13.6 | 9.4 |
| | 21-Nov-07 | 8.0 | 552 | 4.0 | 12.1 |
| | 12-Dec-07 | 7.8 | 495 | 0.5 | |
| | 22-Jan-08 | 7.8 | 411 | 0.1 | |
| | 20-Feb-08 | 7.5 | 232 | 0.1 | 6.4 |
| | 19-Mar-08 | 7.8 | 484 | 1.0 | |
| | 2-Apr-08 | 7.7 | 365 | 2.7 | |
| | 24-Apr-08 | 7.2 | 383 | 9.1 | 9.1 |
| | 21-May-08 | 7.8 | 430 | 9.1 | 10.0 |
| | 18-Jun-08 | 8.3 | 478 | 13.5 | 8.8 |
| | 15-Jul-08 | 7.6 | 505 | 18.4 | 6.8 |
| | 19-Aug-08 | 8.0 | 542 | 16.5 | 5.6 |
| | 16-Sep-08 | 8.5 | 490 | 12.9 | 7.4 |
| | 22-Oct-08 | 8.0 | 493 | 5.0 | 7.8 |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 | 6.9 | 402 | 1.3 | 8.3 |
| | 18-Jan-09 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW19 | 8-Feb-09 (5) | | | | |
| (cont'd) | 15-Mar-09 | 8.8 | 361 | 6.0 | |
| | 12-Apr-09 | 7.7 | 433 | 6.9 | |
| | 17-May-09 | 8.6 | 407 | 12.5 | |
| | 14-Jun-09 | 8.4 | 701 | 14.0 | |
| | 12-Jul-09 | 8.5 | 492 | 13.7 | 10.5 |
| | 9-Aug-09 | 8.3 | 478 | 16.4 | 9.3 |
| | 13-Sep-09 | 7.0 | 454 | 11.4 | |
| | 11-Oct-09 | 7.7 | 541 | 4.4 | 12.8 |
| | 15-Nov-09 | 7.7 | 483 | 3.2 | |
| | 13-Dec-09 | 7.7 | 560 | 0.1 | 13.1 |
| | 17-Jan-10 | 8.3 | 524 | 0.2 | 12.1 |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.9 | 412 | 6.0 | 12.8 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.2 | 460 | 10.5 | 13.7 |
| | 16-May-10 | 8.5 | 370 | 13.6 | 10.3 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.4 | 394 | 15.8 | 12.6 |
| | 18-Jul-10 | 8.4 | 455 | 20.2 | 11.5 |
| | 15-Aug-10 | 8.3 | 412 | 15.9 | 10.2 |
| | 12-Sep-10 | 8.3 | 369 | 11.9 | 10.6 |
| | 17-Oct-10 | 8.3 | 373 | 7.4 | 12.2 |
| | 14-Nov-10 | 8.3 | 308 | 5.4 | 13.4 |
| | 19-Dec-10 | 8.6 | 269 | 0.8 | 14.1 |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | 8.2 | 271 | (0) | 10.8 |
| | 13-Mar-11 | 8.4 | 271 | 2.6 | 14.9 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 8.4 | 304 | 3.7 | 13.5 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.2 | 251 | 3.8 | 10.5 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.6 | 301 | 10.3 | 12.0 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW19** | 27-May-11 | | | | |
| **(cont'd)** | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.6 | 338 | 13.8 | 9.8 |
| | 17-Jul-11 | 8.4 | 422 | 21.2 | 10.4 |
| | 14-Aug-11 | 8.7 | 297 | 17.7 | 9.6 |
| | 18-Sep-11 | 8.8 | 324 | 13.3 | 11.3 |
| | 16-Oct-11 | 8.2 | 385 | 9.8 | 11.0 |
| | 20-Nov-11 | 8.2 | 313 | 3.1 | 13.7 |
| | 18-Dec-11 | 8.9 | 223 | 1.3 | 13.5 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 | 8.2 | 240 | 1.2 | 12.4 |
| | 18-Mar-12 | 8.4 | 307 | 13.9 | 7.8 |
| | 15-Apr-12 | 9.0 | 303 | 5.2 | 15.5 |
| | 13-May-12 | 8.3 | 345 | 11.6 | 12.4 |
| | 17-Jun-12 | 8.4 | 445 | 21.2 | 6.8 |
| | 16-Jul-12 | 8.4 | 440 | 20.7 | 8.2 |
| | 15-Aug-12 | 8.6 | 440 | 15.8 | 7.0 |
| | 19-Sep-12 | 7.9 | 370 | 10.7 | 10.9 |
| | 18-Oct-12 | 8.3 | 359 | 10.6 | 8.9 |
| | 21-Nov-12 | 8.5 | 286 | 5.5 | 4.5 |
| | 18-Dec-12 | 7.8 | 678 | 4.1 | 9.8 |
| | 15-Jan-13 | 8.1 | 314 | 1.4 | 12.4 |
| | 17-Feb-13 (2) | | | | |
| | 19-Mar-13 | 8.2 | 219 | (0) | 12.8 |
| | 16-Apr-13 | 8.1 | 262 | 5.8 | 10.2 |
| | 14-May-13 | 8.3 | 294 | 6.9 | 9.5 |
| | 19-Jun-13 | 8.5 | 323 | 11.3 | 12.3 |
| | 17-Jul-13 | 8.2 | 420 | 20.5 | 8.8 |
| | 20-Aug-13 | 8.4 | 421 | 18.2 | 10.5 |
| | 18-Sep-13 | 8.4 | 421 | 12.5 | 10.5 |
| | 17-Oct-13 | 8.5 | 378 | 11.4 | 6.0 |
| | 20-Nov-13 | 8.0 | 305 | 2.6 | 4.1 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.4 | 282 | 4.4 | 10.3 |
| | 13-May-14 | 8.6 | 354 | 14.2 | 10.3 |
| | 18-Jun-14 | 8.3 | 354 | 15.5 | 10.7 |
| | 15-Jul-14 | 7.8 | 410 | 17.0 | 8.5 |
| | 19-Aug-14 | 8.6 | 445 | 13.8 | 5.4 |
| | 9-Sep-14 | 8.5 | 459 | 15.4 | 5.0 |
| | 21-Oct-14 | 8.3 | 451 | 10.3 | 6.0 |
| | 16-Nov-14 (3) | | | | |
| | 14-Dec-14 (3) | | | | |
| | 18-Jan-15 (3) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (3) | | | | |
| | 23-Apr-15 | 8.4 | 306 | 3.2 | 15.4 |
| | 20-May-15 | 8.4 | 334 | 12.2 | 14.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW19 (cont'd) | 15-Jun-15 | 8.4 | 423 | 16.5 | 9.0 |
| | 21-Jul-15 | 8.4 | 470 | 19.0 | |
| | 12-Aug-15 | 8.3 | 412 | 15.4 | 10.1 |
| | 23-Aug-15 | | | | |
| | 9-Sep-15 | 8.0 | 409 | 18.7 | 5.2 |
| | 16-Oct-15 | 8.1 | 343 | 8.4 | 11.9 |
| | 8-Nov-15 | | | | |
| | 19-Nov-15 | 8.1 | 433 | 9.1 | 13.7 |
| | 8-Dec-15 | 8.3 | 356 | 3.8 | 23.1 |
| | 19-Jan-16 | 8.1 | 266 | (0) | 9.0 |
| | 14-Feb-16 (2) | | | | |
| | 13-Mar-16 (5) | | | | |
| | 21-Apr-16 | 8.4 | 13 | 9.0 | (6) |
| | 17-May-16 | 8.6 | 379 | 10.3 | 11.6 |
| | 22-Jun-16 | 8.5 | 413 | 17.3 | 9.8 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.5 | 422 | 18.0 | 9.4 |
| | 7-Aug-16 | | | | |
| | 25-Aug-16 | 8.3 | 434 | 18.9 | 11.1 |
| | 19-Sep-16 | 8.1 | 414 | 14.7 | 9.1 |
| | 17-Oct-16 | 7.7 | 457 | 12.2 | 10.6 |
| | 15-Nov-16 | 7.6 | 355 | 4.9 | 13.8 |
| | 12-Dec-16 | 7.7 | 311 | 0.1 | 16.9 |
| | 24-Jan-17 | 8.2 | 312 | 1.9 | 14.4 |
| | 17-Feb-17 | 8.3 | 314 | (0) | 16.1 |
| | 22-Mar-17 | 8.6 | 311 | (0) | 12.1 |
| | 19-Apr-17 | 7.8 | 344 | 10.4 | 12.7 |
| | 16-May-17 | 8.6 | 483 | 10.6 | 8.5 |
| | 28-Jun-17 | 8.4 | 415 | 13.1 | 10.7 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.5 | 465 | 18.1 | 9.6 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.5 | 445 | 17.3 | 9.5 |
| | 17-Sep-17 | 8.4 | 432 | 16.9 | 9.3 |
| | 18-Oct-17 | 8.5 | 408 | 10.4 | 8.0 |
| | 14-Nov-17 | 8.5 | 383 | 4.8 | 9.0 |
| | 14-Dec-17 | 8.1 | 213 | (0) | 15.8 |
| | 17-Jan-18 | | 259 | (0) | 10.6 |
| | 24-Feb-18 | 8.5 | 271 | 2.3 | 15.2 |
| | 20-Mar-18 | 8.4 | 281 | (0) | 17.3 |
| | 18-Apr-18 | 8.7 | 492 | 2.8 | 10.2 |
| | 14-May-18 | 8.5 | 461 | 14.3 | 9.9 |
| | 18-Jun-18 | 8.4 | 467 | 8.3 | 9.4 |
| | 19-Jul-18 | 8.3 | 475 | 16.1 | 9.5 |
| | 23-Aug-18 | 8.5 | 489 | 18.2 | 9.2 |
| | 19-Sep-18 | 8.3 | 483 | 13.9 | 9.8 |
| | 24-Oct-18 | 8.6 | 523 | 5.0 | 12.7 |
| | 21-Nov-18 | 8.2 | 527 | 0.0 | 14.3 |
| | 13-Dec-18 | 8.4 | | 1.2 | 13.6 |
| | 19-Jan-19 | 8.2 | 427 | 0.0 | 16.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW19** | 26-Feb-19 (2) | | | | |
| **(cont'd)** | 15-Mar-19 (1) | | | | |
| | 27-May-19 | 8.6 | 418 | 12.1 | 10.5 |
| | 21-Jun-19 | 8.5 | 443 | 15.4 | 9.8 |
| | 30-Jul-19 | 8.4 | 426 | 21.5 | 8.6 |
| | 30-Aug-19 | 7.8 | 939 | 16.3 | 8.3 |
| | 27-Sep-19 | 7.9 | 529 | 17.9 | 7.6 |
| | 22-Oct-19 | 7.7 | 492 | 9.3 | 7.9 |
| | 21-Nov-19 | 8.0 | 419 | 0.6 | 7.9 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (1) | | | | |
| | 28-Apr-20 | 8.6 | 390 | 7.5 | 11.9 |
| | 28-May-20 | 9.2 | 423 | 12.0 | 10.7 |
| | 24-Jun-20 | 8.8 | 426 | 15.2 | 9.7 |
| | 31-Jul-20 | 7.4 | 413 | 15.5 | 10.4 |
| | 26-Aug-20 | 8.1 | 441 | 15.6 | 9.5 |
| | 26-Sep-20 | 8.1 | 433 | 12.7 | 10.2 |
| | 29-Oct-20 | 7.3 | 480 | 7.9 | 7.6 |
| | 26-Nov-20 (3) | | | | |
| | 23-Dec-20 (3) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (3) | | | | |
| | 29-Mar-21 | 8.1 | 465 | 8.0 | 11.0 |
| | 27-Apr-21 (1) | | | | |
| | 27-May-21 | 8.4 | 482 | 12.5 | 12.5 |
| | 22-Jun-21 | 8.4 | 476 | 15.7 | 10.0 |
| | 22-Jul-21 | 8.3 | 512 | 14.8 | 10.2 |
| | 25-Aug-21 | 8.2 | 498 | 15.7 | 9.9 |
| | 28-Sep-21 | 8.2 | 532 | 11.8 | 10.9 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (3) | | | | |
| | 24-Jan-22 (3) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (3) | | | | |
| | 21-Apr-22 | 7.9 | 570 | 3.4 | 10.3 |
| | 24-May-22 | 7.2 | 560 | 10.2 | 11.7 |
| | 25-Jun-22 | | | 9.7 | |
| | 26-Aug-22 | | | 13.4 | |
| | 27-Sep-22 | | | 11.8 | |
| | 28-Oct-22 | | | 7.0 | |
| | 22-Nov-22 | | | 0.5 | |
| | 17-May-23 | | | 10.5 | |
| | 27-Jun-23 | | | 16.4 | |
| | 25-Jul-23 | | | 19.2 | |
| | 29-Aug-23 | | | 16.6 | |
| | 26-Sep-23 | | | 13.0 | |
| | 1-Nov-23 | | | 2.8 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW19** | 28-May-24 | | | 15.1 | |
| **(cont'd)** | 27-Jun-24 | | | 16.1 | |
| | 30-Jul-24 | | | 20.7 | |
| | 28-Aug-24 | | | 18.1 | |
| | 25-Sep-24 | | | 17.3 | |
| | 29-Oct-24 | | | 10.6 | |
| | 27-May-25 | | | 13.0 | |
| | 25-Jun-25 | | | 19.6 | |
| | 29-Jul-25 | | | 20.7 | |
| | 27-Aug-25 | | | 13.1 | |
| | 30-Sep-25 | | | 13.4 | |
| | 29-Oct-25 | | | 4.0 | |
| **SW20** | 22-May-03 | | | 7.0 | |
| | 23-Jun-03 | | | 6.9 | |
| | 25-Sep-03 (1) | | | | |
| | 16-Mar-04 | 7.6 | 485 | 6.7 | 7.5 |
| | 21-Apr-04 | 7.4 | 261 | 6.4 | |
| | 19-May-04 | 7.4 | 334 | 6.8 | |
| | 24-Jun-04 | 7.4 | 331 | 7.0 | 11.4 |
| | 29-Jul-04 | 7.1 | 328 | 7.7 | 11.8 |
| | 26-Aug-04 | 7.3 | 337 | 7.8 | |
| | 22-Sep-04 | 7.5 | 358 | 8.9 | 9.7 |
| | 21-Oct-04 (1) | | | | |
| | 17-Nov-04 (1) | | | | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.7 | 345 | 6.9 | 11.9 |
| | 11-Apr-05 | 7.1 | 254 | 7.1 | |
| | 24-May-05 | 7.3 | 346 | 8.2 | |
| | 28-Jun-05 | 8.3 | 421 | 13.4 | |
| | 11-Jul-05 | 6.8 | 406 | 12.8 | |
| | 22-Aug-05 | 7.6 | 240 | 12.2 | 10.2 |
| | 27-Sep-05 | 7.5 | 367 | 11.7 | 9.7 |
| | 23-Oct-05 (1) | | | | |
| | 13-Nov-05 (1) | | | | |
| | 12-Dec-05 | 8.2 | 328 | 2.5 | 10.6 |
| | 17-Jan-06 | 6.4 | 303 | 5.1 | 11.8 |
| | 19-Feb-06 (2) | | | | |
| | 20-Mar-06 | 8.2 | 323 | 6.9 | |
| | 18-Apr-06 | 7.9 | 371 | 9.5 | |
| | 23-May-06 | 7.8 | 460 | 10.2 | |
| | 20-Jun-06 | 7.7 | 455 | 11.2 | |
| | 11-Jul-06 | 7.7 | 438 | 12.1 | |
| | 23-Aug-06 | 7.5 | 444 | 11.0 | |
| | 20-Sep-06 | 7.6 | 414 | 11.0 | |
| | 18-Oct-06 | 7.6 | 441 | 10.1 | |
| | 27-Nov-06 | 7.7 | 489 | 7.6 | 10.9 |
| | 17-Dec-06 | 7.7 | 521 | 6.3 | 12.4 |
| | 21-Jan-07 | 7.9 | 498 | 5.7 | 12.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 18-Feb-07 | 8.1 | 490 | 5.2 | 12.2 |
| **(cont'd)** | 18-Mar-07 | 8.0 | 423 | 5.7 | 12.3 |
| | 16-Apr-07 | 8.0 | 435 | 5.8 | 12.5 |
| | 13-May-07 | 8.0 | 446 | 9.8 | |
| | 17-Jun-07 | 8.1 | 494 | 12.0 | 9.7 |
| | 15-Jul-07 | 7.9 | 463 | 11.3 | 9.7 |
| | 19-Aug-07 | 8.7 | 469 | 13.4 | |
| | 14-Oct-07 (1) | | | | |
| | 18-Nov-07 (1) | | | | |
| | 9-Dec-07 (2) | | | | |
| | 21-Jan-08 | 7.5 | 380 | 5.7 | |
| | 19-Feb-08 | 7.7 | 451 | 5.0 | 12.0 |
| | 17-Mar-08 | 7.5 | 476 | 7.2 | |
| | 1-Apr-08 | 7.6 | 345 | 4.8 | |
| | 23-Apr-08 | 7.8 | 370 | 8.5 | 10.6 |
| | 20-May-08 | 6.9 | 255 | 10.2 | |
| | 17-Jun-08 | 8.2 | 462 | 7.9 | 9.8 |
| | 15-Jul-08 | 6.9 | 491 | 9.4 | 7.7 |
| | 18-Aug-08 | 5.7 | 293 | 11.2 | 5.8 |
| | 16-Sep-08 | 7.7 | 508 | 8.5 | 8.4 |
| | 20-Oct-08 | 7.5 | 414 | 8.0 | 8.5 |
| | 23-Nov-08 | | 513 | 6.6 | 8.1 |
| | 14-Dec-08 | 7.2 | 403 | 5.5 | 8.3 |
| | 18-Jan-09 | 7.9 | 457 | 5.3 | 9.5 |
| | 8-Feb-09 | | 443 | 6.9 | 7.9 |
| | 15-Mar-09 | 8.1 | 379 | 7.8 | |
| | 12-Apr-09 | 8.0 | 430 | 8.4 | |
| | 17-May-09 | 7.7 | 375 | 11.3 | |
| | 14-Jun-09 | 7.3 | 885 | 10.1 | |
| | 12-Jul-09 | 8.2 | 478 | 8.9 | 10.4 |
| | 9-Aug-09 | 8.4 | 481 | 9.6 | 10.9 |
| | 13-Sep-09 | 9.1 | 426 | 10.4 | |
| | 11-Oct-09 | 6.3 | 492 | 7.9 | |
| | 15-Nov-09 | 7.2 | 426 | 3.9 | |
| | 13-Dec-09 | 7.4 | 456 | 2.4 | 12.1 |
| | 17-Jan-10 | 7.7 | | 3.8 | 12.1 |
| | 7-Feb-10 | 7.8 | 479 | 1.5 | 12.6 |
| | 14-Mar-10 | 7.8 | 423 | 7.8 | 11.9 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.7 | 447 | 8.4 | 12.8 |
| | 16-May-10 | 8.0 | 335 | 9.3 | 11.4 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.8 | 347 | 9.9 | 14.1 |
| | 18-Jul-10 | 7.7 | 351 | 9.8 | 11.7 |
| | 15-Aug-10 | 8.1 | 349 | 11.7 | 9.6 |
| | 12-Sep-10 | 7.7 | 300 | 8.7 | 11.0 |
| | 17-Oct-10 | 7.6 | 295 | 7.4 | 10.4 |
| | 14-Nov-10 | 7.6 | 287 | 6.8 | |
| | 19-Dec-10 | 8.1 | 261 | 5.4 | 11.3 |
| | 15-Jan-11 | 7.8 | 262 | 6.0 | 11.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 16-Jan-11 | 8.0 | 295 | 5.2 | 12.4 |
| **(cont'd)** | 20-Feb-11 | 7.9 | 284 | 5.5 | 12.0 |
| | 13-Mar-11 | 8.0 | 309 | 7.2 | 11.0 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.0 | 282 | 6.8 | 12.0 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.9 | 256 | 6.8 | 13.4 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.7 | 240 | 8.4 | 7.8 |
| | 17-Jul-11 | 7.9 | 331 | 10.2 | 11.2 |
| | 14-Aug-11 | 8.0 | 256 | 12.3 | 11.6 |
| | 18-Sep-11 | 7.5 | 213 | 10.0 | 10.3 |
| | 16-Oct-11 | 8.0 | 324 | 7.7 | 11.4 |
| | 20-Nov-11 | 7.8 | 288 | 3.5 | 12.7 |
| | 18-Dec-11 | 6.8 | 261 | 0.3 | 10.9 |
| | 19-Feb-12 | 7.1 | 272 | 5.1 | 12.7 |
| | 18-Mar-12 | 7.7 | 251 | 7.9 | 10.8 |
| | 15-Apr-12 | 8.7 | 306 | 6.0 | 10.8 |
| | 13-May-12 | 7.8 | 360 | 12.1 | 9.2 |
| | 17-Jun-12 | 7.7 | 383 | 12.3 | 8.4 |
| | 16-Jul-12 | 7.9 | 425 | 17.2 | 5.8 |
| | 14-Aug-12 | 7.6 | 451 | 12.8 | 6.6 |
| | 18-Sep-12 | 6.8 | 355 | 10.9 | 10.6 |
| | 17-Oct-12 | 6.8 | 456 | 8.0 | 7.4 |
| | 20-Nov-12 | 7.8 | 339 | 7.4 | 8.7 |
| | 18-Dec-12 | 7.5 | 728 | 6.6 | 10.1 |
| | 15-Jan-13 | 7.7 | 352 | 5.7 | 11.4 |
| | 20-Feb-13 | 8.1 | 282 | 4.1 | 13.4 |
| | 19-Mar-13 | 7.9 | 241 | 5.0 | 9.7 |
| | 16-Apr-13 | 7.1 | 265 | 6.5 | 9.7 |
| | 13-May-13 | 7.5 | 271 | 7.6 | 10.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 18-Jun-13 | 7.8 | 334 | 9.7 | 8.4 |
| **(cont'd)** | 16-Jul-13 | 7.9 | 357 | 9.7 | 10.0 |
| | 21-Aug-13 | 8.0 | 356 | 11.0 | 10.1 |
| | 18-Sep-13 | 8.5 | 317 | 8.3 | 12.4 |
| | 16-Oct-13 | 8.7 | 337 | 9.2 | 7.0 |
| | 19-Nov-13 | 7.4 | 329 | 5.9 | 6.0 |
| | 17-Dec-13 | 7.8 | 316 | 5.0 | 4.0 |
| | 21-Jan-14 | 7.9 | 201 | 3.5 | 3.4 |
| | 20-Feb-14 | 7.7 | 314 | 5.0 | 7.8 |
| | 18-Mar-14 | 7.3 | 324 | 2.8 | 4.1 |
| | 15-Apr-14 | 7.7 | 267 | 5.9 | 11.9 |
| | 12-May-14 | 7.5 | 320 | 9.2 | 10.3 |
| | 17-Jun-14 | 8.1 | 336 | 9.4 | 11.5 |
| | 14-Jul-14 | 8.9 | 403 | 10.8 | 2.0 |
| | 18-Aug-14 | 8.4 | 192 | 10.9 | 6.6 |
| | 8-Sep-14 | 8.8 | 398 | 10.4 | 8.9 |
| | 23-Oct-14 | 7.9 | 410 | 7.9 | 4.6 |
| | 16-Dec-14 | 8.2 | 383 | 5.9 | |
| | 20-Jan-15 | 6.9 | 255 | 4.4 | 1.2 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.3 | 195 | 5.3 | 12.1 |
| | 21-Apr-15 | 7.7 | 260 | 6.8 | 11.8 |
| | 19-May-15 | 8.0 | 321 | 9.6 | 15.6 |
| | 15-Jun-15 | 7.8 | 387 | 10.6 | 10.0 |
| | 21-Jul-15 | 8.0 | 376 | 11.1 | |
| | 11-Aug-15 | 8.0 | 404 | 12.4 | 10.3 |
| | 23-Aug-15 | | | | |
| | 8-Sep-15 | 7.8 | 372 | 11.6 | 11.4 |
| | 15-Oct-15 | 7.4 | 323 | 8.4 | 7.1 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.9 | 383 | 8.0 | 11.8 |
| | 8-Dec-15 | 8.0 | 370 | 5.8 | 16.3 |
| | 19-Jan-16 | 7.9 | 287 | 1.8 | 15.1 |
| | 17-Feb-16 | 7.7 | 344 | 4.5 | 13.6 |
| | 15-Mar-16 | 7.5 | 284 | 7.1 | 12.9 |
| | 20-Apr-16 | 7.4 | 300 | 7.0 | 12.9 |
| | 17-May-16 | 7.9 | 393 | 9.7 | 11.9 |
| | 22-Jun-16 | 7.9 | 357 | 9.3 | 11.1 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.0 | 372 | 10.3 | 11.0 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.3 | 379 | 12.8 | 11.1 |
| | 19-Sep-16 | 8.2 | 388 | 13.0 | 9.8 |
| | 17-Oct-16 | 7.5 | 353 | 13.7 | 5.9 |
| | 15-Nov-16 | 7.9 | 500 | 6.9 | 11.4 |
| | 12-Dec-16 | 7.8 | 442 | 0.0 | 15.5 |
| | 24-Jan-17 | 7.8 | 328 | 6.2 | 12.1 |
| | 16-Feb-17 | 8.1 | 357 | 3.7 | 13.5 |
| | 21-Mar-17 | 7.9 | 388 | 7.0 | 12.1 |
| | 19-Apr-17 | 7.6 | 344 | 8.4 | 14.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 16-May-17 | 8.4 | 349 | 9.9 | 12.5 |
| **(cont'd)** | 28-Jun-17 | 7.7 | 309 | 8.4 | 11.5 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 | 8.1 | 339 | 9.4 | 11.6 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.3 | 309 | 9.6 | 11.8 |
| | 17-Sep-17 | 7.8 | 379 | 9.9 | 10.3 |
| | 17-Oct-17 | 8.0 | 377 | 8.8 | 10.3 |
| | 14-Nov-17 | 8.0 | 391 | 6.8 | 8.0 |
| | 14-Dec-17 | 7.9 | 367 | 4.7 | 12.5 |
| | 17-Jan-18 | 7.9 | 341 | 5.2 | 7.8 |
| | 23-Feb-18 | 7.9 | 299 | 6.4 | 9.0 |
| | 20-Mar-18 | 8.0 | 356 | 6.3 | 13.4 |
| | 18-Apr-18 | 8.1 | 544 | 6.4 | 7.3 |
| | 14-May-18 | 7.7 | 478 | 9.3 | 11.6 |
| | 18-Jun-18 | 7.8 | 501 | 10.9 | 10.4 |
| | 19-Jul-18 | 7.7 | 500 | 9.0 | 10.1 |
| | 24-Aug-18 | 8.1 | 488 | 12.3 | 9.8 |
| | 19-Sep-18 | 8.2 | 477 | 10.7 | 9.9 |
| | 25-Oct-18 | 7.9 | 453 | 3.7 | 8.2 |
| | 22-Nov-18 | 8.1 | | 3.1 | 12.1 |
| | 13-Dec-18 | 8.0 | | 5.5 | 10.8 |
| | 19-Jan-19 | 7.8 | 500 | 5.0 | 11.4 |
| | 26-Feb-19 (2) | | | | |
| | 19-Mar-19 | 7.9 | 433 | 6.0 | 11.6 |
| | 25-Apr-19 | 7.4 | 373 | 6.3 | 10.4 |
| | 27-May-19 | 8.0 | 428 | 10.4 | 10.7 |
| | 21-Jun-19 | 7.7 | 457 | 7.8 | 10.2 |
| | 30-Jul-19 | 7.9 | 457 | 10.6 | 9.6 |
| | 30-Aug-19 | 8.1 | 904 | 10.8 | 10.0 |
| | 26-Sep-19 (1) | | | | |
| | 23-Oct-19 (1) | | | | |
| | 21-Nov-19 (1) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 25-Mar-20 | 7.7 | 420 | 6.7 | 11.1 |
| | 28-Apr-20 | 7.8 | 385 | 7.6 | 11.1 |
| | 28-May-20 | 8.4 | 434 | 9.4 | 9.9 |
| | 24-Jun-20 | 8.1 | 409 | 9.3 | 10.2 |
| | 31-Jul-20 | 8.1 | 500 | 9.7 | 9.6 |
| | 25-Aug-20 (1) | | | | |
| | 29-Oct-20 | 7.3 | 392 | 8.8 | 7.5 |
| | 26-Nov-20 (2) | | | | |
| | 23-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.6 | 386 | 6.9 | 11.8 |
| | 27-Apr-21 | 7.6 | 399 | 6.8 | 10.6 |
| | 27-May-21 | 7.6 | 490 | 9.8 | 10.8 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 22-Jun-21 | 8.1 | 446 | 10.6 | 10.9 |
| **(cont'd)** | 22-Jul-21 | 7.8 | 505 | 10.3 | 10.4 |
| | 25-Aug-21 | 7.7 | 447 | 11.9 | 9.9 |
| | 28-Sep-21 | 7.7 | 552 | 8.4 | 10.6 |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.1 | 583 | 2.1 | 11.6 |
| | 24-May-22 | 7.8 | 519 | 10.5 | 10.8 |
| | 24-Jun-22 | 8.1 | 603 | 10.5 | 10.5 |
| | 29-Aug-22 | | | 12.7 | |
| | 27-Sep-22 | | | 9.9 | |
| | 27-Oct-22 (1) | | | | |
| | 21-Nov-22 (1) | | | | |
| | 21-Dec-22 | | | 0.7 | |
| | 24-Jan-23 | 7.9 | | 4.2 | |
| | 22-Feb-23 | | | 5.1 | |
| | 27-Mar-23 | | | 7.9 | |
| | 21-Apr-23 | | | 8.4 | |
| | 16-May-23 | | | 9.8 | |
| | 26-Jun-23 | | | 10.3 | |
| | 25-Jul-23 | | | 9.3 | |
| | 29-Aug-23 | | | 9.5 | |
| | 25-Sep-23 | | | 9.8 | |
| | 30-Oct-23 | | | 6.8 | |
| | 29-Nov-23 | | | 3.3 | |
| | 18-Dec-23 | | | 6.1 | |
| | 31-Jan-24 | | | 5.9 | |
| | 27-Feb-24 | | | 5.6 | |
| | 27-Mar-24 | | | 7.2 | |
| | 29-Apr-24 | | | 7.7 | |
| | 27-May-24 | | | 9.0 | |
| | 26-Jun-24 | | | 10.8 | |
| | 29-Jul-24 | | | 11.3 | |
| | 27-Aug-24 | | | 13.6 | |
| | 24-Sep-24 | | | 12.1 | |
| | 28-Oct-24 | | | 7.6 | |
| | 18-Nov-24 | | | 7.1 | |
| | 16-Dec-24 | | | 5.4 | |
| | 27-Jan-25 | | | 3.8 | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 | | | 6.5 | |
| | 28-Apr-25 | | | 9.7 | |
| | 27-May-25 | | | 10.7 | |
| | 24-Jun-25 | | | 11.2 | |
| | 29-Jul-25 (3) | | | | |
| | 26-Aug-25 | | | 11.0 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW20** | 29-Sep-25 (1) | | | 14.4 | |
| **(cont'd)** | 28-Oct-25 (1) | | | | |
| | 24-Nov-25 | | | 6.5 | |
| | 15-Dec-25 | | | 1.5 | |
| **SW21** | 11-Feb-04 | 8.5 | 283 | 0.3 | 10.3 |
| | 17-Mar-04 | 7.5 | 286 | 0.2 | 8.1 |
| | 21-Apr-04 | 8.0 | 310 | 10.8 | |
| | 19-May-04 | 8.1 | 395 | 17.5 | |
| | 24-Jun-04 | 8.1 | 419 | 18.9 | |
| | 29-Jul-04 | 8.0 | 418 | 23.1 | 8.2 |
| | 26-Aug-04 | 7.9 | 411 | 18.4 | |
| | 22-Sep-04 | 7.6 | 417 | 20.5 | 8.7 |
| | 20-Oct-04 | 7.9 | 321 | 9.2 | 10.8 |
| | 18-Nov-04 | 8.0 | 317 | 6.1 | |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.7 | 345 | 6.9 | 11.9 |
| | 11-Apr-05 | 7.1 | 264 | 7.1 | |
| | 26-May-05 | 8.2 | 418 | 19.6 | |
| | 28-Jun-05 | 8.4 | 432 | 25.9 | 8.0 |
| | 12-Jul-05 | 7.9 | 471 | 24.7 | 6.9 |
| | 23-Aug-05 | 7.3 | 342 | 19.9 | 8.5 |
| | 28-Sep-05 | 7.7 | 344 | 16.6 | 8.9 |
| | 25-Oct-05 | 8.0 | 319 | 8.6 | 11.6 |
| | 15-Nov-05 | 8.0 | 298 | 6.3 | 11.9 |
| | 13-Dec-05 | 7.6 | 185 | 0.5 | 12.7 |
| | 17-Jan-06 | 6.8 | 245 | 1.6 | 12.7 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.0 | 247 | 1.4 | |
| | 19-Apr-06 | 8.2 | 388 | 13.5 | |
| | 23-May-06 | 8.1 | 405 | 12.4 | |
| | 20-Jun-06 | 8.1 | 399 | 21.8 | |
| | 11-Jul-06 | 8.1 | 373 | 23.3 | |
| | 23-Aug-06 | 7.9 | 375 | 21.3 | |
| | 20-Sep-06 | 8.0 | 350 | 16.3 | |
| | 19-Oct-06 | 8.0 | 368 | 10.0 | |
| | 23-Nov-06 | 8.3 | 457 | 2.4 | 13.6 |
| | 17-Dec-06 | 7.7 | 515 | 3.0 | |
| | 21-Jan-07 (2) | | | | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 16-Apr-07 | 8.3 | 435 | 4.4 | |
| | 13-May-07 | 8.5 | 383 | 15.0 | |
| | 17-Jun-07 | 8.3 | 415 | 24.4 | |
| | 15-Jul-07 | 8.0 | 418 | 22.0 | 8.0 |
| | 19-Aug-07 | 8.0 | 385 | 20.1 | 8.6 |
| | 18-Oct-07 | 7.9 | 365 | 10.3 | 8.7 |
| | 21-Nov-07 | 8.2 | 418 | 4.5 | 11.7 |
| | 9-Dec-07 | 7.2 | 393 | 1.5 | 12.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21** | 21-Jan-08 | 7.5 | 390 | 1.3 | |
| **(cont'd)** | 19-Feb-08 | 7.7 | 425 | 1.6 | 12.7 |
| | 17-Mar-08 | 7.4 | 444 | 1.1 | |
| | 1-Apr-08 | 7.4 | 326 | 2.0 | |
| | 23-Apr-08 | 7.9 | 394 | 16.6 | 8.2 |
| | 21-May-08 | 7.9 | 357 | 14.0 | 9.3 |
| | 17-Jun-08 | 7.9 | 336 | 19.6 | 6.7 |
| | 15-Jul-08 | 7.4 | 309 | 22.7 | 5.7 |
| | 19-Aug-08 | 8.1 | 325 | 22.1 | 4.2 |
| | 16-Sep-08 | 8.7 | 272 | 10.5 | 6.5 |
| | 21-Oct-08 | 8.0 | 332 | 10.6 | 7.6 |
| | 23-Nov-08 | | 462 | 2.2 | 9.6 |
| | 14-Dec-08 | 7.3 | 394 | 1.8 | 9.7 |
| | 18-Jan-09 | 7.9 | 460 | 0.2 | 12.6 |
| | 8-Feb-09 | 8.9 | 429 | 1.0 | 9.0 |
| | 15-Mar-09 | 8.1 | 375 | 3.9 | |
| | 12-Apr-09 | 8.5 | 433 | 9.8 | |
| | 17-May-09 | 8.2 | 311 | 17.0 | |
| | 14-Jun-09 | 7.9 | 621 | 19.3 | |
| | 12-Jul-09 | 7.8 | 362 | 21.2 | 7.5 |
| | 9-Aug-09 | 6.8 | 361 | 20.1 | 8.8 |
| | 13-Sep-09 | 8.0 | 389 | 20.5 | 9.0 |
| | 11-Oct-09 | 8.5 | 342 | 8.5 | 11.2 |
| | 15-Nov-09 | 7.4 | 369 | 6.6 | |
| | 13-Dec-09 | 7.5 | 463 | 0.4 | 12.3 |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 | 7.4 | 502 | 0.7 | 10.9 |
| | 14-Mar-10 | 7.4 | 305 | 4.3 | 11.5 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.9 | 459 | 10.6 | 14.1 |
| | 16-May-10 | 8.0 | 345 | 14.5 | 8.9 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.0 | 394 | 20.7 | 10.1 |
| | 18-Jul-10 | 8.1 | 401 | 24.2 | 10.1 |
| | 12-Sep-10 | 8.2 | 362 | 18.0 | 7.5 |
| | 17-Oct-10 | 8.0 | 302 | 11.4 | 10.3 |
| | 14-Nov-10 | 8.1 | 281 | 6.8 | 12.6 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | 8.0 | 262 | 0.8 | 11.8 |
| | 13-Mar-11 | 8.1 | 233 | 1.1 | 10.9 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.2 | 303 | 6.5 | 12.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21** | 20-Apr-11 | | | | |
| **(cont'd)** | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.0 | 283 | 12.2 | 12.1 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 332 | 20.8 | 9.8 |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 | 8.2 | 230 | 12.1 | 9.3 |
| | 18-Dec-11 | 8.7 | 230 | 3.7 | 10.7 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 8.0 | 304 | 15.6 | 9.2 |
| | 15-Apr-12 | 8.6 | 319 | 12.0 | 10.9 |
| | 13-May-12 | 8.2 | 347 | 17.6 | 8.8 |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 14-Aug-12 | 8.4 | 459 | 21.5 | 6.2 |
| | 18-Sep-12 | 7.9 | 322 | 17.8 | 7.4 |
| | 17-Oct-12 | 7.0 | 254 | 10.8 | 8.2 |
| | 20-Nov-12 | 8.0 | 316 | 5.7 | 9.4 |
| | 18-Dec-12 | 7.2 | 680 | 4.3 | 9.0 |
| | 15-Jan-13 | 7.4 | 345 | 3.5 | 9.5 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 16-Apr-13 | 7.8 | 299 | 7.2 | 9.9 |
| | 13-May-13 | 8.0 | 339 | 14.5 | 5.2 |
| | 19-Jun-13 | 8.2 | 409 | 22.5 | 7.2 |
| | 16-Jul-13 | 8.1 | 444 | 28.2 | 4.3 |
| | 16-Oct-13 | 8.7 | 331 | 14.9 | 4.8 |
| | 19-Nov-13 | 8.7 | 301 | 5.3 | 2.0 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 7.7 | 194 | 5.9 | 10.6 |
| | 13-May-14 | 7.9 | 312 | 16.0 | 9.1 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 9.4 | 313 | 2.0 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21** | 15-Mar-15 (2) | | | | |
| **(cont'd)** | 22-Apr-15 | 8.0 | 406 | 10.2 | 11.6 |
| | 19-May-15 | 8.2 | 346 | 17.1 | 13.7 |
| | 15-Jun-15 | 8.0 | 393 | 20.5 | 7.4 |
| | 21-Jul-15 | 8.4 | 422 | 23.2 | 7.6 |
| | 11-Aug-15 | 7.6 | 396 | 21.1 | 6.9 |
| | 23-Aug-15 | | | | |
| | 11-Oct-15 (1) | | | | |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.9 | 248 | 6.7 | 13.2 |
| | 8-Dec-15 | 7.4 | 289 | 3.5 | 13.9 |
| | 19-Jan-16 | 7.5 | 270 | 1.4 | 11.9 |
| | 17-Feb-16 | 7.2 | 3 | 1.2 | 11.3 |
| | 15-Mar-16 | 7.5 | 334 | 6.2 | 11.4 |
| | 21-Apr-16 | 7.9 | 345 | 11.3 | 11.5 |
| | 18-May-16 | 8.3 | 382 | 13.7 | 10.8 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 8.3 | 288 | 23.9 | 8.5 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.1 | 326 | 24.7 | 8.9 |
| | 19-Sep-16 | 8.2 | 330 | 22.0 | 8.0 |
| | 18-Oct-16 | 8.2 | 289 | 15.3 | 12.7 |
| | 16-Nov-16 | 7.9 | 264 | 6.9 | 11.3 |
| | 12-Dec-16 | 8.1 | 430 | 1.2 | 15.8 |
| | 25-Jan-17 | 7.5 | 315 | 2.1 | 10.7 |
| | 17-Feb-17 | 7.9 | 303 | 0.6 | 12.5 |
| | 22-Mar-17 | 8.1 | 350 | 4.3 | 12.1 |
| | 19-Apr-17 | 7.1 | 335 | 9.7 | 14.6 |
| | 16-May-17 | 8.7 | 427 | 20.7 | 8.7 |
| | 28-Jun-17 | 8.2 | 429 | 21.2 | 9.4 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.1 | 428 | 24.0 | 7.4 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.1 | 351 | 20.6 | 8.8 |
| | 19-Sep-17 | 8.1 | 343 | 19.4 | 8.0 |
| | 18-Oct-17 | 8.0 | 341 | 12.5 | 9.0 |
| | 15-Nov-17 | 8.1 | 327 | 3.8 | 8.1 |
| | 14-Dec-17 | 8.2 | 294 | 1.1 | 10.4 |
| | 17-Jan-18 (2) | | | | |
| | 23-Feb-18 | 7.6 | 237 | 1.8 | 7.2 |
| | 21-Mar-18 | 7.9 | 328 | 3.2 | 10.6 |
| | 19-Apr-18 | 8.0 | 274 | 1.7 | 11.3 |
| | 15-May-18 | 8.1 | 458 | 16.9 | 9.5 |
| | 18-Jun-18 | 8.2 | 443 | 13.6 | 7.4 |
| | 19-Jul-18 | 8.0 | 430 | 9.0 | 5.8 |
| | 24-Aug-18 | 8.2 | 376 | 22.7 | 7.5 |
| | 20-Sep-18 | 8.0 | 365 | 18.8 | 5.9 |
| | 25-Oct-18 | 8.2 | 379 | 7.3 | 10.0 |
| | 22-Nov-18 (1) | | | | |
| | 13-Dec-18 | 7.7 | 497 | 1.9 | 10.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21** | 18-Jan-19 (2) | | | | |
| **(cont'd)** | 19-Jan-19 (2) | | | | |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 7.6 | 441 | 1.5 | 9.9 |
| | 25-Apr-19 | 8.0 | 409 | 9.9 | 10.7 |
| | 27-May-19 | 8.1 | 428 | 18.0 | 8.7 |
| | 21-Jun-19 | 8.2 | 408 | 22.5 | 8.0 |
| | 30-Jul-19 | 8.2 | 355 | 24.9 | 7.2 |
| | 30-Aug-19 | 8.0 | 411 | 15.9 | 7.2 |
| | 27-Sep-19 | 8.2 | 388 | 15.2 | 7.2 |
| | 22-Oct-19 | 8.0 | 329 | 9.1 | 7.5 |
| | 21-Nov-19 | 8.0 | 395 | 0.1 | 7.7 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | | | | |
| | 28-May-20 (1) | | | | |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 (3) | | | | |
| | 26-Aug-20 (3) | | | | |
| | 26-Sep-20 (3) | | | | |
| | 29-Oct-20 | 7.8 | 311 | 8.5 | 7.6 |
| | 27-Nov-20 | 8.0 | 487 | 4.7 | 11.4 |
| | 22-Dec-20 | 7.6 | 503 | 2.9 | 10.9 |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.3 | 381 | 6.5 | 10.5 |
| | 27-Apr-21 | 7.7 | 388 | 7.0 | 9.3 |
| | 27-May-21 | 7.9 | 470 | 20.3 | 6.3 |
| | 22-Jun-21 (1) | | | | |
| | 22-Jul-21 (1) | | | | |
| | 25-Aug-21 (1) | | | | |
| | 28-Sep-21 (1) | | | | |
| | 26-Oct-21 (3) | | | | |
| | 23-Nov-21 | 7.2 | 522 | 2.3 | 10.3 |
| | 21-Dec-21 | 7.6 | 526 | 1.8 | 10.2 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.6 | 503 | 7.8 | 6.3 |
| | 24-May-22 | 8.0 | 493 | 18.1 | 7.2 |
| | 25-Jun-22 | 8.0 | 645 | 10.5 | 11.4 |
| | 26-Aug-22 (1) | | | | |
| | 29-Sep-22 (1) | | | | |
| | 27-Oct-22 | | | 10.7 | |
| | 22-Nov-22 | 8.2 | | 1.1 | |
| | 17-May-23 | 8.0 | | 14.8 | |
| | 26-Jun-23 (1) | | | | |
| | 26-Jul-23 | 7.9 | | 23.1 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21** | 31-Aug-23 | 8.2 | | 18.4 | |
| **(cont'd)** | 25-Sep-23 (1) | | | | |
| | 31-Oct-23 | 8.2 | | 9.4 | |
| | 28-May-24 | 7.5 | | 19.1 | |
| | 27-Jun-24 | 7.4 | | 21.0 | |
| | 30-Jul-24 | 7.6 | | 24.3 | |
| | 28-Aug-24 (1) | | | | |
| | 25-Sep-24 | 7.4 | | 19.8 | |
| | 29-Oct-24 | 7.4 | | 10.3 | |
| | 28-May-25 | 8.2 | | 15.4 | |
| | 24-Jun-25 | 8.2 | | 23.8 | |
| | 29-Jul-25 (1) | | | | |
| | 26-Aug-25 (1) | | | | |
| | 30-Sep-25 (1) | | | | |
| | 27-Oct-25 | 7.5 | | 9.2 | |
| **SW21A** | 19-Dec-03 (2) | | | | |
| | 10-Feb-04 (2) | | | | |
| | 18-Mar-04 (2) | | | | |
| | 19-May-04 | 8.0 | 378 | 15.7 | |
| | 24-Jun-04 | 8.1 | 384 | 17.2 | |
| | 29-Jul-04 | 8.0 | 416 | 22.7 | 8.2 |
| | 26-Aug-04 | 8.0 | 377 | 15.7 | |
| | 21-Sep-04 (1) | | | | |
| | 20-Oct-04 | 8.0 | 301 | 6.6 | 12.0 |
| | 18-Nov-04 | 7.9 | 332 | 7.9 | 11.2 |
| | 16-Dec-04 | 7.9 | 243 | 0.2 | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.7 | 224 | 2.1 | |
| | 11-Apr-05 | 7.4 | 328 | 9.9 | 11.1 |
| | 26-May-05 | 8.2 | 429 | 22.0 | 8.8 |
| | 28-Jun-05 | 8.2 | 496 | 26.2 | |
| | 12-Jul-05 | 7.7 | 423 | 18.2 | 8.3 |
| | 23-Aug-05 | 7.4 | 363 | 13.6 | 10.1 |
| | 28-Sep-05 | 7.7 | 346 | 11.9 | 10.2 |
| | 25-Oct-05 | 7.9 | 392 | 6.2 | |
| | 15-Nov-05 | 8.0 | 280 | 3.9 | 12.5 |
| | 13-Dec-05 | 7.9 | 278 | 0.3 | 13.0 |
| | 17-Jan-06 | 6.4 | 219 | 0.3 | 13.8 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.2 | 255 | 0.4 | |
| | 19-Apr-06 | 8.3 | 358 | 17.9 | |
| | 23-May-06 | 8.3 | 403 | 15.6 | |
| | 20-Jun-06 | 8.4 | 405 | 17.1 | |
| | 11-Jul-06 | 8.1 | 390 | 19.4 | |
| | 23-Aug-06 | 7.9 | 390 | 16.9 | |
| | 20-Sep-06 | 8.1 | 362 | 11.3 | |
| | 19-Oct-06 | 8.0 | 396 | 9.7 | |
| | 23-Nov-06 | 8.2 | 430 | 1.9 | |
| | 17-Dec-06 | 8.0 | 497 | 1.6 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21A** | 21-Jan-07 (2) | | | | |
| **(cont'd)** | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 (2) | | | | |
| | 16-Apr-07 | 8.3 | 420 | 2.4 | 13.6 |
| | 13-May-07 | 8.5 | 387 | 15.2 | |
| | 17-Jun-07 | 8.3 | 426 | 20.8 | 8.3 |
| | 15-Jul-07 | 8.0 | 419 | 19.1 | 8.7 |
| | 19-Aug-07 | 7.8 | 345 | 16.7 | 9.3 |
| | 18-Oct-07 | 7.9 | 396 | 12.8 | 9.0 |
| | 21-Nov-07 | 8.0 | 423 | 3.6 | 11.2 |
| | 9-Dec-07 | 7.9 | 395 | 0.9 | 13.0 |
| | 20-Jan-08 (2) | | | | |
| | 17-Feb-08 (2) | | | | |
| | 16-Mar-08 (2) | | | | |
| | 30-Mar-08 (2) | | | | |
| | 21-Oct-08 | 8.3 | 380 | 5.0 | |
| | 23-Nov-08 | | 481 | 1.3 | 9.0 |
| | 14-Dec-08 | 7.6 | 379 | 0.3 | 9.2 |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 | 8.1 | 369 | 6.4 | |
| | 12-Apr-09 | 8.4 | 401 | 11.5 | |
| | 17-May-09 | 8.3 | 308 | 21.5 | |
| | 14-Jun-09 (1) | | | | |
| | 12-Jul-09 (1) | | | | |
| | 9-Aug-09 (1) | | | | |
| | 13-Sep-09 | 7.9 | 358 | 16.6 | |
| | 11-Oct-09 | 8.4 | 413 | 5.2 | 12.4 |
| | 15-Nov-09 | 7.6 | 334 | 5.6 | |
| | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 | 7.4 | 284 | 7.0 | 11.1 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.0 | 434 | 12.6 | 12.5 |
| | 16-May-10 | 8.1 | 356 | 14.3 | 9.8 |
| | 23-May-10 | | | | |
| | 13-Jun-10 (1) | | | | |
| | 15-Aug-10 (1) | | | | |
| | 12-Sep-10 | 8.1 | 322 | 14.0 | 8.7 |
| | 14-Nov-10 | 8.1 | 268 | 6.1 | 12.0 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21A** | 8-Apr-11 | | | | |
| **(cont'd)** | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 343 | 8.4 | 10.7 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.0 | 267 | 9.3 | 12.3 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 319 | 18.0 | 8.3 |
| | 18-Sep-11 (1) | | | | |
| | 16-Oct-11 | 8.0 | 304 | 9.4 | 9.0 |
| | 18-Dec-11 | 8.6 | 222 | 1.7 | 11.9 |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 7.9 | 351 | 18.1 | 7.9 |
| | 15-Apr-12 | 8.7 | 272 | 9.4 | 10.7 |
| | 13-May-12 | 8.0 | 368 | 19.5 | 7.3 |
| | 17-Jun-12 (1) | | | | |
| | 15-Jul-12 (1) | | | | |
| | 17-Oct-12 | 7.0 | 296 | 9.4 | 8.0 |
| | 20-Nov-12 | 7.9 | 323 | 5.6 | 8.9 |
| | 18-Dec-12 | 7.2 | 617 | 3.3 | 8.8 |
| | 15-Jan-13 | 7.8 | 306 | 0.7 | 11.0 |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 16-Apr-13 | 7.9 | 227 | 8.6 | 8.7 |
| | 14-Jul-13 (1) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 7.2 | 187 | 3.2 | 10.5 |
| | 13-May-14 | 7.9 | 366 | 15.6 | 8.1 |
| | 15-Jun-14 (1) | | | | |
| | 7-Sep-14 (1) | | | | |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 9.7 | 283 | 0.0 | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21A** | 22-Apr-15 | 7.8 | 381 | 8.2 | 10.1 |
| **(cont'd)** | 17-May-15 (1) | | | | |
| | 14-Jun-15 (1) | | | | |
| | 19-Jul-15 (1) | | | | |
| | 9-Aug-15 (1) | | | | |
| | 23-Aug-15 | | | | |
| | 6-Sep-15 (1) | | | | |
| | 11-Oct-15 (1) | | | | |
| | 8-Nov-15 | | | | |
| | 15-Nov-15 (1) | | | | |
| | 6-Dec-15 (1) | | | | |
| | 17-Jan-16 (2) | | | | |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 7.7 | 296 | 6.8 | 10.7 |
| | 21-Apr-16 | 7.9 | 370 | 9.0 | 8.5 |
| | 15-May-16 (1) | | | | |
| | 19-Jun-16 (1) | | | | |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 7.8 | 401 | 17.9 | 7.0 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 7.9 | 362 | 19.5 | 6.7 |
| | 19-Sep-16 | 8.0 | 381 | 17.8 | 7.0 |
| | 18-Oct-16 | 8.0 | 380 | 14.8 | 10.6 |
| | 16-Nov-16 | 7.9 | 301 | 6.7 | 10.3 |
| | 12-Dec-16 | 8.3 | 465 | 0.7 | 14.5 |
| | 25-Jan-17 | 7.8 | 298 | 1.8 | 11.5 |
| | 17-Feb-17 | 7.8 | 271 | 0.2 | 13.7 |
| | 22-Mar-17 | 8.0 | 383 | (0) | 11.3 |
| | 19-Apr-17 | 6.7 | 326 | 6.8 | 11.8 |
| | 16-May-17 | 8.7 | 404 | 20.7 | 6.9 |
| | 28-Jun-17 | 7.8 | 401 | 16.7 | 7.3 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 7.7 | 408 | 18.4 | 6.9 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 7.9 | 290 | 15.4 | 7.6 |
| | 19-Sep-17 | 7.9 | 374 | 15.3 | 7.7 |
| | 18-Oct-17 | 8.1 | 333 | 9.4 | 10.4 |
| | 15-Nov-17 | 8.2 | 307 | 3.7 | 8.4 |
| | 14-Dec-17 | 8.3 | 265 | (0) | 11.1 |
| | 17-Jan-18 (2) | | | | |
| | 23-Feb-18 | 7.9 | 261 | (0) | 7.9 |
| | 18-Mar-18 (2) | | | | |
| | 18-Apr-18 (2) | | | | |
| | 15-May-18 | 8.0 | 432 | 14.5 | 7.6 |
| | 18-Jun-18 | 8.1 | 429 | 16.5 | 7.9 |
| | 19-Jul-18 | 8.1 | 408 | 18.3 | 7.5 |
| | 24-Aug-18 | 8.1 | 400 | 18.2 | 7.9 |
| | 20-Sep-18 | 8.1 | 396 | 15.6 | 7.3 |
| | 25-Oct-18 | 8.1 | 429 | 4.1 | 0.8 |
| | 22-Nov-18 | 8.2 | | 0.5 | 12.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21A** | 13-Dec-18 | | 7.9 | 484 | 1.4 | 11.5 |
| **(cont'd)** | 18-Jan-19 | (2) | | | | |
| | 19-Jan-19 | (2) | | | | |
| | 28-Feb-19 | (2) | | | | |
| | 19-Mar-19 | (1) | | | | |
| | 25-Apr-19 | | 8.0 | 278 | 7.7 | 10.1 |
| | 27-May-19 | | 8.0 | 430 | 19.8 | 5.7 |
| | 21-Jun-19 | | 7.9 | 363 | 17.5 | (6) |
| | 30-Jul-19 | | 8.1 | | 20.5 | 6.6 |
| | 30-Aug-19 | | 8.1 | 397 | 17.6 | 8.1 |
| | 27-Sep-19 | | 8.6 | 415 | 13.0 | 8.0 |
| | 22-Oct-19 | | 8.3 | 402 | 10.1 | 8.8 |
| | 21-Nov-19 | | 8.4 | 445 | 0.2 | 8.3 |
| | 20-Dec-19 | (2) | | | | |
| | 24-Jan-20 | (2) | | | | |
| | 21-Feb-20 | (2) | | | | |
| | 25-Mar-20 | (2) | | | | |
| | 28-Apr-20 | | | | | |
| | 28-May-20 | (1) | | | | |
| | 24-Jun-20 | (1) | | | | |
| | 31-Jul-20 | (3) | | | | |
| | 26-Aug-20 | (3) | | | | |
| | 26-Sep-20 | (3) | | | | |
| | 29-Oct-20 | | 8.3 | 399 | 9.3 | 9.0 |
| | 27-Nov-20 | | 8.0 | 471 | 4.1 | 11.9 |
| | 22-Dec-20 | | 7.8 | 474 | 1.1 | 12.3 |
| | 27-Jan-21 | (2) | | | | |
| | 22-Feb-21 | (2) | | | | |
| | 29-Mar-21 | | 7.3 | 392 | 6.3 | 10.7 |
| | 27-Apr-21 | | 7.7 | 403 | 7.3 | 8.9 |
| | 27-May-21 | (1) | | | | |
| | 22-Jun-21 | (1) | | | | |
| | 22-Jul-21 | (1) | | | | |
| | 25-Aug-21 | (1) | | | | |
| | 28-Sep-21 | (1) | | | | |
| | 26-Oct-21 | (3) | | | | |
| | 23-Nov-21 | | 7.9 | 463 | 2.1 | 11.9 |
| | 21-Dec-21 | | 7.9 | 451 | 1.3 | 12.0 |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (2) | | | | |
| | 21-Apr-22 | | 7.9 | 521 | 7.9 | 7.4 |
| | 24-May-22 | (1) | | | | |
| | 25-Jun-22 | | 7.5 | 552 | 10.6 | 11.0 |
| | 29-Aug-22 | (1) | | | | |
| | 29-Sep-22 | (1) | | | | |
| | 27-Oct-22 | (1) | | | | |
| | 22-Nov-22 | (1) | | | | |
| | 17-May-23 | (1) | | | | |
| | 26-Jun-23 | (1) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21A** | 26-Jul-23 | (1) | | | | |
| **(cont'd)** | 31-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 31-Oct-23 | (1) | | | | |
| | 28-May-24 | (1) | | | | |
| | 27-Jun-24 | (1) | | | | |
| | 30-Jul-24 | (1) | | | | |
| | 28-Aug-24 | (1) | | | | |
| | 25-Sep-24 | (1) | | | | |
| | 29-Oct-24 | (1) | | | | |
| | 28-May-25 | (1) | | | | |
| | 24-Jun-25 | (1) | | | | |
| | 29-Jul-25 | (1) | | | | |
| | 26-Aug-25 | (1) | | | | |
| | 30-Sep-25 | (1) | | | | |
| | 27-Oct-25 | | 7.6 | | 5.7 | |
| **SW21B** | 18-Mar-04 | (2) | | | | |
| | 19-May-04 | | 8.2 | 318 | 9.6 | |
| | 24-Jun-04 | | 8.2 | 330 | 10.5 | |
| | 29-Jul-04 | | 8.1 | 284 | 11.4 | |
| | 26-Aug-04 | | 8.1 | 322 | 10.3 | |
| | 23-Sep-04 | | 8.1 | 335 | 11.0 | |
| | 20-Oct-04 | | 8.1 | 307 | 7.5 | 11.9 |
| | 18-Nov-04 | | 8.0 | 309 | 6.6 | 11.8 |
| | 15-Dec-04 | (2) | | | | |
| | 16-Jan-05 | (2) | | | | |
| | 13-Feb-05 | (2) | | | | |
| | 29-Mar-05 | | 7.7 | 224 | 2.1 | |
| | 11-Apr-05 | | 7.0 | 231 | 2.3 | 13.6 |
| | 26-May-05 | | 7.6 | 322 | 10.0 | |
| | 12-Jul-05 | | 7.6 | 343 | 12.1 | 10.4 |
| | 23-Aug-05 | | 7.6 | 341 | 11.2 | |
| | 25-Oct-05 | | 8.2 | 399 | 7.2 | |
| | 15-Nov-05 | | 8.0 | 280 | 3.9 | 12.5 |
| | 13-Dec-05 | | 8.3 | 296 | 2.6 | 12.6 |
| | 17-Jan-06 | | 7.0 | 244 | 3.2 | 12.9 |
| | 19-Feb-06 | (2) | | | | |
| | 19-Mar-06 | (2) | | | | |
| | 19-Apr-06 | | 8.3 | 340 | 9.2 | |
| | 23-May-06 | | 8.3 | 395 | 9.4 | |
| | 20-Jun-06 | | 8.2 | 401 | 12.1 | |
| | 11-Jul-06 | | 8.2 | 385 | 12.9 | |
| | 23-Aug-06 | | 8.0 | 400 | 12.6 | |
| | 20-Sep-06 | | 8.0 | 393 | 10.7 | |
| | 28-Sep-06 | | 7.8 | 330 | 10.5 | 10.9 |
| | 19-Oct-06 | | 8.0 | 399 | 8.8 | |
| | 17-Dec-06 | | 8.2 | 432 | 3.7 | |
| | 23-Dec-06 | | 8.4 | 417 | 4.9 | |
| | 21-Jan-07 | | 8.1 | 419 | 2.7 | |
| | 18-Feb-07 | (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21B** | 18-Mar-07 (2) | | | | |
| **(cont'd)** | 16-Apr-07 | 8.4 | 396 | 3.7 | 13.0 |
| | 13-May-07 | 8.4 | 384 | 9.1 | |
| | 17-Jun-07 | 8.3 | 430 | 12.0 | 10.6 |
| | 15-Jul-07 | 8.2 | 430 | 11.6 | 10.5 |
| | 19-Aug-07 | 7.9 | 422 | 11.3 | 10.0 |
| | 17-Sep-07 | 8.0 | 401 | 10.1 | 10.4 |
| | 18-Oct-07 | 7.9 | 404 | 10.0 | 9.2 |
| | 21-Nov-07 | 8.0 | 425 | 5.2 | 10.9 |
| | 9-Dec-07 | 8.1 | 392 | 3.9 | 11.8 |
| | 21-Jan-08 | 7.8 | 378 | 2.6 | 12.4 |
| | 19-Feb-08 | 8.1 | 399 | 2.9 | |
| | 16-Mar-08 (2) | | | | |
| | 30-Mar-08 (2) | | | | |
| | 23-Apr-08 | 7.9 | 343 | 8.5 | 10.0 |
| | 21-May-08 | 7.9 | 365 | 8.0 | 9.8 |
| | 17-Jun-08 | 7.9 | 401 | 11.7 | 8.6 |
| | 15-Jul-08 | 7.5 | 432 | 12.8 | |
| | 19-Aug-08 | 8.1 | 466 | 14.5 | 5.3 |
| | 16-Sep-08 | 8.4 | 419 | 14.3 | 6.4 |
| | 21-Oct-08 | 7.9 | 309 | 9.1 | 8.8 |
| | 23-Nov-08 | | 427 | 4.7 | 8.4 |
| | 14-Dec-08 | 7.4 | 350 | 3.4 | 8.2 |
| | 18-Jan-09 (2) | | | | |
| | 8-Feb-09 (2) | | | | |
| | 15-Mar-09 (2) | | | | |
| | 12-Apr-09 | 8.7 | 375 | 2.9 | |
| | 17-May-09 | 8.3 | 331 | 12.0 | 10.1 |
| | 14-Jun-09 | 7.4 | 773 | 12.0 | 10.5 |
| | 12-Jul-09 | 8.5 | 417 | 13.2 | 9.6 |
| | 9-Aug-09 | 8.3 | 435 | 12.4 | |
| | 13-Sep-09 | 7.7 | 387 | 11.3 | |
| | 11-Oct-09 | 8.6 | 429 | 7.1 | |
| | 15-Nov-09 | 7.6 | 362 | 5.9 | |
| | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 (2) | | | | |
| | 7-Feb-10 (2) | | | | |
| | 14-Mar-10 (2) | | | | |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.2 | 402 | 6.2 | |
| | 16-May-10 | 8.2 | 284 | 9.3 | 10.6 |
| | 23-May-10 | | | | |
| | 12-Sep-10 | 8.2 | 340 | 11.5 | 10.3 |
| | 17-Oct-10 | 8.0 | 294 | 8.8 | 10.9 |
| | 14-Nov-10 | 8.3 | 254 | 6.1 | 12.1 |
| | 19-Dec-10 (2) | | | | |
| | 16-Jan-11 | | | | |
| | 20-Feb-11 | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21B** | 18-Mar-11 | | | | |
| **(cont'd)** | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.3 | 186 | 2.9 | 15.8 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 8.1 | 240 | 7.7 | 12.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.4 | 257 | 10.3 | 12.3 |
| | 17-Jul-11 | 8.3 | 328 | 14.2 | 10.9 |
| | 14-Aug-11 | 8.5 | 245 | 14.2 | 10.1 |
| | 18-Sep-11 | 8.6 | 272 | 11.1 | 10.0 |
| | 16-Oct-11 | 8.0 | 314 | 10.3 | 10.5 |
| | 20-Nov-11 | 8.1 | 270 | 5.2 | 13.5 |
| | 18-Dec-11 (2) | | | | |
| | 15-Jan-12 (2) | | | | |
| | 19-Feb-12 (2) | | | | |
| | 18-Mar-12 | 8.1 | 251 | 7.8 | 11.7 |
| | 15-Apr-12 | 8.7 | 281 | 7.6 | 10.1 |
| | 13-May-12 | 8.2 | 294 | 10.7 | 10.1 |
| | 17-Jun-12 | 8.4 | 290 | 15.1 | 7.4 |
| | 16-Jul-12 | 8.3 | 363 | 16.0 | 7.1 |
| | 14-Aug-12 | 8.4 | 478 | 16.2 | 6.9 |
| | 18-Sep-12 | 7.9 | 342 | 12.9 | 9.4 |
| | 17-Oct-12 | 7.0 | 280 | 8.7 | 9.0 |
| | 20-Nov-12 | 7.8 | 284 | 5.5 | 9.2 |
| | 18-Dec-12 | 7.6 | 560 | 3.8 | 9.4 |
| | 13-Jan-13 (2) | | | | |
| | 17-Feb-13 (2) | | | | |
| | 17-Mar-13 (2) | | | | |
| | 14-Apr-13 (2) | | | | |
| | 13-May-13 | 8.2 | 259 | 7.2 | 6.0 |
| | 19-Jun-13 | 8.7 | 299 | 11.1 | 11.6 |
| | 16-Jul-13 | 8.2 | 360 | 15.8 | 9.0 |
| | 20-Aug-13 | 8.3 | 332 | 14.3 | 9.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21B** | 18-Sep-13 | 8.0 | 310 | 11.6 | 11.1 |
| **(cont'd)** | 16-Oct-13 | 8.6 | 304 | 11.0 | 5.5 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 13-Apr-14 (2) | | | | |
| | 13-May-14 | 8.2 | 144 | 13.7 | 10.6 |
| | 17-Jun-14 | 8.2 | 322 | 14.2 | 10.0 |
| | 15-Jul-14 | 11.9 | 260 | 12.3 | 10.9 |
| | 19-Aug-14 | 8.8 | 372 | 12.7 | 5.8 |
| | 22-Oct-14 | 8.3 | 376 | 9.5 | 6.9 |
| | 16-Nov-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 22-Apr-15 | 7.9 | 263 | 4.0 | 11.0 |
| | 17-May-15 (1) | | | | |
| | 14-Jun-15 (1) | | | | |
| | 19-Jul-15 (1) | | | | |
| | 11-Aug-15 | 8.0 | 361 | 14.8 | 8.6 |
| | 23-Aug-15 | | | | |
| | 8-Sep-15 | 7.8 | 380 | 17.4 | 7.0 |
| | 15-Oct-15 | 8.0 | 320 | 11.8 | 9.4 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.7 | 334 | 8.3 | 11.2 |
| | 8-Dec-15 | 7.5 | 310 | 5.3 | 12.0 |
| | 17-Jan-16 (2) | | | | |
| | 14-Feb-16 (2) | | | | |
| | 13-Mar-16 (2) | | | | |
| | 17-Apr-16 (1) | | | | |
| | 18-May-16 | 8.3 | 324 | 8.0 | 11.4 |
| | 23-Jun-16 | 8.2 | 347 | 14.0 | 9.6 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 8.5 | 345 | 12.3 | 11.2 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.3 | 342 | 13.0 | 10.9 |
| | 19-Sep-16 | 8.3 | 341 | 12.3 | 10.9 |
| | 18-Oct-16 | 8.2 | 341 | 11.4 | 13.6 |
| | 16-Nov-16 | 8.1 | 307 | 7.1 | 11.3 |
| | 12-Dec-16 | 8.7 | 446 | 3.7 | 15.2 |
| | 25-Jan-17 | 8.3 | 298 | 4.0 | 12.3 |
| | 15-Feb-17 (2) | | | | |
| | 22-Mar-17 | 8.3 | 296 | 1.9 | 12.5 |
| | 19-Apr-17 | 7.4 | 280 | 6.6 | 13.9 |
| | 16-May-17 | 8.4 | 304 | 10.4 | 10.7 |
| | 28-Jun-17 | 8.3 | 322 | 10.3 | 11.4 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.2 | 345 | 11.9 | 11.1 |
| | 27-Jul-17 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21B** | 16-Aug-17 | 8.2 | 310 | 11.6 | 10.9 |
| **(cont'd)** | 19-Sep-17 | 8.1 | 341 | 11.6 | 10.6 |
| | 18-Oct-17 | 8.3 | 323 | 9.1 | 11.2 |
| | 15-Nov-17 | 8.4 | 309 | 5.3 | 7.6 |
| | 14-Dec-17 | 8.5 | 283 | 3.0 | 9.4 |
| | 17-Jan-18 (2) | | | | |
| | 18-Feb-18 (2) | | | | |
| | 21-Mar-18 | 8.4 | 241 | 1.4 | 13.8 |
| | 18-Apr-18 (2) | | | | |
| | 15-May-18 | 8.1 | 386 | 9.9 | 11.0 |
| | 18-Jun-18 | 8.3 | 431 | 20.2 | 10.3 |
| | 19-Jul-18 | 8.2 | 427 | 12.5 | 10.2 |
| | 24-Aug-18 | 8.4 | 431 | 13.6 | 10.0 |
| | 20-Sep-18 | 8.3 | 428 | 12.5 | 10.0 |
| | 25-Oct-18 | 8.4 | 430 | 6.8 | 11.4 |
| | 22-Nov-18 | 8.4 | 435 | 3.5 | 12.6 |
| | 13-Dec-18 | 8.4 | 428 | 3.2 | 12.5 |
| | 18-Jan-19 (2) | | | | |
| | 19-Jan-19 (2) | | | | |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 (1) | | | | |
| | 25-Apr-19 (1) | | | | |
| | 27-May-19 (1) | | | | |
| | 21-Jun-19 (1) | | | | |
| | 30-Jul-19 | 8.3 | 388 | 13.6 | 9.7 |
| | 30-Aug-19 | 8.3 | 370 | 12.4 | 10.0 |
| | 27-Sep-19 | 8.2 | 412 | 16.3 | 8.5 |
| | 22-Oct-19 | 8.3 | 418 | 10.4 | 8.9 |
| | 21-Nov-19 | 8.1 | 406 | 0.1 | 8.5 |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | | | | |
| | 28-May-20 (1) | | | | |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 (1) | | | | |
| | 26-Aug-20 (1) | | | | |
| | 26-Sep-20 (1) | | | | |
| | 29-Oct-20 (1) | | | | |
| | 27-Nov-20 (1) | | | | |
| | 22-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 7.8 | 364 | 6.1 | 10.3 |
| | 27-Apr-21 (1) | | | | |
| | 27-May-21 (1) | | | | |
| | 22-Jun-21 (1) | | | | |
| | 22-Jul-21 (1) | | | | |
| | 25-Aug-21 (1) | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|---|
| | | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21B** | 28-Sep-21 | (1) | | | | |
| **(cont'd)** | 26-Oct-21 | (1) | | | | |
| | 23-Nov-21 | (2) | | | | |
| | 21-Dec-21 | (2) | | | | |
| | 24-Jan-22 | (2) | | | | |
| | 8-Feb-22 | (2) | | | | |
| | 16-Mar-22 | (2) | | | | |
| | 24-May-22 | (1) | | | | |
| | 25-Jun-22 | | 8.1 | 598 | 12.9 | 11.2 |
| | 29-Aug-22 | (1) | | | | |
| | 29-Sep-22 | | | | 11.0 | |
| | 27-Oct-22 | | | | 8.6 | |
| | 22-Nov-22 | | 8.2 | | 3.0 | |
| | 17-May-23 | | 8.2 | | 8.6 | |
| | 26-Jun-23 | (1) | | | | |
| | 26-Jul-23 | (1) | | | | |
| | 28-Aug-23 | (1) | | | | |
| | 29-Aug-23 | (1) | | | | |
| | 25-Sep-23 | (1) | | | | |
| | 31-Oct-23 | (1) | | | | |
| | 28-May-24 | (1) | | | | |
| | 27-Jun-24 | (1) | | | | |
| | 30-Jul-24 | (1) | | | | |
| | 25-Sep-24 | | 7.6 | | 16.7 | |
| | 29-Oct-24 | | 7.3 | | 9.8 | |
| | 28-May-25 | | 8.0 | | 13.4 | |
| | 24-Jun-25 | (1) | | | | |
| | 29-Jul-25 | (1) | 7.9 | | 18.7 | |
| | 26-Aug-25 | (1) | | | | |
| | 30-Sep-25 | (1) | | | | |
| | 27-Oct-25 | | 7.8 | | 7.2 | |
| **SW21C** | 11-Feb-04 | | 8.2 | 291 | 3.7 | 8.5 |
| | 17-Mar-04 | | | 409 | 4.0 | 9.4 |
| | 21-Apr-04 | | 8.2 | 246 | 7.7 | |
| | 19-May-04 | | 8.2 | 316 | 9.5 | |
| | 24-Jun-04 | | 8.2 | 320 | 9.9 | |
| | 29-Jul-04 | | 8.1 | 312 | 10.5 | |
| | 26-Aug-04 | | 8.2 | 318 | 9.8 | |
| | 22-Sep-04 | | 8.0 | 329 | 10.3 | 10.8 |
| | 20-Oct-04 | | 8.1 | 305 | 7.3 | 11.9 |
| | 18-Nov-04 | | 8.0 | 317 | 7.4 | 11.6 |
| | 15-Dec-04 | (2) | | | | |
| | 16-Jan-05 | (2) | | | | |
| | 13-Feb-05 | (2) | | | | |
| | 29-Mar-05 | | 8.1 | 281 | 5.4 | |
| | 11-Apr-05 | | 7.4 | 251 | 5.8 | |
| | 26-May-05 | | 8.0 | 240 | 10.0 | |
| | 28-Jun-05 | | 8.3 | 327 | 12.0 | |
| | 12-Jul-05 | | 7.6 | 345 | 11.2 | 10.8 |
| | 23-Aug-05 | | 7.8 | 335 | 10.7 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW21C | 28-Sep-05 | 8.0 | 326 | 9.9 | 11.0 |
| (cont'd) | 25-Oct-05 | 8.2 | 397 | 7.1 | |
| | 15-Nov-05 | 8.3 | 272 | 5.7 | 12.3 |
| | 13-Dec-05 | 8.7 | 295 | 2.5 | 12.2 |
| | 17-Jan-06 | 7.4 | 246 | 3.6 | 13.0 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.6 | 262 | 5.0 | |
| | 19-Apr-06 | 8.4 | 339 | 9.2 | |
| | 23-May-06 | 8.3 | 397 | 9.4 | |
| | 20-Jun-06 | 8.3 | 399 | 11.2 | |
| | 11-Jul-06 | 8.3 | 389 | 12.4 | |
| | 23-Aug-06 | 8.1 | 400 | 12.0 | |
| | 20-Sep-06 | 8.2 | 394 | 10.0 | |
| | 19-Oct-06 | 8.1 | 396 | 8.4 | |
| | 23-Nov-06 | 8.5 | 313 | 5.3 | 12.7 |
| | 17-Dec-06 | 8.2 | 427 | 4.6 | |
| | 21-Jan-07 | 8.5 | 420 | 3.0 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 377 | 4.7 | |
| | 16-Apr-07 | 8.4 | 396 | 5.2 | |
| | 13-May-07 | 8.4 | 383 | 8.9 | |
| | 17-Jun-07 | 8.4 | 428 | 11.6 | |
| | 15-Jul-07 | 8.1 | 431 | 11.0 | |
| | 19-Aug-07 | 7.9 | 425 | 10.6 | 10.4 |
| | 17-Sep-07 | 8.2 | 401 | 9.8 | 10.9 |
| | 18-Oct-07 | 8.0 | 404 | 9.9 | 9.6 |
| | 21-Nov-07 | 8.1 | 430 | 5.5 | 11.0 |
| | 9-Dec-07 | 8.1 | 394 | 4.6 | 11.8 |
| | 21-Jan-08 | 7.8 | 381 | 3.9 | 12.4 |
| | 19-Feb-08 | 8.0 | 400 | 4.2 | |
| | 17-Mar-08 | 7.7 | 409 | 4.1 | |
| | 1-Apr-08 | 7.7 | 314 | 3.9 | |
| | 23-Apr-08 | 8.0 | 343 | 8.8 | 10.4 |
| | 21-May-08 | 7.8 | 356 | 7.8 | 10.3 |
| | 17-Jun-08 | 7.8 | 400 | 9.0 | |
| | 15-Jul-08 | 7.3 | 430 | 10.2 | 9.6 |
| | 19-Aug-08 | 7.9 | 463 | 9.9 | 6.4 |
| | 16-Sep-08 | 8.5 | 428 | 9.8 | 8.0 |
| | 21-Oct-08 | 8.2 | 369 | 6.4 | 7.7 |
| | 23-Nov-08 | 8.5 | 427 | 4.2 | 8.2 |
| | 14-Dec-08 | 7.2 | 350 | 4.8 | 7.0 |
| | 18-Jan-09 | 8.6 | 402 | 3.7 | 10.3 |
| | 8-Feb-09 | | 333 | 4.7 | 8.6 |
| | 15-Mar-09 | 8.6 | 265 | 5.8 | |
| | 12-Apr-09 | 8.6 | 383 | 6.9 | |
| | 17-May-09 | 8.2 | 325 | 13.5 | |
| | 14-Jun-09 | 7.4 | 764 | 9.4 | |
| | 12-Jul-09 | 8.2 | 409 | 9.6 | |
| | 9-Aug-09 | 8.1 | 410 | 11.4 | 10.4 |
| | 13-Sep-09 | 7.6 | 379 | 10.7 | 10.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW21C | 11-Oct-09 | 8.2 | 431 | 6.2 | |
| (cont'd) | 15-Nov-09 | 7.7 | 375 | 5.7 | |
| | 13-Dec-09 | 7.9 | 420 | 2.9 | 12.3 |
| | 17-Jan-10 | 8.5 | 397 | 3.9 | 12.1 |
| | 7-Feb-10 | 8.0 | 408 | 3.0 | 12.3 |
| | 14-Mar-10 | 7.8 | 393 | 5.1 | 12.1 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.9 | 403 | 6.4 | |
| | 16-May-10 | 8.3 | 274 | 8.8 | 11.3 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.3 | 280 | 9.6 | 11.9 |
| | 18-Jul-10 | 8.2 | 299 | 11.4 | 14.1 |
| | 15-Aug-10 | 8.4 | 282 | 10.9 | 11.0 |
| | 12-Sep-10 | 8.3 | 229 | 9.3 | 10.9 |
| | 17-Oct-10 | 8.1 | 286 | 7.7 | 10.7 |
| | 14-Nov-10 | 8.1 | 256 | 6.4 | 11.8 |
| | 19-Dec-10 | 8.3 | 223 | 3.7 | 12.8 |
| | 16-Jan-11 | 8.6 | 165 | 4.6 | 11.9 |
| | 20-Feb-11 | 8.1 | 240 | 3.7 | 12.1 |
| | 13-Mar-11 | 8.3 | 239 | 4.9 | 11.3 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.3 | 266 | 5.7 | 12.3 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.9 | 238 | 7.3 | 12.3 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 255 | 9.7 | 12.4 |
| | 17-Jul-11 | 8.2 | 295 | 11.3 | 9.0 |
| | 14-Aug-11 | 8.6 | 218 | 11.3 | 10.4 |
| | 18-Sep-11 | 8.5 | 261 | 9.7 | 10.4 |
| | 16-Oct-11 | 8.1 | 288 | 8.3 | 10.2 |
| | 20-Nov-11 | 7.7 | 183 | 5.0 | 12.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21C** | 20-Dec-11 | 8.3 | 199 | 4.5 | 11.6 |
| **(cont'd)** | 15-Jan-12 | 8.4 | 212 | 3.7 | 11.8 |
| | 19-Feb-12 | 8.0 | 213 | 4.4 | 12.8 |
| | 18-Mar-12 | 8.0 | 213 | 8.1 | 12.8 |
| | 15-Apr-12 | 8.8 | 268 | 6.4 | 12.0 |
| | 13-May-12 | 8.2 | 265 | 9.0 | 7.5 |
| | 17-Jun-12 | 8.3 | 322 | 11.6 | 11.8 |
| | 16-Jul-12 | 8.3 | 333 | 13.0 | 7.3 |
| | 14-Aug-12 | 8.1 | 456 | 11.0 | 7.6 |
| | 18-Sep-12 | 7.5 | 311 | 10.2 | 10.2 |
| | 17-Oct-12 | 6.7 | 217 | 8.6 | 8.2 |
| | 20-Nov-12 | 7.8 | 293 | 6.8 | 9.2 |
| | 12-Dec-12 | | 442 | 3.3 | 14.7 |
| | 18-Dec-12 | 7.7 | 609 | 5.7 | 9.5 |
| | 16-Jan-13 | 7.9 | 300 | 4.3 | 10.8 |
| | 17-Feb-13 (2) | | | | |
| | 20-Mar-13 | 8.4 | 238 | 4.1 | 7.7 |
| | 16-Apr-13 | 8.1 | 238 | 6.4 | 9.9 |
| | 13-May-13 | 8.1 | 260 | 7.6 | 6.7 |
| | 19-Jun-13 | 8.1 | 273 | 9.3 | 11.6 |
| | 16-Jul-13 | 8.1 | 324 | 11.8 | 10.1 |
| | 21-Aug-13 | 8.2 | 305 | 11.3 | 10.4 |
| | 18-Sep-13 | 7.9 | 291 | 9.0 | 12.0 |
| | 16-Oct-13 | 8.4 | 294 | 9.6 | 6.6 |
| | 19-Nov-13 | 8.5 | 270 | 5.4 | 2.5 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.2 | 263 | 5.1 | 10.6 |
| | 13-May-14 | 8.1 | 265 | 8.8 | 10.5 |
| | 17-Jun-14 | 8.3 | 298 | 10.1 | 12.0 |
| | 15-Jul-14 | 7.7 | 330 | 10.9 | 8.7 |
| | 19-Aug-14 | 8.6 | 353 | 10.4 | 8.3 |
| | 9-Sep-14 | 8.8 | 356 | 10.8 | 4.3 |
| | 22-Oct-14 | 8.2 | 353 | 7.6 | 6.8 |
| | 16-Nov-14 (2) | | | | |
| | 16-Dec-14 | 9.3 | 313 | 4.9 | |
| | 20-Jan-15 | 7.7 | 143 | 1.6 | 1.2 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.4 | 214 | 2.8 | 13.8 |
| | 22-Apr-15 | 8.0 | 304 | 6.0 | 14.5 |
| | 19-May-15 | 8.3 | 267 | 8.8 | |
| | 15-Jun-15 | 8.1 | 325 | 10.0 | 10.4 |
| | 21-Jul-15 | 8.1 | 323 | 10.9 | |
| | 11-Aug-15 | 8.3 | 339 | 10.7 | 10.6 |
| | 25-Aug-15 | 8.3 | 297 | 10.7 | 10.9 |
| | 8-Sep-15 | 7.4 | 337 | 12.1 | 10.6 |
| | 15-Oct-15 | 8.1 | 297 | 8.7 | 10.0 |
| | 8-Nov-15 | | | | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21C** | 18-Nov-15 | 8.1 | 332 | 7.5 | 11.1 |
| **(cont'd)** | 8-Dec-15 | 7.9 | 316 | 5.7 | 12.9 |
| | 19-Jan-16 | 8.2 | 249 | 2.1 | 13.8 |
| | 17-Feb-16 | 8.0 | 288 | 3.6 | 13.7 |
| | 15-Mar-16 | 7.9 | 275 | 6.2 | 12.4 |
| | 21-Apr-16 | 8.1 | 283 | 7.3 | 13.4 |
| | 18-May-16 | 8.5 | 328 | 7.9 | 12.3 |
| | 23-Jun-16 | 8.5 | 316 | 9.5 | 11.6 |
| | 5-Jul-16 | 8.4 | 324 | 10.9 | 16.6 |
| | 21-Jul-16 | 8.5 | 342 | 11.9 | 10.5 |
| | 9-Aug-16 | 8.4 | 426 | 11.6 | 13.1 |
| | 24-Aug-16 | 8.4 | 336 | 12.2 | 11.1 |
| | 19-Sep-16 | 8.4 | 334 | 11.4 | 10.9 |
| | 18-Oct-16 | 8.3 | 340 | 11.7 | 13.6 |
| | 24-Oct-16 | 7.6 | 311 | 7.3 | 13.1 |
| | 16-Nov-16 | 8.2 | 308 | 7.3 | 10.7 |
| | 25-Jan-17 | 8.3 | 296 | 4.8 | 11.7 |
| | 17-Feb-17 | 8.3 | 307 | 3.3 | 14.5 |
| | 22-Mar-17 | 8.5 | 304 | 2.6 | 12.2 |
| | 19-Apr-17 | 7.4 | 270 | 6.3 | 13.2 |
| | 8-May-17 | 8.2 | 224 | 6.9 | 14.2 |
| | 16-May-17 | 8.5 | 197 | 10.8 | 10.8 |
| | 28-Jun-17 | 8.3 | 318 | 9.8 | 11.5 |
| | 7-Jul-17 | 8.2 | 288 | 10.9 | 11.6 |
| | 19-Jul-17 | 8.2 | 336 | 10.9 | 11.1 |
| | 2-Aug-17 | 8.0 | 311 | 10.5 | 12.0 |
| | 16-Aug-17 | 8.3 | 330 | 10.3 | 11.1 |
| | 19-Sep-17 | 8.2 | 326 | 10.4 | 11.0 |
| | 18-Oct-17 | 8.3 | 320 | 8.6 | 11.4 |
| | 15-Nov-17 | 8.4 | 311 | 5.5 | 12.9 |
| | 14-Dec-17 | 8.4 | 281 | 3.0 | 12.2 |
| | 18-Jan-18 | 8.0 | 269 | 3.4 | 9.2 |
| | 23-Feb-18 | 8.4 | 259 | 5.2 | 6.7 |
| | 21-Mar-18 | 8.3 | 270 | 3.2 | 12.5 |
| | 19-Apr-18 | 8.4 | 247 | 3.1 | 11.1 |
| | 9-May-18 | 8.3 | 403 | 8.0 | 11.2 |
| | 15-May-18 | 8.2 | 398 | 8.2 | 10.8 |
| | 18-Jun-18 | 8.3 | 432 | 9.8 | 10.5 |
| | 19-Jul-18 | 8.2 | 429 | 10.4 | 10.5 |
| | 24-Aug-18 | 8.4 | 433 | 11.5 | 10.4 |
| | 20-Sep-18 | 8.4 | 431 | 11.0 | 10.2 |
| | 25-Oct-18 | 8.4 | 434 | 5.9 | 11.5 |
| | 22-Nov-18 | 8.5 | | 2.7 | 12.8 |
| | 13-Dec-18 | 8.5 | 423 | 4.4 | 12.2 |
| | 19-Jan-19 | 8.3 | 419 | 3.0 | 12.8 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.4 | 377 | 4.4 | 12.2 |
| | 25-Apr-19 | 8.3 | 318 | 6.6 | 11.0 |
| | 16-May-19 | 8.4 | 358 | 7.8 | 11.5 |
| | 27-May-19 | 8.4 | 373 | 9.4 | 10.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW21C | 21-Jun-19 | 8.4 | 382 | 9.8 | 10.7 |
| (cont'd) | 30-Jul-19 | 8.4 | 392 | 11.6 | 10.0 |
| | 30-Aug-19 (1) | | | | |
| | 27-Sep-19 (1) | | | | |
| | 22-Oct-19 (1) | | | | |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 | 8.4 | 392 | 4.3 | 12.2 |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | 8.5 | 344 | 6.6 | 11.7 |
| | 20-May-20 | 8.3 | 410 | 8.7 | 11.2 |
| | 28-May-20 | 10.0 | 376 | 10.7 | 10.4 |
| | 24-Jun-20 (1) | | | | |
| | 31-Jul-20 | 8.7 | 407 | 11.9 | 10.1 |
| | 26-Aug-20 | 8.3 | 380 | 11.3 | 10.4 |
| | 26-Sep-20 | 8.2 | 380 | 10.3 | |
| | 29-Oct-20 | 7.1 | 401 | 9.4 | 8.1 |
| | 27-Nov-20 | 8.2 | 415 | 5.9 | 11.9 |
| | 22-Dec-20 | 8.3 | 417 | 4.8 | 12.4 |
| | 28-Jan-21 | 8.2 | 395 | 1.9 | 10.4 |
| | 23-Feb-21 | 7.9 | 360 | 0.1 | 10.2 |
| | 30-Mar-21 | 8.3 | 366 | 5.1 | 9.9 |
| | 28-Apr-21 | 7.6 | 466 | 7.9 | 7.9 |
| | 26-May-21 | 8.1 | 402 | 10.3 | 10.9 |
| | 23-Jun-21 | 8.2 | 420 | 10.1 | 10.9 |
| | 10-Jul-21 | 8.3 | 420 | 11.0 | 10.6 |
| | 23-Jul-21 | 8.3 | 419 | 10.9 | 10.8 |
| | 11-Aug-21 | | | 13.5 | |
| | 26-Aug-21 | 8.3 | 439 | 13.2 | 10.4 |
| | 27-Sep-21 | 8.2 | 445 | 9.5 | 11.2 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 | 8.1 | 397 | 4.2 | 10.2 |
| | 22-Dec-21 | 8.2 | 402 | 4.0 | 10.4 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.5 | 506 | 1.3 | 12.7 |
| | 25-May-22 | 8.3 | 424 | 9.2 | 11.4 |
| | 24-Jun-22 | 8.0 | 479 | 10.7 | 11.5 |
| | 8-Jul-22 | | | 10.2 | |
| | 11-Aug-22 | | | 11.2 | |
| | 29-Aug-22 | | | 11.9 | |
| | 29-Sep-22 | | | 9.1 | |
| | 27-Oct-22 | | | 7.2 | |
| | 17-May-23 | 8.4 | 390 | 7.2 | 11.3 |
| | 26-Jun-23 | 8.0 | | 13.4 | |
| | 11-Jul-23 | 8.6 | | 11.6 | |
| | 26-Jul-23 | 8.5 | | 11.6 | |
| | 14-Aug-23 | 8.1 | | 11.1 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW21C** | 29-Aug-23 | 7.8 | | 10.8 | |
| **(cont'd)** | 25-Sep-23 | 8.4 | | 10.6 | |
| | 31-Oct-23 | 8.4 | | 6.2 | |
| | 28-May-24 | 8.0 | 441 | 9.5 | 10.6 |
| | 27-Jun-24 | 8.0 | | 10.5 | |
| | 16-Jul-24 | 8.0 | | 11.8 | |
| | 30-Jul-24 | 8.0 | | 11.9 | |
| | 12-Aug-24 | 7.8 | | 11.7 | |
| | 28-Aug-24 | 8.1 | | 12.8 | |
| | 25-Sep-24 | 7.8 | | 12.9 | |
| | 29-Oct-24 | 7.7 | | 8.3 | |
| | 28-May-25 | 8.6 | 402 | 9.8 | 11.3 |
| | 24-Jun-25 | 8.1 | | 12.5 | |
| | 14-Jul-25 | 8.2 | | 12.3 | |
| | 29-Jul-25 | 8.2 | | 12.6 | |
| | 11-Aug-25 | 8.0 | | 13.3 | |
| | 26-Aug-25 | 7.9 | | 10.8 | |
| | 30-Sep-25 | 8.0 | | 10.7 | |
| | 27-Oct-25 | 7.9 | | 7.1 | |
| **SW22** | 26-Jun-03 | | | 9.7 | |
| | 11-Feb-04 | 7.9 | 382 | 6.0 | 9.8 |
| | 17-Mar-04 | | 566 | 6.7 | 9.2 |
| | 21-Apr-04 | 7.4 | 301 | 6.5 | |
| | 19-May-04 | 7.3 | 374 | 7.1 | |
| | 24-Jun-04 | 7.3 | 386 | 7.1 | |
| | 29-Jul-04 | 7.2 | 354 | 7.2 | |
| | 26-Aug-04 | 7.3 | 362 | 7.5 | |
| | 22-Sep-04 | 7.7 | 376 | 8.6 | |
| | 20-Oct-04 | 7.2 | 373 | 7.9 | 10.8 |
| | 17-Nov-04 | 7.7 | 383 | 7.9 | 11.2 |
| | 16-Dec-04 | 7.4 | 369 | 7.1 | 12.1 |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.5 | 369 | 6.7 | |
| | 11-Apr-05 | 6.8 | 329 | 6.9 | |
| | 26-May-05 | 6.8 | 383 | 7.6 | |
| | 28-Jun-05 | 8.2 | 396 | 8.1 | |
| | 11-Jul-05 | 7.3 | 390 | 8.4 | 11.8 |
| | 22-Aug-05 | 9.0 | 380 | 8.6 | |
| | 27-Sep-05 | 7.7 | 373 | 8.8 | 11.6 |
| | 25-Oct-05 | 8.0 | 479 | 7.7 | |
| | 15-Nov-05 | 7.9 | 367 | 7.5 | 11.7 |
| | 14-Dec-05 | 8.1 | 372 | 4.9 | 12.0 |
| | 18-Jan-06 | 8.0 | 338 | 6.4 | 12.1 |
| | 19-Feb-06 (2) | | | | |
| | 21-Mar-06 | 8.0 | 380 | 6.8 | 11.9 |
| | 19-Apr-06 | 7.8 | 416 | 7.6 | |
| | 23-May-06 | 7.9 | 478 | 8.4 | |
| | 20-Jun-06 | 7.7 | 467 | 8.8 | |
| | 11-Jul-06 | 8.1 | 457 | 9.5 | |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22** | 23-Aug-06 | 7.9 | 467 | 10.2 | |
| **(cont'd)** | 20-Sep-06 | 8.0 | 455 | 9.2 | |
| | 19-Oct-06 | 8.0 | 462 | 8.6 | |
| | 23-Nov-06 | 7.9 | 483 | 7.4 | 11.8 |
| | 17-Dec-06 | 7.6 | 515 | 7.3 | |
| | 21-Jan-07 | 7.9 | 495 | 5.7 | 12.2 |
| | 18-Feb-07 | 8.1 | 490 | 5.0 | |
| | 18-Mar-07 | 7.7 | 480 | 5.8 | |
| | 17-Apr-07 | 8.0 | 471 | 6.8 | 12.0 |
| | 13-May-07 | 8.1 | 426 | 8.4 | |
| | 17-Jun-07 | 8.0 | 505 | 8.1 | |
| | 15-Jul-07 | 7.9 | 506 | 8.4 | 11.3 |
| | 19-Aug-07 | 7.9 | 500 | 8.5 | 11.2 |
| | 17-Sep-07 | 7.9 | 465 | 8.5 | 10.1 |
| | 18-Oct-07 | 8.0 | 465 | 9.1 | 10.0 |
| | 21-Nov-07 | 7.9 | 503 | 7.0 | |
| | 11-Dec-07 | 8.0 | 435 | 6.1 | 11.3 |
| | 22-Jan-08 | 7.7 | 463 | 7.1 | |
| | 20-Feb-08 | 7.9 | 484 | 6.5 | |
| | 18-Mar-08 | 7.9 | 488 | 6.4 | |
| | 2-Apr-08 | 7.8 | 450 | 6.8 | 11.3 |
| | 23-Apr-08 | 8.0 | 393 | 7.1 | 10.9 |
| | 21-May-08 | 7.4 | 430 | 6.9 | 9.2 |
| | 17-Jun-08 | 8.1 | 466 | 7.3 | 10.6 |
| | 16-Jul-08 | 7.7 | 490 | 8.3 | 9.4 |
| | 19-Aug-08 | 7.7 | 533 | 8.1 | 7.0 |
| | 16-Sep-08 | 7.8 | 476 | 8.0 | 6.7 |
| | 22-Oct-08 | 7.9 | 438 | 7.4 | 6.7 |
| | 23-Nov-08 (2) | | | | |
| | 14-Dec-08 | 7.4 | 402 | 6.9 | 7.1 |
| | 18-Jan-09 | 8.0 | 468 | 6.6 | 7.2 |
| | 8-Feb-09 | | 427 | 6.4 | 7.9 |
| | 15-Mar-09 | 8.1 | 410 | 7.1 | |
| | 12-Apr-09 | 8.2 | 429 | 7.1 | |
| | 17-May-09 | 7.9 | 376 | 8.0 | 11.8 |
| | 14-Jun-09 | 8.2 | 890 | 7.9 | |
| | 12-Jul-09 | 7.6 | 474 | 8.7 | |
| | 9-Aug-09 | 8.8 | 491 | 8.4 | |
| | 13-Sep-09 | 7.7 | 451 | 9.0 | |
| | 11-Oct-09 | 8.6 | 501 | 7.5 | |
| | 15-Nov-09 | 7.9 | 428 | 7.2 | |
| | 13-Dec-09 | 7.9 | 475 | 6.3 | 11.8 |
| | 17-Jan-10 | 8.3 | 462 | 6.1 | 12.3 |
| | 7-Feb-10 | 7.7 | 468 | 6.0 | 12.3 |
| | 14-Mar-10 | 7.6 | 465 | 7.1 | 12.1 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.2 | 455 | 7.3 | |
| | 16-May-10 | 7.9 | 283 | 7.6 | 11.8 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.8 | 300 | 7.4 | 15.2 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22 | 18-Jul-10 | 8.0 | 317 | 8.0 | 15.2 |
| (cont'd) | 15-Aug-10 | 8.2 | 325 | 8.4 | 12.6 |
| | 12-Sep-10 | 8.2 | 350 | 8.2 | 11.4 |
| | 17-Oct-10 | 7.8 | 346 | 7.9 | 11.3 |
| | 14-Nov-10 | 7.9 | 263 | 7.7 | 10.1 |
| | 19-Dec-10 | 8.1 | 290 | 7.1 | 10.7 |
| | 16-Jan-11 | 8.0 | 304 | 6.9 | 11.6 |
| | 20-Feb-11 | 7.8 | 298 | 3.8 | 8.6 |
| | 13-Mar-11 | 8.2 | 205 | 7.3 | 12.2 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 7.9 | 166 | 7.0 | 11.5 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 310 | 6.7 | 8.5 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.1 | 283 | 7.1 | 12.4 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.0 | 267 | 8.4 | 12.7 |
| | 17-Jul-11 | 8.0 | 242 | 8.6 | 14.0 |
| | 14-Aug-11 | 8.7 | 225 | 8.8 | 11.2 |
| | 18-Sep-11 | 8.8 | 292 | 8.9 | 11.8 |
| | 16-Oct-11 | 8.0 | 341 | 8.3 | 11.4 |
| | 20-Nov-11 | 8.4 | 329 | 7.1 | 10.1 |
| | 18-Dec-11 | 8.5 | 262 | 7.2 | 10.3 |
| | 15-Jan-12 | 8.3 | 262 | 6.7 | 9.8 |
| | 19-Feb-12 | 8.2 | 280 | 6.9 | 11.4 |
| | 18-Mar-12 | 7.7 | 251 | 7.5 | 9.2 |
| | 15-Apr-12 | 8.7 | 314 | 7.4 | 13.1 |
| | 13-May-12 | 8.2 | 401 | 7.4 | 13.5 |
| | 17-Jun-12 | 7.8 | 344 | 8.6 | 7.8 |
| | 16-Jul-12 | 8.3 | 346 | 8.6 | 7.9 |
| | 15-Aug-12 | 8.2 | 420 | 8.7 | 6.9 |
| | 18-Sep-12 | 7.7 | 340 | 8.6 | 10.8 |
| | 18-Oct-12 | 8.2 | 313 | 8.9 | 8.7 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22 (cont'd) | 21-Nov-12 | 7.7 | 291 | 7.9 | 4.0 |
| | 20-Dec-12 | 7.5 | 716 | 7.2 | 10.4 |
| | 16-Jan-13 | 7.9 | 365 | 7.2 | 10.6 |
| | 20-Feb-13 | 8.0 | 301 | 6.8 | 12.1 |
| | 20-Mar-13 | 7.8 | 300 | 6.2 | 13.0 |
| | 17-Apr-13 | 7.6 | 310 | 7.1 | 9.9 |
| | 14-May-13 | 7.7 | 295 | 7.0 | 10.0 |
| | 19-Jun-13 | 8.1 | 310 | 7.6 | 12.4 |
| | 17-Jul-13 | 7.9 | 309 | 8.4 | 8.9 |
| | 21-Aug-13 | 8.0 | 338 | 8.4 | 11.8 |
| | 19-Sep-13 | 8.0 | 331 | 8.7 | 6.8 |
| | 17-Oct-13 | 8.3 | 313 | 8.2 | 6.3 |
| | 20-Nov-13 | 8.4 | 331 | 7.3 | 2.8 |
| | 15-Dec-13 (2) | | | | |
| | 22-Jan-14 | 7.6 | 220 | 1.7 | 3.9 |
| | 16-Feb-14 (2) | | | | |
| | 19-Mar-14 | 7.7 | 256 | 3.4 | 6.5 |
| | 17-Apr-14 | 7.9 | 345 | 6.8 | 10.3 |
| | 13-May-14 | 7.2 | 322 | 8.6 | 10.5 |
| | 17-Jun-14 | 7.7 | 300 | 8.7 | 12.3 |
| | 15-Jul-14 | 8.8 | 387 | 9.0 | 4.0 |
| | 19-Aug-14 | 8.6 | 380 | 9.4 | 10.4 |
| | 9-Sep-14 | 9.0 | 386 | 9.2 | 4.2 |
| | 20-Oct-14 | 8.8 | 380 | 9.0 | 4.9 |
| | 16-Nov-14 (2) | | | | |
| | 17-Dec-14 | 8.4 | 377 | 7.1 | |
| | 21-Jan-15 | 7.8 | 367 | 6.3 | 1.4 |
| | 15-Feb-15 (3) | | | | |
| | 19-Mar-15 | 7.9 | 268 | 5.4 | 11.0 |
| | 23-Apr-15 | 7.7 | 358 | 6.7 | 13.5 |
| | 20-May-15 | 7.9 | 293 | 7.6 | 15.0 |
| | 15-Jun-15 | 7.9 | 348 | 7.8 | 10.9 |
| | 22-Jul-15 | 7.8 | 296 | 8.2 | 11.4 |
| | 12-Aug-15 | 8.1 | 357 | 8.4 | 11.6 |
| | 23-Aug-15 | | | | |
| | 9-Sep-15 | 7.8 | 352 | 9.1 | 8.9 |
| | 16-Oct-15 | 7.8 | 330 | 7.9 | 11.2 |
| | 8-Nov-15 | | | | |
| | 19-Nov-15 | 7.6 | 387 | 8.3 | 13.2 |
| | 8-Dec-15 | 7.9 | 371 | 7.0 | 12.4 |
| | 20-Jan-16 | 7.8 | 350 | 6.1 | 11.7 |
| | 18-Feb-16 | 7.7 | 332 | 4.3 | 12.6 |
| | 15-Mar-16 | 7.5 | 339 | 6.9 | 12.1 |
| | 21-Apr-16 | 7.6 | 324 | 7.1 | 13.4 |
| | 18-May-16 | 8.0 | 373 | 7.7 | 11.8 |
| | 22-Jun-16 | 7.9 | 343 | 8.0 | 12.3 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 8.0 | 365 | 8.7 | 12.7 |
| | 7-Aug-16 | | | | |
| | 25-Aug-16 | 8.1 | 358 | 9.6 | 12.4 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22 | 19-Sep-16 | 8.1 | 515 | 9.4 | 8.9 |
| (cont'd) | 17-Oct-16 | 8.0 | 420 | 9.5 | 10.3 |
| | 15-Nov-16 | 8.1 | 361 | 8.1 | 11.4 |
| | 12-Dec-16 | 8.4 | 503 | 5.5 | 14.1 |
| | 25-Jan-17 | 7.6 | 381 | 7.3 | 10.0 |
| | 16-Feb-17 | 8.1 | 361 | 4.9 | 13.2 |
| | 21-Mar-17 | 8.1 | 384 | 7.2 | 11.1 |
| | 19-Apr-17 | 7.1 | 333 | 7.2 | 12.9 |
| | 16-May-17 | 8.3 | 444 | 6.4 | 12.6 |
| | 28-Jun-17 | 7.8 | 340 | 7.1 | 12.4 |
| | 7-Jul-17 | | | | |
| | 20-Jul-17 | 8.1 | 344 | 7.3 | 11.8 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 7.7 | 350 | 7.3 | 11.0 |
| | 19-Sep-17 | 7.8 | 356 | 8.1 | 11.6 |
| | 17-Oct-17 | 8.1 | 358 | 8.1 | 11.1 |
| | 15-Nov-17 | 8.0 | 372 | 7.5 | 11.7 |
| | 14-Dec-17 | 7.4 | 371 | 7.4 | 12.3 |
| | 17-Jan-18 | 7.7 | 342 | 6.5 | 10.9 |
| | 23-Feb-18 | 7.8 | 330 | 6.7 | 8.4 |
| | 20-Mar-18 | 7.7 | 341 | 6.4 | 15.0 |
| | 18-Apr-18 | 8.1 | 541 | 6.4 | 10.7 |
| | 15-May-18 | 7.6 | 473 | 7.6 | 11.2 |
| | 18-Jun-18 | 7.7 | 487 | 17.9 | 11.2 |
| | 18-Jul-18 | 7.7 | 495 | 8.9 | 10.9 |
| | 23-Aug-18 | 8.0 | 503 | 8.8 | 10.7 |
| | 20-Sep-18 | 8.0 | 501 | 8.9 | 10.8 |
| | 24-Oct-18 | 8.3 | 711 | 3.5 | 12.0 |
| | 21-Nov-18 | 8.1 | | 6.3 | 11.0 |
| | 12-Dec-18 | 8.1 | 501 | 7.1 | 11.5 |
| | 18-Jan-19 | 7.7 | 490 | 7.0 | 11.3 |
| | 26-Feb-19 | 7.9 | 484 | 6.3 | 11.6 |
| | 15-Mar-19 | 7.8 | 473 | 6.7 | 11.3 |
| | 24-Apr-19 | 7.7 | 420 | 6.8 | 11.5 |
| | 23-May-19 | 7.7 | 416 | 7.3 | 11.2 |
| | 18-Jun-19 | 7.8 | 444 | 7.7 | 11.3 |
| | 29-Jul-19 | 7.9 | 472 | 8.2 | 11.0 |
| | 29-Aug-19 | 7.9 | 511 | 10.1 | 10.2 |
| | 26-Sep-19 | 8.2 | 534 | 11.4 | 10.2 |
| | 23-Oct-19 | 8.1 | 454 | 9.6 | 10.2 |
| | 22-Nov-19 | 7.7 | 399 | 0.2 | 10.2 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |
| | 27-Apr-20 | | | | |
| | 29-May-20 | 8.2 | 445 | 7.3 | 11.2 |
| | 23-Jun-20 | 8.6 | 639 | 8.8 | 10.6 |
| | 30-Jul-20 | 8.7 | 646 | 14.9 | 9.2 |
| | 25-Aug-20 | 8.1 | 588 | 15.4 | 9.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22** | 25-Sep-20 | 8.0 | 590 | 13.6 | 10.2 |
| **(cont'd)** | 30-Oct-20 | 8.0 | 444 | 9.0 | 10.3 |
| | 26-Nov-20 | 8.1 | 565 | 5.0 | 11.6 |
| | 22-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.1 | 423 | 6.0 | 11.0 |
| | 27-Apr-21 | 7.3 | 427 | 7.6 | 11.8 |
| | 27-May-21 | 7.2 | 405 | 12.0 | 11.6 |
| | 22-Jun-21 | 7.7 | 489 | 7.4 | 11.3 |
| | 22-Jul-21 | 8.0 | 497 | 9.4 | 11.3 |
| | 25-Aug-21 | 7.8 | 452 | | 11.4 |
| | 28-Sep-21 | 7.5 | 495 | 8.1 | 11.3 |
| | 26-Oct-21 | 7.4 | 493 | 8.3 | 11.1 |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.1 | 568 | 0.1 | 10.6 |
| | 24-May-22 | 8.0 | 422 | 10.5 | 9.1 |
| | 24-Jun-22 | 7.7 | 648 | 12.5 | 11.0 |
| | 30-Aug-22 | | | 11.4 | |
| | 27-Sep-22 | | | 10.3 | |
| | 28-Oct-22 | | | 7.9 | |
| | 23-Nov-22 | | | 6.8 | |
| | 16-May-23 | | | 7.6 | |
| | 27-Jun-23 | | | 8.0 | |
| | 26-Jul-23 | | | 8.0 | |
| | 30-Aug-23 | | | 8.3 | |
| | 26-Sep-23 | | | 9.0 | |
| | 31-Oct-23 | | | 8.0 | |
| | 28-May-24 | | | 7.6 | |
| | 27-Jun-24 | | | 7.9 | |
| | 30-Jul-24 | | | 8.5 | |
| | 28-Aug-24 | | | 9.4 | |
| | 25-Sep-24 | | | 9.8 | |
| | 29-Oct-24 | | | 9.5 | |
| | 26-May-25 | | | 9.2 | |
| | 25-Jun-25 | | | 8.7 | |
| | 29-Jul-25 | | | 9.7 | |
| | 26-Aug-25 | | | 9.3 | |
| | 29-Sep-25 | | | 9.7 | |
| | 28-Oct-25 | | | 8.2 | |
| **SW22A** | 11-Feb-04 | 8.7 | 453 | 2.4 | 10.8 |
| | 17-Mar-04 | 8.7 | 618 | 2.0 | 10.1 |
| | 21-Apr-04 | 7.9 | 393 | 5.6 | |
| | 19-May-04 | 7.8 | 496 | 5.6 | |
| | 24-Jun-04 | 8.2 | 548 | 7.6 | |
| | 29-Jul-04 | 8.1 | 607 | 10.3 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22A** | 26-Aug-04 | 8.1 | 586 | 7.4 | |
| **(cont'd)** | 22-Sep-04 | 8.1 | 690 | 13.5 | 10.4 |
| | 20-Oct-04 | 7.9 | 582 | 6.5 | 11.8 |
| | 17-Nov-04 | 7.9 | 642 | 7.7 | 10.9 |
| | 15-Dec-04 (2) | | | | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 8.1 | 676 | 4.9 | |
| | 11-Apr-05 | 7.4 | 389 | 5.1 | |
| | 26-May-05 | 7.1 | 390 | 7.5 | |
| | 28-Jun-05 | 8.4 | 629 | 10.0 | |
| | 11-Jul-05 | 7.3 | 655 | 11.5 | 10.7 |
| | 22-Aug-05 | 9.0 | 640 | 11.3 | |
| | 27-Sep-05 | 7.8 | 597 | 8.5 | |
| | 25-Oct-05 | 8.7 | 750 | 6.1 | |
| | 15-Nov-05 | 7.8 | 506 | 5.9 | 11.7 |
| | 14-Dec-05 | 8.3 | 646 | 4.2 | 12.6 |
| | 18-Jan-06 | 7.4 | 469 | 3.2 | |
| | 19-Feb-06 (2) | | | | |
| | 21-Mar-06 | 8.3 | 545 | 5.5 | |
| | 19-Apr-06 | 8.1 | 581 | 6.5 | |
| | 23-May-06 | 8.3 | 724 | 11.9 | |
| | 20-Jun-06 | 8.2 | 695 | 11.6 | |
| | 11-Jul-06 | 8.4 | 700 | 13.8 | |
| | 23-Aug-06 | 8.2 | 733 | 13.3 | |
| | 20-Sep-06 | 8.3 | 732 | 10.8 | |
| | 19-Oct-06 | 8.2 | 751 | 8.9 | |
| | 23-Nov-06 | 8.4 | 680 | 6.1 | 12.4 |
| | 17-Dec-06 | 8.2 | 713 | 6.0 | |
| | 21-Jan-07 | 8.4 | 689 | 2.3 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.4 | 703 | 1.9 | |
| | 17-Apr-07 | 8.4 | 649 | 4.8 | |
| | 13-May-07 | 8.4 | 614 | 9.3 | |
| | 17-Jun-07 | 8.2 | 615 | 8.8 | |
| | 15-Jul-07 | 8.0 | 402 | 10.0 | 10.8 |
| | 17-Sep-07 | 8.2 | 697 | 9.1 | 10.6 |
| | 18-Oct-07 | 8.6 | | 10.4 | |
| | 21-Nov-07 | 7.9 | 779 | 4.6 | 11.1 |
| | 11-Dec-07 | 8.1 | 372 | 2.3 | 13.1 |
| | 20-Feb-08 | 8.1 | 654 | 3.5 | |
| | 18-Mar-08 | 7.9 | 688 | 3.5 | |
| | 2-Apr-08 | 7.7 | 526 | 5.1 | 12.5 |
| | 23-Apr-08 | 7.7 | 523 | 8.6 | 10.2 |
| | 21-May-08 | 7.7 | 576 | 6.6 | 10.8 |
| | 17-Jun-08 | 8.1 | 656 | 9.5 | |
| | 16-Jul-08 | 7.7 | 709 | 10.0 | |
| | 19-Aug-08 | 7.8 | 816 | 9.9 | |
| | 16-Sep-08 | 7.7 | 724 | 8.5 | |
| | 22-Oct-08 | 7.9 | 606 | 5.8 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22A (cont'd) | 23-Nov-08 | 8.1 | 625 | 5.3 | |
| | 14-Dec-08 | 7.3 | 503 | 2.5 | |
| | 18-Jan-09 | 8.5 | 631 | 0.2 | 12.8 |
| | 8-Feb-09 | | 525 | 4.5 | 9.0 |
| | 15-Mar-09 | 8.6 | 520 | 5.5 | |
| | 12-Apr-09 | 8.2 | 429 | 7.1 | |
| | 17-May-09 | 8.5 | 494 | 11.5 | |
| | 14-Jun-09 | 8.3 | 1,259 | 10.0 | |
| | 12-Jul-09 | 8.3 | 593 | 10.3 | |
| | 9-Aug-09 | 7.5 | 725 | 7.5 | |
| | 13-Sep-09 | 8.1 | 605 | 12.0 | |
| | 11-Oct-09 | 8.3 | 719 | 6.4 | 12.1 |
| | 15-Nov-09 | 7.7 | 569 | 6.4 | 12.4 |
| | 13-Dec-09 | 7.9 | 507 | 0.9 | 11.8 |
| | 17-Jan-10 | 8.4 | 518 | 0.7 | 11.4 |
| | 7-Feb-10 | 7.6 | 586 | 0.0 | 11.6 |
| | 14-Mar-10 | 7.4 | 575 | 6.1 | 12.6 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 8.1 | 607 | 7.8 | |
| | 16-May-10 | 8.3 | 396 | 9.3 | 11.8 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.3 | 439 | 9.8 | 14.6 |
| | 18-Jul-10 | 8.3 | 438 | 8.8 | 15.2 |
| | 15-Aug-10 | 8.3 | 368 | 10.0 | 10.5 |
| | 12-Sep-10 | 8.4 | 467 | 9.3 | 11.1 |
| | 17-Oct-10 | 8.1 | 424 | 7.0 | 11.4 |
| | 14-Nov-10 | 8.2 | 262 | 6.5 | 10.1 |
| | 19-Dec-10 | 8.3 | 363 | 3.6 | 11.5 |
| | 16-Jan-11 | 8.3 | 354 | 2.7 | 12.7 |
| | 20-Feb-11 | 8.0 | 383 | 3.6 | 10.6 |
| | 13-Mar-11 | 8.4 | 314 | 5.8 | 13.1 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 7.6 | 407 | 5.1 | 12.0 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.3 | 347 | 4.6 | 9.1 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.6 | 273 | 6.9 | 12.7 |
| | 16-May-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22A** | 18-May-11 | | | | |
| **(cont'd)** | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.4 | 375 | 8.2 | 12.5 |
| | 17-Jul-11 | 8.4 | 484 | 11.8 | 13.3 |
| | 14-Aug-11 | 8.7 | 338 | 11.9 | 10.0 |
| | 18-Sep-11 | 8.6 | 392 | 11.0 | 10.6 |
| | 16-Oct-11 | 8.1 | 483 | 8.5 | 10.9 |
| | 20-Nov-11 | 8.3 | 396 | 4.4 | 11.6 |
| | 18-Dec-11 | 8.6 | 302 | 5.2 | 11.0 |
| | 15-Jan-12 | 8.6 | 325 | 2.5 | 11.2 |
| | 19-Feb-12 | 8.3 | 329 | 4.0 | 12.1 |
| | 18-Mar-12 | 8.2 | 358 | 9.2 | 8.2 |
| | 15-Apr-12 | 8.7 | 407 | 7.0 | 12.9 |
| | 13-May-12 | 7.8 | 308 | 7.4 | 13.3 |
| | 17-Jun-12 | 8.4 | 506 | 11.8 | 7.1 |
| | 16-Jul-12 | 8.5 | 508 | 11.9 | 7.5 |
| | 15-Aug-12 | 8.4 | 486 | 9.6 | 6.8 |
| | 18-Sep-12 | 7.8 | 491 | 9.7 | 10.2 |
| | 18-Oct-12 | 8.4 | 379 | 8.8 | 8.2 |
| | 21-Nov-12 | 7.9 | 350 | 8.3 | 4.1 |
| | 20-Dec-12 | 7.8 | 889 | 4.6 | 11.1 |
| | 16-Jan-13 | 8.1 | 383 | 6.4 | 10.8 |
| | 20-Feb-13 | 8.3 | 203 | 2.9 | 14.0 |
| | 20-Mar-13 | 8.2 | 375 | 4.4 | 7.3 |
| | 17-Apr-13 | 7.9 | 335 | 6.6 | 10.5 |
| | 14-May-13 | 8.0 | 375 | 6.2 | 9.2 |
| | 19-Jun-13 | 8.2 | 443 | 9.4 | 11.0 |
| | 17-Jul-13 | 8.2 | 469 | 11.0 | 8.6 |
| | 21-Aug-13 | 8.2 | 467 | 10.7 | 11.6 |
| | 19-Sep-13 | 8.2 | 506 | 12.0 | 6.5 |
| | 17-Oct-13 | 8.6 | 422 | 9.2 | 6.2 |
| | 20-Nov-13 | 8.3 | 429 | 5.6 | 2.0 |
| | 15-Dec-13 (2) | | | | |
| | 19-Jan-14 (2) | | | | |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 8.0 | 489 | 5.2 | 11.3 |
| | 13-May-14 | 7.3 | 322 | 8.4 | 10.4 |
| | 17-Jun-14 | 8.4 | 410 | 9.4 | 10.4 |
| | 15-Jul-14 | 8.7 | 540 | 9.8 | 6.9 |
| | 19-Aug-14 | 8.7 | 542 | 10.0 | 11.0 |
| | 16-Nov-14 (2) | | | | |
| | 21-Jan-15 | 8.0 | 446 | 2.2 | 1.3 |
| | 15-Feb-15 (3) | | | | |
| | 19-Mar-15 | 7.7 | 369 | 1.3 | 14.8 |
| | 23-Apr-15 | 8.1 | 443 | 4.1 | 13.7 |
| | 20-May-15 | 8.5 | 411 | 9.5 | 14.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22A | 15-Jun-15 | 8.3 | 484 | 8.4 | 11.3 |
| (cont'd) | 22-Jul-15 | 8.3 | 484 | 8.3 | 11.8 |
| | 12-Aug-15 | 8.3 | 509 | 9.4 | 11.0 |
| | 23-Aug-15 | | | | |
| | 16-Oct-15 | 8.0 | 418 | 6.9 | 11.6 |
| | 8-Nov-15 | | | | |
| | 19-Nov-15 | 7.8 | 553 | 8.3 | 13.2 |
| | 8-Dec-15 | 8.1 | 476 | 4.5 | 12.7 |
| | 20-Jan-16 | 8.1 | 391 | 2.7 | 13.5 |
| | 18-Feb-16 | 7.9 | 441 | 3.2 | 14.1 |
| | 15-Mar-16 | 7.8 | 348 | 5.3 | 12.8 |
| | 21-Apr-16 | 7.9 | 407 | 7.3 | 13.7 |
| | 18-May-16 | 8.6 | 517 | 10.1 | 12.0 |
| | 22-Jun-16 | 8.5 | 496 | 11.0 | 11.3 |
| | 3-Jul-16 | | | | |
| | 21-Jul-16 | 8.4 | 513 | 11.6 | 11.4 |
| | 7-Aug-16 | | | | |
| | 25-Aug-16 | 8.5 | 525 | 13.1 | 11.0 |
| | 19-Sep-16 | 8.3 | 690 | 11.7 | 8.2 |
| | 17-Oct-16 | 8.2 | 508 | 8.3 | 11.0 |
| | 15-Nov-16 | 8.1 | 496 | 8.3 | 10.9 |
| | 12-Dec-16 | 8.0 | 730 | 1.1 | 14.6 |
| | 12-Jan-17 | 8.1 | 495 | 5.3 | 11.7 |
| | 16-Feb-17 | 8.4 | 436 | 3.2 | 14.6 |
| | 21-Mar-17 | 8.2 | 488 | 4.9 | 12.1 |
| | 19-Apr-17 | 7.8 | 492 | 8.9 | 13.1 |
| | 16-May-17 | 8.1 | 3 | 7.0 | 11.7 |
| | 28-Jun-17 | 8.2 | 471 | 8.6 | 12.1 |
| | 7-Jul-17 | | | | |
| | 20-Jul-17 | 8.4 | 517 | 8.3 | 12.0 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.3 | 506 | 10.3 | 11.3 |
| | 19-Sep-17 | 8.2 | 557 | 10.1 | 10.8 |
| | 17-Oct-17 | 8.3 | 529 | 9.8 | 10.5 |
| | 15-Nov-17 | 8.3 | 465 | 5.4 | 13.6 |
| | 14-Dec-17 | 7.8 | 465 | 5.7 | 13.5 |
| | 17-Jan-18 | 7.9 | 421 | 2.2 | 13.2 |
| | 23-Feb-18 | 8.2 | 361 | 4.0 | 10.4 |
| | 20-Mar-18 | 8.2 | 420 | 2.7 | 17.7 |
| | 18-Apr-18 | 8.6 | 655 | 4.5 | 12.2 |
| | 15-May-18 | 7.9 | 611 | 5.8 | 11.6 |
| | 18-Jun-18 | 8.1 | 693 | 9.8 | 11.0 |
| | 18-Jul-18 | 8.2 | 652 | 14.7 | 9.3 |
| | 23-Aug-18 | 8.3 | 677 | 8.8 | 10.5 |
| | 19-Sep-18 | 8.3 | 704 | 10.8 | 10.3 |
| | 24-Oct-18 | 8.2 | 496 | 7.6 | 11.2 |
| | 21-Nov-18 | 8.4 | 484 | 1.7 | 12.9 |
| | 12-Dec-18 | 8.4 | 657 | 3.9 | 12.7 |
| | 18-Jan-19 | 8.2 | 672 | 3.6 | 12.6 |
| | 26-Feb-19 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22A** | 15-Mar-19 | 8.3 | 584 | 3.5 | 12.5 |
| **(cont'd)** | 24-Apr-19 | 8.3 | 483 | 6.1 | 12.0 |
| | 23-May-19 | 8.4 | 570 | 11.0 | 10.6 |
| | 18-Jun-19 | 8.4 | 612 | 7.6 | 11.3 |
| | 29-Jul-19 | 8.3 | 632 | 11.3 | 10.1 |
| | 29-Aug-19 | 8.3 | 554 | 11.1 | 10.7 |
| | 26-Sep-19 | 8.0 | 479 | 12.2 | 10.1 |
| | 23-Oct-19 | 8.0 | 502 | 9.1 | 10.3 |
| | 22-Nov-19 | 8.1 | 407 | 0.3 | 9.5 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |
| | 27-Apr-20 | 8.4 | 569 | 6.8 | 11.7 |
| | 29-May-20 | 8.9 | 355 | 8.3 | 11.0 |
| | 23-Jun-20 | 7.9 | 452 | 7.5 | 10.8 |
| | 30-Jul-20 | 8.1 | 466 | 11.3 | 10.4 |
| | 25-Aug-20 | 7.6 | 439 | 9.4 | 10.7 |
| | 25-Sep-20 | 7.5 | 425 | 8.8 | 10.9 |
| | 30-Oct-20 | 7.9 | 476 | 8.5 | 10.6 |
| | 26-Nov-20 | 7.6 | 484 | 7.7 | 10.9 |
| | 22-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.2 | 362 | 6.8 | 6.5 |
| | 27-Apr-21 | 7.7 | 557 | 8.6 | 11.8 |
| | 27-May-21 | 7.6 | 466 | 9.8 | 10.5 |
| | 22-Jun-21 | 8.3 | 654 | 7.7 | 11.4 |
| | 22-Jul-21 | 8.4 | 627 | 10.3 | 10.9 |
| | 25-Aug-21 | 8.2 | 619 | | 10.1 |
| | 28-Sep-21 | 8.1 | 680 | 8.9 | 11.4 |
| | 26-Oct-21 | 8.0 | 646 | 8.6 | 11.2 |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.1 | 594 | 1.1 | 11.1 |
| | 24-May-22 | 7.8 | 586 | 9.9 | 9.8 |
| | 24-Jun-22 | | | 9.5 | |
| | 30-Aug-22 | | | 10.8 | |
| | 29-Sep-22 | | | 9.7 | |
| | 28-Oct-22 | | | 6.2 | |
| | 23-Nov-22 | | | 2.6 | |
| | 16-May-23 | | | 8.4 | |
| | 27-Jun-23 | | | 8.9 | |
| | 26-Jul-23 | | | 10.7 | |
| | 30-Aug-23 | | | 9.3 | |
| | 26-Sep-23 | | | 9.9 | |
| | 31-Oct-23 | | | 6.3 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22A** | 28-May-24 | | | 8.0 | |
| **(cont'd)** | 27-Jun-24 | | | 8.7 | |
| | 30-Jul-24 | | | 10.3 | |
| | 28-Aug-24 | | | 11.9 | |
| | 25-Sep-24 | | | 13.0 | |
| | 29-Oct-24 | | | 8.2 | |
| | 26-May-25 | | | 10.4 | |
| | 25-Jun-25 | | | 10.9 | |
| | 29-Jul-25 | | | 13.1 | |
| | 26-Aug-25 | | | 10.1 | |
| | 29-Sep-25 | | | 13.0 | |
| | 28-Oct-25 | | | 7.5 | |
| **SW22C** | 18-Mar-07 (2) | | | | |
| | 17-Apr-07 | 8.4 | 547 | 3.2 | 13.3 |
| | 15-May-07 | 8.3 | 548 | 11.6 | 10.3 |
| | 18-Jun-07 | 8.5 | 697 | 13.3 | |
| | 18-Jul-07 | 8.0 | 681 | 14.0 | 9.9 |
| | 22-Aug-07 | 8.0 | 704 | 14.5 | 9.5 |
| | 17-Sep-07 | 8.0 | 651 | 11.0 | 9.9 |
| | 18-Oct-07 | 8.2 | 629 | 11.4 | 9.3 |
| | 21-Nov-07 | 7.8 | 625 | 4.6 | 10.9 |
| | 9-Dec-07 (2) | | | | |
| | 22-Jan-08 | 7.7 | 574 | 2.0 | |
| | 20-Feb-08 | 8.1 | 531 | 1.5 | |
| | 18-Mar-08 | 7.8 | 598 | 1.7 | |
| | 2-Apr-08 | 7.5 | 440 | 2.5 | 13.0 |
| | 23-Apr-08 | 7.8 | 461 | 10.5 | 8.7 |
| | 21-May-08 | 7.5 | 518 | 7.4 | 10.6 |
| | 17-Jun-08 | 8.0 | 583 | 12.1 | 8.6 |
| | 16-Jul-08 | 7.7 | 529 | 14.9 | |
| | 19-Aug-08 | 7.6 | 746 | 13.7 | |
| | 16-Sep-08 | 7.7 | 654 | 11.0 | |
| | 22-Oct-08 | 7.8 | 497 | 5.9 | |
| | 23-Nov-08 | 7.8 | 571 | 3.6 | |
| | 14-Dec-08 | 6.9 | 448 | 2.5 | |
| | 18-Jan-09 | 8.1 | 554 | 1.3 | 12.5 |
| | 8-Feb-09 | | 419 | 1.8 | 9.3 |
| | 15-Mar-09 | 8.1 | 419 | 3.3 | |
| | 12-Apr-09 | 8.5 | 471 | 6.8 | |
| | 17-May-09 | 8.4 | 462 | 14.5 | |
| | 14-Jun-09 | 8.4 | 1,141 | 12.5 | |
| | 12-Jul-09 | 8.0 | 652 | 14.0 | 10.4 |
| | 9-Aug-09 | 8.4 | 634 | 11.6 | 9.7 |
| | 13-Sep-09 | 8.2 | 617 | 14.6 | |
| | 11-Oct-09 | 8.3 | 610 | 6.6 | 12.0 |
| | 15-Nov-09 | 7.7 | 533 | 4.7 | |
| | 13-Dec-09 | 8.1 | 354 | 0.1 | 12.5 |
| | 17-Jan-10 | 8.2 | 315 | 0.1 | 15.9 |
| | 7-Feb-10 | 8.3 | 426 | 0.7 | 11.5 |
| | 14-Mar-10 | 7.5 | 468 | 4.0 | 13.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22C | 4-Apr-10 | | | | |
| (cont'd) | 11-Apr-10 | 8.1 | 545 | 6.9 | |
| | 16-May-10 | 8.2 | 406 | 10.9 | 10.4 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.2 | 450 | 12.9 | 12.6 |
| | 18-Jul-10 | 8.1 | 470 | 13.6 | 13.0 |
| | 15-Aug-10 | 8.3 | 486 | 13.5 | 9.7 |
| | 12-Sep-10 | 8.4 | 478 | 11.1 | 10.2 |
| | 17-Oct-10 | 7.8 | 8 | 7.3 | 10.6 |
| | 14-Nov-10 | 8.2 | 271 | 6.0 | 9.4 |
| | 19-Dec-10 | 8.4 | 300 | 2.4 | 11.9 |
| | 16-Jan-11 | 8.2 | 270 | 1.4 | 12.3 |
| | 20-Feb-11 | 8.0 | 315 | 1.7 | 10.1 |
| | 13-Mar-11 | 8.3 | 279 | 2.8 | 13.8 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | 7.2 | 340 | 2.8 | 12.8 |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.5 | 266 | 3.0 | 12.1 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.3 | 280 | 8.5 | 11.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.3 | 375 | 12.9 | 10.5 |
| | 17-Jul-11 | 8.4 | 498 | 16.1 | 10.8 |
| | 14-Aug-11 | 8.8 | 333 | 15.1 | 9.5 |
| | 18-Sep-11 | 8.8 | 403 | 12.8 | 6.8 |
| | 16-Oct-11 | 7.9 | 413 | 9.2 | 9.6 |
| | 20-Nov-11 | 8.2 | 332 | 3.6 | 11.7 |
| | 18-Dec-11 | 8.4 | 241 | 1.0 | 12.6 |
| | 15-Jan-12 | 8.6 | 262 | 0.8 | 11.9 |
| | 19-Feb-12 | 8.0 | 182 | 2.1 | 12.9 |
| | 18-Mar-12 | 7.8 | 318 | 11.4 | 7.4 |
| | 15-Apr-12 | 8.6 | 347 | 6.3 | 13.4 |
| | 13-May-12 | 8.1 | 394 | 10.2 | 11.9 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW22C | 17-Jun-12 | 8.3 | 526 | 16.1 | 7.1 |
| (cont'd) | 16-Jul-12 | 8.8 | 530 | 16.1 | 7.6 |
| | 15-Aug-12 | 8.6 | 492 | 13.9 | 6.3 |
| | 18-Sep-12 | 7.8 | 468 | 12.5 | 8.3 |
| | 18-Oct-12 | 8.7 | 392 | 9.3 | 9.0 |
| | 21-Nov-12 | 8.1 | 325 | 6.4 | 4.2 |
| | 20-Dec-12 | 7.6 | 735 | 2.9 | 11.4 |
| | 16-Jan-13 | 8.0 | 344 | 2.8 | 11.1 |
| | 20-Feb-13 | 8.2 | 249 | 1.3 | 14.1 |
| | 20-Mar-13 | 8.1 | 308 | 2.2 | 8.9 |
| | 17-Apr-13 | 7.9 | 284 | 4.8 | 9.6 |
| | 14-May-13 | 8.0 | 319 | 6.7 | 8.7 |
| | 19-Jun-13 | 8.4 | 436 | 11.3 | 10.9 |
| | 17-Jul-13 | 8.2 | 483 | 15.8 | 8.8 |
| | 18-Aug-13 (1) | | | | |
| | 19-Sep-13 | 8.3 | 484 | 13.4 | 3.8 |
| | 17-Oct-13 | 9.2 | 419 | 10.6 | 6.0 |
| | 20-Nov-13 | 8.6 | 351 | 3.6 | 2.2 |
| | 15-Dec-13 (2) | | | | |
| | 22-Jan-14 | 7.1 | 236 | (0) | 3.5 |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 17-Apr-14 | 7.4 | 324 | 2.9 | 11.7 |
| | 13-May-14 | 7.2 | 316 | 10.6 | 10.4 |
| | 17-Jun-14 | 8.0 | 440 | 14.5 | 9.2 |
| | 15-Jul-14 | 8.6 | 509 | 15.0 | 6.9 |
| | 19-Aug-14 | 8.7 | 363 | 13.4 | 9.7 |
| | 9-Sep-14 | 8.6 | 584 | 14.3 | 5.0 |
| | 20-Oct-14 | 8.3 | 542 | 11.3 | 4.9 |
| | 16-Nov-14 (2) | | | | |
| | 17-Dec-14 | 8.4 | 350 | 2.5 | |
| | 21-Jan-15 | 7.3 | 346 | 0.5 | 0.3 |
| | 15-Feb-15 (3) | | | | |
| | 15-Mar-15 (2) | | | | |
| | 23-Apr-15 | 8.2 | 363 | 3.5 | 14.3 |
| | 20-May-15 | 8.3 | 386 | 10.5 | 13.9 |
| | 15-Jun-15 | 8.0 | 487 | 12.6 | 9.7 |
| | 22-Jul-15 | 8.1 | 524 | 12.9 | 10.3 |
| | 12-Aug-15 | 8.1 | 528 | 14.2 | 9.3 |
| | 23-Aug-15 | | | | |
| | 9-Sep-15 | 7.8 | 506 | 17.2 | 4.8 |
| | 16-Oct-15 | 8.0 | 417 | 8.6 | 10.2 |
| | 8-Nov-15 | | | | |
| | 19-Nov-15 | 7.7 | 451 | 8.3 | 12.6 |
| | 8-Dec-15 | 7.9 | 413 | 3.8 | 12.5 |
| | 20-Jan-16 | 8.0 | 352 | 1.3 | 13.8 |
| | 18-Feb-16 | 7.8 | 364 | 1.2 | 14.4 |
| | 15-Mar-16 | 7.7 | 278 | 3.7 | 13.1 |
| | 21-Apr-16 | 7.8 | 368 | 7.6 | 12.8 |
| | 18-May-16 | 8.4 | 456 | 9.5 | 11.0 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22C** | 22-Jun-16 | 8.4 | 494 | 13.3 | 10.7 |
| **(cont'd)** | 3-Jul-16 | | | | |
| | 21-Jul-16 | 8.1 | 534 | 14.9 | 10.5 |
| | 7-Aug-16 | | | | |
| | 25-Aug-16 | 8.5 | 552 | 16.8 | 10.8 |
| | 19-Sep-16 | 8.2 | 644 | 14.6 | 8.0 |
| | 18-Oct-16 | 7.9 | 619 | 12.5 | 9.0 |
| | 15-Nov-16 | 8.0 | 427 | 7.5 | 11.2 |
| | 12-Dec-16 | 8.1 | 584 | 1.7 | 15.0 |
| | 25-Jan-17 | 8.2 | 397 | 2.8 | 12.5 |
| | 16-Feb-17 | 8.1 | 206 | 1.1 | 14.7 |
| | 21-Mar-17 | 8.4 | 391 | 3.7 | 12.2 |
| | 19-Apr-17 | 7.6 | 402 | 8.0 | 13.0 |
| | 16-May-17 | 8.1 | 456 | 13.4 | 9.0 |
| | 28-Jun-17 | 8.2 | 476 | 11.1 | 10.2 |
| | 7-Jul-17 | | | | |
| | 20-Jul-17 | 8.3 | 527 | 12.4 | 10.3 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.3 | 432 | 13.5 | 9.9 |
| | 19-Sep-17 | 8.2 | 519 | 13.4 | 8.7 |
| | 17-Oct-17 | 8.3 | 497 | 10.3 | 9.8 |
| | 15-Nov-17 | 8.2 | 414 | 4.5 | 12.9 |
| | 14-Dec-17 | 7.8 | 361 | 1.4 | 15.6 |
| | 17-Jan-18 | 7.8 | 342 | 0.8 | 14.5 |
| | 23-Feb-18 | 8.0 | 295 | 2.1 | 11.1 |
| | 20-Mar-18 | 8.1 | 279 | 0.4 | 18.5 |
| | 18-Apr-18 | 8.5 | 529 | 2.1 | 12.9 |
| | 14-May-18 | 8.1 | 539 | 8.7 | 10.6 |
| | 18-Jun-18 | 8.2 | 632 | 22.8 | 9.9 |
| | 18-Jul-18 | 8.2 | 674 | 10.9 | 10.0 |
| | 23-Aug-18 | 8.2 | 626 | 13.7 | 9.2 |
| | 19-Sep-18 | 8.3 | 658 | 13.8 | 9.4 |
| | 24-Oct-18 | 8.2 | 589 | 5.9 | 11.2 |
| | 21-Nov-18 | 8.2 | 616 | 1.7 | 12.7 |
| | 13-Dec-18 | 8.2 | 616 | 2.8 | 12.6 |
| | 19-Jan-19 | 8.1 | 626 | 2.1 | 12.9 |
| | 26-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.0 | 465 | 1.6 | 12.5 |
| | 25-Apr-19 | 8.2 | 475 | 5.0 | 11.6 |
| | 27-May-19 | 8.2 | 501 | 10.8 | 10.0 |
| | 21-Jun-19 | 8.3 | 550 | 10.7 | 10.3 |
| | 30-Jul-19 | 8.2 | 600 | 15.0 | 9.2 |
| | 30-Aug-19 | 8.3 | 499 | 18.6 | 10.0 |
| | 27-Sep-19 | 8.3 | 498 | 16.5 | 10.1 |
| | 22-Oct-19 | 8.1 | 495 | 9.7 | 10.1 |
| | 21-Nov-19 | 8.3 | 422 | 0.3 | 9.4 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW22C** | 28-Apr-20 | 8.3 | 487 | 6.3 | 11.5 |
| **(cont'd)** | 28-May-20 | 8.8 | 535 | 11.9 | 9.8 |
| | 24-Jun-20 | 8.5 | 599 | 13.3 | 9.2 |
| | 31-Jul-20 | 8.7 | 678 | 10.1 | 10.3 |
| | 26-Aug-20 | 8.0 | 625 | 11.8 | 10.0 |
| | 26-Sep-20 | 8.0 | 600 | 12.5 | 11.1 |
| | 29-Oct-20 | 8.0 | 475 | 8.8 | 10.5 |
| | 27-Nov-20 | 8.1 | 280 | 6.0 | 11.7 |
| | 22-Dec-20 (2) | | | | |
| | 27-Jan-21 (2) | | | | |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.3 | 504 | 7.9 | 11.0 |
| | 27-Apr-21 | 7.7 | 489 | 9.0 | 11.0 |
| | 27-May-21 | 7.3 | 416 | 12.1 | 10.3 |
| | 22-Jun-21 | 8.3 | 300 | 10.8 | 10.4 |
| | 22-Jul-21 | 8.4 | 660 | 13.9 | 9.8 |
| | 25-Aug-21 | 8.2 | 650 | | 10.1 |
| | 28-Sep-21 | 8.2 | 612 | 10.8 | 10.8 |
| | 26-Oct-21 | 7.9 | 599 | 8.8 | 10.6 |
| | 23-Nov-21 (2) | | | | |
| | 21-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 7.6 | 484 | 1.3 | 11.4 |
| | 24-May-22 | 7.5 | 562 | 10.2 | 10.0 |
| | 24-Jun-22 | | | 9.9 | |
| | 30-Aug-22 | | | 13.9 | |
| | 27-Sep-22 | | | 10.4 | |
| | 28-Oct-22 | | | 6.8 | |
| | 23-Nov-22 | | | 3.4 | |
| | 16-May-23 | | | 10.0 | |
| | 27-Jun-23 | | | 13.2 | |
| | 26-Jul-23 | | | 13.6 | |
| | 30-Aug-23 | | | 11.8 | |
| | 26-Sep-23 | | | 12.1 | |
| | 31-Oct-23 | | | 6.7 | |
| | 28-May-24 | | | 10.9 | |
| | 27-Jun-24 | | | 12.5 | |
| | 30-Jul-24 | | | 14.7 | |
| | 28-Aug-24 | | | 15.3 | |
| | 25-Sep-24 | | | 15.2 | |
| | 29-Oct-24 | | | 8.7 | |
| | 26-May-25 | | | 11.6 | |
| | 25-Jun-25 | | | 15.4 | |
| | 29-Jul-25 | | | 16.9 | |
| | 26-Aug-25 | | | 12.8 | |
| | 29-Sep-25 | | | 14.4 | |
| | 28-Oct-25 | | | 6.7 | |
| **SW24A** | 21-Apr-04 | 7.5 | 274 | 6.6 | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW24A** | 19-May-04 | 8.0 | 357 | 7.4 | |
| **(cont'd)** | 24-Jun-04 | 7.5 | 396 | 7.4 | |
| | 29-Jul-04 | 7.6 | 416 | 7.8 | |
| | 26-Aug-04 | 7.5 | 432 | 8.2 | |
| | 22-Sep-04 | 7.6 | 455 | 7.8 | |
| | 20-Oct-04 | 7.7 | 432 | 7.2 | 11.7 |
| | 17-Nov-04 | 7.7 | 440 | 7.4 | 11.1 |
| | 16-Dec-04 | 7.7 | 382 | 6.7 | |
| | 16-Jan-05 (2) | | | | |
| | 13-Feb-05 (2) | | | | |
| | 29-Mar-05 | 7.8 | 369 | 5.6 | 12.6 |
| | 11-Apr-05 | 7.4 | 298 | 6.0 | |
| | 26-May-05 | 7.7 | 345 | 7.4 | 12.1 |
| | 28-Jun-05 | 8.2 | 404 | 8.3 | |
| | 11-Jul-05 | 6.9 | 427 | 9.1 | |
| | 22-Aug-05 | 8.3 | 397 | 10.2 | |
| | 28-Sep-05 | 7.7 | 480 | 10.4 | 10.9 |
| | 15-Nov-05 | 7.9 | 419 | 6.6 | |
| | 12-Dec-05 | 8.3 | 405 | 5.4 | 11.2 |
| | 17-Jan-06 | 7.9 | 305 | 3.0 | 13.4 |
| | 19-Feb-06 (2) | | | | |
| | 22-Mar-06 | 8.5 | 284 | 4.3 | |
| | 18-Apr-06 | 8.3 | 351 | 9.0 | |
| | 24-May-06 | 8.3 | 447 | 8.9 | |
| | 20-Jun-06 | 8.2 | 492 | 11.3 | |
| | 11-Jul-06 | 8.3 | 468 | 12.4 | |
| | 23-Aug-06 | 8.0 | 492 | 11.8 | |
| | 20-Sep-06 | 7.9 | 475 | 10.5 | |
| | 19-Oct-06 | 8.0 | 508 | 9.3 | |
| | 27-Nov-06 | 8.1 | 518 | 7.0 | 12.2 |
| | 17-Dec-06 | 8.1 | 515 | 4.0 | |
| | 21-Jan-07 | 8.2 | 520 | 2.9 | |
| | 18-Feb-07 (2) | | | | |
| | 18-Mar-07 | 8.3 | 459 | 3.9 | |
| | 17-Apr-07 | 8.4 | 417 | 4.2 | |
| | 13-May-07 | 8.3 | 441 | 9.3 | 11.2 |
| | 17-Jun-07 | 8.1 | 522 | 8.5 | 11.5 |
| | 15-Jul-07 | 8.0 | 507 | 11.0 | 9.9 |
| | 19-Aug-07 | 8.1 | 519 | 13.0 | |
| | 17-Sep-07 | 7.9 | 506 | 9.8 | 9.7 |
| | 18-Oct-07 | 7.8 | 525 | 10.7 | 9.0 |
| | 19-Nov-07 | 7.9 | 572 | 4.8 | 11.6 |
| | 10-Dec-07 | 8.0 | 505 | 4.2 | 12.6 |
| | 21-Jan-08 | 7.6 | 390 | 2.9 | |
| | 19-Feb-08 | 7.9 | 453 | 3.0 | |
| | 17-Mar-08 | 7.1 | 466 | 2.0 | |
| | 2-Apr-08 | 7.1 | 466 | 2.0 | |
| | 23-Apr-08 | 8.0 | 351 | 9.6 | |
| | 6-May-08 | 7.1 | 421 | 6.8 | |
| | 21-May-08 | 7.6 | 403 | 7.2 | 10.5 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW24A** | 17-Jun-08 | 7.9 | 479 | 8.1 | 9.8 |
| **(cont'd)** | 15-Jul-08 | 7.0 | 511 | 10.3 | 8.5 |
| | 18-Aug-08 | 7.4 | 574 | 12.8 | 5.5 |
| | 16-Sep-08 | 8.1 | 542 | 9.8 | 8.2 |
| | 21-Oct-08 | 7.9 | 480 | 5.9 | 7.9 |
| | 23-Nov-08 | 7.5 | 461 | 3.5 | 8.3 |
| | 14-Dec-08 | 7.2 | 426 | 2.8 | 8.0 |
| | 18-Jan-09 | 8.3 | 252 | 4.1 | 9.5 |
| | 8-Feb-09 | 8.9 | 452 | 3.5 | 10.2 |
| | 15-Mar-09 | 8.4 | 395 | 4.8 | |
| | 12-Apr-09 | 8.4 | 413 | 7.1 | |
| | 17-May-09 | 7.8 | 378 | 14.0 | |
| | 14-Jun-09 | 7.6 | 911 | 9.1 | |
| | 12-Jul-09 | 8.5 | 502 | 9.6 | |
| | 9-Aug-09 | 6.8 | 362 | 11.2 | 10.3 |
| | 13-Sep-09 | 7.8 | 472 | 10.4 | |
| | 11-Oct-09 | 8.4 | 554 | 7.0 | |
| | 15-Nov-09 | 7.3 | 488 | 4.8 | |
| | 13-Dec-09 | 7.7 | 545 | 3.4 | |
| | 17-Jan-10 | 8.7 | 508 | 3.5 | 11.0 |
| | 7-Feb-10 | 7.7 | 368 | 2.4 | 12.6 |
| | 14-Mar-10 | 8.0 | 460 | 4.9 | 12.9 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.8 | 430 | 5.4 | |
| | 16-May-10 | 8.2 | 318 | 9.8 | 10.6 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 8.2 | 334 | 9.8 | 12.6 |
| | 18-Jul-10 | 8.2 | 399 | 12.5 | 12.7 |
| | 15-Aug-10 | 8.3 | 336 | 12.3 | 9.8 |
| | 12-Sep-10 | 8.2 | 403 | 10.1 | 10.5 |
| | 17-Oct-10 | 8.0 | 290 | 7.7 | 11.0 |
| | 14-Nov-10 | 8.3 | 303 | 5.9 | 12.4 |
| | 19-Dec-10 | 8.2 | 201 | 4.0 | 11.8 |
| | 16-Jan-11 | 8.3 | 292 | 3.7 | 12.9 |
| | 20-Feb-11 | 8.0 | 277 | 4.3 | 12.4 |
| | 13-Mar-11 | 8.1 | 272 | 4.3 | 11.5 |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.2 | 280 | 5.4 | 12.9 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW24A** | 6-May-11 | | | | |
| **(cont'd)** | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.7 | 180 | 6.9 | 12.3 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 8.1 | 290 | 8.6 | 6.7 |
| | 17-Jul-11 | 7.8 | 356 | 9.6 | 9.4 |
| | 14-Aug-11 | 8.5 | 278 | 10.6 | 10.7 |
| | 18-Sep-11 | 8.1 | 333 | 10.5 | 9.3 |
| | 16-Oct-11 | 7.9 | 356 | 8.0 | 11.0 |
| | 20-Nov-11 | 7.5 | 348 | 5.0 | 12.3 |
| | 18-Dec-11 | 8.3 | 139 | 3.7 | 12.0 |
| | 15-Jan-12 | 8.4 | 238 | 3.1 | 12.5 |
| | 19-Feb-12 | 8.0 | 261 | 3.2 | 14.1 |
| | 18-Mar-12 | 8.1 | 264 | 9.1 | 10.9 |
| | 15-Apr-12 | 8.5 | 303 | 5.7 | 10.0 |
| | 13-May-12 | 8.1 | 309 | 10.2 | 10.5 |
| | 17-Jun-12 | 8.3 | 410 | 13.5 | 12.9 |
| | 16-Jul-12 | 8.4 | 427 | 15.0 | 6.8 |
| | 14-Aug-12 | 8.1 | 454 | 12.5 | 7.4 |
| | 18-Sep-12 | 7.3 | 398 | 11.4 | 9.6 |
| | 17-Oct-12 | 7.4 | 354 | 9.4 | 7.9 |
| | 20-Nov-12 | 7.8 | 348 | 6.7 | 9.1 |
| | 18-Dec-12 | 7.5 | 743 | 6.6 | 9.5 |
| | 16-Jan-13 | 8.0 | 317 | 2.9 | 11.5 |
| | 20-Feb-13 | 8.0 | 247 | 1.9 | 14.6 |
| | 20-Mar-13 | 8.1 | 254 | 2.6 | 7.0 |
| | 16-Apr-13 | 8.1 | 248 | 6.2 | 10.0 |
| | 13-May-13 | 8.1 | 239 | 7.2 | 10.1 |
| | 19-Jun-13 | 8.3 | 339 | 9.8 | 11.4 |
| | 16-Jul-13 | 8.1 | 406 | 12.4 | 9.8 |
| | 21-Aug-13 | 8.2 | 406 | 12.5 | 9.7 |
| | 18-Sep-13 | 7.8 | 370 | 8.3 | 12.0 |
| | 16-Oct-13 | 8.4 | 379 | 10.4 | 6.5 |
| | 19-Nov-13 | 8.1 | 324 | 4.3 | 2.5 |
| | 18-Dec-13 | 8.6 | 321 | 3.7 | 4.2 |
| | 21-Jan-14 | 7.6 | 2 | 1.1 | 3.3 |
| | 16-Feb-14 (2) | | | | |
| | 16-Mar-14 (2) | | | | |
| | 16-Apr-14 | 8.2 | 279 | 3.4 | 10.4 |
| | 13-May-14 | 8.3 | 246 | 9.4 | 10.4 |
| | 17-Jun-14 | 8.4 | 359 | 10.8 | 10.0 |
| | 15-Jul-14 | 7.8 | 366 | 12.0 | 4.7 |
| | 23-Oct-14 | 8.2 | 428 | 7.3 | 4.3 |
| | 16-Nov-14 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| SW24A | 16-Dec-14 | 8.7 | 370 | 4.0 | |
| (cont'd) | 20-Jan-15 | 7.9 | 344 | 1.8 | 1.4 |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 8.4 | 252 | 1.5 | 13.2 |
| | 22-Apr-15 | 8.1 | 308 | 5.5 | 12.8 |
| | 19-May-15 | 8.4 | 314 | 9.5 | |
| | 15-Jun-15 | 8.1 | 373 | 10.4 | 9.3 |
| | 21-Jul-15 | 7.5 | 382 | 10.9 | |
| | 11-Aug-15 | 8.2 | 414 | 11.4 | 10.0 |
| | 25-Aug-15 | 8.2 | 366 | 11.9 | 10.2 |
| | 8-Sep-15 | 7.8 | 416 | 13.1 | 9.5 |
| | 15-Oct-15 | 8.0 | 277 | 8.4 | 11.0 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.0 | 421 | 7.9 | 10.3 |
| | 8-Dec-15 | 8.1 | 389 | 5.2 | 19.4 |
| | 19-Jan-16 | 8.1 | 322 | 3.4 | 14.6 |
| | 17-Feb-16 | 8.0 | 339 | 3.3 | 14.3 |
| | 15-Mar-16 | 7.9 | 276 | 5.9 | 12.6 |
| | 21-Apr-16 | 8.1 | 268 | 5.7 | 13.6 |
| | 18-May-16 | 8.4 | 304 | 7.9 | 12.4 |
| | 22-Jun-16 | 8.3 | 394 | 12.2 | 10.6 |
| | 5-Jul-16 | 8.4 | 401 | 13.5 | 14.7 |
| | 20-Jul-16 | 7.8 | 385 | 13.1 | 9.7 |
| | 9-Aug-16 | 8.3 | 246 | 14.0 | 10.9 |
| | 24-Aug-16 | 8.6 | 382 | 17.7 | 9.9 |
| | 19-Sep-16 | 8.1 | 545 | 12.7 | |
| | 18-Oct-16 | 7.8 | 445 | 12.9 | 12.3 |
| | 25-Oct-16 | 7.9 | 336 | 4.3 | 13.8 |
| | 15-Nov-16 | 8.1 | 382 | 7.2 | 11.5 |
| | 12-Dec-16 | 7.9 | 481 | 0.9 | 13.9 |
| | 24-Jan-17 | 8.2 | 319 | 3.9 | 13.2 |
| | 16-Feb-17 | 8.3 | 323 | 1.4 | 15.2 |
| | 21-Mar-17 | 8.4 | 343 | 4.8 | 12.4 |
| | 19-Apr-17 | 8.2 | 286 | 8.8 | 15.7 |
| | 9-May-17 | 8.5 | 239 | 8.1 | 13.4 |
| | 16-May-17 | 8.8 | 344 | 12.2 | 10.5 |
| | 28-Jun-17 | 8.3 | 351 | 8.9 | 11.7 |
| | 7-Jul-17 | 8.1 | 382 | 12.1 | 11.1 |
| | 19-Jul-17 | 8.4 | 422 | 11.6 | 10.4 |
| | 2-Aug-17 | 8.4 | 401 | 12.7 | 10.0 |
| | 15-Aug-17 | 8.7 | 347 | 12.1 | 10.5 |
| | 17-Sep-17 | 8.2 | 428 | 12.2 | 10.2 |
| | 17-Oct-17 | 8.2 | 399 | 8.9 | 10.5 |
| | 14-Nov-17 | 8.3 | 394 | 6.1 | 8.0 |
| | 14-Dec-17 | 8.3 | 360 | 3.1 | 13.4 |
| | 18-Jan-18 | 7.9 | 299 | 2.7 | 9.3 |
| | 24-Feb-18 | 8.2 | 280 | 3.3 | 13.9 |
| | 21-Mar-18 | 8.2 | 293 | 1.1 | 14.4 |
| | 18-Apr-18 | 8.2 | 255 | 0.2 | 11.9 |
| | 8-May-18 | 8.2 | 423 | 10.3 | 10.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW24A** | 15-May-18 | 7.9 | 457 | 7.4 | 11.1 |
| **(cont'd)** | 18-Jun-18 | 8.2 | 504 | 8.2 | 10.1 |
| | 19-Jul-18 | 8.2 | 516 | 10.7 | 10.2 |
| | 24-Aug-18 | 8.3 | 529 | 11.9 | 9.9 |
| | 20-Sep-18 | 8.2 | 526 | 11.8 | 9.3 |
| | 25-Oct-18 | 8.2 | 539 | 6.0 | 11.4 |
| | 22-Nov-18 | 8.3 | | 1.1 | 12.4 |
| | 13-Dec-18 | 8.2 | 516 | 4.0 | 12.1 |
| | 19-Jan-19 | 8.2 | 479 | 1.3 | 13.1 |
| | 28-Feb-19 (2) | | | | |
| | 19-Mar-19 | 8.3 | 439 | 3.6 | 12.4 |
| | 25-Apr-19 | 8.2 | 333 | 5.8 | 11.3 |
| | 16-May-19 | 8.2 | 409 | 10.0 | 10.7 |
| | 27-May-19 | 8.3 | 409 | 10.0 | 10.7 |
| | 21-Jun-19 | 8.3 | 448 | 10.8 | 10.1 |
| | 30-Jul-19 | 8.2 | 468 | 12.7 | 9.5 |
| | 30-Aug-19 | 8.2 | 425 | 14.4 | 9.7 |
| | 27-Sep-19 | 8.0 | 451 | 15.6 | 8.9 |
| | 22-Oct-19 | 8.1 | 395 | 8.8 | 8.2 |
| | 21-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 24-Jan-20 (2) | | | | |
| | 21-Feb-20 (2) | | | | |
| | 25-Mar-20 (2) | | | | |
| | 28-Apr-20 | | | | |
| | 20-May-20 | 8.2 | 460 | 10.2 | 10.5 |
| | 28-May-20 | 8.6 | 401 | 8.2 | 11.0 |
| | 24-Jun-20 | 8.3 | 408 | 12.5 | 9.9 |
| | 31-Jul-20 | 8.3 | 497 | 8.8 | 10.6 |
| | 26-Aug-20 | 8.1 | 470 | 11.7 | 9.8 |
| | 26-Sep-20 | 8.1 | 470 | 10.4 | |
| | 29-Oct-20 | 7.9 | 363 | 7.9 | 9.9 |
| | 27-Nov-20 | 8.0 | 549 | 7.1 | 11.4 |
| | 22-Dec-20 | 8.1 | 524 | 4.2 | 12.4 |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 8.3 | 387 | 5.5 | 10.5 |
| | 28-Apr-21 | 7.8 | 410 | 7.1 | 11.9 |
| | 26-May-21 (3) | | | | |
| | 23-Jun-21 | 8.0 | 518 | 9.9 | 10.7 |
| | 10-Jul-21 | 8.1 | 489 | 11.4 | 10.4 |
| | 23-Jul-21 | 11.5 | 525 | 11.5 | 10.5 |
| | 11-Aug-21 | | | 14.1 | |
| | 26-Aug-21 | 8.2 | 537 | 13.9 | 9.9 |
| | 27-Sep-21 | 8.1 | 531 | 10.0 | 11.0 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 | 7.9 | 463 | 4.7 | 11.9 |
| | 22-Dec-21 | 8.0 | 514 | 3.1 | 12.0 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW24A** | 16-Mar-22 (2) | | | | |
| **(cont'd)** | 21-Apr-22 | 7.6 | 505 | 1.0 | 5.3 |
| | 25-May-22 | 8.2 | 476 | 10.0 | 11.0 |
| | 24-Jun-22 | | | 9.5 | |
| | 8-Jul-22 | | | 12.7 | 0.6 |
| | 11-Aug-22 | | | 10.3 | |
| | 29-Aug-22 | | | 11.3 | |
| | 27-Sep-22 | | | 9.7 | |
| | 27-Oct-22 | | | 7.7 | |
| | 23-Nov-22 | | | 4.7 | |
| | 16-May-23 | 8.1 | 450 | 8.6 | 10.8 |
| | 26-Jun-23 | | | 11.2 | |
| | 11-Jul-23 | | | 9.6 | |
| | 25-Jul-23 | | | 9.1 | |
| | 14-Aug-23 | | | 9.7 | |
| | 29-Aug-23 | | | 11.1 | |
| | 25-Sep-23 | | | 9.9 | |
| | 30-Oct-23 | | | 7.7 | |
| | 27-May-24 | 7.6 | 508 | 9.3 | 10.3 |
| | 26-Jun-24 | | | 10.6 | |
| | 16-Jul-24 | | | 10.1 | |
| | 29-Jul-24 | | | 10.2 | |
| | 12-Aug-24 | | | 10.7 | |
| | 26-Aug-24 | | | 10.8 | |
| | 24-Sep-24 | | | 12.0 | |
| | 28-Oct-24 | | | 8.2 | |
| | 27-May-25 | 8.3 | 448 | 9.2 | 11.0 |
| | 24-Jun-25 | | | 11.1 | |
| | 14-Jul-25 | | | 12.2 | |
| | 29-Jul-25 (3) | | | | |
| | 11-Aug-25 (3) | | | | |
| | 26-Aug-25 | | | 10.9 | |
| | 30-Sep-25 | | | 10.5 | |
| | 27-Oct-25 | | | 7.3 | |
| **SW77** | 13-Dec-09 (2) | | | | |
| | 17-Jan-10 | 8.2 | 164 | 5.6 | 11.3 |
| | 7-Feb-10 | 8.4 | 449 | 5.7 | 12.6 |
| | 14-Mar-10 | | 383 | 6.0 | 12.5 |
| | 4-Apr-10 | | | | |
| | 11-Apr-10 | 7.5 | 407 | 5.9 | 12.9 |
| | 16-May-10 | 7.6 | 264 | 7.0 | 10.5 |
| | 23-May-10 | | | | |
| | 13-Jun-10 | 7.5 | 286 | 7.9 | 12.7 |
| | 18-Jul-10 | 7.3 | 298 | 9.2 | 12.7 |
| | 15-Aug-10 | 7.6 | 326 | 10.0 | 8.6 |
| | 12-Sep-10 | 7.7 | 261 | 10.6 | 11.1 |
| | 17-Oct-10 | 7.0 | 327 | 10.2 | 8.6 |
| | 21-Oct-10 | 6.9 | 354 | 10.0 | 8.7 |
| | 14-Nov-10 | 7.5 | 294 | 9.4 | 13.7 |
| | 19-Dec-10 (2) | | | | |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW77** | 16-Jan-11 (2) | | | | |
| **(cont'd)** | 20-Feb-11 (2) | | | | |
| | 13-Mar-11 (2) | | | | |
| | 17-Mar-11 | | | | |
| | 18-Mar-11 | | | | |
| | 20-Mar-11 | | | | |
| | 1-Apr-11 | | | | |
| | 5-Apr-11 | | | | |
| | 8-Apr-11 | | | | |
| | 12-Apr-11 | | | | |
| | 15-Apr-11 | | | | |
| | 17-Apr-11 | 8.1 | 253 | 5.4 | 12.0 |
| | 20-Apr-11 | | | | |
| | 21-Apr-11 | | | | |
| | 26-Apr-11 | | | | |
| | 29-Apr-11 | | | | |
| | 3-May-11 | | | | |
| | 6-May-11 | | | | |
| | 10-May-11 | | | | |
| | 13-May-11 | | | | |
| | 15-May-11 | 7.7 | 219 | 6.0 | 12.8 |
| | 16-May-11 | | | | |
| | 18-May-11 | | | | |
| | 19-May-11 | | | | |
| | 20-May-11 | | | | |
| | 27-May-11 | | | | |
| | 3-Jun-11 | | | | |
| | 12-Jun-11 | 7.5 | 253 | 7.7 | 5.8 |
| | 17-Jul-11 | 7.3 | 306 | 9.4 | 10.1 |
| | 14-Aug-11 | 8.7 | 240 | 10.6 | 10.9 |
| | 16-Oct-11 | 8.0 | 353 | 10.5 | 9.1 |
| | 20-Nov-11 | 8.3 | 321 | 8.7 | 10.1 |
| | 18-Dec-11 | 8.6 | 225 | 8.2 | 9.2 |
| | 15-Jan-12 | 8.2 | 242 | 7.0 | 10.3 |
| | 19-Feb-12 | 7.1 | 244 | 6.5 | 12.5 |
| | 18-Mar-12 | 7.5 | 214 | 5.9 | 13.3 |
| | 15-Apr-12 | 8.8 | 287 | 6.3 | 12.5 |
| | 13-May-12 | 7.5 | 281 | 7.0 | 9.5 |
| | 17-Jun-12 | 7.6 | 274 | 8.3 | 6.6 |
| | 16-Jul-12 | 7.8 | 346 | 10.8 | 6.1 |
| | 14-Aug-12 | 7.7 | 225 | 10.1 | 9.0 |
| | 18-Sep-12 | 6.6 | 348 | 11.0 | 8.2 |
| | 17-Oct-12 | 7.9 | 318 | 10.6 | 7.5 |
| | 20-Nov-12 | 8.0 | 343 | 9.3 | 8.5 |
| | 18-Dec-12 | 7.7 | 713 | 8.4 | 9.2 |
| | 15-Jan-13 | 7.9 | 306 | 7.4 | 10.3 |
| | 20-Feb-13 | 7.8 | 234 | 6.4 | 10.1 |
| | 19-Mar-13 | 8.1 | 214 | 5.9 | 12.2 |
| | 16-Apr-13 | 6.9 | 194 | 0.2 | 10.0 |
| | 13-May-13 | 7.4 | 265 | 6.1 | 11.0 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW77** | 18-Jun-13 | 7.9 | 296 | 8.2 | 8.7 |
| **(cont'd)** | 16-Jul-13 | 8.2 | 333 | 9.9 | 9.9 |
| | 16-Oct-13 | 9.9 | 336 | 10.1 | 6.3 |
| | 19-Nov-13 | 7.3 | 338 | 8.9 | 6.3 |
| | 17-Dec-13 | 8.1 | 269 | 8.0 | 6.9 |
| | 18-Mar-14 | 6.8 | 280 | 4.3 | 6.0 |
| | 15-Apr-14 | 7.8 | 191 | 4.6 | 10.2 |
| | 12-May-14 | 7.8 | 252 | 6.8 | 3.3 |
| | 17-Jun-14 | 7.8 | 306 | 7.8 | 11.2 |
| | 14-Jul-14 | 8.9 | 341 | 8.7 | 1.9 |
| | 18-Aug-14 | 8.5 | 341 | 9.6 | 4.3 |
| | 8-Sep-14 | 8.5 | 378 | 10.4 | 9.9 |
| | 23-Oct-14 | 8.1 | 435 | 9.3 | 8.5 |
| | 14-Dec-14 (2) | | | | |
| | 18-Jan-15 (2) | | | | |
| | 15-Feb-15 (3) | | | | |
| | 18-Mar-15 | 7.6 | 253 | 5.7 | 10.6 |
| | 21-Apr-15 | 7.5 | 202 | 5.4 | 11.9 |
| | 19-May-15 | 7.9 | 268 | 6.4 | 14.5 |
| | 15-Jun-15 | 7.6 | 329 | 7.3 | 9.6 |
| | 21-Jul-15 | 8.0 | 358 | 13.0 | |
| | 11-Aug-15 | 7.9 | 342 | 13.0 | 9.4 |
| | 25-Aug-15 | 7.7 | 325 | 10.3 | 11.4 |
| | 8-Sep-15 | 7.8 | 372 | 14.2 | 9.6 |
| | 15-Oct-15 | 7.8 | 304 | 8.8 | 9.9 |
| | 8-Nov-15 | | | | |
| | 18-Nov-15 | 7.8 | 360 | 8.3 | 10.0 |
| | 8-Dec-15 | 7.9 | 344 | 6.3 | 14.6 |
| | 19-Jan-16 | 7.9 | 259 | 4.1 | 13.4 |
| | 17-Feb-16 | 7.9 | 321 | 5.1 | 12.3 |
| | 15-Mar-16 | 7.7 | 237 | 6.3 | 13.0 |
| | 20-Apr-16 | 7.3 | 291 | 6.5 | 12.6 |
| | 17-May-16 | 8.0 | 353 | 10.0 | 11.9 |
| | 22-Jun-16 | 7.9 | 336 | 9.1 | 10.9 |
| | 5-Jul-16 | 8.0 | 267 | 10.7 | 16.3 |
| | 20-Jul-16 | 8.3 | 355 | 11.4 | 10.3 |
| | 9-Aug-16 | 8.1 | 345 | 14.9 | 11.8 |
| | 24-Aug-16 | 8.2 | 356 | 12.9 | 11.0 |
| | 19-Sep-16 | 8.2 | 374 | 13.1 | 9.4 |
| | 17-Oct-16 | 7.9 | 340 | 12.1 | 8.9 |
| | 25-Oct-16 | 7.8 | 295 | 6.4 | 12.7 |
| | 15-Nov-16 | 7.4 | 480 | 8.7 | 9.7 |
| | 12-Dec-16 | 8.0 | 431 | 5.0 | 12.1 |
| | 24-Jan-17 | 7.6 | 267 | 6.5 | 12.0 |
| | 16-Feb-17 | 8.1 | 331 | 4.4 | 13.6 |
| | 21-Mar-17 | 8.0 | 349 | 6.5 | 12.1 |
| | 19-Apr-17 | 7.7 | 309 | 8.4 | 14.4 |
| | 9-May-17 | 7.8 | 223 | 6.3 | 14.1 |
| | 16-May-17 | 8.1 | 323 | 9.2 | 11.3 |
| | 28-Jun-17 | 7.7 | 362 | 10.9 | 11.1 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW77** | 7-Jul-17 | 8.0 | 334 | 11.9 | 11.5 |
| **(cont'd)** | 18-Jul-17 | 8.0 | 363 | 11.5 | 10.5 |
| | 2-Aug-17 | 8.2 | 255 | 10.9 | 10.1 |
| | 15-Aug-17 | 8.5 | 294 | 11.0 | 10.8 |
| | 17-Sep-17 | 7.8 | 356 | 11.4 | 10.3 |
| | 17-Oct-17 | 8.0 | 269 | 9.7 | 10.6 |
| | 14-Nov-17 | 8.0 | 377 | 8.1 | 7.8 |
| | 14-Dec-17 | 8.1 | 334 | 4.6 | 13.2 |
| | 17-Jan-18 | 8.0 | 311 | 5.3 | 7.9 |
| | 23-Feb-18 | 7.9 | 299 | 6.4 | 9.0 |
| | 20-Mar-18 | 8.1 | 315 | 5.3 | 14.0 |
| | 18-Apr-18 | 8.2 | 457 | 5.5 | 7.4 |
| | 8-May-18 | 7.7 | 427 | 8.7 | 11.0 |
| | 14-May-18 | 7.8 | 440 | 9.3 | 10.8 |
| | 18-Jun-18 | 7.7 | 466 | 9.4 | 9.8 |
| | 23-Aug-18 | 7.4 | 481 | 12.3 | 10.3 |
| | 19-Sep-18 | 7.4 | 402 | 11.6 | 6.3 |
| | 24-Oct-18 | 7.7 | 456 | 9.3 | 7.0 |
| | 21-Nov-18 (1) | | | | |
| | 12-Dec-18 | 8.0 | 483 | 7.1 | 10.3 |
| | 18-Jan-19 (2) | | | | |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 | 7.9 | 392 | 4.9 | 11.3 |
| | 24-Apr-19 | 7.2 | 366 | 5.4 | 10.3 |
| | 14-May-19 | 7.5 | 381 | 5.9 | 9.7 |
| | 23-May-19 | 7.5 | 397 | 6.1 | 9.2 |
| | 18-Jun-19 | 7.4 | 416 | 7.1 | 8.8 |
| | 29-Jul-19 | 7.5 | 412 | 9.2 | 9.0 |
| | 29-Aug-19 | 8.3 | | 15.7 | 8.8 |
| | 26-Sep-19 (1) | | | | |
| | 23-Oct-19 (1) | | | | |
| | 22-Nov-19 (2) | | | | |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 (2) | | | | |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |
| | 27-Apr-20 (1) | | | | |
| | 19-May-20 | 7.9 | 460 | 6.0 | 8.8 |
| | 29-May-20 | 8.0 | 404 | 6.4 | 9.6 |
| | 23-Jun-20 | 8.0 | 463 | 9.3 | 10.0 |
| | 30-Jul-20 (3) | | | | |
| | 25-Aug-20 | 7.8 | 455 | 10.4 | 9.7 |
| | 25-Sep-20 | 8.1 | 310 | 10.1 | 9.9 |
| | 30-Oct-20 | 7.3 | 384 | 8.9 | 8.7 |
| | 26-Nov-20 (2) | | | | |
| | 22-Dec-20 (2) | | | | |
| | 28-Jan-21 (2) | | | | |
| | 23-Feb-21 (2) | | | | |
| | 30-Mar-21 | 7.7 | 361 | 6.1 | 12.1 |
| | 28-Apr-21 | 7.5 | 388 | 7.2 | 11.6 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **SW77** | 26-May-21 | 7.9 | 429 | 10.6 | 11.0 |
| **(cont'd)** | 27-May-21 | 7.9 | 429 | 10.6 | 11.0 |
| | 23-Jun-21 | 7.9 | 501 | 9.1 | 10.4 |
| | 10-Jul-21 | | | 10.2 | |
| | 23-Jul-21 | 8.4 | 446 | 12.1 | 10.6 |
| | 11-Aug-21 | | | 14.6 | |
| | 26-Aug-21 | 8.1 | 443 | 15.7 | 9.7 |
| | 27-Sep-21 | 8.1 | 501 | 10.8 | 10.8 |
| | 27-Oct-21 (3) | | | | |
| | 22-Nov-21 (2) | | | | |
| | 22-Dec-21 (2) | | | | |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 (2) | | | | |
| | 21-Apr-22 | 8.0 | 440 | 0.1 | 10.6 |
| | 25-May-22 | 8.1 | 444 | 9.4 | 11.4 |
| | 24-Jun-22 | | | 10.0 | |
| | 8-Jul-22 | | | 8.7 | |
| | 11-Aug-22 | | | 9.8 | |
| | 29-Aug-22 | | | 11.4 | |
| | 27-Sep-22 | | | 9.4 | |
| | 27-Oct-22 | | | 8.0 | |
| | 21-Nov-22 | | | 4.9 | |
| | 16-May-23 | 7.8 | | 8.7 | 10.9 |
| | 26-Jun-23 | | | 10.3 | |
| | 11-Jul-23 | | | 10.2 | |
| | 25-Jul-23 | | | 10.3 | |
| | 14-Aug-23 | | | 11.2 | |
| | 29-Aug-23 | | | 10.8 | |
| | 25-Sep-23 | | | 11.1 | |
| | 30-Oct-23 | | | 8.7 | |
| | 27-May-24 | 7.4 | | 8.5 | 10.3 |
| | 26-Jun-24 | | | 10.3 | |
| | 16-Jul-24 | | | 10.7 | |
| | 29-Jul-24 | | | 12.0 | |
| | 12-Aug-24 | | | 11.4 | |
| | 27-Aug-24 | | | 14.7 | |
| | 24-Sep-24 | | | 13.2 | |
| | 28-Oct-24 | | | 9.2 | |
| | 27-May-25 | 8.0 | | 9.1 | 10.6 |
| | 24-Jun-25 | | | 10.9 | |
| | 14-Jul-25 | | | 10.9 | |
| | 29-Jul-25 (3) | | | | |
| | 11-Aug-25 | | | 13.6 | |
| | 26-Aug-25 | | | 11.9 | |
| | 29-Sep-25 | | | 13.4 | |
| | 28-Oct-25 | | | 8.9 | |
| **PR Control** | 25-Aug-15 | 8.4 | 307 | 14.6 | 8.0 |
| | 9-Sep-15 | 8.3 | 365 | 18.4 | 9.4 |
| | 15-Oct-15 | 8.0 | 291 | 8.6 | 11.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| PR Control (cont'd) | 8-Nov-15 | | | | |
| | 18-Nov-15 | 8.0 | 335 | 6.9 | 11.3 |
| | 8-Dec-15 | 8.3 | 305 | 3.5 | 15.7 |
| | 19-Jan-16 | 7.7 | 239 | (0) | 16.1 |
| | 17-Feb-16 | 8.2 | 276 | 0.6 | 15.8 |
| | 15-Mar-16 | 8.3 | 256 | 4.2 | 13.8 |
| | 20-Apr-16 | 7.7 | 310 | 9.7 | 12.2 |
| | 17-May-16 | 8.6 | 328 | 7.5 | 12.5 |
| | 22-Jun-16 | 8.5 | 330 | 12.5 | 11.1 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 8.5 | 344 | 14.2 | 10.2 |
| | 7-Aug-16 | | | | |
| | 24-Aug-16 | 8.4 | 252 | 16.6 | 11.5 |
| | 19-Sep-16 | 8.4 | 440 | 15.2 | 9.7 |
| | 17-Oct-16 | 8.1 | 340 | 12.6 | 9.6 |
| | 25-Oct-16 | 7.9 | 287 | 5.4 | 15.1 |
| | 15-Nov-16 | 8.2 | 468 | 6.1 | 12.9 |
| | 12-Dec-16 | 7.6 | 405 | 0.0 | 13.4 |
| | 24-Jan-17 | 8.2 | 268 | 1.9 | 14.3 |
| | 16-Feb-17 | 8.4 | 284 | 0.4 | 16.4 |
| | 21-Mar-17 | 8.4 | 303 | 2.2 | 13.8 |
| | 19-Apr-17 | 7.7 | 305 | 7.8 | 14.1 |
| | 8-May-17 | 8.4 | 246 | 7.8 | 14.0 |
| | 16-May-17 | 8.4 | 456 | 9.2 | 8.5 |
| | 28-Jun-17 | 8.3 | 358 | 11.7 | 11.1 |
| | 7-Jul-17 | | | | |
| | 18-Jul-17 | 6.4 | 368 | 13.7 | 11.3 |
| | 27-Jul-17 | | | | |
| | 15-Aug-17 | 8.8 | 297 | 14.4 | 11.0 |
| | 17-Sep-17 | 8.2 | 366 | 14.9 | 10.3 |
| | 17-Oct-17 | 8.3 | 338 | 8.8 | 11.5 |
| | 14-Nov-17 | 8.2 | 320 | 4.4 | 11.3 |
| | 14-Dec-17 | 7.9 | 277 | (0) | 19.5 |
| | 17-Jan-18 | 8.1 | 269 | 0.2 | 12.6 |
| | 22-Feb-18 | 8.4 | 243 | 1.9 | 12.8 |
| | 20-Mar-18 | 8.5 | 247 | (0) | 18.8 |
| | 18-Apr-18 | 8.6 | 430 | 2.5 | 10.7 |
| | 8-May-18 | 8.4 | 428 | 8.2 | 11.3 |
| | 14-May-18 | 8.5 | 418 | 12.9 | 10.1 |
| | 18-Jun-18 | 8.4 | 424 | 14.4 | 9.8 |
| | 19-Jul-18 | 8.4 | 417 | 15.6 | 9.4 |
| | 23-Aug-18 | 8.5 | 426 | 16.3 | 9.2 |
| | 19-Sep-18 | 8.5 | 422 | 14.9 | 9.5 |
| | 24-Oct-18 | 8.4 | 449 | 5.0 | 12.3 |
| | 21-Nov-18 | 8.3 | 456 | 0.0 | 13.9 |
| | 12-Dec-18 | 8.3 | 456 | 1.1 | 13.4 |
| | 18-Jan-19 | 8.3 | 454 | 0.1 | 14.0 |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 8.5 | 375 | 6.4 | 11.9 |

## Table C-3 Surface Water Field Chemical Results



| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| PR Control (cont'd) | 14-May-19 | 8.5 | 364 | 5.9 | 12.0 |
| | 23-May-19 | 8.6 | 381 | 10.8 | 10.6 |
| | 18-Jun-19 | 8.4 | 396 | 12.1 | 10.2 |
| | 29-Jul-19 | 8.4 | 383 | 18.6 | 8.8 |
| | 29-Aug-19 | 8.0 | 384 | 15.4 | 7.7 |
| | 26-Sep-19 | 8.2 | 421 | 14.0 | 9.6 |
| | 23-Oct-19 | 8.0 | 377 | 9.4 | 8.3 |
| | 22-Nov-19 | 7.6 | 320 | 1.1 | 8.9 |
| | 20-Dec-19 | 7.9 | 329 | 0.0 | 8.7 |
| | 15-Jan-20 | 7.9 | 394 | 2.2 | 11.6 |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 (2) | | | | |
| | 27-Apr-20 | 8.5 | 433 | 3.4 | 12.6 |
| | 19-May-20 | | | 8.6 | 11.4 |
| | 29-May-20 | 9.0 | 393 | 14.2 | 9.7 |
| | 23-Jun-20 | 8.7 | 380 | 12.2 | 10.0 |
| | 30-Jul-20 | 8.7 | 400 | 17.2 | 9.0 |
| | 25-Aug-20 | 8.4 | 373 | 17.6 | 8.9 |
| | 25-Sep-20 | 8.3 | 385 | 10.6 | 9.1 |
| | 30-Oct-20 | 7.8 | 364 | 8.0 | 8.1 |
| | 26-Nov-20 | 7.8 | 465 | 4.7 | 11.8 |
| | 23-Dec-20 | 8.3 | 486 | 0.2 | 14.3 |
| | 27-Jan-21 | 7.6 | 400 | 1.8 | 10.7 |
| | 22-Feb-21 | 7.4 | 385 | 0.1 | 10.5 |
| | 29-Mar-21 | 8.3 | 400 | 7.2 | 9.6 |
| | 27-Apr-21 | 8.5 | 417 | 5.8 | 13.6 |
| | 27-May-21 | 8.3 | 422 | 9.9 | 12.7 |
| | 22-Jun-21 | 8.0 | 486 | 14.1 | 10.2 |
| | 22-Jul-21 (3) | | | | |
| | 25-Aug-21 | 8.0 | 433 | 18.2 | 9.2 |
| | 28-Sep-21 | 8.3 | 461 | 11.6 | 10.8 |
| | 26-Oct-21 | 8.1 | 467 | 9.5 | 11.2 |
| | 23-Nov-21 | 8.1 | 451 | 2.5 | 11.5 |
| | 21-Dec-21 | 8.2 | 471 | 1.6 | 11.7 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 | 7.9 | 416 | 2.0 | 13.7 |
| | 21-Apr-22 | 8.1 | 368 | 2.1 | 10.0 |
| | 24-May-22 | 8.3 | 434 | 11.9 | 10.5 |
| | 25-Jun-22 | 7.8 | 413 | 10.1 | 11.5 |
| | 26-Aug-22 | 8.2 | 450 | 12.5 | 10.3 |
| | 27-Sep-22 | 8.4 | 394 | 11.6 | 10.6 |
| | 28-Oct-22 | 8.0 | 207 | 7.4 | 7.5 |
| | 22-Nov-22 | 8.6 | 299 | 1.1 | 12.0 |
| | 20-Dec-22 | 8.8 | 169 | 0.5 | 9.2 |
| | 24-Jan-23 | 8.2 | 418 | 0.7 | 14.4 |
| | 22-Feb-23 | 8.0 | 448 | 0.2 | 14.7 |
| | 28-Mar-23 | 9.1 | 414 | 1.8 | 13.3 |
| | 21-Apr-23 | 7.6 | 388 | 10.4 | 10.4 |
| | 17-May-23 | 8.4 | 410 | 7.8 | 11.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| PR Control (cont'd) | 27-Jun-23 | 8.5 | 447 | 14.9 | 9.2 |
| | 26-Jul-23 | 8.4 | 382 | 17.2 | 8.7 |
| | 30-Aug-23 | 7.7 | 348 | 13.1 | 9.6 |
| | 26-Sep-23 | 8.4 | 398 | 12.0 | 10.0 |
| | 31-Oct-23 | 8.0 | 318 | 5.6 | 10.0 |
| | 29-Nov-23 | 8.1 | 493 | 0.2 | 13.6 |
| | 18-Dec-23 | 8.1 | 496 | 4.1 | 11.9 |
| | 31-Jan-24 | 8.2 | 482 | 2.6 | 12.9 |
| | 27-Feb-24 | 8.2 | 380 | 2.0 | 12.8 |
| | 27-Mar-24 | 8.1 | 410 | 5.0 | 12.3 |
| | 29-Apr-24 | 8.5 | 452 | 8.9 | 11.0 |
| | 28-May-24 | 8.0 | 452 | 12.0 | 10.2 |
| | 27-Jun-24 | 8.2 | 462 | 13.8 | 9.9 |
| | 30-Jul-24 | 7.9 | 205 | 21.0 | 9.0 |
| | 28-Aug-24 | 8.3 | 403 | 16.8 | 9.4 |
| | 25-Sep-24 | 7.9 | 412 | 17.4 | |
| | 29-Oct-24 | 7.5 | 402 | 10.2 | 11.1 |
| | 18-Nov-24 | 8.0 | 445 | 6.7 | 11.5 |
| | 16-Dec-24 | 7.8 | 428 | 2.0 | 13.2 |
| | 27-Jan-25 (3) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 (3) | | | | |
| | 29-Apr-25 | 8.3 | 349 | 14.9 | 2.9 |
| | 27-May-25 | 8.6 | 437 | 10.6 | 12.1 |
| | 25-Jun-25 | 8.6 | 402 | 16.9 | 10.4 |
| | 29-Jul-25 | 8.7 | 392 | 18.2 | 10.1 |
| | 27-Aug-25 | 8.3 | 388 | 12.6 | 11.6 |
| | 30-Sep-25 | 8.2 | 390 | 13.5 | 11.1 |
| | 29-Oct-25 | 8.3 | 315 | 4.2 | 13.9 |
| | 24-Nov-25 | 8.3 | 402 | 3.8 | 14.3 |
| | 16-Dec-25 | 8.3 | 409 | 0.2 | 15.1 |
| BC Control | 25-Aug-15 | 8.3 | 436 | 14.6 | 7.9 |
| | 9-Sep-15 | 8.0 | 400 | 17.9 | 5.9 |
| | 16-Oct-15 | 7.8 | 436 | 8.1 | 9.1 |
| | 8-Nov-15 | | | | |
| | 19-Nov-15 | 8.0 | 405 | 9.4 | 11.7 |
| | 8-Dec-15 | 7.9 | 348 | 3.2 | 18.0 |
| | 17-Jan-16 (2) | | | | |
| | 14-Feb-16 (2) | | | | |
| | 15-Mar-16 | 8.1 | 259 | 6.2 | 13.4 |
| | 21-Apr-16 | 8.5 | 316 | 9.7 | 12.2 |
| | 17-May-16 | 8.5 | 334 | 5.8 | 12.6 |
| | 22-Jun-16 | 8.4 | 465 | 15.7 | 8.5 |
| | 3-Jul-16 | | | | |
| | 20-Jul-16 | 7.9 | 457 | 13.6 | 9.1 |
| | 7-Aug-16 | | | | |
| | 25-Aug-16 | 8.3 | 577 | 17.7 | 7.3 |
| | 19-Sep-16 | 8.1 | 275 | 14.6 | 8.3 |
| | 17-Oct-16 | 7.9 | 648 | 12.3 | 8.4 |
| | 25-Oct-16 | 7.7 | 480 | 6.1 | 13.5 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| **BC Control (cont'd)** | 15-Nov-16 | 8.0 | 439 | 5.2 | 11.1 |
| | 12-Dec-16 | 7.6 | 318 | (0) | 14.5 |
| | 24-Jan-17 | 8.2 | 287 | 2.1 | 13.6 |
| | 15-Feb-17 (2) | | | | |
| | 22-Mar-17 | 8.9 | 475 | 0.0 | 6.0 |
| | 19-Apr-17 | 7.5 | 345 | 10.8 | 12.4 |
| | 9-May-17 | 8.4 | 243 | 5.2 | 15.6 |
| | 16-May-17 | 8.6 | 320 | 18.0 | 7.9 |
| | 28-Jun-17 | 8.4 | 415 | 12.4 | 10.8 |
| | 7-Jul-17 | | | | |
| | 19-Jul-17 | 8.5 | 485 | 17.2 | 8.6 |
| | 27-Jul-17 | | | | |
| | 16-Aug-17 | 8.4 | 457 | 15.9 | 8.0 |
| | 17-Sep-17 | 7.1 | 477 | 14.6 | 8.6 |
| | 18-Oct-17 | 8.3 | 404 | 9.4 | 10.4 |
| | 14-Nov-17 | 8.3 | 375 | 5.3 | 10.3 |
| | 14-Dec-17 | 8.0 | 203 | (0) | 18.8 |
| | 18-Jan-18 | 8.1 | 286 | 0.4 | 11.5 |
| | 24-Feb-18 | 8.3 | 271 | 2.2 | 14.8 |
| | 20-Mar-18 | 8.5 | 269 | (0) | 17.3 |
| | 18-Apr-18 | 8.6 | 462 | 2.5 | 10.4 |
| | 8-May-18 | 8.3 | 455 | 9.3 | 11.0 |
| | 14-May-18 | 8.4 | 469 | 15.2 | 9.5 |
| | 18-Jun-18 | 8.4 | 539 | 16.0 | 9.3 |
| | 19-Jul-18 | 8.2 | 633 | 14.8 | 9.6 |
| | 23-Aug-18 | 8.3 | 596 | 17.0 | 9.0 |
| | 19-Sep-18 | 8.2 | 675 | 13.6 | 9.0 |
| | 24-Oct-18 | 8.3 | 597 | 5.0 | 11.9 |
| | 21-Nov-18 | 8.2 | | 0.2 | 13.9 |
| | 12-Dec-18 | 8.3 | 473 | 1.7 | 13.3 |
| | 18-Jan-19 | 7.9 | 383 | 0.1 | 14.9 |
| | 26-Feb-19 (2) | | | | |
| | 15-Mar-19 (2) | | | | |
| | 24-Apr-19 | 8.4 | 370 | 7.8 | 11.5 |
| | 14-May-19 | 8.5 | 366 | 7.3 | 11.6 |
| | 23-May-19 | 8.5 | 413 | 12.4 | 10.3 |
| | 18-Jun-19 | 8.5 | 457 | 14.0 | 9.7 |
| | 29-Jul-19 | 8.3 | 575 | 18.6 | 10.0 |
| | 29-Aug-19 | 8.3 | 499 | 17.0 | 8.0 |
| | 26-Sep-19 | 8.3 | 522 | 15.2 | 7.8 |
| | 23-Oct-19 | 7.5 | 438 | 8.2 | 10.3 |
| | 22-Nov-19 | 7.7 | 384 | 0.5 | 9.3 |
| | 20-Dec-19 (2) | | | | |
| | 15-Jan-20 | 7.9 | 377 | 2.6 | 9.4 |
| | 20-Feb-20 (2) | | | | |
| | 26-Mar-20 | 8.2 | 403 | 4.7 | 12.3 |
| | 27-Apr-20 | 8.4 | 442 | 2.9 | 13.1 |
| | 19-May-20 | | | 9.6 | 11.2 |
| | 29-May-20 | 9.1 | 443 | 11.1 | 10.6 |
| | 23-Jun-20 | 8.7 | 441 | 14.3 | 9.6 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| BC Control (cont'd) | 30-Jul-20 | 8.6 | 535 | 18.4 | 8.4 |
| | 25-Aug-20 | 8.1 | 525 | 15.8 | 9.4 |
| | 25-Sep-20 | 8.1 | 530 | 12.8 | 10.2 |
| | 30-Oct-20 | 7.3 | 427 | 7.7 | 9.6 |
| | 26-Nov-20 | 7.6 | 470 | 4.5 | 12.2 |
| | 23-Dec-20 | 8.2 | 471 | 0.0 | 14.6 |
| | 27-Jan-21 | 7.9 | 388 | 1.4 | 9.4 |
| | 22-Feb-21 (2) | | | | |
| | 29-Mar-21 | 8.1 | 459 | 6.4 | 10.2 |
| | 27-Apr-21 | 8.5 | 422 | 6.6 | 12.5 |
| | 27-May-21 | 8.5 | 509 | 11.6 | 10.8 |
| | 22-Jun-21 | 8.4 | 564 | 14.6 | 10.5 |
| | 22-Jul-21 | 8.1 | 536 | 14.4 | 9.6 |
| | 25-Aug-21 | 8.1 | 562 | 17.7 | 9.3 |
| | 28-Sep-21 | 8.5 | 532 | 11.5 | 10.8 |
| | 26-Oct-21 | 8.2 | 528 | 9.9 | 11.2 |
| | 23-Nov-21 | 8.2 | 522 | 3.1 | 11.1 |
| | 21-Dec-21 | 8.5 | 516 | 2.3 | 11.5 |
| | 24-Jan-22 (2) | | | | |
| | 8-Feb-22 (2) | | | | |
| | 16-Mar-22 | 8.1 | 421 | 2.9 | 13.4 |
| | 21-Apr-22 | 8.1 | 494 | 2.6 | 9.1 |
| | 24-May-22 | 8.3 | 441 | 12.7 | 10.1 |
| | 25-Jun-22 | 8.1 | 435 | 9.9 | 11.7 |
| | 26-Aug-22 | 8.3 | 465 | 12.6 | 10.1 |
| | 27-Sep-22 | 8.0 | 406 | 11.2 | 11.5 |
| | 28-Oct-22 | 7.9 | 431 | 7.7 | 7.2 |
| | 22-Nov-22 | 8.4 | 376 | 1.7 | 10.1 |
| | 21-Dec-22 | 8.7 | 260 | 0.0 | 12.0 |
| | 24-Jan-23 | 8.2 | 468 | 1.3 | 14.2 |
| | 22-Feb-23 | 8.0 | 485 | 0.6 | 14.6 |
| | 28-Mar-23 | 9.0 | 446 | 2.0 | 13.3 |
| | 21-Apr-23 | 7.2 | 422 | 11.5 | 10.2 |
| | 17-May-23 | 8.3 | 482 | 8.6 | 11.2 |
| | 27-Jun-23 | 8.6 | 470 | 15.9 | 9.1 |
| | 26-Jul-23 | 8.3 | 470 | 17.4 | 8.9 |
| | 30-Aug-23 | 7.7 | 408 | 13.3 | 8.7 |
| | 26-Sep-23 | 8.4 | 516 | 12.6 | 9.9 |
| | 1-Nov-23 | 8.0 | 314 | 2.2 | 6.9 |
| | 29-Nov-23 | 8.1 | 573 | 0.2 | 13.5 |
| | 18-Dec-23 | 8.1 | 548 | 4.5 | 12.0 |
| | 31-Jan-24 | 8.2 | 530 | 3.2 | 12.7 |
| | 27-Feb-24 | 8.1 | 436 | 1.8 | 12.9 |
| | 27-Mar-24 | 8.1 | 428 | 5.1 | 12.3 |
| | 29-Apr-24 | 8.4 | 466 | 9.4 | 11.0 |
| | 28-May-24 | 8.0 | 548 | 13.5 | 9.8 |
| | 27-Jun-24 | 8.2 | 532 | 14.9 | 9.7 |
| | 30-Jul-24 | 8.0 | 433 | 18.6 | 8.8 |
| | 28-Aug-24 | 8.1 | 521 | 17.2 | 9.3 |
| | 25-Sep-24 | 7.9 | 509 | 16.8 | 9.3 |

## Table C-3 Surface Water Field Chemical Results

| Surface Water Station | | pH (SU) | EC (µS/cm) | T (°C) | DO |
|---|---|---|---|---|---|
| | PWQO | 6.5 - 8.5 | nc | nc | *a* |
| BC Control (cont'd) | 29-Oct-24 | 7.5 | 456 | 9.5 | 10.7 |
| | 18-Nov-24 | 8.0 | 548 | 7.1 | 11.3 |
| | 16-Dec-24 | 7.8 | 511 | 2.8 | 12.8 |
| | 27-Jan-25 (3) | | | | |
| | 24-Feb-25 (2) | | | | |
| | 24-Mar-25 (3) | | | | |
| | 29-Apr-25 | 8.4 | 430 | 17.8 | 2.6 |
| | 27-May-25 | 8.6 | 488 | 12.0 | 12.0 |
| | 25-Jun-25 | 8.5 | 527 | 19.8 | 9.9 |
| | 29-Jul-25 | 8.5 | 574 | 19.5 | 10.5 |
| | 27-Aug-25 | 8.0 | 638 | 12.3 | 10.9 |
| | 30-Sep-25 | 8.0 | 615 | 13.1 | 11.4 |
| | 29-Oct-25 | 8.0 | 598 | 4.2 | 12.9 |
| | 24-Nov-25 | 8.2 | 434 | 4.1 | 14.3 |
| | 16-Dec-25 (3) | | | | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | *General Parameters* | | | | | | | *Major Ions* | | | | | | | *Nutrients and Organic Indicators* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| SUMP 1 | 23-Mar-16 | | | | | | | | | | | | | | | 1 | <0.1 | | | 0.16 | 0.01 | |
| | 25-May-16 | 8.25 | 700 | 21 | 363 | 324 | 5 | | 235 | 76.1 | 7 | 64 | 40 | 23.2 | 2.5 | 2 | <0.1 | 0.09 | 0.001 | 0.3 | 0.01 | |
| | 10-Aug-16 | 7.92 | 925 | 8 | 442 | 364 | 5 | | 236 | 139 | 6 | 64.6 | 49.4 | 33.2 | 3.8 | 0.8 | <0.1 | 0.09 | 0.017 | 0.3 | 0.01 | |
| | 18-Oct-16 | 7.95 | 825 | 12 | 349 | 359 | 25 | 11.8 | 120 | 117 | 6 | 71 | 44.2 | 29.4 | 2.8 | 1 | <0.1 | 0.62 | 0.013 | 0.8 | 0.02 | <0.001 |
| | 1-Feb-17 | 7.7 | 734 | 24 | 338 | 285 | <2 | 6 | 227 | 75.4 | 8 | 55.6 | 35.5 | 18.4 | 1.7 | 1.5 | <0.1 | 0.1 | 0.004 | 0.2 | <0.01 | |
| | 5-Apr-17 | 8.17 | 603 | <3 | 309 | 271 | 10 | 6 | 208 | 59.3 | 7 | 56.8 | 31.5 | 19.9 | 1.6 | 1.8 | <0.1 | 0.02 | <0.001 | 0.2 | 0.02 | |
| | 17-Jul-17 | 7.99 | 801 | <3 | 357 | 302 | 6 | 5 | 211 | 92 | 6 | 57 | 38.8 | 26.6 | 2.8 | 1.7 | <0.1 | 0.03 | 0.001 | 0.3 | 0.01 | |
| | 4-Oct-17 | 8.16 | 809 | <3 | 382 | 327 | <2 | 5 | 202 | 115 | 6 | 53.4 | 47.1 | 30.9 | 3.6 | 1 | <0.1 | 0.06 | 0.001 | 0.2 | <0.01 | |
| | 6-Mar-18 | 8.08 | 605 | <2 | 328 | 272 | 5.56 | 0.77 | 229 | 53.7 | 5.56 | 55.1 | 29.3 | 18.1 | 1.61 | 1.04 | <0.01 | 0.098 | <0.001 | <0.15 | 0.0586 | |
| | 9-May-18 | 8.21 | 555 | <2 | 291 | 259 | 2.5 | 1.24 | 217 | 47.6 | 5.24 | 53.7 | 28.8 | 17.1 | 1.62 | 1.16 | <0.01 | 0.048 | <0.001 | <0.15 | 0.0031 | |
| | 5-Sep-18 | 8.06 | 710 | <10 | 385 | 300 | 3 | 0.5 | 210 | 100 | 6.1 | 50 | 40 | 27 | 2.8 | 0.68 | <0.01 | <0.05 | <0.001 | 0.1 | <0.02 | <0.001 |
| | 6-Dec-18 | 8.01 | 690 | <10 | 355 | 330 | 3 | 1.4 | 230 | 82 | 6.8 | 59 | 37 | 22 | 2.1 | 1.32 | <0.01 | 0.13 | 0.001 | 0.16 | <0.02 | <0.001 |
| | 9-Mar-19 | 7.84 | 650 | <10 | 315 | 290 | 2 | 0.6 | 250 | 58 | 6.5 | 60 | 34 | 19 | 1.7 | 1.08 | <0.01 | <0.05 | <0.001 | 0.12 | <0.02 | |
| | 10-May-19 | 8.22 | 550 | <10 | 310 | 260 | <2 | 1.3 | 200 | 43 | 5.3 | 56 | 31 | 17 | 1.5 | 1.27 | <0.01 | <0.05 | <0.001 | 0.12 | <0.02 | <0.001 |
| | 4-Sep-19 | 8 | | <10 | 465 | 320 | 4 | 1.2 | 210 | 120 | 5.9 | 59 | 46 | 30 | 3.3 | 0.77 | <0.01 | 0.099 | | 0.29 | <0.004 | 0.043 |
| | 19-Dec-19 | 7.88 | | <10 | 455 | 350 | 3 | 1.4 | 220 | 120 | 7.3 | 63 | 45 | 29 | 2.9 | 1.49 | <0.01 | 0.081 | | 0.16 | <0.02 | <0.001 |
| | 2-Mar-20 | 7.96 | 690 | <10 | 375 | 280 | <2 | 0.8 | 240 | 79 | 7.4 | 63 | 39 | 23 | 2.2 | 1.33 | <0.01 | 0.27 | | 0.13 | <0.02 | <0.001 |
| | 11-Jun-20 | 7.98 | 690 | <10 | 420 | 310 | <2 | 2.1 | 220 | 82 | 7 | 60 | 39 | 25 | 2.3 | 1.49 | <0.01 | 0.13 | | 0.19 | <0.02 | <0.001 |
| | 27-Aug-20 | 8.06 | 830 | <10 | 585 | 330 | 3 | 0.9 | 180 | 130 | 6.9 | 47 | 51 | 36 | 4.8 | 1.04 | 0.017 | 0.12 | | 0.28 | <0.004 | <0.001 |
| | 25-Nov-20 | | | <3 | 423 | 366 | 4 | 2.7 | 198 | 134 | 8 | 65.8 | 49.1 | 31.3 | 3.4 | 2.3 | <0.1 | 0.14 | | 0.3 | <0.01 | <0.002 |
| | 23-Feb-21 | 7.99 | 740 | <10 | 350 | 330 | <2 | 1.3 | 250 | 85 | 7.7 | 66 | 40 | 24 | 2.3 | 1.52 | <0.01 | 0.059 | | 0.14 | <0.004 | <0.001 |
| | 27-May-21 | 8.04 | 800 | <10 | 420 | 350 | <2 | 0.5 | 230 | 120 | 8.1 | 59 | 46 | 30 | 3.1 | 1.22 | <0.01 | <0.05 | <0.002 | <0.1 | 0.005 | <0.001 |
| | 11-Aug-21 | 8.14 | 790 | <10 | 525 | 310 | 5 | 1.3 | 190 | 140 | 7.4 | 49 | 50 | 34 | 4.3 | 0.96 | 0.019 | 0.1 | 0.004 | 0.34 | <0.004 | <0.001 |
| | 7-Oct-21 | 8.01 | 820 | <10 | 435 | 350 | 4 | 1.1 | 200 | 130 | 6.7 | 59 | 48 | 33 | 4.4 | 1.4 | 0.02 | 0.14 | 0.003 | 0.2 | 0.005 | <0.001 |
| | 20-Jan-22 | 8.01 | 800 | <10 | 405 | 340 | | 1.3 | 260 | 95 | 7.7 | | | 26 | 2.9 | 1.5 | <0.01 | 0.082 | 0.001 | | <0.004 | <0.001 |
| | 28-Feb-22 | 8.02 | 660 | <10 | 340 | 300 | <2 | 0.5 | 230 | 72 | 6.1 | 61 | 34 | 24 | 2.2 | 2.64 | <0.01 | 0.11 | 0.002 | 0.15 | <0.004 | <0.001 |
| | 24-Mar-22 | 8.22 | 570 | 61 | 270 | 250 | | 52 | 200 | 61 | 6.3 | | | 19 | 1.9 | 1.72 | <0.01 | 0.094 | 0.001 | | 0.009 | <0.001 |
| | 28-Apr-22 | 7.95 | 770 | <10 | 450 | 260 | <2 | 0.2 | 200 | 110 | 25 | | | 52 | 2.3 | <0.1 | <0.01 | <0.05 | <0.001 | | 0.006 | <0.001 |
| | 26-May-22 | 10.6 | 860 | <10 | 475 | 330 | | 0.6 | 240 | 120 | 8.5 | 62 | 50 | 31 | 3.9 | 1.69 | 0.023 | 0.19 | 0.003 | 0.3 | <0.004 | <0.001 |
| | 2-Jun-22 | 8.07 | 870 | <10 | 460 | 350 | | 1.6 | 240 | 130 | 9 | | | 31 | 4.4 | 1.81 | 0.036 | 0.18 | 0.003 | | <0.004 | <0.001 |
| | 28-Jul-22 | 8.14 | 1000 | <10 | 620 | 370 | | 1.1 | 210 | 170 | 8.1 | | | 40 | 5.7 | 2.08 | 0.044 | 0.16 | 0.009 | | <0.004 | <0.001 |
| | 31-Aug-22 | 11.3 | 960 | <10 | 530 | 400 | 5 | 1.2 | 210 | 170 | 8.8 | 62 | 61 | 41 | 5.9 | 1.92 | 0.02 | 0.16 | 0.002 | 0.37 | 0.011 | <0.001 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| SUMP 1 | 23-Mar-16 | | <0.0001 | 0.0013 | 0.013 | | 0.084 | <0.00002 | <0.002 | | | 0.2 | | 0.00033 | | | | 0.002 |
| | 25-May-16 | 0.14 | <0.0001 | 0.0014 | 0.011 | <0.002 | 0.029 | <0.00002 | <0.002 | 0.0002 | <0.002 | 0.2 | 0.139 | 0.00021 | 0.015 | 0.0004 | <0.01 | 0.004 |
| | 10-Aug-16 | 0.06 | 0.0003 | 0.0017 | 0.013 | <0.002 | 0.049 | <0.00002 | <0.002 | 0.0003 | <0.002 | 0.2 | 0.026 | 0.0001 | 0.035 | 0.0008 | <0.01 | 0.005 |
| | 18-Oct-16 | 0.04 | 0.0001 | 0.0026 | 0.015 | <0.002 | 0.037 | <0.00002 | <0.002 | 0.0003 | <0.002 | 0.3 | 0.046 | 0.00004 | 0.141 | 0.0006 | <0.01 | 0.006 |
| | 1-Feb-17 | 0.03 | <0.0001 | 0.0006 | 0.001 | <0.002 | 0.017 | <0.00002 | <0.002 | 0.0001 | <0.002 | 0.2 | 0.027 | 0.00008 | 0.011 | 0.0004 | <0.01 | 0.001 |
| | 5-Apr-17 | 0.07 | <0.0001 | 0.0006 | 0.013 | <0.002 | 0.018 | <0.00002 | <0.002 | <0.0001 | 0.005 | 0.2 | 0.052 | <0.00002 | 0.005 | 0.0004 | <0.01 | <0.001 |
| | 17-Jul-17 | 0.06 | 0.0001 | 0.0009 | 0.034 | <0.002 | 0.052 | <0.000014 | <0.002 | 0.0002 | 0.004 | 0.2 | 0.105 | 0.00005 | 0.018 | 0.0005 | <0.01 | <0.001 |
| | 4-Oct-17 | 0.03 | <0.0001 | 0.0011 | 0.014 | <0.002 | 0.052 | <0.000014 | <0.002 | <0.0001 | 0.003 | 0.3 | 0.044 | 0.00004 | 0.051 | <0.01 | <0.01 | <0.001 |
| | 6-Mar-18 | 0.012 | <0.0001 | 0.00025 | 0.00994 | <0.0001 | 0.018 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.185 | <0.05 | <0.0001 | 0.0178 | 0.000341 | <0.0005 | <0.00005 |
| | 9-May-18 | 0.027 | <0.0001 | 0.00027 | 0.0098 | <0.0001 | 0.02 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.18 | <0.05 | <0.0001 | 0.00403 | 0.000314 | <0.0005 | 0.000062 |
| | 5-Sep-18 | 0.01 | <0.0005 | <0.001 | 0.012 | <0.0005 | 0.044 | <0.0001 | <0.005 | <0.0005 | 0.0012 | 0.27 | <0.1 | <0.0005 | 0.097 | 0.00058 | <0.001 | <0.002 |
| | 6-Dec-18 | 0.023 | <0.0005 | <0.001 | 0.011 | <0.0005 | 0.031 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.23 | <0.1 | <0.0005 | <0.12 | <0.0005 | 0.0017 | <0.002 |
| | 9-Mar-19 | 0.012 | <0.0005 | <0.001 | 0.012 | <0.0005 | 0.02 | <0.0001 | <0.005 | <0.0005 | 0.0014 | 0.22 | <0.1 | <0.0005 | 0.073 | <0.0005 | <0.001 | <0.002 |
| | 10-May-19 | 0.027 | <0.0005 | <0.001 | 0.0095 | <0.0005 | 0.019 | <0.0001 | <0.005 | <0.0005 | 0.001 | 0.18 | <0.1 | <0.0005 | 0.011 | <0.0005 | <0.001 | <0.002 |
| | 4-Sep-19 | 0.01 | <0.0005 | <0.001 | 0.015 | <0.0005 | 0.046 | <0.0001 | <0.005 | <0.0005 | 0.0018 | 0.24 | <0.1 | <0.5 | 0.089 | 0.00064 | <0.001 | <0.002 |
| | 19-Dec-19 | 0.019 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.036 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.25 | <0.1 | <0.5 | 0.1 | 0.00052 | <0.001 | <0.002 |
| | 2-Mar-20 | 0.01 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.026 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.25 | <0.1 | <0.5 | 0.085 | <0.0005 | <0.001 | <0.002 |
| | 11-Jun-20 | 0.036 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.032 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.22 | <0.1 | <0.5 | 0.044 | <0.0005 | <0.001 | <0.002 |
| | 27-Aug-20 | 0.022 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.066 | <0.09 | <0.005 | <0.0005 | <0.0009 | 0.21 | <0.1 | <0.5 | 0.073 | 0.00067 | <0.001 | <0.002 |
| | 25-Nov-20 | 0.05 | 0.1 | 0.0006 | 0.017 | <0.002 | 0.049 | <0.015 | <0.002 | <0.005 | 0.0004 | 0.1 | 0.058 | 0.1 | 0.107 | <0.01 | <0.01 | <0.001 |
| | 23-Feb-21 | <0.0049 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | 0.0012 | 0.25 | <0.1 | <0.0005 | 0.097 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.0082 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.04 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.2 | <0.1 | <0.0005 | 0.05 | <0.0005 | <0.001 | <0.002 |
| | 11-Aug-21 | 0.02 | <0.0005 | 0.0011 | 0.012 | <0.0004 | 0.06 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.26 | <0.1 | <0.0005 | 0.044 | 0.00059 | <0.001 | <0.002 |
| | 7-Oct-21 | 0.019 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.056 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | <0.1 | <0.0005 | 0.057 | 0.00066 | <0.001 | <0.002 |
| | 20-Jan-22 | | | | | | 0.035 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | 0.0014 | |
| | 28-Feb-22 | 0.0083 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.023 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.19 | <0.1 | <0.0005 | 0.0024 | <0.0005 | <0.001 | <0.002 |
| | 24-Mar-22 | | | | | | 0.02 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.14 | 0.00054 | | | <0.001 | |
| | 28-Apr-22 | | | | | | 0.019 | <0.00009 | <0.005 | <0.005 | <0.0005 | | 0.32 | <0.0005 | | | <0.0005 | |
| | 26-May-22 | 0.011 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.053 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.22 | <0.1 | <0.0005 | 0.046 | 0.00062 | <0.001 | <0.002 |
| | 2-Jun-22 | | | | | | 0.053 | <0.00009 | <0.005 | <0.0005 | 0.0018 | | <0.1 | <0.0005 | | | <0.001 | |
| | 28-Jul-22 | | | | | | 0.074 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.13 | <0.0005 | | | <0.001 | |
| | 31-Aug-22 | 0.022 | <0.0005 | 0.0015 | 0.017 | <0.0004 | 0.077 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | 0.18 | <0.0005 | 0.048 | 0.00077 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SUMP 1 | 23-Mar-16 | | | | | | | 0.00017 | | | | | | |
| | 25-May-16 | | <0.00002 | 0.356 | <0.00005 | <0.005 | 0.02 | 0.00016 | <0.005 | <0.005 | <0.003 | | | |
| | 10-Aug-16 | | <0.00002 | 0.555 | <0.00005 | <0.005 | 0.05 | 0.00018 | <0.005 | <0.005 | <0.003 | | | |
| | 18-Oct-16 | 2.15 | <0.00002 | 0.395 | <0.00005 | <0.005 | <0.01 | 0.00017 | <0.005 | <0.005 | <0.003 | <1 | <1 | <1 |
| | 1-Feb-17 | | <0.00002 | 0.249 | <0.00005 | <0.005 | <0.01 | 0.00014 | <0.005 | <0.005 | <0.003 | | | |
| | 5-Apr-17 | | <0.00002 | 0.222 | <0.00005 | <0.005 | <0.01 | 0.00016 | <0.005 | <0.005 | <0.003 | | | |
| | 17-Jul-17 | | <0.00002 | 0.396 | <0.00005 | <0.005 | <0.01 | 0.00013 | <0.005 | 0.16 | <0.003 | | | |
| | 4-Oct-17 | | <0.00002 | 0.407 | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | 0.007 | <0.003 | | | |
| | 6-Mar-18 | 55.1 | <0.00005 | 0.222 | 0.000015 | <0.0003 | <0.0001 | 0.000123 | <0.0005 | 0.0031 | <0.0003 | | | |
| | 9-May-18 | 1.42 | <0.00005 | 0.208 | 0.000012 | 0.00071 | <0.0001 | 0.000119 | <0.0005 | <0.003 | <0.0003 | | | |
| | 5-Sep-18 | | <0.0001 | 0.31 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.0005 | <0.001 | | | |
| | 6-Dec-18 | | <0.0001 | 0.28 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.0005 | <0.001 | | | |
| | 9-Mar-19 | 0.0551 | <0.0001 | 0.24 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | <0.5 |
| | 10-May-19 | | <0.0001 | 0.2 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | 3.7 |
| | 4-Sep-19 | | <0.0001 | 0.33 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | <0.5 |
| | 19-Dec-19 | | <0.0001 | 0.37 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | 0.8 |
| | 2-Mar-20 | | <0.0001 | 0.3 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 11-Jun-20 | 1.5 | <0.1 | 0.28 | <0.05 | <0.005 | <0.001 | 0.13 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 27-Aug-20 | 1.7 | <0.09 | 0.37 | <0.05 | <0.005 | <0.001 | <0.1 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 25-Nov-20 | 0.0017 | <0.1 | 0.433 | <0.05 | <0.005 | <0.01 | 0.1 | <0.005 | 0.006 | <0.003 | <1 | <1 | <1 |
| | 23-Feb-21 | 2 | <0.00009 | 0.31 | <0.00005 | <0.005 | <0.001 | 0.00016 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 27-May-21 | 1.5 | <0.00009 | 0.37 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 11-Aug-21 | 1.4 | <0.00009 | 0.39 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 7-Oct-21 | 1.5 | <0.00009 | 0.49 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 20-Jan-22 | 2 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 28-Feb-22 | 1.5 | <0.00009 | 0.3 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 24-Mar-22 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 28-Apr-22 | 8.4 | <0.00009 | | | | | | | 0.0063 | | <0.5 | <0.5 | <0.5 |
| | 26-May-22 | 1.5 | <0.00009 | 0.45 | 0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 2-Jun-22 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 28-Jul-22 | 1.3 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 31-Aug-22 | 1.6 | <0.00009 | 0.57 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SUMP 1 | 23-Mar-16 | | | | | | | | | | |
| | 25-May-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 10-Aug-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 18-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 1-Feb-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 5-Apr-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 17-Jul-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 4-Oct-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 6-Mar-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 5-Sep-18 | <0.2 | 0.22 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 6-Dec-18 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 9-Mar-19 | <25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.4 | <25 | <100 | <200 | <200 |
| | 10-May-19 | <25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.4 | <25 | <100 | <200 | <200 |
| | 4-Sep-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-Dec-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 2-Mar-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 11-Jun-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Aug-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-Nov-20 | | | | | | | <25 | <50 | <400 | <400 |
| | 23-Feb-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 11-Aug-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 7-Oct-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-Jan-22 | | | | | | | | | | |
| | 28-Feb-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-Mar-22 | | | | | | | | | | |
| | 28-Apr-22 | | | | | | | | | | |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 2-Jun-22 | | | | | | | | | | |
| | 28-Jul-22 | | | | | | | | | | |
| | 31-Aug-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| SUMP 1 | 15-Sep-22 | 8.02 | 980 | <10 | 555 | 430 | | 0.8 | 220 | 160 | 8.1 | | | 43 | 5.8 | 1.44 | 0.028 | 0.099 | 0.001 | | <0.004 | <0.001 |
| (cont'd) | 28-Oct-22 | 7.98 | 960 | <10 | 495 | 400 | 4 | 1 | 230 | 160 | 8.9 | 64 | 59 | 38 | 5.1 | 1.99 | 0.013 | 0.13 | 0.001 | <0.1 | 0.005 | <0.001 |
| | 23-Nov-22 | 7.98 | 720 | <10 | 335 | 310 | | 1.2 | 260 | 73 | 9.1 | | | 15 | 1.9 | 1.36 | <0.01 | 0.079 | 0.001 | | 0.006 | <0.001 |
| | 21-Dec-22 | 7.99 | 910 | <10 | 400 | 360 | | 3.1 | 250 | 130 | 7.7 | | | 32 | 3.6 | 1.52 | <0.01 | 0.16 | 0.001 | | 0.004 | <0.001 |
| | 25-Jan-23 | 7.86 | 580 | <10 | 255 | 320 | | 0.4 | 270 | 20 | 7.8 | | | 2.7 | 0.7 | 1.28 | <0.01 | <0.05 | <0.001 | | 0.005 | <0.001 |
| | 23-Feb-23 | 7.88 | 530 | <10 | 250 | 280 | 3 | 0.3 | 260 | 14 | 7.7 | 64 | 31 | 3.5 | 0.87 | 1.14 | <0.01 | <0.05 | <0.001 | 0.22 | <0.004 | <0.001 |
| | 27-Mar-23 | 7.81 | 540 | <10 | 265 | 270 | | 0.9 | 220 | 32 | 7.1 | | | 9.8 | 1.5 | 1.56 | <0.01 | <0.05 | <0.003 | | <0.004 | <0.001 |
| | 24-Apr-23 | 8.19 | 630 | 21 | 265 | 280 | | 1.9 | 210 | 64 | 7.1 | | | 22 | 2.5 | 1.45 | <0.01 | 0.078 | <0.001 | | <0.004 | <0.001 |
| | 17-May-23 | 8.09 | 750 | <10 | 380 | 330 | 3 | 0.6 | 240 | 92 | 8.4 | 61 | 41 | 29 | 2.9 | 1.2 | 0.011 | <0.05 | <0.001 | 0.14 | 0.004 | <0.001 |
| | 28-Jun-23 | 8.18 | 820 | <10 | 625 | 340 | | 0.5 | 200 | 110 | 8.9 | | | 32 | 4 | 1.1 | <0.01 | 0.063 | 0.002 | | <0.004 | <0.001 |
| | 26-Jul-23 | 8.19 | 780 | 48 | 405 | 330 | | 3.2 | 190 | 120 | 8.9 | | | 30 | 3.9 | 1.22 | 0.015 | 0.075 | 0.005 | | 0.015 | <0.001 |
| | 10-Aug-23 | | | <10 | | | | | | | | | | | | | | | | | | |
| | 30-Aug-23 | 7.89 | 860 | 12 | 505 | 390 | 3 | 4.6 | 200 | 130 | 8.9 | 57 | 55 | 36 | 4.7 | 1.26 | 0.019 | 0.095 | <0.001 | 0.27 | <0.004 | <0.001 |
| | 25-Sep-23 | 7.99 | 860 | <10 | 425 | 380 | | 1.6 | 220 | 130 | 8.1 | | | 32 | 4 | 1.21 | <0.01 | 0.089 | 0.001 | | 0.022 | <0.001 |
| | 31-Oct-23 | 7.93 | 950 | <10 | 480 | 390 | 3 | 1 | 210 | 150 | 8 | 62 | 53 | 36 | 4.4 | 1.5 | <0.01 | 0.1 | 0.002 | <0.1 | <0.004 | <0.001 |
| | 29-Nov-23 | 8.01 | 950 | <10 | 440 | 420 | | 0.8 | 230 | 150 | 8.4 | | | 36 | 4.7 | 1.6 | <0.01 | 0.12 | <0.001 | | <0.004 | <0.001 |
| | 18-Dec-23 | 8.1 | 880 | 12 | 460 | 360 | | 3.1 | 230 | 110 | 7.2 | | | 29 | 3.4 | 2.02 | <0.01 | 0.11 | 0.001 | | 0.008 | <0.001 |
| | 31-Jan-24 | 8.02 | 740 | <10 | 350 | 310 | | 0.5 | 230 | 80 | 9.6 | | | 17 | 2.6 | 1.72 | <0.01 | 0.061 | 0.003 | | <0.004 | <0.001 |
| | 27-Feb-24 | 7.86 | 650 | 18 | 335 | 300 | <2 | 1.4 | 230 | 51 | 8.5 | 59 | 33 | 11 | 2.1 | 1.16 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | <0.001 |
| | 27-Mar-24 | 8.07 | 580 | 14 | 320 | 270 | | 7.1 | 190 | 56 | 7.9 | | | 20 | 2.2 | 1.91 | <0.01 | 0.053 | <0.001 | | 0.008 | <0.001 |
| | 29-Apr-24 | 8.12 | 650 | 21 | 375 | 290 | | 15 | 210 | 66 | 7.9 | | | 24 | 2.7 | 1.76 | 0.012 | 0.093 | 0.001 | | 0.009 | <0.001 |
| | 29-May-24 | 8.22 | 850 | <10 | 445 | 400 | 2 | 1.7 | 240 | 120 | 8.4 | 58 | 46 | 32 | 3.7 | 1.54 | 0.017 | 0.067 | 0.001 | <0.1 | 0.004 | <0.001 |
| | 26-Jun-24 | 7.93 | 820 | <10 | 480 | 330 | | 2.3 | 220 | 110 | 9.8 | | | 25 | 3.5 | 1.51 | 0.024 | 0.066 | <0.001 | | 0.006 | <0.001 |
| | 29-Jul-24 | 7.98 | 850 | <10 | 530 | 350 | | 1.1 | 210 | 130 | 8 | | | 31 | 4.4 | 1.06 | 0.017 | <0.05 | <0.001 | | <0.004 | <0.001 |
| | 26-Aug-24 | 8.16 | 820 | 24 | 545 | 350 | 4 | 1.7 | 210 | 110 | 10 | 63 | 49 | 30 | 4.4 | 1.01 | 0.011 | 0.068 | 0.002 | 0.21 | <0.004 | <0.001 |
| | 24-Sep-24 | 8.16 | 900 | <10 | 500 | 410 | | 1.3 | 210 | 150 | 8.3 | | | 37 | 5 | 1.33 | 0.018 | 0.064 | 0.001 | | <0.004 | <0.001 |
| | 30-Oct-24 | 7.94 | 950 | <10 | 505 | 380 | 4 | 4.3 | 220 | 150 | 8.4 | 63 | 55 | 37 | 5 | 1.43 | 0.017 | 0.083 | 0.002 | 0.29 | 0.011 | <0.001 |
| | 18-Nov-24 | 8.2 | 1000 | <10 | 600 | 410 | | 2.4 | 120 | 160 | 9.2 | | | 39 | 5.2 | 1.62 | <0.01 | 0.12 | 0.001 | | 0.005 | <0.001 |
| | 16-Dec-24 | 8.07 | 800 | <10 | 550 | 340 | | 2.9 | 220 | 110 | 8.7 | | | 31 | 3.9 | 2.04 | 0.013 | 0.21 | 0.002 | | 0.006 | <0.001 |
| | 27-Jan-25 | 7.92 | 820 | 15 | 410 | 360 | | 6.8 | 250 | 95 | 8.4 | | | 26 | 3 | 1.75 | <0.01 | 0.14 | <0.001 | | 0.007 | <0.001 |
| | 24-Feb-25 | 8.01 | 800 | <10 | 415 | 360 | 3 | 2.4 | 250 | 88 | 7 | 66 | 43 | 25 | 2.9 | 1.45 | <0.01 | 0.14 | 0.001 | 0.11 | 0.01 | <0.001 |
| | 24-Mar-25 | 7.94 | 670 | <10 | 400 | 290 | | 2.6 | 220 | 67 | 6.4 | | | 20 | 2.3 | 1.26 | <0.01 | <0.05 | <0.001 | | <0.004 | <0.001 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | *Total Metals* | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Fluoride | Iron | Lead | Manganese | Molybdenum | Nickel | Selenium |
| | | **Al** | **Sb** | **As** | **Ba** | **Be** | **B** | **Cd** | **Cr** | **Co** | **Cu** | **F** | **Fe** | **Pb** | **Mn** | **Mo** | **Ni** | **Se** |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SUMP 1** | 15-Sep-22 | | | | | | 0.077 | <0.00009 | <0.005 | <0.0005 | 0.0014 | | 0.18 | <0.0005 | | | <0.001 | |
| **(cont'd)** | 28-Oct-22 | 0.013 | <0.0005 | 0.0017 | 0.016 | <0.0004 | 0.065 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | 0.2 | <0.0005 | 0.067 | 0.0009 | <0.001 | <0.002 |
| | 23-Nov-22 | | | | | | 0.027 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.11 | <0.0005 | | | <0.001 | |
| | 21-Dec-22 | | | | | | 0.05 | <0.00009 | <0.005 | 0.00053 | 0.0019 | | 0.43 | <0.0005 | | | 0.0019 | |
| | 25-Jan-23 | | | | | | 0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | <0.001 | |
| | 23-Feb-23 | 0.0067 | <0.0005 | <0.001 | 0.0067 | <0.0004 | 0.013 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.12 | <0.1 | <0.0005 | 0.0034 | <0.0005 | <0.001 | <0.002 |
| | 27-Mar-23 | | | | | | 0.016 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | <0.001 | |
| | 24-Apr-23 | | | | | | 0.027 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | <0.001 | |
| | 17-May-23 | 0.012 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.033 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.26 | <0.1 | <0.0005 | 0.045 | 0.00058 | <0.001 | <0.002 |
| | 28-Jun-23 | | | | | | 0.056 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | <0.001 | |
| | 26-Jul-23 | | | | | | 0.056 | <0.00009 | <0.005 | <0.0005 | 0.0015 | | 0.43 | 0.0012 | | | <0.001 | |
| | 10-Aug-23 | | | | | | | | | | | | | | | | | |
| | 30-Aug-23 | 0.05 | <0.0005 | 0.001 | 0.016 | <0.0004 | 0.063 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.26 | <0.1 | <0.0005 | 0.065 | 0.00069 | <0.001 | <0.002 |
| | 25-Sep-23 | | | | | | 0.059 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | <0.1 | <0.0005 | | | <0.001 | |
| | 31-Oct-23 | 0.0084 | <0.0005 | 0.0012 | 0.016 | <0.0004 | 0.067 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.3 | 0.12 | <0.0005 | 0.088 | 0.00066 | <0.001 | <0.002 |
| | 29-Nov-23 | | | | | | 0.059 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.11 | <0.0005 | | | <0.001 | |
| | 18-Dec-23 | | | | | | 0.047 | <0.00009 | <0.005 | <0.0005 | 0.00098 | | 0.23 | <0.0005 | | | <0.001 | |
| | 31-Jan-24 | | | | | | 0.035 | <0.00009 | <0.005 | <0.0005 | 0.00096 | | <0.1 | <0.0005 | | | 0.0024 | |
| | 27-Feb-24 | 0.0073 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.29 | <0.1 | <0.0005 | 0.0057 | <0.0005 | <0.001 | <0.002 |
| | 27-Mar-24 | | | | | | 0.026 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.24 | <0.0005 | | | <0.001 | |
| | 29-Apr-24 | | | | | | 0.031 | <0.00009 | <0.005 | <0.0005 | 0.001 | | 0.34 | <0.0005 | | | <0.001 | |
| | 29-May-24 | 0.014 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.054 | <0.00009 | <0.005 | <0.0005 | 0.0021 | 0.25 | <0.1 | <0.0005 | 0.036 | 0.00059 | <0.001 | <0.002 |
| | 26-Jun-24 | | | | | | 0.048 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.14 | <0.0005 | | | <0.001 | |
| | 29-Jul-24 | | | | | | 0.057 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.13 | <0.0005 | | | <0.001 | |
| | 26-Aug-24 | 0.015 | <0.0005 | 0.0011 | 0.016 | <0.0004 | 0.057 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.32 | <0.1 | <0.0005 | 0.044 | 0.00053 | <0.001 | <0.002 |
| | 24-Sep-24 | | | | | | 0.068 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.12 | <0.0005 | | | <0.001 | |
| | 30-Oct-24 | 0.042 | <0.0005 | 0.0017 | 0.017 | <0.0004 | 0.068 | <0.00009 | <0.005 | <0.0005 | 0.012 | 0.25 | 0.23 | <0.0005 | 0.076 | 0.00077 | <0.001 | <0.002 |
| | 18-Nov-24 | | | | | | 0.074 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.29 | <0.0005 | | | <0.001 | |
| | 16-Dec-24 | | | | | | 0.055 | <0.00009 | <0.005 | 0.00055 | <0.0009 | | 0.42 | <0.0005 | | | <0.001 | |
| | 27-Jan-25 | | | | | | 0.037 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.35 | <0.0005 | | | <0.001 | |
| | 24-Feb-25 | 0.012 | <0.0005 | 0.0028 | 0.016 | <0.0004 | 0.032 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.33 | 0.37 | <0.0005 | 0.098 | <0.0005 | <0.001 | <0.002 |
| | 24-Mar-25 | | | | | | 0.031 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.27 | <0.0005 | | | <0.001 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SUMP 1 | 15-Sep-22 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| (cont'd) | 28-Oct-22 | 1.7 | <0.00009 | 0.56 | <0.00005 | 0.0053 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | 0.7 | <0.5 | 0.7 |
| | 23-Nov-22 | 1.8 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 21-Dec-22 | 2 | <0.00009 | | | | | | | 0.006 | | <0.5 | <0.5 | <0.5 |
| | 25-Jan-23 | 1.7 | <0.00009 | | | | | | | <0.005 | | 0.9 | <0.5 | 0.9 |
| | 23-Feb-23 | 1.8 | <0.00009 | 0.11 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | 1.2 | <0.5 | 1.2 |
| | 27-Mar-23 | 1.5 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 24-Apr-23 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 17-May-23 | 1.4 | <0.00009 | 0.35 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 28-Jun-23 | 1.2 | <0.00009 | | | | | | | <0.005 | | <0.5 | 0.5 | 0.7 |
| | 26-Jul-23 | 1.6 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 10-Aug-23 | | | | | | | | | | | | | |
| | 30-Aug-23 | 1.5 | <0.00009 | 0.47 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 25-Sep-23 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 31-Oct-23 | 1.6 | <0.00009 | 0.52 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 29-Nov-23 | 1.8 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 18-Dec-23 | 1.6 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 31-Jan-24 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 27-Feb-24 | 1.8 | <0.00009 | 0.29 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 27-Mar-24 | 1.5 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 29-Apr-24 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 29-May-24 | 1.3 | <0.00009 | 0.46 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 26-Jun-24 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 29-Jul-24 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 26-Aug-24 | 1.6 | <0.00009 | 0.45 | <0.00005 | <0.005 | <0.001 | 0.00066 | 0.00053 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 24-Sep-24 | 1.5 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 30-Oct-24 | 1.7 | <0.00009 | 0.54 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | 0.021 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 18-Nov-24 | 1.7 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 16-Dec-24 | 2 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 27-Jan-25 | 2 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 24-Feb-25 | 2.1 | <0.00009 | 0.37 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 24-Mar-25 | 1.8 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SUMP 1 (cont'd) | 15-Sep-22 | | | | | | | | | | |
| | 28-Oct-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 23-Nov-22 | | | | | | | | | | |
| | 21-Dec-22 | | | | | | | | | | |
| | 25-Jan-23 | | | | | | | | | | |
| | 23-Feb-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Mar-23 | | | | | | | | | | |
| | 24-Apr-23 | | | | | | | | | | |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-Jun-23 | | | | | | | | | | |
| | 26-Jul-23 | | | | | | | | | | |
| | 10-Aug-23 | | | | | | | | | | |
| | 30-Aug-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-Sep-23 | | | | | | | | | | |
| | 31-Oct-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 29-Nov-23 | | | | | | | | | | |
| | 18-Dec-23 | | | | | | | | | | |
| | 31-Jan-24 | | | | | | | | | | |
| | 27-Feb-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Mar-24 | | | | | | | | | | |
| | 29-Apr-24 | | | | | | | | | | |
| | 29-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-Jun-24 | | | | | | | | | | |
| | 29-Jul-24 | | | | | | | | | | |
| | 26-Aug-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-Sep-24 | | | | | | | | | | |
| | 30-Oct-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 18-Nov-24 | | | | | | | | | | |
| | 16-Dec-24 | | | | | | | | | | |
| | 27-Jan-25 | | | | | | | | | | |
| | 24-Feb-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 24-Mar-25 | | | | | | | | | | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SUMP 1** | 28-Apr-25 | 8.22 | 620 | <10 | 355 | 290 | | 1.1 | 210 | 54 | 7.9 | | | 23 | 2.5 | 1.37 | <0.01 | <0.05 | <0.001 | | <0.004 | <0.001 |
| **(cont'd)** | 28-May-25 | 8.02 | 820 | <10 | 535 | 330 | <2 | 1.4 | 220 | 110 | 8.4 | 64 | 44 | 31 | 3.6 | 1.76 | <0.01 | <0.05 | <0.001 | 0.11 | 0.006 | <0.001 |
| | 23-Jun-25 | 8.13 | 830 | <10 | 505 | 370 | | 1.3 | 220 | 120 | 9 | | | 31 | 4 | 1.47 | 0.011 | 0.072 | <0.001 | | 0.006 | <0.001 |
| | 28-Jul-25 | 8.12 | 880 | <10 | 485 | 360 | | 0.8 | 220 | 130 | 7.6 | | | 35 | 4.4 | 0.74 | <0.01 | <0.05 | <0.001 | | 0.006 | <0.001 |
| | 25-Aug-25 | 7.97 | 860 | <10 | 470 | 400 | 4 | 2.2 | 220 | 110 | 9.4 | 63 | 48 | 30 | 3.8 | 1.42 | 0.016 | 0.071 | 0.001 | 0.17 | 0.008 | <0.001 |
| | 29-Sep-25 | 7.95 | 920 | <10 | 570 | 360 | | 1.7 | 230 | 140 | 8.8 | | | 38 | 4.8 | 1.49 | 0.014 | 0.1 | 0.001 | | <0.004 | <0.001 |
| | 27-Oct-25 | 8.01 | 910 | <10 | 450 | 350 | 3 | 2.1 | 230 | 120 | 8.5 | 62 | 48 | 32 | 4 | 1.58 | <0.01 | 0.16 | 0.001 | <0.1 | 0.006 | <0.001 |
| | 30-Oct-25 | | | | | | | | | | | | | | | | | | | | | |
| | 24-Nov-25 | 8.09 | 830 | <10 | 380 | 340 | | 2.4 | 210 | 130 | 11 | | | 31 | 4.1 | 2.2 | <0.01 | 1.8 | 0.013 | | 0.011 | <0.001 |
| | 16-Dec-25 (2) | | | | | | | | | | | | | | | | | | | | | |
| **SUMP 2** | 23-Mar-16 | 7.94 | 594 | 2 | 292 | 252 | 8 | | 208 | 52.2 | 6 | 53 | 29.1 | 18 | 1.4 | 1.5 | <0.1 | 0.03 | <0.001 | 0.1 | 0.01 | |
| | 25-May-16 | 8.36 | 711 | 21 | 373 | 339 | 5 | | 235 | 80.7 | 7 | 64.8 | 43 | 24.1 | 2.8 | 2 | <0.1 | 0.08 | 0.004 | 0.2 | 0.01 | |
| | 10-Aug-16 | 8.09 | 947 | 31 | 469 | 384 | 4 | | 231 | 159 | 7 | 64 | 54.5 | 37.1 | 4.5 | 0.8 | <0.1 | 0.09 | 0.013 | 0.4 | 0.03 | |
| | 18-Oct-16 | 7.82 | 833 | 20 | 354 | 377 | 42 | | 120 | 120 | 5 | 73.2 | 47.3 | 31.6 | 3.1 | 0.2 | <0.1 | 0.14 | 0.005 | 0.3 | 0.02 | |
| | 1-Feb-17 | 7.79 | 734 | <2 | 340 | 285 | 5 | | 217 | 82.1 | 7 | 55.1 | 35.9 | 23.4 | 1.7 | 1 | <0.1 | 0.02 | 0.001 | 0.2 | <0.01 | |
| | 5-Apr-17 | 8.25 | 540 | 5 | 269 | 222 | 8 | | 194 | 45.6 | 6 | 49.5 | 24 | 18.7 | 1.1 | 1.5 | <0.1 | 0.03 | 0.001 | 0.2 | 0.02 | |
| | 17-Jul-17 | 7.98 | 794 | <3 | 357 | 297 | 3 | 3 | 203 | 94.1 | 6 | 52.3 | 40.4 | 31.6 | 3 | 1.8 | <0.1 | 0.05 | 0.002 | 0.2 | 0.01 | |
| | 4-Oct-17 | 8.25 | 815 | <3 | 393 | 327 | 6 | 5 | 207 | 124 | 5 | 48.8 | 49.8 | 32.5 | 4.1 | 0.9 | <0.1 | 0.03 | 0.001 | 0.2 | <0.01 | |
| | 6-Mar-18 | 8.22 | 471 | <2 | 244 | 214 | 4.3 | 1.95 | 185 | 32.9 | 3.7 | 49.2 | 21.8 | 12.4 | 1.14 | 0.933 | <0.01 | 0.149 | 0.001 | 0.16 | <0.003 | |
| | 9-May-18 | 8.31 | 503 | <2 | 268 | 234 | <2 | 2.27 | 200 | 39.2 | 4.46 | 50.9 | 25.8 | 16.1 | 1.38 | 1.19 | <0.01 | 0.135 | 0.004 | <0.15 | 0.0041 | |
| | 5-Sep-18 | | | <10 | | 270 | <2 | | 170 | 110 | 5.1 | 35 | 41 | 29 | 3.3 | 0.51 | <0.01 | <0.05 | <0.003 | 0.16 | <0.02 | |
| | 6-Dec-18 | | | <10 | | 300 | 9 | | 230 | 72 | 5.5 | 56 | 34 | 22 | 2 | 1 | <0.01 | 0.085 | <0.001 | 0.13 | <0.02 | |
| | 9-Mar-19 (2) | | | | | | | | | | | | | | | | | | | | | |
| | 17-May-19 | | | <10 | | 230 | <2 | | 190 | 38 | 4.8 | 47 | 28 | 13 | 1.5 | 0.86 | 0.011 | <0.05 | <0.002 | <0.1 | 0.006 | |
| | 4-Sep-19 | | | <10 | | 310 | <2 | | 190 | 130 | 5.8 | 45 | 49 | 35 | 4 | 1.34 | 0.011 | <0.05 | | 0.22 | <0.004 | |
| | 19-Dec-19 | | | | | | | | | | | | | | | | | | | | | |
| | 2-Mar-20 (2) | | | | | | | | | | | | | | | | | | | | | |
| | 30-Jun-20 | | | 10 | | 230 | <2 | | 130 | | 4.8 | 31 | 44 | 28 | 4.3 | 0.81 | 0.034 | 0.075 | | 0.34 | 0.025 | |
| | 27-Aug-20 | | | <10 | | 350 | <2 | | 150 | 160 | 6.5 | 35 | 60 | | | 0.5 | 0.028 | <0.05 | | 0.29 | 0.006 | |
| | 25-Nov-20 | | | <3 | 456 | 388 | 5 | 2.9 | 180 | 173 | 7 | 59 | 58.6 | 37 | 5.5 | 1.7 | <0.1 | 0.1 | | 0.4 | <0.01 | |
| | 23-Feb-21 (2) | | | | | | | | | | | | | | | | | | | | | |
| | 27-May-21 | | | <10 | | 330 | 2 | | 170 | 170 | 7.3 | 35 | 60 | | | 0.56 | 0.034 | <0.05 | | 0.32 | 0.01 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SUMP 1** | 28-Apr-25 | | | | | | 0.029 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.1 | <0.0005 | | | <0.001 | |
| **(cont'd)** | 28-May-25 | 0.015 | <0.0005 | 0.0012 | 0.017 | <0.0004 | 0.04 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.3 | 0.14 | <0.0005 | 0.038 | 0.00067 | <0.001 | <0.002 |
| | 23-Jun-25 | | | | | | 0.053 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.16 | <0.0005 | | | <0.001 | |
| | 28-Jul-25 | | | | | | 0.058 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.24 | <0.0005 | | | <0.001 | |
| | 25-Aug-25 | 0.024 | <0.0005 | 0.0016 | 0.018 | <0.0004 | 0.058 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.3 | 0.16 | <0.0005 | 0.065 | 0.00068 | <0.001 | <0.002 |
| | 29-Sep-25 | | | | | | 0.061 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.28 | <0.0005 | | | <0.001 | |
| | 27-Oct-25 | 0.016 | <0.0005 | 0.0023 | 0.017 | <0.0004 | 0.05 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.29 | 0.29 | <0.0005 | 0.094 | 0.0013 | <0.001 | <0.002 |
| | 30-Oct-25 | | | | | | | | | | | | | | | | | |
| | 24-Nov-25 | | | | | | 0.054 | <0.00009 | <0.005 | <0.0005 | <0.0009 | | 0.22 | <0.0005 | | | <0.001 | |
| | 16-Dec-25 (2) | | | | | | | | | | | | | | | | | |
| **SUMP 2** | 23-Mar-16 | 0.02 | <0.0001 | 0.0013 | 0.009 | <0.002 | 0.015 | <0.00002 | <0.002 | <0.0001 | <0.002 | 0.3 | 0.013 | 0.00004 | 0.003 | 0.0004 | <0.01 | 0.002 |
| | 25-May-16 | 0.14 | <0.0001 | 0.0015 | 0.011 | <0.002 | 0.033 | <0.00002 | <0.002 | 0.0002 | <0.002 | 0.2 | 0.122 | 0.0002 | 0.017 | 0.0004 | <0.01 | 0.004 |
| | 10-Aug-16 | 0.06 | 0.0003 | 0.002 | 0.016 | <0.002 | 0.058 | <0.00002 | <0.002 | 0.0003 | <0.002 | 0.2 | 0.035 | 0.00012 | 0.01 | 0.0008 | <0.01 | 0.006 |
| | 18-Oct-16 | 0.11 | <0.0001 | 0.0032 | 0.018 | <0.002 | 0.039 | <0.00002 | <0.002 | 0.0002 | <0.002 | 0.3 | 0.264 | 0.00009 | 0.091 | 0.0007 | <0.01 | 0.007 |
| | 1-Feb-17 | 0.03 | 0.0001 | 0.0006 | 0.011 | <0.002 | 0.014 | <0.00002 | <0.002 | 0.0001 | <0.002 | 0.2 | 0.014 | 0.00009 | 0.005 | 0.0005 | <0.01 | 0.001 |
| | 5-Apr-17 | 0.07 | <0.0001 | 0.0005 | 0.011 | <0.002 | 0.033 | <0.00002 | <0.002 | <0.0001 | <0.002 | 0.3 | 0.063 | <0.00002 | 0.004 | 0.0003 | <0.01 | 0.001 |
| | 17-Jul-17 | 0.04 | 0.0002 | 0.0008 | 0.014 | <0.002 | 0.052 | <0.000014 | <0.002 | 0.0001 | <0.002 | 0.2 | 0.014 | 0.00003 | 0.001 | 0.0005 | <0.01 | <0.001 |
| | 4-Oct-17 | 0.05 | <0.0001 | 0.0013 | 0.012 | <0.002 | 0.059 | <0.000014 | <0.002 | 0.0001 | <0.002 | 0.2 | 0.048 | 0.00007 | 0.013 | <0.01 | <0.01 | 0.001 |
| | 6-Mar-18 | 0.077 | <0.0001 | 0.00021 | 0.00803 | <0.0001 | 0.011 | <0.000005 | <0.0005 | <0.0001 | 0.00047 | 0.108 | 0.039 | <0.00005 | 0.00255 | 0.000223 | <0.0005 | <0.00005 |
| | 9-May-18 | 0.063 | <0.0001 | 0.00024 | 0.00869 | <0.0001 | 0.016 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.132 | <0.05 | <0.0001 | 0.00346 | 0.000244 | <0.0005 | <0.00005 |
| | 5-Sep-18 | 0.015 | <0.0005 | <0.001 | 0.0086 | <0.0005 | 0.049 | <0.0001 | <0.005 | <0.0005 | 0.0011 | 0.19 | <0.1 | <0.0005 | 0.0032 | 0.00054 | <0.001 | <0.002 |
| | 6-Dec-18 | 0.051 | <0.0005 | <0.001 | 0.0096 | <0.0005 | 0.028 | <0.0001 | <0.005 | <0.0005 | 0.002 | 0.19 | <0.1 | <0.0005 | 0.002 | <0.0005 | <0.001 | <0.002 |
| | 9-Mar-19 (2) | | | | | | | | | | | | | | | | | |
| | 17-May-19 | 0.028 | <0.0005 | <0.001 | 0.0085 | <0.0005 | 0.018 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.11 | <0.1 | <0.5 | 0.0044 | <0.0005 | <0.001 | <0.002 |
| | 4-Sep-19 | 0.0094 | <0.0005 | <0.001 | 0.013 | <0.0005 | 0.055 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.18 | <0.1 | <0.5 | <0.002 | 0.024 | <0.001 | <0.002 |
| | 19-Dec-19 | | | | | | | | | | | | | | | | | |
| | 2-Mar-20 (2) | | | | | | | | | | | | | | | | | |
| | 30-Jun-20 | 0.027 | | <0.001 | 0.006 | <0.0004 | 0.057 | <0.09 | <0.005 | <0.0005 | <0.0009 | 0.14 | <0.1 | 0.5 | 0.0047 | 0.0005 | 0.001 | <0.002 |
| | 27-Aug-20 | 0.018 | <0.0005 | <0.001 | 0.0062 | <0.0004 | 0.081 | <0.09 | <0.005 | <0.0005 | <0.0009 | 0.16 | <0.1 | <0.5 | 0.0057 | 0.00065 | <0.001 | <0.002 |
| | 25-Nov-20 | 0.04 | 0.3 | 0.0007 | 0.01 | <0.002 | 0.071 | <0.015 | <0.002 | <0.005 | 0.0005 | <0.1 | 0.054 | 0.11 | 0.015 | <0.01 | <0.01 | <0.001 |
| | 23-Feb-21 (2) | | | | | | | | | | | | | | | | | |
| | 27-May-21 | 0.016 | <0.0005 | <0.001 | 0.0066 | <0.0004 | 0.073 | <0.00009 | <0.005 | <0.0005 | 0.0019 | 0.11 | <0.1 | <0.0005 | 0.0079 | 0.00066 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon Si | Silver Ag | Strontium Sr | Thallium Tl | Titanium Ti | Tungsten W | Uranium U | Vanadium V | Zinc Zn | Zirconium Zr | Animal / Vegetable | Mineral | Total |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SUMP 1 (cont'd) | 28-Apr-25 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 28-May-25 | 1.5 | <0.00009 | 0.47 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | <0.5 | <0.5 | <0.5 |
| | 23-Jun-25 | 1.4 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 28-Jul-25 | 1.6 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 25-Aug-25 | 1.8 | <0.00009 | 0.41 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | 1.4 | 0.8 | 2.2 |
| | 29-Sep-25 | 2 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 27-Oct-25 | 1.8 | <0.00009 | 0.42 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 30-Oct-25 | | | | | | | | | | | 1 | 0.5 | 1.5 |
| | 24-Nov-25 | 1.5 | <0.00009 | | | | | | | <0.005 | | <0.5 | <0.5 | <0.5 |
| | 16-Dec-25 (2) | | | | | | | | | | | | | |
| SUMP 2 | 23-Mar-16 | | <0.00002 | 0.197 | <0.00005 | <0.005 | 0.04 | 0.00017 | <0.005 | <0.005 | <0.003 | | | |
| | 25-May-16 | | <0.00002 | 0.404 | <0.00005 | <0.005 | 0.02 | 0.00014 | <0.005 | <0.005 | <0.003 | | | |
| | 10-Aug-16 | | <0.00002 | 0.688 | <0.000005 | <0.005 | 0.04 | 0.00017 | <0.005 | <0.005 | <0.003 | | | |
| | 18-Oct-16 | | <0.00002 | 0.446 | <0.00005 | <0.005 | <0.01 | 0.00018 | <0.005 | <0.005 | <0.003 | | | |
| | 1-Feb-17 | | <0.00002 | 0.234 | <0.00005 | <0.005 | <0.01 | 0.00016 | <0.005 | <0.005 | <0.003 | | | |
| | 5-Apr-17 | | <0.00002 | 0.147 | <0.00005 | <0.005 | 0.21 | 0.00014 | 0.005 | <0.005 | <0.003 | | | |
| | 17-Jul-17 | | <0.00002 | 0.414 | <0.00005 | <0.005 | <0.01 | 0.00012 | <0.005 | <0.005 | <0.003 | | | |
| | 4-Oct-17 | | <0.00002 | 0.465 | <0.00005 | <0.005 | <0.01 | 0.00009 | <0.005 | <0.005 | <0.003 | | | |
| | 6-Mar-18 | | <0.00005 | 0.137 | <0.00001 | <0.0025 | <0.0001 | 0.000091 | <0.0005 | <0.001 | <0.0003 | | | |
| | 9-May-18 | 1.1 | <0.00005 | 0.169 | 0.00001 | 0.00149 | <0.0001 | 0.000114 | <0.0005 | <0.003 | <0.0003 | | | |
| | 5-Sep-18 | | <0.0001 | 0.29 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 6-Dec-18 | | <0.0001 | 0.25 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 9-Mar-19 (2) | | | | | | | | | | | | | |
| | 17-May-19 | | <0.0001 | 0.21 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 4-Sep-19 | | <0.0001 | 0.29 | <0.00005 | 0.0069 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-Dec-19 | | | | | | | | | | | | | |
| | 2-Mar-20 (2) | | | | | | | | | | | | | |
| | 30-Jun-20 | | <0.09 | | <0.05 | <0.005 | <0.001 | <0.1 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-Aug-20 | | <0.09 | 0.38 | 0.052 | <0.005 | <0.001 | <0.1 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-Nov-20 | | <0.1 | 0.643 | <0.05 | <0.005 | <0.01 | 0.06 | <0.005 | 0.008 | <0.003 | | | |
| | 23-Feb-21 (2) | | | | | | | | | | | | | |
| | 27-May-21 | | <0.00009 | 0.42 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SUMP 1 (cont'd) | 28-Apr-25 | | | | | | | | | | |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 23-Jun-25 | | | | | | | | | | |
| | 28-Jul-25 | | | | | | | | | | |
| | 25-Aug-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 29-Sep-25 | | | | | | | | | | |
| | 27-Oct-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 30-Oct-25 | | | | | | | | | | |
| | 24-Nov-25 | | | | | | | | | | |
| | 16-Dec-25 (2) | | | | | | | | | | |
| SUMP 2 | 23-Mar-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 25-May-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 10-Aug-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 18-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 1-Feb-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 5-Apr-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 17-Jul-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 4-Oct-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 6-Mar-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 5-Sep-18 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 6-Dec-18 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 9-Mar-19 (2) | | | | | | | | | | |
| | 17-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 4-Sep-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-Dec-19 | | | | | | | | | | |
| | 2-Mar-20 (2) | | | | | | | | | | |
| | 30-Jun-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Aug-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-Nov-20 | | | | | | | <25 | <50 | <400 | <400 |
| | 23-Feb-21 (2) | | | | | | | | | | |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SUMP 2** | 11-Aug-21 | | | <10 | | 310 | 5 | | 160 | 150 | 7.6 | 39 | 54 | | | 0.6 | 0.028 | 0.17 | | 0.37 | <0.004 | |
| **(cont'd)** | 7-Oct-21 | | | <10 | | 320 | 5 | | 180 | 140 | 6.5 | 50 | 49 | | | 1.22 | 0.035 | 0.067 | | 0.21 | 0.006 | |
| | 28-Feb-22 | 8.14 | | 18 | | 380 | 3 | | 240 | 130 | 8.6 | 73 | 61 | 49 | 4.6 | 2.67 | <0.01 | 0.087 | 0.001 | 0.16 | <0.004 | |
| | 26-May-22 | 8.27 | 942 | <10 | | 350 | <2 | | 200 | 160 | 8.4 | 46 | 64 | 37 | 6.5 | 2.1 | 0.055 | 0.24 | 0.014 | 0.35 | | |
| | 31-Aug-22 | | | <10 | | 410 | 2 | | 180 | 230 | 9 | 47 | 73 | 48 | 8.1 | 2.02 | 0.044 | 0.083 | 0.001 | 0.33 | 0.006 | |
| | 28-Oct-22 | | | <10 | | 400 | 2 | | 210 | 210 | 8.8 | 57 | 74 | 49 | 7.6 | 2.22 | 0.028 | 0.19 | 0.003 | <0.1 | 0.005 | |
| | 23-Feb-23 | | | <10 | | 280 | <2 | | 230 | 71 | 7.3 | 65 | 36 | 23 | 2.4 | 2.75 | <0.01 | 0.23 | 0.001 | 0.42 | <0.004 | |
| | 17-May-23 | | | <10 | | 330 | <2 | | 220 | 92 | 8.1 | 56 | 38 | 31 | 3.1 | 1.46 | 0.022 | <0.05 | <0.001 | 0.13 | <0.004 | |
| | 30-Aug-23 | | | <10 | | 420 | <2 | | 170 | 180 | 9 | 46 | 62 | 46 | 6.4 | 1.51 | 0.029 | <0.05 | <0.001 | 0.33 | <0.004 | |
| | 31-Oct-23 | | | <10 | | 400 | 3 | | 180 | 170 | 8.6 | 54 | 61 | 43 | 5.9 | 2.46 | <0.01 | <0.05 | <0.001 | 0.1 | <0.004 | |
| | 29-May-24 | | | <10 | | 420 | 2 | | 210 | 170 | 8.6 | 52 | 58 | 43 | 5.6 | 1.7 | 0.036 | 0.068 | 0.003 | 0.11 | <0.004 | |
| | 26-Aug-24 | | | <10 | | 350 | <2 | | 160 | 170 | 9.4 | 41 | 54 | 39 | 6 | 0.9 | 0.022 | 0.059 | 0.002 | 0.29 | <0.004 | |
| | 30-Oct-24 | | | <10 | | 420 | <2 | | 180 | 210 | 9.5 | 53 | 71 | 52 | 7.9 | 1.2 | 0.02 | <0.05 | <0.001 | 0.25 | <0.004 | |
| | 24-Feb-25 (2) | | | | | | | | | | | | | | | | | | | | | |
| | 28-May-25 | | | <10 | | 300 | <2 | | 200 | 110 | 7.2 | 58 | 45 | 35 | 4.5 | 1.65 | 0.018 | <0.05 | <0.002 | <0.1 | <0.004 | |
| | 25-Aug-25 | | | <10 | | 390 | <2 | | 170 | 160 | 11 | 47 | 54 | 42 | 5.6 | 1.55 | 0.041 | 0.11 | 0.002 | <0.1 | 0.01 | |
| | 27-Oct-25 | | | <10 | | 350 | <2 | | 200 | 150 | 9.7 | 54 | 54 | 39 | 5.5 | 2.3 | 0.021 | 0.14 | 0.002 | 0.1 | <0.004 | |
| **SW1** | 24-Oct-16 | 8.08 | 809 | 8 | 396 | 322 | 31 | | 236 | 116 | 6 | 60.7 | 41.4 | 26.8 | 2.5 | 0.2 | <0.1 | 0.02 | <0.001 | 0.3 | 0.02 | |
| | 9-May-17 | 8.18 | 528 | <3 | 260 | 237 | 13 | | 171 | 50.3 | 4 | 49.3 | 27.7 | 18.2 | 1.6 | 1.3 | <0.1 | 0.01 | <0.001 | 1.1 | 0.02 | |
| | 8-May-18 | 7.97 | 525 | <2 | 298 | 243 | 15.2 | 0.31 | 211 | 46.1 | 4.1 | 50.5 | 27.3 | 17.7 | 1.89 | 0.262 | <0.01 | 0.035 | <0.001 | <0.15 | 0.099 | |
| | 14-May-19 | | | <10 | 396 | 230 | 16 | | 190 | 41 | <1 | 49 | 27 | 19 | 1.6 | <0.01 | 0.37 | <0.05 | <0.001 | 0.22 | <0.02 | |
| | 19-May-20 | | | <10 | 395 | 200 | 24 | 0.3 | 240 | 70 | <1 | 47 | 31 | 21 | 2.1 | 0.26 | <0.01 | <0.05 | <0.001 | 0.23 | 0.026 | |
| | 26-May-21 | | | <10 | 419.65 | 320 | 42 | | 250 | 110 | <1 | 62 | 41 | | | <0.1 | <0.01 | <0.05 | <0.001 | 0.35 | 0.038 | |
| | 4-May-22 | 8.12 | 750 | <10 | | 310 | <0.05 | | 230 | 110 | <1 | 60 | 43 | 28 | 2.4 | <0.1 | <0.01 | 0.19 | | 0.24 | 0.014 | |
| | 15-May-23 | | | <10 | | 270 | 31 | | 210 | 81 | 5.4 | 53 | 35 | 25 | 2.6 | <0.1 | <0.01 | <0.05 | <0.001 | 0.25 | 0.004 | |
| | 28-May-24 | | | <10 | | 390 | 29 | | 240 | 98 | 5.7 | 59 | 45 | 30 | 2.9 | 0.1 | <0.01 | <0.05 | <0.001 | 0.25 | 0.01 | |
| | 26-May-25 | | | <10 | | 290 | 18 | | 200 | 87 | 6.4 | 56 | 38 | 26 | 2.7 | 0.15 | <0.01 | <0.05 | <0.003 | 0.19 | 0.009 | |
| **SW2** | 24-Oct-16 | 8.08 | 643 | 7 | 325 | 269 | <2 | | 259 | 42.8 | 7 | 64.1 | 26.4 | 22.9 | 0.8 | 1.1 | <0.1 | 0.03 | <0.001 | 0.2 | 0.01 | |
| | 9-May-17 | 8.12 | 529 | <3 | 266 | 231 | 3 | | 219 | 29.8 | 4 | 59 | 20.3 | 19.8 | 0.6 | 0.4 | <0.1 | <0.01 | <0.001 | 0.2 | 0.01 | |
| | 8-May-18 | 8.01 | 617 | <2 | 346 | 283 | 2.2 | 0.19 | 269 | 45.7 | 4.24 | 66.9 | 25.8 | 27.2 | 0.934 | 0.453 | <0.01 | 0.048 | <0.001 | <0.15 | 0.039 | |
| | 14-May-19 | | | <10 | | 280 | 2 | | 250 | 44 | 5.2 | 69 | 25 | 29 | 0.86 | 0.35 | <0.1 | <0.05 | <0.001 | <0.1 | 0.007 | |
| | 19-May-20 | | | <10 | 750 | 260 | <2 | 430 | 240 | 76 | 6.5 | 66 | 23 | 41 | 0.76 | 0.44 | <0.1 | <0.05 | | <0.1 | <0.2 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Fluoride | Iron | Lead | Manganese | Molybdenum | Nickel | Selenium |
| | | Al | Sb | As | Ba | Be | B | Cd | Cr | Co | Cu | F | Fe | Pb | Mn | Mo | Ni | Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SUMP 2** | 11-Aug-21 | 0.029 | <0.0005 | <0.001 | 0.006 | <0.0004 | 0.07 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.16 | <0.1 | <0.0005 | 0.0064 | 0.00056 | <0.001 | <0.002 |
| **(cont'd)** | 7-Oct-21 | 0.034 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.064 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.18 | <0.1 | <0.0005 | 0.0068 | 0.00061 | <0.001 | <0.002 |
| | 28-Feb-22 | 0.0091 | <0.0005 | <0.001 | 0.021 | <0.0004 | 0.048 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | <0.1 | <0.0005 | 0.045 | 0.00054 | <0.001 | <0.002 |
| | 26-May-22 | 0.033 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.082 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.2 | <0.1 | <0.0005 | 0.0037 | 0.00084 | <0.001 | <0.002 |
| | 31-Aug-22 | 0.039 | <0.0005 | <0.001 | 0.0094 | <0.0004 | 0.11 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.2 | <0.1 | <0.0005 | 0.0036 | 0.00099 | <0.001 | <0.002 |
| | 28-Oct-22 | 0.024 | <0.0005 | 0.0012 | 0.013 | <0.0004 | 0.096 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.18 | <0.1 | <0.0005 | 0.0034 | 0.0011 | <0.001 | <0.002 |
| | 23-Feb-23 | 0.022 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.03 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.2 | <0.1 | <0.0005 | 0.0054 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.017 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.036 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.19 | <0.1 | <0.0005 | 0.0023 | 0.00053 | <0.001 | <0.002 |
| | 30-Aug-23 | 0.05 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.087 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | <0.1 | <0.0005 | 0.0034 | 0.00075 | <0.001 | <0.002 |
| | 31-Oct-23 | 0.0098 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.08 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | <0.1 | <0.0005 | <0.002 | 0.00068 | <0.001 | <0.002 |
| | 29-May-24 | 0.02 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.08 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.16 | <0.1 | <0.0005 | 0.0065 | 0.00061 | <0.001 | <0.002 |
| | 26-Aug-24 | 0.017 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.071 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.22 | <0.1 | <0.0005 | 0.013 | 0.00052 | <0.001 | <0.002 |
| | 30-Oct-24 | 0.054 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.1 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.15 | <0.1 | <0.0005 | 0.0063 | 0.00067 | <0.001 | <0.002 |
| | 24-Feb-25 (2) | | | | | | | | | | | | | | | | | |
| | 28-May-25 | 0.019 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.053 | <0.00009 | <0.005 | <0.0005 | 0.0039 | 0.19 | <0.1 | <0.0005 | 0.0027 | 0.00055 | <0.001 | <0.002 |
| | 25-Aug-25 | 0.027 | <0.0005 | <0.001 | 0.017 | <0.0004 | 0.079 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.28 | <0.1 | <0.0005 | 0.068 | 0.00074 | <0.001 | <0.002 |
| | 27-Oct-25 | 0.016 | <0.0005 | <0.001 | 0.017 | <0.0004 | 0.064 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.25 | <0.1 | <0.0005 | 0.012 | 0.00082 | <0.001 | <0.002 |
| **SW1** | 24-Oct-16 | 0.03 | <0.0001 | 0.0004 | 0.011 | <0.002 | 0.016 | <0.00002 | 0.002 | 0.0002 | <0.002 | 0.3 | 0.101 | 0.00006 | 0.019 | 0.0005 | <0.01 | 0.006 |
| | 9-May-17 | 0.03 | 0.0001 | 0.0003 | 0.009 | <0.002 | 0.014 | <0.000014 | <0.002 | 0.0002 | <0.002 | <0.1 | 0.024 | <0.00002 | 0.001 | 0.0004 | <0.01 | <0.001 |
| | 8-May-18 | <0.01 | <0.0001 | 0.00028 | 0.0097 | <0.0001 | 0.023 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.175 | <0.05 | <0.0001 | 0.00407 | 0.000336 | <0.0005 | <0.00005 |
| | 14-May-19 | 0.023 | <0.0005 | <0.001 | 0.008 | <0.0005 | 0.017 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.18 | <0.1 | <0.0005 | 0.0032 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | <0.005 | <0.0005 | <0.001 | 0.0094 | <0.0005 | 0.026 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.17 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | <0.0049 | <0.0005 | 0.0012 | 0.014 | <0.0004 | 0.05 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | 0.34 | <0.0005 | 0.38 | <0.0005 | <0.001 | <0.002 |
| | 4-May-22 | 0.0053 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.046 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | <0.1 | <0.0005 | 0.017 | <0.0005 | <0.001 | <0.002 |
| | 15-May-23 | 0.007 | <0.0005 | <0.001 | 0.0095 | <0.0004 | 0.042 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | <0.1 | <0.0005 | 0.013 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.0056 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.047 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | 0.12 | <0.0005 | 0.071 | <0.0005 | <0.001 | <0.002 |
| | 26-May-25 | 0.0089 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.04 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | <0.1 | <0.0005 | 0.011 | <0.0005 | <0.001 | <0.002 |
| **SW2** | 24-Oct-16 | 0.03 | <0.0001 | 0.0003 | 0.007 | <0.002 | 0.009 | <0.00002 | <0.002 | 0.0001 | <0.002 | 0.1 | 0.102 | 0.00011 | 0.018 | 0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.03 | <0.0001 | 0.0001 | 0.007 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.012 | <0.00002 | 0.004 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | <0.01 | <0.0001 | 0.00012 | 0.00797 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.043 | <0.05 | <0.0001 | 0.0087 | 0.000075 | <0.0005 | 0.000062 |
| | 14-May-19 | 0.021 | <0.0005 | <0.001 | 0.0082 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0081 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.022 | <0.0005 | <0.001 | 0.0082 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0059 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SUMP 2 (cont'd) | 11-Aug-21 | | <0.00009 | 0.41 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 7-Oct-21 | | <0.00009 | 0.54 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-Feb-22 | | <0.00009 | 0.58 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | 0.0017 | | | |
| | 26-May-22 | | <0.00009 | 0.69 | 0.000056 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 31-Aug-22 | | <0.00009 | 0.72 | 0.000064 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-Oct-22 | | <0.00009 | 0.82 | <0.00005 | 0.0054 | <0.001 | <0.0001 | <0.0005 | 0.0054 | <0.001 | | | |
| | 23-Feb-23 | | <0.00009 | 0.31 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.38 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 30-Aug-23 | | <0.00009 | 0.62 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 31-Oct-23 | | <0.00009 | 0.67 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 29-May-24 | | <0.00009 | 0.7 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-Aug-24 | | <0.00009 | 0.53 | <0.00005 | <0.005 | <0.001 | <0.0001 | 0.0006 | <0.005 | <0.001 | | | |
| | 30-Oct-24 | | <0.00009 | 0.8 | <0.00005 | 0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 24-Feb-25 (2) | | | | | | | | | | | | | |
| | 28-May-25 | | <0.00009 | 0.55 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-Aug-25 | | <0.00009 | 0.44 | 0.000076 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-Oct-25 | | <0.00009 | 0.51 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| SW1 | 24-Oct-16 | | <0.00002 | 0.32 | <0.00005 | <0.005 | 0.02 | 0.00009 | <0.005 | 0.012 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.229 | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | 0.005 | 0.004 | | | |
| | 8-May-18 | | <0.00005 | 0.21 | 0.000017 | <0.0003 | <0.0001 | 0.000086 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.18 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.25 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.36 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 4-May-22 | | <0.00009 | 0.38 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 15-May-23 | | <0.00009 | 0.31 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.43 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | 0.089 | <0.001 | | | |
| | 26-May-25 | | <0.00009 | 0.36 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW2 | 24-Oct-16 | | <0.00002 | 0.076 | <0.00005 | <0.005 | <0.01 | 0.00009 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.052 | <0.00005 | <0.005 | <0.01 | 0.00009 | <0.005 | <0.005 | 0.006 | | | |
| | 8-May-18 | | <0.00005 | 0.0658 | <0.00001 | <0.0003 | <0.0001 | 0.000082 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.061 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.065 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SUMP 2 (cont'd) | 11-Aug-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 7-Oct-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-Feb-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 31-Aug-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-Oct-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 23-Feb-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 30-Aug-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 31-Oct-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 29-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-Aug-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 30-Oct-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 24-Feb-25 (2) | | | | | | | | | | |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 25-Aug-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 27-Oct-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW1 | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.2 | <0.4 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 4-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 15-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW2 | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SW2** | 27-May-21 | | | <10 | 352 | 310 | 10 | | 280 | 40 | 5.4 | 76 | 29 | | | 0.53 | <0.01 | <0.05 | <0.001 | <0.1 | 0.006 | |
| **(cont'd)** | 26-May-22 | 7.5 | 692 | <10 | | 310 | 3 | | 290 | 49 | 5.8 | 78 | 31 | 23 | 0.82 | 0.77 | <0.01 | <0.05 | <0.001 | 0.11 | 0.015 | |
| | 15-May-23 | | | <10 | | 320 | 2 | | 270 | 59 | 5.3 | 75 | 30 | 27 | 0.94 | 0.8 | <0.01 | <0.05 | <0.001 | <0.1 | 0.006 | |
| | 27-May-24 | | | 21 | | 390 | <2 | | 280 | 61 | 5.9 | 80 | 33 | 27 | 1.1 | 1.29 | <0.01 | <0.05 | <0.001 | <0.1 | 0.024 | |
| | 26-May-25 | | | <10 | | 320 | <2 | | 280 | 73 | 4.8 | 82 | 33 | 33 | 1.1 | 1.11 | <0.01 | <0.05 | <0.001 | <0.1 | 0.004 | |
| **SW0-2** | 24-Oct-16 | 8.16 | 762 | <3 | 373 | 302 | 49 | | 239 | 95.8 | 10 | 62.2 | 35.6 | 22.7 | 2.4 | <0.1 | <0.1 | 0.03 | <0.001 | 1.5 | 0.02 | |
| | 10-May-17 | 8.15 | 527 | <3 | 271 | 256 | 38 | | 188 | 45.7 | 4 | 57 | 27.5 | 20 | 2.5 | 0.3 | <0.1 | <0.01 | <0.001 | 1.6 | 0.03 | |
| | 8-May-18 | 8 | 515 | <2 | 302 | 246 | 36.8 | 0.41 | 211 | 44.7 | 3.22 | 54.1 | 26.2 | 17.6 | 2.89 | 0.037 | <0.01 | 0.085 | <0.001 | 0.26 | 0.526 | |
| | 14-May-19 | | | <10 | | 220 | 47 | | 180 | 36 | <1 | 49 | 23 | 16 | 4.5 | <0.1 | <0.01 | <0.05 | <0.001 | 0.44 | 0.054 | |
| | 19-May-20 | | | <10 | 325 | 200 | 44 | 0.3 | 230 | 49 | <1 | 49 | 23 | 17 | 2.8 | <0.1 | <0.01 | <0.5 | <0.007 | <0.1 | 0.034 | |
| | 26-May-21 | | | <10 | 384.45 | 310 | 50 | | 250 | 87 | <1 | 68 | 36 | | | <0.1 | <0.01 | <0.05 | <0.001 | 0.39 | 0.1 | |
| | 24-May-22 | 7.56 | 726 | <10 | | 300 | 41 | | 240 | 92 | <1 | 66 | 36 | 26 | 1.4 | <0.1 | <0.01 | <0.05 | <0.001 | 0.26 | 0.045 | |
| | 15-May-23 | | | <10 | | 320 | 41 | | 230 | 89 | 3.7 | 61 | 34 | 23 | 2.4 | <0.1 | <0.01 | <0.05 | <0.001 | 0.26 | 0.034 | |
| | 27-May-24 | | | <10 | | 370 | 55 | | 240 | 90 | 3.6 | 66 | 39 | 27 | 1.4 | <0.1 | <0.01 | <0.05 | <0.001 | 0.38 | 0.046 | |
| | 27-May-25 | | | <10 | | 280 | 35 | | 220 | 73 | 3.6 | 62 | 36 | 26 | 2.3 | <0.1 | <0.01 | <0.05 | <0.001 | 0.29 | 0.037 | |
| **QFSW2** | 6-Mar-18 | 8.05 | 607 | <2 | 337 | 270 | 4.3 | | 230 | 54.3 | 5.19 | 55.1 | 29.6 | 17.9 | 1.59 | 0.93 | <0.01 | 0.133 | 0.001 | 0.19 | <0.003 | |
| | 9-May-18 | 8.24 | 554 | <2 | 299 | 256 | 3.1 | 1.36 | 220 | 48.7 | 4.72 | 55.2 | 28.4 | 18.1 | 1.58 | 1.05 | <0.01 | 0.084 | 0.001 | 0.16 | <0.003 | |
| | 5-Sep-18 | | | <10 | | 290 | 3 | | 200 | 110 | 5 | 45 | 42 | 28 | 3 | 0.38 | <0.01 | <0.05 | <0.002 | 0.23 | <0.02 | |
| | 6-Dec-18 | | | <10 | | 330 | 5 | | 230 | 87 | 6.1 | 59 | 38 | 25 | 2.2 | 1.15 | <0.01 | 0.12 | 0.001 | 0.24 | <0.02 | |
| | 8-Mar-19 | 8.05 | 607 | <2 | 337 | 270 | 4.3 | | 230 | 54.3 | 5.19 | 55.1 | 29.6 | 17.9 | 1.59 | 0.93 | <0.01 | 0.133 | 0.001 | 0.19 | <0.003 | |
| | 17-May-19 | | | <10 | | 260 | <2 | | 210 | 44 | 5.5 | 53 | 30 | 18 | 1.5 | 1.04 | <0.01 | <0.05 | <0.001 | <0.01 | 0.005 | |
| | 4-Sep-19 | | | <10 | | 320 | 5 | | 210 | 120 | 5 | 55 | 46 | 31 | 3.2 | 0.42 | <0.01 | 0.13 | | 0.25 | <0.004 | |
| | 19-Dec-19 | | | <10 | | 350 | 3 | | 230 | 120 | 7.3 | 63 | 44 | 29 | 2.9 | 1.47 | <0.01 | 0.09 | | 0.21 | <0.02 | |
| | 2-Mar-20 | | | <10 | | 270 | <2 | | 230 | 84 | 6.5 | 59 | 37 | 23 | 2.1 | 1.07 | <0.01 | 0.094 | | 0.55 | <0.02 | |
| | 11-Jun-20 | | | 15 | | 300 | <2 | | 220 | 87 | 6.8 | 60 | 42 | 29 | 2.4 | 1.54 | <0.01 | 0.11 | | 0.21 | <0.02 | |
| | 27-Aug-20 | | | <10 | | 330 | <2 | | 160 | 150 | 7.2 | 38 | 56 | | | 1.45 | 0.026 | <0.05 | | 0.34 | 0.005 | |
| | 25-Nov-20 | | | 18 | 426 | 382 | 5 | 18.7 | 201 | 134 | 7 | 68.7 | 51.1 | 32 | 3.5 | 2 | <0.1 | 0.2 | | 0.4 | <0.01 | |
| | 23-Feb-21 | | | <10 | 211.75 | 400 | <2 | | 220 | 170 | 17 | 75 | 55 | | | 5.01 | <0.01 | <0.05 | <0.001 | 0.26 | <0.004 | |
| | 27-May-21 | | | <10 | 426.8 | 330 | 2 | | 220 | 130 | 7 | 56 | 49 | | | 0.6 | 0.01 | <0.05 | <0.001 | 0.16 | 0.004 | |
| | 11-Aug-21 | | | <10 | 414.7 | 310 | 8 | | 190 | 140 | 7.3 | 50 | 51 | | | 0.97 | 0.021 | 0.12 | 0.007 | 0.33 | <0.004 | |
| | 7-Oct-21 | | | <10 | 448.8 | 330 | 7 | | 190 | 130 | 7 | 56 | 50 | | | 1.22 | 0.022 | 0.12 | 0.001 | 0.21 | 0.005 | |
| | 28-Feb-22 | 8.09 | | <10 | | 340 | 4 | | 250 | 83 | 6 | 67 | 42 | 28 | 2.6 | 1.49 | <0.01 | 0.13 | | 0.21 | <0.004 | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | *Total Metals* | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Fluoride | Iron | Lead | Manganese | Molybdenum | Nickel | Selenium |
| | | **Al** | **Sb** | **As** | **Ba** | **Be** | **B** | **Cd** | **Cr** | **Co** | **Cu** | **F** | **Fe** | **Pb** | **Mn** | **Mo** | **Ni** | **Se** |
| | **PWQO** | **0.075** ***i*** | **0.02** ***i*** | **0.1** ***i*** | nc | **1.1** | **0.2** | **0.0005** ***i*** | **0.0089** | **0.0009** | **0.005** ***i*** | nc | **0.3** | **0.005** ***i*** | nc | **0.04** | **0.025** | **0.1** |
| **SW2** | 27-May-21 | 0.014 | <0.0005 | <0.001 | 0.0084 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0094 | <0.0005 | <0.001 | <0.002 |
| **(cont'd)** | 26-May-22 | 0.019 | <0.0005 | <0.001 | 0.0094 | <0.0004 | 0.012 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.032 | <0.0005 | <0.001 | <0.002 |
| | 15-May-23 | 0.042 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.16 | <0.0005 | 0.055 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.17 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.013 | <0.00009 | <0.005 | <0.0005 | 0.001 | <0.1 | 0.65 | <0.0005 | 0.13 | <0.0005 | <0.001 | <0.002 |
| | 26-May-25 | 0.03 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.013 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.038 | <0.0005 | <0.001 | <0.002 |
| **SW0-2** | 24-Oct-16 | 0.03 | <0.0001 | 0.0014 | 0.011 | <0.002 | 0.017 | <0.00002 | <0.002 | 0.0002 | <0.002 | 0.2 | 0.097 | 0.00004 | 0.019 | 0.0003 | <0.01 | 0.004 |
| | 10-May-17 | 0.04 | <0.0001 | 0.0005 | 0.008 | <0.002 | 0.01 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.061 | 0.00002 | 0.005 | 0.0003 | <0.01 | <0.001 |
| | 8-May-18 | 0.011 | <0.0001 | 0.00032 | 0.0102 | <0.0001 | 0.02 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.133 | 0.089 | <0.0001 | 0.0393 | 0.000234 | 0.00056 | 0.000059 |
| | 14-May-19 | 0.0085 | <0.0005 | <0.001 | 0.0085 | <0.0005 | 0.014 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.11 | <0.1 | <0.0005 | 0.0079 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.017 | <0.0005 | <0.001 | 0.0094 | <0.0005 | 0.019 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.036 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.021 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.03 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.18 | 0.22 | <0.0005 | 0.12 | <0.0005 | <0.001 | <0.002 |
| | 24-May-22 | 0.017 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.026 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.18 | 0.17 | <0.0005 | 0.053 | <0.0005 | <0.001 | <0.002 |
| | 15-May-23 | 0.0072 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.025 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.22 | <0.1 | 0.0019 | 0.032 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.0079 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.032 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.18 | 0.23 | <0.0005 | 0.067 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.011 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.029 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.19 | 0.17 | <0.0005 | 0.055 | <0.0005 | <0.001 | <0.002 |
| **QFSW2** | 6-Mar-18 | 0.01 | <0.0001 | 0.00024 | 0.0101 | <0.0001 | 0.018 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.182 | <0.05 | <0.0001 | 0.0192 | 0.000311 | <0.0005 | <0.00005 |
| | 9-May-18 | 0.027 | <0.0001 | 0.00027 | 0.00936 | <0.0001 | 0.02 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.172 | <0.05 | <0.0001 | 0.00419 | 0.000326 | <0.0005 | <0.00005 |
| | 5-Sep-18 | 0.011 | <0.0005 | <0.001 | 0.011 | <0.0005 | 0.044 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.23 | <0.1 | <0.0005 | 0.094 | 0.00061 | <0.001 | <0.002 |
| | 6-Dec-18 | 0.02 | <0.0005 | <0.001 | 0.013 | <0.0005 | 0.031 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.24 | <0.1 | <0.0005 | 0.14 | 0.00052 | 0.0011 | <0.002 |
| | 8-Mar-19 | 0.01 | <0.0001 | 0.00024 | 0.0101 | <0.0001 | 0.018 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.182 | <0.05 | <0.0001 | 0.0192 | 0.000311 | <0.0005 | <0.00005 |
| | 17-May-19 | 0.014 | <0.0005 | <0.001 | 0.01 | <0.0005 | 0.019 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.17 | <0.1 | <0.5 | 0.014 | <0.0005 | <0.001 | <0.002 |
| | 4-Sep-19 | 0.0074 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.046 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.23 | <0.1 | <0.5 | 0.13 | 0.00069 | <0.001 | <0.002 |
| | 19-Dec-19 | 0.02 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.037 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.21 | <0.1 | <0.5 | 0.1 | <0.0005 | <0.001 | <0.002 |
| | 2-Mar-20 | 0.0064 | <0.0005 | <0.001 | 0.013 | <0.0005 | 0.022 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.21 | <0.1 | <0.5 | 0.097 | <0.0005 | <0.001 | <0.002 |
| | 11-Jun-20 | 0.037 | <0.0005 | <0.001 | 0.015 | <0.0005 | 0.032 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.27 | <0.1 | <0.5 | 0.056 | 0.00056 | <0.001 | <0.002 |
| | 27-Aug-20 | 0.033 | <0.0005 | <0.001 | 0.0082 | <0.0004 | 0.079 | <0.09 | <0.005 | <0.0005 | <0.0009 | 0.17 | <0.1 | <0.5 | 0.0048 | 0.00064 | <0.001 | <0.002 |
| | 25-Nov-20 | 0.06 | 0.3 | 0.0006 | 0.018 | <0.002 | 0.05 | <0.015 | <0.002 | <0.005 | 0.0005 | <0.1 | 0.134 | 0.21 | 0.146 | <0.01 | <0.01 | <0.001 |
| | 23-Feb-21 | 0.0091 | <0.0005 | <0.001 | 0.021 | <0.0004 | 0.048 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.32 | <0.1 | <0.0005 | 0.0036 | 0.00072 | <0.001 | <0.002 |
| | 27-May-21 | 0.014 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.048 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.17 | <0.1 | <0.0005 | 0.064 | 0.00055 | <0.001 | <0.002 |
| | 11-Aug-21 | 0.018 | <0.0005 | 0.0011 | 0.012 | <0.0004 | 0.061 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | <0.1 | <0.0005 | 0.053 | 0.00066 | <0.001 | <0.002 |
| | 7-Oct-21 | 0.027 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.059 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.19 | <0.1 | <0.0005 | 0.052 | 0.00055 | <0.001 | <0.002 |
| | 28-Feb-22 | 0.0065 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.029 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.25 | 0.11 | <0.0005 | 0.083 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW2 (cont'd) | 27-May-21 | | <0.00009 | 0.09 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-22 | | <0.00009 | 0.11 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 15-May-23 | | <0.00009 | 0.11 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.14 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-25 | | <0.00009 | 0.14 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW0-2 | 24-Oct-16 | | <0.00002 | 0.228 | <0.00005 | <0.005 | 0.01 | 0.00011 | <0.005 | <0.005 | <0.003 | | | |
| | 10-May-17 | | <0.00002 | 0.178 | <0.00005 | <0.005 | <0.01 | 0.0001 | <0.005 | 0.005 | 0.006 | | | |
| | 8-May-18 | | <0.00005 | 0.181 | <0.00001 | <0.0003 | <0.0001 | 0.000075 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.12 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.16 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.28 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 24-May-22 | | <0.00009 | 0.27 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 15-May-23 | | <0.00009 | 0.22 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.3 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.28 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| QFSW2 | 6-Mar-18 | | <0.00005 | 0.218 | 0.000016 | 0.00036 | <0.0001 | 0.000127 | <0.0005 | 0.0043 | <0.0003 | | | |
| | 9-May-18 | | <0.00005 | 0.213 | 0.000014 | 0.00049 | <0.0001 | 0.00013 | <0.0005 | <0.003 | <0.0003 | | | |
| | 5-Sep-18 | | <0.0001 | 0.31 | <0.00005 | <0.0005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 6-Dec-18 | | <0.0001 | 0.29 | <0.00005 | <0.0005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 8-Mar-19 | | <0.00005 | 0.218 | 0.000016 | 0.00036 | <0.0001 | 0.000127 | <0.0005 | 0.0043 | <0.0003 | | | |
| | 17-May-19 | | <0.0001 | 0.21 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 4-Sep-19 | | <0.0001 | 0.31 | 0.000064 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-Dec-19 | | <0.0001 | 0.37 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 2-Mar-20 | | <0.0001 | 0.28 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 11-Jun-20 | | <0.0001 | 0.3 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | 0.006 | <0.001 | | | |
| | 27-Aug-20 | | <0.09 | 0.37 | <0.05 | <0.005 | <0.001 | <0.1 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-Nov-20 | | <0.1 | 0.451 | <0.05 | <0.005 | <0.01 | 0.1 | <0.005 | 0.005 | <0.003 | | | |
| | 23-Feb-21 | | <0.00009 | 0.61 | <0.00005 | <0.005 | <0.001 | 0.00015 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.36 | 0.000052 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 11-Aug-21 | | <0.00009 | 0.4 | 0.000051 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 7-Oct-21 | | <0.00009 | 0.5 | 0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-Feb-22 | | <0.00009 | 0.33 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SW2 (cont'd) | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 15-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW0-2 | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 10-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 15-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| QFSW2 | 6-Mar-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 5-Sep-18 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 6-Dec-18 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 8-Mar-19 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 17-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 4-Sep-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-Dec-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 2-Mar-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 11-Jun-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Aug-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-Nov-20 | | | | | | | <25 | <50 | <400 | <400 |
| | 23-Feb-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 11-Aug-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 7-Oct-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-Feb-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| QFSW2 | 24-May-22 | 7.23 | 465 | <11 | | 320 | 3 | | 230 | 130 | 7.8 | 58 | 49 | 33 | 4.1 | 1.77 | 0.02 | 0.22 | 0.001 | 0.3 | | |
| (cont'd) | 31-Aug-22 | | | <10 | | 390 | 6 | | 220 | 170 | 7.3 | 56 | 61 | 40 | 5.8 | 1.58 | 0.026 | 0.15 | 0.001 | 0.41 | 0.005 | |
| | 28-Oct-22 | | | <10 | | 390 | 8 | | 230 | 170 | 7.3 | 62 | 62 | 41 | 5.4 | 1.42 | 0.017 | 0.17 | 0.001 | 0.14 | <0.004 | |
| | 23-Feb-23 | | | 24 | | 380 | 3 | | 190 | 180 | 12 | 63 | 59 | 47 | 4.8 | 5.56 | <0.01 | <0.05 | <0.001 | <0.2 | <0.004 | |
| | 17-May-23 | | | <10 | | 320 | 3 | | 240 | 90 | 7.8 | 61 | 41 | 30 | 2.7 | 1.01 | <0.01 | <0.05 | <0.001 | 0.16 | <0.004 | |
| | 30-Aug-23 | | | 1500 | | 330 | <2 | | 160 | 120 | 6.8 | 470 | 280 | 33 | 5 | 1.39 | 0.018 | 0.075 | 0.001 | 0.73 | 0.12 | |
| | 31-Oct-23 | | | <10 | | 410 | 6 | | 220 | 150 | 6.4 | 61 | 55 | 37 | 4.4 | 1.32 | <0.01 | 0.12 | 0.003 | 0.17 | <0.004 | |
| | 27-Feb-24 | | | <10 | | 330 | 3 | | 250 | 78 | 7.3 | 66 | 41 | 26 | 2.6 | 1.76 | <0.01 | 0.19 | 0.001 | 0.35 | <0.004 | |
| | 29-May-24 | | | <10 | | 430 | 3 | | 230 | 140 | 9.7 | 59 | 54 | 38 | 4.5 | 1.72 | 0.02 | 0.073 | 0.001 | 0.11 | <0.004 | |
| | 26-Aug-24 | | | <10 | | 360 | 5 | | 210 | 130 | 8.5 | 57 | 51 | 35 | 4.6 | 1.08 | 0.013 | 0.094 | 0.001 | 0.27 | <0.004 | |
| | 30-Oct-24 | | | <10 | | 390 | 6 | | 220 | 150 | 7.8 | 61 | 56 | 38 | 5 | 1.05 | 0.015 | 0.098 | 0.001 | 0.31 | 0.004 | |
| | 24-Feb-25 | | | <10 | | 350 | 4 | | 260 | 76 | 5.1 | 62 | 40 | 24 | 2.4 | 0.82 | <0.01 | 0.2 | 0.019 | 0.2 | 0.009 | |
| | 28-May-25 | | | <10 | | 320 | 3 | | 230 | 90 | 6.4 | 62 | 44 | 32 | 3.4 | 1.23 | <0.01 | 0.069 | 0.001 | <0.1 | <0.004 | |
| | 25-Aug-25 | | | <10 | | 420 | 5 | | 220 | 130 | 8.4 | 60 | 53 | 37 | 4.3 | 1.2 | 0.022 | 0.13 | 0.001 | 0.18 | 0.013 | |
| | 27-Oct-25 | | | <10 | | 350 | 5 | | 230 | 120 | 7 | 66 | 55 | 36 | 4.3 | 1.02 | <0.01 | 0.23 | 0.002 | 0.19 | 0.011 | |
| SW3 | 24-Oct-16 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 9-May-17 | 7.86 | 315 | <3 | 165 | 176 | 27 | | 166 | 0.9 | 2 | 47.6 | 13.8 | 0.9 | 0.2 | <0.1 | <0.1 | <0.01 | <0.001 | 0.3 | 0.01 | |
| | 8-May-18 | 8.01 | 381 | <2 | 240 | 229 | 33.3 | 0.57 | 212 | 1.74 | 1.08 | 61.1 | 17.5 | 1.05 | 0.456 | <0.02 | <0.01 | 0.053 | <0.001 | 0.2 | 0.0082 | |
| | 14-May-19 | | | <10 | | 210 | 36 | | 190 | 2.2 | <1 | 55 | 16 | 1.2 | 0.44 | <0.1 | <0.01 | <0.05 | <0.001 | 0.26 | 0.019 | |
| | 19-May-20 | | | <10 | 260 | 210 | 19 | 0.9 | 200 | 2.1 | <1 | 52 | 16 | 1.4 | 0.5 | <0.1 | <0.01 | <0.05 | <0.001 | 0.33 | <0.02 | |
| | 27-May-21 | | | 180 | 384.45 | 310 | <2 | | 300 | 56 | <1 | 89 | 26 | | | <0.1 | <0.01 | 0.19 | 0.002 | 0.72 | 0.22 | |
| | 26-May-22 | 7.23 | 802 | <10 | | 300 | 8 | | 310 | 73 | 1.1 | 84 | 24 | 49 | 0.51 | <0.1 | 0.012 | 0.18 | 0.001 | 0.37 | 0.027 | |
| | 16-May-23 | | | <10 | | 250 | 11 | | 240 | 4.3 | 2 | 61 | 19 | 3.4 | <0.2 | <0.1 | <0.01 | <0.05 | <0.001 | 0.17 | 0.006 | |
| | 27-May-25 | | | <10 | | 240 | 45 | | 230 | <1 | 2.2 | 67 | 19 | 0.99 | 0.45 | <0.1 | <0.01 | <0.05 | <0.001 | 0.35 | 0.01 | |
| SW9 | 25-Oct-16 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 8-May-17 | 8.21 | 308 | 3 | 159 | 169 | 26 | | 159 | <0.5 | 2 | 44.4 | 14.1 | 0.8 | 0.7 | 0.2 | <0.1 | <0.01 | <0.001 | 2.3 | <0.01 | |
| | 8-May-18 | 8.16 | 342 | 3.1 | 198 | 200 | 25.3 | 0.9 | 192 | 1.09 | 1.69 | 55.6 | 15.3 | 0.86 | 1.52 | <0.02 | <0.01 | 0.039 | 0.001 | <0.15 | 0.0089 | |
| | 14-May-19 | | | <10 | | 200 | 25 | | 180 | <1 | <1 | 51 | 16 | 0.76 | 0.87 | <0.1 | <0.01 | 0.05 | <0.001 | 0.25 | 0.009 | |
| | 19-May-20 | | | <10 | 230 | 200 | 22 | 0.4 | 200 | 1.3 | <1 | 54 | 15 | 0.9 | 1.5 | 0.1 | <0.01 | <0.05 | <0.001 | 0.25 | <0.02 | |
| | 27-May-21 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 25-May-22 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 27-May-25 | | | <10 | | 220 | 35 | | 210 | <1 | 3.8 | 61 | 18 | 0.69 | 0.82 | <0.1 | <0.01 | <0.05 | <0.001 | 0.33 | 0.015 | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| QFSW2 (cont'd) | 24-May-22 | 0.0099 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.053 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.22 | <0.1 | <0.0005 | 0.055 | 0.00053 | <0.001 | <0.002 |
| | 31-Aug-22 | 0.017 | <0.0005 | 0.0019 | 0.016 | <0.0004 | 0.078 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | 0.25 | <0.0005 | 0.079 | 0.00082 | <0.001 | <0.002 |
| | 28-Oct-22 | 0.013 | <0.0005 | 0.0022 | 0.016 | <0.0004 | 0.069 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.22 | 0.24 | <0.0005 | 0.094 | 0.0008 | <0.001 | <0.002 |
| | 23-Feb-23 | 0.015 | <0.0005 | <0.001 | 0.02 | <0.0004 | 0.058 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.29 | <0.1 | <0.0005 | 0.017 | 0.00066 | <0.001 | <0.002 |
| | 17-May-23 | 0.014 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.033 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.23 | <0.1 | <0.0005 | 0.055 | 0.00054 | <0.001 | <0.002 |
| | 30-Aug-23 | 2.9 | <0.0005 | 0.0034 | 0.027 | <0.0004 | 0.071 | <0.00009 | <0.005 | 0.002 | 0.0079 | 0.25 | 5.6 | 0.0083 | 0.49 | 0.00078 | 0.0047 | <0.002 |
| | 31-Oct-23 | 0.01 | <0.0005 | 0.0016 | 0.016 | <0.0004 | 0.067 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.29 | 0.15 | <0.0005 | 0.11 | 0.00064 | <0.001 | <0.002 |
| | 27-Feb-24 | 0.014 | <0.0005 | 0.0019 | 0.016 | <0.0004 | 0.032 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.25 | 0.24 | <0.0005 | 0.1 | <0.0005 | <0.001 | <0.002 |
| | 29-May-24 | 0.012 | <0.0005 | <0.001 | 0.017 | <0.0004 | 0.065 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.21 | <0.1 | <0.0005 | 0.045 | 0.00052 | <0.001 | <0.002 |
| | 26-Aug-24 | 0.018 | <0.0005 | 0.0014 | 0.016 | <0.0004 | 0.058 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.28 | 0.13 | <0.0005 | 0.074 | <0.0005 | <0.001 | <0.002 |
| | 30-Oct-24 | 0.034 | <0.0005 | 0.0026 | 0.018 | <0.0004 | 0.07 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.24 | 0.32 | <0.0005 | 0.1 | 0.00063 | <0.001 | <0.002 |
| | 24-Feb-25 | 0.012 | <0.0005 | 0.0038 | 0.017 | <0.0004 | 0.028 | <0.00009 | <0.005 | 0.00062 | <0.0009 | 0.3 | 0.54 | <0.0005 | 0.13 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.023 | <0.0005 | 0.0018 | 0.017 | <0.0004 | 0.042 | <0.00009 | <0.005 | <0.0005 | 0.001 | 0.24 | 0.23 | <0.0005 | 0.054 | <0.0005 | <0.001 | <0.002 |
| | 25-Aug-25 | 0.021 | <0.0005 | 0.0028 | 0.02 | <0.0004 | 0.061 | <0.00009 | <0.005 | <0.0005 | <0.0009 | 0.3 | 0.29 | <0.0005 | 0.13 | 0.00068 | <0.001 | <0.002 |
| | 27-Oct-25 | 0.013 | <0.0005 | 0.0038 | 0.021 | <0.0004 | 0.055 | <0.00009 | <0.005 | 0.00062 | <0.0009 | 0.28 | 0.53 | <0.0005 | 0.16 | 0.00085 | <0.001 | <0.002 |
| SW3 | 24-Oct-16 (1) | | | | | | | | | | | | | | | | | |
| | 9-May-17 | 0.05 | <0.0001 | <0.0001 | 0.009 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.086 | <0.00002 | 0.011 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.03 | <0.0001 | 0.00028 | 0.0117 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.029 | 0.055 | <0.0001 | 0.0219 | 0.000051 | <0.0005 | 0.000068 |
| | 14-May-19 | 0.026 | <0.0005 | <0.001 | 0.01 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.011 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.03 | <0.0005 | <0.001 | 0.0094 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | 0.15 | <0.1 | <0.0005 | 0.0094 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 1.1 | <0.0005 | 0.0014 | 0.028 | <0.0004 | <0.01 | 0.00011 | <0.005 | 0.0015 | 0.0034 | <0.1 | 2.5 | 0.0019 | 3.1 | 0.00051 | 0.002 | <0.002 |
| | 26-May-22 | 0.1 | <0.0005 | <0.001 | 0.022 | <0.0004 | 0.011 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.5 | <0.0005 | 0.82 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.014 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.081 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.035 | <0.0005 | <0.001 | 0.012 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.03 | <0.0005 | <0.001 | <0.002 |
| SW9 | 25-Oct-16 (1) | | | | | | | | | | | | | | | | | |
| | 8-May-17 | 0.03 | <0.0001 | 0.0001 | 0.01 | <0.002 | 0.01 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.058 | 0.00003 | 0.001 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.024 | <0.0001 | 0.0002 | 0.0144 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.035 | <0.05 | <0.0001 | 0.00211 | 0.000104 | <0.0005 | 0.000061 |
| | 14-May-19 | 0.029 | <0.0005 | <0.001 | 0.011 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.038 | <0.0005 | <0.001 | 0.013 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0025 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 (1) | | | | | | | | | | | | | | | | | |
| | 25-May-22 (1) | | | | | | | | | | | | | | | | | |
| | 27-May-25 | 0.1 | <0.0005 | <0.001 | 0.013 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0019 | <0.1 | 0.12 | <0.0005 | 0.0038 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| QFSW2 | 24-May-22 | | | <0.00009 | 0.45 | 0.000051 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| (cont'd) | 31-Aug-22 | | | <0.00009 | 0.55 | 0.000054 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-Oct-22 | | | <0.00009 | 0.58 | <0.00005 | 0.0052 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 23-Feb-23 | | | <0.00009 | 0.53 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | | <0.00009 | 0.35 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 30-Aug-23 | | | <0.00009 | 0.56 | 0.000089 | 0.059 | <0.001 | 0.00019 | 0.0046 | 0.047 | <0.001 | | | |
| | 31-Oct-23 | | | <0.00009 | 0.51 | 0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-Feb-24 | | | <0.00009 | 0.35 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 29-May-24 | | | <0.00009 | 0.55 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-Aug-24 | | | <0.00009 | 0.45 | <0.00005 | <0.005 | <0.001 | 0.00021 | 0.0006 | <0.005 | <0.001 | | | |
| | 30-Oct-24 | | | <0.00009 | 0.54 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 24-Feb-25 | | | <0.00009 | 0.32 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | | <0.00009 | 0.42 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-Aug-25 | | | <0.00009 | 0.42 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-Oct-25 | | | <0.00009 | 0.44 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW3 | 24-Oct-16 | (1) | | | | | | | | | | | | | |
| | 9-May-17 | | | <0.00002 | 0.043 | <0.00005 | <0.005 | <0.01 | 0.00014 | <0.005 | <0.005 | 0.005 | | | |
| | 8-May-18 | | | <0.00005 | 0.0628 | <0.00001 | 0.00069 | <0.0001 | 0.000176 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | | <0.0001 | 0.051 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | | <0.0001 | 0.047 | <0.00005 | <0.005 | <0.001 | 0.00017 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | | <0.00009 | 0.098 | <0.00005 | 0.028 | <0.001 | 0.00024 | 0.0034 | 0.02 | <0.001 | | | |
| | 26-May-22 | | | <0.00009 | 0.1 | <0.00005 | 0.0058 | <0.001 | 0.00023 | 0.00063 | <0.005 | <0.001 | | | |
| | 16-May-23 | | | <0.00009 | 0.053 | <0.00005 | <0.005 | <0.001 | 0.00017 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | | <0.00009 | 0.064 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| SW9 | 25-Oct-16 | (1) | | | | | | | | | | | | | |
| | 8-May-17 | | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00015 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-18 | | | <0.00005 | 0.066 | <0.00001 | 0.0008 | <0.0001 | 0.000216 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | | <0.0001 | 0.052 | <0.00005 | <0.005 | <0.001 | 0.00018 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | | <0.0001 | 0.061 | <0.00005 | <0.005 | <0.001 | 0.00021 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | (1) | | | | | | | | | | | | | |
| | 25-May-22 | (1) | | | | | | | | | | | | | |
| | 27-May-25 | | | <0.00009 | 0.065 | <0.00005 | 0.0081 | <0.001 | 0.00026 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| QFSW2 (cont'd) | 24-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 31-Aug-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-Oct-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 23-Feb-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 30-Aug-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 31-Oct-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-Feb-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 29-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-Aug-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 30-Oct-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 24-Feb-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 25-Aug-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| | 27-Oct-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW3 | 24-Oct-16 (1) | | | | | | | | | | |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW9 | 25-Oct-16 (1) | | | | | | | | | | |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 (1) | | | | | | | | | | |
| | 25-May-22 (1) | | | | | | | | | | |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | | Phenols |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| SW10 | 24-Oct-16 | 8.09 | 495 | 1110 | 380 | 566 | 38 | | 242 | 5.1 | 7 | 174 | 31.6 | 3.4 | 1 | 1.4 | 0.3 | 0.22 | 0.003 | 24.8 | 3.16 | |
| | 8-May-17 | 8.32 | 365 | 32 | 189 | 195 | 6 | | 183 | 0.9 | 2 | 55 | 13.9 | 1.2 | 0.4 | 1.2 | <0.1 | <0.01 | <0.001 | 0.3 | 0.03 | |
| | 9-May-18 | 8.34 | 393 | <2 | 235 | 231 | 3.3 | 0.43 | 223 | 2.55 | 3.63 | 66 | 15.5 | 1.82 | 0.456 | 2.72 | <0.01 | 0.135 | 0.004 | 0.25 | 0.0134 | |
| | 16-May-19 | | | <10 | | 240 | 4 | | 210 | 3.3 | 4.3 | 69 | 15 | 1.8 | 0.46 | 2.29 | <0.01 | <0.05 | <0.001 | 0.11 | 0.019 | |
| | 20-May-20 | 8.16 | 440 | <10 | 235 | 230 | 5 | 0.2 | 220 | 4.7 | 4.9 | 70 | 17 | 2.5 | 0.49 | 1.93 | <0.01 | <0.05 | | 0.27 | <0.02 | |
| | 27-May-21 | | | 24 | 247.61 | 250 | 93 | | 250 | 3.9 | 5.5 | 75 | 19 | | | 1.39 | <0.01 | 0.11 | 0.001 | 0.33 | 0.06 | |
| | 24-May-22 | 8.12 | 479.3 | 450 | | 340 | 5 | | 260 | 3.9 | 4.6 | 90 | 21 | 2.3 | 1 | 0.99 | <0.01 | 0.14 | 0.004 | 0.14 | 0.88 | |
| | 17-May-23 | | | <10 | | 260 | 4 | | 250 | 1 | 4.3 | 71 | 18 | 1.7 | 0.4 | 1.65 | <0.01 | <0.05 | <0.001 | <0.1 | 0.01 | |
| | 27-May-24 | | | 39 | | 310 | 7 | | 260 | 1.6 | 3.5 | 76 | 19 | 1.9 | 0.47 | 1.1 | <0.01 | <0.05 | <0.001 | <0.1 | 0.01 | |
| | 28-May-25 | | | <10 | | 260 | 6 | | 260 | 2.4 | 3.5 | 73 | 18 | 1.9 | 0.4 | 0.69 | <0.01 | <0.05 | <0.001 | <0.1 | 0.008 | |
| SW11 | 16-Nov-16 | 7.95 | 484 | 195 | 245 | 255 | 13 | | 236 | 2.4 | 7 | 69.8 | 19.7 | 1.9 | 0.7 | 0.3 | <0.1 | <0.01 | <0.001 | 0.3 | 0.02 | |
| | 8-May-17 | 8.28 | 315 | <3 | 165 | 175 | 9 | | 164 | <0.5 | 3 | 47.2 | 13.8 | 0.9 | 0.7 | 0.3 | <0.1 | <0.01 | <0.001 | 1.6 | 0.01 | |
| | 9-May-18 | 8.31 | 341 | <2 | 196 | 200 | 7.3 | 0.68 | 201 | 1.03 | 2.49 | 55.3 | 15.4 | 0.88 | 0.866 | 0.266 | <0.01 | 0.025 | <0.001 | <0.15 | 0.0104 | |
| | 16-May-19 | | | <10 | | 200 | 7 | | 200 | 1.5 | 1 | 57 | 15 | 0.94 | 0.87 | 0.24 | <0.01 | <0.05 | <0.001 | 0.11 | 0.11 | |
| | 20-May-20 | 8.21 | 380 | <10 | 195 | 200 | 7 | 0.5 | 200 | 1.3 | 2 | 55 | 16 | 1 | 0.85 | 0.37 | <0.01 | <0.05 | | 0.17 | <0.02 | |
| | 26-May-21 | | | <10 | 221.82 | 230 | 5 | | 230 | 1.6 | 4.5 | 64 | 17 | | | 0.25 | <0.01 | <0.05 | <0.001 | <0.1 | 0.012 | |
| | 25-May-22 | 8.25 | 399 | <10 | | 220 | 5 | | 230 | 1.6 | 2.2 | 64 | 18 | 0.93 | 0.65 | 0.29 | <0.01 | 0.082 | 0.002 | <0.1 | 0.02 | |
| | 17-May-23 | | | <10 | | 230 | 5 | | 220 | <1 | 3.8 | 57 | 17 | 0.91 | 0.62 | 0.25 | <0.01 | <0.05 | <0.001 | 0.13 | 0.01 | |
| | 28-May-24 | | | <10 | | 260 | 4 | | 240 | 1.1 | 4.1 | 66 | 19 | 0.98 | 0.62 | 0.24 | <0.01 | <0.05 | <0.001 | <0.1 | 0.012 | |
| | 28-May-25 | | | <10 | | 230 | 5 | | 230 | <1 | 3.4 | 62 | 19 | 0.95 | 0.73 | 0.27 | <0.01 | <0.05 | <0.003 | <0.1 | 0.008 | |
| SW11A | 25-Oct-16 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 8-May-17 | 8.26 | 310 | <3 | 161 | 169 | 8 | | 161 | 0.6 | 2 | 45.4 | 13.5 | 0.9 | 0.7 | 0.3 | <0.1 | <0.01 | <0.001 | 1.4 | 0.01 | |
| | 9-May-18 | 8.28 | 349 | 2.3 | 200 | 209 | 5.4 | 0.85 | 210 | 1.12 | 2.4 | 55.1 | 15.7 | 0.92 | 0.925 | 0.222 | <0.01 | 0.045 | <0.001 | <0.15 | 0.0053 | |
| | 16-May-19 | | | <10 | | 200 | 5 | | 190 | 1.4 | <1 | 56 | 15 | 0.88 | 0.89 | 0.21 | <0.01 | <0.05 | <0.001 | 0.15 | 0.006 | |
| | 20-May-20 | | | <10 | 205 | 210 | 4 | 0.2 | 210 | 1.9 | 3.2 | 58 | 18 | 1.1 | 0.88 | 0.28 | <0.01 | <0.05 | <0.001 | 0.15 | <0.02 | |
| | 26-May-21 | | | <10 | 223.3 | 230 | 4 | | 230 | 1.9 | 3.1 | 64 | 18 | | | 0.21 | <0.01 | <0.05 | <0.001 | <0.1 | 0.006 | |
| | 25-May-22 | 7.84 | 438 | 190 | | 230 | 3 | | 240 | 1.1 | 2.8 | 72 | 21 | 1.1 | 1 | 0.21 | <0.01 | <0.05 | <0.001 | <0.1 | 0.088 | |
| | 17-May-23 | | | <10 | | 230 | 4 | | 230 | <1 | 3.8 | 63 | 18 | 0.88 | 0.66 | 0.2 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 28-May-24 | | | <10 | | 280 | <2 | | 250 | <1 | 3.3 | 65 | 19 | 1 | 0.61 | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 28-May-25 | | | <10 | | 230 | 3 | | 230 | 1 | 2.7 | 62 | 18 | 0.86 | 0.65 | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | 0.004 | |
| SW11B | 24-Oct-16 | 8.41 | 439 | 100 | 268 | 248 | 7 | | 230 | 2.2 | 7 | 67.8 | 19.2 | 1.6 | 0.8 | 0.2 | 0.2 | 0.02 | <0.001 | 0.4 | 0.08 | |
| | 8-May-17 | 8.27 | 318 | <3 | 159 | 165 | 8 | | 160 | <0.5 | 2 | 44.1 | 13.3 | 0.9 | 0.7 | 0.3 | <0.1 | <0.01 | <0.001 | 2.2 | <0.01 | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| SW10 | 24-Oct-16 | 3.02 | <0.0001 | 0.0015 | 0.065 | <0.002 | 0.022 | 0.00068 | 0.003 | 0.0034 | 0.016 | <0.1 | 3.53 | 0.0175 | 0.697 | <0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.11 | <0.0001 | 0.0002 | 0.007 | <0.002 | 0.008 | <0.000014 | 0.002 | <0.0001 | <0.002 | <0.1 | 0.181 | 0.00032 | 0.008 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.028 | <0.0001 | 0.00013 | 0.00821 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.04 | <0.05 | <0.0001 | 0.00168 | <0.00005 | <0.0005 | <0.00005 |
| | 16-May-19 | 0.052 | <0.0005 | <0.001 | 0.0086 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0028 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.019 | <0.0005 | <0.001 | 0.0083 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | 0.0026 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.14 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.21 | <0.0005 | 0.0089 | <0.0005 | <0.001 | <0.002 |
| | 24-May-22 | 4.2 | <0.0005 | 0.0022 | 0.033 | <0.0004 | 0.011 | 0.00018 | 0.0059 | 0.0024 | 0.0085 | <0.1 | 6.6 | 0.012 | 0.27 | <0.0005 | 0.0052 | <0.002 |
| | 17-May-23 | 0.023 | <0.0005 | <0.001 | 0.0081 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.28 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.34 | 0.00061 | 0.01 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.031 | <0.0005 | <0.001 | 0.0093 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0035 | <0.0005 | <0.001 | <0.002 |
| SW11 | 16-Nov-16 | 0.16 | <0.0001 | 0.0001 | 0.012 | <0.002 | <0.005 | 0.00009 | 0.099 | 0.0009 | 0.002 | <0.1 | 0.863 | 0.00022 | 0.036 | 0.0083 | 0.1 | <0.001 |
| | 8-May-17 | 0.03 | <0.0001 | 0.0001 | 0.007 | <0.002 | 0.008 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.051 | <0.00002 | 0.001 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.021 | <0.0001 | 0.00015 | 0.00864 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.034 | <0.05 | <0.0001 | 0.00071 | 0.000066 | <0.0005 | <0.00005 |
| | 16-May-19 | 0.082 | <0.0005 | <0.001 | 0.009 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0028 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.086 | <0.0005 | <0.001 | 0.0085 | <0.0005 | 0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0046 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.035 | <0.0005 | <0.001 | 0.0093 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.036 | <0.0005 | <0.001 | 0.0089 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.037 | <0.0005 | <0.001 | 0.008 | <0.0004 | 0.011 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.003 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.14 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.15 | <0.0005 | 0.0079 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.03 | <0.0005 | <0.001 | 0.0093 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.00096 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| SW11A | 25-Oct-16 (1) | | | | | | | | | | | | | | | | | |
| | 8-May-17 | 0.02 | <0.0001 | 0.0001 | 0.008 | <0.002 | 0.008 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.031 | <0.00002 | <0.001 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.027 | <0.0001 | 0.00014 | 0.00918 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.034 | <0.05 | <0.0001 | 0.00069 | 0.000066 | <0.0005 | 0.000063 |
| | 16-May-19 | 0.019 | <0.0005 | <0.001 | 0.092 | <0.0005 | <0.01 | <0.001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.1 | <0.002 |
| | 20-May-20 | 0.057 | <0.0005 | <0.001 | 0.0094 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0032 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.0094 | <0.0005 | <0.001 | 0.0091 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.91 | <0.0005 | <0.001 | 0.015 | <0.0004 | <0.01 | <0.00009 | <0.005 | 0.00083 | 0.004 | <0.1 | 1.3 | 0.00089 | 0.053 | <0.0005 | 0.0015 | <0.002 |
| | 17-May-23 | 0.011 | <0.0005 | <0.001 | 0.0089 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.0057 | <0.0005 | <0.001 | 0.0092 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.013 | <0.0005 | <0.001 | 0.0087 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| SW11B | 24-Oct-16 | 0.2 | <0.0001 | 0.0003 | 0.013 | <0.002 | 0.007 | 0.0001 | <0.002 | 0.0032 | 0.009 | <0.1 | 0.759 | 0.00335 | 0.489 | <0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.03 | <0.0001 | 0.0001 | 0.007 | <0.002 | 0.008 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.05 | <0.00002 | 0.002 | <0.0001 | <0.01 | <0.001 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW10 | 24-Oct-16 | | <0.00002 | 0.165 | 0.00006 | 0.012 | 0.02 | 0.00017 | 0.005 | 0.049 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00007 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.086 | <0.00001 | 0.00075 | <0.0001 | 0.000085 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.079 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.079 | <0.00005 | 0.0052 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.095 | <0.00005 | 0.0074 | <0.001 | <0.0001 | 0.0005 | <0.005 | <0.001 | | | |
| | 24-May-22 | | <0.00009 | 0.11 | 0.00012 | 0.1 | <0.001 | 0.00021 | 0.0068 | 0.023 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.086 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.097 | <0.00005 | 0.01 | <0.001 | <0.0001 | 0.00062 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.09 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW11 | 16-Nov-16 | | <0.00002 | 0.092 | <0.00005 | <0.005 | <0.01 | 0.00012 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.0623 | <0.00001 | 0.00061 | <0.0001 | 0.000129 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.058 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.055 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.07 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.068 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.063 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.074 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.067 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| SW11A | 25-Oct-16 (1) | | | | | | | | | | | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.0001 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.0594 | <0.00001 | 0.00048 | <0.0001 | 0.000137 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.055 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.057 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.066 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.074 | <0.00005 | 0.021 | <0.001 | 0.00016 | 0.0018 | 0.0054 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.062 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.071 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.064 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| SW11B | 24-Oct-16 | | <0.00002 | 0.102 | <0.00005 | 0.007 | <0.01 | 0.00025 | <0.005 | 0.008 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.0001 | <0.005 | <0.005 | <0.003 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| **SW10** | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW11** | 16-Nov-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW11A** | 25-Oct-16 (1) | | | | | | | | | | |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.02 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW11B** | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| SW11B | 9-May-18 | 8.26 | 349 | <2 | 210 | 198 | 5.4 | 0.42 | 195 | 1.11 | 2.39 | 56.2 | | | | 0.217 | <0.01 | 0.053 | <0.001 | <0.15 | 0.0046 | |
| (cont'd) | 16-May-19 | | | <10 | | 200 | 6 | | 200 | 1.1 | <1 | 57 | 15 | 0.95 | 0.91 | 0.2 | <0.01 | <0.05 | <0.001 | 0.15 | 0.006 | |
| | 20-May-20 | | | 18 | 165 | 210 | 5 | 0.2 | 210 | 1.7 | 3.1 | 57 | 18 | 1.1 | 0.93 | 0.27 | <0.01 | <0.05 | <0.001 | 0.13 | <0.02 | |
| | 26-May-21 | | | 49 | 224.4 | 230 | 4 | | 240 | 2.4 | 3.1 | 72 | 20 | | | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | 0.094 | |
| | 25-May-22 | 7.62 | 435.6 | 110 | | 230 | 2 | | 240 | 1.5 | 3.2 | 66 | 20 | 1 | 0.71 | 0.25 | <0.01 | <0.05 | <0.001 | <0.1 | 0.12 | |
| | 17-May-23 | | | <10 | | 250 | 4 | | 220 | <1 | 3.6 | 61 | 18 | 0.9 | 0.62 | 0.21 | <0.01 | <0.05 | <0.001 | <0.1 | 0.005 | |
| | 28-May-24 | | | <10 | | 260 | 2 | | 250 | <1 | 3.8 | 67 | 20 | 1 | 0.64 | 0.2 | <0.01 | <0.05 | <0.001 | <0.1 | 0.005 | |
| | 28-May-25 | | | <10 | | 240 | 3 | | 230 | <1 | 3.3 | 64 | 19 | 0.91 | 0.69 | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| SW11C | 24-Oct-16 | 8.24 | 466 | 16 | 243 | 246 | <2 | | 239 | 2.4 | 7 | 65.9 | 19.8 | 1.9 | 0.5 | 0.4 | 0.2 | 0.02 | <0.001 | 0.2 | 0.03 | |
| | 8-May-17 | 8.31 | 317 | <3 | 164 | 164 | 2 | | 317 | 170 | <0.1 | 45.6 | 13.5 | 0.9 | 0.7 | <0.1 | 0.3 | <0.01 | <0.001 | 1.1 | <0.01 | |
| | 9-May-18 | 8.23 | 350 | <2 | 210 | 200 | 5.5 | 0.36 | 200 | 1.11 | 2.43 | 54.1 | 15.7 | 0.9 | 0.896 | 0.231 | <0.01 | 0.072 | 0.001 | <0.15 | 0.0057 | |
| | 16-May-19 | | | <10 | | 200 | 5 | | 190 | 1.3 | <1 | 56 | 15 | 0.92 | 0.87 | 0.21 | <0.01 | <0.05 | <0.001 | 0.16 | 0.005 | |
| | 20-May-20 | | | <10 | 210 | 210 | 4 | 0.4 | 210 | 1.8 | 3.5 | 57 | 17 | 1 | 0.89 | 0.29 | <0.01 | 0.056 | 0.001 | 0.14 | <0.02 | |
| | 26-May-21 | | | <10 | 226.99 | 230 | 4 | | 240 | 2.1 | 3.3 | 65 | 18 | | | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | 0.007 | |
| | 25-May-22 | 7.69 | 438.4 | <10 | | 230 | 3 | | 240 | 1.6 | 3.2 | 64 | 19 | 1 | 0.7 | 0.25 | <0.01 | <0.05 | <0.001 | <0.1 | 0.009 | |
| | 17-May-23 | | | <10 | | 240 | 4 | | 220 | <1 | 3.6 | 60 | 19 | 0.93 | 0.69 | 0.25 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 28-May-24 | | | <10 | | 290 | <2 | | 250 | <1 | 3.9 | 66 | 19 | 1 | 0.65 | 0.22 | <0.01 | <0.05 | <0.001 | 0.1 | 0.005 | |
| | 28-May-25 | | | 11 | | 230 | 3 | | 230 | <1 | 2.8 | 65 | 19 | 0.92 | 0.69 | 0.24 | <0.01 | <0.05 | <0.001 | 0.1 | <0.004 | |
| SW11D | 24-Oct-16 | 8.35 | 435 | 38 | 233 | 242 | 4 | | 226 | 1.2 | 7 | 66.3 | 18.6 | 1 | 0.5 | 0.4 | 0.2 | 0.01 | <0.001 | 1 | 0.12 | |
| | 8-May-17 | 8.28 | 317 | 3 | 160 | 161 | 9 | | 162 | 0.8 | 2 | 43.3 | 12.9 | 0.9 | 0.7 | 0.4 | <0.1 | <0.01 | <0.001 | 0.7 | 0.03 | |
| | 9-May-18 | 8.28 | 317 | 2.3 | 215 | 198 | 6.1 | 0.79 | 194 | 0.97 | 2.55 | 53.1 | 15.1 | 0.885 | 0.871 | 0.364 | <0.01 | 0.1 | 0.001 | <0.15 | 0.0103 | |
| | 16-May-19 | | | <10 | | 200 | 6 | | 190 | 1.5 | <1 | 55 | 15 | 0.86 | 0.85 | 0.25 | <0.01 | <0.05 | <0.001 | 0.13 | 0.006 | |
| | 20-May-20 | | | <10 | 190 | 200 | 6 | 0.3 | 200 | 1.5 | 1.1 | 56 | 16 | 0.94 | 0.8 | 0.47 | <0.01 | <0.05 | <0.001 | 0.16 | 0.022 | |
| | 26-May-21 | | | <10 | 201.3 | 220 | 8 | | 220 | 1.7 | <1 | 64 | 16 | | | 0.41 | <0.01 | <0.05 | <0.001 | <0.1 | 0.042 | |
| | 25-May-22 | 8.15 | 398.5 | 10 | | 200 | 6 | | 210 | 1.1 | 1.4 | 61 | 16 | 0.75 | 0.55 | 0.66 | <0.01 | <0.05 | <0.001 | <0.1 | 0.034 | |
| | 17-May-23 | | | <10 | | 240 | 5 | | 220 | <1 | 3.8 | 61 | 17 | 0.91 | 0.62 | 0.34 | <0.01 | <0.05 | <0.001 | <0.1 | 0.009 | |
| | 28-May-24 | | | <10 | | 270 | 4 | | 240 | <1 | 4.5 | 64 | 16 | 0.8 | 0.52 | 0.37 | <0.01 | <0.05 | <0.001 | <0.1 | 0.019 | |
| | 28-May-25 | | | <10 | | 230 | 4 | | 210 | 1.2 | 3.3 | 62 | 17 | 0.83 | 0.61 | 0.39 | <0.01 | <0.05 | <0.002 | <0.1 | 0.012 | |
| SW11E | 24-Oct-16 | 8.41 | 439 | 100 | 239 | 248 | 7 | | 230 | 2.2 | 7 | 67.8 | 19.2 | 1.6 | 0.8 | 0.2 | 0.2 | 0.02 | <0.001 | 0.4 | 0.08 | |
| | 9-May-17 | 8.26 | 323 | 5 | 176 | 190 | 8 | | 171 | <0.5 | 3 | 52.4 | 14.3 | 0.8 | 0.8 | 0.4 | <0.1 | <0.01 | <0.001 | 0.2 | 0.02 | |
| | 9-May-18 | 8.39 | 336 | 3.2 | 214 | 194 | 8.1 | 2.21 | 196 | 1.04 | 2.52 | 54.2 | 14.8 | 0.881 | 0.885 | 0.26 | <0.01 | <0.02 | <0.001 | <0.15 | 0.012 | |
| | 16-May-19 | | | <10 | | 200 | 8 | | 190 | 1.2 | <1 | 57 | 15 | 0.95 | 0.91 | 0.23 | <0.01 | <0.05 | <0.002 | 0.24 | 0.012 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SW11B** | 9-May-18 | 0.014 | <0.0001 | 0.00011 | 0.00914 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.033 | <0.05 | <0.0001 | <0.0005 | 0.000066 | <0.0005 | 0.00007 |
| **(cont'd)** | 16-May-19 | 0.000021 | <0.0005 | <0.001 | 0.0094 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.01 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.16 | <0.0005 | <0.001 | 0.01 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | 0.0012 | <0.1 | 0.23 | <0.0005 | 0.016 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.96 | <0.0005 | <0.001 | 0.015 | <0.0004 | <0.01 | <0.00009 | <0.005 | 0.0011 | 0.0043 | <0.1 | 1.4 | 0.00092 | 0.086 | <0.0005 | 0.0014 | <0.002 |
| | 25-May-22 | 0.14 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.00091 | <0.1 | 0.21 | <0.0005 | 0.015 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.041 | <0.0005 | <0.001 | 0.0088 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0011 | <0.1 | <0.1 | <0.0005 | 0.0028 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.052 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0041 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.018 | <0.0005 | <0.001 | 0.0089 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| **SW11C** | 24-Oct-16 | 0.06 | <0.0001 | 0.0002 | 0.01 | <0.002 | 0.005 | <0.00002 | <0.002 | 0.0002 | <0.002 | <0.1 | 0.037 | 0.00011 | 0.009 | 0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.02 | <0.0001 | 0.0001 | 0.007 | <0.002 | 0.007 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.5 | 0.033 | <0.00002 | <0.001 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | <0.01 | <0.0001 | 0.00012 | 0.009 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.035 | <0.05 | <0.0001 | <0.0005 | 0.000075 | <0.0005 | 0.000078 |
| | 16-May-19 | 0.000011 | <0.0005 | <0.001 | 0.0092 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.01 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.13 | <0.0005 | <0.001 | 0.011 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | 0.0014 | <0.1 | 0.14 | 0.0017 | 0.045 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.016 | <0.0005 | <0.001 | 0.0098 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.027 | <0.0005 | <0.001 | 0.0095 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.073 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.11 | <0.0005 | 0.0076 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.073 | <0.0005 | <0.001 | 0.01 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.1 | <0.0005 | 0.0048 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.022 | <0.0005 | <0.001 | 0.0092 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| **SW11D** | 24-Oct-16 | 0.22 | <0.0001 | 0.0005 | 0.01 | <0.002 | 0.009 | 0.00004 | <0.002 | 0.0004 | 0.002 | <0.1 | 0.232 | 0.0015 | 0.051 | <0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.03 | <0.0001 | 0.0001 | 0.007 | <0.002 | 0.007 | <0.000014 | 0.003 | <0.0001 | 0.002 | <0.1 | 0.054 | <0.00002 | 0.002 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.021 | <0.0001 | 0.00014 | 0.00866 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.037 | <0.05 | <0.0001 | 0.00072 | 0.000071 | <0.0005 | 0.000059 |
| | 16-May-19 | 0.016 | <0.0005 | <0.001 | 0.0097 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | 0.0013 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | 0.0022 | <0.002 |
| | 20-May-20 | 0.058 | <0.0005 | <0.001 | 0.0086 | <0.0005 | 0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0025 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.049 | <0.0005 | <0.001 | 0.0072 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.11 | <0.0005 | <0.001 | 0.0075 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.0045 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.038 | <0.0005 | <0.001 | 0.0078 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0011 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.1 | <0.0005 | <0.001 | 0.0077 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.0055 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.023 | <0.0005 | <0.001 | 0.0089 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| **SW11E** | 24-Oct-16 | 0.2 | <0.0001 | 0.0003 | 0.013 | <0.002 | 0.007 | 0.00004 | <0.002 | 0.0004 | 0.003 | <0.1 | 0.239 | 0.00086 | 0.092 | <0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.07 | <0.0001 | <0.0001 | 0.008 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | 0.002 | <0.1 | 0.066 | <0.00002 | 0.004 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.068 | <0.0001 | 0.00017 | 0.00914 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.035 | 0.068 | <0.0001 | 0.00418 | 0.000078 | <0.0005 | 0.000074 |
| | 16-May-19 | 0.066 | <0.0005 | <0.001 | 0.0094 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0034 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon Si | Silver Ag | Strontium Sr | Thallium Tl | Titanium Ti | Tungsten W | Uranium U | Vanadium V | Zinc Zn | Zirconium Zr | Animal / Vegetable | Mineral | Total |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW11B (cont'd) | 9-May-18 | | <0.00005 | 0.0626 | <0.00001 | 0.00045 | <0.0001 | 0.000136 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.058 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.058 | <0.00005 | 0.0062 | <0.001 | 0.00013 | 0.00057 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.075 | <0.00005 | 0.032 | <0.001 | 0.00018 | 0.0022 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.069 | <0.00005 | 0.0055 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.062 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.074 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.068 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| SW11C | 24-Oct-16 | | <0.00002 | 0.087 | <0.00005 | <0.005 | <0.01 | 0.00016 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.0627 | <0.00001 | <0.0003 | <0.0001 | 0.000137 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.057 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.057 | <0.00005 | 0.0054 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.069 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.069 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.061 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.073 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.065 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| SW11D | 24-Oct-16 | | <0.00002 | 0.086 | <0.00005 | <0.005 | 0.01 | 0.00012 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00011 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.0626 | <0.00001 | 0.00061 | <0.0001 | 0.000127 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.054 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.057 | <0.00005 | <0.005 | <0.001 | 0.00012 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.073 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.068 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.066 | <0.00005 | <0.005 | <0.001 | 0.0001 | 0.00087 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.077 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | 0.0096 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.068 | <0.00005 | 0.0052 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW11E | 24-Oct-16 | | <0.00002 | 0.089 | <0.00005 | <0.005 | 0.01 | 0.00017 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.057 | <0.00005 | <0.005 | <0.01 | 0.00013 | <0.005 | <0.005 | 0.005 | | | |
| | 9-May-18 | | <0.00005 | 0.063 | <0.00001 | 0.00131 | <0.0001 | 0.000138 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.06 | <0.00005 | <0.005 | <0.001 | 0.00011 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SW11B (cont'd) | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW11C | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW11D | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW11E | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SW11E** | 20-May-20 | | | 10 | 185 | 200 | 7 | 0.6 | 200 | 1.4 | 1.6 | 59 | 17 | 1 | 1 | 0.29 | <0.01 | <0.05 | <0.002 | 0.21 | <0.02 | |
| **(cont'd)** | 26-May-21 | | | 25 | 218.3 | 220 | 5 | | 230 | 1.8 | 6.4 | 64 | 18 | | | 0.25 | <0.01 | <0.05 | <0.002 | <0.1 | 0.043 | |
| | 25-May-22 | 8.43 | 412.3 | 180 | | 220 | 5 | | 230 | 1.2 | 2 | 75 | 20 | 1.1 | 1.4 | 0.26 | <0.01 | 0.1 | 0.005 | 0.16 | 0.069 | |
| | 17-May-23 | | | 20 | | 240 | 6 | | 220 | <1 | 4.1 | 58 | 17 | 0.84 | 0.67 | 0.22 | <0.01 | <0.05 | <0.002 | <0.1 | 0.02 | |
| | 28-May-24 | | | 35 | | 270 | 5 | | 240 | 1.1 | 4 | 66 | 19 | 1 | 0.77 | 0.23 | <0.01 | <0.05 | <0.001 | 0.11 | 0.045 | |
| | 28-May-25 | | | 12 | | 230 | 5 | | 220 | 1.5 | 3.2 | 63 | 19 | 0.97 | 0.87 | 0.25 | <0.01 | <0.05 | <0.004 | <0.1 | 0.013 | |
| **SW14** | 24-Oct-16 | 8.22 | 460 | 14 | 231 | 219 | 12 | | 220 | 10.2 | 8 | 55.6 | 19.4 | 4.4 | 1 | <0.1 | <0.1 | 0.03 | <0.001 | 0.3 | 0.01 | |
| | 9-May-17 | 8.21 | 458 | 11 | 247 | 253 | 7 | | 246 | 1.2 | 3 | 74.5 | 16.3 | 1.4 | 0.9 | 0.4 | <0.1 | <0.01 | <0.001 | 0.3 | 0.03 | |
| | 8-May-18 | 8.38 | 366 | 3.9 | 230 | 200 | 8.2 | 3.06 | 193 | 8.54 | 3.89 | 56.6 | 15.4 | 5.87 | 1.12 | 0.51 | <0.01 | 0.027 | 0.001 | <0.15 | 0.0115 | |
| | 14-May-19 | | | <10 | | 210 | 8 | | 190 | 9 | 4 | 61 | 16 | 5.9 | 1.1 | 0.41 | <0.01 | 0.05 | 0.002 | 0.13 | 0.016 | |
| | 20-May-20 | | | 11 | 205 | 210 | 7 | 1.2 | 210 | 6.4 | 5.2 | 58 | 17 | 3.5 | 1 | 0.39 | <0.01 | <0.05 | <0.001 | 0.2 | <0.02 | |
| | 27-May-21 | | | <10 | 188.05 | 340 | 2 | | 230 | 6.6 | 5 | 63 | 20 | | | 0.25 | <0.01 | <0.05 | <0.002 | 0.19 | 0.01 | |
| | 26-May-22 | 8.22 | 413.9 | <10 | | 220 | 7 | | 220 | 5.4 | 4.4 | 59 | 19 | 3.4 | 0.94 | 0.19 | <0.01 | <0.05 | <0.003 | 0.15 | 0.019 | |
| | 16-May-23 | | | <10 | | 230 | 7 | | 220 | 9.9 | 5.8 | 60 | 18 | 7 | 0.99 | 0.19 | <0.01 | <0.05 | <0.003 | 0.14 | 0.008 | |
| | 27-May-24 | | | 22 | | 250 | 10 | | 230 | 4.7 | 4.7 | 61 | 19 | 3.7 | 1.1 | 0.22 | <0.01 | <0.05 | <0.001 | 0.2 | 0.02 | |
| | 27-May-25 | | | <10 | | 230 | 8 | | 220 | 5.4 | 3.6 | 63 | 18 | 4.3 | 0.92 | 0.23 | <0.01 | <0.05 | <0.005 | <0.1 | 0.007 | |
| **SW15** | 24-Oct-16 | 8.27 | 437 | <3 | 224 | 220 | 7 | | 226 | 3 | 5 | 58.2 | 18.3 | 1.7 | 0.8 | 0.3 | 0.2 | 0.04 | <0.001 | 0.2 | 0.01 | |
| | 9-May-17 | 8.27 | 365 | 14.7 | 206 | 220 | 7 | | 183 | 5.8 | 3 | 60.4 | 16.8 | 5.2 | 0.9 | 0.8 | <0.1 | <0.01 | <0.001 | 0.2 | 0.03 | |
| | 8-May-18 | 8.28 | 491 | 3.8 | 290 | 288 | 6.6 | 2.19 | 262 | 2.06 | 2.96 | 84.6 | 17.4 | 1.65 | 1.43 | 0.412 | <0.01 | <0.02 | <0.001 | <0.15 | 0.0178 | |
| | 14-May-19 | | | 15 | | 280 | 5 | | 260 | 3 | 3.9 | 85 | 18 | 1.9 | 2.1 | 0.43 | <0.01 | <0.05 | <0.001 | 0.2 | 0.036 | |
| | 20-May-20 | | | <10 | 295 | 270 | 5 | 0.7 | 280 | 5 | 5.6 | 82 | 18 | 2.1 | 1.7 | 0.64 | <0.01 | <0.05 | <0.001 | 0.29 | <0.02 | |
| | 27-May-21 | | | <10 | 304.15 | 280 | 20 | | 320 | 3.5 | 3.1 | 92 | 21 | | | 0.16 | <0.01 | <0.05 | <0.001 | 0.19 | 0.013 | |
| | 25-May-22 (1) | | | | | | | | | | | | | | | | | | | | | |
| | 16-May-23 | | | <10 | | 330 | 6 | | 300 | 5.3 | 5.9 | 96 | 20 | 1.9 | 1.4 | 0.94 | <0.01 | <0.05 | | <0.1 | 0.01 | |
| | 27-May-24 | | | 13 | | 330 | 19 | | 320 | 2.2 | 3 | 91 | 20 | 1.4 | 0.81 | 0.29 | <0.01 | <0.05 | <0.001 | 0.35 | 0.025 | |
| | 27-May-25 | | | 25 | | 320 | 6 | | 300 | 2.8 | 4.2 | 95 | 21 | 2.4 | 1.3 | 0.27 | <0.01 | <0.05 | <0.001 | 0.11 | 0.022 | |
| **SW16** | 25-Oct-16 | 8.15 | 461 | 20 | 260 | 277 | 11 | | 235 | 4.3 | 6 | 73.4 | 22.7 | 1.6 | 2 | 0.1 | <0.1 | 0.01 | <0.001 | 0.4 | 0.12 | |
| | 9-May-17 | 8.21 | 378 | 5 | 199 | 207 | 10 | | 193 | 1.6 | 4 | 57.6 | 15.4 | 1.3 | 0.4 | 0.5 | <0.1 | <0.01 | <0.001 | 0.2 | 0.02 | |
| | 8-May-18 | 8.27 | 363 | <2 | 227 | 211 | 9.5 | 1.69 | 211 | 2.52 | 4.03 | 57.2 | 15.9 | 1.42 | 0.705 | 0.386 | <0.01 | 0.046 | 0.001 | <0.15 | 0.0118 | |
| | 14-May-19 | | | <10 | | 220 | 11 | | 180 | 2.4 | 1.5 | 56 | 15 | 1.3 | 0.66 | 0.3 | <0.01 | <0.05 | <0.002 | 0.14 | 0.023 | |
| | 20-May-20 | | | <10 | 205 | 220 | 9 | 0.7 | 220 | 3 | 3.6 | 63 | 17 | 1.6 | 0.63 | 0.22 | <0.01 | <0.05 | <0.001 | <0.1 | <0.02 | |
| | 26-May-21 | | | 19 | 259.05 | 260 | 11 | | 270 | 1.5 | <1 | 74 | 21 | | | <0.1 | <0.01 | <0.05 | <0.001 | 0.14 | 0.056 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SW11E (cont'd)** | 20-May-20 | 0.31 | <0.0005 | <0.001 | 0.011 | <0.0005 | 0.012 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.34 | <0.0005 | 0.019 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.32 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.33 | <0.0005 | 0.017 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 2.5 | <0.0005 | <0.001 | 0.02 | <0.0004 | <0.01 | <0.00009 | <0.005 | 0.0017 | 0.0057 | <0.1 | 3 | 0.002 | 0.15 | <0.0005 | 0.0037 | <0.002 |
| | 17-May-23 | 0.16 | <0.0005 | <0.001 | 0.0088 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.22 | <0.0005 | 0.014 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.5 | <0.0005 | <0.001 | 0.013 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0017 | <0.1 | 0.61 | 0.00058 | 0.037 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.31 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0013 | <0.1 | 0.31 | <0.0005 | 0.018 | <0.0005 | <0.001 | <0.002 |
| **SW14** | 24-Oct-16 | 0.04 | <0.0001 | 0.0005 | 0.012 | <0.002 | 0.042 | <0.00002 | <0.002 | 0.0001 | <0.002 | <0.1 | 0.212 | 0.00004 | 0.112 | <0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.22 | <0.0001 | <0.0001 | 0.016 | <0.002 | 0.011 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.251 | 0.00015 | 0.032 | 0.0003 | <0.01 | <0.001 |
| | 8-May-18 | 0.124 | <0.0001 | 0.00025 | 0.0105 | <0.0001 | 0.017 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.038 | 0.142 | <0.0001 | 0.0231 | 0.000124 | <0.0005 | 0.000066 |
| | 14-May-19 | 0.21 | <0.0005 | <0.001 | 0.011 | <0.0005 | 0.017 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.21 | <0.0005 | 0.02 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.1 | <0.0005 | <0.001 | 0.01 | <0.0005 | 0.024 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.14 | <0.0005 | 0.029 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.057 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.025 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.15 | <0.0005 | 0.046 | <0.0005 | <0.001 | <0.002 |
| | 26-May-22 | 0.1 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.026 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.19 | <0.0005 | 0.041 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.055 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.02 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.019 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.4 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.03 | <0.00009 | <0.005 | <0.0005 | 0.0013 | <0.1 | 0.61 | <0.0005 | 0.087 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.1 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.015 | <0.00009 | <0.005 | <0.0005 | 0.0011 | <0.1 | 0.13 | <0.0005 | 0.028 | <0.0005 | <0.001 | <0.002 |
| **SW15** | 24-Oct-16 | 0.03 | <0.0001 | 0.0003 | 0.016 | <0.002 | 0.016 | <0.00002 | <0.002 | 0.0001 | <0.002 | 0.1 | 0.028 | <0.00002 | 0.066 | 0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.09 | <0.0001 | <0.0001 | 0.009 | <0.002 | 0.008 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.104 | 0.00005 | 0.013 | 0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.082 | <0.0001 | 0.00025 | 0.0216 | <0.0001 | 0.02 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.043 | 0.096 | <0.0001 | 0.0488 | 0.000121 | <0.0005 | 0.000059 |
| | 14-May-19 | 0.4 | <0.0005 | <0.001 | 0.022 | <0.0005 | 0.017 | <0.0001 | <0.005 | <0.0005 | 0.0011 | <0.1 | 0.48 | <0.0005 | 0.046 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.095 | <0.0005 | <0.001 | 0.023 | <0.0005 | 0.027 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.011 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.019 | <0.0005 | <0.001 | 0.026 | <0.0004 | 0.019 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.47 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 (1) | | | | | | | | | | | | | | | | | |
| | 16-May-23 | 0.036 | <0.0005 | <0.001 | 0.029 | <0.0004 | 0.022 | <0.00009 | <0.005 | <0.0005 | 0.0011 | <0.1 | <0.1 | <0.0005 | 0.016 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.27 | <0.0005 | <0.001 | 0.024 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | 0.0014 | <0.1 | 0.34 | <0.0005 | 0.029 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.29 | <0.0005 | <0.001 | 0.028 | <0.0004 | 0.019 | <0.00009 | <0.005 | <0.0005 | 0.0014 | <0.1 | 0.38 | <0.0005 | 0.05 | <0.0005 | 0.0011 | <0.002 |
| **SW16** | 25-Oct-16 | 0.06 | <0.0001 | 0.0033 | 0.026 | <0.002 | 0.043 | <0.00002 | <0.002 | 0.0005 | <0.002 | 0.2 | 7.37 | 0.00015 | 1.45 | <0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.08 | <0.0001 | <0.0001 | 0.007 | <0.002 | 0.012 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.142 | 0.00004 | 0.021 | 0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.053 | <0.0001 | 0.00028 | 0.00778 | <0.0001 | 0.022 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.047 | 0.078 | <0.0001 | 0.0227 | 0.000095 | <0.0005 | 0.000052 |
| | 14-May-19 | 0.15 | <0.0005 | <0.001 | 0.0069 | <0.0005 | 0.018 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.16 | 0.0057 | 0.024 | 0.0057 | <0.001 | <0.002 |
| | 20-May-20 | 0.052 | <0.0005 | <0.001 | 0.0078 | <0.0005 | 0.03 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.16 | <0.0005 | 0.056 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.42 | <0.0005 | <0.001 | 0.014 | <0.0004 | 0.036 | <0.00009 | <0.005 | <0.0005 | 0.0013 | <0.1 | 1.3 | <0.0005 | 0.39 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW11E (cont'd) | 20-May-20 | | <0.0001 | 0.062 | <0.00005 | 0.0072 | <0.001 | 0.00015 | 0.00074 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.071 | <0.00005 | 0.0072 | <0.001 | 0.00018 | 0.00071 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.081 | <0.00005 | 0.035 | <0.001 | 0.00033 | 0.0037 | 0.011 | 0.0016 | | | |
| | 17-May-23 | | <0.00009 | 0.058 | <0.00005 | <0.005 | <0.001 | 0.00013 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.077 | <0.00005 | 0.0097 | <0.001 | 0.00016 | 0.001 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.071 | <0.00005 | 0.0069 | <0.001 | 0.00015 | 0.00073 | <0.005 | <0.001 | | | |
| SW14 | 24-Oct-16 | | <0.00002 | 0.178 | <0.00005 | <0.005 | 0.01 | 0.0003 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.146 | <0.00005 | 0.005 | <0.01 | 0.00045 | <0.005 | <0.005 | 0.007 | | | |
| | 8-May-18 | | <0.00005 | 0.0951 | <0.00001 | 0.00289 | <0.0001 | 0.000262 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.081 | <0.00005 | 0.01 | <0.001 | 0.00022 | 0.00076 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.091 | <0.00005 | <0.005 | <0.001 | 0.00025 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.12 | <0.00005 | <0.005 | <0.001 | 0.00027 | 0.00059 | <0.005 | <0.001 | | | |
| | 26-May-22 | | <0.00009 | 0.11 | <0.00005 | <0.005 | <0.001 | 0.00028 | 0.00068 | 0.0092 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.093 | <0.00005 | <0.005 | <0.001 | 0.00027 | <0.0005 | 0.0056 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.12 | <0.00005 | 0.0093 | <0.001 | 0.00031 | 0.00096 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.1 | <0.00005 | <0.005 | <0.001 | 0.00029 | <0.0005 | <0.005 | <0.001 | | | |
| SW15 | 24-Oct-16 | | <0.00002 | 0.145 | <0.00005 | <0.005 | 0.01 | 0.00032 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.084 | <0.00005 | <0.005 | <0.01 | 0.00025 | <0.005 | <0.005 | 0.005 | | | |
| | 8-May-18 | | <0.00005 | 0.186 | <0.00001 | 0.00268 | <0.0001 | 0.000422 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.16 | <0.00005 | 0.015 | <0.001 | 0.00045 | 0.00013 | <0.0005 | <0.0001 | | | |
| | 20-May-20 | | <0.0001 | 0.17 | <0.00005 | <0.005 | <0.001 | 0.0005 | 0.00063 | <0.005 | 0.0038 | | | |
| | 27-May-21 | | <0.00009 | 0.2 | <0.00005 | <0.005 | <0.001 | 0.00052 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 (1) | | | | | | | | | | | | | |
| | 16-May-23 | | <0.00009 | 0.2 | <0.00005 | <0.005 | <0.001 | 0.00058 | 0.0006 | 0.036 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.21 | <0.00005 | 0.0086 | <0.001 | 0.00056 | 0.001 | 0.03 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.23 | <0.00005 | 0.01 | <0.001 | 0.00054 | 0.00089 | 0.01 | <0.001 | | | |
| SW16 | 25-Oct-16 | | <0.00002 | 0.221 | <0.00005 | <0.005 | <0.01 | 0.00026 | <0.005 | 0.011 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.103 | <0.00005 | <0.005 | <0.01 | 0.00035 | <0.005 | <0.005 | 0.006 | | | |
| | 8-May-18 | | <0.00005 | 0.113 | <0.00001 | 0.00136 | <0.0001 | 0.000266 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.1 | <0.00005 | <0.005 | <0.001 | 0.00025 | 0.00061 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.11 | <0.00005 | <0.005 | <0.001 | 0.00029 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.17 | <0.00005 | 0.011 | <0.001 | 0.0003 | 0.00088 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| **SW11E (cont'd)** | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW14** | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW15** | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 (1) | | | | | | | | | | |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW16** | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SW16** | 25-May-22 | 7.6 | 471.4 | 10 | | 250 | 8 | | 260 | 1.4 | 1.3 | 71 | 21 | 1.5 | 0.4 | <0.1 | <0.01 | <0.05 | <0.001 | 0.14 | 0.023 | |
| **(cont'd)** | 16-May-23 | | | 60 | | 240 | 7 | | 240 | 2.5 | 4.5 | 71 | 19 | 1.9 | 1.3 | <0.1 | <0.01 | <0.05 | <0.001 | 0.14 | 0.058 | |
| | 28-May-24 | | | <10 | | 290 | 13 | | 270 | <1 | 2.6 | 70 | 21 | 1.4 | 0.46 | <0.1 | <0.01 | <0.05 | | 0.25 | 0.021 | |
| | 27-May-25 | | | <10 | | 240 | 9 | | 230 | 1.4 | 3.2 | 67 | 18 | 1.7 | 0.38 | <0.1 | <0.01 | <0.05 | <0.002 | 0.13 | 0.02 | |
| **SW17** | 25-Oct-16 | 8.29 | 428 | 8 | 228 | 234 | 6 | | 196 | 11.4 | 10 | 56.5 | 22.5 | 7.7 | 1.2 | 0.2 | <0.1 | <0.01 | <0.001 | 0.4 | 0.02 | |
| | 9-May-17 | 8.26 | 399 | 5 | 211 | 215 | 5 | | 199 | 3.4 | 6 | 60 | 15.7 | 2.6 | 0.5 | 0.7 | <0.1 | <0.01 | <0.001 | 0.2 | 0.01 | |
| | 8-May-18 | 8.34 | 389 | <2 | 217 | 219 | 3.2 | 0.86 | 219 | 5.81 | 7.12 | 60.5 | 17 | 4.07 | 0.757 | 0.436 | <0.01 | <0.02 | <0.001 | <0.15 | 0.0114 | |
| | 14-May-19 | | | <10 | | 220 | 3 | | 200 | 7.1 | 7.5 | 59 | 16 | 4.3 | 0.67 | 0.26 | <0.01 | 0.05 | 0.002 | 0.13 | 0.008 | |
| | 20-May-20 | | | 10 | 210 | 230 | 4 | 0.2 | 240 | 3.7 | 5.9 | 74 | 16 | 2.2 | 0.58 | 0.16 | <0.01 | <0.05 | <0.001 | <0.1 | <0.02 | |
| | 26-May-21 | | | <10 | 235.4 | 230 | 7 | | 230 | 8.2 | 8.6 | 63 | 19 | | | 0.19 | <0.01 | <0.05 | <0.003 | 0.12 | 0.017 | |
| | 25-May-22 | 8.1 | 444.4 | 17 | | 220 | 5 | | 230 | 7.1 | 7.2 | 62 | 19 | 4.4 | 0.76 | 0.23 | <0.01 | <0.05 | <0.002 | 0.13 | 0.021 | |
| | 16-May-23 | | | <10 | | 250 | 4 | | 230 | 5.2 | 7.4 | 66 | 20 | 4.4 | 0.67 | 0.2 | <0.01 | <0.05 | <0.002 | 0.1 | 0.007 | |
| | 27-May-24 | | | 14 | | 240 | 5 | | 220 | 6.7 | 6.9 | 55 | 20 | 4.9 | 0.68 | 0.15 | <0.01 | <0.05 | <0.001 | 0.12 | 0.015 | |
| | 27-May-25 | | | 10 | | 230 | 5 | | 220 | 5.3 | 5.7 | 62 | 18 | 3.9 | 0.75 | 0.15 | <0.01 | <0.05 | <0.003 | 0.1 | 0.005 | |
| **SW17A** | 25-Oct-16 | 8.41 | 443 | 8 | 244 | 263 | 5 | | 229 | 2.9 | 7 | 71.1 | 20.8 | 1.6 | 1.1 | 0.6 | <0.1 | 0.01 | <0.001 | 0.2 | 0.01 | |
| | 9-May-17 | 8.38 | 377 | 7 | 203 | 210 | 4 | | 195 | 1.7 | 3 | 60.7 | 14.2 | 1 | 0.7 | 1 | <0.1 | <0.01 | <0.001 | 0.2 | 0.01 | |
| | 8-May-18 | 8.39 | 370 | 7.6 | 230 | 214 | 3.4 | 2.56 | 216 | 3.2 | 3.9 | 62.6 | 14.9 | 1.77 | 0.916 | 0.828 | <0.01 | 0.064 | 0.003 | <0.15 | 0.009 | |
| | 14-May-19 | | | <10 | | 240 | <2 | | 220 | 3.6 | 4.1 | 68 | 17 | 1.3 | 0.85 | 0.75 | 3.6 | <0.05 | <0.002 | <0.1 | <0.02 | |
| | 20-May-20 | | | 11 | 220 | 240 | 2 | 0.3 | 240 | 3.6 | 5.4 | 72 | 19 | 1.5 | 0.91 | 0.72 | <0.01 | <0.05 | <0.002 | 0.16 | <0.02 | |
| | 26-May-21 | | | <10 | 240.19 | 240 | 4 | | 240 | 3.5 | 5 | 71 | 19 | | | 0.6 | <0.01 | <0.05 | <0.002 | <0.1 | 0.013 | |
| | 26-May-22 | 8.29 | 453.4 | 28 | | 250 | 4 | | 250 | 11 | 10 | 78 | 19 | 6.6 | 0.8 | 0.29 | <0.01 | <0.05 | <0.002 | <0.1 | 0.043 | |
| | 16-May-23 | | | <10 | | 270 | 3 | | 240 | 3.8 | 4.4 | 71 | 19 | 1.4 | 0.9 | 0.53 | <0.01 | <0.05 | <0.002 | <0.1 | <0.004 | |
| | 27-May-24 | | | 19 | | 260 | 5 | | 240 | 2.4 | 4 | 69 | 20 | 1.5 | 0.88 | 0.48 | <0.01 | <0.05 | <0.001 | 0.1 | 0.012 | |
| | 27-May-25 | | | <10 | | 250 | 9 | | 230 | 2.4 | 3.4 | 71 | 19 | 1.5 | 0.87 | 0.45 | <0.01 | <0.05 | <0.003 | <0.1 | 0.004 | |
| **SW18** | 24-Oct-16 | 8.42 | 494 | 4 | 261 | 257 | 10 | | 253 | 4.4 | 10 | 68.6 | 20.8 | 2.8 | 0.8 | 0.2 | 0.2 | 0.04 | 0.001 | 0.2 | <0.01 | |
| | 9-May-17 | 8.39 | 395 | 5 | 219 | 240 | 5 | | 206 | 1.4 | 4 | 69.5 | 16 | 1.4 | 0.7 | 0.6 | <0.1 | <0.01 | <0.001 | 0.2 | 0.01 | |
| | 8-May-18 | 8.41 | 379 | 7.1 | 229 | 222 | 8.2 | 3.39 | 231 | 2.5 | 4.06 | 63.7 | 15.8 | 1.58 | 0.835 | 0.564 | <0.01 | 0.065 | 0.003 | <0.15 | 0.0081 | |
| | 14-May-19 | | | <10 | | 230 | 3 | | 220 | 3.1 | 4.9 | 63 | 16 | 1.5 | 0.69 | 0.35 | <0.01 | <0.05 | <0.002 | 0.13 | <0.02 | |
| | 20-May-20 | | | <10 | 225 | 230 | 3 | 0.4 | 230 | 3.4 | 6.3 | 69 | 17 | 2 | 0.69 | 0.33 | <0.01 | <0.05 | <0.002 | 0.15 | <0.02 | |
| | 27-May-21 | | | 13 | 237.6 | 250 | 3 | | 240 | 3.8 | 5.1 | 72 | 21 | | | 0.3 | <0.01 | <0.05 | <0.001 | 0.11 | 0.007 | |
| | 26-May-22 | 8.15 | 445.8 | <10 | | 230 | 5 | | 230 | 2.8 | 4.7 | 68 | 19 | 2 | 0.69 | 0.25 | <0.01 | <0.05 | <0.002 | <0.1 | 0.007 | |
| | 16-May-23 | | | <10 | | 270 | 4 | | 230 | 2 | 5 | 72 | 19 | 1.9 | 0.71 | 0.25 | <0.01 | <0.05 | | 0.12 | 0.007 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SW16** | 25-May-22 | 0.11 | <0.0005 | <0.001 | 0.0095 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.48 | <0.0005 | 0.2 | <0.0005 | <0.001 | <0.002 |
| **(cont'd)** | 16-May-23 | 2.8 | <0.0005 | 0.0012 | 0.023 | <0.0004 | 0.027 | <0.00009 | <0.005 | 0.0015 | 0.0058 | <0.1 | 3.5 | 0.0016 | 0.21 | <0.0005 | 0.0034 | <0.002 |
| | 28-May-24 | 0.01 | <0.0005 | <0.001 | 0.0096 | <0.0004 | 0.037 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.63 | <0.0005 | 0.4 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.058 | <0.0005 | <0.001 | 0.0081 | <0.0004 | 0.024 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.4 | <0.0005 | 0.15 | <0.0005 | <0.001 | <0.002 |
| **SW17** | 25-Oct-16 | 0.05 | <0.0001 | 0.0005 | 0.01 | <0.002 | 0.057 | <0.00002 | 0.01 | 0.0002 | <0.002 | 0.2 | 0.29 | 0.00015 | 0.077 | 0.0013 | <0.01 | <0.001 |
| | 9-May-17 | 0.04 | <0.0001 | <0.0001 | 0.008 | <0.002 | 0.01 | <0.000014 | 0.005 | <0.0001 | <0.002 | <0.1 | 0.046 | <0.00002 | 0.006 | 0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.036 | <0.0001 | 0.00021 | 0.00992 | <0.0001 | 0.024 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.046 | <0.05 | <0.0001 | 0.00871 | 0.000146 | <0.0005 | 0.000054 |
| | 14-May-19 | 0.041 | <0.0005 | <0.001 | 0.009 | <0.0005 | 0.024 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.015 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.092 | <0.0005 | <0.001 | 0.012 | <0.0005 | 0.031 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.25 | <0.0005 | 0.043 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.15 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.033 | <0.00009 | <0.005 | <0.0005 | 0.00091 | <0.1 | 0.2 | <0.0005 | 0.037 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.23 | <0.0005 | <0.001 | 0.011 | <0.0004 | 0.029 | <0.00009 | <0.005 | <0.0005 | 0.0014 | <0.1 | 0.32 | <0.0005 | 0.049 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.085 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.027 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.1 | <0.0005 | 0.016 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.13 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.033 | <0.00009 | <0.005 | <0.0005 | 0.001 | <0.1 | 0.24 | <0.0005 | 0.05 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.11 | <0.0005 | <0.001 | 0.01 | <0.0004 | 0.025 | <0.00009 | <0.005 | <0.0005 | 0.0012 | <0.1 | 0.18 | <0.0005 | 0.032 | <0.0005 | <0.001 | <0.002 |
| **SW17A** | 25-Oct-16 | 0.05 | <0.0001 | 0.0002 | 0.01 | <0.002 | 0.01 | <0.00002 | <0.002 | 0.0002 | <0.002 | <0.1 | 0.152 | 0.00011 | 0.055 | 0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.06 | <0.0001 | <0.0001 | 0.009 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.085 | 0.00023 | 0.01 | 0.0005 | <0.01 | <0.001 |
| | 8-May-18 | 0.052 | <0.0001 | 0.00016 | 0.01 | <0.0001 | 0.011 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.039 | 0.074 | 0.00011 | 0.00973 | 0.000087 | <0.0005 | <0.00005 |
| | 14-May-19 | 0.033 | <0.0005 | <0.001 | 0.00092 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | <0.0054 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.076 | <0.0005 | <0.001 | 0.011 | <0.0005 | 0.013 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.012 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.08 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.13 | <0.0005 | 0.015 | <0.0005 | <0.001 | <0.002 |
| | 26-May-22 | 0.21 | <0.0005 | <0.001 | 0.015 | <0.0004 | 0.049 | <0.00009 | <0.005 | <0.0005 | 0.0018 | <0.1 | 0.31 | <0.0005 | 0.027 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.053 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0098 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.19 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.00095 | <0.1 | 0.31 | <0.0005 | 0.034 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.051 | <0.0005 | <0.001 | 0.012 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.012 | <0.0005 | <0.001 | <0.002 |
| **SW18** | 24-Oct-16 | 0.03 | <0.0001 | 0.0002 | 0.012 | <0.002 | 0.026 | <0.00002 | <0.002 | 0.0001 | <0.002 | 0.1 | 0.014 | <0.00002 | 0.004 | <0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.07 | <0.0001 | <0.0001 | 0.011 | <0.002 | 0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.086 | 0.00006 | 0.018 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.135 | <0.0001 | 0.0002 | 0.0119 | <0.0001 | 0.014 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.042 | 0.203 | 0.00017 | 0.038 | 0.000093 | 0.00053 | 0.000053 |
| | 14-May-19 | 0.063 | <0.0005 | <0.001 | 0.01 | <0.0005 | 0.014 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.016 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.057 | <0.0005 | <0.001 | 0.013 | <0.0005 | 0.025 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.023 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.046 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.017 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.11 | <0.0005 | 0.036 | <0.0005 | <0.001 | <0.002 |
| | 26-May-22 | 0.057 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.021 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.13 | <0.0005 | 0.031 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.092 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.016 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.022 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW16 (cont'd) | 25-May-22 | | <0.00009 | 0.16 | <0.00005 | <0.005 | <0.001 | 0.00028 | <0.0005 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.14 | <0.00005 | 0.046 | <0.001 | 0.0004 | 0.0045 | 0.009 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.17 | <0.00005 | <0.005 | <0.001 | 0.00026 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.14 | <0.00005 | <0.005 | <0.001 | 0.00028 | <0.0005 | <0.005 | <0.001 | | | |
| SW17 | 25-Oct-16 | | <0.00002 | 0.508 | <0.00005 | <0.005 | 0.01 | 0.00018 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.276 | <0.00005 | <0.005 | <0.01 | 0.00023 | <0.005 | 0.007 | 0.007 | | | |
| | 8-May-18 | | <0.00005 | 0.378 | <0.00001 | 0.00072 | <0.0001 | 0.000217 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.38 | <0.00005 | <0.005 | <0.001 | 0.00021 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.24 | <0.00005 | 0.0053 | <0.001 | 0.00032 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.46 | <0.00005 | 0.005 | <0.001 | 0.00023 | 0.00051 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.41 | <0.00005 | 0.0058 | <0.001 | 0.00019 | 0.00073 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.39 | <0.00005 | <0.005 | <0.001 | 0.0002 | 0.00052 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.39 | <0.00005 | <0.005 | <0.001 | 0.00019 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.4 | <0.00005 | <0.005 | <0.001 | 0.00027 | <0.0005 | <0.005 | <0.001 | | | |
| SW17A | 25-Oct-16 | | <0.00002 | 0.118 | <0.0005 | <0.005 | <0.01 | 0.00015 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.071 | <0.00005 | <0.005 | 0.02 | 0.00014 | <0.005 | <0.005 | 0.007 | | | |
| | 8-May-18 | | <0.00005 | 0.137 | <0.00001 | 0.00187 | <0.0001 | 0.000152 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.082 | <0.00005 | <0.0005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.086 | <0.00005 | 0.00056 | <0.001 | 0.00016 | 0.00051 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.095 | <0.00005 | <0.005 | <0.001 | 0.00016 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-22 | | <0.00009 | 0.65 | <0.00005 | 0.0061 | <0.001 | 0.00023 | 0.00062 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.09 | <0.00005 | <0.005 | <0.001 | 0.00016 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.1 | <0.00005 | 0.0062 | <0.001 | 0.00015 | 0.00051 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.099 | <0.00005 | <0.005 | <0.001 | 0.00016 | <0.0005 | <0.005 | <0.001 | | | |
| SW18 | 24-Oct-16 | | <0.00002 | 0.244 | <0.00005 | <0.005 | 0.02 | 0.00026 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.134 | <0.00005 | <0.005 | <0.01 | 0.00023 | <0.005 | 0.007 | 0.006 | | | |
| | 8-May-18 | | <0.00005 | 0.142 | <0.00001 | 0.00343 | <0.0001 | 0.000191 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.14 | <0.00005 | <0.005 | <0.001 | 0.00022 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.16 | <0.00005 | <0.005 | <0.001 | 0.00024 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.18 | <0.00005 | <0.005 | <0.001 | 0.00016 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-22 | | <0.00009 | 0.18 | <0.00005 | <0.005 | <0.001 | 0.0002 | <0.0005 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.17 | <0.00005 | <0.005 | <0.001 | 0.00021 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| **SW16 (cont'd)** | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW17** | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW17A** | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| **SW18** | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | General Parameters | | | | | | | Major Ions | | | | | | | Nutrients and Organic Indicators | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | PWQO | 6.5 - 8.5 | nc | nc | nc | nc | nc | *b* | *c* | nc | nc | nc | nc | nc | nc | nc | nc | nc | 0.02 *d* | nc | 0.03 *i e* | 0.001 |
| **SW18** | 27-May-24 | | | 48 | | 260 | 7 | | 240 | 2.7 | 4 | 70 | 20 | 1.9 | 0.87 | 0.23 | <0.01 | <0.05 | | 0.13 | 0.028 | |
| **(cont'd)** | 27-May-25 | | | <10 | | 250 | 4 | | 240 | 1.8 | 3.9 | 73 | 18 | 1.8 | 0.6 | 0.17 | <0.01 | <0.05 | | 0.1 | 0.004 | |
| **SW21C** | 24-Oct-16 | 8.42 | 445 | 12 | 233 | 236 | 3 | | 225 | 2.2 | 6 | 57.9 | 22.3 | 0.9 | 0.3 | 1.8 | 0.2 | 0.01 | <0.001 | 0.2 | <0.01 | |
| | 8-May-17 | 8.37 | 379 | 12 | 198 | 202 | 5 | | 189 | 1.5 | 4 | 55.9 | 15.2 | 0.9 | 0.3 | 1.6 | <0.1 | <0.01 | <0.001 | 2 | 0.02 | |
| | 9-May-18 | 8.39 | 376 | 6.9 | 234 | 221 | 9.7 | 2.01 | 211 | 2.31 | 3.85 | 61.3 | 17.3 | 0.89 | 0.376 | 1.86 | <0.01 | <0.02 | <0.001 | <0.15 | 0.0134 | |
| | 16-May-19 | | | <10 | | 230 | 2 | | 210 | 2 | 4.1 | 61 | 17 | 0.91 | 0.36 | 1.26 | <0.01 | <0.05 | <0.002 | 0.13 | 0.007 | |
| | 20-May-20 | | | <10 | 220 | 220 | 2 | 0.3 | 220 | 1.6 | 4.7 | 60 | 19 | 0.85 | 0.39 | 1.09 | <0.01 | <0.05 | <0.001 | 0.16 | <0.02 | |
| | 26-May-21 | | | 10 | 221.1 | 230 | 4 | | 230 | 2.2 | 4.1 | 68 | 20 | | | 0.61 | <0.01 | <0.05 | <0.001 | <0.1 | 0.08 | |
| | 25-May-22 | 8.3 | 423.5 | <10 | | 220 | <2 | | 230 | 1.3 | 3.9 | 62 | 21 | 0.78 | 0.33 | 0.46 | <0.01 | <0.05 | <0.002 | 0.14 | 0.15 | |
| | 17-May-23 | | | <10 | | 260 | <2 | | 230 | <1 | 3 | 64 | 20 | 0.76 | 0.33 | 0.33 | <0.01 | <0.05 | <0.002 | <0.1 | 0.006 | |
| | 28-May-24 | | | <10 | | 260 | 2 | | 240 | <1 | 2.4 | 63 | 21 | 0.78 | 0.34 | 0.29 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 28-May-25 | | | 11 | | 240 | <2 | | 240 | <1 | 2.3 | 65 | 19 | 0.77 | 0.35 | 0.27 | <0.01 | <0.05 | <0.003 | <0.1 | 0.006 | |
| **SW24A** | 25-Oct-16 | 8.35 | 533 | 46 | 294 | 290 | 13 | | 234 | 17.5 | 19 | 79.8 | 22 | 11.6 | 1.5 | 0.3 | <0.1 | <0.01 | <0.001 | 0.3 | 0.03 | |
| | 9-May-17 | 8.3 | 388 | 5 | 208 | 223 | 5 | | 194 | 1.5 | 4 | 61.9 | 16.7 | 0.8 | 0.3 | 1.4 | <0.1 | <0.01 | <0.001 | 0.2 | 0.01 | |
| | 8-May-18 | 8.34 | 398 | 35.8 | 232 | 223 | 15.4 | 13.2 | 233 | 5.18 | 6.33 | 67.3 | 15.4 | 3.89 | 0.71 | 0.264 | <0.01 | <0.02 | <0.001 | <0.15 | 0.0085 | |
| | 16-May-19 | | | <10 | | 230 | 3 | | 220 | 6.7 | 7.7 | 70 | 15 | 4 | 0.68 | 0.25 | <0.01 | <0.05 | <0.002 | <0.1 | 0.008 | |
| | 20-May-20 | | | <10 | 220 | 230 | 4 | 0.5 | 230 | 10 | 10 | 70 | 16 | 5.9 | 0.79 | 0.3 | <0.01 | 0.061 | 0.002 | 0.15 | 0.02 | |
| | 26-May-21 | | | 14 | | 260 | 6 | | 260 | 11 | 11 | 79 | 18 | | | 0.24 | <0.01 | <0.05 | | <0.1 | 0.025 | |
| | 25-May-22 | 8.18 | 476.4 | <10 | | 230 | 3 | | 240 | 3.2 | 4.9 | 69 | 20 | 1.4 | 0.78 | 0.53 | <0.01 | <0.05 | <0.001 | 0.21 | 0.01 | |
| | 16-May-23 | | | <10 | | 290 | 3 | | 250 | 11 | 9.9 | 73 | 19 | 7.3 | 0.85 | 0.32 | <0.01 | <0.05 | <0.001 | <0.1 | 0.007 | |
| | 27-May-24 | | | <10 | | 270 | 6 | | 250 | 12 | 11 | 70 | 21 | 9 | 1.1 | 0.54 | <0.01 | <0.05 | <0.001 | <0.1 | 0.014 | |
| | 27-May-25 | | | 14 | | 250 | 3 | | 240 | 7.6 | 7.6 | 70 | 18 | 5.5 | 0.85 | 0.44 | <0.01 | <0.05 | <0.002 | <0.1 | 0.012 | |
| **SW77** | 25-Oct-16 | 8.32 | 460 | 184 | 285 | 345 | <2 | | 233 | 2.2 | 7 | 108 | 18.1 | 1.3 | 0.6 | 1.5 | <0.1 | 0.01 | <0.001 | 5.4 | 0.81 | |
| | 9-May-17 | 8.16 | 398 | 38 | 207 | 209 | 3 | | 195 | 2.8 | 3 | 62.2 | 12.9 | 1 | <0.1 | 1.9 | <0.1 | <0.01 | <0.001 | 0.2 | 0.02 | |
| | 8-May-18 | 8.23 | 400 | <2 | 248 | 226 | <2 | 0.26 | 230 | 3.85 | 2.99 | 72.5 | 13.3 | 1.26 | 0.207 | 2.34 | <0.01 | 0.024 | <0.001 | <0.15 | 0.0045 | |
| | 14-May-19 | | | <10 | | 240 | <2 | | 220 | 3.6 | 3.6 | 69 | 13 | 1.1 | <0.2 | 1.44 | <0.01 | <0.05 | <0.001 | <0.1 | <0.02 | |
| | 19-May-20 | | | <10 | 315 | 230 | <2 | <0.1 | 230 | 1.7 | 3.7 | 70 | 14 | 1.2 | 0.29 | 0.95 | <0.01 | <0.05 | <0.001 | <0.1 | <0.02 | |
| | 27-May-21 | | | 180 | 235.95 | 260 | <2 | | 240 | 1.7 | 4.2 | 78 | 14 | | | 0.7 | <0.01 | <0.05 | <0.001 | 0.11 | 0.053 | |
| | 25-May-22 | 8.12 | 444.3 | <10 | | 240 | <2 | | 250 | 1.2 | 3.6 | 78 | 15 | 1.2 | 0.28 | 0.52 | <0.01 | <0.05 | <0.001 | <0.1 | 0.013 | |
| | 16-May-23 | | | <10 | | 250 | <2 | | 240 | <1 | 3.5 | 75 | 14 | 1.3 | 0.26 | 0.46 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 27-May-24 | | | 80 | | 280 | 3 | | 260 | <1 | 2.4 | 78 | 15 | 1.2 | 0.3 | 0.36 | <0.01 | <0.05 | <0.001 | <0.1 | 0.041 | |
| | 27-May-25 | | | <10 | | 250 | <2 | | 250 | <1 | 2.4 | 80 | 15 | 1.3 | 0.29 | 0.29 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum Al | Antimony Sb | Arsenic As | Barium Ba | Beryllium Be | Boron B | Cadmium Cd | Chromium Cr | Cobalt Co | Copper Cu | Fluoride F | Iron Fe | Lead Pb | Manganese Mn | Molybdenum Mo | Nickel Ni | Selenium Se |
| | PWQO | 0.075 *i* | 0.02 *i* | 0.1 *i* | nc | 1.1 | 0.2 | 0.0005 *i* | 0.0089 | 0.0009 | 0.005 *i* | nc | 0.3 | 0.005 *i* | nc | 0.04 | 0.025 | 0.1 |
| **SW18** | 27-May-24 | 0.69 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.023 | <0.00009 | <0.005 | <0.0005 | 0.0017 | <0.1 | 1.1 | 0.00067 | 0.14 | <0.0005 | <0.001 | <0.002 |
| **(cont'd)** | 27-May-25 | 0.05 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.013 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.025 | <0.0005 | <0.001 | <0.002 |
| **SW21C** | 24-Oct-16 | 0.03 | <0.0001 | 0.0001 | 0.005 | <0.002 | <0.005 | <0.00002 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.021 | 0.00006 | 0.002 | <0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.07 | <0.0001 | 0.0002 | 0.005 | <0.002 | 0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.096 | 0.00015 | 0.004 | <0.0001 | <0.01 | <0.001 |
| | 9-May-18 | 0.082 | <0.0001 | 0.00018 | 0.00557 | <0.0001 | <0.01 | <0.00001 | <0.0005 | <0.0001 | <0.001 | 0.034 | 0.076 | 0.00013 | 0.00279 | <0.00005 | <0.0005 | <0.00005 |
| | 16-May-19 | 0.032 | <0.0005 | <0.001 | 0.0052 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.072 | <0.0005 | <0.001 | 0.0052 | <0.0005 | 0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0039 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.68 | <0.0005 | <0.001 | 0.0093 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | 0.0013 | <0.1 | 0.77 | 0.0012 | 0.037 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.1 | <0.0005 | <0.001 | 0.0057 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.0066 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.053 | <0.0005 | <0.001 | 0.0056 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | 0.0018 | 0.003 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.07 | <0.0005 | <0.001 | 0.0058 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0057 | <0.0005 | <0.001 | <0.002 |
| | 28-May-25 | 0.16 | <0.0005 | <0.001 | 0.0058 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.16 | <0.0005 | 0.0074 | <0.0005 | <0.001 | <0.002 |
| **SW24A** | 25-Oct-16 | 0.07 | <0.0001 | 0.0002 | 0.015 | <0.002 | 0.079 | <0.00002 | <0.002 | 0.0003 | <0.002 | 0.2 | 0.123 | 0.00022 | 0.052 | 0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.08 | <0.0001 | <0.0001 | 0.006 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.089 | 0.00012 | 0.012 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.173 | <0.0001 | 0.00022 | 0.0123 | <0.0001 | 0.025 | <0.00001 | <0.0005 | 0.00012 | 0.0014 | 0.05 | 0.226 | 0.0002 | 0.0155 | 0.000143 | <0.0005 | 0.000059 |
| | 16-May-19 | 0.067 | <0.0005 | <0.001 | 0.012 | <0.0005 | 0.024 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0052 | <0.0005 | <0.001 | <0.002 |
| | 20-May-20 | 0.1 | <0.0005 | <0.001 | 0.014 | <0.0005 | 0.049 | <0.0001 | <0.005 | <0.0005 | 0.0021 | <0.1 | 0.14 | <0.0005 | 0.0091 | <0.0005 | <0.001 | <0.002 |
| | 26-May-21 | 0.21 | <0.0005 | <0.001 | 0.016 | <0.0004 | 0.046 | <0.00009 | <0.005 | <0.0005 | 0.0017 | <0.1 | 0.29 | <0.0005 | 0.028 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.054 | <0.0005 | <0.001 | 0.011 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.011 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.041 | <0.0005 | <0.001 | 0.012 | <0.0004 | 0.036 | <0.00009 | <0.005 | <0.0005 | 0.0012 | <0.1 | <0.1 | <0.0005 | 0.0071 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.12 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.059 | <0.00009 | <0.005 | <0.0005 | 0.0022 | <0.1 | 0.19 | <0.0005 | 0.025 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.12 | <0.0005 | <0.001 | 0.013 | <0.0004 | 0.028 | <0.00009 | <0.005 | <0.0005 | 0.0024 | <0.1 | 0.17 | <0.0005 | 0.018 | <0.0005 | <0.001 | <0.002 |
| **SW77** | 25-Oct-16 | 0.92 | <0.0001 | 0.0005 | 0.026 | <0.002 | 0.006 | 0.00008 | <0.002 | 0.001 | 0.005 | <0.1 | 1.33 | 0.00289 | 0.381 | <0.0001 | <0.01 | <0.001 |
| | 9-May-17 | 0.07 | <0.0001 | <0.0001 | 0.006 | <0.002 | <0.005 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.051 | 0.00006 | 0.005 | <0.0001 | <0.01 | <0.001 |
| | 8-May-18 | <0.01 | <0.0001 | <0.0001 | 0.00706 | <0.0001 | <0.01 | <0.00001 | 0.00077 | <0.0001 | <0.001 | 0.035 | <0.05 | <0.0001 | 0.00106 | <0.00005 | <0.0005 | <0.00005 |
| | 14-May-19 | 0.017 | <0.0005 | <0.001 | 0.0064 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.036 | <0.0005 | <0.001 | 0.0074 | <0.0005 | <0.01 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | <0.1 | <0.0005 | 0.0025 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.042 | <0.0005 | <0.001 | 0.0079 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0045 | <0.0005 | <0.001 | <0.002 |
| | 25-May-22 | 0.096 | <0.0005 | <0.001 | 0.0084 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.13 | <0.0005 | 0.0068 | <0.0005 | <0.001 | <0.002 |
| | 16-May-23 | 0.0095 | <0.0005 | <0.001 | 0.0074 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |
| | 27-May-24 | 0.23 | <0.0005 | <0.001 | 0.0093 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.3 | <0.0005 | 0.016 | 0.0017 | <0.001 | <0.002 |
| | 27-May-25 | 0.014 | <0.0005 | <0.001 | 0.0077 | <0.0004 | <0.01 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | <0.002 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| SW18 | 27-May-24 | | <0.00009 | 0.18 | <0.00005 | 0.015 | <0.001 | 0.00024 | 0.0015 | <0.005 | <0.001 | | | |
| (cont'd) | 27-May-25 | | <0.00009 | 0.17 | <0.00005 | <0.005 | <0.001 | 0.00022 | <0.0005 | <0.005 | <0.001 | | | |
| SW21C | 24-Oct-16 | | <0.00002 | 0.063 | <0.00005 | <0.005 | <0.01 | 0.00007 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00006 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-18 | | <0.00005 | 0.067 | <0.00001 | <0.002 | <0.0001 | 0.000059 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.06 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.06 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.067 | <0.00005 | 0.017 | <0.001 | <0.0001 | 0.0011 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.064 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.064 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.067 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-25 | | <0.00009 | 0.066 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| SW24A | 25-Oct-16 | | <0.00002 | 0.872 | <0.00005 | <0.005 | 0.01 | 0.00026 | <0.005 | <0.005 | 0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.064 | <0.00005 | <0.005 | <0.01 | 0.0001 | <0.005 | <0.005 | 0.008 | | | |
| | 8-May-18 | | <0.00005 | 0.456 | <0.00001 | 0.00357 | <0.0001 | 0.000195 | <0.0005 | <0.003 | <0.0003 | | | |
| | 16-May-19 | | <0.0001 | 0.44 | <0.00005 | <0.005 | <0.001 | 0.00018 | <0.0005 | <0.005 | <0.001 | | | |
| | 20-May-20 | | <0.0001 | 0.53 | <0.00005 | <0.005 | <0.001 | 0.00021 | <0.0005 | <0.005 | <0.001 | | | |
| | 26-May-21 | | <0.00009 | 0.65 | <0.00005 | 0.0073 | <0.001 | 0.00024 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.092 | <0.00005 | <0.005 | <0.001 | 0.00014 | <0.0005 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.66 | <0.00005 | <0.005 | <0.001 | 0.00023 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.75 | <0.00005 | <0.005 | <0.001 | 0.00024 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.61 | <0.00005 | <0.005 | <0.001 | 0.00024 | <0.0005 | <0.005 | <0.001 | | | |
| SW77 | 25-Oct-16 | | <0.00002 | 0.147 | <0.00005 | 0.009 | <0.01 | 0.00015 | <0.005 | 0.01 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.077 | <0.00005 | <0.005 | <0.01 | 0.00008 | <0.005 | <0.005 | 0.006 | | | |
| | 8-May-18 | | <0.00005 | 0.0994 | <0.00001 | 0.00036 | <0.0001 | 0.000085 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.091 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.094 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.1 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 25-May-22 | | <0.00009 | 0.1 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 16-May-23 | | <0.00009 | 0.093 | <0.00005 | <0.005 | <0.001 | <0.0001 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-24 | | <0.00009 | 0.11 | <0.00005 | 0.0099 | <0.001 | 0.00011 | 0.00058 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.11 | <0.00005 | <0.005 | <0.001 | 0.0001 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| SW18 | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| (cont'd) | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW21C | 24-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW24A | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 16-May-19 | | | | | | | | <100 | <200 | <200 |
| | 20-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 26-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| SW77 | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 25-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 16-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | *General Parameters* | | | | | | | *Major Ions* | | | | | | | *Nutrients and Organic Indicators* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH (SU) | EC (µS/cm) | T S S | T D S | Hardness | Colour (TCU) | Turbidity (NTU) | Alkalinity | Chloride Cl | Sulphate $SO_4$ | Calcium Ca | Magnesium Mg | Sodium Na | Potassium K | Nitrate $NO_3$ | Nitrite $NO_2$ | Ammonia $NH_3$ | Un-ionized Ammonia | T K N | T P P | Phenols |
| | **PWQO** | **6.5 - 8.5** | nc | nc | nc | nc | nc | ***b*** | ***c*** | nc | nc | nc | nc | nc | nc | nc | nc | nc | **0.02** ***d*** | nc | **0.03** ***i e*** | **0.001** |
| **PR Control** | 25-Oct-16 | 8.4 | 456 | <3 | 245 | 261 | 10 | | 225 | 4.1 | 11 | 65.5 | 23.6 | 3 | 1.3 | 0.3 | <0.1 | <0.01 | <0.001 | 1 | 0.01 | |
| | 8-May-17 | 8.46 | 408 | 10 | 216 | 226 | 8 | | 208 | 1.7 | 5 | 61.5 | 17.5 | 1.7 | 0.7 | 0.5 | <0.1 | <0.01 | <0.001 | 2 | 0.02 | |
| | 8-May-18 | 8.43 | 398 | 5.7 | 245 | 233 | 9.7 | 3.58 | 250 | 2.47 | 6.98 | 64.5 | 18.6 | | 0.869 | 0.447 | <0.01 | 0.101 | 0.004 | <0.15 | 0.0071 | |
| | 14-May-19 | | | <10 | | 250 | 8 | | 210 | 2.9 | 7.6 | 60 | 17 | 1.5 | 0.77 | <0.01 | 0.36 | <0.05 | <0.002 | 0.11 | 0.009 | |
| | 19-May-20 | 8.31 | 430 | 18 | 285 | 220 | 4 | 0.9 | 220 | 3 | 7.6 | 62 | 17 | 1.8 | 0.99 | 0.39 | <0.01 | <0.05 | | 0.12 | <0.02 | |
| | 27-May-21 | | | <10 | 232.1 | 240 | <2 | | 230 | 3.9 | 8.5 | 64 | 21 | | | 0.41 | <0.01 | <0.05 | <0.002 | 0.18 | 0.008 | |
| | 24-May-22 | 8.25 | 434.4 | 10 | | 240 | 5 | | 230 | 3.7 | 8.1 | 62 | 21 | 2.2 | 0.98 | 0.45 | <0.01 | <0.05 | <0.002 | <0.1 | 0.009 | |
| | 17-May-23 | | | <10 | | 260 | 5 | | 240 | 2.4 | 7.5 | 65 | 20 | 2 | 0.89 | 0.34 | <0.01 | <0.05 | <0.002 | <0.1 | 0.004 | |
| | 28-May-24 | | | 15 | | 250 | 4 | | 240 | 2.8 | 7.2 | 64 | 21 | 2.3 | 0.99 | 0.43 | <0.01 | <0.05 | <0.001 | <0.1 | <0.004 | |
| | 27-May-25 | | | <10 | | 250 | 4 | | 230 | 3.2 | 6.7 | 67 | 19 | 2.1 | 0.94 | 0.37 | <0.01 | <0.05 | <0.003 | <0.1 | 0.004 | |
| **BC Control** | 25-Oct-16 | 8.26 | 714 | <3 | 406 | 362 | 20 | | 228 | 57.1 | 61 | 105 | 24.2 | 15.4 | 3.5 | 0.5 | <0.1 | <0.01 | <0.001 | 0.2 | 0.02 | |
| | 9-May-17 | 8.32 | 429 | 9 | 231 | 237 | 13 | | 199 | 8.3 | 6 | 70.1 | 15 | 4 | 0.8 | 1.6 | <0.1 | <0.01 | <0.001 | 9 | 0.02 | |
| | 8-May-18 | 8.36 | 446 | 6.7 | 269 | 247 | 15.6 | 4.4 | 240 | 11.3 | 6.31 | 70.6 | 15.7 | 5.08 | 1.14 | 0.83 | <0.01 | 0.033 | 0.001 | <0.15 | 0.011 | |
| | 14-May-19 | | | <10 | | 220 | 15 | | 200 | 12 | <1 | 62 | 14 | 5.4 | 0.84 | 0.48 | <0.01 | <0.05 | <0.002 | 0.25 | 0.014 | |
| | 19-May-20 | 8.27 | 450 | 13 | 315 | 210 | 17 | 1.7 | 210 | 14 | 1.9 | 63 | 14 | 6.2 | 0.9 | 0.51 | <0.01 | <0.05 | | 0.2 | <0.02 | |
| | 27-May-21 | | | <10 | 279.95 | 280 | 7 | | 260 | 16 | 8.7 | 81 | 19 | | | 0.84 | <0.01 | <0.05 | <0.003 | 0.23 | 0.012 | |
| | 24-May-22 | 8.27 | 440.6 | 10 | | 290 | 8 | | 260 | 17 | 14 | 84 | 19 | 6.3 | 1.2 | 0.91 | <0.01 | <0.05 | <0.002 | <0.1 | 0.017 | |
| | 17-May-23 | | | 10 | | 300 | 11 | | 250 | 19 | 10 | 76 | 18 | 7.8 | 0.93 | 0.49 | <0.01 | <0.05 | <0.002 | 0.17 | 0.007 | |
| | 28-May-24 | | | 20 | | 290 | 22 | | 270 | 18 | 7.4 | 83 | 20 | 9.7 | 0.93 | 0.57 | <0.01 | <0.05 | <0.001 | 0.18 | 0.019 | |
| | 27-May-25 | | | <10 | | 280 | 10 | | 250 | 14 | 7.9 | 84 | 18 | 7.5 | 1 | 0.8 | <0.01 | <0.05 | <0.004 | 0.1 | 0.004 | |

## Table C-4 Surface Water Laboratory Chemical Results



| Surface Water Station | Date | *Total Metals* | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Fluoride | Iron | Lead | Manganese | Molybdenum | Nickel | Selenium |
| | | **Al** | **Sb** | **As** | **Ba** | **Be** | **B** | **Cd** | **Cr** | **Co** | **Cu** | **F** | **Fe** | **Pb** | **Mn** | **Mo** | **Ni** | **Se** |
| | **PWQO** | **0.075** ***i*** | **0.02** ***i*** | **0.1** ***i*** | nc | **1.1** | **0.2** | **0.0005** ***i*** | **0.0089** | **0.0009** | **0.005** ***i*** | nc | **0.3** | **0.005** ***i*** | nc | **0.04** | **0.025** | **0.1** |
| **PR Control** | 25-Oct-16 | 0.02 | 0.0002 | 0.0001 | 0.022 | <0.002 | 0.025 | <0.00002 | <0.002 | 0.0002 | <0.002 | <0.1 | <0.005 | <0.00002 | 0.008 | <0.0001 | <0.01 | <0.001 |
| | 8-May-17 | 0.08 | <0.0001 | 0.0001 | 0.019 | <0.002 | 0.02 | <0.000014 | 0.004 | <0.0001 | <0.002 | <0.1 | 0.161 | 0.00006 | 0.012 | 0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.091 | <0.0001 | 0.00019 | 0.0183 | <0.0001 | <0.021 | <0.00001 | 0.00061 | <0.0001 | <0.001 | 0.04 | 0.102 | <0.0001 | 0.00746 | 0.000158 | <0.0005 | <0.00005 |
| | 14-May-19 | 0.11 | <0.0005 | <0.001 | 0.017 | <0.0005 | 0.017 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 0.1 | <0.0005 | 0.0056 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.21 | <0.0005 | <0.001 | 0.022 | <0.0005 | 0.02 | <0.0001 | <0.005 | <0.0005 | 0.0012 | <0.1 | 0.26 | <0.0005 | 0.021 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.059 | <0.0005 | <0.001 | 0.019 | <0.0004 | 0.023 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0098 | <0.0005 | <0.001 | <0.002 |
| | 24-May-22 | 0.12 | <0.0005 | <0.001 | 0.02 | <0.0004 | 0.023 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.14 | <0.0005 | 0.016 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.062 | <0.0005 | <0.001 | 0.023 | <0.0004 | 0.021 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0096 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.14 | <0.0005 | <0.001 | 0.02 | <0.0004 | 0.026 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.17 | <0.0005 | 0.015 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.074 | <0.0005 | <0.001 | 0.021 | <0.0004 | 0.021 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | <0.1 | <0.0005 | 0.0081 | <0.0005 | <0.001 | <0.002 |
| **BC Control** | 25-Oct-16 | 0.04 | <0.0001 | 0.0014 | 0.051 | <0.002 | 0.231 | <0.00002 | <0.002 | 0.0003 | <0.002 | 0.2 | 0.023 | <0.00002 | 0.044 | 0.0001 | <0.01 | 0.006 |
| | 9-May-17 | 0.09 | <0.0001 | <0.0001 | 0.02 | <0.002 | 0.01 | <0.000014 | <0.002 | <0.0001 | <0.002 | <0.1 | 0.091 | 0.00003 | 0.009 | 0.0001 | <0.01 | <0.001 |
| | 8-May-18 | 0.154 | <0.0001 | 0.00024 | 0.0217 | <0.0001 | 0.026 | <0.00001 | <0.0005 | 0.0001 | <0.001 | 0.046 | 0.18 | <0.0001 | 0.0136 | 0.000125 | <0.0005 | <0.00005 |
| | 14-May-19 | 0.11 | <0.0005 | <0.001 | 0.018 | <0.0005 | 0.017 | <0.0001 | <0.005 | <0.0005 | <0.001 | <0.1 | 220 | <0.0005 | 0.013 | <0.0005 | <0.001 | <0.002 |
| | 19-May-20 | 0.16 | <0.0005 | <0.001 | 0.02 | <0.0005 | 0.023 | <0.0001 | <0.005 | <0.0005 | 0.001 | <0.1 | 0.16 | <0.0005 | 0.01 | <0.0005 | <0.001 | <0.002 |
| | 27-May-21 | 0.095 | <0.0005 | <0.001 | 0.029 | <0.0004 | 0.043 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.1 | <0.0005 | 0.014 | <0.0005 | <0.001 | <0.002 |
| | 24-May-22 | 0.16 | <0.0005 | <0.001 | 0.031 | <0.0004 | 0.06 | <0.00009 | <0.005 | <0.0005 | 0.0009 | <0.1 | 0.18 | <0.0005 | 0.026 | <0.0005 | <0.001 | <0.002 |
| | 17-May-23 | 0.1 | <0.0005 | <0.001 | 0.025 | <0.0004 | 0.035 | <0.00009 | <0.005 | <0.0005 | <0.0009 | <0.1 | 0.12 | <0.0005 | 0.015 | <0.0005 | <0.001 | <0.002 |
| | 28-May-24 | 0.25 | <0.0005 | <0.001 | 0.027 | <0.0004 | 0.038 | <0.00009 | <0.005 | <0.0005 | 0.001 | <0.1 | 0.31 | <0.0005 | 0.03 | <0.0005 | <0.001 | <0.002 |
| | 27-May-25 | 0.08 | <0.0005 | <0.001 | 0.025 | <0.0004 | 0.049 | <0.00009 | <0.005 | <0.0005 | 0.0011 | <0.1 | 0.11 | <0.0005 | 0.014 | <0.0005 | <0.001 | <0.002 |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | Total Metals | | | | | | | | | | Oil & Grease | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Silicon | Silver | Strontium | Thallium | Titanium | Tungsten | Uranium | Vanadium | Zinc | Zirconium | Animal / Vegetable | Mineral | Total |
| | | Si | Ag | Sr | Tl | Ti | W | U | V | Zn | Zr | | | |
| | PWQO | nc | 0.0001 | nc | 0.0003 | nc | 0.03 *i* | 0.005 *i* | 0.006 *i* | 0.03 | 0.004 *i* | *f* | *f* | *f* |
| PR Control | 25-Oct-16 | | <0.00002 | 0.19 | <0.00005 | <0.005 | <0.01 | 0.00024 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-17 | | <0.00002 | | <0.00005 | <0.005 | <0.01 | 0.00027 | <0.005 | <0.005 | <0.003 | | | |
| | 8-May-18 | | <0.00005 | 0.135 | <0.00001 | 0.00207 | <0.0001 | 0.000241 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.12 | <0.00005 | <0.005 | <0.001 | 0.00022 | 0.00054 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.14 | <0.00005 | 0.0076 | <0.001 | 0.00026 | 0.00063 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.16 | <0.00005 | <0.005 | <0.001 | 0.00023 | <0.0005 | <0.005 | <0.001 | | | |
| | 24-May-22 | | <0.00009 | 0.15 | <0.00005 | <0.005 | <0.001 | 0.00024 | 0.00058 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.15 | <0.00005 | <0.005 | <0.001 | 0.00029 | <0.0005 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.15 | <0.00005 | <0.005 | <0.001 | 0.00025 | <0.0005 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.16 | <0.00005 | <0.005 | <0.001 | 0.00029 | <0.0005 | <0.005 | <0.001 | | | |
| BC Control | 25-Oct-16 | | <0.00002 | 0.913 | <0.00005 | <0.005 | <0.01 | 0.00038 | <0.005 | <0.005 | <0.003 | | | |
| | 9-May-17 | | <0.00002 | 0.156 | <0.00005 | <0.005 | <0.01 | 0.00024 | <0.005 | 0.005 | 0.009 | | | |
| | 8-May-18 | | <0.00005 | 0.19 | <0.00001 | 0.00345 | <0.0001 | 0.000227 | <0.0005 | <0.003 | <0.0003 | | | |
| | 14-May-19 | | <0.0001 | 0.14 | <0.00005 | <0.005 | <0.001 | 0.00018 | <0.0005 | <0.005 | <0.001 | | | |
| | 19-May-20 | | <0.0001 | 0.16 | <0.00005 | 0.022 | <0.001 | 0.00022 | 0.00052 | <0.005 | <0.001 | | | |
| | 27-May-21 | | <0.00009 | 0.32 | <0.00005 | <0.005 | <0.001 | 0.00031 | 0.0006 | <0.005 | <0.001 | | | |
| | 24-May-22 | | <0.00009 | 0.35 | <0.00005 | 0.0057 | <0.001 | 0.00037 | 0.00061 | <0.005 | <0.001 | | | |
| | 17-May-23 | | <0.00009 | 0.25 | <0.00005 | <0.005 | <0.001 | 0.00027 | 0.00053 | <0.005 | <0.001 | | | |
| | 28-May-24 | | <0.00009 | 0.26 | <0.00005 | 0.0058 | <0.001 | 0.00035 | 0.00066 | <0.005 | <0.001 | | | |
| | 27-May-25 | | <0.00009 | 0.26 | <0.00005 | <0.005 | <0.001 | 0.00032 | <0.0005 | <0.005 | <0.001 | | | |

## Table C-4 Surface Water Laboratory Chemical Results

| Surface Water Station | Date | BTEX & Hydrocarbons (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethylbenzene | m&p-Xylene | o-Xylene | Total Xylenes | F1 (C6-C10) | F2 (C10-C16) | F3 (C16-C34) | F4 (C34-C50) |
| | PWQO | 100 *i* | 0.8 *i* | 8 *i* | 2 *i* | 40 *i* | nc | nc | nc | nc | nc |
| PR Control | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |
| BC Control | 25-Oct-16 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 9-May-17 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <1.1 | <50 | <50 | <400 | <400 |
| | 8-May-18 | <0.5 | <0.5 | <0.5 | <0.4 | <0.3 | <0.5 | <25 | <100 | <250 | <250 |
| | 14-May-19 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 19-May-20 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-21 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 24-May-22 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 17-May-23 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 28-May-24 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <100 | <200 | <200 |
| | 27-May-25 | <0.2 | <0.2 | <0.2 | <0.4 | <0.2 | <0.4 | <25 | <90 | <200 | <200 |

## Table C-5 Surface Water Laboratory Microbiological Results

| Surface Water Station | Date | *Microbiological* | | |
|---|---|---|---|---|
| | | Total Coliforms (cfu/100mL) | E.Coli (cfu/100mL) | Heterotrophic Plate Count (cfu/mL) |
| | PWQO | nc | **100** | nc |
| **SUMP 1** | 23-Mar-16 | 330 | 131 | 610 |
| | 25-May-16 | 26 | 13 | >2000 |
| | 10-Aug-16 | 16 | 5 | >2000 |
| | 18-Oct-16 | (7) | (7) | >2000 |
| | 1-Feb-17 | (7) | (7) | >2000 |
| | 5-Apr-17 | <10 | 0 | 16 |
| | 17-Jul-17 | >200 | 61 | >2000 |
| | 4-Oct-17 | (7) | (7) | >2000 |
| | 6-Mar-18 | 34 | 0 | 13 |
| | 9-May-18 | 21 | 1 | 81 |
| | 5-Sep-18 | 69 | 53 | 470 |
| | 6-Dec-18 | 18 | 4 | 33 |
| | 9-Mar-19 | 7 | 9 | 7 |
| | 10-May-19 | 41 | 9 | 20 |
| | 4-Sep-19 | 49 | 22 | 180 |
| | 19-Dec-19 | 20 | 10 | 120 |
| | 2-Mar-20 | 66 | 27 | 34 |
| | 11-Jun-20 | 22 | 13 | 970 |
| | 27-Aug-20 | (7) | (7) | >5700 |
| | 25-Nov-20 | 84 | <2 | 410 |
| | 23-Feb-21 | 68 | 16 | 14 |
| | 27-May-21 | 16 | 9 | 200 |
| | 11-Aug-21 | (7) | (7) | 930 |
| | 7-Oct-21 | 140 | 51 | 740 |
| | 28-Feb-22 | 6 | 0 | 130 |
| | 26-May-22 | 130 | 3 | 170 |
| | 31-Aug-22 | 170 | 110 | 610 |
| | 28-Oct-22 | 33 | 2 | 1600 |
| | 23-Feb-23 | 43 | 0 | 560 |
| | 17-May-23 | 29 | 2 | 170 |
| | 30-Aug-23 | (7) | (7) | 2300 |
| | 31-Oct-23 | 280 | 3 | 790 |
| | 27-Feb-24 | 54 | 0 | 450 |
| | 29-May-24 | (7) | (7) | 450 |
| | 26-Aug-24 | (7) | (7) | 5200 |
| | 30-Oct-24 | (7) | (7) | 1500 |
| | 24-Feb-25 | (7) | (7) | 380 |
| | 28-May-25 | (7) | (7) | 1400 |
| | 25-Aug-25 | (7) | (7) | 5700 |
| | 27-Oct-25 | 79 | 4 | 840 |
| **SUMP 2** | 23-Mar-16 | 16 | 0 | 1360 |
| | 25-May-16 | 50 | 21 | >2000 |
| | 10-Aug-16 | 102 | 15 | >2000 |
| | 18-Oct-16 | (7) | (7) | >2000 |
| | 1-Feb-17 | 4 | 0 | 50 |
| | 5-Apr-17 | <10 | 0 | 60 |
| | 17-Jul-17 | >200 | 50 | >200 |

## Table C-5 Surface Water Laboratory Microbiological Results

| Surface Water Station | Date | *Microbiological* | | |
|---|---|---|---|---|
| | | Total Coliforms (cfu/100mL) | E.Coli (cfu/100mL) | Heterotrophic Plate Count (cfu/mL) |
| | PWQO | nc | **100** | nc |
| **SUMP 2** | 4-Oct-17 | (7) | (7) | >2000 |
| **(cont'd)** | 6-Mar-18 | 6 | 1 | 14 |
| | 9-May-18 | 9 | 117 | 55 |
| | 5-Sep-18 | 95 | 53 | 150 |
| | 6-Dec-18 | 13 | 2 | 46 |
| | 17-May-19 | 4 | 2 | 8 |
| | 4-Sep-19 | (7) | (7) | 160 |
| | 30-Jun-20 | 120 | 20 | 220 |
| | 27-Aug-20 | 600 | 600 | 5500 |
| | 25-Nov-20 | 18 | <2 | 530 |
| | 27-May-21 | 140 | 130 | 470 |
| | 11-Aug-21 | 47 | 20 | 880 |
| | 7-Oct-21 | 75 | 49 | 580 |
| | 28-Feb-22 | 8 | 2 | 9 |
| | 26-May-22 | (7) | (7) | 340 |
| | 31-Aug-22 | 150 | 98 | 530 |
| | 28-Oct-22 | 83 | 23 | 1900 |
| | 23-Feb-23 | 11 | 0 | 79 |
| | 17-May-23 | 31 | 6 | 150 |
| | 30-Aug-23 | (7) | (7) | 970 |
| | 31-Oct-23 | 79 | 1 | 910 |
| | 29-May-24 | (7) | (7) | 300 |
| | 26-Aug-24 | 62 | 21 | 4400 |
| | 30-Oct-24 | (7) | (7) | 1500 |
| | 24-Feb-25 (2) | | | |
| | 28-May-25 | 29 | 0 | 350 |
| | 25-Aug-25 | (7) | (7) | >5700 |
| | 27-Oct-25 | 75 | 6 | 590 |
| **QFSW2** | 6-Mar-18 | 34 | 0 | 9 |
| | 9-May-18 | 32 | 5 | 72 |
| | 5-Sep-18 | 53 | 14 | 270 |
| | 6-Dec-18 | 9 | 2 | 5 |
| | 8-Mar-19 | 1 | 1 | 3 |
| | 17-May-19 | 6 | 0 | 2 |
| | 4-Sep-19 | 31 | 13 | 130 |
| | 19-Dec-19 | 24 | 13 | 60 |
| | 2-Mar-20 | 22 | 16 | 11 |
| | 11-Jun-20 | 12 | 3 | 900 |
| | 27-Aug-20 | (7) | (7) | >5700 |
| | 25-Nov-20 | 46 | <2 | 370 |
| | 23-Feb-21 | 52 | 0 | 0 |
| | 27-May-21 | 0 | 0 | 300 |
| | 11-Aug-21 | 140 | 86 | 1100 |
| | 7-Oct-21 | 190 | 100 | 970 |
| | 28-Feb-22 | 14 | 1 | 27 |
| | 24-May-22 | 79 | 9 | 100 |
| | 31-Aug-22 | 130 | 68 | 440 |

## Table C-5 Surface Water Laboratory Microbiological Results

| Surface Water Station | Date | *Microbiological* | | |
|---|---|---|---|---|
| | | Total Coliforms (cfu/100mL) | E.Coli (cfu/100mL) | Heterotrophic Plate Count (cfu/mL) |
| | PWQO | nc | 100 | nc |
| QFSW2 (cont'd) | 28-Oct-22 | 39 | 6 | 1300 |
| | 23-Feb-23 | 0 | 0 | 7 |
| | 17-May-23 | 23 | 1 | 220 |
| | 30-Aug-23 | (7) | (7) | 1400 |
| | 31-Oct-23 | 420 | 6 | 570 |
| | 27-Feb-24 | 28 | 1 | 210 |
| | 29-May-24 | (7) | (7) | 240 |
| | 26-Aug-24 | (7) | (7) | 2000 |
| | 30-Oct-24 | (7) | (7) | 610 |
| | 24-Feb-25 | 17 | 1 | 87 |
| | 28-May-25 | 40 | 2 | 370 |
| | 25-Aug-25 | (7) | (7) | 5700 |
| | 27-Oct-25 | 51 | 1 | 300 |
| SW10 | 24-Oct-16 | >2000 | 108 | >2000 |
| | 8-May-17 | 60 | 1 | 270 |
| | 9-May-18 | 160 | 14 | 63 |
| | 20-May-20 | (7) | (7) | 140 |
| | 24-May-22 | (7) | (7) | 570 |
| | 17-May-23 | (7) | (7) | 360 |
| | 27-May-24 | (7) | (7) | 510 |
| | 28-May-25 | (7) | (7) | 300 |
| SW11A | 8-May-17 | 52 | 4 | 200 |
| | 9-May-18 | 3 | 0 | 3 |
| | 16-May-19 | 0 | 7 | 4 |
| | 20-May-20 | 6 | 0 | 0 |
| | 26-May-21 | 4 | 0 | 6 |
| | 25-May-22 | (7) | (7) | 500 |
| | 17-May-23 | 2 | 0 | 0 |
| | 28-May-24 | 80 | 0 | 7 |
| | 28-May-25 | 32 | 0 | 10 |
| SW11B | 24-Oct-16 | 230 | 9 | >2000 |
| | 8-May-17 | 68 | 0 | 40 |
| | 9-May-18 | 3 | 2 | 1 |
| | 16-May-19 | 93 | 0 | 36 |
| | 20-May-20 | 7 | 0 | 0 |
| | 26-May-21 | 0 | 0 | 39 |
| | 25-May-22 | 48 | 0 | 310 |
| | 17-May-23 | 16 | 0 | 17 |
| | 28-May-24 | (7) | (7) | 140 |
| | 28-May-25 | 440 | 2 | 66 |
| SW11C | 24-Oct-16 | 230 | 4 | 500 |
| | 8-May-17 | 74 | 1 | 40 |
| | 9-May-18 | 5 | 0 | 4 |
| | 16-May-19 | 7 | 0 | 4 |
| | 20-May-20 | 52 | 12 | 1 |
| | 26-May-21 | 0 | 0 | 31 |
| | 25-May-22 | 8 | 0 | 17 |

## Table C-5 Surface Water Laboratory Microbiological Results

| Surface Water Station | Date | *Microbiological* | | |
|---|---|---|---|---|
| | | Total Coliforms (cfu/100mL) | E.Coli (cfu/100mL) | Heterotrophic Plate Count (cfu/mL) |
| | PWQO | nc | 100 | nc |
| SW11C (cont'd) | 17-May-23 | 11 | 0 | 22 |
| | 28-May-24 | 20 | 0 | 15 |
| | 28-May-25 | 26 | 0 | 29 |
| SW11D | 24-Oct-16 | 390 | 81 | >2000 |
| | 8-May-17 | 28 | 0 | 10 |
| | 9-May-18 | 6 | 0 | 5 |
| | 16-May-19 | 3 | 0 | 4 |
| | 20-May-20 | 80 | 20 | 0 |
| | 26-May-21 | 0 | 0 | 16 |
| | 25-May-22 | 47 | 0 | 19 |
| | 17-May-23 | 19 | 0 | 17 |
| | 28-May-24 | (7) | (7) | 38 |
| | 28-May-25 | 300 | 0 | 17 |
| SW11E | 24-Oct-16 | 230 | 9 | >2000 |
| | 9-May-17 | 60 | 0 | 160 |
| | 9-May-18 | 41 | 0 | 30 |
| | 20-May-20 | 88 | 42 | 1 |
| | 26-May-21 | 0 | 0 | 160 |
| | 25-May-22 | (7) | (7) | 140 |
| | 17-May-23 | 120 | 0 | 350 |
| | 28-May-24 | (7) | (7) | 360 |
| | 28-May-25 | (7) | (7) | 290 |
| SW21C | 24-Oct-16 | 160 | 1 | 460 |
| | 8-May-17 | 46 | 11 | 110 |
| | 9-May-18 | 140 | 0 | 70 |
| | 16-May-19 | 19 | 0 | 6 |
| | 20-May-20 | 72 | 27 | 19 |
| | 26-May-21 | 300 | 300 | 290 |
| | 25-May-22 | (7) | (7) | 270 |
| | 17-May-23 | 150 | 15 | 74 |
| | 28-May-24 | (7) | (7) | 120 |
| | 28-May-25 | 130 | 0 | 230 |

# D

## Climate Data

## Table D-1: 30 Year Climate Normal (1971 - 2000)

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -6.6 | 0.0 | 0.0 | 0.8 | 0.0 | 94.2 | 150.0 | 94.2 | 0.0 |
| **February** | -6.1 | 0.0 | 0.0 | 0.8 | 0.0 | 63.8 | 150.0 | 63.8 | 0.0 |
| **March** | -1.6 | 0.0 | 0.0 | 1.0 | 0.0 | 63.5 | 150.0 | 63.5 | 0.0 |
| **April** | 5.2 | 1.1 | 24.9 | 1.1 | 27.9 | 62.4 | 150.0 | 34.5 | 0.0 |
| **May** | 11.5 | 3.5 | 56.8 | 1.3 | 72.1 | 70.6 | 148.5 | 0.0 | 0.0 |
| **June** | 16.6 | 6.1 | 83.1 | 1.3 | 106.4 | 75.7 | 117.8 | 0.0 | 0.0 |
| **July** | 19.7 | 7.9 | 99.3 | 1.3 | 129.0 | 80.9 | 69.7 | 0.0 | 0.0 |
| **August** | 19.0 | 7.5 | 95.6 | 1.2 | 114.7 | 85.8 | 40.7 | 0.0 | 0.0 |
| **September** | 15.1 | 5.3 | 75.3 | 1.0 | 78.3 | 94.0 | 56.4 | 0.0 | 0.0 |
| **October** | 9.0 | 2.4 | 44.0 | 1.0 | 41.8 | 81.0 | 95.5 | 0.0 | 0.0 |
| **November** | 2.9 | 0.4 | 13.6 | 0.8 | 11.0 | 97.2 | 150.0 | 31.7 | 0.0 |
| **December** | -3.1 | 0.0 | 0.0 | 0.8 | 0.0 | 97.0 | 150.0 | 97.0 | 0.0 |
| **Total** | **6.8** | **34.3** | | | **581.4** | **966.1** | | **384.7** | **0.0** |
| | | | | **Net Water Surplus** | | **384.7** | **mm** | | |

*Notes:*

- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Climate normal data from Thornbury Slama Climatological Station located at 44°34'N 80°29'W/O, 213 masl

## Table D-2a: 2003 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -11.2 | 0.0 | 0.0 | 0.8 | 0.0 | 128.2 | 150.0 | 128.2 | 0.0 |
| February | -10.5 | 0.0 | 0.0 | 0.8 | 0.0 | 111.6 | 150.0 | 111.6 | 0.0 |
| March | -2.9 | 0.0 | 0.0 | 1.0 | 0.0 | 76.6 | 150.0 | 76.6 | 0.0 |
| April | 3.5 | 0.6 | 16.1 | 1.1 | 18.0 | 51.2 | 150.0 | 33.2 | 0.0 |
| May | 11.4 | 3.5 | 55.6 | 1.3 | 70.7 | 73.0 | 150.0 | 2.3 | 0.0 |
| June | 17.3 | 6.5 | 86.2 | 1.3 | 110.4 | 45.4 | 85.0 | 0.0 | 0.0 |
| July | 19.8 | 8.0 | 99.4 | 1.3 | 129.2 | 61.0 | 16.8 | 0.0 | 0.0 |
| August | 20.6 | 8.5 | 103.6 | 1.2 | 124.3 | 68.8 | 0.0 | 0.0 | 38.7 |
| September | 15.8 | 5.7 | 78.4 | 1.0 | 81.5 | 65.2 | 0.0 | 0.0 | 16.3 |
| October | 7.8 | 2.0 | 37.3 | 1.0 | 35.5 | 111.0 | 75.5 | 0.0 | 0.0 |
| November | 3.4 | 0.6 | 15.6 | 0.8 | 12.6 | 131.0 | 150.0 | 43.9 | 0.0 |
| December | -2.6 | 0.0 | 0.0 | 0.8 | 0.0 | 97.4 | 150.0 | 97.4 | 0.0 |
| **Total** | **6.0** | **35.2** | | | **582.2** | **1020.4** | | **493.2** | **55.0** |
| | | | | | **Net Water Surplus** | **438.2** | **mm** | | |

## Table D-3a: 2004 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -12.9 | 0.0 | 0.0 | 0.8 | 0.0 | 149.6 | 150.0 | 149.6 | 0.0 |
| February | -6.4 | 0.0 | 0.0 | 0.8 | 0.0 | 56.6 | 150.0 | 56.6 | 0.0 |
| March | -0.2 | 0.0 | 0.0 | 1.0 | 0.0 | 94.2 | 150.0 | 94.2 | 0.0 |
| April | 5.5 | 1.2 | 26.6 | 1.1 | 29.8 | 43.0 | 150.0 | 13.2 | 0.0 |
| May | 11.5 | 3.5 | 57.0 | 1.3 | 72.4 | 148.6 | 150.0 | 76.2 | 0.0 |
| June | 16.0 | 5.8 | 80.2 | 1.3 | 102.6 | 44.0 | 91.4 | 0.0 | 0.0 |
| July | 19.2 | 7.6 | 96.8 | 1.3 | 125.8 | 124.8 | 90.3 | 0.0 | 0.0 |
| August | 17.6 | 6.7 | 88.5 | 1.2 | 106.2 | 48.0 | 32.2 | 0.0 | 0.0 |
| September | 16.7 | 6.2 | 83.8 | 1.0 | 87.2 | 37.4 | 0.0 | 0.0 | 17.6 |
| October | 9.3 | 2.6 | 45.8 | 1.0 | 43.5 | 61.6 | 18.1 | 0.0 | 0.0 |
| November | 3.1 | 0.5 | 14.7 | 0.8 | 11.9 | 81.8 | 88.0 | 0.0 | 0.0 |
| December | -5.7 | 0.0 | 0.0 | 0.8 | 0.0 | 115.6 | 150.0 | 53.6 | 0.0 |
| **Total** | **6.1** | **34.0** | | | **579.5** | **1005.2** | | **443.3** | **17.6** |
| | | | | | **Net Water Surplus** | **425.7** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-4a: 2005 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -9.6 | 0.0 | 0.0 | 0.8 | 0.0 | 59.2 | 150.0 | 59.2 | 0.0 |
| February | -6.6 | 0.0 | 0.0 | 0.8 | 0.0 | 61.8 | 150.0 | 61.8 | 0.0 |
| March | -4.1 | 0.0 | 0.0 | 1.0 | 0.0 | 39.4 | 150.0 | 39.4 | 0.0 |
| April | 6.3 | 1.4 | 26.3 | 1.1 | 29.4 | 121.0 | 150.0 | 91.6 | 0.0 |
| May | 10.5 | 3.1 | 47.0 | 1.3 | 59.7 | 26.8 | 117.1 | 0.0 | 0.0 |
| June | 20.5 | 8.4 | 100.8 | 1.3 | 129.0 | 142.4 | 130.5 | 0.0 | 0.0 |
| July | 21.6 | 9.1 | 107.0 | 1.3 | 139.0 | 50.4 | 41.8 | 0.0 | 0.0 |
| August | 20.7 | 8.5 | 101.9 | 1.2 | 122.3 | 65.2 | 0.0 | 0.0 | 15.2 |
| September | 17.9 | 6.9 | 86.3 | 1.0 | 89.8 | 78.6 | 0.0 | 0.0 | 11.2 |
| October | 10.6 | 3.1 | 47.5 | 1.0 | 45.2 | 44.0 | 0.0 | 0.0 | 1.2 |
| November | 3.8 | 0.7 | 14.8 | 0.8 | 12.0 | 118.2 | 106.2 | 0.0 | 0.0 |
| December | -4.7 | 0.0 | 0.0 | 0.8 | 0.0 | 114.6 | 150.0 | 70.8 | 0.0 |
| **Total** | **7.2** | **41.2** | | | **626.4** | **921.6** | | **322.8** | **27.6** |
| | | | | | **Net Water Surplus** | **295.2** | **mm** | | |

## Table D-5a: 2006 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -2.5 | 0.0 | 0.0 | 0.8 | 0.0 | 78.2 | 150.0 | 78.2 | 0.0 |
| February | -7.0 | 0.0 | 0.0 | 0.8 | 0.0 | 166.6 | 150.0 | 166.6 | 0.0 |
| March | -1.5 | 0.0 | 0.0 | 1.0 | 0.0 | 61.0 | 150.0 | 61.0 | 0.0 |
| April | 7.0 | 1.7 | 31.4 | 1.1 | 35.1 | 85.0 | 150.0 | 49.9 | 0.0 |
| May | 13.3 | 4.4 | 63.4 | 1.3 | 80.5 | 52.2 | 121.7 | 0.0 | 0.0 |
| June | 18.3 | 7.1 | 89.9 | 1.3 | 115.1 | 85.8 | 92.4 | 0.0 | 0.0 |
| July | 21.9 | 9.3 | 109.5 | 1.3 | 142.4 | 143.8 | 93.8 | 0.0 | 0.0 |
| August | 19.6 | 7.9 | 97.0 | 1.2 | 116.4 | 22.2 | 0.0 | 0.0 | 0.4 |
| September | 14.6 | 5.0 | 70.2 | 1.0 | 73.0 | 100.2 | 27.2 | 0.0 | 0.0 |
| October | 8.1 | 2.1 | 36.8 | 1.0 | 35.0 | 132.4 | 124.6 | 0.0 | 0.0 |
| November | 4.6 | 0.9 | 19.8 | 0.8 | 16.0 | 97.8 | 150.0 | 56.4 | 0.0 |
| December | 0.5 | 0.0 | 1.7 | 0.8 | 1.4 | 88.8 | 150.0 | 87.4 | 0.0 |
| **Total** | **8.1** | **38.3** | | | **614.9** | **1114.0** | | **499.5** | **0.4** |
| | | | | | **Net Water Surplus** | **499.1** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-6a: 2007 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -5.8 | 0.0 | 0.0 | 0.8 | 0.0 | 75.7 | 150.0 | 75.7 | 0.0 |
| **February** | -9.5 | 0.0 | 0.0 | 0.8 | 0.0 | 103.3 | 150.0 | 103.3 | 0.0 |
| **March** | -1.3 | 0.0 | 0.0 | 1.0 | 0.0 | 35.2 | 150.0 | 35.2 | 0.0 |
| **April** | 6.5 | 1.5 | 27.5 | 1.1 | 30.8 | 91.4 | 150.0 | 60.6 | 0.0 |
| **May** | 13.4 | 4.4 | 62.4 | 1.3 | 79.3 | 48.1 | 118.8 | 0.0 | 0.0 |
| **June** | 18.7 | 7.3 | 91.0 | 1.3 | 116.5 | 13.9 | 16.3 | 0.0 | 0.0 |
| **July** | 20.0 | 8.1 | 98.2 | 1.3 | 127.6 | 79.7 | 0.0 | 0.0 | 31.7 |
| **August** | 21.1 | 8.8 | 104.3 | 1.2 | 125.2 | 48.5 | 0.0 | 0.0 | 76.7 |
| **September** | 17.0 | 6.3 | 81.7 | 1.0 | 85.0 | 58.4 | 0.0 | 0.0 | 26.6 |
| **October** | 12.6 | 4.0 | 58.2 | 1.0 | 55.3 | 101.9 | 46.6 | 0.0 | 0.0 |
| **November** | 1.4 | 0.1 | 4.8 | 0.8 | 3.9 | 89.9 | 132.6 | 0.0 | 0.0 |
| **December** | -4.1 | 0.0 | 0.0 | 0.8 | 0.0 | 166.9 | 150.0 | 149.5 | 0.0 |
| **Total** | **7.5** | **40.7** | | | **623.6** | **912.9** | | **424.2** | **134.9** |
| | | | | | **Net Water Surplus** | **289.3** | **mm** | | |

## Table D-7a: 2008 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -4.3 | 0.0 | 0.0 | 0.8 | 0.0 | 98.6 | 150.0 | 98.6 | 0.0 |
| **February** | -7.1 | 0.0 | 0.0 | 0.8 | 0.0 | 135.3 | 150.0 | 135.3 | 0.0 |
| **March** | -4.3 | 0.0 | 0.0 | 1.0 | 0.0 | 87.5 | 150.0 | 87.5 | 0.0 |
| **April** | -8.6 | 0.0 | 0.0 | 1.1 | 0.0 | 33.3 | 150.0 | 33.3 | 0.0 |
| **May** | 10.3 | 3.0 | 51.2 | 1.3 | 65.0 | 99.3 | 150.0 | 34.3 | 0.0 |
| **June** | 18.6 | 7.3 | 93.9 | 1.3 | 120.2 | 73.0 | 102.8 | 0.0 | 0.0 |
| **July** | 20.5 | 8.4 | 103.7 | 1.3 | 134.8 | 95.3 | 63.3 | 0.0 | 0.0 |
| **August** | 18.4 | 7.2 | 92.8 | 1.2 | 111.4 | 67.5 | 19.4 | 0.0 | 0.0 |
| **September** | 15.7 | 5.6 | 78.9 | 1.0 | 82.0 | 105.0 | 42.4 | 0.0 | 0.0 |
| **October** | 8.1 | 2.1 | 40.0 | 1.0 | 38.0 | 39.5 | 43.9 | 0.0 | 0.0 |
| **November** | 0.9 | 0.1 | 4.2 | 0.8 | 3.4 | 146.0 | 150.0 | 36.5 | 0.0 |
| **December** | -4.9 | 0.0 | 0.0 | 0.8 | 0.0 | 112.1 | 150.0 | 112.1 | 0.0 |
| **Total** | **5.3** | **33.6** | | | **554.8** | **1092.4** | | **537.6** | **0.0** |
| | | | | | **Net Water Surplus** | **537.6** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-8a: 2009 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -10.7 | 0.0 | 0.0 | 0.8 | 0.0 | 113.2 | 150.0 | 113.2 | 0.0 |
| February | -5.9 | 0.0 | 0.0 | 0.8 | 0.0 | 105.0 | 150.0 | 105.0 | 0.0 |
| March | -0.7 | 0.0 | 0.0 | 1.0 | 0.0 | 50.7 | 150.0 | 50.7 | 0.0 |
| April | 6.4 | 1.5 | 31.1 | 1.1 | 34.8 | 146.1 | 150.0 | 111.3 | 0.0 |
| May | 12.3 | 3.9 | 61.1 | 1.3 | 77.6 | 78.7 | 150.0 | 1.1 | 0.0 |
| June | 15.9 | 5.7 | 79.6 | 1.3 | 101.9 | 81.6 | 129.7 | 0.0 | 0.0 |
| July | 17.7 | 6.7 | 89.0 | 1.3 | 115.7 | 104.9 | 118.9 | 0.0 | 0.0 |
| August | 19.4 | 7.7 | 97.8 | 1.2 | 117.4 | 58.7 | 60.3 | 0.0 | 0.0 |
| September | 15.5 | 5.5 | 77.6 | 1.0 | 80.7 | 42.1 | 21.7 | 0.0 | 0.0 |
| October | 7.4 | 1.8 | 36.1 | 1.0 | 34.3 | 80.1 | 67.5 | 0.0 | 0.0 |
| November | 5.5 | 1.2 | 26.6 | 0.8 | 21.5 | 30.0 | 75.9 | 0.0 | 0.0 |
| December | -4.0 | 0.0 | 0.0 | 0.8 | 0.0 | 72.9 | 148.8 | 0.0 | 0.0 |
| **Total** | **6.6** | **34.1** | | | **583.8** | **964.0** | | **381.3** | **0.0** |
| | | | | | **Net Water Surplus** | **381.3** | **mm** | | |

## Table D-9a: 2010 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -7.2 | 0.0 | 0.0 | 0.8 | 0.0 | 46.3 | 150.0 | 46.3 | 0.0 |
| February | -5.9 | 0.0 | 0.0 | 0.8 | 0.0 | 41.1 | 150.0 | 41.1 | 0.0 |
| March | 3.0 | 0.5 | 11.1 | 1.0 | 11.4 | 30.5 | 150.0 | 19.1 | 0.0 |
| April | 9.6 | 2.7 | 42.1 | 1.1 | 47.2 | 27.3 | 130.1 | 0.0 | 0.0 |
| May | 14.9 | 5.2 | 69.7 | 1.3 | 88.6 | 102.4 | 143.9 | 0.0 | 0.0 |
| June | 17.6 | 6.7 | 84.4 | 1.3 | 108.1 | 169.9 | 150.0 | 55.8 | 0.0 |
| July | 21.8 | 9.2 | 107.9 | 1.3 | 140.3 | 97.8 | 107.5 | 0.0 | 0.0 |
| August | 21.1 | 8.8 | 103.9 | 1.2 | 124.7 | 63.2 | 46.0 | 0.0 | 0.0 |
| September | 15.7 | 5.6 | 74.1 | 1.0 | 77.0 | 118.9 | 87.9 | 0.0 | 0.0 |
| October | 9.3 | 2.6 | 40.6 | 1.0 | 38.6 | 64.1 | 113.4 | 0.0 | 0.0 |
| November | 3.1 | 0.5 | 11.5 | 0.8 | 9.3 | 48.1 | 150.0 | 2.1 | 0.0 |
| December | -5.6 | 0.0 | 0.0 | 0.8 | 0.0 | 103.4 | 150.0 | 103.4 | 0.0 |
| **Total** | **8.1** | **41.7** | | | **645.2** | **913.0** | | **267.8** | **0.0** |
| | | | | | **Net Water Surplus** | **267.8** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-10a: 2011 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -9.0 | 0.0 | 0.0 | 0.8 | 0.0 | 107.6 | 150.0 | 107.6 | 0.0 |
| February | -6.5 | 0.0 | 0.0 | 0.8 | 0.0 | 61.8 | 150.0 | 61.8 | 0.0 |
| March | -2.5 | 0.0 | 0.0 | 1.0 | 0.0 | 84.5 | 150.0 | 84.5 | 0.0 |
| April | 5.9 | 1.3 | 24.6 | 1.1 | 27.6 | 90.2 | 150.0 | 62.6 | 0.0 |
| May | 13.6 | 4.5 | 63.4 | 1.3 | 80.5 | 70.7 | 140.2 | 0.0 | 0.0 |
| June | 17.7 | 6.7 | 85.5 | 1.3 | 109.4 | 57.8 | 88.6 | 0.0 | 0.0 |
| July | 22.5 | 9.7 | 112.2 | 1.3 | 145.8 | 92.7 | 35.4 | 0.0 | 0.0 |
| August | 20.3 | 8.3 | 99.8 | 1.2 | 119.8 | 71.9 | 0.0 | 0.0 | 12.5 |
| September | 16.5 | 6.1 | 78.9 | 1.0 | 82.1 | 74.5 | 0.0 | 0.0 | 7.6 |
| October | 10.1 | 2.9 | 45.3 | 1.0 | 43.0 | 118.5 | 75.5 | 0.0 | 0.0 |
| November | 5.8 | 1.3 | 24.2 | 0.8 | 19.6 | 96.3 | 150.0 | 2.2 | 0.0 |
| December | -0.7 | 0.0 | 0.0 | 0.8 | 0.0 | 62.9 | 150.0 | 62.9 | 0.0 |
| **Total** | **7.8** | **40.8** | | | **627.8** | **989.4** | | **381.6** | **20.1** |
| | | | | | **Net Water Surplus** | **361.6** | **mm** | | |

## Table D-11a: 2012 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -3.9 | 0.0 | 0.0 | 0.8 | 0.0 | 66.9 | 150.0 | 66.9 | 0.0 |
| February | -2.4 | 0.0 | 0.0 | 0.8 | 0.0 | 81.1 | 150.0 | 81.1 | 0.0 |
| March | 6.4 | 1.5 | 26.2 | 1.0 | 26.9 | 24.9 | 148.0 | 0.0 | 0.0 |
| April | 5.9 | 1.3 | 23.9 | 1.1 | 26.7 | 46.8 | 150.0 | 18.1 | 0.0 |
| May | 15.2 | 5.4 | 71.1 | 1.3 | 90.3 | 39.6 | 99.3 | 0.0 | 0.0 |
| June | 19.4 | 7.7 | 94.2 | 1.3 | 120.6 | 78.4 | 57.1 | 0.0 | 0.0 |
| July | 22.5 | 9.7 | 111.8 | 1.3 | 145.3 | 83.7 | 0.0 | 0.0 | 4.5 |
| August | 20.3 | 8.3 | 99.3 | 1.2 | 119.1 | 95.0 | 0.0 | 0.0 | 24.1 |
| September | 15.3 | 5.4 | 71.6 | 1.0 | 74.5 | 138.0 | 63.5 | 0.0 | 0.0 |
| October | 9.5 | 2.6 | 41.3 | 1.0 | 39.3 | 127.5 | 150.0 | 1.7 | 0.0 |
| November | 2.3 | 0.3 | 8.0 | 0.8 | 6.5 | 49.5 | 150.0 | 43.0 | 0.0 |
| December | -0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 73.6 | 150.0 | 73.6 | 0.0 |
| **Total** | **9.1** | **42.2** | | | **649.1** | **905.0** | | **284.4** | **28.6** |
| | | | | | **Net Water Surplus** | **255.9** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-12a: 2013 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -4.9 | 0.0 | 0.0 | 0.8 | 0.0 | 107.0 | 150.0 | 107.0 | 0.0 |
| February | -6.6 | 0.0 | 0.0 | 0.8 | 0.0 | 101.8 | 150.0 | 101.8 | 0.0 |
| March | -1.3 | 0.0 | 0.0 | 1.0 | 0.0 | 33.1 | 150.0 | 33.1 | 0.0 |
| April | 5.1 | 1.0 | 22.8 | 1.1 | 25.5 | 113.1 | 150.0 | 87.6 | 0.0 |
| May | 13.8 | 4.6 | 66.7 | 1.3 | 84.7 | 109.2 | 150.0 | 24.5 | 0.0 |
| June | 17.8 | 6.8 | 87.8 | 1.3 | 112.4 | 29.8 | 67.4 | 0.0 | 0.0 |
| July | 21.2 | 8.9 | 106.1 | 1.3 | 137.9 | 110.9 | 40.3 | 0.0 | 0.0 |
| August | 19.2 | 7.6 | 95.3 | 1.2 | 114.4 | 103.3 | 29.3 | 0.0 | 0.0 |
| September | 15.0 | 5.3 | 73.0 | 1.0 | 75.9 | 79.1 | 32.4 | 0.0 | 0.0 |
| October | 10.2 | 2.9 | 48.1 | 1.0 | 45.7 | 120.3 | 107.0 | 0.0 | 0.0 |
| November | 0.8 | 0.1 | 3.1 | 0.8 | 2.5 | 63.1 | 150.0 | 17.6 | 0.0 |
| December | -6.4 | 0.0 | 0.0 | 0.8 | 0.0 | 93.2 | 150.0 | 93.2 | 0.0 |
| **Total** | **7.0** | **37.2** | | | **599.2** | **1063.9** | | **464.7** | **0.0** |
| | | | | | **Net Water Surplus** | **464.7** | **mm** | | |

## Table D-13a: 2014 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -10.5 | 0.0 | 0.0 | 0.8 | 0.0 | 97.1 | 150.0 | 97.1 | 0.0 |
| February | -9.5 | 0.0 | 0.0 | 0.8 | 0.0 | 72.1 | 150.0 | 72.1 | 0.0 |
| March | -6.2 | 0.0 | 0.0 | 1.0 | 0.0 | 49.0 | 150.0 | 49.0 | 0.0 |
| April | 4.6 | 0.9 | 21.2 | 1.1 | 23.7 | 81.1 | 150.0 | 57.4 | 0.0 |
| May | 13.2 | 4.3 | 64.6 | 1.3 | 82.1 | 42.3 | 110.2 | 0.0 | 0.0 |
| June | 18.3 | 7.1 | 91.3 | 1.3 | 116.8 | 134.8 | 128.2 | 0.0 | 0.0 |
| July | 18.9 | 7.4 | 94.4 | 1.3 | 122.8 | 73.6 | 79.1 | 0.0 | 0.0 |
| August | 18.8 | 7.4 | 93.9 | 1.2 | 112.7 | 104.3 | 70.7 | 0.0 | 0.0 |
| September | 15.8 | 5.7 | 78.1 | 1.0 | 81.3 | 99.9 | 89.3 | 0.0 | 0.0 |
| October | 9.8 | 2.8 | 47.2 | 1.0 | 44.8 | 75.2 | 119.7 | 0.0 | 0.0 |
| November | 1.0 | 0.1 | 4.2 | 0.8 | 3.4 | 77.6 | 150.0 | 43.9 | 0.0 |
| December | -1.8 | 0.0 | 0.0 | 0.8 | 0.0 | 74.5 | 150.0 | 74.5 | 0.0 |
| **Total** | **6.0** | **35.7** | | | **587.6** | **981.5** | | **393.9** | **0.0** |
| | | | | | **Net Water Surplus** | **393.9** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-14a: 2015 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -10.7 | 0.0 | 0.0 | 0.8 | 0.0 | 61.5 | 150.0 | 61.5 | 0.0 |
| February | -14.9 | 0.0 | 0.0 | 0.8 | 0.0 | 52.9 | 150.0 | 52.9 | 0.0 |
| March | -3.5 | 0.0 | 0.0 | 1.0 | 0.0 | 23.9 | 150.0 | 23.9 | 0.0 |
| April | 6.2 | 1.4 | 25.9 | 1.1 | 29.0 | 61.1 | 150.0 | 32.1 | 0.0 |
| May | 15.3 | 5.4 | 72.3 | 1.3 | 91.9 | 38.3 | 96.4 | 0.0 | 0.0 |
| June | 17.2 | 6.5 | 82.6 | 1.3 | 105.8 | 153.5 | 144.2 | 0.0 | 0.0 |
| July | 20.2 | 8.2 | 99.2 | 1.3 | 128.9 | 37.0 | 52.2 | 0.0 | 0.0 |
| August | 19.5 | 7.8 | 95.3 | 1.2 | 114.3 | 106.4 | 44.3 | 0.0 | 0.0 |
| September | 18.9 | 7.4 | 92.0 | 1.0 | 95.6 | 67.2 | 15.8 | 0.0 | 0.0 |
| October | 9.0 | 2.4 | 39.6 | 1.0 | 37.6 | 84.0 | 62.2 | 0.0 | 0.0 |
| November | 6.0 | 1.3 | 25.0 | 0.8 | 20.2 | 60.8 | 102.8 | 0.0 | 0.0 |
| December | 3.1 | 0.5 | 11.8 | 0.8 | 9.2 | 39.7 | 133.3 | 0.0 | 0.0 |
| **Total** | **7.2** | **41.0** | | | **632.6** | **786.3** | | **170.4** | **0.0** |
| | | | | | **Net Water Surplus** | **170.4** | **mm** | | |

## Table D-15a: 2016 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -5.7 | 0.0 | 0.0 | 0.8 | 0.0 | 116.0 | 150.0 | 116.0 | 0.0 |
| February | -5.0 | 0.0 | 0.0 | 0.8 | 0.0 | 50.0 | 150.0 | 50.0 | 0.0 |
| March | 0.5 | 0.0 | 1.4 | 1.0 | 1.4 | 156.0 | 150.0 | 154.6 | 0.0 |
| April | 3.8 | 0.7 | 14.4 | 1.1 | 16.1 | 65.0 | 150.0 | 48.9 | 0.0 |
| May | 13.5 | 4.5 | 62.1 | 1.3 | 78.8 | 51.0 | 122.2 | 0.0 | 0.0 |
| June | 18.0 | 6.9 | 86.4 | 1.3 | 110.7 | 39.0 | 50.5 | 0.0 | 0.0 |
| July | 21.9 | 9.3 | 108.4 | 1.3 | 140.9 | 54.0 | 0.0 | 0.0 | 36.3 |
| August | 22.4 | 9.6 | 111.2 | 1.2 | 133.5 | 118.0 | 0.0 | 0.0 | 15.5 |
| September | 17.6 | 6.7 | 84.2 | 1.0 | 87.6 | 38.0 | 0.0 | 0.0 | 49.6 |
| October | 10.8 | 3.2 | 48.0 | 1.0 | 45.6 | 79.0 | 33.4 | 0.0 | 0.0 |
| November | 5.6 | 1.2 | 22.5 | 0.8 | 18.2 | 52.0 | 67.2 | 0.0 | 0.0 |
| December | -2.7 | 0.0 | 0.0 | 0.8 | 0.0 | 124.0 | 150.0 | 41.2 | 0.0 |
| **Total** | **8.4** | **42.1** | | | **632.8** | **942.0** | | **410.6** | **101.4** |
| | | | | | **Net Water Surplus** | **309.2** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-16a: 2017 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -3.7 | 0.0 | 0.0 | 0.8 | 0.0 | 131.0 | 133.3 | 131.0 | 0.0 |
| February | -2.2 | 0.0 | 0.0 | 0.8 | 0.0 | 101.0 | 150.0 | 84.3 | 0.0 |
| March | -0.3 | 0.0 | 0.0 | 1.0 | 0.0 | 75.0 | 150.0 | 75.0 | 0.0 |
| April | 8.0 | 2.0 | 36.4 | 1.1 | 40.7 | 122.0 | 150.0 | 81.3 | 0.0 |
| May | 11.6 | 3.6 | 54.6 | 1.3 | 69.4 | 124.0 | 150.0 | 54.6 | 0.0 |
| June | 17.4 | 6.6 | 85.2 | 1.3 | 109.0 | 120.0 | 150.0 | 11.0 | 0.0 |
| July | 20.0 | 8.1 | 99.2 | 1.3 | 129.0 | 65.0 | 86.0 | 0.0 | 0.0 |
| August | 18.8 | 7.4 | 92.7 | 1.2 | 111.2 | 74.0 | 48.8 | 0.0 | 0.0 |
| September | 17.2 | 6.5 | 84.1 | 1.0 | 87.5 | 57.0 | 18.3 | 0.0 | 0.0 |
| October | 12.2 | 3.8 | 57.7 | 1.0 | 54.8 | 77.0 | 40.5 | 0.0 | 0.0 |
| November | 2.0 | 0.3 | 8.0 | 0.8 | 6.5 | 81.0 | 115.0 | 0.0 | 0.0 |
| December | -6.8 | 0.0 | 0.0 | 0.8 | 0.0 | 88.0 | 150.0 | 53.0 | 0.0 |
| **Total** | **7.9** | **38.2** | | | **608.1** | **1115.0** | | **490.2** | **0.0** |
| | | | | | **Net Water Surplus** | **490.2** | **mm** | | |

## Table D-17a: 2018 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -7.8 | 0.0 | 0.0 | 0.8 | 0.0 | 79.4 | 150.0 | 79.4 | 0.0 |
| February | -3.6 | 0.0 | 0.0 | 0.8 | 0.0 | 97.0 | 150.0 | 97.0 | 0.0 |
| March | -1.9 | 0.0 | 0.0 | 1.0 | 0.0 | 46.8 | 150.0 | 46.8 | 0.0 |
| April | 1.5 | 0.2 | 5.4 | 1.1 | 6.0 | 132.8 | 150.0 | 126.8 | 0.0 |
| May | 15.9 | 5.7 | 76.1 | 1.3 | 96.6 | 68.2 | 121.6 | 0.0 | 0.0 |
| June | 18.1 | 7.0 | 88.0 | 1.3 | 112.6 | 43.8 | 52.7 | 0.0 | 0.0 |
| July | 21.9 | 9.3 | 109.0 | 1.3 | 141.7 | 64.2 | 0.0 | 0.0 | 24.8 |
| August | 21.7 | 9.2 | 107.9 | 1.2 | 129.4 | 107.0 | 0.0 | 0.0 | 22.4 |
| September | 17.6 | 6.7 | 85.3 | 1.0 | 88.7 | 20.8 | 0.0 | 0.0 | 67.9 |
| October | 8.0 | 2.0 | 35.2 | 1.0 | 33.4 | 130.1 | 96.7 | 0.0 | 0.0 |
| November | 0.1 | 0.0 | 0.3 | 0.8 | 0.2 | 102.8 | 150.0 | 49.3 | 0.0 |
| December | -2.3 | 0.0 | 0.0 | 0.8 | 0.0 | 97.8 | 150.0 | 97.8 | 0.0 |
| **Total** | **7.4** | **40.1** | | | **608.8** | **990.7** | | **497.0** | **115.1** |
| | | | | | **Net Water Surplus** | **381.9** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-18a: 2019 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -9.0 | 0.0 | 0.0 | 0.8 | 0.0 | 66.2 | 150.0 | 66.2 | 0.0 |
| February | -6.1 | 0.0 | 0.0 | 0.8 | 0.0 | 88.2 | 150.0 | 88.2 | 0.0 |
| March | -3.0 | 0.0 | 0.0 | 1.0 | 0.0 | 63.2 | 150.0 | 63.2 | 0.0 |
| April | 4.8 | 0.9 | 22.1 | 1.1 | 24.8 | 100.0 | 150.0 | 75.2 | 0.0 |
| May | 10.9 | 3.2 | 52.7 | 1.3 | 66.9 | 86.6 | 150.0 | 19.7 | 0.0 |
| June | 16.5 | 6.1 | 81.7 | 1.3 | 104.6 | 75.0 | 120.4 | 0.0 | 0.0 |
| July | 22.0 | 9.4 | 110.9 | 1.3 | 144.1 | 49.6 | 25.9 | 0.0 | 0.0 |
| August | 19.3 | 7.7 | 96.5 | 1.2 | 115.8 | 54.0 | 0.0 | 0.0 | 36.0 |
| September | 16.0 | 5.8 | 79.1 | 1.0 | 82.3 | 75.4 | 0.0 | 0.0 | 6.9 |
| October | 9.6 | 2.7 | 46.1 | 1.0 | 43.8 | 137.0 | 93.2 | 0.0 | 0.0 |
| November | -0.5 | 0.0 | 0.0 | 0.8 | 0.0 | 46.0 | 139.2 | 0.0 | 0.0 |
| December | -2.8 | 0.0 | 0.0 | 0.8 | 0.0 | 107.6 | 150.0 | 96.8 | 0.0 |
| **Total** | **6.5** | **35.8** | | | **582.3** | **948.8** | | **409.3** | **42.8** |
| | | | | | **Net Water Surplus** | **366.5** | **mm** | | |

## Table D-19a: 2020 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -3.8 | 0.0 | 0.0 | 0.8 | 0.0 | 108.4 | 150.0 | 108.4 | 0.0 |
| February | -5.1 | 0.0 | 0.0 | 0.8 | 0.0 | 80.2 | 150.0 | 80.2 | 0.0 |
| March | 1.5 | 0.2 | 5.6 | 1.0 | 5.8 | 48.0 | 150.0 | 42.2 | 0.0 |
| April | 4.7 | 0.9 | 19.9 | 1.1 | 22.3 | 48.8 | 150.0 | 26.5 | 0.0 |
| May | 11.4 | 3.5 | 53.1 | 1.3 | 67.4 | 109.4 | 150.0 | 42.0 | 0.0 |
| June | 18.5 | 7.2 | 90.7 | 1.3 | 116.1 | 56.0 | 89.9 | 0.0 | 0.0 |
| July | 23.0 | 10.0 | 115.4 | 1.3 | 150.0 | 50.8 | 0.0 | 0.0 | 9.3 |
| August | 20.4 | 8.4 | 101.1 | 1.2 | 121.3 | 219.6 | 98.3 | 0.0 | 0.0 |
| September | 15.4 | 5.5 | 74.0 | 1.0 | 77.0 | 66.4 | 87.7 | 0.0 | 0.0 |
| October | 8.3 | 2.1 | 37.3 | 1.0 | 35.5 | 61.6 | 113.9 | 0.0 | 0.0 |
| November | 5.9 | 1.3 | 25.6 | 0.8 | 20.7 | 69.0 | 150.0 | 12.1 | 0.0 |
| December | -2.0 | 0.0 | 0.0 | 0.8 | 0.0 | 106.6 | 150.0 | 106.6 | 0.0 |
| **Total** | **8.2** | **39.0** | | | **616.0** | **1024.8** | | **418.1** | **9.3** |
| | | | | | **Net Water Surplus** | **408.8** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-20a: 2021 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -4.8 | 0.0 | 0.0 | 0.8 | 0.0 | 49.8 | 150.0 | 49.8 | 0.0 |
| **February** | -7.0 | 0.0 | 0.0 | 0.8 | 0.0 | 40.6 | 150.0 | 40.6 | 0.0 |
| **March** | 1.5 | 0.2 | 4.9 | 1.0 | 5.0 | 35.2 | 150.0 | 30.2 | 0.0 |
| **April** | 7.1 | 1.7 | 30.0 | 1.1 | 33.6 | 62.8 | 150.0 | 29.2 | 0.0 |
| **May** | 12.4 | 3.9 | 56.6 | 1.3 | 71.9 | 27.8 | 105.9 | 0.0 | 0.0 |
| **June** | 20.1 | 8.2 | 98.5 | 1.3 | 126.0 | 108.6 | 88.5 | 0.0 | 0.0 |
| **July** | 19.6 | 7.9 | 95.4 | 1.3 | 124.0 | 204.0 | 150.0 | 18.4 | 0.0 |
| **August** | 21.9 | 9.3 | 108.3 | 1.2 | 129.9 | 21.2 | 41.3 | 0.0 | 0.0 |
| **September** | 16.2 | 5.9 | 76.7 | 1.0 | 79.8 | 152.6 | 114.1 | 0.0 | 0.0 |
| **October** | 13.1 | 4.3 | 60.0 | 1.0 | 57.0 | 66.0 | 123.1 | 0.0 | 0.0 |
| **November** | 2.7 | 0.4 | 9.7 | 0.8 | 7.8 | 74.6 | 150.0 | 39.9 | 0.0 |
| **December** | -0.2 | 0.0 | 0.0 | 0.8 | 0.0 | 83.8 | 150.0 | 83.8 | 0.0 |
| **Total** | **8.5** | **41.7** | | | **635.1** | **927.0** | | **291.9** | **0.0** |
| | | | | | **Net Water Surplus** | **291.9** | **mm** | | |

## Table D-21a: 2022 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -11.0 | 0.0 | 0.0 | 0.8 | 0.0 | 59.6 | 150.0 | 59.6 | 0.0 |
| **February** | -7.3 | 0.0 | 0.0 | 0.8 | 0.0 | 72.2 | 150.0 | 72.2 | 0.0 |
| **March** | -0.8 | 0.0 | 0.0 | 1.0 | 0.0 | 59.8 | 150.0 | 59.8 | 0.0 |
| **April** | 5.4 | 1.1 | 23.4 | 1.1 | 26.3 | 58.4 | 150.0 | 32.1 | 0.0 |
| **May** | 14.4 | 4.9 | 69.0 | 1.3 | 87.6 | 42.8 | 105.2 | 0.0 | 0.0 |
| **June** | 17.7 | 6.7 | 86.6 | 1.3 | 110.8 | 94.8 | 89.1 | 0.0 | 0.0 |
| **July** | 19.9 | 8.1 | 98.5 | 1.3 | 128.0 | 57.8 | 18.9 | 0.0 | 0.0 |
| **August** | 20.5 | 8.4 | 101.8 | 1.2 | 122.1 | 118.8 | 15.6 | 0.0 | 0.0 |
| **September** | 16.2 | 5.9 | 78.5 | 1.0 | 81.7 | 64.4 | 0.0 | 0.0 | 1.7 |
| **October** | 9.4 | 2.6 | 43.1 | 1.0 | 41.0 | 50.8 | 9.8 | 0.0 | 0.0 |
| **November** | 4.4 | 0.8 | 18.7 | 0.8 | 15.2 | 86.6 | 81.3 | 0.0 | 0.0 |
| **December** | -1.5 | 0.0 | 0.0 | 0.8 | 0.0 | 81.2 | 150.0 | 12.5 | 0.0 |
| **Total** | **7.3** | **38.6** | | | **612.7** | **847.2** | | **236.2** | **1.7** |
| | | | | | **Net Water Surplus** | **234.5** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-22a: 2023 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -2.8 | 0.0 | 0.0 | 0.8 | 0.0 | 70.0 | 150.0 | 70.0 | 0.0 |
| February | -4.2 | 0.0 | 0.0 | 0.8 | 0.0 | 65.4 | 150.0 | 65.4 | 0.0 |
| March | -0.6 | 0.0 | 0.0 | 1.0 | 0.0 | 80.4 | 150.0 | 80.4 | 0.0 |
| April | 7.8 | 2.0 | 35.2 | 1.1 | 39.4 | 90.8 | 150.0 | 51.4 | 0.0 |
| May | 12.0 | 3.8 | 56.5 | 1.3 | 71.8 | 48.6 | 126.8 | 0.0 | 0.0 |
| June | 18.0 | 6.9 | 88.2 | 1.3 | 113.0 | 123.4 | 137.3 | 0.0 | 0.0 |
| July | 20.5 | 8.4 | 101.8 | 1.3 | 132.4 | 137.4 | 142.3 | 0.0 | 0.0 |
| August | 18.7 | 7.3 | 92.0 | 1.2 | 110.4 | 76.2 | 108.1 | 0.0 | 0.0 |
| September | 16.9 | 6.3 | 82.3 | 1.0 | 85.6 | 15.6 | 38.1 | 0.0 | 0.0 |
| October | 11.2 | 3.4 | 52.4 | 1.0 | 49.8 | 122.5 | 110.8 | 0.0 | 0.0 |
| November | 2.6 | 0.4 | 10.5 | 0.8 | 8.5 | 63.6 | 150.0 | 15.9 | 0.0 |
| December | 1.0 | 0.1 | 3.7 | 0.8 | 2.9 | 76.1 | 150.0 | 73.2 | 0.0 |
| **Total** | **8.4** | **38.5** | | | **613.7** | **970.0** | | **356.3** | **0.0** |
| | | | | **Net Water Surplus** | | **356.3** | **mm** | | |

## Table D-23a: 2024 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -3.6 | 0.0 | 0.0 | 0.8 | 0.0 | 80.6 | 150.0 | 80.6 | 0.0 |
| February | -2.0 | 0.0 | 0.0 | 0.8 | 0.0 | 78.8 | 150.0 | 78.8 | 0.0 |
| March | 2.2 | 0.3 | 7.8 | 1.0 | 8.0 | 57.0 | 150.0 | 49.0 | 0.0 |
| April | 7.2 | 1.7 | 30.3 | 1.1 | 33.9 | 153.9 | 150.0 | 120.0 | 0.0 |
| May | 14.6 | 5.0 | 68.1 | 1.3 | 86.5 | 107.8 | 150.0 | 21.3 | 0.0 |
| June | 18.5 | 7.2 | 89.4 | 1.3 | 114.4 | 128.4 | 150.0 | 14.0 | 0.0 |
| July | 20.9 | 8.7 | 102.8 | 1.3 | 133.6 | 106.6 | 123.0 | 0.0 | 0.0 |
| August | 20.0 | 8.1 | 97.7 | 1.2 | 117.3 | 68.8 | 74.5 | 0.0 | 0.0 |
| September | 17.4 | 6.6 | 83.3 | 1.0 | 86.6 | 31.4 | 19.2 | 0.0 | 0.0 |
| October | 10.6 | 3.1 | 47.2 | 1.0 | 44.8 | 50.6 | 25.0 | 0.0 | 0.0 |
| November | 5.1 | 1.0 | 20.4 | 0.8 | 16.5 | 65.6 | 74.1 | 0.0 | 0.0 |
| December | -2.2 | 0.0 | 0.0 | 0.8 | 0.0 | 115.0 | 150.0 | 39.1 | 0.0 |
| **Total** | **9.1** | **41.8** | | | **641.6** | **1044.5** | | **402.9** | **0.0** |
| | | | | **Net Water Surplus** | | **402.9** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-24a: 2025 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -7.3 | 0.0 | 0.0 | 0.8 | 0.0 | 121.6 | 150.0 | 121.6 | 0.0 |
| **February** | -7.2 | 0.0 | 0.0 | 0.8 | 0.0 | 119.8 | 150.0 | 119.8 | 0.0 |
| **March** | 0.3 | 0.0 | 0.8 | 1.0 | 0.8 | 112.2 | 150.0 | 111.4 | 0.0 |
| **April** | 5.6 | 1.2 | 23.5 | 1.1 | 26.4 | 74.0 | 150.0 | 47.6 | 0.0 |
| **May** | 12.2 | 3.8 | 56.5 | 1.3 | 71.7 | 83.6 | 150.0 | 11.9 | 0.0 |
| **June** | 19.0 | 7.5 | 92.9 | 1.3 | 118.9 | 38.8 | 69.9 | 0.0 | 0.0 |
| **July** | 22.4 | 9.6 | 111.5 | 1.3 | 145.0 | 23.8 | 0.0 | 0.0 | 51.3 |
| **August** | 20.0 | 8.1 | 98.6 | 1.2 | 118.3 | 69.4 | 0.0 | 0.0 | 48.9 |
| **September** | 17.0 | 6.3 | 81.8 | 1.0 | 85.1 | 33.8 | 0.0 | 0.0 | 51.3 |
| **October** | 10.9 | 3.3 | 50.0 | 1.0 | 47.5 | 65.8 | 18.3 | 0.0 | 0.0 |
| **November** | 2.2 | 0.3 | 8.1 | 0.8 | 6.5 | 120.2 | 132.0 | 0.0 | 0.0 |
| **December** | -5.2 | 0.0 | 0.0 | 0.8 | 0.0 | 159.6 | 150.0 | 141.6 | 0.0 |
| **Total** | **7.5** | **40.2** | | | **620.2** | **1022.6** | | **553.9** | **151.5** |
| | | | | | **Net Water Surplus** | **402.4** | **mm** | | |

*Notes:*

- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the Shanty Bay Climatological Station located at 44°24'N 79°37.8'W/O, 250 masl

## Table D-15b: 2016 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -5.7 | 0.0 | 0.0 | 0.8 | 0.0 | 62.0 | 150.0 | 62.0 | 0.0 |
| **February** | -6.2 | 0.0 | 0.0 | 0.8 | 0.0 | 67.0 | 150.0 | 67.0 | 0.0 |
| **March** | -0.6 | 0.0 | 0.0 | 1.0 | 0.0 | 170.0 | 150.0 | 170.0 | 0.0 |
| **April** | 4.5 | 0.9 | 20.3 | 1.1 | 22.7 | 24.0 | 150.0 | 1.3 | 0.0 |
| **May** | 12.2 | 3.8 | 58.9 | 1.3 | 74.8 | 40.0 | 115.2 | 0.0 | 0.0 |
| **June** | 16.5 | 6.1 | 81.4 | 1.3 | 104.1 | 42.0 | 53.0 | 0.0 | 0.0 |
| **July** | 19.9 | 8.1 | 99.4 | 1.3 | 129.2 | 28.0 | 0.0 | 0.0 | 48.2 |
| **August** | 20.7 | 8.5 | 103.7 | 1.2 | 124.4 | 28.0 | 0.0 | 0.0 | 96.4 |
| **September** | 16.1 | 5.8 | 79.2 | 1.0 | 82.4 | 8.0 | 0.0 | 0.0 | 74.4 |
| **October** | 9.0 | 2.4 | 42.6 | 1.0 | 40.4 | 7.0 | 0.0 | 0.0 | 33.4 |
| **November** | 4.4 | 0.8 | 19.8 | 0.8 | 16.0 | 54.0 | 38.0 | 0.0 | 0.0 |
| **December** | -4.9 | 0.0 | 0.0 | 0.8 | 0.0 | 25.0 | 63.0 | 0.0 | 0.0 |
| **Total** | **7.2** | **36.5** | | | **594.2** | **555.0** | | **300.3** | **252.4** |
| | | | | | **Net Water Surplus** | **47.9** | **mm** | | |

## Table D-16b: 2017 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -5.0 | 0.0 | 0.0 | 0.8 | 0.0 | 86.0 | 63.0 | 86.0 | 0.0 |
| **February** | -3.3 | 0.0 | 0.0 | 0.8 | 0.0 | 44.0 | 107.0 | 0.0 | 0.0 |
| **March** | -3.4 | 0.0 | 0.0 | 1.0 | 0.0 | 55.0 | 150.0 | 12.0 | 0.0 |
| **April** | 6.1 | 1.4 | 31.0 | 1.1 | 34.7 | 134.0 | 150.0 | 99.3 | 0.0 |
| **May** | 9.9 | 2.8 | 50.4 | 1.3 | 64.0 | 132.0 | 150.0 | 68.0 | 0.0 |
| **June** | 16.0 | 5.8 | 81.4 | 1.3 | 104.2 | 131.0 | 150.0 | 26.8 | 0.0 |
| **July** | 18.2 | 7.0 | 92.7 | 1.3 | 120.5 | 58.0 | 87.5 | 0.0 | 0.0 |
| **August** | 16.7 | 6.2 | 85.0 | 1.2 | 102.0 | 66.0 | 51.5 | 0.0 | 0.0 |
| **September** | 15.8 | 5.7 | 80.4 | 1.0 | 83.6 | 88.0 | 55.9 | 0.0 | 0.0 |
| **October** | 10.5 | 3.1 | 53.4 | 1.0 | 50.7 | 90.0 | 95.1 | 0.0 | 0.0 |
| **November** | 0.0 | 0.0 | 0.1 | 0.8 | 0.0 | 89.0 | 150.0 | 34.1 | 0.0 |
| **December** | -7.9 | 0.0 | 0.0 | 0.8 | 0.0 | 46.0 | 150.0 | 46.0 | 0.0 |
| **Total** | **6.1** | **31.9** | | | **559.8** | **1019.0** | | **372.2** | **0.0** |
| | | | | | **Net Water Surplus** | **372.2** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the WAI station located at the main quarry, elevation approx. 520 masl

## Table D-17b: 2018 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -8.4 | 0.0 | 0.0 | 0.8 | 0.0 | 59.5 | 150.0 | 59.5 | 0.0 |
| February | -5.1 | 0.0 | 0.0 | 0.8 | 0.0 | 62.8 | 150.0 | 62.8 | 0.0 |
| March | -4.3 | 0.0 | 0.0 | 1.0 | 0.0 | 22.5 | 150.0 | 22.5 | 0.0 |
| April | -0.5 | 0.0 | 0.0 | 1.1 | 0.0 | 103.7 | 150.0 | 103.7 | 0.0 |
| May | 14.9 | 5.2 | 74.2 | 1.3 | 94.2 | 76.2 | 132.0 | 0.0 | 0.0 |
| June | 16.7 | 6.2 | 83.5 | 1.3 | 106.9 | 43.6 | 68.7 | 0.0 | 0.0 |
| July | 20.3 | 8.3 | 102.3 | 1.3 | 133.0 | 44.9 | 0.0 | 0.0 | 19.4 |
| August | 19.9 | 8.1 | 100.2 | 1.2 | 120.3 | 84.2 | 0.0 | 0.0 | 36.1 |
| September | 15.5 | 5.5 | 77.3 | 1.0 | 80.4 | 22.4 | 0.0 | 0.0 | 58.0 |
| October | 5.9 | 1.3 | 28.3 | 1.0 | 26.9 | 104.6 | 77.7 | 0.0 | 0.0 |
| November | -2.0 | 0.0 | 0.0 | 0.8 | 0.0 | 66.4 | 144.1 | 0.0 | 0.0 |
| December | -3.5 | 0.0 | 0.0 | 0.8 | 0.0 | 65.4 | 150.0 | 59.5 | 0.0 |
| **Total** | **5.8** | **34.5** | | | **561.6** | **756.2** | | **308.0** | **113.4** |
| | | | | | **Net Water Surplus** | **194.6** | **mm** | | |

## Table D-18b: 2019 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -10.4 | 0.0 | 0.0 | 0.8 | 0.0 | 38.4 | 150.0 | 38.4 | 0.0 |
| February | -8.3 | 0.0 | 0.0 | 0.8 | 0.0 | 16.0 | 150.0 | 16.0 | 0.0 |
| March | -5.6 | 0.0 | 0.0 | 1.0 | 0.0 | 33.0 | 150.0 | 33.0 | 0.0 |
| April | 2.7 | 0.4 | 14.3 | 1.1 | 16.0 | 127.9 | 150.0 | 111.9 | 0.0 |
| May | 9.4 | 2.6 | 48.7 | 1.3 | 61.9 | 96.1 | 150.0 | 34.2 | 0.0 |
| June | 15.5 | 5.5 | 79.7 | 1.3 | 102.0 | 53.9 | 101.9 | 0.0 | 0.0 |
| July | 20.4 | 8.4 | 104.4 | 1.3 | 135.7 | 24.0 | 0.0 | 0.0 | 9.8 |
| August | 17.8 | 6.8 | 91.3 | 1.2 | 109.5 | 17.2 | 0.0 | 0.0 | 92.3 |
| September | 14.6 | 5.0 | 75.1 | 1.0 | 78.1 | 73.7 | 0.0 | 0.0 | 4.4 |
| October | 7.8 | 2.0 | 40.6 | 1.0 | 38.5 | 89.1 | 50.6 | 0.0 | 0.0 |
| November | -2.4 | 0.0 | 0.0 | 0.8 | 0.0 | 62.8 | 113.4 | 0.0 | 0.0 |
| December | -3.9 | 0.0 | 0.0 | 0.8 | 0.0 | 28.1 | 141.5 | 0.0 | 0.0 |
| **Total** | **4.8** | **30.7** | | | **541.8** | **660.2** | | **233.5** | **106.6** |
| | | | | | **Net Water Surplus** | **127.0** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the WAI station located at the main quarry, elevation approx. 520 masl

## Table D-19b: 2020 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -4.8 | 0.0 | 0.0 | 0.8 | 0.0 | 50.7 | 150.0 | 50.7 | 0.0 |
| **February** | -6.6 | 0.0 | 0.0 | 0.8 | 0.0 | 34.1 | 150.0 | 34.1 | 0.0 |
| **March** | -0.4 | 0.0 | 0.0 | 1.0 | 0.0 | 82.2 | 150.0 | 82.2 | 0.0 |
| **April** | 2.6 | 0.4 | 15.5 | 1.1 | 17.3 | 36.1 | 150.0 | 18.8 | 0.0 |
| **May** | 9.7 | 2.7 | 53.0 | 1.3 | 67.3 | 78.5 | 150.0 | 11.2 | 0.0 |
| **June** | 17.7 | 6.7 | 92.7 | 1.3 | 118.7 | 84.9 | 116.2 | 0.0 | 0.0 |
| **July** | 21.1 | 8.8 | 109.0 | 1.3 | 141.8 | 99.9 | 74.4 | 0.0 | 0.0 |
| **August *** | 18.7 | 7.3 | 97.5 | 1.2 | 117.0 | 47.7 | 5.1 | 0.0 | 0.0 |
| **September *** | 0.0 | 0.0 | 0.1 | 1.0 | 0.1 | 0.0 | 5.0 | 0.0 | 0.0 |
| **October *** | 5.4 | 1.1 | 30.6 | 1.0 | 29.1 | 61.3 | 37.2 | 0.0 | 0.0 |
| **November *** | 1.3 | 0.1 | 8.3 | 0.8 | 6.7 | 7.2 | 37.7 | 0.0 | 0.0 |
| **December *** | -3.5 | 0.0 | 0.0 | 0.8 | 0.0 | 6.7 | 44.4 | 0.0 | 0.0 |
| **Total** | **5.1** | **27.2** | | | **498.0** | **589.3** | | **197.0** | **0.0** |
| | | | | | **Net Water Surplus** | **197.0** | **mm** | | |

## Table D-20b: 2021 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| **January** | -5.7 | 0.0 | 0.0 | 0.8 | 0.0 | 2.0 | 150.0 | 2.0 | 0.0 |
| **February** | -8.4 | 0.0 | 0.0 | 0.8 | 0.0 | 20.7 | 150.0 | 20.7 | 0.0 |
| **March** | 0.1 | 0.0 | 0.7 | 1.0 | 0.8 | 41.1 | 150.0 | 40.3 | 0.0 |
| **April** | 5.4 | 1.1 | 27.5 | 1.1 | 30.7 | 51.7 | 150.0 | 21.0 | 0.0 |
| **May** | 11.3 | 3.4 | 57.6 | 1.3 | 73.2 | 30.8 | 107.6 | 0.0 | 0.0 |
| **June** | 19.4 | 7.7 | 98.7 | 1.3 | 126.4 | 78.3 | 59.5 | 0.0 | 0.0 |
| **July** | 14.2 | 4.9 | 72.4 | 1.3 | 94.1 | 134.9 | 100.3 | 0.0 | 0.0 |
| **August** | 18.2 | 7.0 | 92.4 | 1.2 | 110.9 | 60.5 | 49.9 | 0.0 | 0.0 |
| **September** | 14.2 | 4.8 | 72.1 | 1.0 | 75.0 | 192.4 | 150.0 | 17.3 | 0.0 |
| **October** | 10.3 | 3.0 | 52.3 | 1.0 | 49.7 | 82.1 | 150.0 | 32.4 | 0.0 |
| **November** | -1.8 | 0.0 | 0.0 | 0.8 | 0.0 | 47.9 | 150.0 | 47.9 | 0.0 |
| **December** | -1.8 | 0.0 | 0.0 | 0.8 | 0.0 | 65.9 | 150.0 | 65.9 | 0.0 |
| **Total** | **6.3** | **32.0** | | | **560.8** | **808.3** | | **247.5** | **0.0** |
| | | | | | **Net Water Surplus** | **247.5** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the WAI station located at the main quarry, elevation approx. 520 masl
- * 2020 data not available from Aug 21 to Oct 8 and Nov 4 to Dec 17

## Table D-21b: 2022 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -10.8 | 0.0 | 0.0 | 0.8 | 0.0 | 1.5 | 150.0 | 1.5 | 0.0 |
| February | -7.6 | 0.0 | 0.0 | 0.8 | 0.0 | 38.9 | 150.0 | 38.9 | 0.0 |
| March | -2.0 | 0.0 | 0.0 | 1.0 | 0.0 | 50.2 | 150.0 | 50.2 | 0.0 |
| April | 3.7 | 0.6 | 17.5 | 1.1 | 19.6 | 46.8 | 150.0 | 27.2 | 0.0 |
| May | 14.2 | 4.8 | 70.3 | 1.3 | 89.3 | 38.0 | 98.7 | 0.0 | 0.0 |
| June | 16.7 | 6.2 | 83.6 | 1.3 | 107.0 | 83.2 | 75.0 | 0.0 | 0.0 |
| July | 19.0 | 7.5 | 95.3 | 1.3 | 123.9 | 40.3 | 0.0 | 0.0 | 8.7 |
| August | 19.2 | 7.6 | 96.3 | 1.2 | 115.6 | 79.2 | 0.0 | 0.0 | 36.4 |
| September | 14.8 | 5.2 | 73.6 | 1.0 | 76.5 | 77.9 | 1.4 | 0.0 | 0.0 |
| October | 8.8 | 2.3 | 42.5 | 1.0 | 40.4 | 37.5 | 0.0 | 0.0 | 1.5 |
| November | 3.2 | 0.5 | 14.9 | 0.8 | 12.1 | 47.4 | 35.3 | 0.0 | 0.0 |
| December | -3.2 | 0.0 | 0.0 | 0.8 | 0.0 | 36.5 | 71.8 | 0.0 | 0.0 |
| **Total** | **6.3** | **34.8** | | | **584.3** | **577.4** | | **117.8** | **46.6** |
| | | | | | **Net Water Surplus** | **71.3** | **mm** | | |

## Table D-22b: 2023 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -3.6 | 0.0 | 0.0 | 0.8 | 0.0 | 30.1 | 150.0 | 30.1 | 0.0 |
| February | -5.0 | 0.0 | 0.0 | 0.8 | 0.0 | 33.3 | 150.0 | 33.3 | 0.0 |
| March | -2.3 | 0.0 | 0.0 | 1.0 | 0.0 | 52.2 | 150.0 | 52.2 | 0.0 |
| April | 6.4 | 1.4 | 31.3 | 1.1 | 35.0 | 101.9 | 150.0 | 66.9 | 0.0 |
| May | 11.7 | 3.6 | 58.3 | 1.3 | 74.1 | 50.3 | 126.2 | 0.0 | 0.0 |
| June | 17.0 | 6.3 | 85.5 | 1.3 | 109.4 | 157.1 | 150.0 | 23.9 | 0.0 |
| July | 19.1 | 7.6 | 96.4 | 1.3 | 125.3 | 139.9 | 150.0 | 14.6 | 0.0 |
| August | 16.9 | 6.3 | 85.0 | 1.2 | 102.0 | 99.0 | 147.0 | 0.0 | 0.0 |
| September | 15.6 | 5.6 | 78.4 | 1.0 | 81.5 | 34.0 | 99.5 | 0.0 | 0.0 |
| October | 9.7 | 2.7 | 48.1 | 1.0 | 45.7 | 76.0 | 129.8 | 0.0 | 0.0 |
| November | 0.8 | 0.1 | 3.9 | 0.8 | 3.1 | 78.4 | 150.0 | 55.0 | 0.0 |
| December | -0.2 | 0.0 | 0.0 | 0.8 | 0.0 | 53.7 | 150.0 | 53.7 | 0.0 |
| **Total** | **7.2** | **33.6** | | | **576.3** | **905.9** | | **329.6** | **0.0** |
| | | | | | **Net Water Surplus** | **329.6** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the WAI station located at the main quarry, elevation approx. 520 masl

## Table D-23b: 2024 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -5.2 | 0.0 | 0.0 | 0.8 | 0.0 | 64.8 | 150.0 | 64.8 | 0.0 |
| February | -2.5 | 0.0 | 0.0 | 0.8 | 0.0 | 22.6 | 150.0 | 22.6 | 0.0 |
| March | 0.7 | 0.1 | 3.0 | 1.0 | 3.1 | 52.5 | 150.0 | 49.4 | 0.0 |
| April | 6.0 | 1.3 | 28.6 | 1.1 | 32.0 | 158.7 | 150.0 | 126.7 | 0.0 |
| May | 13.8 | 4.6 | 68.3 | 1.3 | 86.7 | 43.9 | 107.2 | 0.0 | 0.0 |
| June | 17.5 | 6.6 | 87.5 | 1.3 | 112.0 | 102.7 | 97.8 | 0.0 | 0.0 |
| July | 19.7 | 7.9 | 99.0 | 1.3 | 128.8 | 165.6 | 134.7 | 0.0 | 0.0 |
| August | 18.5 | 7.2 | 92.8 | 1.2 | 111.3 | 96.3 | 119.7 | 0.0 | 0.0 |
| September | 17.0 | 6.3 | 84.9 | 1.0 | 88.3 | 53.6 | 85.0 | 0.0 | 0.0 |
| October | 15.9 | 5.7 | 79.2 | 1.0 | 75.2 | 2.2 | 11.9 | 0.0 | 0.0 |
| November | 3.5 | 0.6 | 16.3 | 0.8 | 13.2 | 62.9 | 61.6 | 0.0 | 0.0 |
| December | -3.6 | 0.0 | 0.0 | 0.8 | 0.0 | 112.9 | 150.0 | 24.5 | 0.0 |
| **Total** | **8.4** | **40.4** | | | **650.7** | **938.7** | | **288.0** | **0.0** |
| | | | | | **Net Water Surplus** | **288.0** | **mm** | | |

## Table D-24b: 2025 Water Budget

| Month | Mean Temperature °C | I | E mm | Daylight Factor | E Adj. mm | Total Precipitation mm | WHC mm | Surplus mm | Deficit mm |
|---|---|---|---|---|---|---|---|---|---|
| January | -8.7 | 0.0 | 0.0 | 0.8 | 0.0 | 50.6 | 150.0 | 50.6 | 0.0 |
| February | -8.1 | 0.0 | 0.0 | 0.8 | 0.0 | 132.3 | 150.0 | 132.3 | 0.0 |
| March | -0.3 | 0.0 | 0.0 | 1.0 | 0.0 | 121.5 | 150.0 | 121.5 | 0.0 |
| April | 4.6 | 0.9 | 21.2 | 1.1 | 23.7 | 68.9 | 150.0 | 45.2 | 0.0 |
| May | 10.7 | 3.2 | 52.1 | 1.3 | 66.2 | 95.2 | 150.0 | 29.0 | 0.0 |
| June | 18.2 | 7.0 | 90.8 | 1.3 | 116.2 | 71.4 | 105.2 | 0.0 | 0.0 |
| July | 20.8 | 8.6 | 104.5 | 1.3 | 135.9 | 24.0 | 0.0 | 0.0 | 6.7 |
| August | 18.5 | 7.2 | 92.3 | 1.2 | 110.8 | 101.4 | 0.0 | 0.0 | 9.4 |
| September | 15.8 | 5.7 | 78.3 | 1.0 | 81.4 | 54.5 | 0.0 | 0.0 | 26.9 |
| October | 9.7 | 2.7 | 46.9 | 1.0 | 44.6 | 110.6 | 66.0 | 0.0 | 0.0 |
| November | 0.7 | 0.0 | 2.8 | 0.8 | 2.3 | 85.9 | 149.7 | 0.0 | 0.0 |
| December | -6.5 | 0.0 | 0.0 | 0.8 | 0.0 | 74.0 | 150.0 | 73.7 | 0.0 |
| **Total** | **6.3** | **35.3** | | | **581.1** | **990.3** | | **452.2** | **43.0** |
| | | | | | **Net Water Surplus** | **409.2** | **mm** | | |

*Notes:*
- calculations based on Thornthwaite Mather Method
- °C calculated mean of daily temperatures for the month, in degrees Celcius
- I denotes Heat Index
- E denotes Evapotranspiration
- WHC denotes Water Holding Capacity
- A value of 150 mm was used for the water holding capacity of the soils
- Temperature and precipitation data from the WAI station located at the main quarry, elevation approx. 520 masl

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