REPORT

Mill Creek Aggregates Pit Hydrogeology

Appendix B of the 2024 Coordinated Monitoring Report

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1.0 INTRODUCTION

1.1 Background

The University of Guelph owns approximately 185.5 ha of land situated in Part Lot 24, Concession 1, and Part Lots 21, 22, 23, and 24, Concession 2, Township of Puslinch, in the County of Wellington. Dufferin Aggregates, a CRH Company, leases the property from the University of Guelph. The property, called the Mill Creek Aggregates Pit, is underlain by a substantial outwash deposit, which extends to the northeast and southwest of Highway 401. See **Figure 1**, Location and Physical Setting, for details. This deposit forms the most important aggregate resource in this area. The subject property is licenced by the Ministry Natural Resources (MNR) as a Category 3 Class 'A' Pit Below Water for extraction of the aggregate resource from above and below the water table (Licence #5738).

The northwest corner of the property is traversed by Mill Creek and by two tributary creeks, Galt Creek and Pond Creek. Various reaches of Mill Creek are documented as supporting naturally sustaining brown trout and brook trout populations. Brown trout spawning is documented as occurring in the section of Mill Creek on the Mill Creek Aggregates Pit property. Approximately half of the University property on the north side of Township Road 2 is within the regulatory flood line of Mill Creek. There is also a substantial area of wetland adjacent to Mill Creek and the tributary streams, which is part of the larger Galt Creek Swamp, an area that is designated as a Provincially Significant Wetland (formerly a Class 1 Wetland) by the MNR.

It was predicted and accepted by the approving agencies at the time of approval of the Mill Creek Aggregates Pit that sub-aqueous extraction of the sand and gravel and the progressive formation of large ponds would modify groundwater flow patterns and discharge conditions near Mill Creek. Predicted effects were greatest in the reach of Mill Creek upstream from the Hanlon interchange to north of Highway 401. The approved aggregate extraction operation was designed to limit the impacts on the western reach of Mill Creek and its two tributaries, and the wetland area adjacent to the creek.

Extraction below the water table commenced in Phase 1 in 1995 (see **Figure 3**), and occurred each year through to October 2002. In late 2002, extraction activities were undertaken in Phase 2, and continued through to 2012. Between 2007 and 2012, extraction activities were undertaken in Phases 2 and 3, and in 2013 extraction occurred in Phases 3 and 4. Approval for extraction in the area formerly designated on previous Site Plans as "Area To Be Monitored", located northwest of Phase 3, was obtained in 2010. Extraction in 2016 and 2017 occurred above the water table along the east (2016 only), west, and south boundaries of the Phase 2 pond as a result of obtaining MNR approval to extract the setbacks. Below the water table extraction occurred in 2016 and 2017 near the east (2016 only) and west boundaries of the Phase 2 pond within the original licensed area. Extraction occurred in 2018 above and below the water table at the east and south boundaries of the Phase 1 pond because extraction had not previously been completed to the approved limit. Extraction within the setback on the east side of the Phase 1 pond also took place as a result of obtaining MNR approval to extract the above-water table material within the setback, per the approved Site Plans. In 2019, extraction continued within the Phase 1 pond setback along the east side of the Site, and occurred above and below the water table at the northeast corner of Phase 5 and silt pond SP4. Extraction in 2020 occurred above the water table in Phase 6, while extraction in 2021 occurred both above and below the water table in Phase 6. In 2022, extraction occurred both above and below the water table in Phase 2, Phase 5 and Phase 6, as well as below the water table in Silt Pond 4 (SP4). Extraction in 2023 occurred below the water table near the entrance of the Site (in Phase 2). Extraction did not occur at the Mill Creek Pit in 2024.

1.2 Groundwater Thresholds

On June 27, 2001 and following detailed negotiations with MNR and other regulatory agencies, Dufferin Aggregates issued a document entitled Mill Creek Aggregates Interim Groundwater Threshold and Action Response Plan. Interim thresholds and early warning values were set at six locations across the site, and each location includes a pair of groundwater monitors. The thresholds are based on maintaining positive seasonal hydraulic head differences on the water table between the monitor pairs, such that a hydraulic gradient will continue to exist from the site toward Mill Creek. The thresholds and early warning values have been developed to ensure that the quantity of groundwater that discharges to Mill Creek does not decline below a minimum level, and they are based on seasonal historic low water level data. The threshold values were revised in 2002, 2004, 2006 and 2022 and the 2006/2022 thresholds now form the basis of the environmental monitoring program that is undertaken at the Mill Creek Aggregates Pit.

Various additional threshold monitor pairs and threshold values for the on-Site ponds have been added to the program since 2003. In addition, due to well replacements and loss of access to wells, threshold pairs have been periodically replaced or revised, as required.

Drive point monitor DP5B was vandalized in the summer of 2012, and a replacement monitor, DP5C, was installed slightly upstream of DP5B in August 2012, as shown on **Figure 2**. New preliminary seasonal threshold values were established for the OW5-84 to DP5C threshold pair in the fall of 2012 based on the limited data available at that time for DP5C. In August 2013, drive point, DP5D was installed slightly downstream of DP5C, but thresholds were not established at this location. In Spring 2017, both drive points DP5C and DP5D were found removed from Mill Creek, and assumed to be removed by a vandal. Replacement drive point DP5CR was installed at the location of DP5C in May 2017. Revised early warning and threshold values were developed for the OW5-84 to DP5CR pair in 2021 and were approved for implementation by the MNR in June 2022.

1.3 Objective and Scope

The principal objectives of the 2024 Annual Monitoring Program are:

- To comply with the pertinent terms of the 2024 water monitoring program;
- To provide an assessment of the effects of on-site aggregate extraction activities on the local groundwater and surface water setting;
- To determine and assess any changes in the groundwater quality;
- To document results in an annual monitoring report as part of a coordinated report; and
- To recommend a monitoring program for implementation in 2025.

The annual monitoring report includes the collation of the monitoring data collected since 1986, a presentation of the results, and an analysis and discussion of the 2024 monitoring data. The discussion includes aspects from the companion monitoring document on surface water (Technical Appendix A). The accompanying summary document entitled “Mill Creek Coordinated Monitoring Report January 1 to December 31, 2024” integrates the monitoring results from the hydrogeology, surface water, and fisheries monitoring programs.

Prior to the 2019 annual report, the full available dataset of historic monitoring results was presented in tabular form in the report appendices. The tabulated data presented in the appendices of the Hydrogeology Reports from 2019 onward have been reduced to show only the previous five (5) years of data, while the full available dataset

continues to be presented in the appended figures and graphs. Tabulated data from 1986 to 2019 can be found in previous annual reports or provided upon request.

2.0 ROUTINE GROUNDWATER MONITORING PROGRAM

Figure 2, Groundwater Monitor Locations, identifies the location of the monitors in the network. Details of the monitor installations are presented in **Tables A-1 to A-5, Appendix A**. The 2024 monitoring program consisted of the following tasks that are outlined in the subsequent sections.

WATER LEVELS

Manually Recorded Monitors

Table 1, Monitor Groupings, presents the monitors grouped within the different hydrostratigraphic units and physical settings at the property. Monitoring was performed monthly at the following locations:

1) Monitors BH1-R, BH3 to BH6, BH11, BH13, and BH14; OW1-84 OW2-84, OW4-84, OW5-84, and OW16A-78, TW16-78, and TW16-79, which are adjacent to Mill Creek near the southwest corner of the site; and 92-1R, 92-5, 92-8, 92-12, 92-13, 92-27 to 92-29, 92-32, and 92 33, which were installed at select locations in the 1992 resource boreholes across the property.

2) In-stream drive point monitors DP1 to DP4R; DP5CR, and DP17R to DP22. Monitoring was performed monthly at the Mill Creek in-stream drive point monitors. Measurements at the Mill Creek drive point monitors included groundwater levels and temperatures, and surface water levels and temperatures. In addition, surface water levels are monitored manually at stations SW1 and SW2, both of which are located in Mill Creek.

3) Shallow water table drive point monitors DP6 to DP12 and DP16, which are established in the wetland areas on the Mill Creek Aggregates Pit property.

It is noted that monitor BH2-R became inaccessible due to re-grading works in fall 2023 and was, therefore, excluded from the monthly monitoring program in 2024. WSP prepared a letter dated October 16, 2024, to recommend that monitor BH2-R be removed from the monitoring program. The MNR provided approval to remove monitor BH2-R from the monitoring program on October 25, 2024. A copy of the WSP letter and MNR approval are included in **Appendix F**.

Additionally, weekly threshold monitoring was completed at Monitors BH13, BH92-12, BH92-27, BH92-29, OW5-84, DP1, DP2, DP3, DP5CR, DP6, DP17R, and DP21.

Multi-Level Monitors Equipped with Data Loggers

Several multi-level monitors are installed at the Site, as listed in **Table A-2, Appendix A**. Where multi-level monitors are present, the deepest monitor is designated 'I', the intermediate monitor is designated 'II' and the shallowest monitor is designated 'III'.

Monitors:

- 92-13 – east side of the property adjacent to the southwest corner of the Phase 1 pond. A replacement shallow data logger was installed at this monitor in May 2013.
- 92-28, 92-29, and 92-32 – west side of the property adjacent to Mill Creek – installed in November 2006 as part of extraction monitoring in Phase 3

- BH4, DP7, DP8, and DP9 – centre of property adjacent to Phase 4 operations. These are single level data logger installations.

Readings of water level and temperature were obtained once per day. The data were downloaded from the data loggers monthly for review.

A data logger was installed at standpipe monitor 92-33 in March 2012 for the purpose of collecting groundwater level and temperature data from the shallow part of the aquifer. The previous permanent, non-removable multi-level pressure transducer and thermistor instrumentation malfunctioned at monitor nest 92-33 in 2010. A second shallow data logger was installed at 92-33 in October 2017 at a depth similar to the previous (i.e., pre-2012) shallow data logger. The multi-level monitors have not been replaced as adjacent monitors can provide similar information, and extraction in that area is complete.

The data loggers at 92-26 were removed in December 2011 due to access safety issues. A data logger was re-installed in 92-26-III in June 2012 to provide groundwater level and temperature data in the shallow aquifer adjacent to the Phase 3 pond. Due to access safety issues, the data logger was removed in September 2013. Extraction is complete in Phase 3.

Data loggers were also installed in the following monitors in 2011/2012.

- Monitor 92-15 (shallow monitor only) – Removed in December 2013 in anticipation of the decommissioning of Monitor 92-15 in 2014.
- Monitor 92-12 (shallow monitor only)
- Monitor 92-27 (shallow monitor only)
- Drive point DP16

A data logger was installed in Monitor BH14, located between Monitor 92-12 and Mill Creek, in June 2015.

Water Wells

As in previous years, and although not part of the 1993 “official” monitoring program, water wells located on the property, and a well supplying a local resident in the vicinity of the property, were monitored monthly. Water level monitoring began in the summer of 1994 at select locations.

Pond Staff Gauges

Surveyed staff gauges were maintained in the Phase 1 pond, Phase 2 pond, Phase 3 pond, and Phase 4 pond. Measurements of pond water levels were made daily during the ice-free period through 2024. Pond temperatures were measured monthly during the ice-free period.

The 2024 and historic monitoring results are presented in **Appendix B**.

WATER QUALITY

In March and September 2024, groundwater samples were collected from Monitors BH1-R, 92-32-III, and 92-8, and a surface water sample was collected from the Phase 1 pond. Typically, the water quality sampling events have been scheduled such that the spring event is completed prior to the commencement of on-Site activities following the winter shut-down period; and the fall event is completed prior to the start of the winter shut-down period. Historically, the sampling events have typically been completed in March/April and November/December.

In 2024, on-Site activities were shut down in the early fall, and, therefore, the fall water quality sampling event was completed in September.

Samples were tested in the field for temperature, pH, and conductivity and then submitted to Bureau Veritas Laboratories for chemical analysis. Water samples were analyzed for major cations and anions, alkalinity, conductivity, pH, hardness, and oil and grease. The 2024 and historic groundwater chemical results are presented in **Appendix C**.

QA/QC PROGRAM

The groundwater monitoring program included a Quality Assurance/Quality Control component that consisted of the following.

1) Dufferin staff performed the routine daily and weekly monitoring in accordance with protocols established for those tasks. The data were forwarded to WSP for review and compilation.

2) WSP collected groundwater samples in March and September 2024. The analytical laboratory, Bureau Veritas Laboratories, was required to include a QA/QC component as part of the program that included a replicate analysis. The results of the laboratory's internal QA/QC testing are included in the reporting procedure and are kept on file.

3) Through 2024, Dufferin staff reviewed the results of the routine monitoring program for consistency with historic data, seasonal trends, and precipitation data. Any significant deviations from anticipated values that could not be explained, such as an increase/decrease in excess of 125% of previously established seasonal trends, were to be re-monitored for verification. If the deviations were confirmed, the MNR was then to be notified in writing with suggestions for remedial measures, as appropriate. In 2024, no significant deviations were observed during the monitoring.

4) WSP performed the routine monthly monitoring, in accordance with protocols established for those tasks, during 2024.

REPORTING

An annual hydrogeological monitoring report is submitted to the MNR for its review, as part of a coordinated report, by the end of March the following year. The annual hydrogeological report provides the following information:

1) Summary of monitoring results.

4) Description of monitoring methodology and monitoring locations. Any deviation from the standard methodology and/or monitoring locations is to be reported to the MNR at that time. This information is summarized in the annual report.

5) Factual descriptions of monitoring results, including tables of water levels, hydrographs, and chemical data for the monitoring locations, as appropriate.

6) Discussion of monitoring results, with specific reference to key locations across the site, such as:

   a. Adjacent to current extraction area,
   b. Multi-level (data logger) monitors,
   c. Mill Creek drive points,

d. Wetland fringe groundwater levels,
e. Groundwater level profile(s) across the site through the wetland area,
f. Water table configuration across the site and trends in hydraulic gradient and groundwater discharge conditions, to demonstrate any changes with respect to pre-extraction conditions, and
g. Assessment with respect to early warning values and action thresholds at monitor pair locations.
h. Discussion and integration of monitoring results with respect to the other monitoring programs including:
    i. Surface water flow (with particular reference to base flow quantities);
    ii. Threshold action levels and implementation of contingency measures (if appropriate); and
    iii. Scope of future monitoring program, including frequency of monitoring and addition/deletion of monitoring stations.

3.0 ANNUAL MONITORING RESULTS

3.1 Physical Setting

The Mill Creek Aggregates Pit is located on the southeast side of a broad northeast-southwest trending glacial outwash spillway, as shown in **Figure 1**. Outwash sand and gravel materials, ranging from about seven to twenty metres in thickness, underlie the property. These outwash deposits consist of interbedded sands, gravel, and to a lesser extent, silts. Mill Creek is bottomed in these granular soils.

The surficial soils adjacent to the Creek in the west and north-central parts of the Mill Creek Aggregates Pit consist of thin organic deposits. These organic soils are developed in a wetland area because of the high groundwater table condition adjacent to the creek. Generally, the thickness of these soils ranges from 0.5 m to greater than 3 m. Granular outwash deposits underlie the organics. A layer of glacial silt till generally underlies the sand and gravel deposit. Dolostone bedrock underlies the overburden materials beneath the site. The thickness of glacial till across the property varies from 0 m to about 12 m. The thickest area of till corresponds to a drumlin landform that is exposed at ground surface on the southern edge of the main property. The bedrock beneath the subject property is dolostone of the Guelph Formation. This unit is moderately hard dolostone that is generally flat-lying and displays few irregularities that affect surface topography. The resource drilling data generally confirm the relatively moderate amount of variation in the elevation of the buried bedrock surface beneath the property. The dolostone bedrock serves as the main groundwater supply aquifer in the area, although some water supply wells are developed in the granular overburden soils.

3.2 Extraction Activities

Figure 3, Site Plan Sequencing, shows the site details based on the most current (2019) approved extraction areas. Extraction did not occur at the Site in 2024; however, off-site aggregate materials were washed at the Site in 2024.

Similar to previous years, water was taken from the Phase 1 pond for aggregate washing and dust control during 2024. In 2024, the site operated under Amended PTTW #5557-B93NZ5, which was issued on February 7, 2019. A copy of the current PTTW is included in **Appendix F**.

The silty wash water from the processing plant was pumped into the northeast area of the Phase 1 pond for settlement of the suspended silt. The detailed pumping data for 2024 are presented in **Table E-1**, and a summary of the monthly pumping totals is presented in **Table E-2**, both of which are in **Appendix E**.

3.3 Climate Data

Water budgets have been prepared based on 30-year climate normals from five different 30-year periods using a variety of climate stations, based on data availability. The five 30-year climate normal water budgets are based on data from: (a) Guelph Arboretum Climatological Station (1951 to 1980), (b) Preston Climatological Station (1961 to 1990), (c) Waterloo-Wellington Climatological Station (1971 to 2000), (d) Elora Climatological Station (1983 to 2012), and (e) Grand River Conservation Authority's (GRCA) Shade's Mills Climatological Station (1991 to 2020). The 30-year climate normal water budgets are presented in **Tables D-1 to D-5, Appendix D**.

Water budget calculations are also presented for annual climate data from the GRCA Shade's Mills Climatological Station from 2020 through 2024, as shown in **Tables D-6 through D-10**. Water budgets were prepared for the climate data using the Thornthwaite method. Graphs depicting the annual temperature profiles and the annual precipitation and water surplus are also presented in **Appendix D**.

Between the start of monitoring in 1988 and 2024, the total annual precipitation in the area has averaged 901.5 mm. This 37-year average is 41.8 mm lower than the 30-year normal precipitation of 935 mm (1991-2020 Shade's Mills) presented in **Table D-5**. Since 1988, the three highest total annual precipitations occurred in 2013, 2008, and 1992, when total precipitation was 1,113 mm, 1,117 mm, and 1,121 mm, respectively. The lowest amount of total annual precipitation recorded was 657 mm in 1998, while similar lows were recorded in 2012 (679 mm) and 2022 (682 mm).

The 2024 temperature and precipitation data are presented in **Figure 4** and are compared to the 30-year normal (1991 to 2020 Shade's Mills) data. Based on the data presented in **Appendix D** and in **Figure 4**, the following observations and trends are noted:

- The mean monthly temperatures in 2024 were consistently higher than the 30-year average monthly temperatures. The average monthly temperatures recorded in June, July, August, October and December were 0.4°C to 1.8°C warmer than normal for those months, while the average monthly temperatures recorded in January, March, April, May, September and November were 2.0°C to 3.5°C warmer than normal. The average monthly temperature recorded in February was 5.4°C warmer than normal.
- The annual average of the monthly mean temperatures in 2024 was 10.6°C, which is notably higher than both the 30-year normal annual average temperature (8.3°C) and the annual average temperature recorded in 2023 (8.3°C). The 2024 annual average of the monthly mean temperatures is the highest recorded value since at least 1991. A notable increase in air temperature has been observed since 2016, with annual averages ranging between 9.2°C and 10.6°C in 2016, 2017, 2018, 2020, 2021 and 2024.
- The total precipitation was 976 mm, which was higher than the 30-year average precipitation (935 mm) by 41 mm (4%).
- In the winter (January to March) months, January was considerably wetter than normal, February was considerably drier than normal and March was similar to normal conditions.
- In the spring (April to June) months, April and May were considerably wetter than normal, while June was similar to normal conditions.
- In the summer (July to September) months, July and August were considerably wetter than normal, while September was considerably drier than normal.

- In the fall (October to December) months, October and November were considerably drier than normal, while December was wetter than normal conditions.
- The resulting groundwater levels were generally similar to 2023 levels and higher than 2022 levels, as detailed later in this report. The 2023 and 2024 data indicate that groundwater levels partially recovered from the low levels observed in fall 2022, the latter of which were attributed to cumulative impacts from low precipitation amounts received in 2020, the first half of 2021 and 2022.
- The months in which precipitation differed the most from the 30-year normal were January, April, July and August (41 mm, 32 mm, 58 mm and 27 mm higher than normal, respectively) and February, September and October (31 mm, 54 mm and 46 mm lower than normal, respectively).
- As shown in **Figure 4**, the water surplus in 2024 generally followed the typical seasonal trend of decreasing from a peak in the spring until late summer before increasing in the fall. Due to the precipitation trends in 2024, the monthly surplus was higher than normal in April and May, lower than normal in November and December, and similar to normal during the remaining months.
- Despite the slightly higher-than-average annual total precipitation, the calculated net water surplus for 2024 was 277 mm (**Table D-10**), which is 27 mm (9%) lower than the 30-year normal surplus of 304 mm (**Table D-5**). The 2024 value was 104 mm (27%) lower than the 2023 surplus of 381 mm.

Because of the permeable nature of the surficial soils at the site, the amount of precipitation received and the timing of that precipitation have a direct impact on the seasonal groundwater levels at the site. This is discussed in detail in later sections.

3.4 Bedrock Aquifer

As noted in **Table 1**, Monitor Groupings, there are two water wells on the property that are developed within the bedrock aquifer: TW16-78 and North Farmhouse Well 4794. Water level data for these wells are provided in **Tables B-1 and B-2, Appendix B**, and a groundwater hydrograph for the North Farmhouse Well 4794 is presented in **Figure B-47, Appendix B**.

Based on the 2024 groundwater level data and the hydrographs for the bedrock wells, the following observations are made.

- As in previous years, free-flowing artesian conditions were observed at TW16-78 during each of the monitoring events in 2024. The flowing conditions indicate that the vertical hydraulic gradient in the bedrock aquifer at that location (southwest corner of the site) was upwards at the time of the monitoring event, and that the magnitude of the confined pressure (piezometric) head was above grade.
- Monitoring at North Farmhouse Well 4794, which is the well for the farmhouse on the north property, began in 1994. Water levels at Well 4794 typically increase by between 0.5 m and 1.2 m in the late spring, which is attributed to recharge following the spring freshet, and then decrease through the fall or winter. In 2024, the water levels followed a similar pattern. The groundwater level increased between January and June, fluctuated between June and August, before decreasing through the end of 2024. The abrupt fluctuations in water level observed between June and August 2024 may be attributed to wetter than normal climatic conditions reported in July and August 2024 (Section 3.3). As shown in **Figure B-47**, the 2024 groundwater levels were within the historical range for the well.

In summary, the water levels in the bedrock aquifer well TW16-78, and North Farmhouse Well (as far as could be monitored) exhibited normal seasonal trends that reflected prevailing climatic conditions and were not affected by pit operations.

3.5 Sand and Gravel Aquifer

The monitors that are screened in the sand and gravel aquifer are noted in **Table 1**. Water level data from the previous 5 years (2020 to 2024) for the sand and gravel aquifer monitors are documented in **Table B-1, Appendix B**. Groundwater hydrographs for the monitors in the sand and gravel aquifer are also presented in **Figures B-1 through B-28, Appendix B**. A summary of the water level data from the previous 5 years (2020 to 2024) for the monitors is provided in **Table B-6, Appendix B**. Groundwater hydrographs for representative sand and gravel aquifer monitors (Monitors 1, 7-II and 92-32) located from east to west across the property are presented on **Figure 5**. Monitor 7-II was removed in March 2015 as part of extraction activities, so Monitor 4-I, which is also located in the central portion of the site, is included on **Figure 5** as well. Historic groundwater elevations at Monitors 4-I and 7-II are similar. Monitor 1-I was removed due to extraction activities in May 2019 and was reinstalled as Monitor 1-R in June 2020. Presented on **Figure 6** is the relationship between the shallow groundwater level at Monitor 92-28 (located in the northwest area of the site) and daily precipitation during 2024.

Compared to 2023, water levels in the representative monitors were, on average, 0.04 m lower (92-32) to 0.19 m higher (1-R) in 2024. The average water levels at 92-32 remained similar from 2023 to 2024 due to the lower water levels observed from March through August and December being offset by the higher water levels observed during the remaining months. The average water levels at 1-R and 4-I were higher than observed in 2023 during each month in 2024, contributing to the higher average annual levels in 2024.

As observed in **Table B-6**, the 2024 average water levels at the individual monitors ranged from approximately 0.2 m above ground surface to 7.9 m below ground surface across the site, and fluctuations ranged from 0.1 m to 0.6 m during 2024. In 2024, the maximum and minimum water levels at the monitors were within their historical ranges.

Historically, a seasonal variation in water levels is typically observed, which is a peak in the spring due to the annual spring melt and precipitation recharge, decreasing through the summer, and an increase in the fall. In 2024, water levels did not exhibit a notable increase in the spring, which is attributed to the lack of spring snow melt. In general, water levels remained stable or decreased during the winter and spring of 2024, but typically increased in July and August in response to wetter than normal climatic conditions during those months (Section 3.3).

Based on the water level data, hydrographs (**Figures B-1 through B-28**), and **Figures 5 and 6**, the following groundwater elevation trends were observed in 2024.

- With respect to **Figure 6**, the shallow groundwater level at 92-28 responded to precipitation events through most of the year.
- The highest water levels in 2024 generally were recorded in (a) April in the southwest corner, (b) April, May or September on the west side of the site, and (c) August on the east side of the site. The timing of the 2024 peak water levels is generally consistent compared to historical results, with the exceptions of the August and September peaks that were caused by higher than normal precipitation amounts received in summer 2024.

- Annual low water levels were generally recorded in (a) July in the southwest corner, (b) January on the west side of the site, and (c) January on the east side of the site.

As in previous years, the fluctuations that were observed in groundwater elevations during 2024 were a direct response to several factors, including seasonal climatic conditions and proximity to open-water ponds. **Figures 7 and 8** present interpretations of the groundwater table configuration across the property based on water level data for August 13 and January 8, 2024, respectively. The August data are generally representative of the 2024 high water table conditions, which is historically observed in the spring following the spring freshet. In 2024, the high water table conditions occurred in August following the notably wet climatic conditions in July and August. The January data are generally representative of the 2024 low water table conditions, as groundwater levels continued to recover from near-record low levels that were observed across the Site at the end of 2022. Most water table conditions throughout the year fell between the high and low conditions shown on **Figures 7 and 8**, respectively, although, as indicated above, the annual high and low water levels at individual monitors occurred during various months throughout 2024.

The interpreted water table configuration illustrated on **Figures 7 and 8** indicates that groundwater continues to move from east to west across the northern property. The water table contours south of Highway 401 tend to "bend back" toward the creek, indicating that the creek receives groundwater discharge from the subject property along the reach south of Highway 401. Typically, water table contours bend back further (i.e., more strongly) under high flow water table conditions, indicating an increased component of groundwater flow northwestward toward the creek near the Hanlon interchange and to the west.

The water table configuration adjacent to Mill Creek north of Highway 401, from the western limit of Slovenski Park downstream to the 401 culvert, continues to exhibit a somewhat different trend relative to the lands to the south. The water level data in that area north of Highway 401 indicate that shallow groundwater movement is to the west, essentially parallel to the creek, with a component toward the reach of Mill Creek south of Highway 401 and east of the Hanlon interchange. This trend typically is more apparent in the low groundwater conditions (**Figure 8**), and is a result of the buffering influence of the water levels that occur in the Phase 1 pond and to the east in the St. Marys Cement (McNally) pond south of Highway 401, and in the Reid Heritage ponds to the north.

Profiles of the 2024 high and low water conditions from southeast to northwest across the north property are presented in **Figure 9**. The alignment of cross-section X-X' is shown on **Figures 7 and 8**. The variation between the high and low water level conditions in 2024 was similar to the conditions observed in 2023.

Daily automatic readings of piezometric pressure were obtained from select locations across the property, as indicated with yellow shading on **Figure 2**. Given the large volume of data that has been collected for these multi-level monitors, the individual readings are not included in this report; they are available in electronic format, upon request. The automated data recorded by data loggers are presented in graphical form in **Appendix B**, as discussed later in the report.

The depths at which the multi-level monitors are installed are summarized below, together with comments on their functionality.

MULTI-LEVEL MONITOR	DEPTH OF PROBE (m)	STRATIGRAPHY	MONITOR FUNCTIONING?	
			PRESSURE TRANSDUCER	THERMISTOR
92-12-III	3.7	Gravelly fine to coarse sand	Yes (re-installed in June 2012)	Yes (re-installed in June 2012)
92-13-III	5.0	Gravelly medium to coarse sand	Yes (re-installed in May 2013)	Yes (re-installed in May 2013)
92-27-III	5.0	Gravelly Sand	Yes	Yes
92-28-I	4.0	Sandy gravel	Yes	Yes
92-28-II	3.1	Sandy gravel	Yes	Yes
92-28-III	2.4	Sandy gravel	Yes	Yes
92-29-I	8.5	Sandy gravel	Yes	Yes
92-29-II	5.4	Sand	Yes	Yes
92-29-III	3.0	Sandy gravel	Yes	Yes
92-32-I	13.9	Silt till	Yes	Yes
92-32-II	8.8	Silty fine sand	Yes	Yes
92-32-III	3.5	Sand	Yes	Yes
92-33-III	7.6	Gravelly sand	Yes (re-installed in March 2012)	Yes (re-installed in March 2012)
92-33-III	3.0	Gravelly sand	Yes (installed October 2017)	Yes (installed October 2017)
BH4	4.3	Sand and Gravel	Yes	Yes
BH14	6.0	Sand and Gravel/Gravelly Sand	Yes	Yes
DP7	2.3	Organics/gravelly sand	Yes	Yes
DP8	2.0	Organics/gravelly sand	Yes	Yes
DP9	1.8	Organics/gravelly sand	Yes	Yes

It is noted that the functioning data loggers provide sufficient information on groundwater levels and temperatures for continued assessment of potential impacts adjacent to the extraction ponds.

HYDROGRAPHS

Groundwater hydrographs produced using the levelogger data, including the multi-level monitors, are presented in **Figures B-29 to B-37**, and groundwater thermographs in **Figures B-38 to B-46, Appendix B**. For clarity, it is noted that hydrographs presenting manual monthly water level measurements at these wells are also presented in **Figures B-1 to B-28**. In each case, the manual water level data began earlier than the levelogger monitoring. Based on the hydrographs of the levelogger data, the following observations were noted at the monitors in 2024.

BH4

A data logger was installed at BH4 in 2011. The automated data are presented in **Figure B-29**. This monitor is located adjacent to Township Road No. 2, approximately 40 m south of silt pond SP3, and outside of the licenced extraction area. The 2024 water levels were within the historic range of water levels recorded at BH4 since the data logger was installed and continued to exhibit a slight recovery from the near-record low levels observed in the fall of 2022. The 2024 water levels generally increased from January through July, declined from July through October and remained relatively stable through the end of 2024.

BH14

Monitor BH14 and a data logger were installed in June 2015. The automated data are presented in **Figure B-30**. This monitor is located in the north-central area of the property, approximately 40 m southeast of Mill Creek and

about 60 m northwest of Monitor 92-12. The 2024 water levels were within the range of water levels measured at BH14 since the data logger was installed, with the exception of the water level recorded on July 17, 2024, which was slightly higher than the historical maximum value. The temporary increase in water level observed on July 17, 2024, is attributed to a 74 mm rainfall event recorded between July 15 and 17. Any post-installation aggregate extraction influence is not apparent. Water levels at BH14 generally increased in January, remained stable from February through June, increased in July, decreased in August and remained relatively stable through December.

92-12

This monitor nest is located in the north-central area of the property, about 300 m west (downgradient) of the Phase 1 pond, and approximately 60 m and 100 m southeast (upgradient) of Monitor BH14 and Mill Creek, respectively. A data logger was installed in the shallow monitor at 92-12 in 2012. As shown in **Figure B-31**, the 2024 water levels were within the range of water levels measured at 92-12 since the data logger was installed. Any post-installation aggregate extraction influence is not apparent. The 2024 water levels generally increased in January, remained stable from February to June, increased in July, decreased through September and remained relatively stable to the end of the year, which generally match the trends observed at adjacent Monitor BH14.

92-13

This nest of monitors is located approximately 20 m west of the pond in Phase 1. As shown in **Figure B-32**, the 2024 water levels were within the historic range of water levels measured at the shallow monitor at 92-13. Given the close proximity of 92-13 to the Phase 1 and Phase 4 ponds, the groundwater levels at 92-13 are similar to the levels of these ponds, as expected. The 2024 water levels gradually increased from January through early March, remained stable from March through May, decreased in June, increased in July, decreased in September and fluctuated through to the end of the year.

92-32

This monitor nest was installed in November 2006 and is located about 80 m northwest (downgradient) of the western limit of the Phase 3 pond, and approximately 60 m southeast (upgradient) of Mill Creek. The automated data from the well nest are presented in **Figure B-36**. The following table contains a summary of the range in vertical hydraulic gradients between the intermediate and shallow monitors and the deep and intermediate monitors from 2007 to 2024.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intermediate/ Shallow	-0.005 to 0.019	-0.008 to 0.022	0.014 to 0.053	-0.008 to 0.022	-0.019 to 0.031	-0.003 to 0.019	0.002 to 0.024	0.006 to 0.027	0.011 to 0.026	-0.001 to 0.029	0.004 to 0.025
Deep/ Intermediate	0.007 to 0.029	0.013 to 0.037	0.011 to 0.043	0.002 to 0.040	-0.003 to 0.026	0.002 to 0.035	-0.003 to 0.042	0.000 to 0.052	0.022 to 0.050	0.030 to 0.060	0.022 to 0.053

	2018	2019	2020	2021	2022	2023	2024
Intermediate / Shallow	-0.013 to 0.022	0.004 to 0.028	-0.001 to 0.035	0.005 to 0.048	0.004 to 0.016	-0.004 to 0.021	-0.013 to 0.024
Deep/ Intermediate	0.008 to 0.041	0.000 to 0.044	-0.004 to 0.042	-0.007 to 0.068	0.012 to 0.033	0.003 to 0.034	-0.001 to 0.035

Note: "-" indicates a downward gradient

In 2024, the gradient between the intermediate and shallow monitors, and between the intermediate and deep monitors, ranged between a slightly downward gradient to a small upward gradient. These trends are similar to the recent results. The peak vertical gradients between the intermediate and shallow monitors, and between the intermediate and deep monitors, in 2024 were within the respective range of historical results. An aggregate extraction influence on the vertical gradient is not apparent.

The three monitors show similar responses to precipitation recharge events, although the magnitude of the response is greatest at the shallow monitor and lowest at the deep monitor. The deep probe is located in the silt till beneath the sand and above the bedrock.

It is noted that the deep monitors at 92-32 and 92-33 are set within the glacial till soils that underlie the aggregate resource. The relatively strong vertical gradients that are observed at the deep monitors are likely a reflection, at least in part, of the upward gradients present in the underlying bedrock aquifer, which result in flowing artesian conditions in monitors at some locations.

On the west side of the north property, the data loggers/leveloggers have been divided into two lines of two monitor nests. Each line is discussed below.

NORTH LINE: 92-29 AND 92-28

92-29

This monitor nest was installed in November 2006 approximately 120 m southeast (upgradient) of Mill Creek, and is within 10 m of the western limit of the Phase 3 pond. The automated data from the well nest are presented in **Figure B-35**. The following table contains a summary of the range in vertical hydraulic gradients between the intermediate and shallow, and the deep and intermediate monitors from 2007 to 2024.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intermediate/ Shallow	-0.052 to 0.02	-0.118 to 0.014	-0.079 to 0.01	-0.095 to 0.052	-0.017 to 0.015	-0.087 to 0.045	-0.083 to -0.021	-0.080 to -0.019	-0.083 to -0.016	-0.083 to -0.026	-0.039 to -0.010
Deep/ Intermediate	-0.021 to 0.037	-0.009 to 0.087	-0.094 to 0.104	-0.049 to 0.052	-0.009 to 0.010	-0.059 to 0.047	-0.025 to -0.002	-0.036 to -0.001	-0.051 to -0.009	-0.035 to -0.012	-0.029 to -0.003

	2018	2019	2020	2021	2022	2023	2024
Intermediate/ Shallow	-0.031 to 0.018	-0.036 to 0.015	-0.031 to 0.008	-0.017 to 0.011	-0.031 to 0.014	-0.023 to 0.008	-0.028 to -0.006
Deep/ Intermediate	-0.019 to 0.008	-0.033 to 0.029	-0.017 to 0.014	-0.026 to 0.006	-0.020 to 0.007	-0.028 to 0.007	-0.029 to -0.002

Note: "-" indicates a downward gradient

In 2024, the gradient between the intermediate and shallow monitors, and between the intermediate and deep monitors, were consistently observed to be downward, which is similar to the results at the monitors between 2013 through 2017. During the years of 2007 to 2012 and 2018 to 2023, the gradients observed varied between small upward gradients and small downward gradients. The water level elevations observed at the well nest were typically higher from 2013 through 2017, and again in 2024, which is attributed to higher water level elevations in the Phase 3 pond. As shown in Figure B-35, the occasional upward gradients that were observed between 2007 to 2012 and 2018 to 2023 are consistent with lower water level elevations at the monitor. The peak vertical gradients were within the historic ranges in 2024. The three monitors show similar responses to precipitation recharge events. Given that each of the three probes are located in sand and gravel within 10 m of the Phase 3 pond, small downward vertical gradients are not unexpected.

92-28

This monitor nest was installed in November 2006 and is located approximately 40 m northwest (downgradient) of 92-29, and 60 m east (upgradient) of Mill Creek. The automated data from the well nest are presented in **Figure B-34**. The following table contains a summary of the range in vertical hydraulic gradients between the intermediate and shallow monitors and the deep and intermediate monitors between 2007 and 2024.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intermediate/ Shallow	-0.085 to 0.044	-0.080 to 0.021	-0.104 to 0.043	-0.093 to 0.026	-0.157 to 0.087	-0.252 to 0.525	-0.177 to -0.046	-0.162 to -0.031	-0.214 to 0.013	-0.044 to 0.026	-0.066 to -0.015
Deep/ Intermediate	-0.084 to 0.062	-0.017 to 0.043	-0.102 to 0.088	-0.075 to 0.101	-0.083 to 0.078	-0.538 to 0.190	-0.084 to 0.150	-0.028 to 0.011	-0.049 to 0.035	-0.068 to 0.003	-0.014 to 0.012

	2018	2019	2020	2021	2022	2023	2024
Intermediate/ Shallow	-0.064 to 0.009	-0.057 to 0.118	-0.098 to 0.055	-0.060 to 0.085	-0.111 to 0.036	-0.186 to 0.058	-0.281 to 0.111
Deep/ Intermediate	-0.017 to 0.041	-0.056 to 0.015	-0.026 to 0.025	-0.037 to 0.010	-0.024 to 0.006	-0.062 to 0.027	-0.028 to 0.003

Note: "-" indicates a downward gradient

In 2024, the gradient between the intermediate and shallow monitors, and between the intermediate and deep monitors, varied between a small upward gradient and a small downward gradient, which is similar to the recent results. The peak vertical gradients were within the historic ranges in 2024, with the exception of the peak downward gradient observed between the intermediate and shallow monitors, which was slightly stronger than observed historically. Stronger downward gradients were occasionally observed between the intermediate and shallow monitors in July/August 2024, which is attributed to large storm events. The three probes are located in sandy gravel and, therefore, small gradients would be expected. The three monitors show similar responses to precipitation recharge events. It is noted that the water level recorded at 92-28 remained relatively stable from January through early July 2024, which is evidence of the lack of spring freshet in 2024.

Figure 6 shows the relationship between the shallow groundwater level (water table) and precipitation events at Monitor 92-28-III in 2024. The water level responded to precipitation through most of the year.

SOUTH LINE: 92-27 AND 92-33

92-27

This monitor nest is located about 100 m east (upgradient) of Mill Creek and is adjacent to the final western limit of the Phase 3 pond. A data logger was installed in the shallow monitor at this location in December 2011. The automated data are presented in **Figure B-33**. In 2024, the water level increased slightly in January and then remained relatively stable through mid-July, which is attributed to the lack of spring freshet in 2024. The water levels observed in the winter and spring were similar to the peak water levels recorded at the well location in spring 2018, 2019, 2020 and 2023, but were higher than the spring peaks observed in 2021 and 2022. After remaining relatively stable through the first half of 2024, the water level increased notably in mid-July, which is attributed to higher than normal precipitation amounts in July. The water level generally decreased from late July through September, and remained stable between September and the end of the year. The water level pattern observed at monitor 92-27 follows 2024 precipitation patterns (Section 3.3). Overall, the 2024 water levels at monitor 92-27 were higher than the levels observed in 2020, 2021 and 2022 and were similar to those observed between 2017 and 2019 and in 2023. The pattern of water level fluctuations at 92-27 is similar to the water level fluctuations in the adjacent Phase 3 pond.

92-33

This monitor nest is located approximately 60 m northwest (downgradient) from 92-27, and 50 m east (upgradient) of Mill Creek and was operational since 1992, but all three pressure transducers and temperature thermistors malfunctioned in July 2010. A data logger was re-installed in the shallow monitor in March 2012, and a second shallow data logger was installed in October 2017 for temperature monitoring purposes at a depth, similar to the previous (i.e., pre-2012) shallow data logger. The automated data are presented in **Figure B-37**. In 2024, the

shallow water levels at this location generally remained stable from January through mid-July, increased in late July, decreased in August and September and remained relatively stable from September through the end of the year. Similar to the trends noted above at monitor 92-27, the winter/spring 2024 water level was similar to the spring peaks observed in 2018, 2019, 2020 and 2023, but was higher than the spring peaks observed in 2021 and 2022. Overall, the 2024 water levels at monitor 92-33 were higher than the levels observed in 2020, 2021 and 2022 and were similar to those observed in 2017, 2019 and 2023. The pattern of water level fluctuations at 92-33 is similar to the water level fluctuations in the adjacent Phase 3 pond.

THERMOGRAPHS

Groundwater thermographs produced using the levelogger data, including the multi-level monitors, are presented in **Figures B-38 to B-46, Appendix B**. Based on these thermographs, the following observations were noted at the monitors in 2024.

BH4

A levelogger transducer was installed in BH4 in August 2011. This monitor is located approximately 40 m south of silt pond SP3, adjacent to Township Road No. 2, and outside of the licenced extraction area. As shown in **Figure B-38**, the seasonal groundwater temperature fluctuation observed at this location exhibits a wave-like pattern. In 2024, the maximum and minimum temperatures were similar to the peak temperatures recorded from 2011 to 2023 and within the historic range. An aggregate extraction influence is not apparent at this location. Consideration should be given to discontinuing temperature monitoring at this location as impacts from off-site aggregate extraction south of BH4 are likely occurring. The temperature decreased from 8.6°C at the beginning of January to the annual low of 6.1°C in March. The temperature then increased to the annual high of 11.6°C in October before decreasing to 9.2°C by the end of December.

The following table summarizes the temperature range in the monitor.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Shallow	9.1* to 11.4	6.3 to 11.6	5.9 to 11.5	5.3 to 11.7	5.3 to 11.1	6.1 to 11.6	5.9 to 11.3	5.8 to 11.7	5.3 to 11.2	5.5 to 11.1	5.7 to 11.3	5.3 to 11.1

	2023	2024
Shallow	5.7 to 11.2	6.1 to 11.6

Note: Temperatures are recorded in degrees Celsius
" * " indicates data logger installed in August.

BH14

Monitor BH14, and a data logger, were installed in June 2015. This monitor is located in the north-central area of the property, approximately 40 m southeast of Mill Creek and about 60 m northwest of Monitor 92-12. In 2024, the temperature decreased from 9.7°C at the start of the year to the annual low of 6.5°C in March, as shown in **Figure B-39**. The temperature then increased to the annual high of 12.2°C in October before decreasing to 10.2°C by the end of December. In 2024, the minimum and maximum temperatures were within the historic range recorded since 2015.

The following table summarizes the temperature range in the monitor.

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Shallow	7.8* to 12.2	6.7 to 12.5	7.0 to 12.8	6.9 to 12.5	6.0 to 12.1	6.6 to 12.2	6.8 to 12.4	6.3 to 11.6	6.1 to 11.7

	2024
Shallow	6.5 to 12.2

Note: Temperatures are recorded in degrees Celsius
" * " indicates data logger installed in June.

92-12

This monitor nest is located in the north-central area of the property, about 300 m west (downgradient) of the Phase 1 pond, and approximately 60 m and 100 m southeast (upgradient) of Monitor BH14 and Mill Creek, respectively. A data logger was installed in the shallow monitor at 92-12 in June 2012. As shown in **Figure B-40**, the 2024 peak temperatures were similar to the 2012 to 2023 peaks. An aggregate extraction influence is not apparent at this location. The temperature decreased from 8.6°C at the beginning of January to the seasonal low of 4.6°C in late-January. Following the seasonal low recorded in January, the temperature increased to the annual high of 17.5°C in September before decreasing to 8.5°C by the end of December.

The following table summarizes the temperature range in the monitor.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Shallow	7.7* to 18.8	3.8 to 17.0	2.8 to 17.9	3.2 to 18.3	4.7 to 16.2	4.3 to 14.5	2.5 to 17.5	3.2 to 15.7	2.9 to 16.1	3.3 to 17.6	3.2 to 17.4

	2023	2024
Shallow	2.0 to 17.5	4.6 to 17.5

Note: Temperatures are recorded in degrees Celsius
" * " indicates data logger installed in June.

92-13

This monitor nest is located approximately 20 m to the west (downgradient) of the pond in Phase 1. Given the close proximity of the monitor to the pond, this monitor provides data with respect to the thermal effects resulting from the presence of the pond, wash water pumping, and silt pond water recirculation. It is noted that this monitor will eventually be removed during the extraction in Phase 5.

The groundwater temperature fluctuations at this location (**Figure B-41**) resemble a wave-like pattern, similar to the ambient air temperature. The air temperature exhibits a generally consistent pattern that sees annual winter

lows in January/February, increasing to annual highs in the summer (July/August) and then decreasing through the fall back to the winter season. The natural pre-extraction groundwater temperatures show a reasonably similar pattern, with annual lows of 5.7°C to 8.5°C that occur in late spring/early summer, increasing to annual highs of 9.0°C to 10.7°C in the fall, followed by a progressive decrease through the fall and into the winter. The historical data illustrate the pre-extraction (1992 to 1994) natural seasonal variation at the shallow monitor at nest 92-13, followed by the thermal modifications resulting from the progressive development of the Phase 1 pond. In 2024, the temperature at 92-13 decreased from 15.3°C at the beginning of January, to the annual low of 6.1°C in June. The temperature then increased to the annual high of 17.1°C in November and then decreased to 16.6°C at the end of the year.

The following table summarizes the temperature ranges observed at each of the three monitor elevations since installation.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Shallow	5.7 to 19.1	2.1 to 20.5	1.1 to 18.9	1.1 to 19.9	1.9 to 14.9	2.5 to 13.5	2.7 to 14.1	6.9 to 16.3	3.3 to 18.1	2.7 to 18.9
Intermediate	7.4 to 16.8	4.2 to 18.6	3.6 to 17.0	2.6 to 17.6	4.4 to 14.2	4.0 to 12.6	3.8 to 13.6	6.4 to 15.0	4.4 to 16.8	3.0 to 17.8
Deep	8.2 to 14.1	5.8 to 16.3	5.5 to 15.3	3.7 to 15.9	6.2 to 14.3	5.3 to 11.4	4.7 to 12.4	6.4 to 12.6	5.1 to 14.7	4.1 to 15.7

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Shallow	2.3 to 20.5	5.7 to 20.1	2.7 to 20.7	5.9 to 21.7	2.9 to 21.3	8.9 to 17.7	2.9 to 22.6	N/A	3.4 to 19.0	2.4 to 20.9
Intermediate	3.2 to 17.8	5.2 to 17.6	3.2 to 16.8	5.8 to 19.0	4.4 to 18.6	7.4 to 18.8	5.0 to 16.2	N/A	N/A	N/A
Deep	4.1 to 15.3	4.7 to 14.7	2.3 to 13.6	N/A	N/A	N/A	7.9 to 15.3	N/A	N/A	N/A

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shallow	2.3 to 21.3	3.5 to 21.9	2.8 to 20.6	4.5 to 17.5	5.6 to 15.8	4.4 to 15.7	6.1 to 15.0	5.4 to 15.2	6.0 to 15.4	6.1 to 17.1
Intermediate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Deep	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: Temperatures are recorded in degrees celsius
"N/A" indicates temperatures not available due to data logger failure
From May 2013 onward, only a shallow data logger was present.

92-32

This monitor nest was installed in November 2006 and is located approximately 60 m southeast (upgradient) of Mill Creek and approximately 90 m downgradient of the western limit of the Phase 3 pond. As shown in **Figure B-45**, the seasonal groundwater temperature fluctuations observed at the shallow monitor at this location (32-III) exhibit a wave-like pattern, with the annual low in late winter/spring and highs in the late summer/fall. The

shallow monitor historically responds to thermal increases and decreases a couple of months prior to the intermediate monitor and a few months earlier than the deep monitor. In recent years, however, the lag has increased. The apparent seasonal changes in groundwater temperature in the intermediate and deep monitors are very small relative to the shallow monitor and to monitors at other locations. This is likely due to the greater depth at which these two lower monitors are installed, compared to other intermediate and deep probes, and/or the finer-grained materials in which the monitors are installed (silty fine sand and silt till, respectively). A slight increasing trend in groundwater temperatures at the intermediate and deep monitors was apparent in 2013 and temperatures have since fluctuated at this higher level.

Shallow Monitor – The temperature decreased from 7.2°C at the start of the year to the annual low of 5.5°C in late February, then increased to the annual high of 15.0°C in August, and decreased to 7.6°C through the end of the year.

Intermediate Monitor – The temperature gradually decreased from of 9.2°C at the start of the year to the annual low of 8.9°C in June, and increased to the annual high of 9.4°C by the end of the year.

Deep Monitor – The temperature at this monitor remained steady between 9.0°C and 9.2°C during 2024.

The following table contains a summary of the temperature ranges at each of the three monitors. The peak minimum and maximum temperatures in the shallow and intermediate monitors in 2024 were similar to the historic ranges. The peak minimum and maximum temperatures recorded at the deep monitor in 2024 were slightly higher (0.1°C) than the historical ranges, which may be attributed to warmer air temperatures and the lack of spring freshet in 2024.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Shallow	4.0 to 12.2	3.5 to 13.6	3.6 to 13.3	3.3 to 15.3	5.6 to 14.0	6.1 to 15.2	5.3 to 15.1	5.0 to 13.6	4.6 to 14.9
Intermediate	8.2 to 8.6	8.2 to 8.6	8.2 to 8.6	8.3 to 9.1	8.1 to 9.2	8.5 to 9.1	8.7 to 9.5	8.7 to 9.5	8.6 to 9.3
Deep	8.1 to 8.2	8.1 to 8.3	8.1 to 8.3	8.1 to 8.3	8.1 to 8.7	8.2 to 8.6	8.3 to 8.9	8.4 to 8.9	8.3 to 8.7

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shallow	3.5 to 15.7	3.5 to 14.8	4.3 to 15.1	3.0 to 13.9	2.8 to 13.5	2.8 to 14.0	2.6 to 13.4	4.3 to 14.2	5.5 to 15.0
Intermediate	8.8 to 9.1	9.0 to 9.6	9.4 to 9.8	9.1 to 9.5	8.9 to 9.4	8.8 to 9.2	8.8 to 9.2	9.0 to 9.3	8.9 to 9.4
Deep	8.4 to 8.6	8.6 to 9.0	8.9 to 9.1	8.8* to 9.0*	8.9** to 9.1	8.8 to 9.1	8.9 to 9.0	8.9 to 9.0	9.0 to 9.2

Notes: Temperatures are recorded in degrees Celsius.
* 2019 range excludes data from August 1 onward
** 2020 range excludes data from January 1 to March 12

On the west side of the north property, the data loggers have been divided into two lines of two monitor nests. Each line is discussed below.

NORTH LINE: 92-29 AND 92-28

92-29

This monitor nest was installed in November 2006 and is located within 10 m of the limit of extraction of the Phase 3 pond (completed in 2012), and approximately 120 m southeast of Mill Creek. As shown in **Figures 10 and B-44**, historically, the seasonal groundwater temperature fluctuations observed at each of the three monitors at this location exhibited a wave-like pattern, with the annual low typically in late winter/spring and highs typically in the late summer/fall. The shallow monitor (29-III) typically responded to thermal increases and decreases a couple of months prior to the intermediate monitor and a few months earlier than the deep monitor. The temperatures recorded from 2012 to 2024, however, do not follow the general patterns observed at this location prior to 2012, and now reflect the monitor's location adjacent to the western limit of the Phase 3 pond. The groundwater temperatures at the shallow and intermediate monitors generally mirrored each other throughout 2024, and much greater fluctuations occurred at each monitor from 2012 to 2024 compared to previous years. The thermal increases at the deep monitor lagged behind the other two monitors by a couple months, as typically occurs, but from 2014 to 2016, peak high temperatures at the deep monitor were greater than in previous years. The peak high temperatures between 2017 and 2022 were lower than 2014 to 2016; however, the peak high temperatures observed in 2023 and 2024 were similar to those observed between 2012 and 2015. The recent increase in peak high temperatures corresponds with the recent increase in water levels of the Phase 3 pond, and subsequently the water levels at monitor 92-29. The annual peak low temperatures observed at the deep monitor since 2017 have returned to a temperature similar to pre-2014 levels. These changes in temperature trends at this monitor are attributed to the excavation of the Phase 3 pond to within 10 m of the monitor nest.

Shallow Monitor – The temperature decreased from 3.2°C at the beginning of the year to the annual low of 0.3°C in February. The temperature then increased to the annual high of 24.3°C in August before decreasing to 1.6°C by the end of the year.

Intermediate Monitor – The temperature decreased from 3.7°C at the beginning of the year to the annual low of 1.3°C in February. The temperature then increased to the annual high of 24.4°C in August before decreasing to 3.3°C by the end of the year.

Deep Monitor – The temperature declined from 13.0°C at the beginning of the year to the annual low of 8.7°C in April. The groundwater temperature then increased to the annual high of 18.1°C in September, and decreased to 13.5°C by the end of the year.

The following table contains a summary of the temperature ranges at each of the three monitors.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Shallow	4.1 to 15.0	3.3 to 15.1	4.0 to 14.9	3.2 to 15.9	4.0 to 15.3	2.2 to 24.7	0.7 to 26.3	-0.2 to 23.9	-0.4 to 24.9
Intermediate	7.0 to 11.5	6.1 to 11.7	6.4 to 11.1	6.6 to 11.9	6.6 to 11.3	2.1 to 24.6	1.4 to 26.7	1.5 to 24.0	1.6 to 24.6
Deep	8.0 to 10.1	7.9 to 10.0	7.8 to 10.0	7.9 to 10.3	7.8 to 10.3	8.3 to 16.6	5.7 to 17.3	3.9 to 18.1	3.5 to 17.8

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shallow	-0.2 to 25.8	0.4 to 22.8	0.0 to 24.3	0.3 to 23.7	0.4 to 23.6	0.5 to 22.2	0.5 to 22.7	1.0 to 22.9	0.3 to 24.3
Intermediate	1.8 to 25.8	1.2 to 22.5	1.1 to 23.7	2.1 to 23.5	2.4 to 22.8	2.8 to 21.7	2.6 to 22.9	3.1 to 23.5	1.3 to 24.4
Deep	6.1 to 21.3	6.2 to 15.7	7.5 to 14.7	7.7 to 15.1	7.9 to 13.9	8.5 to 13.3	8.0 to 15.4	9.0 to 16.5	8.7 to 18.1

Note: Temperatures are recorded in degrees Celsius.

Figure 11 shows the relationship between the air temperature and the groundwater temperature at the three elevations in the aquifer throughout 2024. As expected, the groundwater continues to respond proportionately to seasonal air temperature changes, but it is also influenced by the water temperature in the adjacent Phase 3 pond.

92-28

This monitor nest was installed in November 2006 and is located approximately 40 m downgradient of 92-29 (which itself is within 10 m from the western limit of the Phase 3 pond), and 60 m east (upgradient) of Mill Creek. As shown in **Figure B-43**, the seasonal groundwater temperature fluctuations observed at each of the three monitors at this location through 2024 continue to exhibit a wave-like pattern similar to historical values, with the annual low in late winter/spring and highs in the late summer/fall. The magnitude and general timing of the seasonal temperature changes in the three monitors at this location are reasonably similar to each other, as each of the three monitors are relatively shallow (within 4 m of ground surface). Beginning in 2012, the winter low temperatures were 1 to 2°C higher than the pre-2012 results. The winter low temperatures in 2019 were lower than in 2018, and were similar to the pre-2012 results; however, the winter low temperatures recorded since 2020 were slightly higher than observed in 2019. The winter low temperatures observed at the intermediate and deep monitors in 2024 were the highest recorded to date, which may be attributed to the lack of spring freshet and higher air temperatures observed in 2024. The summer/fall high temperatures at the shallow monitor also continue to be slightly lower than prior to 2012. The 2012 to 2024 data trends suggest that the presence of the Phase 3 pond in the northwest corner of the extraction area may have a subtle influence on groundwater temperatures at the 92-28 nest, which is located approximately 50 m downgradient from the pond, and approximately 60 m upgradient from Mill Creek. Influences to date at this location are considered minor.

Shallow Monitor – The temperature declined from 7.7°C at the beginning of the year to the annual low of 5.7°C in March. Temperatures then increased to the annual high of 14.4°C in August. It is noted that the annual high observed at the shallow monitor at 92-29 in 2024 was 9.9°C higher than the high at 92-28, which demonstrates the considerable thermal plume dissipation that occurs over the 40 m distance between the two monitors. From September to the end of the year, the shallow groundwater temperature decreased to 7.9°C.

Intermediate Monitor – The temperature decreased from 8.6°C at the beginning of the year to the annual low of 6.6°C in March. Temperatures then increased to the annual high of 13.9°C in September. From September to the end of the year, the intermediate groundwater temperature decreased to 9.1°C.

Deep Monitor – The temperature declined from 9.1°C at the beginning of the year to the annual low of 7.0°C in March. The groundwater temperature then increased to the annual high of 13.6°C in September. From September to the end of the year, the deep groundwater temperature decreased to 9.7°C.

The following table contains a summary of the temperature ranges at each of the three monitors.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Shallow	3.8 to 14.1	3.6 to 14.7	3.6 to 14.9	3.5 to 15.5	3.5 to 14.5	4.9 to 14.1	5.3 to 14.1	5.4 to 13.6	5.6 to 13.3
Intermediate	4.3 to 13.4	3.8 to 14.2	3.9 to 14.1	3.8 to 14.6	4.0 to 14.3	5.1 to 13.9	5.5 to 13.9	5.8 to 13.4	6.2 to 12.9
Deep	5.1 to 12.5	4.6 to 13.0	4.9 to 12.7	4.6 to 13.4	4.6 to 13.2	5.7 to 12.6	6.4 to 12.5	6.8 to 12.2	6.4 to 12.1

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shallow	5.4 to 14.3	6.0 to 14.0	5.1 to 14.3	4.0 to 13.7	4.8 to 13.9	4.9 to 14.0	4.8 to 13.5	4.9 to 13.8	5.7 to 14.4
Intermediate	5.8 to 14.2	6.3 to 13.8	5.7 to 13.9	4.8 to 13.5	5.3 to 13.6	5.3 to 13.8	5.4 to 13.1	5.4 to 13.7	6.6 to 13.9
Deep	6.3 to 13.7	6.7 to 13.0	5.7 to 13.1	4.8 to 12.6	5.4 to 12.6	5.3 to 13.0	5.4 to 13.1	5.8 to 13.3	7.0 to 13.6

Note: Temperatures are recorded in degrees Celsius.

SOUTH LINE: 92-27 AND 92-33

92-27

This monitor nest is located about 100 m east (upgradient) of Mill Creek and is adjacent to the western limit of the Phase 3 extraction. A data logger was installed in the shallow monitor at this location in December 2011, and a thermograph for the monitor is presented in **Figure B-42**. The temperature in 2024 decreased from 10.2°C at the beginning of the year to the annual low of 5.5°C in March. The temperature then increased to the annual high of 21.6°C in September before decreasing to 11.3°C by the end of the year.

The following table contains a summary of the annual temperature range at this monitor location from 2012 to 2024. The peak minimum and maximum temperatures recorded at 92-27 since 2017 have generally been higher and lower, respectively, compared to the pre-2017 results; however, the peak maximum temperatures have increased since 2022, with the peak maximum temperature in 2024 being similar to the pre-2017 results. This increase coincides with the increases in water elevations observed at 92-27 and the adjacent Phase 3 pond since 2022. Prior to 2017, the temperature pattern at 92-27 was similar to the pattern observed at 92-29, which indicated a similar pond influence at the two monitors. This similar pond influence is expected given the comparable separation distances between the monitors and the Phase 3 pond. The muted amplitude of annual temperature fluctuations observed at 92-27 between 2017 and 2022 is attributed to the decrease in groundwater

level observed at the monitor during that period. Higher water levels recorded between 2013 and 2017 were typically near the ground surface, or higher than the ground surface, in the spring, which would have allowed for a greater influence from air temperatures. The decrease in groundwater levels at 92-27 since 2017, which is attributed to the water level decrease in the Phase 3 pond, has resulted in increased insulation of the groundwater at 92-27 from air temperature effects. The increase in peak maximum temperatures observed since 2022 is attributed to the lack of spring freshet, which typically allows cooler water to infiltrate, and wetter than normal conditions in the summer, which allows warmer water to infiltrate. This is evident in Figure B-33, which shows that the amplitude of water level fluctuation at monitor 92-27 has been muted since 2022.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Shallow	3.9 to 20.2	1.7 to 22.2	0.6 to 21.8	-0.5 to 20.0	1.0 to 23.0	4.6 to 16.4	4.0 to 17.1	2.8 to 18.7	2.8 to 17.5	3.6 to 17.4	3.5 to 19.2

	2023	2024
Shallow	4.2 to 20.5	5.5 to 21.6

Note: Temperatures are recorded in degrees Celsius.

92-33

This monitor nest is located 50 m east (upgradient) of Mill Creek and was operational since 1992. All three thermistors malfunctioned in July 2010. A data logger was re-installed in the shallow monitor in March 2012. The monitor is located within approximately 70 m of the western edge of the Phase 3 pond. A second shallow data logger, denoted 'Shallow (A)' on **Figure B-46**, was installed in October 2017 for temperature monitoring purposes at a depth similar to the previous (i.e., pre-2012) shallow data logger. The 'Shallow (A)' data logger is installed about 4.7 m higher than the existing shallow data logger. In early 2025, it was determined that the 'Shallow' logger was inadvertently located at the same depth as the 'Shallow (A)' logger in 2024. As such, the 2024 automated temperature data for the deeper 'Shallow' zone are unavailable. The temperature profile changes in the 'Shallow (A)' zone that occurred in 2024 compared to previous years (see below) hindered the identification of this inadvertent installation during the completion of monthly data reviews. The logger was re-installed at the target depth in March 2025.

The amplitude of the thermograph recorded by the 'Shallow' data logger has been variable since 2012, although the temperatures have generally fluctuated within a similar range over the long term.

The temperature profile of the 'Shallow (A)' data logger, which is installed at a similar depth to the previous shallow data logger (pre-2011), showed a different pattern in 2024 compared to the historical results. In the pre-2011 data logger temperature data, the water temperature typically reached a peak low temperature in April and a peak high temperature in September or October, and the difference between the peak high and low temperatures was typically between 8°C and 9°C. In 2024, the temperature increased from 10.8°C at the start of the year to the annual minimum of 10.2°C in early February and then increased to 12.5°C between February and June. The temperature then decreased marginally, to 11.3°C, between June and mid-August. Between mid-August and early November, the temperature rapidly increased to the annual maximum of 15.3°C before decreasing through the end of the year. The seasonal decline in temperature that is typically observed in the winter/spring was

absent in 2024, which could be attributed to the lack of spring freshet. The spring freshet normally allows infiltration of cooler water into the aquifer. The notable increase in temperature observed in the late summer/fall of 2024 may be attributed to the appreciably wet climatic conditions observed in the summer, which would have introduced warmer water into the aquifer. In addition, it is noted that warmer air temperatures were observed in 2024 compared to historical results (Section 3.3). Further monitoring will assist with interpretation.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Shallow	4.3 to 11.9	3.5 to 11.7	3.9 to 11.5	4.5 to 12.3	5.1 to 12.9	5.9 to 13.3	4.7 to 12.7	5.3 to 13.7	5.1 to 12.7	4.9 to 12.9
Intermediate	7.3 to 8.4	7.5 to 8.4	7.5 to 8.6	7.5 to 8.8	8.0 to 9.8	8.1 to 9.6	8.3 to 9.8	8.6 to 10.6	8.3 to 9.6	8.3 to 10.2
Deep	8.1 to 9.1	8.1 to 8.3	8.1 to 9.3	8.3 to 8.7	8.5 to 9.1	8.9 to 9.9	9.1 to 10.1	9.5 to 11.9	8.6 to 9.6	9.4 to 10.6

	2005	2006	2007	2008	2009	2010*	2011	2012**	2013	2014
Shallow	4.7 to 13.9	5.3 to 13.7	5.7 to 13.3	5.1 to 13.3	5.1 to 14.1	5.3 to 13.1	N/A	8.4 to 9.8	8.2 to 10.9	7.5 to 11.0
Intermediate	8.1 to 10.6	8.6 to 10.4	8.6 to 10.4	8.6 to 10.6	8.8 to 10.6	8.6 to 10.8	N/A	N/A	N/A	N/A
Deep	9.4 to 11.0	9.4 to 11.2	9.4 to 11.4	9.2 to 10.6	8.8 to 10.6	8.6 to 10.2	N/A	N/A	N/A	N/A

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shallow	8.2 to 10.5	8.9 to 12.0	10.3 to 12.4	10.3 to 10.5	9.5 to 10.2	10.0 to 10.9	9.8 to 10.7	10.0 to 10.6	9.9 to 11.4	N/A
Shallow (A)†	N/A	N/A	8.0*** to 12.1	6.3 to 13.5	5.8 to 11.2	7.3 to 12.4	5.0 to 13.6	6.0 to 11.8	6.4 to 12.1	10.2 to 15.3
Intermediate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Deep	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: Temperatures are recorded in degrees Celsius.
"*" indicates January to July only.
"**" indicates March to December only.
"***" indicates October to December only.
"N/A" indicates temperatures not available due to data logger failure.
Blank indicates data logger not installed.
† ' Shallow (A)' logger is installed 4.7 m shallower than 'Shallow' logger

3.6 Wetland Water Levels

The drive point monitors that are located in the wetland are noted in **Table 1**. Monitors DP6 to DP12 are located in the large wetland area in the north-central part of the property. DP16 is located in the wetland along the western side of the property.

Monitoring of wetland drive points on the Reid Heritage property adjacent to Mill Creek north of Highway 401 commenced in August 2000, and those monitors were incorporated into the routine monitoring program. These drive points were removed by others with the exception of DP113, located immediately north of Hwy 401. Results for this monitor are discussed later in this section.

The water level data from the previous five years (2020 to 2024) for the wetland drive points are documented in **Table B-3, Appendix B**. Groundwater hydrographs presenting the full dataset of historic results for the wetland drive points are presented in **Figures B-49 to B-58, B-60, B-62, and B-64, Appendix B**. In **Table B-7, Appendix B**, a summary of wetland water level data from the previous five years (2020 to 2024) is provided. A groundwater hydrograph presenting the full dataset of historic results of three representative drive points in the wetland is presented in **Figure 12**. As shown in the hydrograph, of the three representative drive points, the groundwater elevation at DP7 is typically highest, and the lowest elevations occur at DP11. This is expected, as DP7 is located furthest upgradient from Mill Creek and DP11 is closest, and groundwater flow at the site is toward Mill Creek.

Historically, the groundwater levels within the wetland remained reasonably close to ground surface throughout the year. The water levels are typically nearest to ground surface, and in some instances, they are above ground surface, mostly during the spring melt. The groundwater levels then show a progressive decline to their maximum depth below ground surface during the summer to early fall months. The fluctuation between the spring high water levels to the summer low water levels usually ranges from 0.1 m to 1.0 m, depending on the location.

In 2024, the following groundwater elevation trends were observed in the wetland monitors, based on the monthly monitoring results.

- In 2024, water levels in the wetland drive points followed the typical seasonal fluctuation of increasing water levels during the winter/spring and decreasing through the summer and into early fall. Despite the typical seasonal fluctuation, wetland water levels also increased in July/August 2024 following wetter than normal climatic conditions.
- The timing of the highest water levels in 2024 was variable; with peaks occurring in March/April/May, and a similar peak occurring in August/September. The lowest water levels were typically recorded in January; however, similar levels were also observed in November/December.
- Based on manually measured groundwater levels, the overall seasonal variation in the elevation of the water table in the wetland in 2024 (seasonal high to low), ranged from 0.22 m at DP10, located near Mill Creek, to 0.39 m at DP9, located in the southern portion of the wetland.
- In 2024, based on manually measured groundwater levels, the average depth of the water table below ground surface within the wetland monitors ranged from 0.4 m at DP7, located within the southeastern edge of the wetland, to 1.0 m at DP10, adjacent to Mill Creek. The maximum depth of the water table recorded in 2024 was 1.1 m below ground surface at DP10 in January, and the minimum depth of the water table recorded was 0.4 m above ground surface, recorded at DP16 in July.

A cross-section through the wetland showing the groundwater profiles for both the high and low water table conditions is presented in **Figure 13**. The location of the section is shown on the Site Plan, **Figure 2**.

The average groundwater level recorded within the wetland areas in 2024 was equal to the historical average, and about 0.06 m above the 2023 average for the site. The higher average levels in 2024 compared to 2023 are attributed to the increase in water level observed in the late summer due to higher than normal precipitation in July/August. The increase in water levels within the wetland areas generally is less than the increase experienced at other locations across the site. This is primarily due to the proximity of the wetland areas to Mill Creek, which acts as a buffer, or hinge point, for the water table that reduces the magnitude of seasonal variations. The wetland groundwater levels recorded in 2024 were within the historical maximum and minimum groundwater levels. An aggregate extraction influence is not apparent.

Daily readings of piezometric pressure and water temperature were collected at drive points DP7, DP8, and DP9 in the north-central part of the property, and at drive point DP16 at the western side of the property. The groundwater in the shallower drive points DP9 and DP16 typically responds to thermal increases and decreases a few months prior to the deeper screened drive points DP7 and DP8. The automated temperature data from the wetland drive points (DP7, DP8, DP9 and DP16) are presented in **Figures B-59, B-61, B-63 and B-65**, respectively.

DP7 – The temperature decreased from 10.8°C at the beginning of the year to the annual low of 8.7°C in May. The temperature then increased to the annual high of 11.9°C in October/November, and decreased to 11.0°C by the end of the year.

DP8 – The groundwater temperature decreased from 9.5°C at the beginning of the year to the annual low of 7.7°C in March/April, then increased to the annual high of 10.8°C in November before decreasing to 9.5°C by the end of the year.

DP9 – The temperature decreased from 6.7°C at the beginning of the year to the annual low of 3.9°C in February, then increased to the annual high of 13.8°C in August. The temperature decreased to 6.1°C by the end of the year.

DP16 – The temperature decreased from 7.9°C at the beginning of the year to the annual low of 6.0°C in March. The temperature then increased to the annual high of 15.3°C in August, then decreased to 8.0°C by the end of the year.

The following table contains a summary of the temperature range in the drive points from August 2011 to 2024. The annual minimum and maximum temperatures recorded at the drive points in 2024 were within the ranges recorded since the data loggers were installed in 2011/2012, with two exceptions. The annual maximum temperatures recorded at DP8 and DP9 were 0.1°C and 0.5°C higher than the historical annual maximum values, respectively. The appreciably wet climatic conditions observed in the summer of 2024 may have contributed to the warmer groundwater temperatures observed at DP8 and DP9 in August, as warmer surface water would have rapidly infiltrated in the wetland. In addition, as previously noted, the average annual air temperatures recorded in 2024 were the highest observed in decades. An aggregate extraction influence is not apparent.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
DP7	10.3 to 12.6	8.5 to 12.8	9.4 to 12.5	8.6 to 11.4	8.1 to 10.9	8.5 to 11.6	9.6 to 12.2	8.1 to 11.9	7.9 to 11.7	8.1 to 12.5	8.9 to 12.4	8.7 to 11.5
DP8	N/A	7.8* to 10.3*	7.8 to 10.3	7.6 to 9.4	7.4 to 10.2	7.8 to 10.3	7.8 to 10.1	7.2 to 10.5	7.6 to 10.5	7.5 to 10.7	7.9 to 10.7	7.7 to 10.7
DP9	6.9 to 13.3	4.5 to 13.3	4.3 to 12.9	4.1 to 13.2	3.7 to 13.0	4.5 to 13.0	4.0 to 12.5	3.5 to 13.2	2.9 to 12.9	3.7 to 13.1	3.3 to 13.3	3.7 to 12.3
DP16	N/A	8.6** to 18.3**	2.7 to 17.1	1.3 to 17.1	2.3 to 17.6	6.4 to 16.9	6.1 to 14.8	4.6 to 16.3	3.6 to 15.4	4.6 to 15.4	3.5 to 15.5	3.1 to 15.0

Note: Temperatures are recorded in degrees Celsius.
"N/A" indicates data logger not installed.
* 2012 DP8 data include only April to December
** 2012 DP16 data include only June to December.

	2023	2024
DP7	9.2 to 11.7	8.7 to 11.9
DP8	7.9 to 10.6	7.7 to 10.8
DP9	4.1 to 12.7	3.9 to 13.8
DP16	5.1 to 15.5	6.0 to 15.3

Note: Temperatures are recorded in degrees Celsius.

Based on the data from the data logger transducers at DP7, DP8, DP9, and DP16, the groundwater level in the wetland increased slightly from January through April, decreased slightly in May/June, increased notably in July, remained high in August, decreased in September/October and increased through the end of the year. The water levels at DP7 (**Figure B-58**) and DP8 (**Figure B-60**) were similar to the levels recorded prior to 2018 and since 2020, which are slightly lower than the 2018 to 2020 levels. The higher water levels recorded at DP7 and DP8 between 2018 and 2020 are attributed to the higher seasonal water levels observed in the Phase 4 pond during the same period, as shown on **Figure B-68**. The higher water levels in the Phase 4 pond indicate that the silt barrier is functioning as designed. The decrease in water level observed at DP7 and DP8 since 2020 correlates with the decrease in water level observed in the Phase 4 pond, which is partially attributed to dry climatic conditions between 2020 and 2022. The water levels at DP7 and DP8 were generally higher in 2024 than in 2023, which is attributed to wetter climatic conditions in 2023 and 2024. The water levels at DP9 (**Figure B-62**) have been relatively stable over the long term. An aggregate extraction influence at DP9 is not apparent.

It is noted that, similar to the water levels at Monitor 92-32, located about 140 m north of DP16, the water levels at DP16 (**Figure B-64**) showed an overall downward trend from 2014 to 2020. The declining water levels at DP16 are attributed to the declining seasonal water levels observed in the Phase 3 pond during the same period, as shown on **Figure B-68**. The higher water levels in the Phase 4 pond relative to the lower water levels in the Phase 3 pond indicate that the silt barrier is functioning as designed. In 2021 and 2022, the water levels at DP16 and the Phase 3 pond remained similar to the levels measured in 2020, indicating that impacts from the silt barrier had stabilized. In 2023 and 2024, the water levels at DP16 increased overall and were similar to those observed from 2015 to 2018.

3.7 Mill Creek Drive Points

The drive point monitors that are installed in the creek bed are listed in **Table 1**. The drive point locations are shown on **Figure 2**. The drive point monitors are used to provide groundwater and surface water temperature data. As well, the drive points provide a measure of the hydraulic head within the groundwater system beneath the creek, as well as providing a surface water level in the creek. These data are used to calculate the magnitude and direction (i.e., upward or downward) of the vertical hydraulic gradient at the creek.

Drive points DP18 to DP20 are located north of Highway 401, upstream from the property. Drive points DP3, DP4, DP17/R, DP21, and DP22 are located in the northeast section of the creek, from south of the Hanlon interchange upstream to Highway 401. Drive points DP1 and DP2 are located in the northwest section of the creek, downstream from the Galt Creek and Pond Creek tributaries, and DP5CR (formerly DP5A then DP5B then DP5C) is located just beyond the southwest corner of the site, where Mill Creek flows beneath the bridge at Concession Road 2.

The previous 5 years of water level data for the creek drive points are presented in **Table B-5**, and groundwater/ surface water hydrographs presenting the full historic dataset for the creek drive points are presented in **Figures B-70 to B-100, Appendix B**. Additionally, the previous 5 years of water level data for the original surface water monitoring stations SW1 and SW2 are presented in **Table B-4**, and full historic hydrographs are provided in **Figures B-66 and B-67**, respectively. A summary of the previous 5 years of creek drive point data, including temperature, vertical hydraulic gradients, and calculated discharge fluxes for each monitor, is presented in **Table B-5**. Thermographs of the groundwater and surface water temperatures at each drive point are presented in **Figures B-71 to B-104, Appendix B**.

The hydrographs for the drive point monitors show the seasonal changes in elevation of the groundwater at each monitor, together with the surface water elevation data for the creek. The yearly average vertical hydraulic gradients for the in-stream drive points, starting at the downstream location DP5A/B/C/CR and moving upgradient to DP18, from 2024 back to 2005, and historically from the start of data collection (1988 to 1993) up to 2005, are shown below.

Average Vertical Hydraulic Gradient

DRIVE POINT	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
DP5A/B/C/CR	0.61	0.62	0.68	0.66	0.55	0.52*	0.54	0.47	0.18	0.21	0.28	0.18
DP2	0.15	0.16	0.24	0.25	0.24	0.25	0.26	0.25	0.33	0.34	0.29	0.33
DP1	0.33	0.32	0.28	0.23	0.20	0.25	0.27	0.25	0.33	0.33	0.37	0.37
DP3	0.07	0.05	0.06	0.06	0.05	0.04	0.07	0.04	0.06	0.05	0.05	0.05
DP17/R	0.06	0.08	0.04	0.04	0.06	0.05	0.07	0.06	0.04	0.05	0.03	0.03
DP22	0.05	0.04	0.04	0.04	0.06	0.07	0.07	0.08	0.05	0.05	0.08	0.05
DP4/R	0.07	0.04	0.03	0.02	0.06	0.13	0.13	0.16	0.10	0.14	0.17	0.11
DP21	0.11	0.08	0.08	0.07	0.12	0.08	0.06	0.11	0.03	0.06	0.08	0.07
DP20	-0.02	-0.05	-0.07	0.08	0.11	0.13	0.08	0.14	0.10	0.12	0.12	0.14
DP19	-0.10	-0.13	-0.20	0.03	0.06	0.05	0.02	0.01	-0.03	-0.01	0.06	0.03
DP18	-0.15	-0.06	-0.09	0.15	0.10	0.10	0.06	0.12	0.08	0.11	0.09	0.10

DRIVE POINT	2012	2011	2010	2009	2008	2007	2006	2005	HISTORIC AVERAGE (UP TO 2005)
DP5A/B/C/CR	0.40	0.19	0.18	0.12	0.12	0.09	0.09	0.11	0.09
DP2	0.32	0.30	0.30	0.24	0.22	0.22	0.21	0.14	0.17
DP1	0.30	0.31	0.27	0.21	0.22	0.19	0.21	0.23	0.22
DP3	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.05	0.04
DP17/R	0.03	0.04	0.06	0.05	0.06	0.04	0.04	0.04	0.02
DP22	0.04	0.06	0.06	0.09	0.09	0.06	0.07	0.06	0.03
DP4/R	0.08	0.12	0.15	0.22	0.20	0.12	0.12	0.09	0.04
DP21	0.05	0.09	0.10	0.14	0.16	0.11	0.11	0.08	0.06
DP20	0.08	0.10	0.11	0.19	0.15	0.14	0.14	0.12	0.00
DP19	0.00	0.04	0.04	0.12	0.09	0.04	0.05	0.07	-0.06
DP18	0.07	0.08	0.07	0.13	0.12	0.06	0.07	0.08	0.03

NOTES:
1) (-) = downward vertical gradient
2) Because of several drive point replacements due to vandalism, DP5 data from 2012 onward are interpreted with caution.
3) * Due to the presence of a beaver dam downstream of DP5CR, DP5CR data for 2019 are interpreted with caution.

The following patterns and trends were observed from the 2024 and historical results.

- Based on the average condition through 2024, upward gradients between the groundwater and the creek occurred from where Mill Creek crosses highway 401 (DP21) downstream to DP5CR. Groundwater discharge continues to provide base flow to these reaches of Mill Creek.
- As shown in the preceding table, the magnitude of the average vertical hydraulic gradient is variable from DP21 downstream to DP5A/B/C/CR, with the strongest upward gradients being observed at DP1, DP2, and DP5A/B/C/CR, and the weakest upward gradients in the creek between DP4/R, DP22 and DP3.
- Based on the average condition through 2024, downward gradients between the groundwater and the creek occurred at the drivepoints located north of Highway 401 (DP18, DP19 and DP20).
- Between 1998 and 2005, downward vertical gradients persisted in the reach north of Highway 401 at DP19 (**Figure B-93**). At DP18 (**Figure B-90**) and DP20 (**Figure B-96**), gradients varied from downward to upwards during the 1998 to 2005 period. From 2005 to June 2022, the vertical gradients at these drive points remained upward, with the exception of neutral and downward vertical gradient conditions on average over the course of the year at DP19 in 2012 and in 2015 and 2016, respectively (varied between downward and upward gradient conditions). Beginning in July 2022, strong downward gradients were frequently observed within the reach north of Highway 401. As shown in **Figures B-90, B-93 and B-96**, the downward gradients observed since July 2022 are stronger than observed historically at each of the three drive point locations. As shown in **Figures B-88, B-91 and B-94**, when the downward gradients are observed, they are caused by a notable decrease in groundwater level recorded at the drive point locations. These lower groundwater levels were not consistently observed in 2023/2024 but, when observed, resulted in downward gradients. The cause of the sudden change in hydraulic gradient at DP18, DP19 and DP20 is not apparent; however, it is interpreted to be related to upgradient activities or climatic conditions.
- In 2024, the average vertical hydraulic gradients were higher than the 2023 values at DP1, DP3, DP4R, DP19, DP20, DP21 and DP22; and lower than the 2023 values at the remaining in-stream drive points. The difference between the 2024 average and the 2023 average ranged between a decrease of 0.09 at DP18 and an increase of 0.03 at DP4R, DP19, DP20 and DP21. The 2024 average vertical hydraulic gradients at the creek drive points were generally higher than, or similar to, the pre-2005 averages, with the exceptions of the locations north of Highway 401. This overall increase in hydraulic gradients likely reflects a buffering effect due to the presence of the Phase 1, Phase 3, and Phase 4 ponds, and translates into a proportional increase in the groundwater discharge to Mill Creek. This is discussed in further detail later in this section.
- Generally, the seasonal fluctuation of the surface water elevation in Mill Creek at the drive point monitors was similar to the variation of the groundwater elevation in 2024. Historically, greater seasonal groundwater fluctuations have been observed compared to surface water fluctuations.

The drive point hydrographs typically show clear seasonal patterns consisting of:

- A rise early in the year due to snowmelt and other groundwater discharge;
- A decline through the summer months;
- An increase in the late fall; and
- A gradual decline through the winter when the precipitation is generally bound up in the snow pack.

In 2024, the groundwater levels typically increased from January to April, decreased in May, June and July, increased in August and then fluctuated through the end of the year. The pattern was consistent with precipitation data and Phase 1, 2, 3 and 4 pond levels, which show that January, April, July and August were wet months and the remaining months were similar to, or drier than, normal conditions. Frozen conditions in groundwater were encountered at DP1 in January and at DP2 and DP5CR in December. The groundwater levels were within the historical ranges at each creek drive point in 2024, with the exception of the November 2024 elevation at upstream station DP18, which was lower than the previous minimum value.

The surface water levels at the creek drive points typically increased from January to April, decreased through July, increased in August, and fluctuated to the end of the year. Surface water levels at the creek drive points were within their historic ranges in 2024. It is noted that, owing to various reasons over the years, such as access issues and vandalism, the DP5 drive point has had to be re-installed a number of times in several different locations in this reach of Mill Creek. These different locations have had different stream bed elevations and hydrogeological properties, resulting in varying groundwater and surface water elevations being reported over time, as observed on **Figure B-82**. The data should be interpreted with caution.

THERMOGRAPHS

The in-creek drive point monitors are also used to provide a measure of the temperature of the groundwater discharge and the surface water at each location. As presented in the thermographs, **Figures B-71 to B-101**, and in **Table 5**, the groundwater and surface water temperature data show the trends noted below. These surface water temperatures are based on manual measurements recorded once per month; therefore, surface water "maximum" temperatures differ from those recorded by the surface water data loggers, which are reported in Technical Appendices A and C of this annual report. The trends are as follows.

- A wide seasonal variation in the surface water temperatures, which are low in the winter and high in the summer, is observed. In 2024, the surface water temperature ranged from 1.2°C to 23.2°C, which was within the historical range.
- Whereas there is a somewhat smaller seasonal variation in groundwater temperatures recorded (historically between 2°C and 21°C when all drive point monitors are considered), this is still considered to be a wide seasonal variation for typical groundwater. It is noted, however, that thermal transfer from the creek surface water will affect the shallow groundwater temperatures at the drive points. In addition, the amount of monitor development that is completed before a groundwater temperature reading is taken can affect the value. The groundwater temperatures at the creek drive points in 2024 ranged from 2.2°C to 19.7°C.
- Along Mill Creek downstream of Highway 401 in 2024, vertical gradients were generally upward, and groundwater discharge provided a cooling influence on creek temperatures during the warm summer months, and a warming influence during the cold winter months.
- The temperature patterns for 2024 shown on the thermographs are generally consistent with historic patterns. The average 2024 groundwater temperatures at each drive point except for DP20 were higher than the historical averages, while the average 2024 groundwater temperature at DP20 was lower than the historical average. The average 2024 surface water temperatures at DP1, DP2, DP5CR, DP18, DP19 and DP20 were higher than the historical averages, while the average 2024 surface water temperatures at the remaining drive points were lower than the historical averages. Compared to the historical averages (start of monitoring to 2023), the 2024 groundwater temperature averages differed by between -0.5°C and 1.5°C, and the surface water temperature averages differed by between -0.7°C and 1.1°C.

Groundwater thermographs for each of the Mill Creek drive points are also presented in **Figures B-103 and B-104, Appendix B**. These graphs were prepared to enable long-term trend analyses of groundwater temperatures at the creek drive points locations across the Site. It is noted that, to allow for a direct comparison between the various drive point locations, these graphs only include results from monitoring events where readings were successfully collected from all creek drive points. As such, if one or more drive point readings were unavailable, the results from that monitoring event are excluded from the graphs. Each thermograph includes three (3) linear trendlines that were generated using the following datasets: (i) the full 31-year dataset from 1994 to 2024; (ii) the 20-year dataset from 2005 to 2024; and (iii) the 10-year dataset from 2015 to 2024. The graphs also include equations of each linear trendline. The following observations are noted regarding the thermographs:

- The linear trendlines generated using 31 years of monitoring data show that groundwater temperatures at each of the creek drive point locations have marginally increased over the long term. The rate of temperature increase is similar between each drive point location, including the drive points located upgradient from the site, as the slope of the linear trendline is 0.0002°C/day at most locations. The slope of the linear trendline is slightly lower at DP18 (0.0001°C/day). The 30-year dataset of temperature results suggests that groundwater temperatures below the creek have not been impacted by extraction activities at the Site.
- The linear trendlines generated using the most recent 20 years of monitoring data also show that groundwater temperatures at each of the creek drive point locations, including the drive points located upgradient from the site, have marginally increased over the long term. The rate of temperature increase is similar between each drive point location as the slope of the linear trendline is 0.0001°C/day or 0.0002°C/day at most locations. The slope of the linear trendline is slightly lower (less than 0.0001°C/day) at DP4/R, DP5A/B/C/CR and DP19, and slightly higher (0.0003°C/day) at DP17/R. The most recent 20 years of temperature data suggest that groundwater temperatures below the creek have not been impacted by extraction activities at the Site.
- The linear trendlines generated using the most recent 10 years of monitoring data show that groundwater temperatures at most locations have continued to show a marginal increasing trend, while a decreasing trend is observed at various locations. Based on the most recent 10 years of results, the rate of temperature changes at the drive point locations far removed from the on-Site ponds have either (i) remained unchanged compared to the 20-year trendline (DP3, DP17/R); or (ii) have shown declining temperature trends (DP4/R, DP5A/B/C/CR, DP18, DP19, DP20, DP21, DP22). At DP1, located closest to the Phase 3 pond, the 10-year trendline shows that temperatures continue to increase but at a lower rate compared to the 20-year trendline. At DP2, also located in close proximity to the Phase 3 pond, the results show that temperatures have increased at a slightly higher rate over the past 10-years compared to the 20-year trendline. Given that the groundwater temperature results from DP1 are similar to the results from other on-Site drive point locations, the results suggest that groundwater temperatures below the creek are not being impacted by extraction activities at the Site.

GROUNDWATER DISCHARGE

Table B-5, Appendix B, includes the calculated groundwater discharge, or influx, to the creek bed at each in-creek drive point monitor location. **Tables 2 and 3** incorporate the calculated influx at each drive point location and provide an estimate of the distribution of groundwater influx into the creek, for various conditions. **Table 2** includes the distribution of groundwater influx for the 2024 average, winter low flow, and summer low flow conditions from DP18 downstream to DP5CR. **Table 3** includes the distribution for the overall historic average, historic winter low flow average, and the historic summer low flow average conditions. Locations of the monitoring

stations and their separation distances are shown on **Figure 14**. The distribution of groundwater influx for each monitoring period from 2020 to 2024 is presented in **Table B-8, Appendix B**.

Figures 15, 16, and 17 show the distribution of groundwater influx for the 2024 summer low flow, winter low flow, and average conditions, respectively. Under summer low flow conditions, **Figure 15**, the 2024 groundwater flux from the Mill Creek Aggregates property to the creek is estimated at about 27.0 L/s, compared to about 23.8 L/s for the historical average summer low flow conditions. The 2024 value is 13% higher than the average condition. The 2024 summer low flow groundwater flux is 9% lower than the 2023 estimation of 29.6 L/s.

Under winter low flow conditions, **Figure 16**, the 2025 groundwater flux from the Mill Creek Aggregates Property to the creek is estimated at about 29.4 L/s, compared to about 25.5 L/s for the historical average winter low flow condition. The 2024 value is 15% higher than the average condition. The 2024 winter low flow groundwater flux is 22% higher than the 2023 estimation of 24.1 L/s.

As shown in **Figure 17**, the groundwater flux from the property is estimated to be about 28.6 L/s for the 2024 average condition, or 8% higher compared to about 26.5 L/s for the overall historical average condition. The 2024 estimation was less than 1% higher than the 2023 estimation of 28.3 L/s.

As shown in **Table B-8, Appendix B**, the calculated event-based groundwater influx in 2024 was higher in certain months, and lower in others, compared to the same months in 2023. In 2024, the maximum event-based estimated groundwater influx to the creek from the Mill Creek Aggregates Pit property (Highway 401 downstream to DP5CR) occurred in August and was about 32.8 L/s.

The minimum event-based estimated groundwater influx from the property (Highway 401 downstream to DP5CR) was about 25.6 L/s in April 2024. The historical average minimum event-based groundwater influx from the property is 18.9 L/s, with individual values varying from 15 L/s to 27 L/s (based on the average of the yearly summer low flow data for each drive point for the period 1989 to 1999).

As observed through comparison of **Tables 2 and 3**, the overall average groundwater influx to Mill Creek from the Site in 2024 was similar to the average historic conditions. An impact from aggregate operations at the Site on groundwater influx to the creek is not apparent.

As previously noted, downward gradients were occasionally observed at the three drive points located north of Highway 401 in 2024. The downward gradients were initially observed beginning in July 2022. As shown in **Table 2**, the result is that negative influx was calculated in the reaches of Mill Creek north of the Site, which means that surface water from the creek was discharging to the ground during the ‘2024 average’ and ’2023 winter low flow’ conditions. Based on the calculated influx values, the discharge of surface water into the ground was greatest at the farthest upstream location DP18 and the rate of discharge decreased at each subsequent drive point approaching the Mill Creek Pit site. The results suggest that the cause of the downward gradients is located upgradient of the Site. During the 2024 summer low flow condition, surface water discharge to the ground is interpreted at DP18, while groundwater influx towards the creek was calculated at the DP19 and DP20 drive point locations during the event.

3.8 Surface Water

WSP staff undertake stream flow monitoring on-site, and Stantec completed the monitoring prior to 2019. The results of historic pre-extraction stream flow measurements conducted by others are presented in the May 1989 Existing Conditions Consolidated Report, prepared by Gartner Lee Limited and Jagger Hims Limited (now WSP).

The elevation data from the previous five years (2020 to 2024) for the water levels in the creek at the drive points are presented in **Table B-5, Appendix B**, while the full dataset of historic results is presented graphically in **Figures B-70 to B-102, Appendix B**. In addition, the elevations of the creek at the original surface water monitoring stations SW1 and SW2 from the previous five years (2020 to 2024) are provided in **Table B-4**. Graphs presenting the full dataset of historic results are also provided in **Figures B-66 and B-67, Appendix B**.

The stages of Mill Creek and the two tributaries historically were monitored on a continuous basis at the four surface water monitoring stations SWM1 to SWM4 to provide an estimate of stream flow during the year (see Technical Appendix A of the Coordinated Monitoring Report). Commencing in 2013, with the approval of the MNR, stream flow estimations are now only provided for stations SWM1 and SWM2. Estimates of stream flow are calculated using the stage-discharge curves that have been established for each station. The data illustrate that Mill Creek and the tributary streams exhibit typical seasonal variation in flow. High flows occur for a relatively short period in the spring and during occasional winter thaw events, and relatively low flows occur during the winter when precipitation is usually bound up in the snow pack and frozen ground conditions prevail. The lowest flows occur during the summer, reflecting high evapotranspiration rates.

A summary of the 2024 instantaneous flow and temperature extremes at the surface water monitoring locations is provided below. It is noted that the high flow values are interpreted to be overestimated due to the lower accuracy of the rating curve formula at higher flows. The maximum daily average flow at both SWM1 and SWM2 in 2024 occurred on July 17. A total of 56 mm of rain was recorded at the GRCA Shade's Mills Conservation Area on July 17, with an additional 18.4 mm between July 15 and 16. It is noted that this date differs from the high flow indicated at SWM1 in the following table, as the table presents the instantaneous flow calculated using the hourly data logger data.

	SWM1 AT HWY 401 UPSTREAM	SWM4 GALT CREEK	SWM3 POND CREEK	SWM2 AT TWP. RD. 2 DOWNSTREAM
High Flow (L/s)	6,451	N/A	N/A	14,018
	July 17			July 17
Low Flow (L/s)	62	N/A	N/A	38
	April 5			June 4
High Temperature (°C) (Manual)	22.0	17.7	20.3	21.8
	July 9	July 9	July 9	July 9
High Temperature (°C) (Data logger)	24.3	19.1	20.1	23.8
	June 19	July 17	July 16	June 19
Low Temperature (°C) (Manual)	1.4	2.2	2.6	2.6
	January 8	January 8	January 8	January 8
Low Temperature (°C) (Data logger)	-0.4	0.8	0.3	-0.7
	February 20	February 20	December 22	December 22

Notes: Data logger values shown are based on hourly data (i.e. instantaneous).
N/A indicates data not available.
High flow values are interpreted with caution due to the flow calculation method.

A comparison between the manually recorded open water temperatures (groundwater program) and the water temperatures recorded electronically (surface water program) illustrates the notable effect of solar warming within

a given day. As indicated by temperatures recorded electronically, the creek temperature at SWM1 can fluctuate by as much as 7°C during a day (as indicated by historical data from the Surface Water Monitoring Program). Temperature data collected by WSP, which are in-stream manual measurements taken at the time of groundwater monitoring, are incorporated into this assessment.

Staff gauges are installed in the Phase 1 to Phase 4 ponds and the former recharge trench at the northern limit of Phase 1. Water level and temperature data from the past five years are presented in **Table B-4**. The full dataset is presented in a pond hydrograph, **Figure B-68** and pond thermograph, **Figure B-69, in Appendix B**. The thermograph indicates that the temperature of the shallow water in the ponds generally ranges from frozen (or near frozen) conditions in the winter to a peak temperature of between 24°C to 29°C in the summer. The temperature then decreases through the fall, to near frozen conditions again in December.

3.9 Groundwater – Surface Water Interaction

Seasonal variation in stream flow is a reflection of normal long-term climatic seasonal variation, as well as specific climatic events. The high flows, which typically occur in the spring, are the result of the annual spring melt and rainfall events. The low flows, which typically occur during the latter part of the summer season, and to a lesser extent during mid-winter, are the result of moderately lower rainfall, and in the case of the summer, increased temperatures and evapotranspiration losses. In the mid-winter period, precipitation is generally bound up in the snow pack, except when thaws occur periodically.

During low flow periods, and in the absence of rainfall, stream flow is sustained by groundwater discharge to the creek. The groundwater discharge component of stream flow is termed base flow. Since base flow is derived from the groundwater flow system, which shows subdued seasonal changes compared to surface waters, the magnitude of the seasonal variation under base flow conditions will be less than that of the surface runoff component. In addition, since the temperature of groundwater, and particularly the deeper groundwater, does not fluctuate seasonally to anywhere near the same degree as does the surface water, the temperature of the groundwater discharge to the creek remains relatively more consistent.

Thus, groundwater discharge to the creek provides two important functions:

1) It provides base flow to maintain stream flow during low flow periods; and

2) It provides a cooling effect on the creek temperatures during the warm summer season, and a warming effect during the cold winter season.

Given the diffuse nature of groundwater movement, it is not possible to directly measure the magnitude of the groundwater discharge component to Mill Creek from the Mill Creek Aggregates property. Groundwater influx to Mill Creek is estimated at each drive point location for different flow conditions and the measurement is interpolated for the stream sections between drive points. These calculations are presented in **Tables 2 and 3**, and the data are shown in plan view on **Figures 15 to 17**. The results of these calculations are summarized in the following table.

Groundwater Influx from the Mill Creek Aggregates Pit Property

	Historic Range (1989-1999)	Historic Average (1989-1999)	2024	2023	2022	2021	2020	2019	2018
Summer Low Flow Conditions (May to October)	15 - 24 L/s	18.9 L/s	27.0 L/s (July)	29.6 L/s (May)	22.5 L/s (Sept)	27.7 L/s (May)	23.8 L/s (July)	23.1 L/s (Aug)	26.9 L/s (July)
Winter Low Flow Conditions (November to April)	18 - 28 L/s	22.2 L/s	29.4 L/s (Nov)	24.1 L/s (Nov)	23.4 L/s (Nov)	26.1 L/s (Nov)	25.3 L/s (Mar)	29.2 L/s (Apr)	26.0 L/s (Feb)
Average		22.8 L/s	28.6 L/s	28.3 L/s	26.4 L/s	25.9 L/s	25.2 L/s	23.7 L/s*	28.9 L/s

* Data are interpreted with caution due to reduced flux values in the fall of 2019 due to beaver dam downstream of DP5CR

	2017	2016	2015	2014	2013	2012	2011	2010	2009
Summer Low Flow Conditions (May to October)	28.2 L/s (Sept)	27.8 L/s (Aug)	29.2 L/s (Sept)	33.9 L/s (Aug)	24.1 L/s (Oct)	27.2 L/s (Aug)	33.0 L/s (July)	30.6 L/s (Aug)	26.4 L/s (Sept)
Winter Low Flow Conditions (November to April)	19.8 L/s (Dec)	26.2 L/s (Nov)	26.3 L/s (Dec)	25.2 L/s (Dec)	28.5 L/s (Apr)	21.6 L/s (Nov)	26.7 L/s (Mar)	35.1 L/s (Nov)	32.5 L/s (Nov)
Average	27.3 L/s	27.5 L/s	29.0 L/s	30.3 L/s	28.3 L/s	25.6 L/s	34.6 L/s	35.7 L/s	33.0 L/s

	2008	2007	2006	2005	2004	2003	2002	2001	2000
Summer Low Flow Conditions (May to October)	29.5 L/s (June)	22.1 L/s (Sept)	24.7 L/s (Aug)	22.0 L/s (Oct)	23.8 L/s (Sept)	12.5 L/s (Aug)	16.1 L/s (Sept)	17.0 L/s (Aug)	21.7 L/s (May)
Winter Low Flow Conditions (November to April)	31.7 L/s (Mar)	Not Available	25.2 L/s (Jan)	23.6 L/s (Nov)	22.1 L/s (Nov)	22.1 L/s (Apr)	24.5 L/s (Nov)	22.4 L/s (Apr)	26.5 L/s (Nov)
Average	31.5 L/s	26.9 L/s	27.6 L/s	26.7 L/s	27.3 L/s	19.9 L/s	22.6 L/s	24.1 L/s	25.5 L/s

The summer low flow groundwater influx values have fluctuated from 2004 to 2024. The calculated 2024 summer low flow groundwater influx (27.0 L/s) was about 43% higher than the historical average yearly summer low flow influx (18.9 L/s), which is based on the average of the yearly summer low flow data for each drive point for the period 1989 to 1999.

The winter low flow groundwater influx values increased from 2003 to 2010, decreased to 2012, and fluctuated from 2013 to 2024. The calculated 2024 winter low flow groundwater influx (29.4 L/s) was about 32% higher than the historical average yearly winter low flow influx (22.2 L/s), which is based on the average of the yearly winter low flow data for each drive point for the period 1989 to 1999.

From 2004 to 2007, the calculated average influx values fluctuated annually. From 2007 to 2010, the values increased, and the values have fluctuated since 2010. The 2024 annual average influx (28.6 L/s) was about 25% higher than the pre-1999 historic long-term average influx (22.8 L/s). The higher values of groundwater discharge from 2004 to 2024 compared to the pre-1999 historic average are attributed to the consistently higher water level

in the Phase 1 pond since 2004, and in the Phase 3 and Phase 4 ponds in recent years, and the resulting higher groundwater levels across the site.

In 2024, twelve routine monthly monitoring events were conducted. The groundwater influx to Mill Creek was calculated using the drive point data from ten of the events. The January and December events were excluded due to frozen conditions. A summary of the estimated influxes and the temperature data from the four surface water monitoring stations is presented in the table below.

DATE		SWM1 @ Hwy 401 Upstream	SWM4 Galt Creek	SWM3 Pond Creek	SWM2 @ Twp. Rd. 2 Downstream	Influx (L/s) (Both sides of Creek)*	Influx (L/s) (South of Creek Only)*
08-Jan-24	Flow (L/s)	101	NA	NA	162	Frozen	Frozen
	Temp. (°C)	2.9(1.5)	2.2(3.3)	2.6(4.8)	2.6(1.9)	5.3	
27-Feb-24	Flow (L/s)	103	NA	NA	165	56.5	30.4
	Temp. (°C)	4.1(3.2)	4.0(2.8)	4.3(5.3)	4.7(3.2)	6.3	
12-Mar-24	Flow (L/s)	126	NA	NA	202	50.3	27.2
	Temp. (°C)	4.2(4.6)	3.8(4.1)	4.1(5.8)	5.2(4.7)	6.1	
05-Apr-24	Flow (L/s)	141	NA	NA	191	47.0	25.6
	Temp. (°C)	4.6(4.4)	4.5(4.2)	4.5(5.0)	4.8(4.1)	5.7	
13-May-24	Flow (L/s)	104	NA	NA	157	50.6	27.1
	Temp. (°C)	13.9(14.0)	10.4(10.8)	13.7(10.8)	15.6(13.4)	12.1	
04-Jun-24	Flow (L/s)	103	NA	NA	121	50.4	27.0
	Temp. (°C)	17.6(17.9)	16.7(12.9)	17.9(12.3)	20.6(17.5)	14.3	
09-Jul-24	Flow (L/s)	81	NA	NA	120	50.3	27.0
	Temp. (°C)	22.0(21.4)	17.7(14.8)	20.3(12.5)	21.8(20.0)	16.3	
13-Aug-24	Flow (L/s)	90	NA	NA	141	60.0	32.8
	Temp. (°C)	15.9(18.2)	17.0(14.0)	17.4(11.9)	14.3(17.0)	17.5	
10-Sep-24	Flow (L/s)	87	NA	NA	140	54.6	29.3
	Temp. (°C)	15.1(14.9)	15.8(12.3)	13.6(10.8)	13.0(14.1)	13.7	
02-Oct-24	Flow (L/s)	92	NA	NA	149	56.8	30.4
	Temp. (°C)	15.5(15.4)	15.6(12.9)	15.6(10.7)	15.6(14.4)	14.5	
04-Nov-24	Flow (L/s)	97	NA	NA	150	54.8	29.4
	Temp. (°C)	9.2(8.6)	11.2(8.4)	8.9(8.6)	10.5(7.9)	10.5	
02-Dec-24	Flow (L/s)	90	NA	NA	145	Frozen	Frozen
	Temp. (°C)	1.4(1.4)	4.2(3.5)	2.7(4.5)	2.9(1.0)	6.6	

Notes:
(1) Flow values are daily averages.
(2) NA = not available.
(3) Temperature in brackets is approximate daily average from mid-creek data logger.
(4) * - Groundwater influx calculated from drive point data.
(5) Flow data no longer recorded at SWM3 and SWM4 as approved by the MNR.

Surface water temperatures are recorded using in-stream temperature probes as part of the surface water monitoring program. The temperature data from those data loggers are collected from mid-stream at one-hour intervals. Since surface water temperatures fluctuate throughout the day, Dufferin Aggregates and WSP

temperature data are presented, which are in-stream measurements collected manually at the time of groundwater monitoring. Available temperature values in brackets are from the data logger data.

Prior to 2013, the groundwater influx was estimated using the surface water data based on the following equation.

$$\text{Groundwater Influx} = [\text{SWM2} - (\text{SWM1} + \text{SWM3} + \text{SWM4})]$$

As stated in previous reports, however, estimating groundwater influx at this site based on stage-discharge relationships is considered inaccurate. Following the discontinuation of surface water flow rate estimations at stations SWM3 and SWM4 in 2013, evaluating groundwater influx to the creek is no longer undertaken using that methodology. A higher degree of accuracy is achieved by estimating groundwater influx based on drive point data, and these estimates are presented in the above table.

The July 9, 2024 summer low flow drive point data estimate of groundwater influx from the Mill Creek Aggregates Pit (i.e., from the south side of the creek) of 27.0 L/s represents about 23% of the total estimated stream flow in Mill Creek at SWM2 under base flow conditions, which is estimated to be 120 L/s at that time. The combined groundwater discharge from both sides of the creek (50.3 L/s) represents about 42% of total stream flow. It is noted that in March 2024, when the flow in Mill Creek was higher, the groundwater discharge component from the property was estimated to be 27.2 L/s; however, since the flow in Mill Creek at that time was recorded as 202 L/s at SWM2, the groundwater influx from the pit property (south side of the creek) represented only about 13% of the total stream flow. The combined groundwater discharge from both sides of the creek (50.3 L/s) represented approximately 25% of the total stream flow under the higher flow conditions.

The thermal effects on Mill Creek temperatures from the two tributaries, as well as the groundwater discharge component, are relatively significant during much of the year, based on the observed temperature differences between SWM1 (upstream) and SWM2 (downstream). Generally, during the summer low flow, those three sources of input water provide a cooling effect on Mill Creek. It is noted that canopy cover along some reaches also provides a cooling effect in Mill Creek during the summer months.

In 2024, the largest summer temperature difference between SWM1 and SWM2 (using average daily temperatures from data loggers) during routine monitoring events was noted on July 9, 2024. The mean temperature of the water entering the Mill Creek Aggregates Pit property at Highway 401 (SWM1) on July 9 was measured at 21.4°C. The mean water temperature in the creek leaving the property at SWM2 on July 9 was 20.0°C, which is 1.4°C lower than at SWM1. On July 9, the mean water temperature of Galt Creek (SWM4) and Pond Creek (SWM3) was 14.8°C and 12.5°C, respectively, which is strongly indicative of groundwater discharge into those tributaries. The temperature of the groundwater discharge component to Mill Creek was estimated to be about 16.3°C, based on average temperatures recorded at the in-stream drive points. Historically (from 2005 to 2012), approximately 33% to 66% of the total temperature differential has been estimated to be attributed to the two tributaries, whereas approximately 34% to 67% has been attributed to the combined groundwater discharge from both sides of Mill Creek. As noted above, it is recognized that the vegetation canopy and riparian cover will also serve to reduce surface water temperatures across the property.

3.10 Groundwater Conditions Adjacent to Extraction Activities

Aggregate extraction from below the water table in Phase 1 began in 1995 and was completed in 2002. The operations were moved to Phase 2 in late 2002 and continued there throughout 2003 to 2012. In 2013, aggregate extraction from above and below the water table occurred in the central area of Phase 3 and in the western area of Phase 4. Extraction from above and below the water table occurred in the south-central and eastern area of

Phase 4 in 2014 and 2015, respectively. Extraction in 2016 and 2017 occurred above and below the water table along the east (2016 only) and west boundaries and above the water table on the south boundary of the Phase 2 pond as a result of obtaining MNR approval to extract the setbacks. Extraction in 2018 occurred above and below the water table along the east and south boundaries of the Phase 1 pond, for material that was not previously extracted up to the below water table extraction limit. In addition, extraction occurred above the water table in Phase 1, as a result of obtaining MNR approval to extract the former excavation setback area above the water table, as per the approved Site Plans. In 2019, extraction continued within the Phase 1 pond setback along the east side of the Site, and occurred above and below the water table at the northeast corner of Phase 5 and silt pond SP4. Extraction in 2020 occurred above the water table in Phase 6, while extraction in 2021 occurred both above and below the water table in Phase 6. In 2022, extraction occurred both above and below the water table in Phase 2, Phase 5 and Phase 6, as well as below the water table in Silt Pond 4 (SP4). Extraction in 2023 occurred below the water table in Phase 2, near the Site entrance. Extraction did not occur at the Mill Creek Pit in 2024.

Previous monitoring results at locations adjacent to the Phase 1 pond (Monitors 92-1, 92-5, 92-8, 92-13, 92-14, 92-15, BH1, BH5, and BH6) have indicated that operational activities, including the pumping of process water out of the pond, have an effect on local groundwater levels and temperatures. In 2024, pumping from the Phase 1 pond and the return of process water back to SP4/Phase 1 pond occurred between March 19 and September 9, as shown in **Tables E-1 and E-2, Appendix E**.

Until they malfunctioned in 2011, groundwater temperatures were measured daily by means of electronic temperature probes set at three horizons in the sand and gravel profile in Monitor nest 92-13. A new shallow data logger was installed at this monitor in May 2013. This monitor nest is located approximately 20 m to the west of the open water in the Phase 1 pond. The data have shown that groundwater temperatures at each of the three elevations are affected by the presence of open water in the Phase 1 pond.

The following observations are noted for the monitors located west of Phase 3, at the western limit of the Site, which are currently equipped with multiple data loggers.

- At Monitor 92-28, the vertical gradients remained similar to the 2007 gradients until 2012, when much larger gradients occurred. It is interpreted that extraction activities in the northwest corner of the Phase 3 pond resulted in localized influences on the groundwater levels observed at monitor nest 92-28, giving rise to the apparent higher vertical gradient conditions. The vertical gradients have decreased since 2012, which supports this interpretation as extraction activities in the northwest corner of the Phase 3 pond did not occur after 2012. Similar to the 2013 to 2023 period, smaller seasonal groundwater level fluctuations occurred in 2024 compared to previous years, resulting in higher average elevations at each of the three monitors. These smaller fluctuations are attributed to the buffering effect of the Phase 3 pond. Groundwater levels fluctuated with an overall declining trend at each of the three 92-28 monitors between 2016 and 2020, which is attributed to the declining water levels in the Phase 3 pond during the same period. In 2021 and 2022, water levels at monitor 92-28 remained similar to 2020, while water levels increased in 2023 and 2024. The 2021 to 2024 water level trends are consistent with the water level trends measured at the Phase 3 pond. The peak groundwater temperatures measured at the three monitors were slightly lower (i.e., higher annual low, lower annual high) than observed prior to 2012;
- At Monitor 92-29, which is now located adjacent to the Phase 3 pond, the vertical gradients in 2024 were similar to the 2007 to 2023 gradients. The magnitude of water level fluctuations, however, was lower at the three monitors in 2024 compared to the fluctuations from 2007 to 2012, and was similar to the fluctuations

recorded from 2013 to 2023, and at Monitor 92-28. The increased average groundwater levels from 2013 to 2016 compared to pre-2012 levels, which occurred at Monitor 92-28, also occurred at Monitor 92-29, and are also attributed to the buffering effect of the Phase 3 pond. The decrease in water levels observed at each of the three 92-28 monitors since 2016 compared to the 2013 to 2016 period also occurred at 92-29, and is also attributed to the lower water levels in the Phase 3 pond since 2016 compared to that earlier period. In 2023 and 2024, water levels at monitor 92-29 increased compared to the levels observed from 2020 to 2022, which is consistent with the water level trends measured at the Phase 3 pond. The groundwater temperatures at Monitor 92-29, which had been consistent from 2007 to 2011, have fluctuated much more since 2012. The typical time lag in temperatures between the shallow and intermediate monitors has not been observed since 2011, as the temperatures at the two monitors generally mirrored each other. These temperature trend changes are attributed to the advancement of the excavation/pond development to within a few metres of Monitor 92-29; and

- At Monitor 92-32, the vertical gradients in 2024 were generally consistent with the gradients measured from 2007 to 2023. The decrease in water levels observed at 92-28 and 92-29 since 2016 compared to the 2013 to 2016 period also occurred at 92-32 within each of the three monitors (shallow, intermediate, and deep), and is also attributed to water levels in the Phase 3 pond since 2016. The water levels increased in 2023 and 2024 compared to the levels observed from 2020 to 2022, consistent with the Phase 3 pond water levels. The groundwater temperature trends at the three monitors were similar to previous years, although a slight increase in temperature at the intermediate and deep monitors was observed between 2010 and 2018. The groundwater temperatures have stabilized, or decreased, since 2018. The vertical gradients and groundwater temperatures at Monitor 92-32 do not appear to be measurably affected by the Phase 3 pond; however, the groundwater levels do appear to be influenced by the water levels in the Phase 3 pond.

3.11 Water Quality

Chemical analyses of groundwater and surface water were completed in March and September 2024 for samples collected from BH1-R, 92-32-III, and 92-8, and the Phase 1 pond. The field chemical results are presented in **Table C-1**, and the laboratory chemical results are presented in **Tables C-2 and C-3, Appendix C**. The laboratory chemical results and Quality Assurance/Quality Control (QA/QC) reports for the current year are included in **Appendix C**.

The groundwater and surface water temperatures, as measured in the field, fluctuate in response to the ambient air temperature. The pH and conductivity values were within their respective historical ranges at 92-32-III and 92-8 and at BH1-R when compared to the historical results from original well BH1.

The 2024 chemical results are generally similar to historic values, with some exceptions. Based on the 2024 chemical data, the following observations are made.

- For comparison purposes, groundwater quality was assessed versus the Ontario Drinking Water Quality Standards (ODWQS). Groundwater quality generally complies with the ODWQS for the parameters tested, except as outlined below.
    - BH1-R – hardness (March and September) and total dissolved solids (March and September)
    - 92-8 – iron (March), manganese (March and September), hardness (March and September) and total dissolved solids (September)
    - 92-32-III – manganese (March and September) and hardness (March and September) and

Hardness, total dissolved solids, iron and manganese are not considered to be health-related parameters. The standard for hardness is a guideline, which is established for parameters that need to be controlled to ensure efficient treatment of water supplies. The standards for total dissolved solids, iron and manganese are aesthetic objectives, which are established for parameters that may impair the taste, odour, or colour of water. Hardness, total dissolved solids, iron and manganese exceedances were observed historically at the property, both before and after extraction commenced. The elevated concentrations of hardness, total dissolved solids, iron and manganese are attributed to natural conditions at the site.

- Over the short term, in 2024 the parameter concentrations were generally similar to the 2023 concentrations. The 2024 results from replacement well BH1-R were similar to the historical results from the original well (BH1).
- The concentrations of most parameters have been fluctuating slightly or have been relatively consistent over the long-term. Exceptions are (a) conductivity values (laboratory) and sodium and chloride concentrations at BH1/BH1-R (located at the eastern, upgradient, boundary of the property) and BH92-8, which have exhibited an overall increasing trend since the mid-1990s, and (b) sodium and chloride concentrations at Monitor BH8-I/92 32-III, which increased sharply in 2009, but have been stable or decreased in recent years. It is noted, however, that the following historically high concentrations were detected in 2024.

  - BH1/1-R: total dissolved solids (545 mg/L) in September
  - 92-8: chloride (170 mg/L) in September
  - Phase 1 pond: total organic carbon (4.2 mg/L) in March, chloride (190 mg/L) in September and total dissolved solids (505 mg/L) in September

  The increasing sodium, chloride and conductivity concentrations may reflect road salting activities along Highway 401 and/or along the Township roads. As these increasing trends are observed at locations both upgradient and downgradient of the property, they are not attributed to operations at the Mill Creek Pit.
- Historically, and in 2024, with increasing distance downgradient across the site (from Monitor BH1/1-R/92-5 to 92-8 to BH8/92-32-III), detected parameter concentrations generally tend to either increase or fluctuate. Exceptions include sodium, potassium, chloride and conductivity, which decreased across the site in 2024.
- Parameter concentrations in the Phase 1 pond are generally similar to values detected at Monitor BH1-R. The surface water quality complies with the Provincial Water Quality Objectives for the parameters tested in 2024.
- Trace concentrations of total oil and grease (0.6 mg/L – 1.2 mg/L) were detected at the Phase 1 pond, upgradient well BH1-R and monitors 92-8 (duplicate sample) and 92-32-III during the September 2024 sampling event. Similar detections have occurred historically. As these oil and grease detections are observed at locations both upgradient and downgradient of the property, they are not attributed to operations at the Mill Creek Pit.

3.12 Compliance With Interim Threshold Values

The early warning and interim threshold values, which came into effect on June 30, 2001, are based on maintaining positive seasonal hydraulic head gradients across the water table between specific monitor pairs, such that a positive hydraulic gradient continues to exist from the site toward Mill Creek. In other words, the groundwater levels should be lower at locations closer to Mill Creek. The thresholds were developed to ensure

that the quantity of groundwater discharging to Mill Creek does not decline below a minimum level. The creek drive point monitors tie the thresholds to groundwater level/discharge at the creek. Surface water elevations in the Phase 1 to Phase 4 ponds are also included with the compliance monitoring. Maximum and minimum elevations with associated early warning values are defined for each pond. The interim threshold and early warning values generally are based on a review of historic pre-extraction low water level data (where available) and are defined seasonally; pond threshold water level values do not change seasonally. Where necessary, threshold pairs have been modified over time to reflect current extraction conditions and the removal of individual monitor locations.

It is noted that the groundwater levels in the in-stream drive points typically respond more rapidly to precipitation and snowmelt events than the deeper groundwater monitors. As such, occasionally, early warning and threshold value exceedances can occur due to these natural events.

A summary of the head differences and pond elevations recorded since 2023 is included in **Tables G-1 to G-10**, and the full dataset of historic results is shown graphically in **Figures G-1 to G-16, Appendix G**. A summary of the early warning and threshold value compliance for 2024 is provided in the following table, and the monitor pairs and ponds are discussed below.

MONITOR PAIR / LOCATION	EARLY WARNING VALUE EXCEEDANCE IN 2024?	THRESHOLD VALUE EXCEEDANCE IN 2024?
BH13 to DP21	No	No
BH92-12 to DP17R	No	No
DP6 to DP3	No	No
BH92-29 to DP1	No	No
BH92-27 to DP2	No	No
OW5-84 to DP5CR	No	No
Phase 1 Pond	No	No
Phase 2 Pond	No	No
Phase 3 Pond	No	No
Phase 4 Pond	No	No
Silt Pond SP3	No	No

BH13 to DP21

BH13 is located adjacent to the northern boundary of the property (north of Phase 5) and to the east of DP21. DP21 is an in-creek drive point monitor located immediately downstream of the property line, south of Highway 401. There were no exceedances of the threshold values or the early warning values at this pair in 2024 (see **Table G-1** and **Figures G-1 and G-2**).

BH92-12 to DP17R

BH92-12 was established in 2001 just outside the licensed area of extraction, west of Phase 5 (extraction began in the northeast corner of Phase 5 at the end of 2019). Monitor DP17R is an in-creek drive point located at the Hanlon interchange, upstream from DP3. The threshold values have not been exceeded since its implementation

on June 30, 2001 (see **Table G-2** and **Figures G 3 and G-4**). The early warning and threshold values were not exceeded at this pair in 2024.

DP6 to DP3

DP6 is located at the eastern limit of the central wetland area, adjacent to Phase 5, and DP3 is an in-creek drive point monitor located directly south of the Hanlon interchange. As shown in **Table G-3** and **Figures G-5 and G-6**, the early warning and threshold values were not exceeded at this pair in 2024.

BH92-29 to DP1

This monitor pair replaced the BH92-30 to BH92-28 threshold pair in May 2012, as BH92-30 was removed during extraction activities in April 2012. This pair is located in the northwest corner of the site, south of the confluence between the Pond Creek tributary and Mill Creek. DP1 is an in-creek drive point located in Mill Creek near the western property boundary. There were no exceedances of the threshold values or the early warning values at this pair in 2024 (see **Table G-4** and **Figures G-7 and G-8**).

BH92-27 to DP2

This pair of monitors is located in the western part of the site, west of the Phase 3 extraction area, and replaced BH92-26 to DP2 after November 2011 when BH92-26 became inaccessible due to its proximity to the extraction area. DP2 is an in-creek drive point located in Mill Creek at the western property boundary. There were no exceedances of the early warning values or threshold values at this pair in 2024 (see **Table G-5** and **Figures G-9 and G-10**).

OW5-84 to DP5CR

This pair of monitors is located in the southwest corner of the site, adjacent to Mill Creek. OW5-84 is a groundwater monitor screened to about full depth in the aquifer, and is situated just inside the property line. The location of DP5 has been modified several times due to vandalism and access issues. DP5A was an in-creek drive point situated in Mill Creek just north of the bridge at Township Road 2. DP5B replaced DP5A in this threshold pair in December 2011 when DP5A became inaccessible due to landowner permission being withdrawn. DP5B, located south of the bridge, was vandalized in July 2012, and replaced with DP5C, which was installed slightly upstream from DP5B, but still south of the bridge. New (preliminary) threshold values were implemented for the OW5-84 to DP5C pair in September 2012. Based on hydraulic conductivity testing, it is interpreted that DP5C was installed in lower-conductivity soil that is not reflective of the sand/gravel aquifer in which DP5A and DP5B were developed. This condition would result in groundwater levels that do not respond to climatic conditions as quickly as nearby drive points screened in more representative soils with higher hydraulic conductivities.

DP5C was vandalised in Spring 2017 and replaced with DP5CR, which was installed at the location of DP5C. The early warning and threshold values were not exceeded at DP5C prior to the vandalism. Frequent exceedances of the early warning and threshold values at the OW5-84 to DP5CR pair occurred between the DP5CR installation in 2017 and 2021, which were considered to be “false” exceedances that are the result of the observed hydrogeological variability at this location in Mill Creek. Revised early warning and threshold values were developed by WSP in 2021 were approved by the MNR in mid-2022.

There were no exceedances of the early warning values or threshold values at this pair in 2024 (see **Table G-6** and **Figures G-11 and G-12**).

On-Site Ponds

As shown in **Tables G-7 through G-10** and **Figures G-13 through 16**, the early warning and threshold values established for the Phase 1, 2, 3 and 4 ponds were not exceeded in 2024. It is noted that the constant water levels recorded during the winter months between 2000 and 2015 indicate that the extraction pond or silt pond was frozen. From 2015 onward, frozen conditions are better represented by a gap in the data.

A hydrograph presenting water levels at each of the ponds is provided in **Figure B-68**. As observed in the hydrograph, the pond water levels typically decreased in 2020, 2021 and 2022, which reflects the lower precipitation amounts observed during that period. The 2023 pond water levels were similar to, or higher than, the levels observed from 2020 to 2022. The 2024 pond water levels were generally higher than the 2023 pond levels. In 2024, the pond levels remained within their respective historic range.

As indicated above, the water levels in the Phase 3 pond were lower in 2017 through 2024 compared to the 2013 to 2016 period. The water levels, however, were similar to the 2009 to 2012 levels and remained well above the early warning value. The lower water levels observed in 2017 through 2024 are attributed to the effect of the fully developed silt barrier between the Phase 3 and Phase 4 ponds. The lower hydraulic conductivity of the silt barrier results in a reduction in the rate of movement of water from the Phase 4 pond westerly through the silt barrier and into the Phase 3 pond. As such, water that (a) naturally moves from east to west through the granular subsurface soil that remains in place between the Phase 1 pond and the Phase 4 pond, and (b) water that accumulates in the Phase 4 pond as direct precipitation, is “held back” by the silt barrier in the Phase 4 pond (as designed), resulting in higher water levels in the Phase 4 pond compared to the Phase 3 pond, as intended. The 2023 and 2024 water levels in the Phase 3 pond were higher than observed between 2020 and 2022 and were similar to the levels observed from 2017 to 2019.

4.0 SUMMARY

Groundwater monitoring has been conducted at the Mill Creek Aggregates Pit property since late 1986. Aggregate extraction from below the water table has been ongoing at the property since 1995. The 2024 monitoring program included five components which were: (a) the monitoring of water levels and temperature conditions in the groundwater monitors, the multi-level monitors and the water wells, (b) groundwater quality monitoring, (c) quality assurance/quality control aspects, (d) assessment of compliance with the interim action thresholds, and (e) annual reporting.

The annual average of the monthly mean temperatures in 2024 was 10.6^{o}C, which is appreciably higher than both the 30-year normal annual average temperature (8.3^{o}C) and the annual average temperature recorded in 2023 (8.3^{o}C). The 2024 annual average of the monthly mean temperatures is the highest recorded value since at least 1991. A notable increase in air temperature has been observed since 2016, with annual averages ranging between 9.2^{o}C and 10.6^{o}C in 2016, 2017, 2018, 2020, 2021 and 2024. The 30-year normal total annual precipitation in this area is 935 mm, and the 30-year normal water surplus is estimated to be about 304 mm per year. In 2024, the corresponding values were 976 mm and 277 mm, respectively, which represent an increase of 4% in precipitation and a decrease of 9% in the annual water surplus with respect to the 30-year climate normal conditions. Persistent dry conditions were generally observed from early 2020 through the end of 2022, followed by wetter conditions in 2023.

In 2024, extraction did not occur at the Site. Monitoring results adjacent to the pond in Phase 1 indicate an effect on the pond levels and local groundwater levels resulting from seasonal climatic variation, the pumping of water

from the pond for aggregate processing, and the recirculation discharge of clean water back into the Phase 1 pond.

Shallow groundwater monitoring immediately downgradient of the pit ponds shows groundwater temperatures quickly dissipate a short distance from the ponds.

Groundwater conditions in 2024 generally were consistent with historic monitoring data, with groundwater flowing from east to west through the site toward, and discharging into, Mill Creek, except as discussed in the main text. The water table in the wetland areas adjacent to Mill Creek continues to be at or near ground surface during the spring melt high groundwater conditions, with seasonal decreases in the order of 0.5 m over the course of the year.

Groundwater discharge continues to provide a relatively consistent seasonal base flow component to Mill Creek, from Highway 401 downstream to Concession Road 2, resulting in a cooling influence on creek temperatures during the warm and dry summer months, and a warming influence during the late fall, winter, and early spring period. The estimated groundwater contribution from the Mill Creek Aggregates Pit property located north of Township Road 2 in 2024 was similar to the historic average and the values in recent years.

From 2020 to 2022, groundwater levels in several monitors were lower compared to those recorded in 2019. Given the precipitation patterns described above, these lower groundwater levels experienced across the central and eastern areas of the site are not unexpected and are attributed to climatic conditions. In 2023 and 2024, groundwater levels at the Site generally exhibited a recovery from the low levels observed in 2022, which is attributed to wetter climatic conditions.

In 2024, vertical gradients observed at the creek drive points were consistent with historical results, with the exceptions of the drive point locations located within the reach north of Highway 401. Beginning in July 2022, strong downward gradients were frequently observed within the reach north of Highway 401. When the downward gradients are observed, they are caused by a notable decrease in groundwater level recorded at the drive point locations. From 2005 to June 2022, the vertical gradients at these drive points remained upward, with the exception of neutral and downward vertical gradient conditions on average over the course of the year at DP19 in 2012 and in 2015 and 2016, respectively (varied between downward and upward gradient conditions). The sudden change in gradient is attributed to upgradient activities.

The multi-level monitors within the sand and gravel aquifer continued to exhibit the general pattern of upward to neutral gradients, which is consistent with historic trends. Several observations of downward gradients also occurred in 2024, which is also consistent with historic trends. The groundwater temperatures at the multi-level monitors showed a pattern similar to historic trends, with the shallow water temperatures exhibiting the greatest, and the deep temperatures showing the least, seasonal fluctuations. The multi-level monitor temperatures also show a time lag response pattern between the shallow, intermediate and deep profiles, which also is consistent with historic patterns.

The data from the Mill Creek drive point locations indicate that groundwater temperatures below the creek have generally increased over the long-term at the locations monitored. The rate of temperature change is similar at drive point locations close to the Phase 3 pond (DP1, DP2) compared to the drive point locations far removed from the Phase 3 pond. As such, the data indicate that groundwater temperatures at the Mill Creek drive points have not been measurably affected by pit operations.

Results of the two sets of groundwater and surface water quality chemical analyses completed in 2024 are generally consistent with historical values. Groundwater quality within on-site monitors complies with the Ontario Drinking Water Quality Standards for the parameters tested, except for hardness at each of the monitors tested, and total dissolved solids, iron and manganese at some locations. Conductivity values and sodium and chloride concentrations have demonstrated an overall long-term increasing trend at upgradient well BH1/1-R and at Monitor BH92-8. These increases may be attributable to road salting on Highway 401 and/or along the Township roads.

The Action Threshold Values established for the monitoring pairs located adjacent to Mill Creek were not exceeded in 2024.

Phase 1, 2, 3 and 4 pond water levels typically decreased from 2020 to 2022 and increased in 2023 and 2024, which reflects precipitation patterns during that period. In 2024, the pond levels remained within their respective historic range and did not exceed their respective threshold values.

5.0 2025 MONITORING PROGRAM

The current monitoring program, as detailed in Section 2 of this report, should be continued through 2025.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings presented in this report, the following conclusions are provided.

- The 2024 monitoring program was completed in accordance with the groundwater monitoring program that was recommended in the original 1993 Coordinated Report on Monitoring Programs and as updated in July 2002, October 2004, and January 2006.
- The annual average of the monthly mean temperatures in 2024 was appreciably higher than the 30-year normal value. A notable increase in air temperature has been observed since 2016.
- The total annual precipitation in 2024 was 976 mm, which was 41 mm (4%) higher than the 30-year normal value of 935 mm.
- The calculated annual water surplus for 2024 was 277 mm. This value is 9% lower than the 30-year normal surplus of 304 mm.
- Similar precipitation levels in 2024 compared to 2023 resulted in similar groundwater levels at most locations in 2024 compared to 2023 levels. The 2024 water levels were typically within historical ranges.
- Results from Monitors 92-28, 92-29, and 92-32, located between the Phase 3 pond and Mill Creek, indicate that the vertical gradients in 2024 were generally similar to the 2023 results, with minor exceptions. Maximum and minimum temperatures at 92-28 and 92-32 in 2024 were similar to the historic values. Temperature effects at 92-29 are attributed to the extraction of the Phase 3 pond to within a few metres of 92-29 in 2012.
- In 2024, the multi-level monitors continued to exhibit the general pattern of upward to neutral vertical gradients at the base of the sand and gravel, which is consistent with historic trends. Occasional downward gradients were also observed, which is also consistent with historic trends.
- Phase 1, 2, 3 and 4 pond water levels typically decreased from 2020 to 2022 and increased in 2023 and 2024, which reflects precipitation patterns during that period. In 2024, the pond levels remained within their respective historic range and satisfied their respective threshold values.

- The 2024 groundwater discharge was similar along Mill Creek compared to historical results.
- The long-term groundwater temperature trends at the Mill Creek drive point locations show a similar rate of temperature increase at locations close to the on-Site ponds as the locations located far removed from the ponds. As such, the data indicate that groundwater temperatures at the Mill Creek drive points have not been measurably affected by pit operations.
- Results of the groundwater quality chemical analyses completed in 2024 are generally consistent with historical data, except for conductivity values and sodium and chloride concentrations which have demonstrated a long-term increasing trend at upgradient Monitor BH1/BH1-R and at Monitor BH92-8. These increases may be attributed to road salting along Highway 401 and/or along the Township roads, and are not attributed to extraction activities at the Site.
- The Action Threshold Values established for the monitoring pairs located adjacent to Mill Creek were not exceeded in 2024.

We respectfully submit the following recommendations, based on the study findings, for your consideration.

- The groundwater monitoring program should be continued in 2025.

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RW/GRS/rc

Tables

Technical Appendix B – 2024 Hydrogeology Report

TABLE 1
MONITOR GROUPINGS
MILL CREEK AGGREGATES PIT

Bedrock	Sand and Gravel			Wetland	Creek
TW16-78	1*	TW16-79	92-33	DP6	DP1
Well 4794	1-R	OW1-84	OW5-84	DP7	DP2
	2*	OW2-84		DP8	DP3
	2-R **	OW4-84		DP9	DP4*
	3	92-1*		DP10	DP4R
	4	92-1R		DP11	DP5A**
	5	92-5		DP12	DP5B***
	6	92-8		DP16	DP5C***
	7-I*	92-12		DP113	DP5CR
	7-II*	92-13			DP17*
	11	92-14*			DP17R
	12*	92-15*			DP18
	13	92-15a*			DP19
	14	92-26			DP20
	OW16A-78	92-27			DP21
		92-28			DP22
		92-29			
		92-32			

NOTES:
- * Indicates monitor was decommissioned.
- ** Indicates monitor is no longer accessible.
- *** Indicates monitor was removed by vandals.

TABLE 2
DISTRIBUTION OF GROUNDWATER INFLUX, 2024 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH	AVERAGE WIDTH	AVERAGE INFLUX (L/s/m²)			TOTAL GROUNDWATER INFLUX (L/s)			ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)			ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)		
		(m)	(m)	2024 Average	2024 Winter Low Flow	2024 Summer Low Flow	2024 Average	2024 Winter Low Flow	2024 Summer Low Flow	2024 Average	2024 Winter Low Flow	2024 Summer Low Flow	2024 Average	2024 Winter Low Flow	2024 Summer Low Flow
DP18	DP19	670	6.5	-2.6E-03	-7.0E-03	-1.7E-03	-11.3	-30.7	-7.3	-5.7	-15.3	-3.7	-5.7	-15.3	-3.7
DP19	DP20	310	6.5	-7.4E-04	-3.0E-03	1.1E-03	-1.5	-6.1	2.2	-0.6	-2.4	0.9	-0.9	-3.6	1.3
DP20	Hwy 401	270	6.5	-4.8E-05	-1.4E-03	1.4E-03	-0.1	-2.5	2.4	0.0	-1.0	1.0	-0.1	-1.5	1.4
Hwy 401	DP21	60	7.1	2.4E-03	1.8E-03	2.5E-03	1.0	0.8	1.1	2.0	0.3	0.4	0.6	0.5	0.6
DP21	DP4/R	100	7.3	2.7E-03	2.0E-03	2.6E-03	2.0	1.5	1.9	0.8	0.6	0.8	1.2	0.9	1.2
DP4/R	DP22	50	7.1	3.9E-03	3.3E-03	4.2E-03	1.4	1.2	1.5	0.6	0.5	0.6	0.8	0.7	0.9
DP22	DP17/R	100	6.6	3.0E-03	3.0E-03	3.2E-03	2.0	2.0	2.1	0.8	0.8	0.8	1.2	1.2	1.3
DP17/R	DP3	165	7.1	2.2E-03	2.3E-03	1.4E-03	2.5	2.6	1.7	1.0	1.1	0.7	1.5	1.6	1.0
DP3	Galt Creek	420	6.0	2.2E-03	2.1E-03	1.7E-03	5.7	5.4	4.2	2.3	2.1	1.7	3.4	3.2	2.5
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	2.5	2.5	2.5	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	8.7E-03	8.8E-03	8.4E-03	17.4	17.7	16.8	8.7	8.8	8.4	8.7	8.8	8.4
DP1	DP2	100	6.7	7.0E-03	7.5E-03	6.8E-03	4.7	5.1	4.6	2.4	2.5	2.3	2.4	2.5	2.3
DP2	DP5CR	800	7.6	1.7E-03	2.1E-03	1.7E-03	10.2	12.6	10.3	5.1	6.3	5.1	5.1	6.3	5.1
TOTALS							40.2	15.6	47.5	19.8	6.7	21.4	22.0	8.9	26.1
TOTAL INFLUX FROM HWY 401 TO DP5CR							53.1	54.8	50.3	26.1	25.5	23.3	28.6	29.4	27.0

NOTES:
- Groundwater influx at Galt Creek and Pond Creek based on seepage meter data from May/June 1992.
- 2024 Average - Average of all 2024 data at each drive point.
- 2024 Winter Low Flow - Based on November 4, 2024 data.
- 2024 Summer Low Flow - Based on July 9, 2024 data.

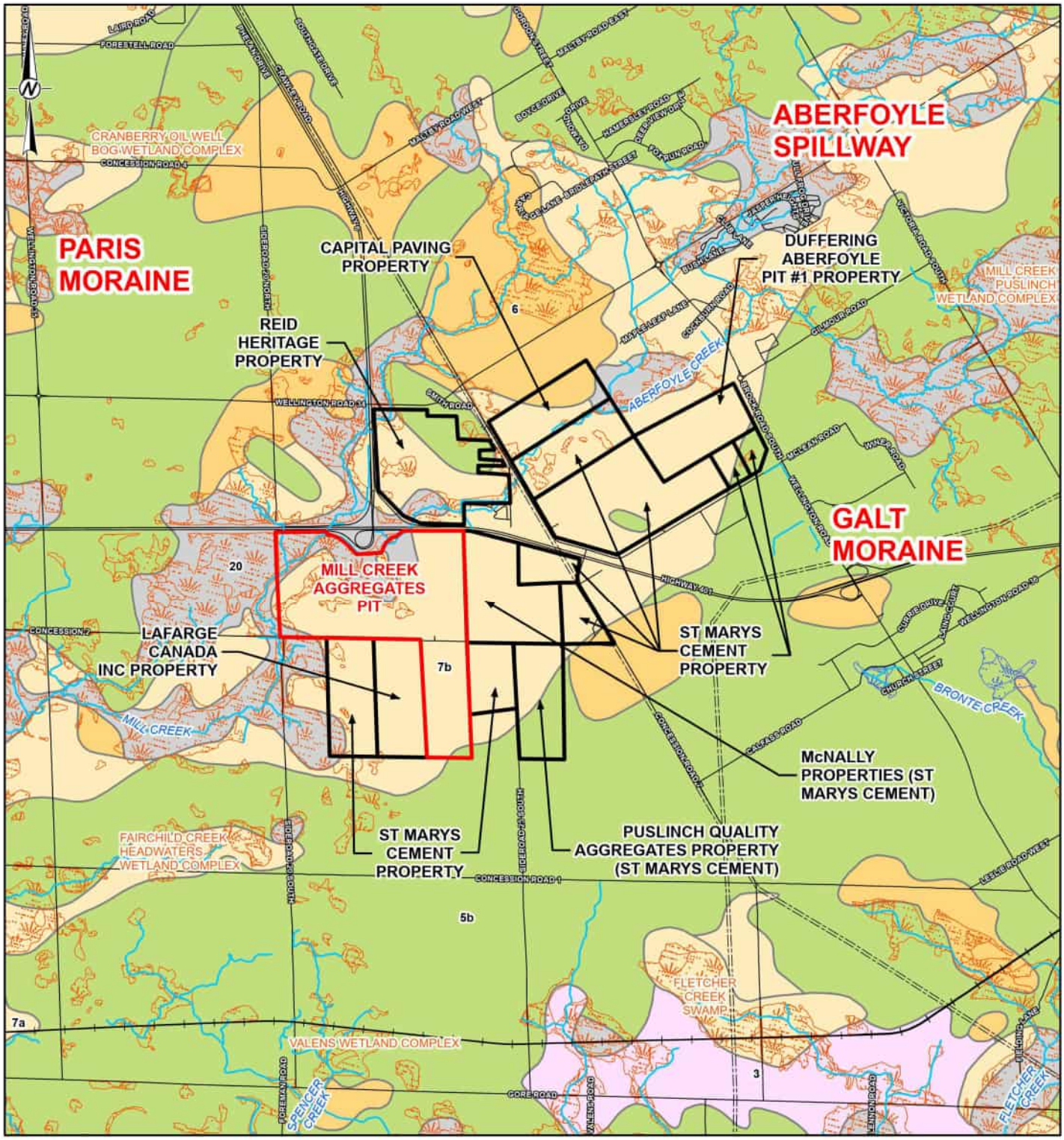
TABLE 3
DISTRIBUTION OF GROUNDWATER INFLUX, AVERAGE HISTORIC CONDITIONS (1993-2023)
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH	AVERAGE WIDTH	AVERAGE INFLUX (L/s/m²)			TOTAL GROUNDWATER INFLUX (L/s)			ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)			ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)		
		(m)	(m)	Overall Average	Winter Low Flow Average	Summer Low Flow Average	Overall Average	Winter Low Flow Average	Summer Low Flow Average	Overall Average	Winter Low Flow Average	Summer Low Flow Average	Overall Average	Winter Low Flow Average	Summer Low Flow Average
DP18	**DP19**	670	6.5	7.0E-04	1.4E-04	4.1E-04	3.1	0.6	1.8	1.5	0.3	0.9	1.5	0.3	0.9
DP19	**DP20**	310	6.5	4.6E-04	8.9E-05	9.2E-05	0.9	0.2	0.2	0.4	0.1	0.1	0.6	0.1	0.1
DP20	**Hwy 401**	270	6.5	1.1E-03	7.7E-04	7.5E-04	2.0	1.3	1.3	0.8	0.5	0.5	1.2	0.8	0.8
Hwy 401	**DP21**	60	7.1	1.6E-03	1.2E-03	1.4E-03	0.7	0.5	0.6	0.3	0.2	0.2	0.4	0.3	0.4
DP21	**DP4/R**	100	7.3	2.5E-03	1.7E-03	2.1E-03	1.8	1.3	1.5	0.7	0.5	0.6	1.1	0.8	0.9
DP4/R	**DP22**	50	7.1	3.7E-03	2.6E-03	3.2E-03	1.3	0.9	1.1	0.5	0.4	0.5	0.8	0.6	0.7
DP22	**DP17/R**	100	6.6	2.5E-03	2.0E-03	2.2E-03	1.7	1.3	1.4	0.7	0.5	0.6	1.0	0.8	0.9
DP17/R	**DP3**	165	7.1	1.4E-03	1.5E-03	1.3E-03	1.7	1.7	1.5	0.7	0.7	0.6	1.0	1.0	0.9
DP3	**Galt Creek**	420	6.0	1.7E-03	1.7E-03	1.7E-03	4.4	4.4	4.2	1.8	1.8	1.7	2.6	2.6	2.5
Galt Creek	**Pond Creek**	255	8.1	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	2.5	2.5	2.5	3.7	3.7	3.7
Pond Creek	**DP1**	250	8.0	7.1E-03	6.8E-03	6.6E-03	14.2	13.7	13.3	7.1	6.8	6.6	7.1	6.8	6.6
DP1	**DP2**	100	6.7	5.7E-03	5.4E-03	5.1E-03	3.8	3.6	3.5	1.9	1.8	1.7	1.9	1.8	1.7
DP2	**DP5A/B/C/D/CR**	800	7.6	2.3E-03	2.3E-03	1.8E-03	13.6	14.0	10.9	6.8	7.0	5.5	6.8	7.0	5.5
TOTALS							55.5	49.8	47.6	25.7	23.1	22.0	29.8	26.7	25.6
TOTAL INFLUX FROM HWY 401 TO DP5A/B/C/D/CR							49.5	47.7	44.3	23.0	22.2	20.5	26.5	25.5	23.8

NOTES:
- Groundwater influx at Galt Creek and Pond Creek based on seepage meter data from May/June 1992.
- Overall Average - Average of year-round historic data at each drive point.
- Winter Low Flow Average - Based on historic winter data at each drive point.
- Summer Low Flow Average - Based on historic summer data at each drive point.

Figures

Technical Appendix B – 2024 Hydrogeology Report



LEGEND

- UTILITY LINE
- RAILWAY
- WATERCOURSE
- ROAD
- WETLAND EVALUATED - OTHER
- PROVINCIALLY SIGNIFICANT WETLAND
- 20: ORGANIC DEPOSITS
- 3: PALEOZOIC BEDROCK
- 5B: STONE-POOR, CARBONATE-DERIVED SILTY TO SANDY TILL
- 6: ICE-CONTACT STRATIFIED DEPOSITS
- 7A: SANDY DEPOSITS
- 7B: GRAVELLY DEPOSITS

0 500 1,000 2,000

1:50,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: PROVINCE OF ONTARIO, ESRI CANADA, ESRI, TOMTOM, GARMIN, FAO, NOAA, USGS, EPA, NPS, NRCAN, PARKS CANADA
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
LOCATION AND PHYSICAL SETTING

CONSULTANT

wsp

YYYY-MM-DD	2025-03-05
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
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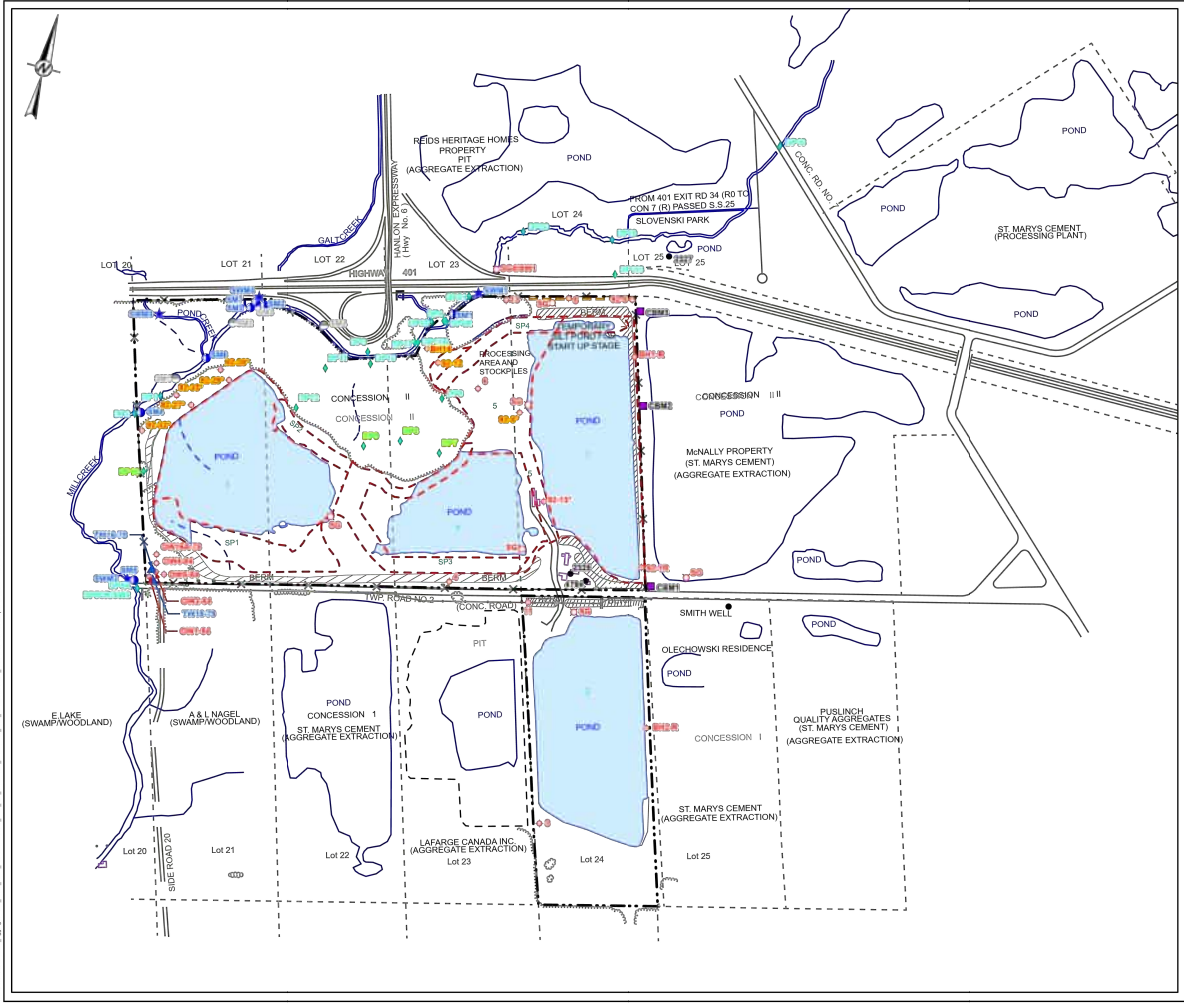
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

25mm

0



LEGEND

- BOREHOLE LOCATIONS
- CBM MONITOR AND DESIGNATION
- DRIVE POINT
- SEEPAGE METER DESIGNATION AND APPROXIMATE LOCATION (BY J. FITZGIBBON)(NO LONGER OPERATIVE)
- STAFF GAUGE AND DESIGNATION
- STREAM QUALITY AND FISHERIES MONITORING STATIONS (WATER QUALITY BIOLOGICAL/FISHERIES AS PER FAUN AQUATICS REPORT)
- SURFACE WATER MONITORING STATION
- TEST WELLS
- WATER WELL WITH MOE IDENTIFICATION NUMBER
- APPROVED PHASHING
- DENOTES DATALOGGER INSTALLED
- DENOTES STANDPIPE MONITOR INSTALLED
- SILT POND AND DESIGNATION
- GATE
- HYDRO/TELEPHONE LINE
- POST AND WIRE FENCE
- NATURAL DRAINAGE
- WOODLANDS/FOREST (MIXED)
- MILLCREEK
- BOUNDARY OF LICENCED PROPERTY
- RECHARGE TRENCH
- BOUNDARY OF EXTRACTION AREA PER G.R.C.A. FILL PERMIT APPLICATION
- POND

0 125 250 500

1:12,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4. POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY (DUFFERIN AGGREGATES, NOVEMBER 2020).

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
GROUNDWATER MONITORING LOCATIONS

CONSULTANT

YYYY-MM-DD	2025-02-21
DESIGNED	----
PREPARED	AS
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
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0 25mm

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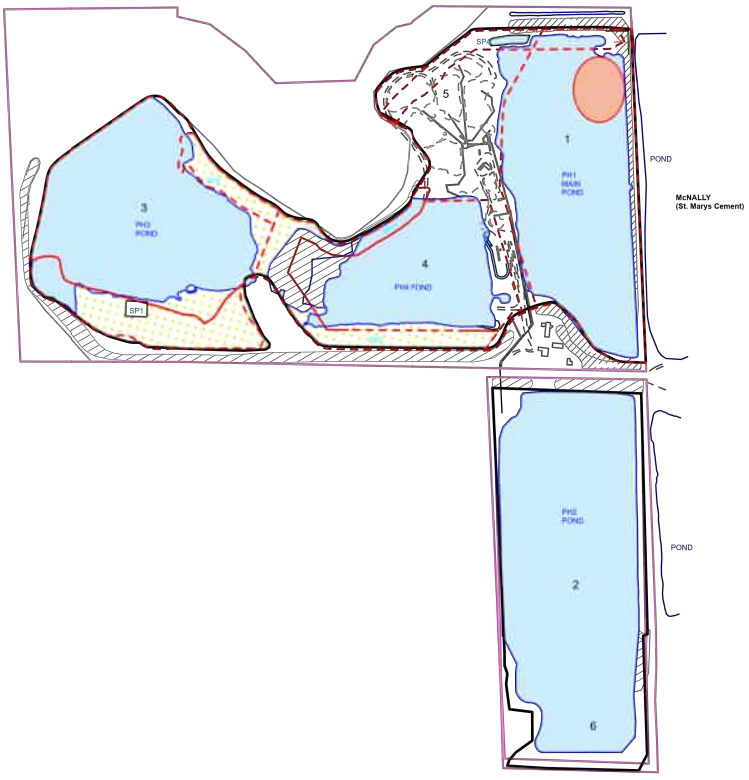

LEGEND

- 5 — APPROVED PHASHING
- SP1 — SILT POND AND DESIGNATION
- BOUNDARY OF EXTRACTION AREA PER G.R.C.A. FILL PERMIT APPLICATION
- LICENCED LIMIT OF EXTRACTION PER SITE PLANS
- BOUNDARY OF LICENSED PROPERTY
- 2024 DEPOSITION AREA
- BERM
- INFILLED SILT POND
- PARTIALLY INFILLED POND

0 100 200 400

1:10,000 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020).

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
SITE PLAN SEQUENCING

CONSULTANT

YYYY-MM-DD	2025-02-21
DESIGNED	----
PREPARED	AS
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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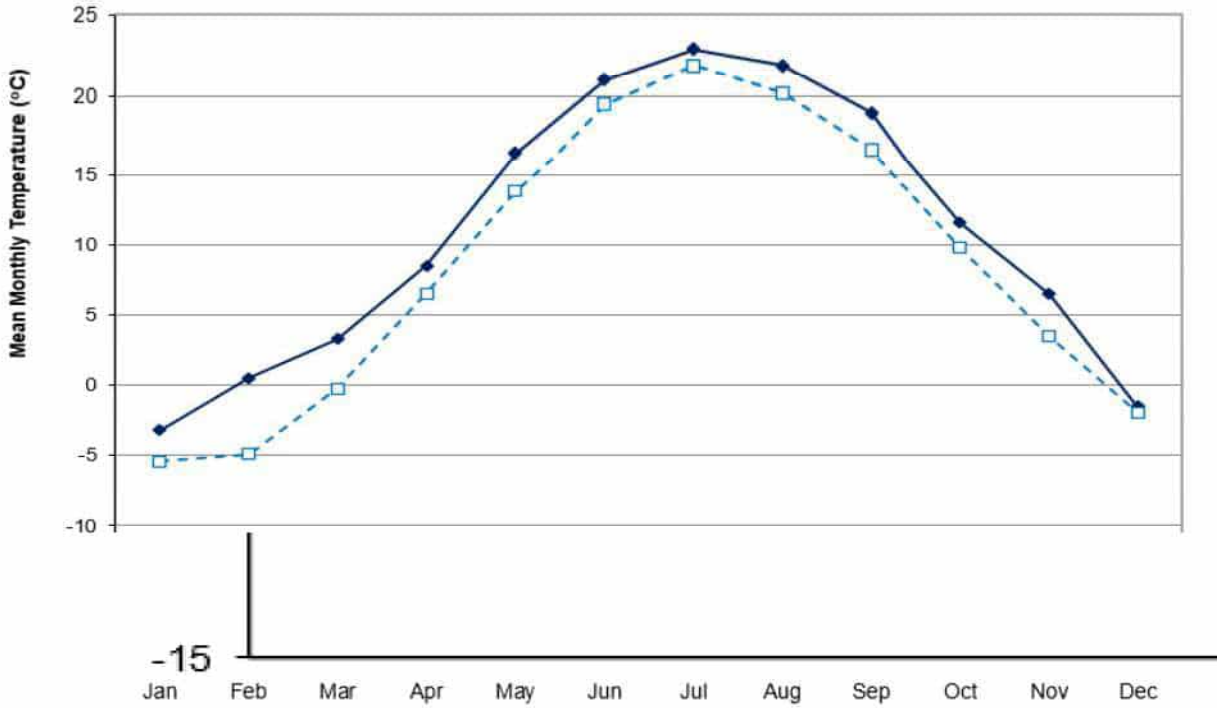
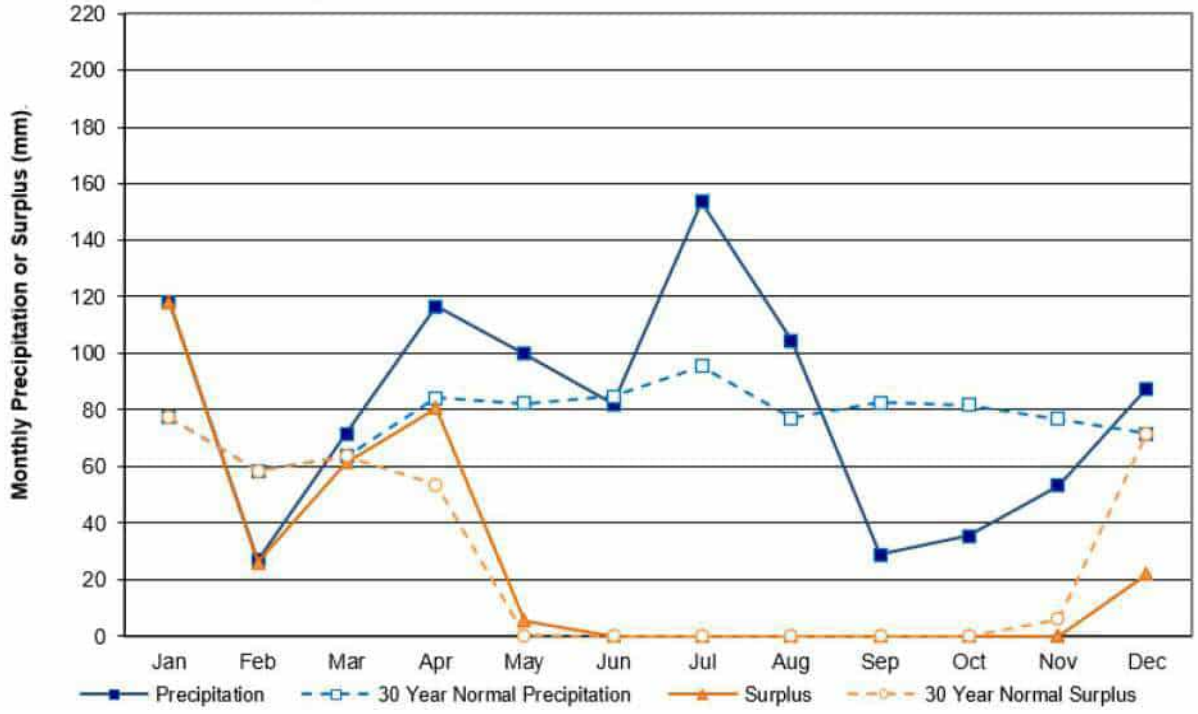


2024 PRECIPITATION DATA
SHADE'S MILLS CLIMATE



CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

YYYY-MM-DD	2025-02-25
DESIGNED	
PREPARED	INS
REVIEWED	
APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
2024 TEMPERATURE AND PRECIPITATION DATA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	4

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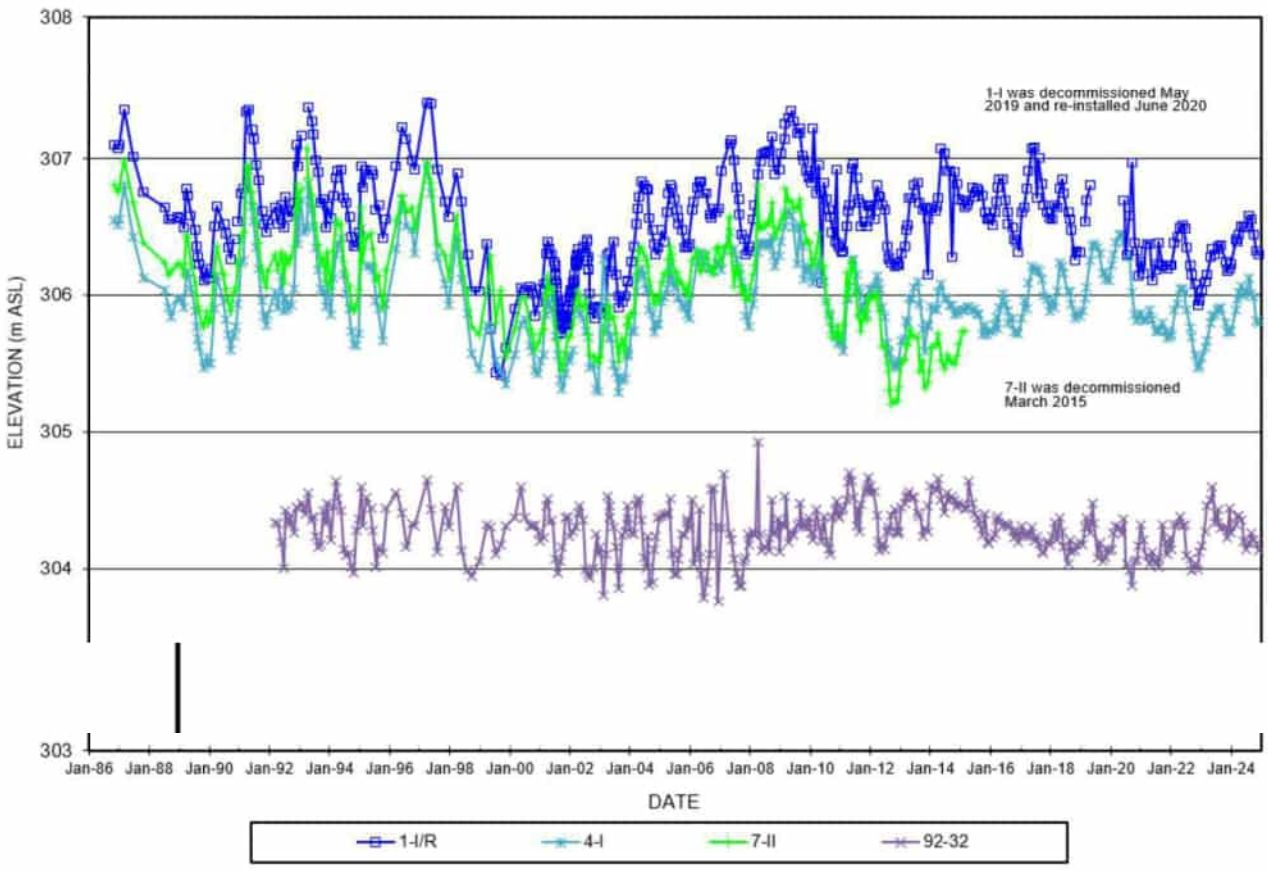

REFERENCE(S)
THESE MONITORS ARE WATER TABLES STANDPIPES ESTABLISHED IN THE BH-SERIES OF MONITORS ACROSS THE PROPERTY.

CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

YYYY-MM-DD	2025-02-25
DESIGNED	
PREPARED	INS
REVIEWED	
APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
GROUNDWATER HYDROGRAPH OF REPRESENTATIVE MONITORS IN THE SAND AND GRAVEL AQUIFER

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
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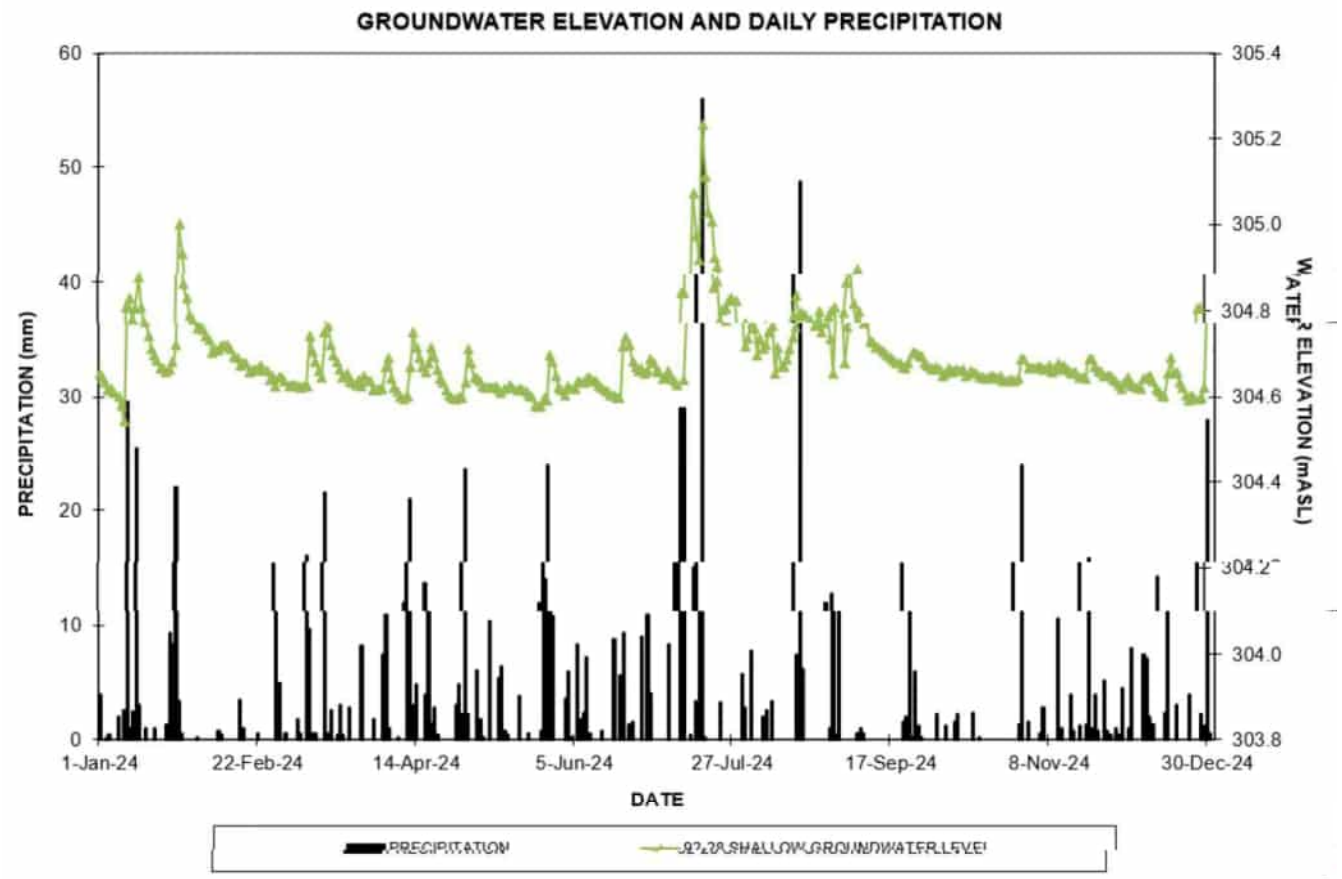

CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

YYYY-MM-DD	2025-02-25
DESIGNED	
PREPARED	INS
REVIEWED	
APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
SHALLOW GROUNDWATER ELEVATION AND DAILY PRECIPITATION AT MONITOR 92-28

PROJECT NO.	CONTROL	REV.	FIGURE
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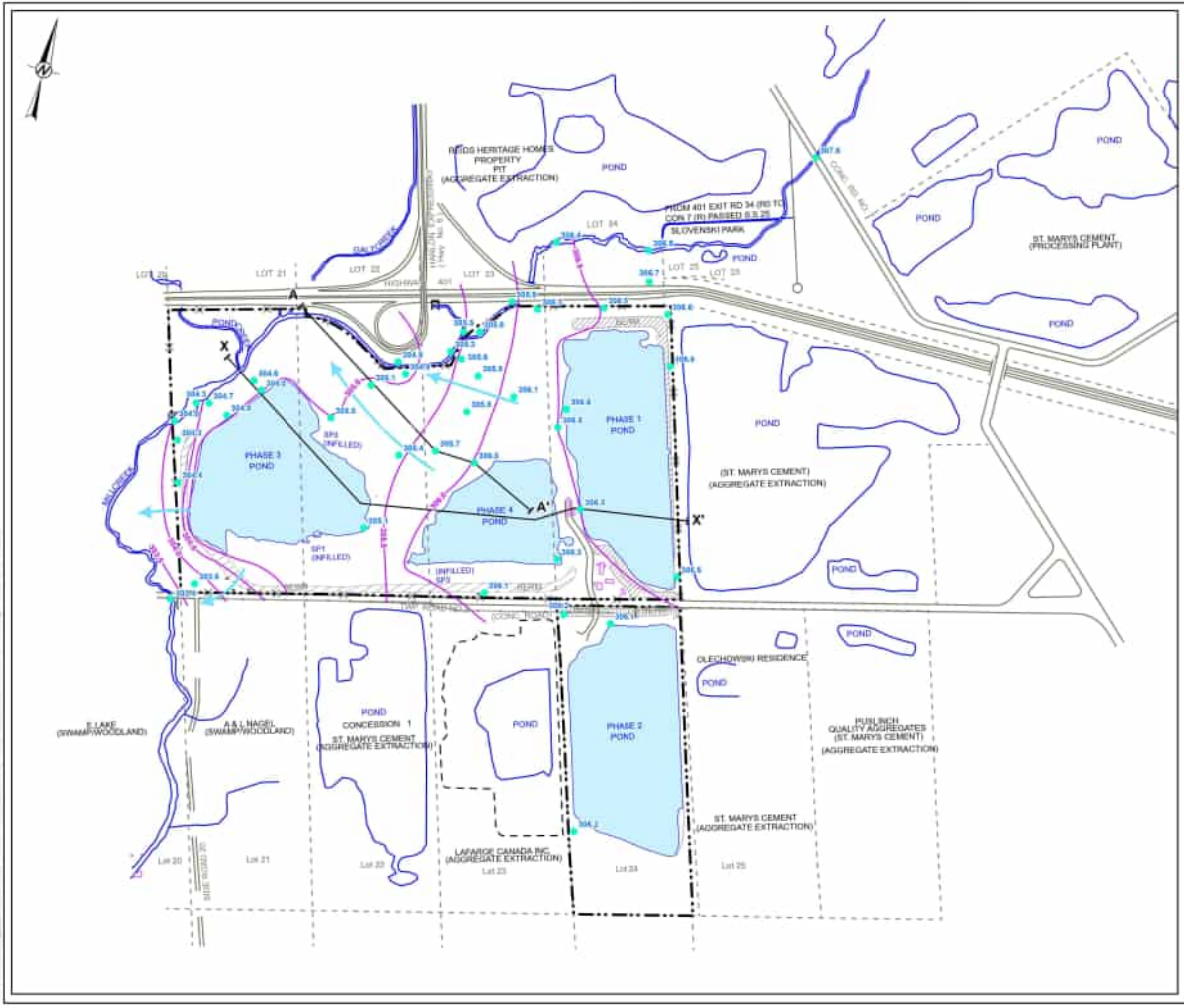

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020)

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
2024 'HIGH FLOW' WATER TABLE CONFIGURATION (AUGUST)

CONSULTANT

YYYY/MM/DD	2025/03/05
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
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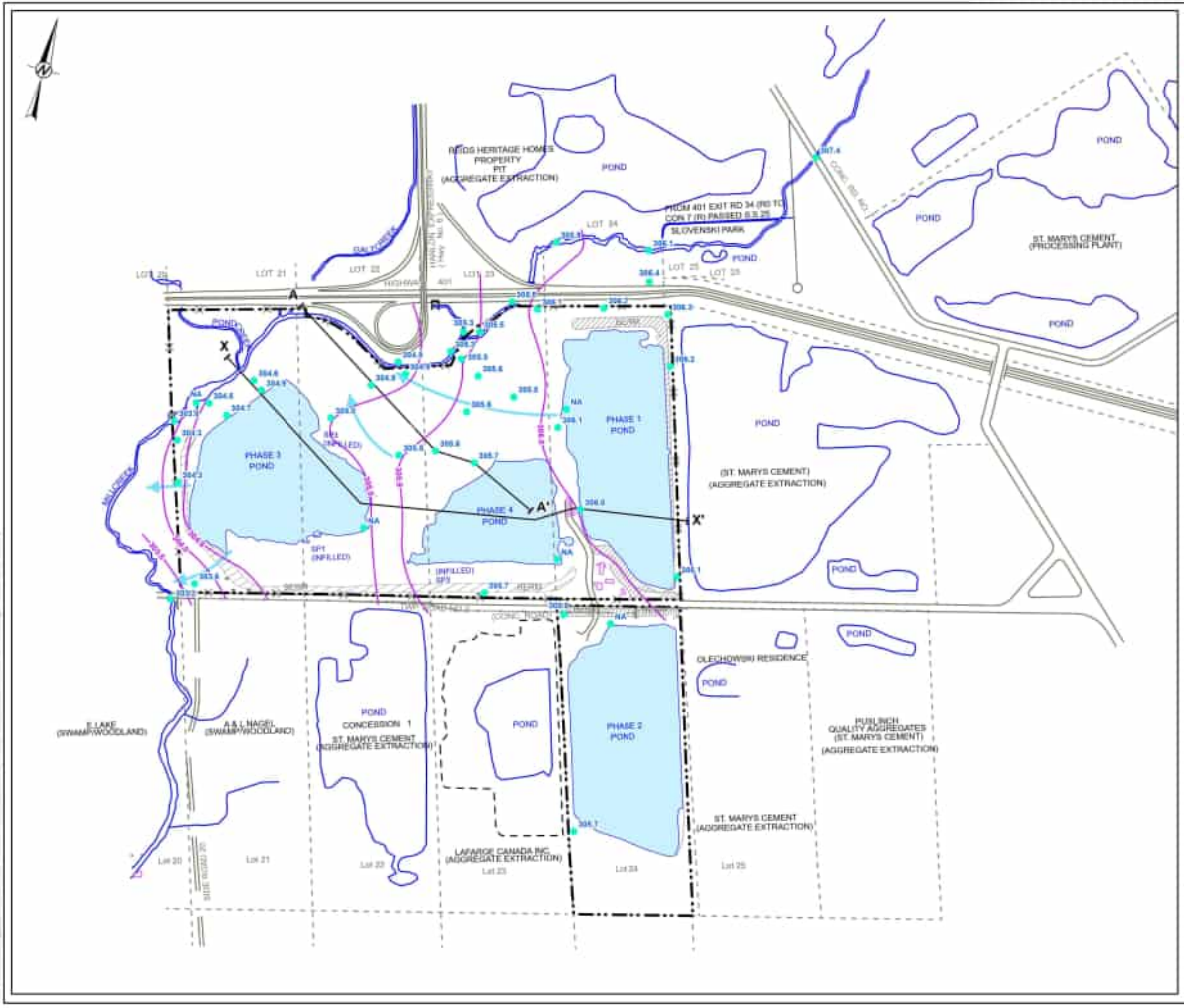

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020).

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
2024 'LOW FLOW' WATER TABLE CONFIGURATION (JANUARY)

CONSULTANT

YYYY/MM/DD	2025-03-04
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
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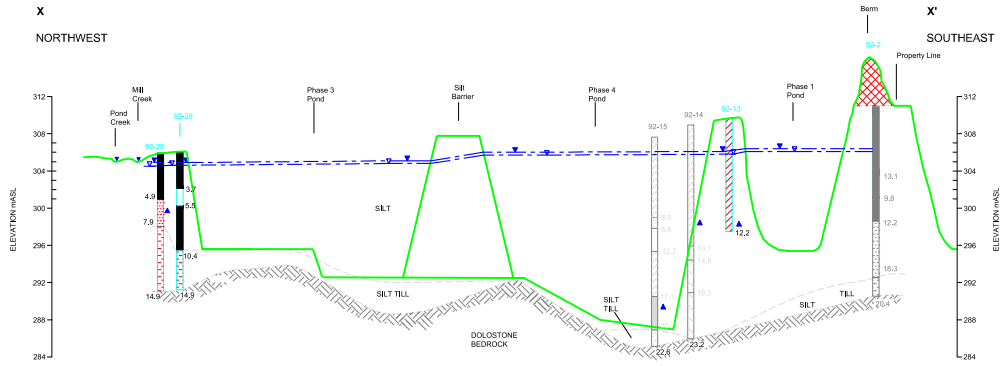

LEGEND

- GRAVEL, SANDY GRAVEL, SAND AND GRAVEL
- GRAVELLY, FINE TO COARSE, SAND
- SAND
- SILT, SILTY FINE SAND, FINE SAND
- SILTY TILL
- ASSUMED BEDROCK
- 92-28 — BOREHOLE DESIGNATION (GREYED OUT BOREHOLE = DECOMMISSIONED MONITOR)
- 2024 "HIGH FLOW" WATER TABLE PROFILE (AUGUST 2024)
- 2024 "LOW FLOW" WATER TABLE PROFILE (JANUARY 2024)
- 5.5 — DEPTH TO CHANGE IN STRATA (m)
- GROUNDWATER MONITOR
- 14.9 — BOTTOM OF BOREHOLE (m)

REFERENCE(S)

1. THE ACTUAL SOIL STRATIFICATION HAS BEEN VERIFIED FROM DATA OBTAINED AT THE BOREHOLE LOCATIONS ONLY.
2. THE INFERRED CONTACTS SHOWN ARE BASED ON GEOLOGICAL EVIDENCE AND THESE MAY VARY FROM THOSE SHOWN BETWEEN BORINGS.

0 1 2
1:40 HORIZONTAL METRES

0 0.05 0.1
1:2 VERTICAL METRES

CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

YYYY-MM-DD	2025-02-25
DESIGNED	
PREPARED	INS
REVIEWED	
APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
WATER TABLE PROFILE

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

Path: \\corp.pbwan.net\CAOAME$\05\CT_Data\Revit\Archive\Working_Aggregates\4_Mine_Drilling_Proj\CA0046173_5391_Fin_Ac\xxxxx_PROD\CA0046173_5391_Fin_Ac\xxxxx.rvt | File Name: CA0046173_5391-a001-r2rvt2406.rvt | Last Edited By: ioslb709 Date: 2025-02-25 Time:8:13 PM | Printed By: MMB0709 Date: 2025-02-25 Time:8:39:31 PM

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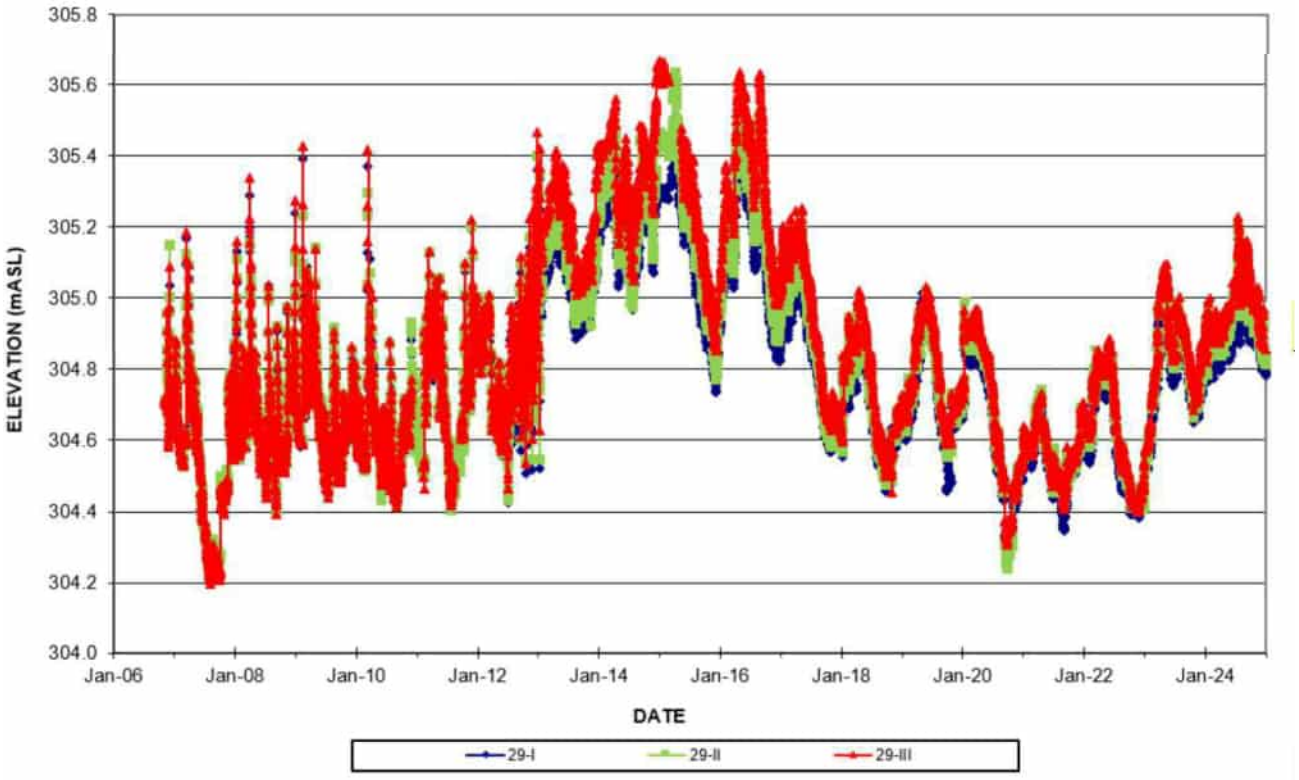
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-29



CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

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APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
GROUNDWATER TEMPERATURE PROFILE MULTI-LEVEL MONITOR 92-29

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
0 25 mm

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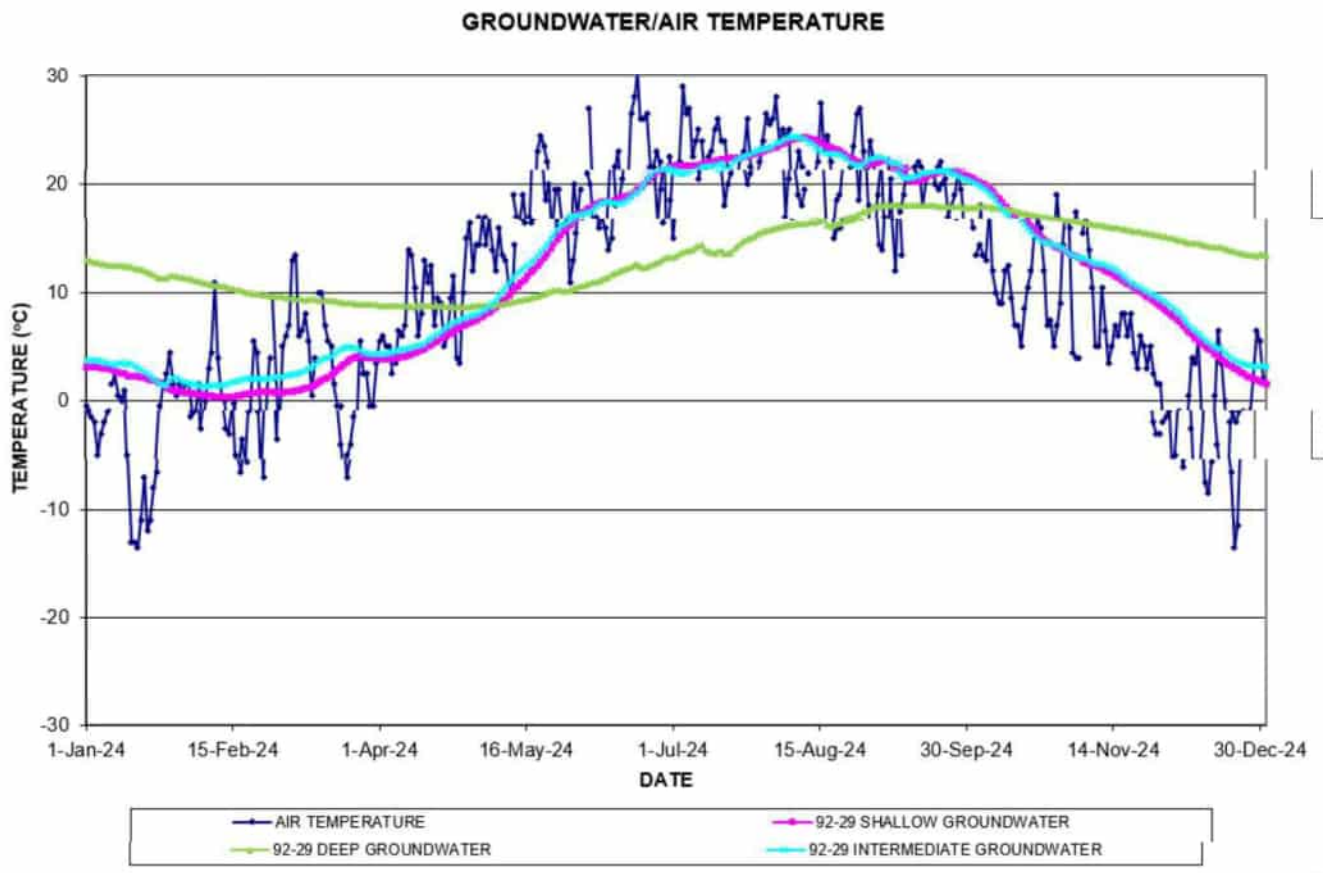

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DUFFERIN AGGREGATES

CONSULTANT
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APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
GROUNDWATER VS AIR TEMPERATURE AT MULTI-LEVEL MONITOR 92-29

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
0 25 mm

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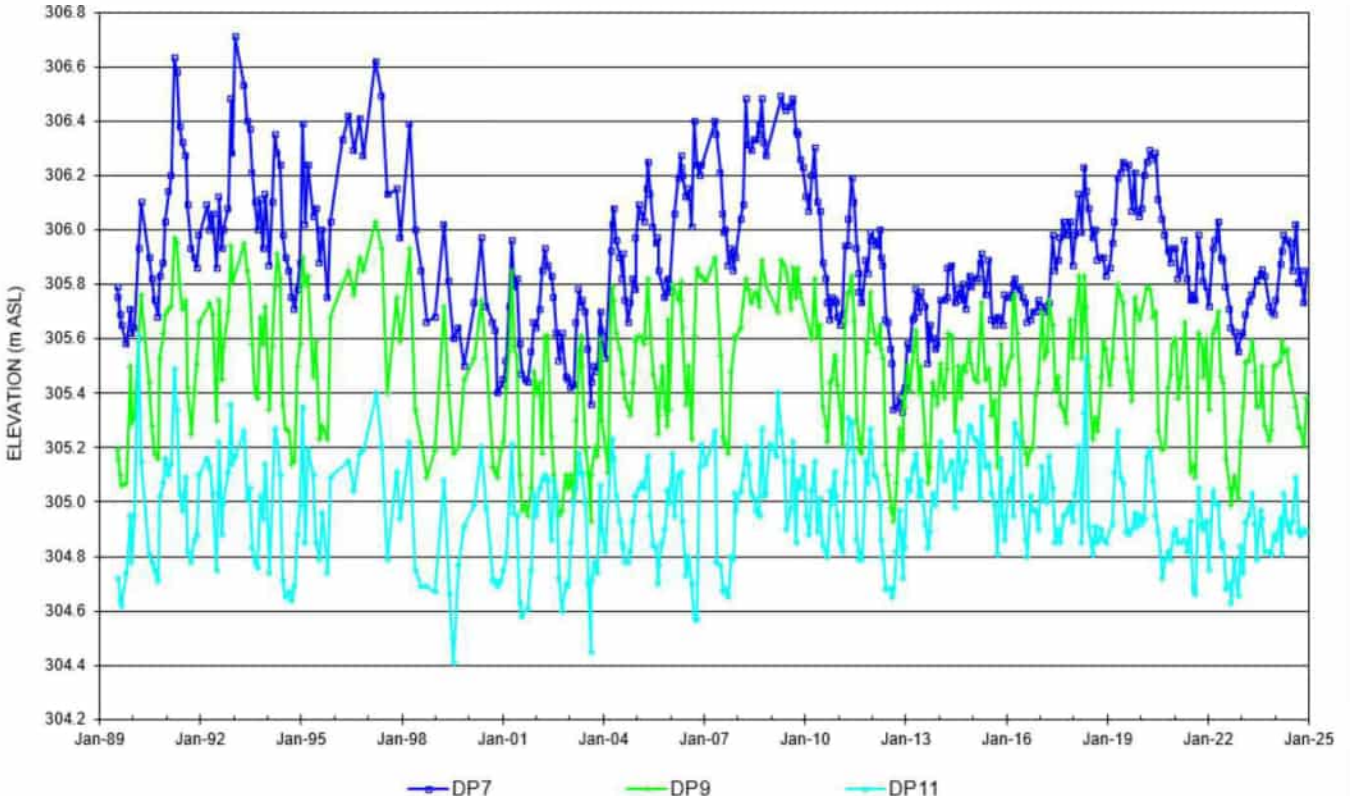
GROUNDWATER HYDROGRAPH
REPRESENTATIVE WETLAND DRIVE POINTS



CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

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PREPARED	INS
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APPROVED	

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

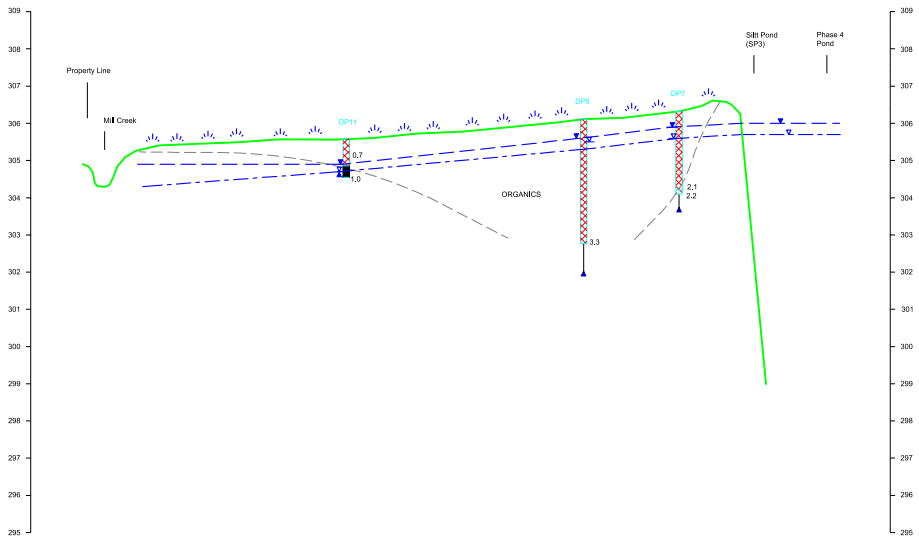
TITLE
GROUNDWATER HYDROGRAPH OF REPRESENTATIVE DRIVE POINTS IN THE WETLAND

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
0 25 mm

A
NORTHWEST

A'
SOUTHEAST



LEGEND

- ORGANICS
- SAND AND GRAVEL
- GRAVELLY SAND
- SAND
- CLAYEY SILT
- SILTY TILL
- DP11 — BOREHOLE DESIGNATION
- BUSH/WETLAND DESIGNATION
- 2024 "HIGH FLOW" WATER TABLE PROFILE (AUGUST 2024)
- 2024 "LOW FLOW" WATER TABLE PROFILE (JANUARY 2024)
- 0.7 — DEPTH TO CHANGE IN STRATA (m)
- GROUNDWATER MONITOR
- 1.0 — BOTTOM OF BOREHOLE (m)

REFERENCE(S)

1. THE ACTUAL SOIL STRATIFICATION HAS BEEN VERIFIED FROM DATA OBTAINED AT THE BOREHOLE LOCATIONS ONLY.
2. THE INFERRED CONTACTS SHOWN ARE BASED ON GEOLOGICAL EVIDENCE AND THESE MAY VARY FROM THOSE SHOWN BETWEEN BORINGS.

0 1 2
1:40 HORIZONTAL METRES

0 0.05 0.1
1:2 VERTICAL METRES

CLIENT
DUFFERIN AGGREGATES

CONSULTANT
wsp

YYYY-MM-DD	2025-02-25
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PREPARED	INS
REVIEWED	
APPROVED	

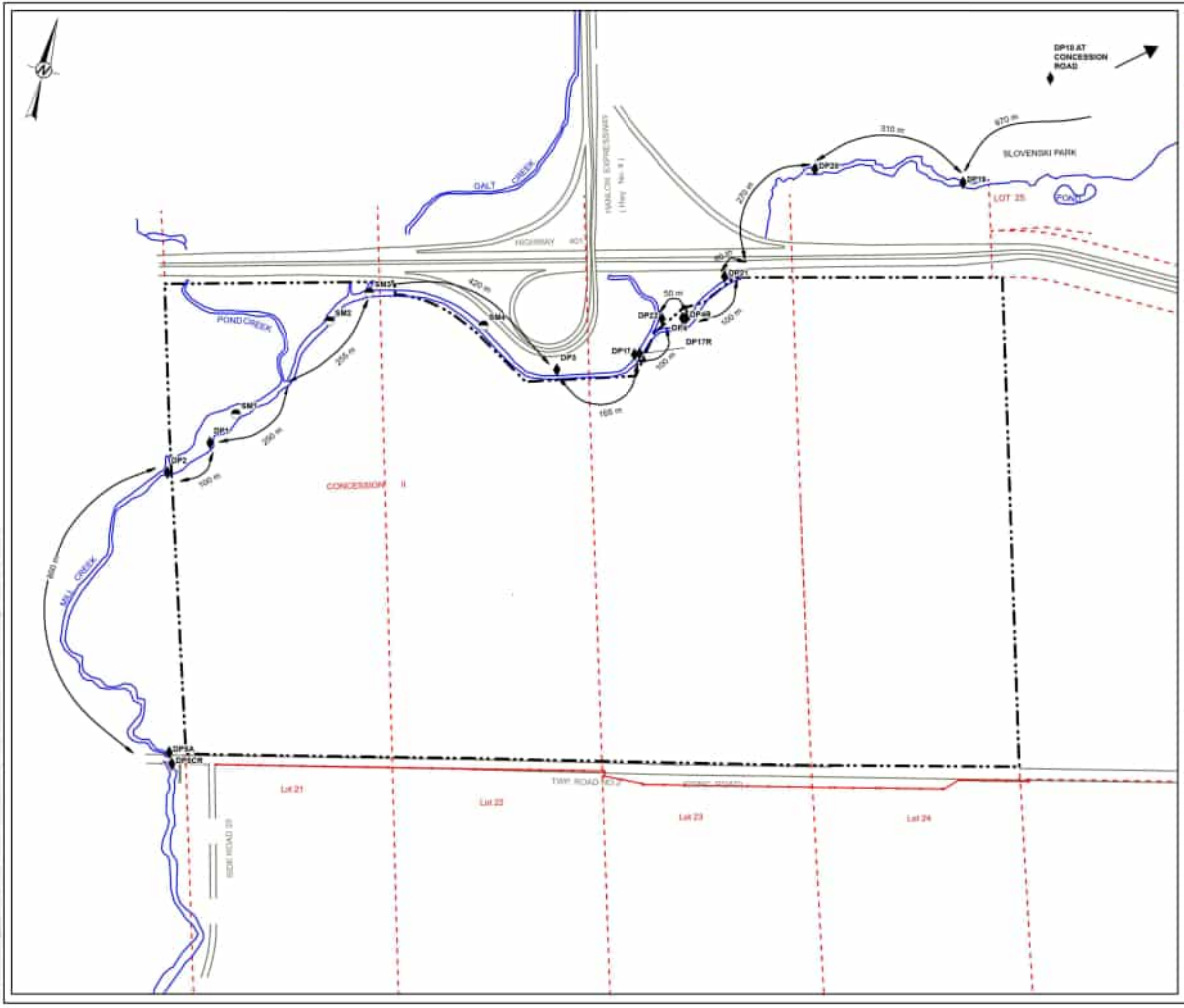
PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT, TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
GROUNDWATER LEVEL PROFILES THROUGH THE WETLAND

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	13

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B
0 5mm

Path: C:\Users\JHEBERT\Documents\Projects\CA0046173_5391-0001-CA0046173.prj | File Name: CA0046173_5391-0001-CA0046173.dwg | Last Edited By: mes0578 Date: 2025-02-25 Time:5:15:07 PM | Printed By: MES0578 Date: 2025-02-25 Time:5:29:48 PM



LEGEND

- SM1 SEEPAGE METER DESIGNATION AND APPROXIMATE LOCATION (BY J. FITZGIBBON)
- DP1 DRIVE POINT LOCATION AND DESIGNATION
- MILL CREEK
- BOUNDARY OF LICENCED PROPERTY
- HYDRO/TELEPHONE LINE

0 75 150 300
1:7,500 METRES

NOTE(S)
1. DISTANCES ARE APPROXIMATE, MEASURED FROM SITE PLAN BASE MAP.

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020).

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
MILL CREEK GROUNDWATER MONITORING LOCATIONS AND SEPARATION DISTANCES

CONSULTANT

YYYY-MM-DD	2023-02-10
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PREPARED	AS
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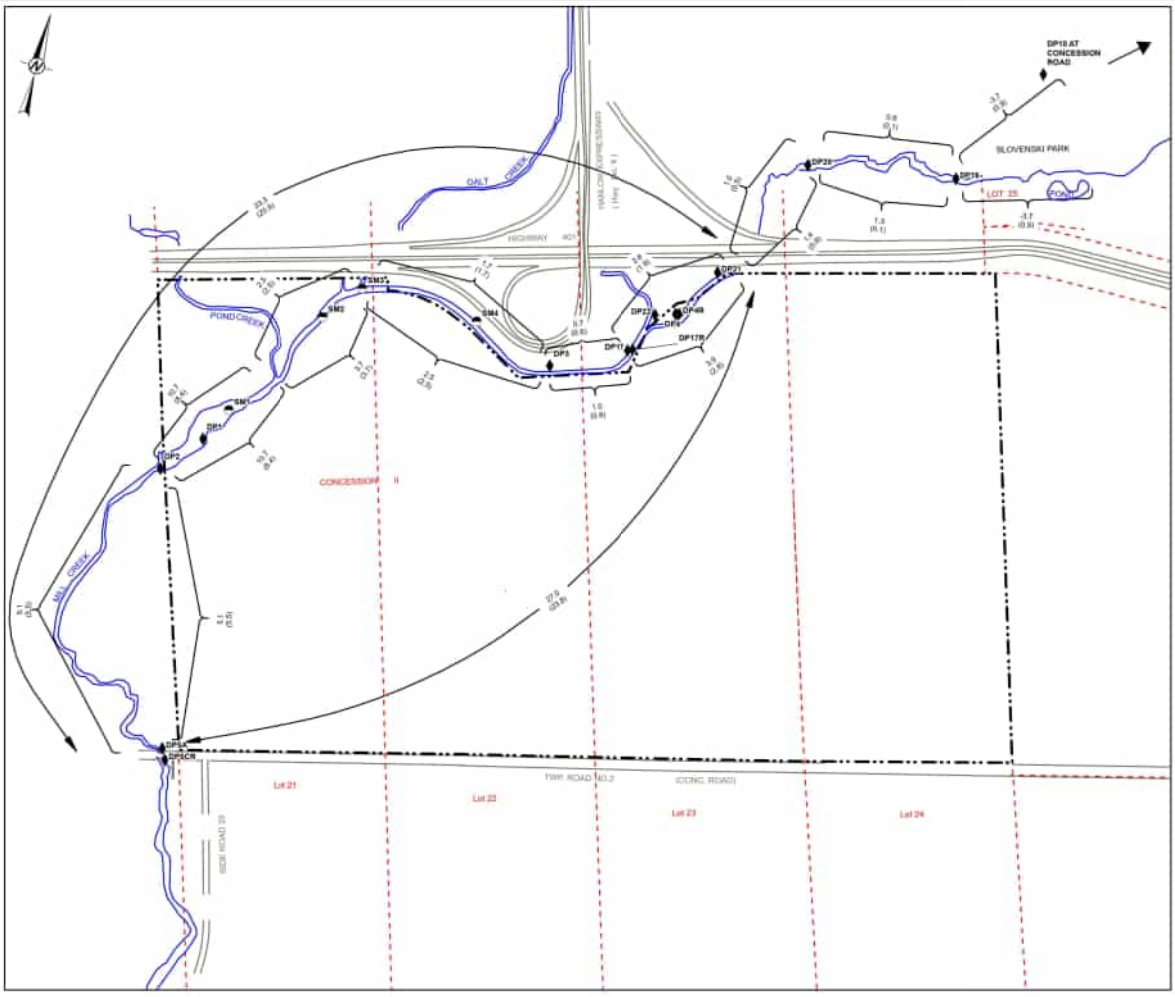
PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	14



LEGEND

- SM1 SEEPAGE METER DESIGNATION AND APPROXIMATE LOCATION (BY J. FITZGIBBON)
- DP1 DRIVE POINT LOCATION AND DESIGNATION
- MILLCREEK
- BOUNDARY OF LICENCED PROPERTY
- 0.9 2024 SUMMER 'LOW FLOW' CONDITIONS (L/S) JULY 9, 2024
- (0.6) AVERAGE OF YEARLY SUMMER 'LOW FLOW' CONDITIONS (L/S) 1992-2023

0 75 150 300
1:7,500 METRES

NOTE(S)
1. DISTANCES ARE APPROXIMATE, MEASURED FROM SITE PLAN BASE MAP.

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020).

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DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
DISTRIBUTION OF GROUNDWATER INFLUX FOR SUMMER "LOW FLOW" CONDITIONS

CONSULTANT

YYYY/MM/DD	2025-03-12
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PREPARED	AS
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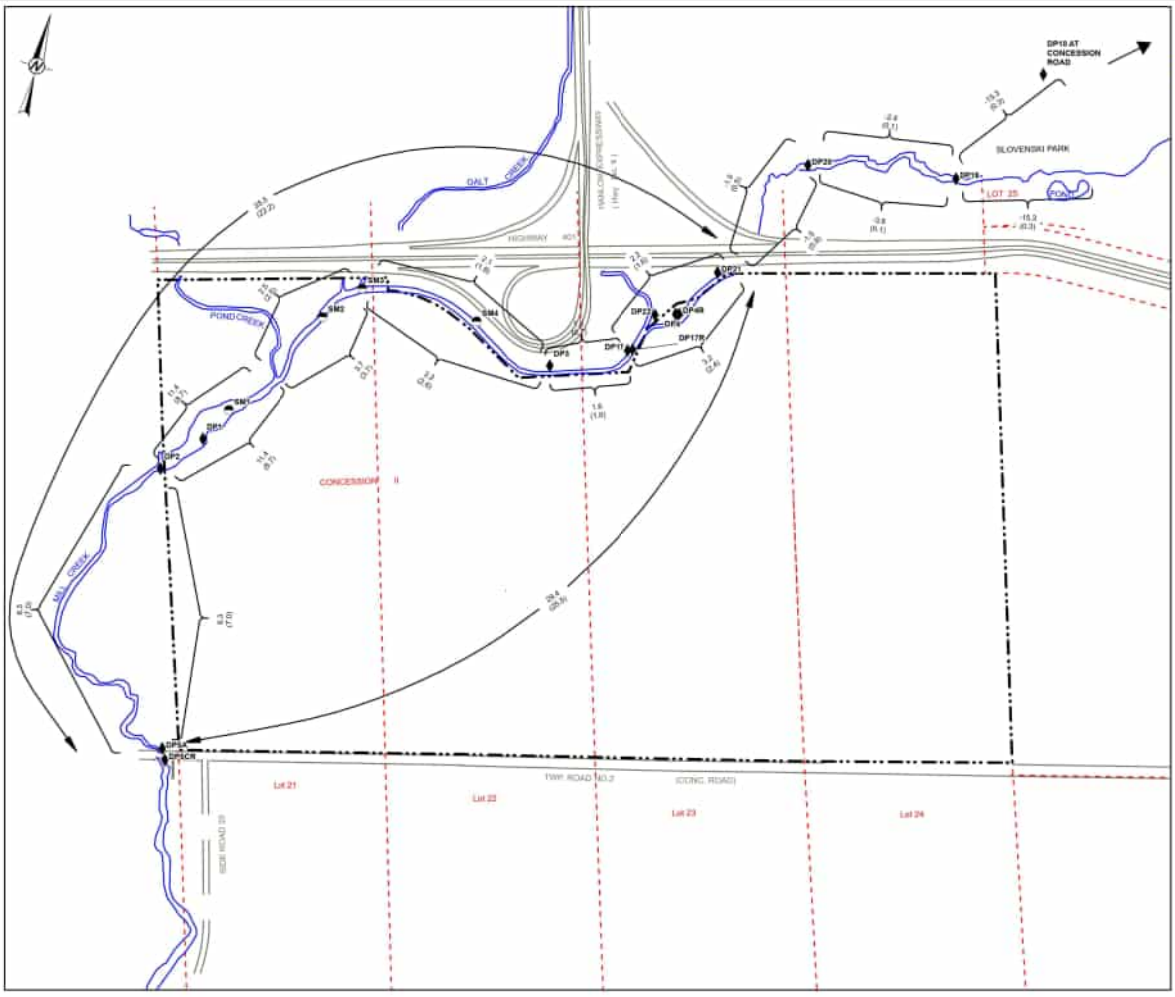
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	15



LEGEND

- SM1 SEEPAGE METER DESIGNATION AND APPROXIMATE LOCATION (BY J. FITZSIMMONS)
- DP1 DRIVE POINT LOCATION AND DESIGNATION
- MILLCREEK
- BOUNDARY OF LICENCED PROPERTY
- 0.9 2024 WINTER 'LOW FLOW' CONDITIONS (L/S) NOVEMBER 4, 2024
- (0.6) AVERAGE OF YEARLY WINTER 'LOW FLOW' CONDITIONS (L/S) 1962-2023

0 75 150 300
1:7,500 METRES

NOTE(S)
1. DISTANCES ARE APPROXIMATE, MEASURED FROM SITE PLAN BASE MAP.

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020)

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
DISTRIBUTION OF GROUNDWATER INFLUX FOR WINTER "LOW FLOW" CONDITIONS

CONSULTANT

YYYY/MM/DD	2025-03-12
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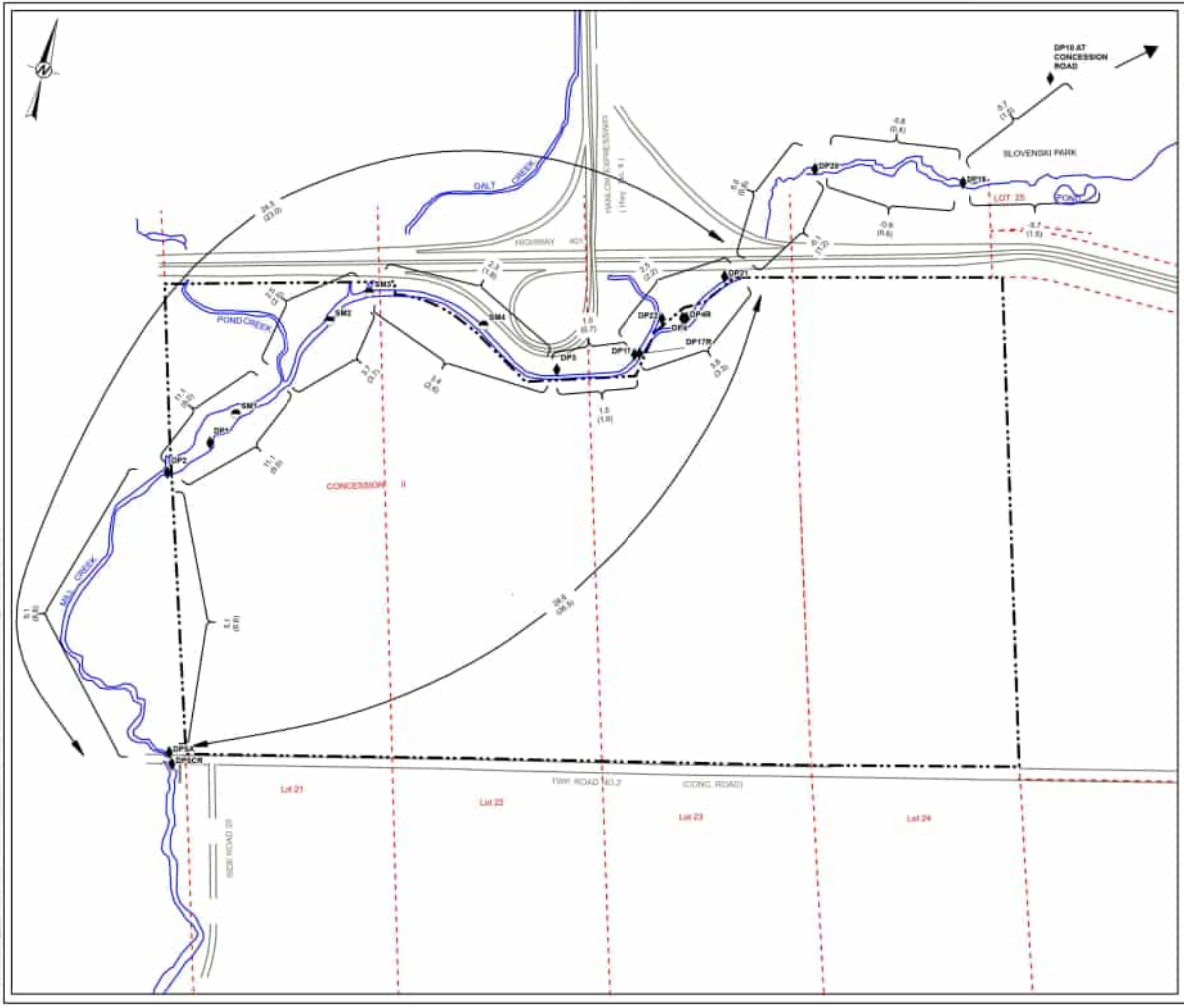
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	16



LEGEND

- SM1 — SEEPAGE METER DESIGNATION AND APPROXIMATE LOCATION (BY J. FITZGIBBON)
- DP1 — DRIVE POINT LOCATION AND DESIGNATION
- MILLCREEK
- BOUNDARY OF LICENCED PROPERTY
- 0.9 — AVERAGE 2024 FLOW CONDITION (L/S)
- (0.6) — AVERAGE HISTORIC FLOW CONDITION (L/S) 1960-2023

0 75 150 300
1:7,500 METRES

NOTE(S)
1. DISTANCES ARE APPROXIMATE, MEASURED FROM SITE PLAN BASE MAP.

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.
2. BASE MAPPING BY PLANNING INITIATIVES LTD., DATED AUGUST 1987, DRAWING NUMBERS 1A AND 1B OF 4.
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
4.POND BOUNDARIES BASED ON AERIAL PHOTOGRAPHY(DUFFERIN AGGREGATES, NOVEMBER 2020).

CLIENT
DUFFERIN AGGREGATES

PROJECT
2024 ANNUAL GROUNDWATER MONITORING REPORT
MILL CREEK AGGREGATES PIT TOWNSHIP OF PUSLINCH
FOR DUFFERIN AGGREGATES

TITLE
DISTRIBUTION OF GROUNDWATER INFLUX FOR "AVERAGE" CONDITIONS

CONSULTANT

YYYY-MM-DD	2025-03-12
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PREPARED	AS
REVIEWED	—
APPROVED	—

PROJECT NO.	CONTROL	REV.	FIGURE
CA0046173.5391	0001	A	17

APPENDIX A

Monitor Details

Technical Appendix B – 2024 Hydrogeology Report

TABLE A-1
GROUNDWATER MONITOR DETAILS
MILL CREEK AGGREGATES PIT

BOREHOLE NO.	MONITOR NO.	MONITOR TYPE	MONITOR DIAMETER (mm)	MONITOR ELEVATION (T.O.P.) (mASL)	SCREENED INTERVAL ELEVATION (mASL)	FILTER PACK ELEVATION (mASL)	SEAL ELEVATION (mASL)	BACKFILL ELEVATION (mASL)
1		S	51	309.86	303.4 - 304.9		307.9 - 308.8	303.4 - 307.9
1-R		S	51	311.25	304.13 - 307.18	303.82 - 307.48	307.48 - 310.83	310.83 - 311.44
2A		S	51	313.41	297.08 - 300.82		309.61 - 312.66	296.76 - 309.61
2-R		S	51	315.19	304.46 - 307.51	304.26 - 307.92	307.92 - 313.71	313.71 - 314.32
3A		S	51	315.62	296.38 - 300.12		311.66 - 314.82	296.06 - 311.66
4		S	51	308.85	304.2 - 305.8		307.3 - 308.2	304.2 - 307.3
5		S	51	309.19	303.5 - 305.0		307.0 - 307.9	303.5 - 307.0
6		S	51	308.34	303.5 - 305.1		306.2 - 307.1	303.5 - 306.2
7	I	P	51	308.46	292.4 - 294.0		294.4 - 295.2	292.4 - 294.4
							306.5 - 307.4	295.2 - 306.5
7	II	S	51	308.4	303.0 - 304.5		306.5 - 307.4	303.0 - 306.5
11		S	51	310.09	300.28 - 306.38		308.58 - 309.28	300.18 - 308.58
12		S	51	311.61	301.23 - 307.43		310.43 - 311.13	300.43 - 310.43
13		S	51	307.59	299.26 - 305.77		306.17 - 306.87	306.17 - 299.26
14		S	51	308.14	302.84 - 304.36		304.67 - 307.41	
CBM1		S	51	312.85				
CBM2		S	51	310.83				
CBM3		S	51	312.17				
TW16-78		P	152	304.0	271.3 - 282.1 [1]		Cased from 282.1 - 303.6	
TW16-79		P	146	304.2	295.1 - 296.5 [2]		Cased from 296.5 - 303.7	
OW1-84		S	51	304.8	294.9 - 295.8		303.5 - 303.8	294.9 - 303.5
OW2-84		S	51	304.8	295.4 - 295.9		303.6 - 303.9	295.4 - 303.6
OW4-84		S	51	304.6	294.6 - 295.7		303.4 - 303.7	294.6 - 303.4
OW5-84		S	51	304.41	294.8 - 295.6		303.3 - 303.6	294.8 - 303.3
OW16A-78		S	38	304.5	295.5 - 296.7		302.6 - 303.5	295.5 - 302.6
92-1		S	51	313.0	303.0 - 306.0			303.0 - 312.2
92-1R		S	51	314.62	303.48 - 306.53	303.03 - 307.29	307.29 - 313.08	313.08 - 313.69
92-5		S	51	308.20	300.0 - 303.0			300.0 - 308.0
92-8		S	51	309.65	300.3 - 303.3			300.3 - 308.1
92-12		S	51	308.41	303.05 - 304.57			303.05 - 307.26
92-13		S [3]	76	310.0	297.8 - 309.5			297.8 - 309.5
92-14		S [3]	76	309.8	297.6 - 308.8			297.6 - 308.8
92-15		S [3]	76	309.1	289.7 - 308.4			289.7 - 308.4
92-15a		S	51	309.27	296.90 - 297.66			296.90 - 308.55
92-26		S [3]	76	306.3	295.9 - 305.4			295.9 - 305.4
92-27		S [3]	76	305.9	292.9 - 305.1			292.9 - 305.1
92-28		S [3]	76	306.6	299.3 - 305.8			299.3 - 305.8
92-29		S [3]	76	306.9	297.1 - 306.1			297.1 - 306.1
92-32		S [3]	76	305.4	290.1 - 304.9			290.1 - 304.9
92-33		S [3]	76	306.2	291.0 - 305.5			291.0 - 305.5

NOTES:
- P - Piezometer
- S - Standpipe
- mASL - Metres above sea level
- T.O.P. - Top of pipe
- (1) - Open hole
- (2) - Well Screen in an open hole
- (3) - Equipped with multi-level transducers
- * - Bedrock well; well completion details not available

TABLE A-2
MULTI-LEVEL MONITOR DETAILS
MILL CREEK AGGREGATES PIT

BOREHOLE NO.	MONITOR NO.	GROUND ELEVATION (mASL)	MONITOR ELEVATION (T.O.P.) (mASL)	PROBE DESIGNATION	PROBE ELEVATION (mASL)
92-13	I	309.5	310.0	Deep	299.3
	II			Intermediate	301.8
	III			Shallow	304.5
92-15	I	308.4	309.1	Deep	290.0
92-15 a	II		309.3	Intermediate	297.7
92-15	III		309.1	Shallow	305.4
92-26	I	305.48	306.36	Deep	296.30
	II		306.36	Intermediate	299.46
	III		306.30	Shallow	302.39
92-27	I	305.1	305.9	Deep	295.9
	II			Intermediate	299.2
	III			Shallow	302.7
92-28	I	305.83	306.73	Deep	301.81
	II		306.72	Intermediate	302.70
	III		306.60	Shallow	303.45
92-29	I	306.05	306.97	Deep	297.53
	II		306.97	Intermediate	300.61
	III		306.90	Shallow	303.10
92-32	I	304.93	305.58	Deep	290.90
	II		305.58	Intermediate	296.02
	III		305.40	Shallow	301.42
92-33	I	305.5	306.2	Deep	294.4
	II			Intermediate	298.5
	III			Shallow	303.5 / 298.5
	III			Shallow (A)	303.3

NOTES:
- Each probe is a combination water level pressure transducer and temperature thermistor.
- mASL - Metres above sea level
- T.O.P. - Top of pipe

TABLE A-3
DRIVE POINT MONITOR DETAILS
MILL CREEK AGGREGATES PIT

MONITOR	DRIVE POINT DIAMETER (mm)	GROUND ELEVATION (m ASL)	TOP OF PIPE ELEVATION (m ASL)	SCREENED INTERVAL ELEVATION (m ASL)	MID-POINT OF SCREEN BELOW GRADE (m)
DP1	32	303.55 [1]	304.86	301.86 - 302.46	1.39
DP2A	32	303.15 [1]	304.52	301.05 - 301.55	1.85
DP3	32	304.46 [1]	305.68	302.49 - 303.39	1.52
DP4	32	305.23 [1]	306.81	303.80 - 304.40	1.13
DP4R	32	305.29 [1]	306.46	304.53 - 304.83	0.61
DP5A	32	302.56 [1]	303.59	301.60 - 302.00	0.76
DP5B	32	302.43 [1]	303.50	301.51 - 301.91	0.72
DP5C	32	302.67 [1]	304.11	301.81 - 302.42	0.57
DP5CR	32	302.66 [1]	303.71	301.77 - 302.07	0.76
DP6	32	306.2	306.82	304.5 - 305.1	1.4
DP7	32	306.3	307.63	303.7 - 304.3	2.1
DP8	32	306.1	307.2	301.9 - 302.5	3.9
DP9	32	305.9	306.8	304.6 - 305.2	1.0
DP10	32	306.0	307.4	303.7 - 304.3	1.9
DP11	32	305.6	306.8	304.5 - 305.6	0.6
DP12	32	305.6	306.7	303.8 - 305.2	1.1
DP16	32	304.1	305.0	302.4 - 303.3	1.3
DP17	32	305.04 [1]	306.26	303.69 - 304.59	0.90
DP17R	32	305.07 [1]	306.38	304.45 - 304.80	0.45
DP18	32	307.07 [1]	307.74	306.04 - 306.64	0.73
DP19	32	306.33 [1]	307.53	303.93 - 304.43	2.15
DP20	32	306.02 [1]	307.14	303.64 - 304.04	2.18
DP21	32	305.47 [1]	306.77	303.98 - 304.48	1.24
DP22	32	304.89 [1]	306.01	302.41 - 302.91	2.23

NOTES:
- mASL - Metres above sea level
- (1) - Elevation of creek bed
- DP5B replaced DP5A when resident denied access to creek
- DP5C replaced DP5B when DP5B was removed by unauthorized personnel
- DP5D added to monitoring program
- DP5C and DP5D were removed by unauthorized personnel
- DP5CR added to monitoring program to replace DP5C
- DP17R replaced DP17 due to corrosion
- DP4R replaced DP4 due to corrosion

TABLE A-4
SURFACE WATER MONITOR DETAILS
MILL CREEK AGGREGATES PIT

MONITOR	TOP OF MONITOR ELEVATION (mASL)	MONITOR TYPE
SW1	306.65	1 metre staffing gauge
SW2	303.71	Drive Point
RT	307.44	2 metre staffing gauge in recharge trench
P1	306.73	1 metre staffing gauge in Phase 1 pond
P2	306.25	1 metre staffing gauge in Phase 2 pond
P3	305.32 306.104 *	1 metre staffing gauge in Phase 3 pond 2 metre staffing gauge in Phase 3 pond *
P4	306.47	1 metre staffing gauge in Phase 4 pond

NOTE:
- SW1 resurveyed on May 16, 2013
- SW2 is measured from the top of DP5CR
- P1, P2, P3 and P4 surveyed on March 21, 2024.
- * P3 staffing gauge extended and resurveyed on August 15, 2024.

TABLE A-5
REID HERITAGE DRIVE POINT MONITOR DETAILS
MILL CREEK AGGREGATES PIT

MONITOR	TOP OF MONITOR ELEVATION (mASL)	GRADE ELEVATION (mASL)	MONITOR LENGTH (m)	BOTTOM OF MONITOR ELEVATION (mASL)	MONITOR TYPE
DP113	307.87	307.08	4.08	303.84	near creek drive point

APPENDIX B

Monitoring Results

Technical Appendix B – 2024 Hydrogeology Report

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH1-I/BH1-R			BH2-I/BH2B/BH2-R			BH3-I/BH3B		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
11-Jun-20	4.56	306.69				09-Jan-20	(F)	
08-Jul-20	4.96	306.29	Decommissioned and re-installed			10-Feb-20	(F)	
19-Aug-20	4.67	306.58				09-Mar-20	9.34	306.28
17-Sep-20	4.28	306.97	10-Mar-21	9.35	305.84	14-Apr-20	9.26	306.36
23-Oct-20	4.87	306.38	21-Apr-21	9.33	305.86	13-May-20	9.32	306.30
19-Nov-20	4.93	306.32	19-May-21	9.42	305.77	11-Jun-20	9.33	306.29
03-Dec-20	5.12	306.13	25-Jun-21	9.40	305.79	08-Jul-20	9.48	306.14
08-Jan-21	5.00	306.25	27-Jul-21	9.44	305.75	19-Aug-20	9.58	306.04
10-Feb-21	5.09	306.16	12-Aug-21	9.46	305.73	17-Sep-20	9.74	305.88
10-Mar-21	4.87	306.38	23-Sep-21	9.46	305.73	23-Oct-20	9.86	305.76
21-Apr-21	4.87	306.38	27-Oct-21	9.48	305.71	19-Nov-20	9.92	305.70
19-May-21	5.14	306.11	10-Nov-21	9.55	305.64	18-Dec-20	9.95	305.67
25-Jun-21	5.07	306.18	16-Dec-21	9.53	305.66	08-Jan-21	(F)	
27-Jul-21	5.02	306.23	14-Jan-22	9.45	305.74	10-Feb-21	9.92	305.70
12-Aug-21	4.86	306.39	24-Feb-22	9.33	305.86	10-Mar-21	9.93	305.69
23-Sep-21	5.04	306.21	17-Mar-22	9.28	305.91	21-Apr-21	9.83	305.79
27-Oct-21	5.03	306.22	21-Apr-22	9.12	306.07	19-May-21	9.92	305.70
10-Nov-21	5.05	306.20	24-May-22	9.09	306.10	25-Jun-21	9.90	305.72
16-Dec-21	5.03	306.22	15-Jun-22	9.13	306.06	27-Jul-21	9.94	305.68
14-Jan-22	5.04	306.22	14-Jul-22	9.27	305.92	12-Aug-21	9.94	305.68
24-Feb-22	4.87	306.38	25-Aug-22	9.40	305.79	23-Sep-21	9.93	305.69
17-Mar-22	4.83	306.43	08-Sep-22	9.48	305.71	27-Oct-21	9.93	305.69
21-Apr-22	4.76	306.49	13-Oct-22	9.62	305.57	10-Nov-21	10.00	305.62
24-May-22	4.74	306.51	24-Nov-22	9.77	305.42	16-Dec-21	9.98	305.64
15-Jun-22	4.77	306.48	16-Dec-22	9.73	305.46	14-Jan-22	9.98	305.64
14-Jul-22	4.91	306.34	12-Jan-23	9.66	305.53	24-Feb-22	9.83	305.79
25-Aug-22	5.04	306.21	14-Feb-23	9.66	305.53	17-Mar-22	9.76	305.86
08-Sep-22	5.11	306.14	17-Mar-23	9.68	305.51	21-Apr-22	9.61	306.01
13-Oct-22	5.18	306.07	27-Apr-23	9.41	305.78	24-May-22	9.58	306.04
24-Nov-22	5.33	305.93	26-May-23	9.33	305.86	15-Jun-22	9.61	306.01
16-Dec-22	5.30	305.95	15-Jun-23	9.33	305.86	14-Jul-22	9.75	305.87
12-Jan-23	5.21	306.04	25-Jul-23	9.29	305.90	25-Aug-22	9.87	305.75
14-Feb-23	5.16	306.09	08-Aug-23	9.27	305.92	08-Sep-22	9.94	305.68
17-Mar-23	5.11	306.14	07-Sep-23	9.26	305.93	13-Oct-22	10.06	305.56
27-Apr-23	4.98	306.27	26-Oct-23	NA		24-Nov-22	10.17	305.46
26-May-23	4.92	306.33	16-Nov-23	NA		16-Dec-22	10.17	305.45
15-Jun-23	4.96	306.29	18-Dec-23	NA		12-Jan-23	10.12	305.50
25-Jul-23	4.92	306.33	08-Jan-24	NA		14-Feb-23	10.07	305.55
08-Aug-23	4.90	306.36	27-Feb-24	NA		17-Mar-23	9.98	305.64
07-Sep-23	4.89	306.36	12-Mar-24	NA		27-Apr-23	9.85	305.78
26-Oct-23	5.01	306.24	05-Apr-24	NA		26-May-23	9.78	305.84
16-Nov-23	5.08	306.17	13-May-24	NA		15-Jun-23	9.77	305.85
18-Dec-23	5.06	306.19	04-Jun-24	NA		25-Jul-23	9.73	305.89
08-Jan-24	5.03	306.23	09-Jul-24	NA		08-Aug-23	9.72	305.90
27-Feb-24	4.85	306.40	13-Aug-24	NA		07-Sep-23	9.71	305.92
12-Mar-24	4.86	306.39	10-Sep-24	NA		26-Oct-23	9.80	305.82
05-Apr-24	4.81	306.44	02-Oct-24	NA		16-Nov-23	9.88	305.74
13-May-24	4.75	306.50				18-Dec-23	9.91	305.71
04-Jun-24	4.76	306.49	Removed from monitoring program			08-Jan-24	9.88	305.74
09-Jul-24	4.76	306.49				27-Feb-24	9.75	305.87
13-Aug-24	4.67	306.58				12-Mar-24	9.68	305.94
10-Sep-24	4.70	306.55				05-Apr-24	9.66	305.96
02-Oct-24	4.81	306.44				13-May-24	9.54	306.08
04-Nov-24	4.93	306.32				04-Jun-24	9.54	306.08
02-Dec-24	4.96	306.29				09-Jul-24	9.56	306.06
						13-Aug-24	9.45	306.18
						10-Sep-24	9.32	306.30
						02-Oct-24	9.58	306.04
						04-Nov-24	9.74	305.88
						02-Dec-24	9.79	305.83

NOTES:
- BTOP — Below top of pipe
- NA — Not available
- m ASL — metres above sea level
- (F) — Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH4-I			BH5-I			BH6-I		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	2.63	306.22	09-Jan-20	2.75	306.44	09-Jan-20	2.25	306.09
10-Feb-20	2.55	306.30	10-Feb-20	2.68	306.51	10-Feb-20	2.12	306.22
09-Mar-20	2.46	306.39	09-Mar-20	2.50	306.69	09-Mar-20	2.02	306.32
14-Apr-20	2.41	306.44	14-Apr-20	2.46	306.73	14-Apr-20	1.99	306.35
13-May-20	2.41	306.44	13-May-20	2.52	306.67	13-May-20	2.04	306.30
11-Jun-20	2.46	306.39	11-Jun-20	2.46	306.73	11-Jun-20	1.97	306.37
08-Jul-20	2.57	306.28	08-Jul-20	2.67	306.52	08-Jul-20	2.16	306.18
19-Aug-20	2.56	306.29	19-Aug-20	2.76	306.43	19-Aug-20	2.24	306.10
17-Sep-20	2.83	306.02	17-Sep-20	2.88	306.31	17-Sep-20	2.35	305.99
23-Oct-20	2.99	305.86	23-Oct-20	2.88	306.31	23-Oct-20	2.35	305.99
19-Nov-20	3.04	305.81	19-Nov-20	2.95	306.24	19-Nov-20	2.39	305.95
03-Dec-20	3.01	305.84	18-Dec-20	2.90	306.29	18-Dec-20	2.45	305.89
08-Jan-21	2.98	305.87	08-Jan-21	2.87	306.32	08-Jan-21	2.41	305.93
10-Feb-21	3.04	305.81	10-Feb-21	2.95	306.24	10-Feb-21	2.50	305.84
10-Mar-21	3.03	305.82	10-Mar-21	2.89	306.30	10-Mar-21	2.45	305.89
21-Apr-21	2.96	305.89	21-Apr-21	2.90	306.29	21-Apr-21	2.40	305.94
19-May-21	3.03	305.82	19-May-21	3.16	306.03	19-May-21	2.50	305.84
25-Jun-21	3.11	305.74	25-Jun-21	3.11	306.08	25-Jun-21	2.35	305.99
27-Jul-21	3.10	305.75	27-Jul-21	3.05	306.14	27-Jul-21	2.53	305.81
12-Aug-21	3.11	305.74	12-Aug-21	3.09	306.10	12-Aug-21	2.57	305.77
23-Sep-21	3.05	305.80	23-Sep-21	2.89	306.30	23-Sep-21	2.39	305.95
27-Oct-21	3.11	305.74	27-Oct-21	2.98	306.21	27-Oct-21	2.46	305.88
10-Nov-21	3.17	305.68	10-Nov-21	3.06	306.13	10-Nov-21	2.52	305.82
16-Dec-21	3.13	305.72	16-Dec-21	3.05	306.14	16-Dec-21	2.51	305.83
14-Jan-22	3.15	305.70	14-Jan-22	3.05	306.14	14-Jan-22	2.59	305.75
24-Feb-22	2.96	305.89	24-Feb-22	2.82	306.37	24-Feb-22	2.36	305.98
17-Mar-22	2.91	305.94	17-Mar-22	2.82	306.37	17-Mar-22	2.37	305.97
21-Apr-22	2.80	306.05	21-Apr-22	2.78	306.41	21-Apr-22	2.33	306.01
24-May-22	2.80	306.05	24-May-22	2.59	306.60	24-May-22	2.36	305.98
15-Jun-22	2.83	306.02	15-Jun-22	2.83	306.36	15-Jun-22	2.34	306.00
14-Jul-22	2.96	305.89	14-Jul-22	2.98	306.21	14-Jul-22	2.46	305.88
25-Aug-22	3.09	305.76	25-Aug-22	3.06	306.13	25-Aug-22	2.52	305.82
08-Sep-22	3.16	305.69	08-Sep-22	3.13	306.06	08-Sep-22	2.61	305.73
13-Oct-22	3.29	305.56	13-Oct-22	3.18	306.01	13-Oct-22	2.67	305.67
24-Nov-22	3.38	305.48	24-Nov-22	3.29	305.90	24-Nov-22	2.75	305.60
16-Dec-22	3.37	305.49	16-Dec-22	3.24	305.95	16-Dec-22	2.73	305.61
12-Jan-23	3.31	305.54	12-Jan-23	3.17	306.02	12-Jan-23	2.68	305.66
14-Feb-23	3.24	305.61	14-Feb-23	3.10	306.09	14-Feb-23	2.61	305.73
17-Mar-23	3.18	305.67	17-Mar-23	3.03	306.17	17-Mar-23	2.44	305.90
27-Apr-23	3.05	305.80	27-Apr-23	2.97	306.22	27-Apr-23	2.47	305.87
26-May-23	3.00	305.85	26-May-23	2.97	306.22	26-May-23	2.44	305.90
15-Jun-23	2.99	305.86	15-Jun-23	3.00	306.19	19-Jun-23	2.49	305.85
25-Jul-23	2.97	305.88	25-Jul-23	2.89	306.30	25-Jul-23	2.38	305.96
08-Aug-23	2.95	305.90	08-Aug-23	2.91	306.28	08-Aug-23	2.42	305.92
07-Sep-23	2.94	305.91	07-Sep-23	2.95	306.24	07-Sep-23	2.59	305.75
26-Oct-23	3.05	305.80	26-Oct-23	3.01	306.18	26-Oct-23	2.51	305.83
16-Nov-23	3.12	305.73	16-Nov-23	3.10	306.09	16-Nov-23	2.57	305.77
18-Dec-23	3.11	305.74	18-Dec-23	3.05	306.14	18-Dec-23	2.60	305.74
08-Jan-24	3.11	305.74	08-Jan-24	3.03	306.17	08-Jan-24	2.55	305.79
27-Feb-24	2.96	305.89	27-Feb-24	2.90	306.29	27-Feb-24	2.45	305.90
12-Mar-24	2.88	305.97	12-Mar-24	2.87	306.32	12-Mar-24	2.40	305.94
05-Apr-24	2.83	306.02	05-Apr-24	2.81	306.38	05-Apr-24	2.35	305.99
13-May-24	2.78	306.07	13-May-24	2.83	306.36	13-May-24	2.33	306.01
04-Jun-24	2.85	306.00	04-Jun-24	2.84	306.35	04-Jun-24	NA	
09-Jul-24	2.82	306.03	09-Jul-24	2.86	306.33	09-Jul-24	2.38	305.96
13-Aug-24	2.72	306.13	13-Aug-24	2.73	306.46	13-Aug-24	2.26	306.08
10-Sep-24	2.85	306.01	10-Sep-24	2.80	306.39	10-Sep-24	2.41	305.93
02-Oct-24	2.86	305.99	02-Oct-24	2.86	306.34	02-Oct-24	2.43	305.91
04-Nov-24	3.04	305.81	04-Nov-24	2.97	306.22	04-Nov-24	2.55	305.79
02-Dec-24	3.05	305.80	02-Dec-24	2.99	306.21	02-Dec-24	2.55	305.79

NOTES:
- · BTOP — Below top of pipe
- · NA — Not available
- · m ASL — metres above sea level
- · (F) — Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH 11			BH 13			BH 14		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	3.99	306.10	09-Jan-20	1.27	306.32	09-Jan-20	2.60	305.54
10-Feb-20	3.80	306.29	10-Feb-20	1.23	306.36	10-Feb-20	2.51	305.63
09-Mar-20	3.63	306.46	09-Mar-20	1.06	306.53	09-Mar-20	2.42	305.72
14-Apr-20	3.60	306.49	14-Apr-20	1.07	306.52	14-Apr-20	2.48	305.66
13-May-20	3.69	306.40	13-May-20	1.12	306.47	13-May-20	2.51	305.63
11-Jun-20	3.68	306.41	11-Jun-20	1.02	306.57	11-Jun-20	2.43	305.71
08-Jul-20	3.85	306.24	08-Jul-20	1.20	306.39	08-Jul-20	2.60	305.54
19-Aug-20	3.88	306.21	19-Aug-20	1.30	306.29	19-Aug-20	2.69	305.45
17-Sep-20	3.96	306.13	17-Sep-20	1.37	306.22	17-Sep-20	2.63	305.51
23-Oct-20	4.20	305.89	23-Oct-20	1.30	306.29	23-Oct-20	2.61	305.53
19-Nov-20	4.21	305.88	19-Nov-20	1.41	306.18	19-Nov-20	2.62	305.52
18-Dec-20	4.22	305.87	18-Dec-20	1.45	306.14	03-Dec-20	2.57	305.57
08-Jan-21	4.15	305.94	08-Jan-21	1.40	306.19	08-Jan-21	2.57	305.57
10-Feb-21	4.32	305.77	10-Feb-21	1.37	306.22	10-Feb-21	2.65	305.49
10-Mar-21	4.21	305.88	10-Mar-21	1.70	305.89	10-Mar-21	2.60	305.54
21-Apr-21	4.16	305.93	21-Apr-21	1.37	306.22	21-Apr-21	2.56	305.58
19-May-21	4.37	305.72	19-May-21	1.48	306.11	19-May-21	2.68	305.46
25-Jun-21	4.26	305.83	25-Jun-21	1.28	306.31	25-Jun-21	2.69	305.45
27-Jul-21	4.28	305.81	27-Jul-21	1.51	306.08	27-Jul-21	2.69	305.45
12-Aug-21	4.30	305.79	12-Aug-21	1.54	306.05	12-Aug-21	2.72	305.42
23-Sep-21	4.24	305.85	23-Sep-21	1.23	306.36	23-Sep-21	2.34	305.80
27-Oct-21	4.28	305.81	27-Oct-21	1.39	306.20	27-Oct-21	2.54	305.60
10-Nov-21	4.37	305.72	10-Nov-21	1.48	306.11	10-Nov-21	2.62	305.52
16-Dec-21	4.34	305.75	16-Dec-21	1.44	306.15	16-Dec-21	2.59	305.55
14-Jan-22	4.34	305.75	14-Jan-22	1.53	306.06	14-Jan-22	2.69	305.45
24-Feb-22	4.17	305.92	24-Feb-22	1.26	306.33	24-Feb-22	2.49	305.65
17-Mar-22	4.12	305.97	17-Mar-22	1.29	306.30	17-Mar-22	2.52	305.62
21-Apr-22	3.99	306.10	21-Apr-22	1.25	306.34	21-Apr-22	2.54	305.60
24-May-22	3.94	306.15	24-May-22	1.34	306.25	24-May-22	2.61	305.53
15-Jun-22	3.96	306.13	15-Jun-22	1.34	306.25	15-Jun-22	2.61	305.53
14-Jul-22	4.17	305.92	14-Jul-22	1.47	306.12	14-Jul-22	2.70	305.44
25-Aug-22	4.28	305.81	25-Aug-22	1.51	306.08	25-Aug-22	2.69	305.45
08-Sep-22	4.36	305.73	08-Sep-22	1.58	306.01	08-Sep-22	2.75	305.39
13-Oct-22	4.47	305.63	13-Oct-22	1.58	306.01	13-Oct-22	2.69	305.45
24-Nov-22	4.58	305.52	24-Nov-22	1.67	305.92	24-Nov-22	2.74	305.40
16-Dec-22	4.57	305.52	16-Dec-22	1.61	305.99	16-Dec-22	2.69	305.45
12-Jan-23	4.42	305.68	12-Jan-23	1.59	306.00	12-Jan-23	2.70	305.44
14-Feb-23	4.46	305.64	14-Feb-23	1.52	306.07	14-Feb-23	2.62	305.52
17-Mar-23	4.39	305.70	17-Mar-23	1.40	306.19	17-Mar-23	2.63	305.51
27-Apr-23	4.27	305.82	27-Apr-23	1.42	306.17	27-Apr-23	2.60	305.54
26-May-23	4.18	305.91	26-May-23	1.42	306.17	26-May-23	2.64	305.50
15-Jun-23	4.20	305.89	15-Jun-23	1.44	306.15	15-Jun-23	2.63	305.51
25-Jul-23	4.18	305.91	25-Jul-23	1.26	306.33	25-Jul-23	2.30	305.84
08-Aug-23	4.16	305.93	08-Aug-23	1.38	306.21	08-Aug-23	2.60	305.54
07-Sep-23	4.11	305.98	07-Sep-23	1.41	306.18	07-Sep-23	2.64	305.50
26-Oct-23	4.24	305.85	26-Oct-23	1.47	306.12	26-Oct-23	2.64	305.50
16-Nov-23	4.29	305.80	16-Nov-23	1.52	306.07	16-Nov-23	2.67	305.47
18-Dec-23	4.32	305.77	18-Dec-23	1.49	306.11	18-Dec-23	2.65	305.49
08-Jan-24	4.28	305.81	08-Jan-24	1.49	306.11	08-Jan-24	2.66	305.48
27-Feb-24	4.13	305.96	27-Feb-24	1.39	306.21	27-Feb-24	2.61	305.53
12-Mar-24	4.09	306.01	12-Mar-24	1.34	306.25	12-Mar-24	2.55	305.59
05-Apr-24	4.04	306.06	05-Apr-24	1.28	306.31	05-Apr-24	2.49	305.65
13-May-24	3.97	306.12	13-May-24	1.33	306.26	13-May-24	2.38	305.76
04-Jun-24	3.96	306.13	04-Jun-24	1.32	306.27	04-Jun-24	2.59	305.55
09-Jul-24	3.86	306.23	09-Jul-24	1.36	306.23	09-Jul-24	2.45	305.69
13-Aug-24	3.89	306.20	13-Aug-24	1.27	306.32	13-Aug-24	2.58	305.56
10-Sep-24	3.99	306.10	10-Sep-24	1.32	306.27	10-Sep-24	2.53	305.61
02-Oct-24	4.02	306.07	02-Oct-24	1.35	306.24	02-Oct-24	2.57	305.57
04-Nov-24	4.18	305.91	04-Nov-24	1.44	306.15	04-Nov-24	2.64	305.50
02-Dec-24	4.21	305.88	02-Dec-24	1.45	306.14	02-Dec-24	2.65	305.49

NOTES:
- · BTOP Below top of pipe
- · NA Not available
- · m ASL metres above sea level
- · (F) Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

TW16-78			TW16-79			OW1-84		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20		FLOWING	09-Jan-20	0.50	303.70	09-Jan-20	(F)	
10-Feb-20		FLOWING	10-Feb-20	0.50	303.70	10-Feb-20	1.12	303.69
09-Mar-20		FLOWING	09-Mar-20	0.37	303.83	09-Mar-20	0.97	303.84
14-Apr-20		FLOWING	14-Apr-20	0.45	303.75	14-Apr-20	1.08	303.73
13-May-20		FLOWING	13-May-20	0.52	303.68	13-May-20	1.15	303.66
11-Jun-20		FLOWING	11-Jun-20	0.49	303.71	11-Jun-20	1.10	303.71
08-Jul-20		FLOWING	08-Jul-20	0.78	303.42	08-Jul-20	1.40	303.41
19-Aug-20		FLOWING	19-Aug-20	0.75	303.45	19-Aug-20	1.37	303.44
17-Sep-20		FLOWING	17-Sep-20	0.81	303.39	17-Sep-20	1.42	303.39
23-Oct-20		FLOWING	23-Oct-20	0.54	303.66	23-Oct-20	1.16	303.65
19-Nov-20		NO FLOW	19-Nov-20	0.62	303.58	19-Nov-20	1.24	303.57
18-Dec-20		NO FLOW	18-Dec-20	0.64	303.56	18-Dec-20	(F)	
08-Jan-21		NO FLOW	08-Jan-21	0.59	303.61	08-Jan-21	(F)	
10-Feb-21		NO FLOW	10-Feb-21	0.69	303.51	10-Feb-21	1.30	303.51
10-Mar-21		FLOWING	10-Mar-21	0.47	303.73	10-Mar-21	1.09	303.72
21-Apr-21		FLOWING	21-Apr-21	0.54	303.66	21-Apr-21	1.16	303.65
19-May-21		FLOWING	19-May-21	0.79	303.41	19-May-21	1.39	303.42
25-Jun-21		FLOWING	25-Jun-21	0.62	303.58	25-Jun-21	1.19	303.62
27-Jul-21		FLOWING	27-Jul-21	0.74	303.46	27-Jul-21	1.36	303.45
12-Aug-21		FLOWING	12-Aug-21	0.72	303.48	12-Aug-21	1.34	303.47
23-Sep-21		FLOWING	23-Sep-21	0.37	303.83	23-Sep-21	0.99	303.82
27-Oct-21		FLOWING	27-Oct-21	0.50	303.70	27-Oct-21	1.07	303.74
10-Nov-21		FLOWING	10-Nov-21	0.61	303.59	10-Nov-21	1.22	303.59
16-Dec-21		NO FLOW	16-Dec-21	0.51	303.69	16-Dec-21	1.14	303.67
14-Jan-22		FLOWING	14-Jan-22	0.54	303.66	14-Jan-22	1.25	303.56
24-Feb-22		FLOWING	24-Feb-22	0.35	303.85	24-Feb-22	1.00	303.81
17-Mar-22		FLOWING	17-Mar-22	0.39	303.81	17-Mar-22	1.01	303.80
21-Apr-22		FLOWING	21-Apr-22	0.41	303.79	21-Apr-22	1.03	303.78
24-May-22		FLOWING	24-May-22	0.56	303.64	24-May-22	1.20	303.61
15-Jun-22		FLOWING	15-Jun-22	0.56	303.64	15-Jun-22	1.19	303.62
14-Jul-22		FLOWING	14-Jul-22	0.78	303.42	14-Jul-22	1.42	303.39
25-Aug-22		FLOWING	25-Aug-22	0.73	303.47	25-Aug-22	1.34	303.47
08-Sep-22		FLOWING	08-Sep-22	0.83	303.37	08-Sep-22	1.44	303.37
13-Oct-22		FLOWING	13-Oct-22	0.64	303.56	13-Oct-22	1.31	303.50
24-Nov-22		FLOWING	24-Nov-22	0.68	303.52	24-Nov-22	1.30	303.52
16-Dec-22		FLOWING	16-Dec-22	0.53	303.67	16-Dec-22	1.15	303.67
12-Jan-23		FLOWING	12-Jan-23	0.55	303.66	12-Jan-23	1.16	303.65
14-Feb-23		FLOWING	14-Feb-23	0.50	303.71	14-Feb-23	1.11	303.70
17-Mar-23		FLOWING	17-Mar-23	0.35	303.85	17-Mar-23	0.96	303.85
27-Apr-23		FLOWING	27-Apr-23	0.46	303.74	27-Apr-23	1.07	303.74
26-May-23		FLOWING	27-May-23	0.50	303.70	26-May-23	1.13	303.68
15-Jun-23		FLOWING	19-Jun-23	0.54	303.66	15-Jun-23	1.13	303.68
25-Jul-23		FLOWING	25-Jul-23	0.43	303.77	25-Jul-23	1.05	303.76
08-Aug-23		FLOWING	08-Aug-23	0.50	303.70	08-Aug-23	1.13	303.69
07-Sep-23		FLOWING	07-Sep-23	0.61	303.59	07-Sep-23	1.21	303.60
26-Oct-23		FLOWING	26-Oct-23	0.56	303.64	26-Oct-23	1.17	303.64
16-Nov-23		FLOWING	16-Nov-23	0.55	303.65	16-Nov-23	1.19	303.62
18-Dec-23		FLOWING	18-Dec-23	0.49	303.71	18-Dec-23	1.10	303.71
08-Jan-24		FLOWING	08-Jan-24	0.54	303.66	08-Jan-24	1.16	303.65
27-Feb-24		FLOWING	27-Feb-24	0.46	303.74	27-Feb-24	1.09	303.72
12-Mar-24		FLOWING	12-Mar-24	0.46	303.74	12-Mar-24	1.09	303.72
05-Apr-24		FLOWING	05-Apr-24	0.42	303.78	05-Apr-24	1.04	303.77
13-May-24		FLOWING	13-May-24	0.49	303.71	13-May-24	1.12	303.69
04-Jun-24		FLOWING	04-Jun-24	0.51	303.69	04-Jun-24	1.14	303.68
09-Jul-24		FLOWING	09-Jul-24	0.60	303.60	09-Jul-24	1.23	303.58
13-Aug-24		FLOWING	13-Aug-24	0.59	303.61	13-Aug-24	1.19	303.62
10-Sep-24		FLOWING	10-Sep-24	0.57	303.63	10-Sep-24	1.19	303.62
02-Oct-24		FLOWING	02-Oct-24	0.51	303.70	02-Oct-24	1.19	303.63
04-Nov-24		FLOWING	04-Nov-24	0.54	303.66	04-Nov-24	1.18	303.63
02-Dec-24		FLOWING	02-Dec-24	0.55	303.65	02-Dec-24	1.18	303.63

NOTES:
- · BTOP Below top of pipe
- · NA Not available
- · m ASL metres above sea level
- · (F) Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

OW2-84			OW4-84			OW5-84		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	1.14	303.66	09-Jan-20	0.88	303.73	09-Jan-20	0.76	303.64
10-Feb-20	1.15	303.65	10-Feb-20	0.89	303.72	10-Feb-20	0.76	303.64
09-Mar-20	1.00	303.80	09-Mar-20	0.74	303.87	09-Mar-20	0.60	303.80
14-Apr-20	1.10	303.70	14-Apr-20	0.85	303.76	14-Apr-20	0.71	303.69
13-May-20	1.17	303.63	13-May-20	0.92	303.69	13-May-20	0.78	303.62
11-Jun-20	1.13	303.67	11-Jun-20	0.87	303.74	11-Jun-20	0.74	303.66
08-Jul-20	1.41	303.39	08-Jul-20	1.16	303.45	08-Jul-20	1.02	303.38
19-Aug-20	1.39	303.41	19-Aug-20	1.13	303.48	19-Aug-20	1.01	303.39
17-Sep-20	1.38	303.42	17-Sep-20	1.19	303.42	17-Sep-20	1.06	303.34
23-Oct-20	1.17	303.63	23-Oct-20	0.94	303.67	23-Oct-20	0.81	303.59
19-Nov-20	1.27	303.53	19-Nov-20	1.01	303.60	19-Nov-20	0.88	303.52
18-Dec-20	1.25	303.55	18-Dec-20	1.05	303.56	18-Dec-20	0.87	303.53
08-Jan-21	1.18	303.62	08-Jan-21	0.97	303.64	08-Jan-21	0.80	303.60
10-Feb-21	1.34	303.46	10-Feb-21	1.08	303.53	10-Feb-21	0.94	303.46
10-Mar-21	1.10	303.70	10-Mar-21	0.85	303.76	10-Mar-21	0.73	303.67
21-Apr-21	1.19	303.61	21-Apr-21	0.94	303.67	21-Apr-21	0.80	303.60
19-May-21	1.41	303.39	19-May-21	1.15	303.46	19-May-21	1.02	303.38
25-Jun-21	1.21	303.59	25-Jun-21	0.98	303.63	25-Jun-21	0.84	303.56
27-Jul-21	1.39	303.41	27-Jul-21	1.15	303.46	27-Jul-21	0.99	303.41
12-Aug-21	1.37	303.43	12-Aug-21	1.12	303.49	12-Aug-21	0.98	303.42
23-Sep-21	1.01	303.79	23-Sep-21	0.76	303.85	23-Sep-21	0.62	303.78
27-Oct-21	1.14	303.66	27-Oct-21	0.89	303.72	27-Oct-21	0.75	303.65
10-Nov-21	1.25	303.55	10-Nov-21	1.00	303.61	10-Nov-21	0.88	303.52
16-Dec-21	1.16	303.64	16-Dec-21	0.89	303.72	16-Dec-21	0.77	303.63
14-Jan-22	1.28	303.52	14-Jan-22	1.02	303.59	14-Jan-22	0.90	303.50
24-Feb-22	0.96	303.84	24-Feb-22	0.71	303.90	24-Feb-22	0.78	303.62
17-Mar-22	0.93	303.87	17-Mar-22	0.73	303.88	17-Mar-22	0.76	303.65
21-Apr-22	1.05	303.75	21-Apr-22	0.80	303.81	21-Apr-22	0.64	303.76
24-May-22	1.18	303.62	24-May-22	0.95	303.66	24-May-22	0.82	303.58
15-Jun-22	1.21	303.59	15-Jun-22	0.95	303.66	15-Jun-22	0.83	303.57
14-Jul-22	1.43	303.37	14-Jul-22	1.18	303.43	14-Jul-22	1.04	303.36
25-Aug-22	1.37	303.43	25-Aug-22	1.12	303.49	25-Aug-22	0.98	303.42
08-Sep-22	1.46	303.34	08-Sep-22	1.21	303.40	08-Sep-22	1.08	303.32
13-Oct-22	1.33	303.47	13-Oct-22	1.08	303.53	13-Oct-22	0.95	303.45
24-Nov-22	1.31	303.49	24-Nov-22	1.06	303.55	24-Nov-22	0.93	303.47
16-Dec-22	1.17	303.64	16-Dec-22	0.91	303.70	16-Dec-22	0.89	303.52
12-Jan-23	1.19	303.61	12-Jan-23	0.93	303.68	12-Jan-23	0.80	303.60
14-Feb-23	1.15	303.65	14-Feb-23	0.90	303.71	14-Feb-23	(F)	
17-Mar-23	1.00	303.80	17-Mar-23	0.73	303.88	17-Mar-23	0.60	303.80
27-Apr-23	1.10	303.70	27-Apr-23	0.84	303.77	27-Apr-23	0.70	303.70
26-May-23	1.15	303.65	26-May-23	0.89	303.72	26-May-23	0.76	303.64
15-Jun-23	1.17	303.63	15-Jun-23	0.90	303.71	15-Jun-23	0.78	303.62
25-Jul-23	1.08	303.72	25-Jul-23	0.82	303.79	25-Jul-23	0.69	303.71
08-Aug-23	1.15	303.65	08-Aug-23	0.90	303.72	08-Aug-23	0.76	303.64
07-Sep-23	1.27	303.53	07-Sep-23	0.98	303.63	07-Sep-23	0.85	303.55
26-Oct-23	1.20	303.61	26-Oct-23	0.94	303.67	26-Oct-23	0.81	303.59
16-Nov-23	1.21	303.59	16-Nov-23	0.94	303.67	16-Nov-23	0.82	303.59
18-Dec-23	1.13	303.67	18-Dec-23	0.87	303.74	18-Dec-23	0.74	303.66
08-Jan-24	1.18	303.63	08-Jan-24	0.92	303.70	08-Jan-24	0.79	303.62
27-Feb-24	1.12	303.68	27-Feb-24	0.85	303.76	27-Feb-24	0.71	303.69
12-Mar-24	1.12	303.68	12-Mar-24	0.92	303.69	12-Mar-24	0.73	303.67
05-Apr-24	1.06	303.74	05-Apr-24	0.81	303.80	05-Apr-24	0.67	303.73
13-May-24	1.14	303.66	13-May-24	0.86	303.75	13-May-24	0.75	303.65
04-Jun-24	1.17	303.63	04-Jun-24	0.89	303.72	04-Jun-24	0.77	303.63
09-Jul-24	1.25	303.55	09-Jul-24	0.99	303.62	09-Jul-24	0.88	303.52
13-Aug-24	1.25	303.55	13-Aug-24	0.95	303.66	13-Aug-24	0.83	303.57
10-Sep-24	1.22	303.58	10-Sep-24	0.96	303.65	10-Sep-24	0.82	303.58
02-Oct-24	1.24	303.56	02-Oct-24	0.95	303.66	02-Oct-24	0.82	303.59
04-Nov-24	1.22	303.58	04-Nov-24	0.94	303.67	04-Nov-24	0.82	303.58
02-Dec-24	1.19	303.61	02-Dec-24	0.93	303.68	02-Dec-24	0.80	303.60

NOTES:
- BTOP Below top of pipe
- NA Not available
- m ASL metres above sea level
- (F) Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

OW16A-78			BH92-1/BH92-1R			BH92-5		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	(F)					09-Jan-20	1.58	306.62
10-Feb-20	(F)		Decommissioned and re-installed			10-Feb-20	(F)	
09-Mar-20	0.63	303.87				09-Mar-20	1.34	306.86
14-Apr-20	0.73	303.77	11-Jun-20	7.92	306.70	14-Apr-20	1.29	306.91
13-May-20	0.80	303.70	08-Jul-20	8.03	306.59	13-May-20	1.35	306.85
11-Jun-20	0.76	303.74	19-Aug-20	8.20	306.42	11-Jun-20	1.30	306.90
08-Jul-20	1.07	303.43	17-Sep-20	8.31	306.31	08-Jul-20	1.48	306.72
19-Aug-20	1.03	303.47	23-Oct-20	8.47	306.15	19-Aug-20	1.39	306.81
17-Sep-20	1.08	303.42	19-Nov-20	8.50	306.12	17-Sep-20	1.72	306.48
23-Oct-20	0.82	303.68	03-Dec-20	8.50	306.12	23-Oct-20	1.74	306.46
19-Nov-20	0.89	303.61	08-Jan-21	8.46	306.16	19-Nov-20	1.82	306.38
18-Dec-20	0.89	303.61	10-Feb-21	8.50	306.12	18-Dec-20	(F)	
08-Jan-21	(F)		10-Mar-21	8.49	306.13	08-Jan-21	(F)	
10-Feb-21	(F)		21-Apr-21	8.45	306.17	10-Feb-21	1.80	306.40
10-Mar-21	(F)		19-May-21	8.53	306.09	10-Mar-21	1.76	306.44
21-Apr-21	0.82	303.68	25-Jun-21	8.61	306.01	21-Apr-21	1.78	306.42
19-May-21	1.04	303.46	27-Jul-21	8.59	306.03	19-May-21	1.87	306.33
25-Jun-21	0.95	303.55	12-Aug-21	8.63	305.99	25-Jun-21	1.81	306.39
27-Jul-21	1.02	303.48	23-Sep-21	8.61	306.01	27-Jul-21	1.91	306.29
12-Aug-21	1.00	303.50	27-Oct-21	8.62	306.00	12-Aug-21	1.95	306.25
23-Sep-21	0.65	303.85	10-Nov-21	8.68	305.94	23-Sep-21	1.84	306.36
27-Oct-21	0.78	303.72	16-Dec-21	8.64	305.98	27-Oct-21	1.88	306.32
10-Nov-21	0.90	303.60	14-Jan-22	8.67	305.95	10-Nov-21	1.94	306.26
16-Dec-21	0.80	303.70	24-Feb-22	8.47	306.15	16-Dec-21	1.90	306.30
14-Jan-22	0.91	303.59	17-Mar-22	8.39	306.23	14-Jan-22	1.93	306.28
24-Feb-22	0.89	303.61	21-Apr-22	8.27	306.35	24-Feb-22	1.72	306.48
17-Mar-22	0.88	303.62	24-May-22	8.25	306.37	17-Mar-22	1.71	306.50
21-Apr-22	0.68	303.82	15-Jun-22	8.28	306.34	21-Apr-22	1.66	306.54
24-May-22	0.85	303.65	14-Jul-22	8.44	306.18	24-May-22	1.65	306.55
15-Jun-22	0.86	303.64	25-Aug-22	8.57	306.05	15-Jun-22	1.68	306.52
14-Jul-22	1.08	303.42	08-Sep-22	8.65	305.97	14-Jul-22	1.83	306.37
25-Aug-22	1.01	303.49	13-Oct-22	8.78	305.84	25-Aug-22	1.94	306.26
08-Sep-22	1.11	303.39	24-Nov-22	8.90	305.72	08-Sep-22	2.00	306.20
13-Oct-22	0.97	303.53	16-Dec-22	8.91	305.71	13-Oct-22	2.08	306.12
24-Nov-22	0.95	303.55	12-Jan-23	8.80	305.82	24-Nov-22	2.19	306.01
16-Dec-22	0.80	303.70	14-Feb-23	8.76	305.87	16-Dec-22	2.16	306.04
12-Jan-23	0.82	303.68	17-Mar-23	8.70	305.93	12-Jan-23	2.08	306.12
14-Feb-23	0.80	303.70	27-Apr-23	8.54	306.08	14-Feb-23	2.01	306.19
17-Mar-23	0.64	303.86	26-May-23	8.47	306.15	17-Mar-23	1.95	306.25
27-Apr-23	0.71	303.79	15-Jun-23	8.49	306.13	27-Apr-23	1.85	306.35
26-May-23	0.78	303.72	25-Jul-23	8.43	306.19	26-May-23	1.81	306.39
15-Jun-23	0.79	303.71	08-Aug-23	8.44	306.18	15-Jun-23	1.86	306.34
25-Jul-23	0.70	303.80	07-Sep-23	8.42	306.21	25-Jul-23	1.79	306.41
08-Aug-23	0.78	303.72	26-Oct-23	8.55	306.07	08-Aug-23	1.78	306.42
07-Sep-23	0.87	303.63	16-Nov-23	8.62	306.00	07-Sep-23	1.80	306.40
26-Oct-23	0.83	303.67	18-Dec-23	8.62	306.01	26-Oct-23	1.90	306.30
16-Nov-23	0.84	303.66	08-Jan-24	8.50	306.12	16-Nov-23	1.97	306.23
18-Dec-23	0.76	303.74	27-Feb-24	8.44	306.18	18-Dec-23	1.94	306.26
08-Jan-24	0.82	303.68	12-Mar-24	8.39	306.24	08-Jan-24	1.90	306.30
27-Feb-24	0.76	303.74	05-Apr-24	8.34	306.29	27-Feb-24	1.75	306.45
12-Mar-24	0.87	303.63	13-May-24	8.26	306.36	12-Mar-24	1.73	306.47
05-Apr-24	0.70	303.80	04-Jun-24	8.25	306.37	05-Apr-24	1.68	306.52
13-May-24	0.76	303.74	09-Jul-24	8.27	306.35	13-May-24	1.68	306.52
04-Jun-24	0.80	303.70	13-Aug-24	8.16	306.46	04-Jun-24	1.67	306.53
09-Jul-24	0.86	303.64	10-Sep-24	8.24	306.39	09-Jul-24	1.61	306.59
13-Aug-24	0.85	303.65	02-Oct-24	8.31	306.31	13-Aug-24	1.56	306.64
10-Sep-24	0.85	303.65	04-Nov-24	8.47	306.15	10-Sep-24	1.62	306.58
02-Oct-24	0.84	303.66	02-Dec-24	8.51	306.11	02-Oct-24	1.70	306.50
04-Nov-24	0.84	303.66				04-Nov-24	1.82	306.38
02-Dec-24	0.83	303.67				02-Dec-24	1.85	306.35

NOTES:
- · BTOP — Below top of pipe
- · NA — Not available
- · m ASL — metres above sea level
- · (F) — Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH92-8			BH92-12A			BH92-13		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	3.18	306.47	09-Jan-20	2.41	305.75	09-Jan-20	3.71	306.29
10-Feb-20	(F)		10-Feb-20	2.24	305.92	10-Feb-20	3.48	306.52
09-Mar-20	2.93	306.72	09-Mar-20	2.18	305.98	09-Mar-20	3.43	306.57
14-Apr-20	2.87	306.78	14-Apr-20	2.19	305.97	14-Apr-20	3.35	306.65
13-May-20	2.92	306.73	13-May-20	2.25	305.91	13-May-20	3.38	306.62
11-Jun-20	2.88	306.77	11-Jun-20	2.18	305.98	11-Jun-20	3.36	306.64
08-Jul-20	3.05	306.60	08-Jul-20	2.36	305.80	08-Jul-20	3.50	306.50
19-Aug-20	3.11	306.54	19-Aug-20	2.42	305.74	19-Aug-20	3.62	306.38
17-Sep-20	3.26	306.39	17-Sep-20	2.48	305.68	17-Sep-20	3.73	306.27
23-Oct-20	3.32	306.33	23-Oct-20	2.37	305.79	23-Oct-20	3.85	306.15
19-Nov-20	3.38	306.27	19-Nov-20	2.46	305.70	19-Nov-20	3.91	306.09
18-Dec-20	3.41	306.24	03-Dec-20	2.50	305.66	03-Dec-20	3.89	306.11
08-Jan-21	3.38	306.27	08-Jan-21	2.42	305.74	08-Jan-21	3.85	306.15
10-Feb-21	3.44	306.21	10-Feb-21	2.51	305.65	10-Feb-21	3.92	306.08
10-Mar-21	3.41	306.24	10-Mar-21	2.46	305.70	10-Mar-21	3.92	306.08
21-Apr-21	3.34	306.31	21-Apr-21	2.39	305.77	21-Apr-21	3.86	306.14
19-May-21	3.50	306.15	19-May-21	2.59	305.57	19-May-21	3.92	306.08
25-Jun-21	3.40	306.25	25-Jun-21	2.32	305.84	25-Jun-21	4.04	305.96
27-Jul-21	3.48	306.17	27-Jul-21	2.56	305.60	27-Jul-21	3.96	306.04
12-Aug-21	3.51	306.14	12-Aug-21	2.59	305.57	12-Aug-21	4.03	305.97
23-Sep-21	3.40	306.25	23-Sep-21	2.23	305.93	23-Sep-21	3.97	306.03
27-Oct-21	3.44	306.21	27-Oct-21	2.41	305.75	27-Oct-21	3.98	306.02
10-Nov-21	3.49	306.16	10-Nov-21	2.49	305.67	10-Nov-21	4.03	305.97
16-Dec-21	3.54	306.11	16-Dec-21	2.47	305.69	16-Dec-21	4.10	305.90
14-Jan-22	3.57	306.08	14-Jan-22	2.57	305.59	14-Jan-22	4.09	305.91
24-Feb-22	3.39	306.26	24-Feb-22	2.33	305.83	24-Feb-22	3.93	306.07
17-Mar-22	3.34	306.31	17-Mar-22	2.36	305.80	17-Mar-22	3.86	306.14
21-Apr-22	3.24	306.41	21-Apr-22	2.32	305.84	21-Apr-22	3.73	306.27
24-May-22	3.31	306.34	24-May-22	2.44	305.72	24-May-22	3.82	306.18
15-Jun-22	3.33	306.32	15-Jun-22	2.43	305.73	15-Jun-22	3.84	306.16
14-Jul-22	3.44	306.21	14-Jul-22	2.55	305.61	14-Jul-22	3.94	306.06
25-Aug-22	3.54	306.11	25-Aug-22	2.82	305.59	25-Aug-22	4.08	305.92
08-Sep-22	3.62	306.03	08-Sep-22	2.89	305.52	08-Sep-22	4.16	305.84
13-Oct-22	3.68	305.97	13-Oct-22	2.89	305.52	13-Oct-22	4.23	305.77
24-Nov-22	3.77	305.88	24-Nov-22	2.96	305.45	24-Nov-22	4.32	305.68
16-Dec-22	3.74	305.91	16-Dec-22	2.89	305.52	16-Dec-22	4.29	305.72
12-Jan-23	3.71	305.94	12-Jan-23	2.88	305.53	12-Jan-23	4.24	305.76
14-Feb-23	3.67	305.98	14-Feb-23	2.79	305.62	14-Feb-23	4.22	305.79
17-Mar-23	3.64	306.01	17-Mar-23	2.78	305.63	17-Mar-23	4.20	305.81
27-Apr-23	3.54	306.11	27-Apr-23	2.75	305.67	27-Apr-23	4.12	305.88
26-May-23	3.43	306.22	26-May-23	2.75	305.66	26-May-23	3.97	306.03
15-Jun-23	3.43	306.22	15-Jun-23	2.75	305.66	15-Jun-23	3.97	306.03
25-Jul-23	3.49	306.16	25-Jul-23	2.57	305.84	25-Jul-23	4.06	305.95
08-Aug-23	3.41	306.24	08-Aug-23	2.71	305.70	08-Aug-23	3.95	306.05
07-Sep-23	3.42	306.23	07-Sep-23	2.75	305.66	07-Sep-23	3.94	306.06
26-Oct-23	3.52	306.13	26-Oct-23	2.78	305.63	26-Oct-23	4.08	305.93
16-Nov-23	3.58	306.07	16-Nov-23	2.83	305.58	16-Nov-23	4.13	305.87
18-Dec-23	3.62	306.03	18-Dec-23	2.81	305.60	18-Dec-23	4.15	305.85
08-Jan-24	3.56	306.09	08-Jan-24	2.81	305.60	08-Jan-24	4.05	305.95
27-Feb-24	3.39	306.26	27-Feb-24	2.73	305.68	27-Feb-24	3.88	306.12
12-Mar-24	3.36	306.29	12-Mar-24	2.67	305.74	12-Mar-24	3.84	306.16
05-Apr-24	3.30	306.35	05-Apr-24	2.61	305.80	05-Apr-24	3.80	306.21
13-May-24	3.30	306.35	13-May-24	2.68	305.73	13-May-24	3.80	306.20
04-Jun-24	3.27	306.38	04-Jun-24	2.67	305.74	04-Jun-24	3.78	306.22
09-Jul-24	3.34	306.31	09-Jul-24	2.71	305.70	09-Jul-24	3.89	306.11
13-Aug-24	3.17	306.48	13-Aug-24	2.63	305.78	13-Aug-24	3.69	306.31
10-Sep-24	3.42	306.23	10-Sep-24	2.74	305.67	10-Sep-24	3.97	306.03
02-Oct-24	3.38	306.27	02-Oct-24	2.75	305.66	02-Oct-24	3.88	306.12
04-Nov-24	3.54	306.11	04-Nov-24	2.82	305.59	04-Nov-24	4.11	305.89
02-Dec-24	3.53	306.12	02-Dec-24	2.80	305.61	02-Dec-24	4.06	305.94

NOTES:
- · BTOP Below top of pipe
- · NA Not available
- · m ASL metres above sea level
- · (F) Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH92-27			BH92-28			BH92-29		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	1.24	304.66	09-Jan-20	2.04	304.56	09-Jan-20	2.15	304.75
10-Feb-20	1.13	304.77	10-Feb-20	1.97	304.63	10-Feb-20	1.99	304.91
09-Mar-20	1.08	304.82	09-Mar-20	1.94	304.66	09-Mar-20	1.96	304.94
14-Apr-20	1.10	304.80	14-Apr-20	1.94	304.66	14-Apr-20	1.96	304.94
13-May-20	1.17	304.73	13-May-20	2.00	304.60	13-May-20	2.05	304.85
11-Jun-20	1.19	304.71	11-Jun-20	1.99	304.61	11-Jun-20	2.07	304.83
08-Jul-20	1.39	304.51	08-Jul-20	2.18	304.42	08-Jul-20	2.22	304.68
19-Aug-20	1.48	304.42	19-Aug-20	2.30	304.30	19-Aug-20	2.36	304.54
17-Sep-20	1.53	304.37	17-Sep-20	2.26	304.34	17-Sep-20	2.43	304.47
23-Oct-20	1.43	304.47	23-Oct-20	2.21	304.39	23-Oct-20	2.41	304.49
19-Nov-20	1.43	304.47	19-Nov-20	2.30	304.30	19-Nov-20	2.43	304.47
03-Dec-20	1.36	304.54	03-Dec-20	2.10	304.50	03-Dec-20	2.37	304.53
08-Jan-21	1.30	304.60	08-Jan-21	2.07	304.53	08-Jan-21	2.28	304.62
10-Feb-21	1.38	304.52	10-Feb-21	2.15	304.45	10-Feb-21	2.31	304.59
10-Mar-21	1.27	304.63	10-Mar-21	2.09	304.51	10-Mar-21	2.27	304.63
21-Apr-21	1.26	304.64	21-Apr-21	2.10	304.50	21-Apr-21	2.19	304.71
19-May-21	1.38	304.52	19-May-21	2.17	304.43	19-May-21	2.29	304.61
25-Jun-21	1.49	304.41	25-Jun-21	2.24	304.36	25-Jun-21	2.41	304.49
27-Jul-21	1.48	304.43	27-Jul-21	2.24	304.36	27-Jul-21	2.40	304.50
12-Aug-21	1.48	304.42	12-Aug-21	2.26	304.34	12-Aug-21	2.42	304.48
23-Sep-21	1.26	304.65	23-Sep-21	1.95	304.65	23-Sep-21	2.41	304.49
27-Oct-21	1.31	304.59	27-Oct-21	2.05	304.55	27-Oct-21	2.33	304.57
10-Nov-21	1.37	304.53	10-Nov-21	2.14	304.46	10-Nov-21	2.36	304.54
16-Dec-21	1.25	304.65	16-Dec-21	2.02	304.58	16-Dec-21	2.21	304.69
14-Jan-22	1.32	304.58	14-Jan-22	2.14	304.46	14-Jan-22	2.37	304.53
24-Feb-22	1.17	304.73	24-Feb-22	1.89	304.71	24-Feb-22	2.13	304.77
17-Mar-22	1.17	304.73	17-Mar-22	1.95	304.65	17-Mar-22	2.11	304.79
21-Apr-22	1.16	304.74	21-Apr-22	1.99	304.61	21-Apr-22	2.08	304.82
24-May-22	1.17	304.73	24-May-22	2.03	304.57	24-May-22	2.06	304.84
15-Jun-22	1.19	304.71	15-Jun-22	2.01	304.59	15-Jun-22	2.03	304.87
14-Jul-22	1.41	304.49	14-Jul-22	2.18	304.42	14-Jul-22	2.23	304.67
25-Aug-22	1.46	304.44	25-Aug-22	2.20	304.40	25-Aug-22	2.32	304.58
08-Sep-22	1.51	304.39	08-Sep-22	2.26	304.34	08-Sep-22	2.38	304.52
13-Oct-22	1.49	304.41	13-Oct-22	2.26	304.34	13-Oct-22	2.43	304.47
24-Nov-22	1.51	304.39	24-Nov-22	2.26	304.34	24-Nov-22	2.50	304.40
16-Dec-22	1.44	304.46	16-Dec-22	2.19	304.41	16-Dec-22	2.43	304.47
12-Jan-23	1.36	304.54	12-Jan-23	2.13	304.47	12-Jan-23	2.33	304.57
14-Feb-23	1.25	304.65	14-Feb-23	2.01	304.59	14-Feb-23	2.20	304.70
17-Mar-23	1.15	304.75	17-Mar-23	1.91	304.69	17-Mar-23	2.06	304.85
27-Apr-23	1.01	304.89	27-Apr-23	1.87	304.73	27-Apr-23	1.83	305.07
26-May-23	1.07	304.83	26-May-23	1.94	304.66	26-May-23	1.90	305.00
15-Jun-23	1.16	304.74	15-Jun-23	2.01	304.59	15-Jun-23	2.01	304.89
25-Jul-23	1.05	304.85	25-Jul-23	1.80	304.80	25-Jul-23	1.90	305.00
08-Aug-23	1.12	304.78	08-Aug-23	1.94	304.67	08-Aug-23	1.99	304.91
07-Sep-23	1.17	304.73	07-Sep-23	2.16	304.44	07-Sep-23	2.01	304.89
26-Oct-23	1.21	304.69	26-Oct-23	2.05	304.55	26-Oct-23	2.14	304.77
16-Nov-23	1.26	304.64	16-Nov-23	2.07	304.53	16-Nov-23	2.16	304.74
18-Dec-23	1.17	304.73	18-Dec-23	2.00	304.60	18-Dec-23	2.04	304.87
08-Jan-24	1.21	304.69	08-Jan-24	2.02	304.58	08-Jan-24	2.06	304.85
27-Feb-24	1.16	304.74	27-Feb-24	1.95	304.65	27-Feb-24	2.01	304.89
12-Mar-24	1.11	304.79	12-Mar-24	1.92	304.68	12-Mar-24	1.99	304.91
05-Apr-24	1.12	304.79	05-Apr-24	1.91	304.69	05-Apr-24	1.97	304.93
13-May-24	1.17	304.73	13-May-24	1.98	304.62	13-May-24	1.94	304.96
04-Jun-24	1.12	304.78	04-Jun-24	1.98	304.62	04-Jun-24	1.95	304.95
09-Jul-24	1.11	304.79	09-Jul-24	1.97	304.63	09-Jul-24	1.88	305.02
13-Aug-24	1.11	304.79	13-Aug-24	1.97	304.63	13-Aug-24	1.92	304.98
10-Sep-24	1.01	304.89	10-Sep-24	1.85	304.75	10-Sep-24	1.76	305.14
02-Oct-24	1.10	304.81	02-Oct-24	1.93	304.67	02-Oct-24	1.87	305.03
04-Nov-24	1.11	304.79	04-Nov-24	1.93	304.67	04-Nov-24	1.90	305.00
02-Dec-24	1.14	304.76	02-Dec-24	1.98	304.62	02-Dec-24	1.98	304.92

NOTES:
- BTOP — Below top of pipe
- NA — Not available
- m ASL — metres above sea level
- (F) — Frozen

TABLE B-1
WATER LEVEL DATA - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

BH92-32			BH92-33		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-20	1.26	304.14	09-Jan-20	1.68	304.52
10-Feb-20	1.14	304.26	10-Feb-20	1.57	304.63
09-Mar-20	1.09	304.31	09-Mar-20	1.52	304.68
14-Apr-20	1.10	304.30	14-Apr-20	1.55	304.65
13-May-20	1.15	304.25	13-May-20	1.60	304.60
11-Jun-20	1.04	304.36	11-Jun-20	1.64	304.56
08-Jul-20	1.37	304.03	08-Jul-20	1.83	304.37
19-Aug-20	1.42	303.98	19-Aug-20	1.91	304.29
17-Sep-20	1.53	303.87	17-Sep-20	1.94	304.26
23-Oct-20	1.35	304.05	23-Oct-20	1.86	304.34
19-Nov-20	1.34	304.06	19-Nov-20	1.84	304.36
03-Dec-20	1.24	304.16	03-Dec-20	1.77	304.43
08-Jan-21	1.08	304.32	08-Jan-21	1.73	304.47
10-Feb-21	1.19	304.21	10-Feb-21	1.80	304.40
10-Mar-21	1.31	304.09	10-Mar-21	1.74	304.46
21-Apr-21	1.37	304.03	21-Apr-21	1.70	304.50
19-May-21	1.28	304.12	19-May-21	1.81	304.39
25-Jun-21	1.36	304.04	25-Jun-21	1.91	304.29
27-Jul-21	1.32	304.08	27-Jul-21	1.90	304.31
12-Aug-21	1.39	304.01	12-Aug-21	1.90	304.30
23-Sep-21	1.08	304.32	23-Sep-21	1.64	304.56
27-Oct-21	1.21	304.19	27-Oct-21	1.72	304.48
10-Nov-21	1.30	304.10	10-Nov-21	1.78	304.42
16-Dec-21	1.18	304.22	16-Dec-21	1.67	304.53
14-Jan-22	1.26	304.14	14-Jan-22	1.76	304.44
24-Feb-22	1.08	304.32	24-Feb-22	1.59	304.61
17-Mar-22	1.08	304.32	17-Mar-22	1.60	304.60
21-Apr-22	1.02	304.38	21-Apr-22	1.60	304.60
24-May-22	1.09	304.31	24-May-22	1.63	304.57
15-Jun-22	1.08	304.32	15-Jun-22	1.64	304.56
14-Jul-22	1.31	304.09	14-Jul-22	1.85	304.35
25-Aug-22	1.33	304.07	25-Aug-22	1.86	304.34
08-Sep-22	1.42	303.98	08-Sep-22	1.93	304.27
13-Oct-22	1.37	304.03	13-Oct-22	1.91	304.29
24-Nov-22	1.41	303.99	24-Nov-22	1.92	304.28
16-Dec-22	1.28	304.12	16-Dec-22	1.86	304.35
12-Jan-23	1.24	304.16	12-Jan-23	1.78	304.42
14-Feb-23	1.13	304.27	14-Feb-23	1.68	304.53
17-Mar-23	0.94	304.46	17-Mar-23	1.59	304.61
27-Apr-23	0.90	304.50	27-Apr-23	1.47	304.73
26-May-23	0.80	304.60	26-May-23	1.54	304.66
15-Jun-23	1.06	304.34	15-Jun-23	1.63	304.57
25-Jul-23	0.97	304.43	25-Jul-23	1.46	304.74
08-Aug-23	1.06	304.34	08-Aug-23	1.55	304.65
07-Sep-23	1.11	304.29	07-Sep-23	1.62	304.58
26-Oct-23	1.10	304.30	26-Oct-23	1.51	304.70
16-Nov-23	1.18	304.22	16-Nov-23	1.69	304.51
18-Dec-23	0.96	304.44	18-Dec-23	1.61	304.59
08-Jan-24	1.14	304.26	08-Jan-24	1.64	304.56
27-Feb-24	1.08	304.32	27-Feb-24	1.64	304.56
12-Mar-24	1.02	304.38	12-Mar-24	1.57	304.64
05-Apr-24	1.01	304.39	05-Apr-24	1.56	304.65
13-May-24	1.05	304.35	13-May-24	1.42	304.78
04-Jun-24	1.08	304.32	04-Jun-24	1.56	304.64
09-Jul-24	1.14	304.26	09-Jul-24	1.60	304.60
13-Aug-24	1.09	304.31	13-Aug-24	1.55	304.65
10-Sep-24	1.02	304.38	10-Sep-24	1.48	304.72
02-Oct-24	1.07	304.33	02-Oct-24	1.55	304.65
04-Nov-24	1.10	304.30	04-Nov-24	1.54	304.66
02-Dec-24	1.15	304.25	02-Dec-24	1.59	304.61

NOTES:
- · BTOP — Below top of pipe
- · NA — Not available
- · m ASL — metres above sea level
- · (F) — Frozen

TABLE B-2
WATER LEVEL DATA - RESIDENTIAL WELLS
MILL CREEK AGGREGATES PIT

NORTH FARMHOUSE WELL (MOE WELL 4794)		SMITH WELL	
DATE	Water Level BTOC (m)	DATE	Water Level BTOC (m)
09-Jan-20	5.09	09-Jan-20	6.26
10-Feb-20	4.91	10-Feb-20	6.06
09-Mar-20	4.82	09-Mar-20	5.95
14-Apr-20	NA	14-Apr-20	6.25
13-May-20	4.78	13-May-20	5.91
11-Jun-20	4.78	11-Jun-20	5.91
08-Jul-20	4.93	08-Jul-20	6.06
19-Aug-20	5.09	19-Aug-20	6.16
17-Sep-20	5.20	17-Sep-20	6.21
23-Oct-20	NA	23-Oct-20	6.44
19-Nov-20	5.39	19-Nov-20	6.47
18-Dec-20	5.38	18-Dec-20	6.50
08-Jan-21	NA	08-Jan-21	6.41
10-Feb-21	5.40	10-Feb-21	6.50
10-Mar-21	5.39	10-Mar-21	6.50
21-Apr-21	5.38	21-Apr-21	6.47
19-May-21	5.40	19-May-21	6.50
25-Jun-21	5.47	25-Jun-21	6.50
27-Jul-21	5.48	27-Jul-21	6.58
12-Aug-21	5.49	12-Aug-21	6.65
23-Sep-21	5.55	23-Sep-21	6.61
27-Oct-21	5.44	27-Oct-21	6.58
10-Nov-21	5.53	10-Nov-21	6.56
16-Dec-21	5.52	16-Dec-21	6.60
14-Jan-22	5.50	14-Jan-22	6.62
24-Feb-22	5.44	24-Feb-22	6.48
17-Mar-22	5.42	17-Mar-22	6.44
21-Apr-22	5.23	21-Apr-22	6.27
24-May-22	5.17	24-May-22	6.21
15-Jun-22	5.21	15-Jun-22	6.26
14-Jul-22	5.30	14-Jul-22	5.85
25-Aug-22	5.44	25-Aug-22	6.44
08-Sep-22	5.52	08-Sep-22	6.52
13-Oct-22	5.67	13-Oct-22	6.64
24-Nov-22	5.76	24-Nov-22	6.77
16-Dec-22	5.75	16-Dec-22	6.76
12-Jan-23	5.69	12-Jan-23	6.67
14-Feb-23	5.64	14-Feb-23	6.61
17-Mar-23	5.58	17-Mar-23	6.58
27-Apr-23	5.49	27-Apr-23	6.45
26-May-23	5.36	26-May-23	6.34
15-Jun-23	5.36	15-Jun-23	6.36
25-Jul-23	4.56	25-Jul-23	6.30
08-Aug-23	5.33	08-Aug-23	6.28
07-Sep-23	5.31	07-Sep-23	6.33
26-Oct-23	5.42	26-Oct-23	6.38
16-Nov-23	5.46	16-Nov-23	6.42
18-Dec-23	5.48	18-Dec-23	6.47
08-Jan-24	5.47	08-Jan-24	6.45
27-Feb-24	5.33	27-Feb-24	6.38
12-Mar-24	5.37	12-Mar-24	6.27
05-Apr-24	5.28	05-Apr-24	6.21
13-May-24	5.33	13-May-24	6.15
04-Jun-24	4.78	04-Jun-24	6.12
09-Jul-24	5.15	09-Jul-24	6.13
13-Aug-24	4.94	13-Aug-24	6.03
10-Sep-24	NA	10-Sep-24	6.08
02-Oct-24	NA	02-Oct-24	6.16
04-Nov-24	5.30	04-Nov-24	6.30
02-Dec-24	5.35	02-Dec-24	6.44

NOTES:
· BTOC Below top of concrete crib
· NA Not available

TABLE B-3
WATER LEVEL DATA - WETLAND DRIVE POINTS
MILL CREEK AGGREGATES PIT

DP6			DP7			DP8		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-2020	0.89	305.93	09-Jan-2020	1.55	306.08	09-Jan-2020	1.34	305.86
10-Feb-2020	0.80	306.02	10-Feb-2020	1.43	306.20	10-Feb-2020	(F)	
09-Mar-2020	0.68	306.14	09-Mar-2020	1.38	306.25	09-Mar-2020	1.33	305.87
14-Apr-2020	0.68	306.14	14-Apr-2020	1.34	306.29	14-Apr-2020	1.21	305.99
13-May-2020	0.75	306.07	13-May-2020	1.37	306.26	13-May-2020	1.23	305.97
11-Jun-2020	0.67	306.15	11-Jun-2020	1.35	306.28	11-Jun-2020	1.33	305.87
08-Jul-2020	0.91	305.91	08-Jul-2020	1.52	306.11	08-Jul-2020	1.39	305.81
19-Aug-2020	0.97	305.85	19-Aug-2020	1.59	306.04	19-Aug-2020	1.57	305.63
17-Sep-2020	1.06	305.76	17-Sep-2020	1.65	305.98	17-Sep-2020	1.52	305.68
23-Oct-2020	0.95	305.87	23-Oct-2020	1.71	305.92	23-Oct-2020	1.58	305.62
19-Nov-2020	0.99	305.83	19-Nov-2020	1.75	305.88	19-Nov-2020	1.53	305.67
03-Dec-2020	1.10	305.72	03-Dec-2020	1.70	305.93	03-Dec-2020	1.47	305.73
08-Jan-2021	1.04	305.78	08-Jan-2021	1.70	305.93	08-Jan-2021	1.43	305.77
10-Feb-2021	1.13	305.69	10-Feb-2021	1.81	305.82	10-Feb-2021	1.52	305.68
10-Mar-2021	1.07	305.75	10-Mar-2021	1.78	305.85	10-Mar-2021	1.54	305.66
21-Apr-2021	1.01	305.81	21-Apr-2021	1.67	305.96	21-Apr-2021	1.50	305.70
19-May-2021	1.17	305.65	19-May-2021	1.81	305.82	19-May-2021	1.51	305.69
25-Jun-2021	0.90	305.92	25-Jun-2021	1.89	305.74	25-Jun-2021	1.72	305.48
27-Jul-2021	1.18	305.64	27-Jul-2021	1.87	305.76	27-Jul-2021	1.66	305.54
12-Aug-2021	1.21	305.61	12-Aug-2021	1.89	305.74	12-Aug-2021	1.69	305.51
23-Sep-2021	0.84	305.98	23-Sep-2021	1.65	305.98	23-Sep-2021	1.54	305.66
27-Oct-2021	1.03	305.79	27-Oct-2021	1.76	305.87	27-Oct-2021	1.51	305.69
10-Nov-2021	1.11	305.71	10-Nov-2021	1.82	305.81	10-Nov-2021	1.54	305.66
16-Dec-2021	1.10	305.72	16-Dec-2021	1.84	305.79	16-Dec-2021	1.52	305.68
14-Jan-2022	1.22	305.60	14-Jan-2022	1.91	305.72	14-Jan-2022	1.58	305.62
24-Feb-2022	0.95	305.87	24-Feb-2022	1.70	305.93	24-Feb-2022	1.49	305.71
17-Mar-2022	0.96	305.87	17-Mar-2022	1.67	305.96	17-Mar-2022	1.45	305.75
21-Apr-2022	0.89	305.93	21-Apr-2022	1.60	306.03	21-Apr-2022	1.38	305.82
24-May-2022	1.06	305.76	24-May-2022	1.73	305.90	24-May-2022	1.46	305.74
15-Jun-2022	1.07	305.75	15-Jun-2022	1.74	305.89	15-Jun-2022	1.54	305.66
14-Jul-2022	1.17	305.65	14-Jul-2022	1.84	305.79	14-Jul-2022	1.73	305.47
25-Aug-2022	1.24	305.58	25-Aug-2022	1.92	305.71	25-Aug-2022	1.85	305.35
08-Sep-2022	1.32	305.50	08-Sep-2022	1.99	305.64	08-Sep-2022	1.89	305.31
13-Oct-2022	1.28	305.54	13-Oct-2022	2.01	305.63	13-Oct-2022	1.98	305.22
24-Nov-2022	1.35	305.47	24-Nov-2022	2.08	305.55	24-Nov-2022	1.96	305.24
16-Dec-2022	1.26	305.56	16-Dec-2022	2.02	305.61	16-Dec-2022	1.85	305.35
12-Jan-2023	1.27	305.55	12-Jan-2023	2.01	305.62	12-Jan-2023	1.73	305.47
14-Feb-2023	1.20	305.62	14-Feb-2023	1.94	305.69	14-Feb-2023	1.66	305.55
17-Mar-2023	1.11	305.72	17-Mar-2023	1.90	305.74	17-Mar-2023	1.61	305.59
27-Apr-2023	1.11	305.71	27-Apr-2023	1.87	305.76	27-Apr-2023	1.52	305.68
26-May-2023	1.12	305.70	26-May-2023	NA		26-May-2023	NA	
15-Jun-2023	1.13	305.69	15-Jun-2023	1.82	305.82	15-Jun-2023	1.63	305.58
25-Jul-2023	1.05	305.77	25-Jul-2023	1.80	305.83	25-Jul-2023	1.56	305.64
08-Aug-2023	1.08	305.74	08-Aug-2023	1.78	305.85	08-Aug-2023	1.57	305.64
07-Sep-2023	1.13	305.69	07-Sep-2023	1.80	305.83	07-Sep-2023	1.59	305.61
26-Oct-2023	1.22	305.61	26-Oct-2023	1.91	305.72	26-Oct-2023	1.72	305.49
16-Nov-2023	1.23	305.59	16-Nov-2023	1.93	305.70	16-Nov-2023	1.78	305.42
18-Dec-2023	1.22	305.60	18-Dec-2023	1.94	305.69	18-Dec-2023	1.65	305.55
08-Jan-2024	1.19	305.63	08-Jan-2024	1.89	305.74	08-Jan-2024	1.59	305.61
27-Feb-2024	1.09	305.73	27-Feb-2024	1.76	305.88	27-Feb-2024	1.47	305.73
12-Mar-2024	1.01	305.81	12-Mar-2024	1.71	305.92	12-Mar-2024	1.48	305.72
05-Apr-2024	0.94	305.88	05-Apr-2024	1.65	305.98	05-Apr-2024	1.49	305.71
13-May-2024	1.00	305.82	13-May-2024	1.67	305.96	13-May-2024	1.43	305.77
04-Jun-2024	1.02	305.80	04-Jun-2024	1.68	305.95	04-Jun-2024	1.61	305.59
09-Jul-2024	1.10	305.72	09-Jul-2024	1.78	305.85	09-Jul-2024	1.53	305.67
13-Aug-2024	1.00	305.82	13-Aug-2024	1.61	306.02	13-Aug-2024	1.48	305.73
10-Sep-2024	1.15	305.68	10-Sep-2024	1.83	305.81	10-Sep-2024	1.58	305.62
02-Oct-2024	1.11	305.71	02-Oct-2024	1.78	305.85	02-Oct-2024	1.63	305.57
04-Nov-2024	1.27	305.55	04-Nov-2024	1.90	305.73	04-Nov-2024	1.73	305.47
02-Dec-2024	1.18	305.64	02-Dec-2024	1.78	305.85	02-Dec-2024	1.65	305.55

NOTES:
- BTOP — Below top of pipe
- NA — Not available
- m ASL — metres above sea level
- (F) — Frozen

TABLE B-3
WATER LEVEL DATA - WETLAND DRIVE POINTS
MILL CREEK AGGREGATES PIT

DP9			DP10			DP11		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-2020	(F)		09-Jan-2020	2.40	305.00	09-Jan-2020	1.88	304.92
10-Feb-2020	(F)		10-Feb-2020	2.38	305.02	10-Feb-2020	1.86	304.94
09-Mar-2020	1.01	305.79	09-Mar-2020	2.22	305.18	09-Mar-2020	1.63	305.17
14-Apr-2020	1.02	305.78	14-Apr-2020	2.24	305.16	14-Apr-2020	1.61	305.19
13-May-2020	1.12	305.68	13-May-2020	2.40	305.00	13-May-2020	1.72	305.08
11-Jun-2020	1.10	305.70	11-Jun-2020	2.51	304.89	11-Jun-2020	1.85	304.95
08-Jul-2020	1.54	305.26	08-Jul-2020	2.36	305.04	08-Jul-2020	1.91	304.89
19-Aug-2020	1.61	305.19	19-Aug-2020	2.54	304.86	19-Aug-2020	2.08	304.72
17-Sep-2020	1.60	305.20	17-Sep-2020	2.50	304.90	17-Sep-2020	2.01	304.79
23-Oct-2020	1.38	305.42	23-Oct-2020	2.47	304.93	23-Oct-2020	1.98	304.82
19-Nov-2020	1.33	305.47	19-Nov-2020	2.48	304.92	19-Nov-2020	2.01	304.79
03-Dec-2020	1.22	305.58	03-Dec-2020	2.41	304.99	03-Dec-2020	1.92	304.88
08-Jan-2021	1.20	305.60	08-Jan-2021	2.40	305.00	08-Jan-2021	1.90	304.90
10-Feb-2021	1.42	305.38	10-Feb-2021	2.45	304.95	10-Feb-2021	1.95	304.85
10-Mar-2021	1.34	305.46	10-Mar-2021	2.49	304.91	10-Mar-2021	1.95	304.85
21-Apr-2021	1.14	305.66	21-Apr-2021	2.46	304.94	21-Apr-2021	1.94	304.86
19-May-2021	1.38	305.42	19-May-2021	2.50	304.90	19-May-2021	1.98	304.82
25-Jun-2021	1.69	305.11	25-Jun-2021	2.32	305.08	25-Jun-2021	1.87	304.93
27-Jul-2021	1.67	305.14	27-Jul-2021	2.57	304.83	27-Jul-2021	2.12	304.68
12-Aug-2021	1.71	305.09	12-Aug-2021	2.60	304.80	12-Aug-2021	2.14	304.66
23-Sep-2021	1.18	305.62	23-Sep-2021	2.02	305.38	23-Sep-2021	1.75	305.05
27-Oct-2021	1.23	305.57	27-Oct-2021	2.36	305.04	27-Oct-2021	1.88	304.92
10-Nov-2021	1.34	305.46	10-Nov-2021	2.46	304.94	10-Nov-2021	1.90	304.90
16-Dec-2021	1.20	305.60	16-Dec-2021	2.40	305.00	16-Dec-2021	1.87	304.93
14-Jan-2022	1.46	305.34	14-Jan-2022	2.55	304.85	14-Jan-2022	2.05	304.75
24-Feb-2022	1.18	305.62	24-Feb-2022	2.30	305.10	24-Feb-2022	1.76	305.04
17-Mar-2022	1.16	305.64	17-Mar-2022	2.33	305.07	17-Mar-2022	1.80	305.00
21-Apr-2022	1.10	305.70	21-Apr-2022	2.35	305.05	21-Apr-2022	1.81	304.99
24-May-2022	1.34	305.46	24-May-2022	2.51	304.89	24-May-2022	1.97	304.83
15-Jun-2022	1.36	305.44	15-Jun-2022	2.52	304.88	15-Jun-2022	1.95	304.85
14-Jul-2022	1.64	305.16	14-Jul-2022	2.60	304.80	14-Jul-2022	2.12	304.68
25-Aug-2022	1.75	305.05	25-Aug-2022	2.58	304.82	25-Aug-2022	2.10	304.70
08-Sep-2022	1.81	304.99	08-Sep-2022	2.63	304.77	08-Sep-2022	2.17	304.63
13-Oct-2022	1.71	305.10	13-Oct-2022	2.54	304.86	13-Oct-2022	2.01	304.79
24-Nov-2022	1.79	305.01	24-Nov-2022	2.62	304.78	24-Nov-2022	2.15	304.66
16-Dec-2022	1.58	305.22	16-Dec-2022	2.53	304.87	16-Dec-2022	1.97	304.84
12-Jan-2023	1.45	305.35	12-Jan-2023	2.54	304.86	12-Jan-2023	2.06	304.74
14-Feb-2023	1.29	305.52	14-Feb-2023	2.45	304.95	14-Feb-2023	1.88	304.93
17-Mar-2023	1.28	305.52	17-Mar-2023	2.44	304.96	17-Mar-2023	1.85	304.95
27-Apr-2023	1.21	305.59	27-Apr-2023	2.43	304.97	27-Apr-2023	1.77	305.03
26-May-2023	1.32	305.48	26-May-2023	2.51	304.89	26-May-2023	1.88	304.92
15-Jun-2023	1.45	305.35	15-Jun-2023	2.51	304.89	15-Jun-2023	2.01	304.79
25-Jul-2023	1.44	305.36	25-Jul-2023	2.00	305.41	25-Jul-2023	1.83	304.97
08-Aug-2023	1.30	305.50	08-Aug-2023	2.43	304.97	08-Aug-2023	1.86	304.94
07-Sep-2023	1.52	305.28	07-Sep-2023	2.51	304.89	07-Sep-2023	1.98	304.82
26-Oct-2023	1.58	305.23	26-Oct-2023	2.49	304.92	26-Oct-2023	1.98	304.82
16-Nov-2023	1.54	305.27	16-Nov-2023	2.53	304.87	16-Nov-2023	1.99	304.81
18-Dec-2023	1.30	305.50	18-Dec-2023	2.49	304.91	18-Dec-2023	1.92	304.88
08-Jan-2024	1.30	305.50	08-Jan-2024	2.54	304.87	08-Jan-2024	1.94	304.86
27-Feb-2024	1.28	305.52	27-Feb-2024	2.48	304.92	27-Feb-2024	1.86	304.94
12-Mar-2024	1.21	305.59	12-Mar-2024	2.39	305.01	12-Mar-2024	1.99	304.81
05-Apr-2024	1.26	305.55	05-Apr-2024	2.32	305.08	05-Apr-2024	1.77	305.03
13-May-2024	1.24	305.56	13-May-2024	2.47	304.93	13-May-2024	1.88	304.92
04-Jun-2024	1.33	305.47	04-Jun-2024	2.48	304.92	04-Jun-2024	1.91	304.89
09-Jul-2024	NA		09-Jul-2024	2.41	304.99	09-Jul-2024	1.87	304.93
13-Aug-2024	1.45	305.35	13-Aug-2024	2.48	304.92	13-Aug-2024	1.71	305.09
10-Sep-2024	1.53	305.28	10-Sep-2024	2.52	304.88	10-Sep-2024	1.91	304.89
02-Oct-2024	1.53	305.27	02-Oct-2024	2.50	304.90	02-Oct-2024	1.93	304.88
04-Nov-2024	1.60	305.21	04-Nov-2024	2.53	304.87	04-Nov-2024	1.90	304.90
02-Dec-2024	1.42	305.38	02-Dec-2024	2.52	304.88	02-Dec-2024	1.91	304.89

NOTES:
- BTOP — Below top of pipe
- NA — Not available
- m ASL — metres above sea level
- (F) — Frozen

TABLE B-3
WATER LEVEL DATA - WETLAND DRIVE POINTS
MILL CREEK AGGREGATES PIT

DP12			DP16			DP113		
DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)	DATE	Water Level BTOP (m)	Groundwater Elevation (m ASL)
09-Jan-2020	1.90	304.80	09-Jan-2020	0.72	304.28	09-Jan-2020	1.29	306.58
10-Feb-2020	1.89	304.81	10-Feb-2020	0.69	304.31	10-Feb-2020	1.06	306.81
09-Mar-2020	1.45	305.25	09-Mar-2020	0.55	304.45	09-Mar-2020	1.05	306.82
14-Apr-2020	1.53	305.17	14-Apr-2020	0.65	304.35	14-Apr-2020	0.98	306.89
13-May-2020	1.58	305.12	13-May-2020	0.70	304.30	13-May-2020	0.97	306.90
11-Jun-2020	1.72	304.98	11-Jun-2020	0.63	304.37	11-Jun-2020	0.95	306.92
08-Jul-2020	1.90	304.80	08-Jul-2020	0.95	304.05	08-Jul-2020	1.22	306.65
19-Aug-2020	2.09	304.61	19-Aug-2020	0.97	304.03	19-Aug-2020	1.02	306.85
17-Sep-2020	2.03	304.67	17-Sep-2020	0.98	304.02	17-Sep-2020	1.16	306.71
23-Oct-2020	2.06	304.64	23-Oct-2020	0.83	304.17	23-Oct-2020	1.04	306.83
19-Nov-2020	2.14	304.56	19-Nov-2020	0.95	304.05	19-Nov-2020	1.23	306.64
03-Dec-2020	2.11	304.59	03-Dec-2020	0.78	304.22	03-Dec-2020	1.09	306.78
08-Jan-2021	2.08	304.62	08-Jan-2021	0.73	304.27	08-Jan-2021	1.16	306.71
10-Feb-2021	2.15	304.55	10-Feb-2021	0.86	304.14	10-Feb-2021	1.21	306.66
10-Mar-2021	1.97	304.73	10-Mar-2021	0.73	304.27	10-Mar-2021	1.26	306.61
21-Apr-2021	1.91	304.79	21-Apr-2021	0.72	304.28	21-Apr-2021	1.25	306.62
19-May-2021	1.95	304.75	19-May-2021	0.86	304.14	19-May-2021	1.34	306.53
25-Jun-2021	1.83	304.87	25-Jun-2021	0.94	304.06	25-Jun-2021	1.08	306.79
27-Jul-2021	2.15	304.56	27-Jul-2021	0.96	304.05	27-Jul-2021	1.34	306.53
12-Aug-2021	2.16	304.54	12-Aug-2021	0.96	304.04	12-Aug-2021	1.32	306.55
23-Sep-2021	1.87	304.83	30-Sep-2021	0.84	304.16	30-Sep-2021	1.22	306.65
27-Oct-2021	2.00	304.70	27-Oct-2021	0.73	304.27	27-Oct-2021	1.19	306.68
10-Nov-2021	2.08	304.62	10-Nov-2021	0.84	304.16	10-Nov-2021	1.22	306.65
16-Dec-2021	1.92	304.78	16-Dec-2021	0.71	304.29	16-Dec-2021	1.25	306.62
14-Jan-2022	1.99	304.71	14-Jan-2022	0.81	304.19	14-Jan-2022	1.32	306.55
24-Feb-2022	1.79	304.91	24-Feb-2022	0.54	304.46	24-Feb-2022	1.27	306.60
17-Mar-2022	1.78	304.92	17-Mar-2022	0.59	304.41	17-Mar-2022	1.28	306.59
21-Apr-2022	1.73	304.97	21-Apr-2022	0.55	304.45	21-Apr-2022	1.29	306.58
24-May-2022	1.85	304.85	24-May-2022	0.65	304.35	24-May-2022	1.31	306.56
15-Jun-2022	1.81	304.89	15-Jun-2022	0.64	304.36	15-Jun-2022	1.30	306.57
14-Jul-2022	2.01	304.69	14-Jul-2022	0.93	304.08	14-Jul-2022	1.36	306.51
25-Aug-2022	2.08	304.62	25-Aug-2022	0.89	304.11	25-Aug-2022	1.40	306.47
08-Sep-2022	2.13	304.57	08-Sep-2022	1.02	303.98	08-Sep-2022	1.43	306.44
13-Oct-2022	2.07	304.63	13-Oct-2022	0.94	304.07	13-Oct-2022	NA	
24-Nov-2022	2.21	304.49	24-Nov-2022	0.95	304.05	24-Nov-2022	1.56	306.31
16-Dec-2022	1.98	304.72	16-Dec-2022	0.83	304.17	16-Dec-2022	1.62	306.25
12-Jan-2023	2.05	304.65	12-Jan-2023	0.70	304.30	12-Jan-2023	1.58	306.29
14-Feb-2023	1.90	304.80	14-Feb-2023	0.65	304.35	14-Feb-2023	1.54	306.34
17-Mar-2023	1.52	305.18	17-Mar-2023	0.47	304.54	17-Mar-2023	1.53	306.34
27-Apr-2023	1.59	305.11	27-Apr-2023	0.41	304.59	27-Apr-2023	1.38	306.49
26-May-2023	1.70	305.00	26-May-2023	0.52	304.48	26-May-2023	1.40	306.47
15-Jun-2023	1.80	304.91	15-Jun-2023	0.65	304.35	15-Jun-2023	1.43	306.44
25-Jul-2023	1.68	305.02	25-Jul-2023	0.55	304.45	25-Jul-2023	1.36	306.52
08-Aug-2023	1.73	304.97	08-Aug-2023	0.61	304.39	08-Aug-2023	1.33	306.54
07-Sep-2023	1.79	304.91	07-Sep-2023	0.67	304.33	07-Sep-2023	1.38	306.49
26-Oct-2023	1.90	304.80	26-Oct-2023	0.72	304.29	26-Oct-2023	1.51	306.37
16-Nov-2023	1.90	304.81	16-Nov-2023	0.75	304.26	16-Nov-2023	1.53	306.34
18-Dec-2023	1.75	304.95	18-Dec-2023	0.71	304.29	18-Dec-2023	1.52	306.35
08-Jan-2024	1.70	305.00	08-Jan-2024	0.71	304.29	08-Jan-2024	1.48	306.39
27-Feb-2024	1.75	304.95	27-Feb-2024	0.66	304.34	27-Feb-2024	1.37	306.50
12-Mar-2024	1.69	305.02	12-Mar-2024	0.59	304.41	12-Mar-2024	1.34	306.53
05-Apr-2024	1.68	305.03	05-Apr-2024	0.59	304.42	05-Apr-2024	1.31	306.57
13-May-2024	1.76	304.94	13-May-2024	0.64	304.36	13-May-2024	1.28	306.59
04-Jun-2024	1.76	304.94	04-Jun-2024	0.62	304.38	04-Jun-2024	1.42	306.45
09-Jul-2024	1.71	304.99	09-Jul-2024	0.51	304.49	09-Jul-2024	1.28	306.59
13-Aug-2024	1.69	305.01	13-Aug-2024	0.65	304.35	13-Aug-2024	1.13	306.74
10-Sep-2024	1.58	305.12	10-Sep-2024	0.57	304.43	10-Sep-2024	1.09	306.78
02-Oct-2024	1.67	305.04	02-Oct-2024	0.64	304.36	02-Oct-2024	1.13	306.74
04-Nov-2024	1.67	305.03	04-Nov-2024	0.65	304.35	04-Nov-2024	1.21	306.66
02-Dec-2024	1.81	304.89	02-Dec-2024	0.69	304.31	02-Dec-2024	1.27	306.60

NOTES:
- BTOP — Below top of pipe
- NA — Not available
- m ASL — metres above sea level
- (F) — Frozen

TABLE B-4
WATER LEVEL DATA - SURFACE WATER STATIONS
MILL CREEK AGGREGATES PIT

SG4/SW1			SW2			Trench (West)		
DATE	Water Level On Gauge (m)	Surface Water Elevation (m ASL)	DATE	Water Level On Gauge (m)	Surface Water Elevation (m ASL)	DATE	Water Level FBOG (m)	Surface Water Elevation (m ASL)
09-Jan-2020	0.31	305.96	09-Jan-2020	0.48	303.23	09-Jan-2020	(F)	
10-Feb-2020	0.29	305.94	10-Feb-2020	0.69	303.02	10-Feb-2020	(F)	
09-Mar-2020	0.37	306.02	09-Mar-2020	0.51	303.20	09-Mar-2020	1.69	307.13
14-Apr-2020	0.32	305.97	14-Apr-2020	0.62	303.09	14-Apr-2020	1.76	307.20
13-May-2020	0.26	305.91	13-May-2020	0.77	302.94	13-May-2020	1.70	307.14
11-Jun-2020	0.27	305.92	11-Jun-2020	0.55	303.16	11-Jun-2020	1.74	307.18
08-Jul-2020	0.21	305.86	08-Jul-2020	0.80	302.91	08-Jul-2020	1.59	307.03
19-Aug-2020	0.19	305.84	19-Aug-2020	0.81	302.90	19-Aug-2020	1.46	306.90
17-Sep-2020	0.17	305.82	17-Sep-2020	0.80	302.91	17-Sep-2020	1.31	306.75
23-Oct-2020	0.40	306.05	23-Oct-2020	0.67	303.04	23-Oct-2020	1.31	306.75
19-Nov-2020	0.24	305.89	19-Nov-2020	0.74	302.97	19-Nov-2020	1.25	306.69
18-Dec-2020	0.26	305.91	18-Dec-2020	0.79	302.92	18-Dec-2020	(F)	
08-Jan-2021	0.28	305.93	08-Jan-2021	0.70	303.01	08-Jan-2021	(F)	
10-Feb-2021	(F)		10-Feb-2021	0.86	302.85	10-Feb-2021	(F)	
10-Mar-2021	0.25	305.90	10-Mar-2021	0.62	303.09	10-Mar-2021	(F)	
21-Apr-2021	0.24	305.89	21-Apr-2021	0.81	302.90	21-Apr-2021	1.30	306.74
19-May-2021	0.36	306.01	19-May-2021	0.86	302.85	19-May-2021	1.20	306.64
25-Jun-2021	0.25	305.90	25-Jun-2021	0.39	303.32	25-Jun-2021	1.35	306.79
27-Jul-2021	0.19	305.84	27-Jul-2021	0.84	302.87	27-Jul-2021	1.49	306.93
12-Aug-2021	0.18	305.83	12-Aug-2021	0.84	302.87	12-Aug-2021	1.12	306.56
23-Sep-2021	0.24	305.89	23-Sep-2021	0.80	302.91	23-Sep-2021	1.25	306.69
27-Oct-2021	0.35	306.00	27-Oct-2021	0.71	303.00	27-Oct-2021	1.20	306.64
10-Nov-2021	0.28	305.93	10-Nov-2021	0.80	302.91	10-Nov-2021	1.15	306.59
16-Dec-2021	0.30	305.95	16-Dec-2021	0.78	302.93	16-Dec-2021	1.19	306.63
14-Jan-2022	0.22	305.87	14-Jan-2022	(F)		14-Jan-2022	(F)	
24-Feb-2022	0.48	306.13	24-Feb-2022	0.59	303.12	24-Feb-2022	(F)	
17-Mar-2022	0.34	305.99	17-Mar-2022	0.71	303.00	17-Mar-2022	(F)	
21-Apr-2022	0.32	305.97	21-Apr-2022	0.72	302.99	21-Apr-2022	1.40	306.84
24-May-2022	0.22	305.87	24-May-2022	0.82	302.89	24-May-2022	1.38	306.82
15-Jun-2022	0.22	305.87	15-Jun-2022	0.80	302.91	15-Jun-2022	1.38	306.82
14-Jul-2022	0.17	305.82	14-Jul-2022	0.85	302.86	14-Jul-2022	1.20	306.64
25-Aug-2022	0.18	305.83	25-Aug-2022	0.83	302.88	25-Aug-2022	1.14	306.58
08-Sep-2022	0.16	305.81	08-Sep-2022	0.84	302.87	08-Sep-2022	1.06	306.50
13-Oct-2022	0.23	305.88	13-Oct-2022	0.80	302.91	13-Oct-2022	1.00	306.44
24-Nov-2022	0.18	305.83	24-Nov-2022	0.85	302.87	24-Nov-2022	(F)	
16-Dec-2022	0.23	305.88	16-Dec-2022	0.81	302.90	16-Dec-2022	(F)	
12-Jan-2023	0.22	305.87	12-Jan-2023	0.84	302.87	12-Jan-2023	(F)	
14-Feb-2023	0.26	305.91	14-Feb-2023	0.78	302.93	14-Feb-2023	(F)	
17-Mar-2023	0.29	305.94	17-Mar-2023	0.79	302.92	17-Mar-2023	(F)	
27-Apr-2023	0.25	305.90	27-Apr-2023	0.81	302.90	27-Apr-2023	1.20	306.64
26-May-2023	0.22	305.87	26-May-2023	0.84	302.87	26-May-2023	1.26	306.70
15-Jun-2023	0.22	305.87	15-Jun-2023	0.90	302.81	15-Jun-2023	1.20	306.64
25-Jul-2023	0.78	306.43	25-Jul-2023	0.27	303.44	25-Jul-2023	1.27	306.71
08-Aug-2023	0.29	305.94	08-Aug-2023	0.78	302.94	08-Aug-2023	1.27	306.71
07-Sep-2023	0.23	305.88	07-Sep-2023	0.83	302.88	07-Sep-2023	1.25	306.69
26-Oct-2023	0.22	305.87	26-Oct-2023	0.81	302.90	26-Oct-2023	1.13	306.57
16-Nov-2023	0.22	305.87	16-Nov-2023	0.82	302.89	16-Nov-2023	1.09	306.53
18-Dec-2023	0.26	305.91	18-Dec-2023	0.83	302.88	18-Dec-2023	1.10	306.54
08-Jan-2024	0.22	305.87	08-Jan-2024	0.87	302.84	08-Jan-2024	1.17	306.61
27-Feb-2024	0.23	305.88	27-Feb-2024	0.82	302.89	27-Feb-2024	1.28	306.72
12-Mar-2024	0.29	305.94	12-Mar-2024	0.78	302.93	12-Mar-2024	1.35	306.79
05-Apr-2024	0.33	305.98	05-Apr-2024	0.73	302.98	05-Apr-2024	1.37	306.81
13-May-2024	0.21	305.86	13-May-2024	0.82	302.89	13-May-2024	1.38	306.82
04-Jun-2024	0.19	305.84	04-Jun-2024	0.81	302.90	04-Jun-2024	1.37	306.81
09-Jul-2024	0.23	305.88	09-Jul-2024	0.84	302.87	09-Jul-2024	1.35	306.79
13-Aug-2024	0.23	305.88	13-Aug-2024	0.82	302.89	13-Aug-2024	1.46	306.90
10-Sep-2024	0.20	305.85	10-Sep-2024	0.82	302.89	10-Sep-2024	1.39	306.83
02-Oct-2024	0.22	305.87	02-Oct-2024	0.83	302.88	02-Oct-2024	1.33	306.77
04-Nov-2024	0.21	305.86	04-Nov-2024	0.83	302.88	04-Nov-2024	1.25	306.69
02-Dec-2024	0.21	305.86	02-Dec-2024	0.84	302.87	02-Dec-2024	1.22	306.66

NOTES:
- NA Not available
- m ASL metres above sea level
- (F) Frozen
- FBOG from bottom of gauge
- SW2 is measured from the top of DP5A, DP5B, DB5C, DP5D or DP5CR

TABLE B-4
WATER LEVEL DATA - SURFACE WATER STATIONS
MILL CREEK AGGREGATES PIT

PHASE 1 POND				PHASE 2 POND			
DATE	Water Level FBOG (m)	Surface Water Elevation (m ASL)	Water Temperature at Surface (^{o}C)	DATE	Water Level FBOG (m)	Surface Water Elevation (m ASL)	Water Temperature at Surface (^{o}C)
09-Jan-2020	(F)			09-Jan-2020	(F)		
10-Feb-2020	(F)			10-Feb-2020	(F)		
09-Mar-2020	(F)			09-Mar-2020	(F)		
14-Apr-2020	0.48	306.87	7.8	14-Apr-2020	0.70	306.43	7.7
13-May-2020	0.43	306.82	10.8	13-May-2020	0.66	306.39	10.9
11-Jun-2020	0.46	306.85	21.4	11-Jun-2020	0.66	306.39	20.0
08-Jul-2020	0.33	306.72	25.0	08-Jul-2020	0.53	306.26	25.8
19-Aug-2020	0.19	306.58	23.1	19-Aug-2020	0.38	306.11	24.2
17-Sep-2020	0.08	306.47	19.9	17-Sep-2020	0.24	305.97	20.7
23-Oct-2020	0.27	306.36	12.9	23-Oct-2020	0.15	305.88	13.0
19-Nov-2020	0.21	306.30	8.7	19-Nov-2020	0.06	305.79	10.8
18-Dec-2020	0.22	306.31	0.2	18-Dec-2020	0.07	305.80	1.1
08-Jan-2021	(F)			08-Jan-2021	(F)		
10-Feb-2021	(F)			10-Feb-2021	(F)		
10-Mar-2021	(F)		4.4	10-Mar-2021	(F)		
21-Apr-2021	0.82	306.40	10.8	21-Apr-2021	0.64	305.84	10.2
19-May-2021	0.73	306.31	16.1	19-May-2021	0.58	305.78	17.1
25-Jun-2021	0.72	306.30	24.5	25-Jun-2021	0.67	305.87	24.8
27-Jul-2021	0.67	306.25	22.8	27-Jul-2021	0.52	305.72	24.0
12-Aug-2021	0.64	306.22	24.2	12-Aug-2021	0.52	305.72	24.2
23-Sep-2021	0.65	306.23	19.7	23-Sep-2021	0.52	305.72	20.1
27-Oct-2021	0.67	306.25	14.7	27-Oct-2021	0.49	305.69	15.4
10-Nov-2021	0.64	306.22	11.2	10-Nov-2021	0.46	305.66	10.3
16-Dec-2021	0.64	306.22	5.4	16-Dec-2021	0.49	305.69	5.0
14-Jan-2022	(F)			14-Jan-2022	(F)		
24-Feb-2022	(F)			24-Feb-2022	(F)		
17-Mar-2022	(F)		4.8	17-Mar-2022	(F)		
21-Apr-2022	0.64	306.49	7.5	21-Apr-2022	0.80	306.06	8.1
24-May-2022	0.65	306.50	17.2	24-May-2022	0.80	306.06	18.9
15-Jun-2022	0.63	306.48	20.9	15-Jun-2022	0.77	306.03	22.3
14-Jul-2022	0.40	306.35	23.4	14-Jul-2022	0.60	305.89	23.5
25-Aug-2022	0.29	306.24	24.5	25-Aug-2022	0.46	305.75	24.8
08-Sep-2022	0.23	306.18	22.8	08-Sep-2022	0.39	305.68	22.8
13-Oct-2022	0.34	306.29	15.3	13-Oct-2022	0.25	305.54	14.8
24-Nov-2022	0.23	306.18	6.4	24-Nov-2022	0.16	305.45	6.6
16-Dec-2022	(F)		2.6	16-Dec-2022	(F)		2.9
12-Jan-2023	(F)		1.3	12-Jan-2023	(F)		1.2
14-Feb-2023	(F)			14-Feb-2023	(F)		
17-Mar-2023	(F)		3.5	17-Mar-2023	(F)		
27-Apr-2023	0.68	306.31	12.8	27-Apr-2023	0.73	305.75	12.7
26-May-2023	0.73	306.36	17.9	26-May-2023	0.82	305.84	18.4
15-Jun-2023	0.69	306.32	18.3	15-Jun-2023	0.81	305.83	18.9
25-Jul-2023	0.75	306.38	25.4	25-Jul-2023	0.87	305.89	27.2
08-Aug-2023	0.77	306.40	22.6	08-Aug-2023	0.87	305.89	23.9
07-Sep-2023	0.77	306.40	23.9	07-Sep-2023	0.88	305.90	24.2
26-Oct-2023	0.63	306.26	13.5	26-Oct-2023	0.76	305.78	14.6
16-Nov-2023	0.59	306.22	9.7	16-Nov-2023	0.73	305.75	9.6
18-Dec-2023	(F)		4.4	18-Dec-2023	(F)		4.0
08-Jan-2024	(F)		2.4	08-Jan-2024	(F)		2.5
27-Feb-2024	(F)		2.6	27-Feb-2024	(F)		
12-Mar-2024	(F)		7.7	12-Mar-2024	(F)		7.0
05-Apr-2024	0.71	306.44	5.7	05-Apr-2024	0.72	305.97	6.5
13-May-2024	0.79	306.52	15.3	13-May-2024	0.84	306.09	18.9
04-Jun-2024	0.78	306.51	22	04-Jun-2024	0.86	306.11	23.4
09-Jul-2024	0.76	306.49	25.4	09-Jul-2024	0.84	306.09	24.1
13-Aug-2024	0.88	306.61	24.2	13-Aug-2024	0.81	306.06	25.8
10-Sep-2024	0.80	306.53	20.8	10-Sep-2024	0.86	306.11	22.4
02-Oct-2024	0.75	306.48	20.8	02-Oct-2024	0.79	306.04	20.9
04-Nov-2024	0.64	306.37	13.3	04-Nov-2024	0.65	305.90	13.1
02-Dec-2024	0.59	306.32	6.6	02-Dec-2024	0.60	305.85	6.7

Note:
- ·FBOG — from bottom of gauge
- ·m ASL — metres above sea level
- · (F) — Frozen
- · NA — Not available

TABLE B-4
WATER LEVEL DATA - SURFACE WATER STATIONS
MILL CREEK AGGREGATES PIT

PHASE 3 POND				PHASE 4 POND			
DATE	Water Level FBOG (m)	Surface Water Elevation (m ASL)	Water Temperature at Surface (°C)	DATE	Water Level FBOG (m)	Surface Water Elevation (m ASL)	Water Temperature at Surface (°C)
09-Jan-2020	(F)			09-Jan-2020	(F)		
10-Feb-2020	(F)			10-Feb-2020	(F)		
09-Mar-2020	(F)			09-Mar-2020	(F)		
14-Apr-2020	0.74	305.03	7.0	14-Apr-2020	0.24	306.58	7.2
13-May-2020	0.64	304.93	10.0	13-May-2020	0.20	306.54	13.0
11-Jun-2020	0.61	304.90	21.3	11-Jun-2020	0.20	306.54	21.6
08-Jul-2020	0.47	304.76	27.3	08-Jul-2020	0.10	306.44	26.3
19-Aug-2020	0.34	304.63	22.8	19-Aug-2020	0.21	306.33	22.8
17-Sep-2020	0.24	304.53	20.7	17-Sep-2020	0.07	306.19	19.6
23-Oct-2020	0.24	304.53	12.7	23-Oct-2020	0.42	306.13	12.7
19-Nov-2020	0.22	304.51	6.7	19-Nov-2020	0.34	306.05	9.9
18-Dec-2020	0.29	304.58	0.3	18-Dec-2020	0.34	306.05	0.9
08-Jan-2021	(F)			08-Jan-2021	(F)		
10-Feb-2021	(F)			10-Feb-2021	(F)		
10-Mar-2021	(F)			10-Mar-2021	(F)		
21-Apr-2021	0.42	304.73	9.1	21-Apr-2021	0.64	306.14	8.7
19-May-2021	0.35	304.66	14.9	19-May-2021	0.54	306.04	16.9
25-Jun-2021	0.31	304.62	27.6	25-Jun-2021	0.55	306.05	27.5
27-Jul-2021	0.25	304.56	25.3	27-Jul-2021	0.49	305.99	24.9
12-Aug-2021	0.23	304.54	24.6	12-Aug-2021	0.40	305.90	24.1
23-Sep-2021	0.25	304.56	19.5	23-Sep-2021	0.51	306.01	20.0
27-Oct-2021	0.29	304.60	12.0	27-Oct-2021	0.51	306.01	13.0
10-Nov-2021	0.28	304.59	8.5	10-Nov-2021	0.47	305.97	12.4
16-Dec-2021	0.41	304.72	4.5	16-Dec-2021	0.37	305.87	4.6
14-Jan-2022	(F)			14-Jan-2022	(F)		
24-Feb-2022	(F)			24-Feb-2022	(F)		
17-Mar-2022	(F)			17-Mar-2022	(F)		
21-Apr-2022	0.62	304.85	8.2	21-Apr-2022	0.58	306.19	8.3
24-May-2022	0.66	304.89	17.2	24-May-2022	0.46	306.07	17.5
15-Jun-2022	0.70	304.93	21.7	15-Jun-2022	0.44	306.05	21.1
14-Jul-2022	0.50	304.73	23.6	14-Jul-2022	0.36	305.97	23.6
25-Aug-2022	0.41	304.64	24.7	25-Aug-2022	0.23	305.84	23
08-Sep-2022	0.37	304.60	22.3	08-Sep-2022	0.16	305.77	22.1
13-Oct-2022	0.29	304.52	14.7	13-Oct-2022	0.10	305.71	15.4
24-Nov-2022	0.23	304.46	4.9	24-Nov-2022	0.03	305.64	6.8
16-Dec-2022	(F)			16-Dec-2022	(F)		
12-Jan-2023	(F)			12-Jan-2023	(F)		
14-Feb-2023	(F)			14-Feb-2023	(F)		
17-Mar-2023	(F)			17-Mar-2023	(F)		
27-Apr-2023	0.98	305.19	11.4	27-Apr-2023	0.70	305.79	11.6
26-May-2023	0.88	305.09	16.3	26-May-2023	0.90	305.99	16.2
15-Jun-2023	0.77	304.98	18.8	15-Jun-2023	0.92	306.01	18.2
25-Jul-2023	0.78	304.99	25.3	25-Jul-2023	0.87	305.96	25.5
08-Aug-2023	0.85	305.06	22.7	08-Aug-2023	0.90	305.99	22.4
07-Sep-2023	0.78	304.99	24.1	07-Sep-2023	0.93	306.02	23.4
26-Oct-2023	0.82	305.03	14.3	26-Oct-2023	0.76	305.85	14.6
16-Nov-2023	0.64	304.85	7.7	16-Nov-2023	0.75	305.84	7.6
18-Dec-2023	(F)		3.4	18-Dec-2023	(F)		3.6
08-Jan-2024	(F)		1.4	08-Jan-2024	(F)		1.6
27-Feb-2024	(F)			27-Feb-2024	(F)		4.8
12-Mar-2024	NA		3.9	12-Mar-2024	(F)		4.8
05-Apr-2024	0.68	305.00	5.3	05-Apr-2024	0.70	306.17	4.8
13-May-2024	0.75	305.07	16.5	13-May-2024	0.70	306.17	16.5
04-Jun-2024	0.69	305.01	23.5	04-Jun-2024	0.71	306.18	22.6
09-Jul-2024	0.58	304.90	25.5	09-Jul-2024	0.79	306.26	25.9
13-Aug-2024	0.77	305.09	22.6	13-Aug-2024	0.79	306.26	22.9
10-Sep-2024	1.15	305.25	20.9	10-Sep-2024	0.46	305.93	20.9
02-Oct-2024	1.00	305.10	20.9	02-Oct-2024	0.59	306.06	20.8
04-Nov-2024	1.06	305.16	12.2	04-Nov-2024	0.37	305.84	13.3
02-Dec-2024	0.99	305.09	4.2	02-Dec-2024	0.46	305.93	5.9

Note: ·FBOG from bottom of gauge
·m ASL metres above sea level
· (F) Frozen
· NA Not available

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP1	09-Jan-20	(F)	1.03		303.83				(F)	0.5
	10-Feb-20	(F)	1.01		303.85				(F)	0.9
	09-Mar-20	0.51	0.89	304.35	303.97	0.38	0.27	1.05E-02	8.3	3.3
	14-Apr-20	0.58	1.01	304.28	303.85	0.43	0.31	1.18E-02	9.0	8.4
	13-May-20	0.60	1.03	304.26	303.83	0.43	0.31	1.18E-02	8.8	6.9
	11-Jun-20	0.55	0.89	304.31	303.97	0.34	0.24	9.36E-03	15.0	18.6
	08-Jul-20	0.73	1.09	304.13	303.77	0.36	0.26	9.91E-03	16.2	17.8
	19-Aug-20	0.78	1.00	304.08	303.86	0.22	0.16	6.06E-03	14.2	14.8
	17-Sep-20	0.80	1.07	304.06	303.79	0.27	0.19	7.43E-03	12.3	13.2
	23-Oct-20	0.59	0.70	304.27	304.16	0.11	0.08	3.03E-03	11.0	10.5
	19-Nov-20	0.63	0.59	304.23	304.27	-0.04	-0.03	-1.10E-03	6.7	4.5
	18-Dec-20	(F)	0.86		304.00				(F)	0.4
	08-Jan-21	(F)	0.90		303.96				(F)	0.1
	10-Feb-21	(F)	(F)						(F)	(F)
	10-Mar-21	0.62	0.93	304.24	303.93	0.31	0.22	8.54E-03	6.7	3.1
	21-Apr-21	0.60	0.94	304.26	303.92	0.34	0.24	9.36E-03	8.2	5.2
	19-May-21	0.69	1.09	304.17	303.77	0.40	0.29	1.10E-02	12.1	11.8
	25-Jun-21	0.43	0.53	304.43	304.33	0.10	0.07	2.75E-03	17.8	21.4
	27-Jul-21	0.74	1.06	304.13	303.80	0.32	0.23	8.95E-03	14.6	17.5
	12-Aug-21	0.74	1.07	304.12	303.79	0.33	0.24	9.09E-03	14.9	18.6
	30-Sep-21	0.69	1.05	304.17	303.81	0.36	0.26	9.91E-03	11.3	11.8
	27-Oct-21	0.60	0.92	304.26	303.94	0.32	0.23	8.81E-03	10.4	8.8
	10-Nov-21	0.66	1.01	304.20	303.85	0.35	0.25	9.64E-03	9.3	7.4
	16-Dec-21	0.60	0.98	304.26	303.88	0.38	0.27	1.05E-02	8.7	6.4
	14-Jan-22	(F)	1.07		303.79				(F)	0.8
	24-Feb-22	0.45	0.75	304.41	304.11	0.30	0.22	8.26E-03	7.5	2.4
	17-Mar-22	0.53	0.96	304.33	303.90	0.43	0.31	1.18E-02	7.5	2.4
	21-Apr-22	0.53	1.00	304.33	303.86	0.47	0.34	1.29E-02	8.1	6.7
	24-May-22	0.57	1.08	304.29	303.78	0.51	0.37	1.40E-02	12.9	12.1
	15-Jun-22	0.55	1.09	304.31	303.77	0.54	0.39	1.49E-02	14.5	16.0
	14-Jul-22	0.70	1.12	304.16	303.74	0.42	0.30	1.16E-02	15.4	14.1
	25-Aug-22	0.71	0.99	304.15	303.87	0.28	0.20	7.71E-03	19.8	17.1
	08-Sep-22	0.77	1.13	304.09	303.73	0.36	0.26	9.91E-03	13.4	14.9
	13-Oct-22	0.73	1.06	304.13	303.81	0.32	0.23	8.95E-03	11.8	12.5
	24-Nov-22	0.75	1.10	304.11	303.76	0.35	0.25	9.64E-03	6.8	4.1
	16-Dec-22	0.69	1.05	304.17	303.81	0.36	0.26	9.91E-03	4.1	2.7
	12-Jan-23	(F)	1.07		303.79				(F)	4.4
	14-Feb-23	0.57	1.02	304.29	303.85	0.44	0.32	1.23E-02	3.1	2.0
	17-Mar-23	0.48	0.99	304.38	303.87	0.51	0.37	1.41E-02	4.6	3.7
	27-Apr-23	0.44	1.02	304.42	303.85	0.58	0.41	1.59E-02	10.5	8.7
	26-May-23	0.49	1.05	304.37	303.81	0.56	0.40	1.54E-02	10.9	11.2
	15-Jun-23	0.54	1.00	304.32	303.86	0.46	0.33	1.27E-02	13.2	14.6
	26-Jul-23	0.39	0.68	304.47	304.19	0.29	0.21	7.90E-03	16.0	19.9
	08-Aug-23	0.51	0.94	304.35	303.92	0.43	0.31	1.18E-02	15.8	18.2
	07-Sep-23	0.55	1.01	304.31	303.85	0.46	0.33	1.27E-02	14.9	18.8
	26-Oct-23	0.57	0.98	304.29	303.88	0.41	0.29	1.13E-02	11.7	12.7
	16-Nov-23	0.61	0.98	304.26	303.88	0.38	0.27	1.04E-02	11.2	5.9
	18-Dec-23	0.51	0.96	304.35	303.91	0.44	0.32	1.23E-02	5.0	5.3
	08-Jan-24	(F)	1.02		303.85				(F)	2.0
	27-Feb-24	0.42	1.01	304.44	303.85	0.59	0.42	1.62E-02	5.5	4.3
	12-Mar-24	0.50	0.93	304.36	303.93	0.43	0.31	1.18E-02	4.2	4.0
	05-Apr-24	0.56	0.88	304.31	303.98	0.32	0.23	8.95E-03	3.7	4.8
	13-May-24	0.51	0.98	304.35	303.88	0.47	0.34	1.29E-02	13.2	15.0
	04-Jun-24	0.53	0.97	304.33	303.89	0.44	0.32	1.21E-02	16.5	17.9
	09-Jul-24	0.53	0.97	304.33	303.89	0.44	0.32	1.21E-02	17.7	20.5
	13-Aug-24	0.54	0.99	304.32	303.87	0.45	0.32	1.24E-02	14.9	16.5
	10-Sep-24	0.48	1.00	304.39	303.87	0.52	0.37	1.43E-02	13.7	12.6
	02-Oct-24	0.51	1.00	304.35	303.86	0.49	0.35	1.35E-02	13.8	15.4
	04-Nov-24	0.52	0.99	304.34	303.87	0.47	0.34	1.29E-02	10.1	9.1
	02-Dec-24	0.54	1.02	304.32	303.84	0.48	0.35	1.32E-02	(F)	2.8
2024 AVERAGE VALUES						0.46	0.33	1.28E-02	11.3	10.4
OVERALL AVERAGE VALUES						0.35	0.25	9.51E-03	10.0	10.1

NOTES:
- m ASL metres above sea level
- (F) Frozen
- L/s/m² Litres per second per square metre
- Depth of screen midpoint below the creek bed is 1.39 m
- Assumed vertical permeability is 3.80E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUND WATER FLUX TO CREEK (L/s/m^2)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP2	09-Jan-20	(F)	0.91		303.61				(F)	0.5
	10-Feb-20	(F)	0.87		303.65				(F)	0.9
	09-Mar-20	0.26	0.74	304.26	303.78	0.48	0.26	2.21E-03	7.5	3.5
	14-Apr-20	0.32	0.88	304.20	303.64	0.56	0.30	2.57E-03	8.9	8.3
	13-May-20	0.35	0.92	304.17	303.60	0.57	0.31	2.62E-03	8.7	7.0
	11-Jun-20	0.30	0.74	304.22	303.78	0.44	0.24	2.02E-03	14.8	18.5
	08-Jul-20	0.46	0.84	304.06	303.68	0.38	0.21	1.75E-03	16.8	16.4
	19-Aug-20	0.69	0.99	303.83	303.53	0.3	0.16	1.38E-03	14.6	15.4
	17-Sep-20	0.59	0.95	303.93	303.57	0.36	0.19	1.65E-03	12.5	13.2
	23-Oct-20	**	**						**	**
	19-Nov-20	**	**						**	**
	18-Dec-20	**	**						**	**
	08-Jan-21	**	**						**	**
	10-Feb-21	**	**						**	**
	10-Mar-21	**	**						**	**
	21-Apr-21	**	**						**	**
	19-May-21	0.66	1.07	303.86	303.45	0.41	0.22	1.88E-03	11.6	11.8
	25-Jun-21	**	**						**	**
	27-Jul-21	0.55	1.01	303.97	303.51	0.46	0.25	2.11E-03	15.1	17.6
	12-Aug-21	**	**						**	**
	30-Sep-21	0.19*	0.95	304.33*	303.57	0.76*	0.41*	3.49E-03*	12.5	11.8
	27-Oct-21	0.37	0.78	304.15	303.74	0.41	0.22	1.88E-03	10.4	8.8
	10-Nov-21	0.39	0.88	304.13	303.64	0.49	0.26	2.25E-03	9.4	7.4
	16-Dec-21	0.39	0.86	304.13	303.66	0.47	0.25	2.16E-03	8.8	6.3
	14-Jan-22	(F)	0.98		303.54				(F)	0.7
	24-Feb-22	(F)	(F)						(F)	(F)
	17-Mar-22	0.29	0.81	304.23	303.71	0.52	0.28	2.39E-03	4.5	2.6
	21-Apr-22	0.29	0.84	304.23	303.68	0.55	0.30	2.53E-03	8.3	6.8
	24-May-22	0.31	0.96	304.21	303.56	0.65	0.35	2.99E-03	12.9	12.2
	15-Jun-22	0.31	0.96	304.21	303.56	0.65	0.35	2.99E-03	15.1	16.0
	14-Jul-22	0.67	1.02	303.85	303.50	0.35	0.19	1.61E-03	16.3	14.1
	25-Aug-22	0.63	1.12	303.89	303.40	0.49	0.26	2.25E-03	19.2	17.2
	13-Oct-22	0.58	0.92	303.94	303.60	0.34	0.18	1.56E-03	11.8	12.2
	24-Nov-22	0.67	0.92	303.86	303.60	0.25	0.14	1.17E-03	5.1	4.2
	16-Dec-22	0.57	0.76	303.95	303.76	0.19	0.10	8.73E-04	4.0	2.8
	12-Jan-23	0.46	0.88	304.06	303.65	0.42	0.22	1.91E-03	4.1	3.4
	14-Feb-23	0.47	0.82	304.05	303.70	0.35	0.19	1.61E-03	1.7	2.0
	17-Mar-23	0.59	0.80	303.94	303.72	0.22	0.12	9.88E-04	4.1	3.8
	27-Apr-23	0.39	0.80	304.13	303.72	0.41	0.22	1.87E-03	9.3	8.5
	26-May-23	0.48	0.83	304.04	303.69	0.35	0.19	1.61E-03	11.8	11.5
	15-Jun-23	0.49	0.78	304.03	303.75	0.28	0.15	1.31E-03	14.7	14.3
	26-Jul-23	0.41	0.47	304.11	304.05	0.06	0.03	2.71E-04	18.8	19.8
	08-Aug-23	0.51	0.71	304.01	303.81	0.20	0.11	9.19E-04	18.7	18.4
	07-Sep-23	0.29	0.79	304.23	303.73	0.50	0.27	2.30E-03	19.8	18.9
	26-Oct-23	0.50	0.78	304.02	303.75	0.27	0.15	1.26E-03	13.1	12.7
	16-Nov-23	0.55	0.82	303.97	303.71	0.26	0.14	1.22E-03	11.9	5.8
	18-Dec-23	0.51	0.75	304.01	303.78	0.24	0.13	1.08E-03	4.9	5.3
	08-Jan-24	0.70	0.79	303.82	303.73	0.09	0.05	4.14E-04	2.2	2.7
	27-Feb-24	0.62	0.72	303.90	303.80	0.10	0.05	4.59E-04	5.5	4.3
	12-Mar-24	0.52	0.72	304.00	303.80	0.20	0.11	9.19E-04	4.1	4.1
	05-Apr-24	0.51	0.73	304.01	303.79	0.22	0.12	1.01E-03	3.8	4.4
	13-May-24	0.52	0.75	304.00	303.77	0.23	0.12	1.06E-03	16.3	15.2
	04-Jun-24	0.46	0.77	304.06	303.75	0.31	0.17	1.42E-03	18.9	18.3
	09-Jul-24	0.44	0.78	304.08	303.74	0.34	0.18	1.56E-03	19.6	20.1
	13-Aug-24	0.48	0.78	304.04	303.74	0.30	0.16	1.38E-03	17.4	17.4
	10-Sep-24	0.49	0.77	304.03	303.75	0.28	0.15	1.29E-03	13.5	13.3
	02-Oct-24	0.33	0.79	304.20	303.73	0.47	0.25	2.14E-03	NA	14.8
	04-Nov-24	0.34	0.80	304.18	303.72	0.46	0.25	2.11E-03	10.2	9.1
	02-Dec-24	(F)	0.81		303.71				(F)	2.8
2024 AVERAGE VALUES						0.27	0.15	1.25E-03	11.2	10.5
OVERALL AVERAGE VALUES						0.35	0.21	1.82E-03	10.0	10.2

NOTES:
- · m ASL — metres above sea level
- · (F) — Frozen
- · * — Sept. 30, 2021 water level at DP2 is interpreted to be anomalous. On Oct. 6, the water level elevation at DP2 was 304.09 m ASL.
- · ** — Unavailable due to unsafe conditions
- · L/s/m² — Litres per second per square metre
- · Depth of screen midpoint below the creek bed is 1.85 m
- · Assumed vertical permeability is 8.50E-06 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP3	09-Jan-20	(F)	0.78		304.90				(F)	0.3
	10-Feb-20	(F)	0.80		304.88				(F)	0.9
	09-Mar-20	0.68	0.74	305.00	304.94	0.06	0.04	1.78E-03	8.5	5.2
	14-Apr-20	0.70	0.79	304.98	304.89	0.09	0.06	2.66E-03	6.4	5.8
	13-May-20	0.80	0.85	304.88	304.83	0.05	0.03	1.48E-03	8.1	8.0
	11-Jun-20	0.70	0.73	304.98	304.95	0.03	0.02	8.88E-04	14.7	18.9
	08-Jul-20	0.81	0.83	304.87	304.85	0.02	0.01	5.92E-04	14.4	15.2
	19-Aug-20	0.94	1.06	304.74	304.62	0.12	0.08	3.55E-03	13.2	16.2
	17-Sep-20	0.94	1.05	304.74	304.63	0.11	0.07	3.26E-03	12.8	14.6
	23-Oct-20	0.80	0.91	304.88	304.77	0.11	0.07	3.26E-03	11.4	10.7
	19-Nov-20	0.87	0.95	304.81	304.73	0.08	0.05	2.37E-03	10.3	6.3
	18-Dec-20	(F)	1.03		304.65				(F)	0.7
	08-Jan-21	(F)	0.97		304.71				(F)	0.3
	10-Feb-21	(F)	0.95		304.73				(F)	0.1
	10-Mar-21	0.75	0.93	304.93	304.75	0.18	0.12	5.33E-03	4.1	3.0
	21-Apr-21	0.88	0.92	304.80	304.76	0.04	0.03	1.18E-03	9.0	7.3
	19-May-21	1.00	1.11	304.68	304.57	0.11	0.07	3.26E-03	11.8	13.2
	25-Jun-21	0.81	0.85	304.87	304.83	0.04	0.03	1.18E-03	21.4	21.2
	27-Jul-21	0.96	1.01	304.72	304.67	0.05	0.03	1.48E-03	14.6	18.8
	12-Aug-21	0.98	1.10	304.70	304.58	0.12	0.08	3.55E-03	15.5	20.8
	30-Sep-21	0.91	0.97	304.77	304.71	0.06	0.04	1.78E-03	13.2	13.7
	27-Oct-21	0.65	0.81	305.03	304.87	0.16	0.11	4.74E-03	11.7	9.8
	10-Nov-21	0.85	0.92	304.83	304.76	0.07	0.05	2.07E-03	10.4	8.2
	16-Dec-21	0.87	0.89	304.81	304.79	0.02	0.01	5.92E-04	9.3	7.0
	14-Jan-22	(F)	1.01		304.67				(F)	0.0
	24-Feb-22	0.59	0.78	305.09	304.90	0.19	0.12	5.62E-03	(F)	0.5
	17-Mar-22	0.75	0.87	304.93	304.82	0.12	0.08	3.40E-03	7.1	3.4
	21-Apr-22	0.77	0.85	304.91	304.83	0.08	0.05	2.37E-03	8.3	7.9
	24-May-22	0.93	1.03	304.75	304.65	0.10	0.07	2.96E-03	13.1	12.6
	15-Jun-22	0.94	1.03	304.74	304.65	0.09	0.06	2.66E-03	15.0	17.6
	14-Jul-22	1.00	1.09	304.68	304.59	0.09	0.06	2.66E-03	14.3	15.5
	25-Aug-22	0.98	1.07	304.70	304.61	0.09	0.06	2.66E-03	16.0	18.8
	08-Sep-22	1.01	1.07	304.67	304.61	0.06	0.04	1.78E-03	13.9	16.2
	13-Oct-22	0.90	0.99	304.78	304.69	0.09	0.06	2.66E-03	12.1	12.7
	24-Nov-22	0.99	1.08	304.69	304.60	0.09	0.06	2.66E-03	5.2	2.8
	16-Dec-22	0.92	1.01	304.76	304.67	0.09	0.06	2.66E-03	8.1	1.7
	12-Jan-23	0.93	1.03	304.75	304.66	0.10	0.06	2.84E-03	6.3	2.3
	14-Feb-23	0.85	0.94	304.84	304.74	0.09	0.06	2.81E-03	4.7	1.7
	17-Mar-23	0.86	0.96	304.83	304.73	0.10	0.07	2.96E-03	7.0	3.4
	27-Apr-23	0.85	0.96	304.83	304.73	0.10	0.07	3.11E-03	8.2	8.1
	26-May-23	0.93	1.02	304.75	304.66	0.09	0.06	2.66E-03	9.4	12.7
	15-Jun-23	0.97	1.01	304.71	304.67	0.04	0.03	1.18E-03	12.7	15.4
	25-Jul-23	0.23	0.20	305.45	305.48	-0.03	-0.02	-8.88E-04	18.9	18.5
	08-Aug-23	0.82	0.91	304.87	304.78	0.09	0.06	2.66E-03	12.9	18.2
	07-Sep-23	0.90	1.00	304.79	304.68	0.11	0.07	3.11E-03	14.3	20.1
	26-Oct-23	0.88	0.98	304.80	304.70	0.10	0.07	2.96E-03	11.4	12.7
	16-Nov-23	0.90	0.99	304.78	304.69	0.09	0.06	2.66E-03	9.1	5.7
	18-Dec-23	0.84	0.94	304.84	304.75	0.10	0.06	2.81E-03	6.7	5.0
	08-Jan-24	0.90	0.98	304.79	304.71	0.08	0.05	2.37E-03	5.8	2.7
	27-Feb-24	0.88	0.99	304.80	304.69	0.11	0.07	3.26E-03	5.9	4.3
	12-Mar-24	0.81	0.91	304.87	304.77	0.10	0.07	2.96E-03	7.7	4.2
	05-Apr-24	0.70	0.85	304.98	304.83	0.15	0.10	4.44E-03	7.3	4.5
	13-May-24	0.88	0.96	304.80	304.72	0.08	0.05	2.37E-03	10.4	13.5
	04-Jun-24	0.89	0.97	304.79	304.71	0.08	0.05	2.37E-03	11.4	17.3
	09-Jul-24	0.96	1.03	304.72	304.65	0.07	0.05	2.07E-03	12.8	20.5
	13-Aug-24	0.89	1.09	304.79	304.59	0.20	0.13	5.92E-03	17.5	14.0
	10-Sep-24	0.91	1.00	304.78	304.68	0.10	0.06	2.81E-03	12.2	14.4
	02-Oct-24	0.90	1.00	304.78	304.68	0.10	0.07	2.96E-03	12.7	14.4
	04-Nov-24	0.90	1.00	304.78	304.68	0.10	0.07	2.96E-03	10.9	9.4
	02-Dec-24	0.91	1.02	304.77	304.66	0.11	0.07	3.26E-03	(F)	1.5
2024 AVERAGE VALUES						0.11	0.07	3.15E-03	10.4	10.1
OVERALL AVERAGE VALUES						0.07	0.05	2.16E-03	9.6	10.5

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- Depth of screen midpoint below the creek bed is 1.52 m
- Assumed vertical permeability is 4.50E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP4	09-Jan-20	(F)	1.30		305.50				(F)	0.3
	10-Feb-20	(F)	1.20		305.60				(F)	1.0
	09-Mar-20	1.16	1.22	305.64	305.58	0.06	0.05	1.81E-03	7.6	4.8
	14-Apr-20	**	1.25		305.55				**	5.9
	DRIVE POINT WAS REPLACED DUE TO CORROSION									
DP4R	13-May-20	0.85	0.94	305.61	305.52	0.09	0.15	5.02E-03		
	11-Jun-20	0.78	0.85	305.68	305.61	0.07	0.11	3.90E-03	13.3	19.2
	08-Jul-20	1.20	1.34	305.26	305.12	0.14	0.23	7.80E-03	17.6	20.5
	19-Aug-20	0.94	0.98	305.52	305.48	0.04	0.07	2.23E-03	14.1	16.6
	17-Sep-20	0.92	0.97	305.54	305.49	0.05	0.08	2.79E-03	13.9	15.0
	23-Oct-20	0.84	0.90	305.62	305.56	0.06	0.10	3.34E-03	12.1	10.5
	19-Nov-20	0.88	0.95	305.58	305.51	0.07	0.11	3.90E-03	10.3	6.3
	18-Dec-20	(F)	0.95		305.51				(F)	0.5
	08-Jan-21	(F)	0.93		305.53				(F)	0.1
	10-Feb-21	0.92	0.85	305.54	305.61	-0.07	-0.11	-3.90E-03	(F)	-0.2
	10-Mar-21	0.89	0.92	305.57	305.54	0.03	0.05	1.67E-03	5.1	3.0
	21-Apr-21	0.92	0.95	305.54	305.51	0.03	0.05	1.67E-03	8.0	6.8
	19-May-21	0.94	0.99	305.52	305.47	0.05	0.08	2.79E-03	14.0	14.1
	25-Jun-21	0.61	0.61	305.85	305.85	0.00	0.00	0.00E+00	20.3	21.3
	27-Jul-21	0.94	0.98	305.52	305.48	0.04	0.07	2.23E-03	16.4	19.4
	12-Aug-21	0.96	0.99	305.50	305.47	0.03	0.05	1.67E-03	17.7	21.5
	30-Sep-21	0.92	0.98	305.54	305.48	0.06	0.10	3.34E-03	13.9	13.7
	27-Oct-21	0.83	0.88	305.63	305.58	0.05	0.08	2.79E-03	12.4	9.8
	10-Nov-21	0.90	0.94	305.56	305.52	0.04	0.07	2.23E-03	11.5	8.3
	16-Dec-21	0.87	0.90	305.59	305.56	0.03	0.05	1.67E-03	9.3	6.7
	14-Jan-22	(F)	0.98		305.48				(F)	0.0
	24-Feb-22	0.72	0.83	305.74	305.63	0.11	0.18	6.13E-03	(F)	0.6
	17-Mar-22	0.84	0.87	305.62	305.59	0.03	0.05	1.67E-03	5.4	3.2
	21-Apr-22	0.85	0.90	305.61	305.56	0.05	0.08	2.79E-03	8.4	7.8
	24-May-22	0.93	0.95	305.53	305.51	0.02	0.03	1.11E-03	12.0	12.8
	15-Jun-22	0.93	0.97	305.53	305.49	0.04	0.07	2.23E-03	15.0	18.1
	14-Jul-22	0.97	1.01	305.49	305.45	0.04	0.07	2.23E-03	14.4	16.3
	25-Aug-22	0.96	0.99	305.50	305.47	0.03	0.05	1.67E-03	17.7	19.4
	08-Sep-22	0.99	1.01	305.47	305.45	0.02	0.03	1.11E-03	16.5	16.8
	13-Oct-22	0.93	0.94	305.53	305.52	0.01	0.02	5.57E-04	12.1	12.8
	24-Nov-22	0.98	0.98	305.48	305.48	0.00	0.00	0.00E+00	5.2	2.4
	16-Dec-22	0.93	0.95	305.53	305.51	0.02	0.03	1.11E-03	3.5	1.2
	12-Jan-23	0.96	0.96	305.51	305.50	0.00	0.01	2.79E-04	4.8	2.2
	14-Feb-23	0.90	0.93	305.57	305.53	0.04	0.06	1.95E-03	4.7	1.6
	17-Mar-23	0.89	0.91	305.57	305.55	0.02	0.03	8.92E-04	5.2	3.3
	27-Apr-23	0.89	0.92	305.57	305.54	0.03	0.05	1.67E-03	8.0	8.8
	26-May-23	0.92	0.94	305.54	305.52	0.02	0.03	1.11E-03	11.6	12.8
	15-Jun-23	0.91	0.95	305.55	305.51	0.04	0.07	2.23E-03	12.3	15.3
	25-Jul-23	0.44	0.41	306.02	306.05	-0.03	-0.05	-1.73E-03	19.1	18.6
	08-Aug-23	0.88	0.91	305.58	305.56	0.02	0.04	1.39E-03	15.0	18.4
	07-Sep-23	0.91	0.98	305.55	305.48	0.07	0.11	3.90E-03	15.8	20.6
	26-Oct-23	0.90	0.94	305.56	305.53	0.04	0.06	1.95E-03	12.0	12.8
	16-Nov-23	0.94	0.95	305.52	305.51	0.01	0.02	5.57E-04	7.5	5.5
	18-Dec-23	0.91	0.96	305.55	305.50	0.05	0.08	2.79E-03	6.6	5.2
	08-Jan-24	1.00	0.95	305.47	305.51	-0.05	-0.07	-2.51E-03	5.4	2.6
	27-Feb-24	0.90	0.95	305.56	305.51	0.05	0.08	2.79E-03	6.6	3.7
	12-Mar-24	0.86	0.90	305.60	305.56	0.04	0.07	2.23E-03	5.5	4.4
	05-Apr-24	0.81	0.88	305.65	305.58	0.07	0.11	3.90E-03	5.7	4.6
	13-May-24	0.89	0.94	305.57	305.52	0.05	0.08	2.79E-03	11.1	13.5
	04-Jun-24	0.91	0.95	305.55	305.51	0.04	0.07	2.23E-03	12.6	17.7
	09-Jul-24	0.94	0.99	305.52	305.47	0.05	0.08	2.79E-03	14.8	20.2
	13-Aug-24	0.90	0.95	305.56	305.51	0.05	0.08	2.79E-03	17.8	14.9
	10-Sep-24	0.90	0.98	305.56	305.48	0.08	0.13	4.46E-03	14.0	14.6
	02-Oct-24	0.92	0.98	305.54	305.48	0.06	0.10	3.34E-03	15.2	14.5
	04-Nov-24	0.93	0.97	305.53	305.49	0.04	0.07	2.23E-03	10.1	9.2
	02-Dec-24	0.93	0.98	305.53	305.48	0.05	0.08	2.79E-03	(F)	1.4
2024 AVERAGE VALUES						0.04	0.07	2.48E-03	10.8	10.1
OVERALL AVERAGE VALUES						0.08	0.08	3.52E-03	10.5	10.6

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- ** — Unavailable due to damaged drive point
- L/s/m² — Litres per second per square metre
- Depth of screen midpoint below the creek bed was 1.13 m for DP4, 0.61 for DP4R
- Assumed vertical permeability is 3.40E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP5CR	09-Jan-20	(F)	0.48		303.23				(F)	0.4
	10-Feb-20	0.30	0.69	303.42	303.02	0.39	0.52	1.72E-03	(F)	0.8
	09-Mar-20	0.16	0.51	303.55	303.20	0.35	0.46	1.52E-03	6.2	3.3
	14-Apr-20	0.25	0.62	303.46	303.09	0.37	0.49	1.61E-03	7.1	6.3
	13-May-20	0.33	0.77	303.38	302.94	0.44	0.58	1.91E-03	8.8	9.2
	11-Jun-20	0.25	0.55	303.46	303.16	0.30	0.39	1.30E-03	12.5	18.4
	08-Jul-20	0.53	0.80	303.18	302.91	0.27	0.36	1.17E-03	16.0	18.2
	19-Aug-20	0.52	0.81	303.19	302.90	0.29	0.38	1.26E-03	13.9	14.2
	17-Sep-20	0.52	0.80	303.19	302.91	0.28	0.37	1.22E-03	13.2	13.4
	23-Oct-20	0.32	0.67	303.39	303.04	0.35	0.46	1.52E-03	11.4	10.2
	19-Nov-20	0.66	0.74	303.05	302.97	0.08	0.11	3.47E-04	10.7	6.7
	18-Dec-20	(F)	0.79		302.92				(F)	0.6
	08-Jan-21	(F)	0.70		303.01				(F)	0.2
	10-Feb-21	(F)	0.86		302.85				(F)	0.1
	10-Mar-21	0.16	0.62	303.55	303.09	0.46	0.61	2.00E-03	7.7	4.9
	21-Apr-21	0.36	0.81	303.35	302.90	0.45	0.59	1.95E-03	8.9	8.0
	19-May-21	0.51	0.86	303.20	302.85	0.35	0.46	1.52E-03	11.6	12.0
	25-Jun-21	0.27	0.39	303.44	303.32	0.12	0.16	5.21E-04	17.2	21.1
	27-Jul-21	0.50	0.84	303.21	302.87	0.34	0.45	1.48E-03	15.9	18.1
	12-Aug-21	0.47	0.84	303.24	302.87	0.37	0.49	1.61E-03	16.9	20.3
	30-Sep-21	0.39	0.71	303.32	303.00	0.32	0.42	1.39E-03	13.4	13.1
	27-Oct-21	0.34	0.80	303.37	302.91	0.46	0.61	2.00E-03	12.8	10.1
	10-Nov-21	0.37	0.78	303.34	302.93	0.41	0.54	1.78E-03	10.9	8.5
	16-Dec-21	0.31	0.78	303.40	302.93	0.47	0.62	2.04E-03	9.3	7.7
	14-Jan-22	(F)	(F)						(F)	0.7
	24-Feb-22	(F)	0.59		303.12				(F)	0.4
	17-Mar-22	0.24	0.71	303.47	303.00	0.47	0.62	2.04E-03	7.5	5.1
	21-Apr-22	0.25	0.72	303.46	302.99	0.47	0.62	2.04E-03	9.2	8.2
	24-May-22	0.36	0.82	303.35	302.89	0.46	0.61	2.00E-03	13.4	14.5
	15-Jun-22	0.37	0.80	303.34	302.91	0.43	0.57	1.87E-03	15.0	17.3
	14-Jul-22	0.53	0.85	303.18	302.86	0.32	0.42	1.39E-03	15.6	16.6
	25-Aug-22	0.49	0.83	303.22	302.88	0.34	0.45	1.48E-03	17.3	18.4
	08-Sep-22	0.56	0.84	303.15	302.87	0.28	0.37	1.22E-03	16.0	15.7
	13-Oct-22	0.45	0.80	303.26	302.91	0.35	0.46	1.52E-03	12.0	12.4
	24-Nov-22	0.45	0.85	303.27	302.87	0.40	0.53	1.74E-03	6.9	4.4
	16-Dec-22	0.44	0.81	303.27	302.90	0.37	0.49	1.61E-03	7.8	2.5
	12-Jan-23	0.36	0.84	303.36	302.87	0.48	0.64	2.11E-03	5.6	2.9
	14-Feb-23	0.27	0.78	303.44	302.93	0.51	0.67	2.20E-03	5.1	2.3
	17-Mar-23	0.15	0.79	303.56	302.92	0.64	0.84	2.79E-03	7.1	3.9
	27-Apr-23	0.30	0.81	303.41	302.90	0.51	0.67	2.21E-03	8.6	9.2
	26-May-23	0.32	0.84	303.39	302.87	0.52	0.68	2.26E-03	10.2	14.2
	15-Jun-23	0.38	0.90	303.33	302.81	0.52	0.68	2.26E-03	12.2	14.8
	25-Jul-23	0.16	0.27	303.55	303.44	0.11	0.14	4.78E-04	18.6	19.5
	08-Aug-23	0.31	0.78	303.40	302.94	0.46	0.61	2.02E-03	15.7	18.8
	07-Sep-23	0.39	0.83	303.32	302.88	0.44	0.58	1.91E-03	16.3	19.9
	26-Oct-23	0.36	0.81	303.35	302.90	0.45	0.59	1.95E-03	11.7	12.7
	16-Nov-23	0.35	0.82	303.36	302.89	0.47	0.62	2.04E-03	9.1	6.4
	18-Dec-23	0.28	0.83	303.43	302.88	0.55	0.72	2.39E-03	6.3	5.5
	08-Jan-24	0.47	0.87	303.24	302.84	0.40	0.53	1.74E-03	6.5	2.6
	27-Feb-24	0.28	0.82	303.43	302.89	0.54	0.71	2.34E-03	6.4	4.7
	12-Mar-24	0.29	0.78	303.42	302.93	0.49	0.64	2.13E-03	7.9	5.2
	05-Apr-24	0.31	0.73	303.40	302.98	0.42	0.55	1.82E-03	6.2	4.8
	13-May-24	0.31	0.82	303.40	302.89	0.51	0.67	2.21E-03	10.6	15.6
	04-Jun-24	0.33	0.81	303.38	302.90	0.48	0.63	2.08E-03	14.1	20.6
	13-Aug-24	0.36	0.82	303.35	302.89	0.46	0.61	2.00E-03	19.1	14.3
	10-Sep-24	0.37	0.82	303.34	302.89	0.45	0.59	1.95E-03	12.8	13.0
	02-Oct-24	0.37	0.83	303.35	302.88	0.46	0.61	2.02E-03	15.5	15.6
	04-Nov-24	0.36	0.83	303.35	302.88	0.47	0.62	2.04E-03	11.4	10.5
	02-Dec-24	(F)	0.84		302.87				(F)	2.9
2024 AVERAGE VALUES						0.46	0.61	2.02E-03	11.5	11.0
OVERALL AVERAGE VALUES						0.15	0.22	2.60E-03	10.9	10.1

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- New pipe added March 2012, elevation of Top of Pipe is now 304.348 m ASL.
- Depth of screen midpoint below the creek bed is 0.72 m for DP5B, 0.57 m for DP5C, 0.62 m for DP5D and 0.76 m for DP5CR.
- Horizontal hydraulic conductivity (Kh) value for DP5B/5C data in 2011/2012 estimated as the geometric mean of slug test values for DP5A and DP5C. Vertical hydraulic conductivity value (Kv) calculated as 1.0E-06 m/s based on assumed Kv:Kh of 1:10.
- Vertical hydraulic conductivity value (Kv) for DP5D calculated as 4.7E-06 m/s based on assumed Kv:Kh of 1:10.
- Vertical hydraulic conductivity value (Kv) for DP5CR calculated as 3.3E-06 m/s based on geometric mean of slug test values for DP5A, DP5C, and DP5CR, and assumed Kv:Kh of 1:10.
- Underlining indicates data are interpreted with caution due to beaver dam downstream of DP5CR

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP17R	09-Jan-20	(F)	1.08		305.30				(F)	0.3
	10-Feb-20	1.01	1.07	305.37	305.31	0.06	0.13	2.36E-03	(F)	1.0
	09-Mar-20	0.95	1.10	305.43	305.28	0.15	0.33	5.90E-03	8.1	4.8
	14-Apr-20	0.98	1.05	305.40	305.33	0.07	0.16	2.75E-03	6.4	5.9
	13-May-20	1.02	1.07	305.36	305.31	0.05	0.11	1.97E-03	8.4	7.8
	11-Jun-20	0.96	1.01	305.42	305.37	0.05	0.11	1.97E-03	16.2	18.9
	08-Jul-20	1.09	1.13	305.29	305.25	0.04	0.09	1.57E-03	14.2	20.3
	19-Aug-20	1.09	1.13	305.29	305.25	0.04	0.09	1.57E-03	14.2	16.7
	17-Sep-20	1.09	1.11	305.29	305.27	0.02	0.04	7.87E-04	15.1	15.0
	23-Oct-20	1.00	1.05	305.38	305.33	0.05	0.11	1.97E-03	12.1	10.6
	19-Nov-20	1.05	1.09	305.33	305.29	0.04	0.09	1.57E-03	11.0	5.8
	18-Dec-20	(F)	1.11		305.27				(F)	0.5
	08-Jan-21	(F)	1.09		305.29				(F)	0.1
	10-Feb-21	(F)	1.00		305.38				(F)	-0.1
	10-Mar-21	0.99	1.07	305.39	305.31	0.08	0.18	3.15E-03	3.5	2.4
	21-Apr-21	1.05	1.09	305.33	305.29	0.04	0.09	1.57E-03	8.1	6.7
	19-May-21	1.12	1.14	305.26	305.24	0.02	0.04	7.87E-04	13.5	13.9
	25-Jun-21	0.80	0.84	305.58	305.54	0.04	0.09	1.57E-03	21.6	21.4
	27-Jul-21	1.09	1.12	305.29	305.26	0.03	0.07	1.18E-03	15.6	19.1
	12-Aug-21	1.11	1.13	305.27	305.25	0.02	0.04	7.87E-04	17.4	21.4
	30-Sep-21	1.06	1.11	305.32	305.27	0.05	0.11	1.97E-03	12.9	13.8
	27-Oct-21	0.99	1.02	305.39	305.36	0.03	0.07	1.18E-03	12.3	9.8
	10-Nov-21	1.04	1.07	305.34	305.31	0.03	0.07	1.18E-03	10.4	8.2
	16-Dec-21	1.01	1.06	305.37	305.32	0.05	0.11	1.97E-03	9.1	6.8
	14-Jan-22	(F)	1.08		305.30				(F)	0.0
	24-Feb-22	0.94	1.03	305.44	305.35	0.09	0.20	3.54E-03	(F)	0.4
	17-Mar-22	1.01	1.06	305.37	305.32	0.05	0.11	1.97E-03	8.2	3.1
	21-Apr-22	1.01	1.06	305.37	305.32	0.05	0.11	1.97E-03	8.5	7.8
	24-May-22	1.06	1.11	305.32	305.27	0.05	0.11	1.97E-03	12.2	12.6
	15-Jun-22	1.09	1.12	305.29	305.26	0.03	0.07	1.18E-03	14.7	17.9
	14-Jul-22	1.14	1.16	305.24	305.22	0.02	0.04	7.87E-04	14.1	15.6
	25-Aug-22	1.12	1.14	305.26	305.24	0.02	0.04	7.87E-04	16.1	19.3
	08-Sep-22	1.15	1.15	305.23	305.23	0.00	0.00	0.00E+00	15.3	16.7
	13-Oct-22	1.08	1.10	305.30	305.28	0.02	0.04	7.87E-04	12.1	12.8
	24-Nov-22	1.13	1.15	305.25	305.23	0.02	0.04	7.87E-04	6.0	2.0
	16-Dec-22	1.09	1.11	305.29	305.27	0.02	0.04	7.87E-04	2.5	1.2
	12-Jan-23	1.10	1.12	305.28	305.26	0.02	0.04	7.87E-04	5.5	2.2
	14-Feb-23	1.06	1.10	305.32	305.28	0.05	0.10	1.77E-03	5.2	1.6
	17-Mar-23	1.05	1.10	305.33	305.28	0.05	0.11	1.97E-03	6.8	3.3
	27-Apr-23	1.06	1.09	305.32	305.29	0.03	0.07	1.18E-03	10.0	8.6
	26-May-23	1.08	1.11	305.30	305.27	0.03	0.07	1.18E-03	NA	12.1
	15-Jun-23	1.08	1.11	305.30	305.27	0.03	0.07	1.18E-03	11.7	15.3
	25-Jul-23	0.58	0.57	305.80	305.81	-0.01	-0.03	-5.51E-04	18.9	18.6
	08-Aug-23	1.05	1.08	305.33	305.30	0.03	0.07	1.22E-03	14.4	18.3
	07-Sep-23	1.09	1.13	305.29	305.25	0.04	0.09	1.57E-03	16.5	20.4
	26-Oct-23	1.08	1.11	305.30	305.27	0.03	0.07	1.30E-03	12.1	12.8
	16-Nov-23	1.09	1.12	305.29	305.26	0.03	0.07	1.18E-03	NA	5.5
	18-Dec-23	0.97	1.11	305.41	305.27	0.14	0.31	5.51E-03	6.6	5.0
	08-Jan-24	1.09	1.10	305.29	305.28	0.01	0.02	3.93E-04	5.9	2.4
	27-Feb-24	1.06	1.11	305.32	305.27	0.05	0.10	1.77E-03	8.3	4.0
	12-Mar-24	1.03	1.08	305.35	305.30	0.05	0.11	1.97E-03	7.0	3.9
	05-Apr-24	1.00	1.00	305.38	305.38	0.00	0.00	0.00E+00	7.2	4.5
	13-May-24	1.06	1.08	305.32	305.30	0.02	0.04	7.87E-04	10.9	13.6
	04-Jun-24	1.06	1.09	305.32	305.29	0.03	0.07	1.18E-03	13.4	17.0
	09-Jul-24	1.11	1.13	305.27	305.25	0.02	0.04	7.87E-04	18.6	21.1
	13-Aug-24	1.07	1.11	305.31	305.27	0.04	0.09	1.57E-03	17.7	14.1
	10-Sep-24	1.08	1.10	305.30	305.28	0.02	0.04	7.87E-04	13.0	14.4
	02-Oct-24	1.08	1.11	305.30	305.27	0.03	0.07	1.18E-03	13.6	14.5
	04-Nov-24	1.08	1.12	305.30	305.26	0.04	0.09	1.57E-03	11.7	11.0
	02-Dec-24	1.09	1.12	305.29	305.26	0.03	0.07	1.18E-03	(F)	1.3
2024 AVERAGE VALUES						0.03	0.06	1.10E-03	11.6	10.2
OVERALL AVERAGE VALUES						0.03	0.04	6.42E-04	10.1	10.6

NOTES:
- m ASL
- (F)
- L/s/m²
- NA - Not available due to equipment failure
- Depth of screen midpoint below the creek bed is 0.90 m for DP17 and 0.45 m for DP17R
- Assumed vertical permeability is 1.77E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP18	09-Jan-20	(F)	0.38		307.36				(F)	0.3
	10-Feb-20	0.31	0.39	307.43	307.35	0.08	0.11	2.22E-03	(F)	1.0
	09-Mar-20	0.25	0.27	307.49	307.47	0.02	0.03	5.56E-04	3.9	2.9
	14-Apr-20	0.28	0.33	307.46	307.41	0.05	0.07	1.39E-03	6.8	6.4
	13-May-20	0.28	0.41	307.46	307.33	0.13	0.18	3.62E-03	8.4	10.8
	11-Jun-20	0.16	0.24	307.58	307.50	0.08	0.11	2.22E-03	16.6	18.4
	08-Jul-20	0.45	0.50	307.29	307.24	0.05	0.07	1.39E-03	17.3	19.1
	19-Aug-20	0.41	0.52	307.33	307.22	0.11	0.15	3.06E-03	16.6	16.8
	17-Sep-20	0.45	0.51	307.29	307.23	0.06	0.08	1.67E-03	14.6	14.8
	23-Oct-20	0.27	0.36	307.47	307.38	0.09	0.12	2.50E-03	11.1	10.4
	19-Nov-20	0.34	0.42	307.40	307.32	0.08	0.11	2.22E-03	9.2	6.5
	18-Dec-20	(F)	0.39		307.35				(F)	0.8
	08-Jan-21	(F)	0.37		307.37				(F)	0.2
	10-Feb-21	(F)	0.49		307.25				(F)	-0.2
	10-Mar-21	0.34	0.43	307.40	307.31	0.09	0.12	2.50E-03	3.8	2.7
	21-Apr-21	0.34	0.43	307.40	307.31	0.09	0.12	2.50E-03	9.2	7.4
	19-May-21	0.49	0.57	307.25	307.17	0.08	0.11	2.22E-03	13.2	13.6
	25-Jun-21	0.25	0.40	307.49	307.34	0.15	0.21	4.17E-03	20.6	21.5
	27-Jul-21	0.39	0.49	307.35	307.25	0.10	0.14	2.78E-03	18.6	19.8
	12-Aug-21	0.43	0.51	307.31	307.23	0.08	0.11	2.22E-03	20.7	22.0
	30-Sep-21	0.21	0.45	307.53	307.29	0.24	0.33	6.67E-03	14.2	13.3
	27-Oct-21	0.21	0.29	307.53	307.45	0.08	0.11	2.22E-03	11.7	9.2
	10-Nov-21	0.29	0.38	307.45	307.36	0.09	0.12	2.50E-03	9.5	8.1
	16-Dec-21	0.26	0.34	307.48	307.40	0.08	0.11	2.22E-03	8.5	6.7
	14-Jan-22	(F)	0.45		307.29				(F)	0.1
	24-Feb-22	(F)	0.13		307.61				(F)	0.8
	17-Mar-22	0.23	0.32	307.51	307.42	0.09	0.12	2.50E-03	6.7	5.0
	21-Apr-22	0.24	0.30	307.50	307.44	0.06	0.08	1.67E-03	8.6	8.1
	24-May-22	0.33	0.44	307.41	307.30	0.11	0.15	3.06E-03	14.2	14.9
	15-Jun-22	0.35	0.45	307.39	307.29	0.10	0.14	2.78E-03	16.8	19.3
	14-Jul-22	0.58	0.51	307.16	307.23	-0.07	-0.10	-1.95E-03	19.3	18.8
	25-Aug-22	0.71	0.48	307.03	307.26	-0.23	-0.32	-6.40E-03	21.4	20.6
	08-Sep-22	0.57	0.52	307.17	307.22	-0.05	-0.07	-1.39E-03	18.0	17.6
	13-Oct-22	0.70	0.44	307.04	307.30	-0.26	-0.36	-7.23E-03	13.4	12.8
	24-Nov-22	0.74	0.47	307.00	307.27	-0.27	-0.37	-7.51E-03	5.3	3.7
	16-Dec-22	0.54	0.43	307.20	307.31	-0.11	-0.15	-3.06E-03	3.9	3.0
	12-Jan-23	0.54	0.44	307.21	307.31	-0.10	-0.14	-2.78E-03	4.6	3.5
	14-Feb-23	0.50	0.39	307.25	307.36	-0.11	-0.15	-3.06E-03	3.2	2.9
	17-Mar-23	0.41	0.36	307.33	307.38	-0.05	-0.07	-1.39E-03	3.8	3.4
	27-Apr-23	0.49	0.39	307.25	307.35	-0.10	-0.14	-2.78E-03	8.9	11.3
	26-May-23	0.56	0.45	307.18	307.29	-0.11	-0.15	-3.06E-03	12.4	14.9
	15-Jun-23	0.39	0.45	307.35	307.30	0.06	0.08	1.53E-03	15.2	16.2
	25-Jul-23	0.19	0.09	307.55	307.65	-0.10	-0.13	-2.67E-03	16.6	19.8
	08-Aug-23	0.42	0.35	307.33	307.40	-0.07	-0.10	-1.95E-03	17.7	19.7
	07-Sep-23	0.38	0.45	307.37	307.29	0.07	0.10	2.09E-03	18.6	20.9
	26-Oct-23	0.58	0.40	307.16	307.34	-0.18	-0.25	-5.01E-03	13.2	13.4
	16-Nov-23	0.46	0.44	307.28	307.31	-0.02	-0.03	-6.95E-04	8.3	5.5
	18-Dec-23	0.38	0.60	307.36	307.14	0.22	0.30	6.12E-03	4.9	5.3
	08-Jan-24	0.39	0.44	307.35	307.30	0.05	0.07	1.39E-03	4.4	2.6
	27-Feb-24	0.52	0.38	307.22	307.36	-0.14	-0.19	-3.89E-03	5.2	4.3
	12-Mar-24	0.51	0.33	307.23	307.41	-0.18	-0.25	-5.01E-03	6.8	5.6
	05-Apr-24	0.72	0.28	307.02	307.46	-0.44	-0.60	-1.22E-02	5.2	4.6
	13-May-24	0.58	0.40	307.16	307.34	-0.18	-0.25	-5.01E-03	13.9	15.3
	04-Jun-24	0.61	0.41	307.13	307.33	-0.20	-0.27	-5.56E-03	16.1	20.0
	09-Jul-24	0.58	0.43	307.16	307.31	-0.15	-0.21	-4.17E-03	18.6	22.8
	13-Aug-24	0.17	0.45	307.57	307.29	0.28	0.38	7.79E-03	19.7	20.6
	10-Sep-24	0.22	0.44	307.52	307.30	0.22	0.30	6.12E-03	16.7	16.4
	02-Oct-24	0.65	0.43	307.09	307.31	-0.22	-0.30	-6.12E-03	16.4	15.7
	04-Nov-24	0.77	0.43	306.97	307.31	-0.34	-0.47	-9.45E-03	10.9	9.9
	02-Dec-24	0.44	0.45	307.30	307.29	0.01	0.01	2.78E-04	(F)	2.9
2024 AVERAGE VALUES						-0.11	-0.15	-2.99E-03	12.2	11.7
OVERALL AVERAGE VALUES						0.03	0.04	8.87E-04	11.4	10.6

NOTES:
- m ASL metres above sea level
- (F) Frozen
- L/s/m² Litres per second per square metre
- n/a not available
- Depth of screen midpoint below the creek bed is 0.73 m
- Assumed vertical permeability is 2.03E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP19	09-Jan-20	(F)	0.86		306.67				(F)	0.1
	10-Feb-20	0.73	0.93	306.80	306.60	0.20	0.09	1.34E-03	(F)	1.0
	09-Mar-20	0.67	0.83	306.86	306.70	0.16	0.07	1.07E-03	4.8	3.2
	14-Apr-20	0.67	0.87	306.86	306.66	0.20	0.09	1.34E-03	7.5	6.3
	13-May-20	0.70	0.93	306.83	306.60	0.23	0.11	1.54E-03	8.0	10.1
	11-Jun-20	0.68	0.75	306.85	306.78	0.07	0.03	4.69E-04	14.0	19.8
	08-Jul-20	0.98	1.00	306.55	306.53	0.02	0.01	1.34E-04	17.2	19.3
	19-Aug-20	0.92	1.02	306.61	306.51	0.10	0.05	6.70E-04	16.3	16.8
	17-Sep-20	0.96	1.05	306.57	306.48	0.09	0.04	6.03E-04	14.4	14.9
	23-Oct-20	0.80	0.91	306.73	306.62	0.11	0.05	7.37E-04	10.0	10.4
	19-Nov-20	0.94	0.95	306.59	306.58	0.01	0.00	6.70E-05	8.1	5.4
	18-Dec-20	(F)	0.92		306.61				(F)	0.6
	08-Jan-21	(F)	0.85		306.68				(F)	0.2
	10-Feb-21	(F)	0.88		306.65				(F)	-0.1
	10-Mar-21	0.91	0.95	306.62	306.58	0.04	0.02	2.68E-04	4.6	3.0
	21-Apr-21	0.80	0.97	306.73	306.56	0.17	0.08	1.14E-03	9.1	7.3
	19-May-21	0.93	1.03	306.60	306.50	0.10	0.05	6.70E-04	12.5	13.7
	25-Jun-21	0.81	0.90	306.72	306.63	0.09	0.04	6.03E-04	19.8	20.2
	27-Jul-21	1.02	1.03	306.51	306.50	0.01	0.00	6.70E-05	18.9	19.7
	12-Aug-21	1.07	1.03	306.46	306.50	-0.04	-0.02	-2.68E-04	20.9	22.0
	30-Sep-21	0.90	0.98	306.63	306.55	0.08	0.04	5.36E-04	14.8	13.3
	27-Oct-21	0.78	0.81	306.75	306.72	0.03	0.01	2.01E-04	12.4	9.3
	10-Nov-21	0.77	0.88	306.76	306.65	0.11	0.05	7.37E-04	9.7	8.1
	16-Dec-21	0.89	0.87	306.64	306.66	0.11	0.05	7.37E-04	7.9	6.6
	14-Jan-22	(F)	0.92		306.61				(F)	0.2
	24-Feb-22	(F)	0.49		307.04				(F)	(F)
	17-Mar-22	0.78	0.81	306.75	306.72	0.03	0.01	2.01E-04	7.7	5.2
	21-Apr-22	0.79	0.84	306.74	306.69	0.05	0.02	3.35E-04	7.8	7.9
	24-May-22	0.88	0.94	306.65	306.59	0.06	0.03	4.02E-04	14.6	14.8
	15-Jun-22	0.90	0.92	306.63	306.61	0.02	0.01	1.34E-04	16.3	18.7
	14-Jul-22	1.58	0.98	305.95	306.55	-0.60	-0.28	-4.02E-03	19.1	19
	25-Aug-22	1.63	0.94	305.90	306.59	-0.69	-0.32	-4.62E-03	20.6	20.6
	08-Sep-22	1.91	0.98	305.62	306.55	-0.93	-0.43	-6.23E-03	18.0	17.7
	13-Oct-22	1.80	0.99	305.73	306.54	-0.81	-0.38	-5.43E-03	12.1	12.9
	24-Nov-22	1.63	0.95	305.90	306.58	-0.68	-0.32	-4.55E-03	6.8	4.1
	16-Dec-22	1.58	0.91	305.96	306.63	-0.67	-0.31	-4.49E-03	5.1	2.8
	12-Jan-23	1.51	0.95	306.02	306.58	-0.56	-0.26	-3.76E-03	5.4	2.6
	14-Feb-23	1.53	0.91	306.00	306.63	-0.63	-0.29	-4.20E-03	4.6	2.6
	17-Mar-23	1.58	0.90	305.95	306.63	-0.68	-0.32	-4.57E-03	5.7	3.5
	27-Apr-23	0.86	0.97	306.67	306.56	0.11	0.05	7.37E-04	8.8	11.4
	26-May-23	0.88	0.98	306.65	306.55	0.10	0.05	6.70E-04	12.5	15.2
	15-Jun-23	1.04	0.98	306.49	306.55	-0.06	-0.03	-4.02E-04	15.2	16.5
	25-Jul-23	0.83	0.47	306.71	307.07	-0.36	-0.17	-2.41E-03	18.1	20.0
	08-Aug-23	0.86	0.90	306.67	306.63	0.04	0.02	2.68E-04	17.9	19.4
	07-Sep-23	0.93	0.95	306.61	306.58	0.02	0.01	1.67E-04	18.4	21.3
	26-Oct-23	1.60	0.90	305.94	306.63	-0.70	-0.32	-4.65E-03	12.4	12.8
	16-Nov-23	1.02	0.91	306.52	306.62	-0.10	-0.05	-7.03E-04	8.7	6.2
	18-Dec-23	1.53	0.91	306.01	306.62	-0.61	-0.29	-4.12E-03	5.5	5.2
	08-Jan-24	1.44	0.96	306.10	306.57	-0.48	-0.22	-3.18E-03	6.0	2.7
	27-Feb-24	1.43	0.95	306.10	306.58	-0.48	-0.22	-3.21E-03	5.3	4.6
	12-Mar-24	1.31	0.90	306.22	306.63	-0.41	-0.19	-2.75E-03	6.8	5.9
	05-Apr-24	1.57	0.85	305.96	306.68	-0.72	-0.33	-4.82E-03	5.8	5.3
	13-May-24	0.79	0.96	306.74	306.57	0.17	0.08	1.14E-03	12.6	16.0
	04-Jun-24	0.83	0.96	306.70	306.57	0.13	0.06	8.71E-04	15.5	20.2
	09-Jul-24	0.86	0.98	306.67	306.55	0.12	0.06	8.04E-04	17.4	22.7
	13-Aug-24	0.67	0.96	306.86	306.57	0.29	0.13	1.94E-03	19.5	19.8
	10-Sep-24	0.87	0.95	306.66	306.58	0.08	0.04	5.36E-04	16.5	15.9
	02-Oct-24	1.58	0.94	305.95	306.59	-0.64	-0.30	-4.29E-03	15.9	15.8
	04-Nov-24	1.64	0.95	305.89	306.58	-0.69	-0.32	-4.62E-03	10.9	9.2
	02-Dec-24	0.97	0.97	306.56	306.56	0.00	0.00	0.00E+00	6.4	2.4
2024 AVERAGE VALUES						-0.22	-0.10	-1.47E-03	11.6	11.7
OVERALL AVERAGE VALUES						-0.06	-0.03	7.27E-03	11.3	10.7

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- Depth of screen midpoint below the creek bed is 2.15 m
- Assumed vertical permeability is 1.44E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP20	09-Jan-20	(F)	0.76		306.38				(F)	0.1
	10-Feb-20	0.56	0.67	306.58	306.47	0.11	0.05	6.21E-04	(F)	1.0
	09-Mar-20	0.69	0.84	306.45	306.30	0.15	0.07	8.46E-04	4.2	2.9
	14-Apr-20	0.49	0.88	306.65	306.26	0.39	0.18	2.20E-03	6.8	6.4
	13-May-20	0.52	0.94	306.62	306.20	0.42	0.19	2.37E-03	7.8	10.0
	11-Jun-20	0.49	0.76	306.65	306.38	0.27	0.12	1.52E-03	13.7	19.4
	08-Jul-20	0.82	0.96	306.32	306.18	0.14	0.06	7.90E-04	17.1	19.5
	19-Aug-20	0.72	0.96	306.42	306.18	0.24	0.11	1.35E-03	16.6	16.8
	17-Sep-20	0.75	1.00	306.39	306.14	0.25	0.11	1.41E-03	14.6	14.7
	23-Oct-20	0.63	0.82	306.51	306.32	0.19	0.09	1.07E-03	11.5	10.5
	19-Nov-20	0.76	0.91	306.38	306.23	0.15	0.07	8.46E-04	7.7	5.1
	18-Dec-20	(F)	0.90		306.24				(F)	0.7
	08-Jan-21	(F)	0.82		306.32				(F)	0.1
	10-Feb-21	(F)	(F)						(F)	(F)
	10-Mar-21	0.63	0.91	306.51	306.23	0.28	0.13	1.58E-03	4.3	2.8
	21-Apr-21	0.68	0.93	306.46	306.21	0.25	0.11	1.41E-03	9.4	7.5
	19-May-21	0.76	1.02	306.38	306.12	0.26	0.12	1.47E-03	12.4	13.8
	25-Jun-21	0.65	0.86	306.49	306.28	0.21	0.10	1.18E-03	18.5	19.3
	27-Jul-21	0.82	0.96	306.32	306.18	0.14	0.06	7.90E-04	18.3	20.1
	12-Aug-21	0.84	0.97	306.30	306.17	0.13	0.06	7.33E-04	20.9	22.3
	30-Sep-21	0.77	0.92	306.37	306.22	0.15	0.07	8.46E-04	14.5	13.6
	27-Oct-21	0.70	0.80	306.44	306.34	0.10	0.05	5.64E-04	11.8	9.3
	10-Nov-21	0.90	1.00	306.24	306.14	0.10	0.05	5.64E-04	10.4	8.3
	16-Dec-21	0.72	0.86	306.42	306.28	0.14	0.06	7.90E-04	7.5	6.6
	14-Jan-22	(F)	0.92		306.22				(F)	0.2
	24-Feb-22	0.42	(F)	306.72					(F)	(F)
	17-Mar-22	0.55	0.81	306.59	306.33	0.26	0.12	1.47E-03	7.6	5.1
	21-Apr-22	0.56	0.83	306.58	306.31	0.27	0.12	1.52E-03	8.0	7.9
	24-May-22	0.69	0.89	306.45	306.25	0.20	0.09	1.13E-03	13.1	15.2
	15-Jun-22	0.70	0.89	306.44	306.25	0.19	0.09	1.07E-03	15.4	18.8
	14-Jul-22	1.44	0.94	305.70	306.20	-0.50	-0.23	-2.82E-03	18.8	19.9
	25-Aug-22	1.38	0.91	305.76	306.23	-0.47	-0.22	-2.65E-03	21.5	21.3
	08-Sep-22	1.21	0.95	305.93	306.19	-0.26	-0.12	-1.47E-03	19.1	19.2
	13-Oct-22	1.34	0.90	305.80	306.24	-0.44	-0.20	-2.48E-03	13.6	13.1
	24-Nov-22	1.30	0.94	305.85	306.20	-0.35	-0.16	-1.99E-03	7.2	3.5
	16-Dec-22	1.24	0.92	305.90	306.22	-0.32	-0.15	-1.81E-03	5.1	2.6
	12-Jan-23	1.37	0.94	305.77	306.20	-0.43	-0.20	-2.44E-03	5.9	2.4
	14-Feb-23	1.32	0.91	305.82	306.23	-0.41	-0.19	-2.32E-03	5.4	2.9
	17-Mar-23	1.11	0.89	306.04	306.26	-0.22	-0.10	-1.24E-03	6.0	3.4
	27-Apr-23	0.70	0.91	306.44	306.23	0.21	0.10	1.18E-03	9.0	11.9
	26-May-23	0.72	0.96	306.42	306.18	0.24	0.11	1.35E-03	12.4	15.6
	15-Jun-23	0.94	0.94	306.20	306.20	0.00	0.00	0.00E+00	15.0	16.5
	25-Jul-23	0.51	0.47	306.63	306.67	-0.04	-0.02	-2.26E-04	18.9	19.8
	08-Aug-23	0.71	0.91	306.43	306.23	0.20	0.09	1.13E-03	18.5	19.8
	07-Sep-23	0.73	0.92	306.41	306.22	0.19	0.09	1.07E-03	18.4	21.4
	26-Oct-23	1.35	0.92	305.79	306.22	-0.43	-0.20	-2.43E-03	12.5	13.0
	16-Nov-23	0.93	0.87	306.22	306.28	-0.06	-0.03	-3.39E-04	8.7	6.2
	18-Dec-23	1.28	0.90	305.86	306.25	-0.38	-0.18	-2.17E-03	6.0	5.1
	08-Jan-24	1.22	0.92	305.92	306.22	-0.30	-0.14	-1.69E-03	5.5	2.5
	27-Feb-24	1.34	0.91	305.80	306.23	-0.43	-0.20	-2.43E-03	4.3	4.3
	12-Mar-24	1.24	0.86	305.90	306.28	-0.38	-0.17	-2.14E-03	5.5	5.9
	05-Apr-24	1.16	0.81	305.98	306.33	-0.35	-0.16	-1.97E-03	5.7	4.9
	13-May-24	0.65	0.93	306.49	306.21	0.28	0.13	1.58E-03	12.7	16.2
	04-Jun-24	0.68	0.93	306.46	306.21	0.25	0.11	1.41E-03	16.2	20.2
	09-Jul-24	0.73	0.97	306.41	306.17	0.24	0.11	1.35E-03	17.9	23.2
	13-Aug-24	0.70	0.96	306.44	306.18	0.26	0.12	1.47E-03	18.7	20.3
	10-Sep-24	0.83	0.91	306.31	306.23	0.08	0.04	4.51E-04	16.2	16.1
	02-Oct-24	0.71	0.92	306.44	306.22	0.22	0.10	1.21E-03	16.4	16.0
	04-Nov-24	1.14	0.89	306.00	306.25	-0.25	-0.11	-1.41E-03	10.1	9.2
	02-Dec-24	0.79	0.93	306.35	306.21	0.14	0.06	7.90E-04	5.9	2.5
2024 AVERAGE VALUES						-0.05	-0.02	-2.73E-04	10.9	11.3
OVERALL AVERAGE VALUES						0.10	0.05	9.59E-04	11.3	10.9

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- NA — Not available
- Depth of screen midpoint below the creek bed is 2.18 m
- Assumed vertical permeability is 1.23E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP21	09-Jan-20	(F)	0.95		305.82				(F)	0.1
	10-Feb-20	0.84	1.00	305.93	305.77	0.16	0.13	2.84E-03	(F)	1.0
	09-Mar-20	0.76	0.92	306.01	305.85	0.16	0.13	2.84E-03	7.0	5.0
	14-Apr-20	0.78	0.97	305.99	305.80	0.19	0.15	3.37E-03	6.6	5.9
	13-May-20	0.84	1.04	305.93	305.73	0.20	0.16	3.55E-03	8.0	7.5
	11-Jun-20	0.75	0.92	306.02	305.85	0.17	0.14	3.02E-03	14.5	19.1
	08-Jul-20	0.95	1.05	305.82	305.72	0.10	0.08	1.77E-03	17.4	20.6
	19-Aug-20	0.96	1.10	305.81	305.67	0.14	0.11	2.48E-03	16.4	16.7
	17-Sep-20	0.97	1.09	305.80	305.68	0.12	0.10	2.13E-03	14.6	14.8
	23-Oct-20	0.86	0.96	305.91	305.81	0.10	0.08	1.77E-03	12.2	10.6
	19-Nov-20	0.92	1.03	305.85	305.74	0.11	0.09	1.95E-03	7.7	7.6
	18-Dec-20	(F)	1.07		305.70				(F)	0.4
	08-Jan-21	(F)	1.04		305.73				(F)	0.1
	10-Feb-21	(F)	0.99		305.78				(F)	0.0
	10-Mar-21	0.91	1.03	305.86	305.74	0.12	0.10	2.13E-03	3.5	2.5
	21-Apr-21	0.93	1.05	305.84	305.72	0.12	0.10	2.13E-03	8.1	6.7
	19-May-21	1.00	1.12	305.77	305.65	0.12	0.10	2.13E-03	12.7	14.3
	25-Jun-21	0.67	0.69	306.10	306.08	0.02	0.02	3.55E-04	16.6	21.3
	27-Jul-21	1.01	1.09	305.76	305.68	0.08	0.06	1.42E-03	18.0	19.7
	12-Aug-21	1.03	1.10	305.74	305.67	0.07	0.06	1.24E-03	18.9	21.6
	30-Sep-21	0.96	1.07	305.81	305.70	0.11	0.09	1.95E-03	14.7	13.8
	27-Oct-21	0.84	0.85	305.93	305.92	0.01	0.01	1.77E-04	13.0	9.8
	10-Nov-21	0.92	1.01	305.85	305.76	0.09	0.07	1.60E-03	11.3	8.6
	16-Dec-21	0.91	1.00	305.86	305.77	0.09	0.07	1.60E-03	7.6	6.7
	14-Jan-22	(F)	1.08		305.69				(F)	0
	24-Feb-22	0.71	0.93	306.06	305.84	0.22	0.18	3.90E-03	(F)	0.7
	17-Mar-22	0.84	0.98	305.93	305.79	0.14	0.11	2.48E-03	5.3	3.2
	21-Apr-22	0.84	0.99	305.93	305.78	0.15	0.12	2.66E-03	7.9	7.8
	24-May-22	0.94	1.08	305.83	305.69	0.14	0.11	2.48E-03	14.8	16.3
	15-Jun-22	0.94	1.04	305.83	305.73	0.10	0.08	1.77E-03	16.8	18.4
	14-Jul-22	1.04	1.12	305.73	305.65	0.08	0.06	1.42E-03	14.6	16.5
	25-Aug-22	1.01	1.10	305.76	305.67	0.09	0.07	1.60E-03	18.3	19.6
	08-Sep-22	1.09	1.13	305.68	305.64	0.04	0.03	7.10E-04	17.2	17.1
	13-Oct-22	1.00	1.03	305.77	305.74	0.03	0.02	5.32E-04	12.6	13.1
	24-Nov-22	1.10	1.15	305.68	305.62	0.05	0.04	9.76E-04	6.8	2.5
	16-Dec-22	1.00	1.07	305.77	305.71	0.06	0.05	1.15E-03	5.3	1.2
	12-Jan-23	1.02	1.08	305.75	305.69	0.06	0.05	1.06E-03	5.4	2.3
	14-Feb-23	0.95	1.05	305.83	305.73	0.10	0.08	1.77E-03	4.6	1.6
	17-Mar-23	0.92	1.05	305.85	305.72	0.13	0.10	2.31E-03	5.0	3.3
	27-Apr-23	0.92	1.04	305.86	305.73	0.13	0.10	2.22E-03	8.2	8.8
	26-May-23	0.96	1.07	305.81	305.70	0.11	0.09	1.95E-03	12.2	13.6
	15-Jun-23	0.96	1.06	305.82	305.71	0.11	0.08	1.86E-03	12.7	15.4
	25-Jul-23	0.60	0.53	306.18	306.24	-0.07	-0.05	-1.15E-03	19.0	18.5
	08-Aug-23	0.91	1.03	305.86	305.74	0.12	0.10	2.13E-03	16.2	18.6
	07-Sep-23	0.95	1.09	305.82	305.68	0.14	0.11	2.48E-03	17.3	20.5
	26-Oct-23	0.96	1.06	305.82	305.71	0.11	0.08	1.86E-03	12.3	12.8
	16-Nov-23	0.99	1.08	305.78	305.69	0.09	0.07	1.60E-03	7.5	5.3
	18-Dec-23	0.96	1.07	305.81	305.70	0.11	0.09	1.95E-03	6.5	5.3
	08-Jan-24	0.98	1.11	305.80	305.66	0.13	0.11	2.40E-03	5.1	2.9
	27-Feb-24	0.93	1.06	305.84	305.71	0.13	0.10	2.31E-03	5.6	4.1
	12-Mar-24	0.89	1.00	305.88	305.77	0.11	0.09	1.95E-03	6.6	4.2
	05-Apr-24	0.81	0.95	305.96	305.82	0.14	0.11	2.48E-03	5.6	4.6
	13-May-24	0.95	1.07	305.82	305.70	0.12	0.10	2.13E-03	13.2	13.9
	04-Jun-24	0.91	1.06	305.86	305.71	0.15	0.12	2.66E-03	14.7	17.6
	09-Jul-24	0.97	1.11	305.80	305.66	0.14	0.11	2.48E-03	16.3	22.0
	13-Aug-24	0.89	1.08	305.88	305.69	0.19	0.15	3.37E-03	17.7	15.9
	10-Sep-24	0.94	1.08	305.83	305.69	0.14	0.11	2.48E-03	15.7	15.1
	02-Oct-24	0.95	1.09	305.82	305.68	0.14	0.11	2.48E-03	16.2	15.5
	04-Nov-24	0.96	1.06	305.81	305.71	0.10	0.08	1.77E-03	9.8	9.2
	02-Dec-24	0.96	1.04	305.81	305.73	0.08	0.06	1.42E-03	(F)	1.4
2024 AVERAGE VALUES						0.13	0.11	2.33E-03	11.5	10.5
OVERALL AVERAGE VALUES						0.09	0.07	2.27E-03	11.0	11.0

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- Depth of screen midpoint below the creek bed is 1.24 m
- Assumed vertical permeability is 2.20E-05 m/s

TABLE B-5
SUMMARY OF CREEK BASED DRIVE POINT DATA
MILL CREEK AGGREGATES PIT

MONITOR LOCATION	DATE	G.W. LEVEL BTOP (m)	S.W. LEVEL BTOP (m)	GROUND-WATER ELEVATION (m ASL)	SURFACE WATER ELEVATION (m ASL)	HYDRAULIC HEAD IN GROUND-WATER (m)	VERTICAL HYDRAULIC GRADIENT	CALCULATED GROUNDWATER FLUX TO CREEK ($L/s/m^2$)	TEMPERATURE	
									GROUND-WATER (°C)	SURFACE WATER (°C)
DP22	09-Jan-20	(F)	0.63		305.38				(F)	0.3
	10-Feb-20	(F)	0.63		305.38				(F)	1.0
	09-Mar-20	0.65	0.56	305.36	305.45	-0.09	-0.04	-3.31E-03	7.7	5.0
	14-Apr-20	0.36	0.58	305.65	305.43	0.22	0.10	8.09E-03	6.3	5.8
	13-May-20	0.43	0.54	305.58	305.47	0.11	0.05	4.04E-03	8.1	7.5
	11-Jun-20	0.35	0.52	305.66	305.49	0.17	0.08	6.25E-03	14.5	19.1
	8-Jul-20	0.57	0.71	305.44	305.30	0.14	0.06	5.15E-03	16.7	20.6
	19-Aug-20	0.54	0.72	305.47	305.29	0.18	0.08	6.62E-03	15.6	16.7
	17-Sep-20	0.55	0.71	305.46	305.30	0.16	0.07	5.88E-03	15.2	15.0
	23-Oct-20	0.47	0.61	305.54	305.40	0.14	0.06	5.15E-03	11.9	10.6
	19-Nov-20	0.51	0.66	305.50	305.35	0.15	0.07	5.52E-03	10.1	5.7
	18-Dec-20	(F)	0.69		305.32				(F)	0.5
	08-Jan-21	(F)	0.66		305.35				(F)	0.2
	10-Feb-21	(F)	(F)						(F)	(F)
	10-Mar-21	0.77	0.64	305.24	305.37	-0.13	-0.06	-4.78E-03	3.0	2.5
	21-Apr-21	0.51	0.66	305.50	305.35	0.15	0.07	5.52E-03	8.4	6.6
	19-May-21	0.58	0.74	305.43	305.27	0.16	0.07	5.88E-03	13.8	14.0
	25-Jun-21	0.30	0.33	305.71	305.68	0.03	0.01	1.10E-03	21.5	21.3
	27-Jul-21	0.59	0.71	305.42	305.30	0.12	0.05	4.41E-03	16.2	19.2
	12-Aug-21	0.61	0.73	305.40	305.28	0.12	0.05	4.41E-03	17.9	21.5
	30-Sep-21	0.56	0.69	305.45	305.32	0.13	0.06	4.78E-03	14.1	13.7
	27-Oct-21	0.46	0.58	305.55	305.43	0.12	0.05	4.41E-03	13.1	9.7
	10-Nov-21	0.51	0.64	305.50	305.37	0.13	0.06	4.78E-03	11.2	8.2
	16-Dec-21	0.49	0.52	305.52	305.49	0.03	0.01	1.10E-03	9.0	6.8
	14-Jan-22	(F)	0.69		305.32				(F)	0.0
	24-Feb-22	0.31	0.54	305.70	305.47	0.23	0.10	8.46E-03	(F)	0.5
	17-Mar-22	0.45	0.57	305.56	305.45	0.12	0.05	4.23E-03	4.9	3.1
	21-Apr-22	0.43	0.58	305.58	305.43	0.15	0.07	5.52E-03	8.5	9.2
	24-May-22	0.76	0.68	305.25	305.33	-0.08	-0.04	-2.94E-03	12.7	12.6
	15-Jun-22	0.55	0.68	305.46	305.33	0.13	0.06	4.78E-03	15.4	18.0
	14-Jul-22	0.61	0.75	305.40	305.26	0.14	0.06	5.15E-03	14.3	16.0
	25-Aug-22	0.67	0.72	305.34	305.29	0.05	0.02	1.84E-03	17.8	19.4
	08-Sep-22	0.68	0.74	305.33	305.27	0.06	0.03	2.21E-03	16.0	16.7
	13-Oct-22	0.62	0.67	305.39	305.34	0.05	0.02	1.84E-03	12.5	12.8
	24-Nov-22	0.65	0.72	305.36	305.29	0.07	0.03	2.57E-03	6.6	2.4
	16-Dec-22	0.62	0.68	305.39	305.33	0.06	0.03	2.21E-03	6.8	1.0
	12-Jan-23	0.71	0.65	305.30	305.36	-0.06	-0.03	-2.24E-03	5.2	2.3
	14-Feb-23	0.52	0.64	305.50	305.38	0.12	0.05	4.41E-03	4.8	1.5
	17-Mar-23	0.50	0.64	305.52	305.37	0.14	0.07	5.33E-03	5.4	3.2
	27-Apr-23	0.30	0.64	305.71	305.37	0.34	0.15	1.25E-02	8.0	8.8
	26-May-23	0.54	0.65	305.47	305.36	0.11	0.05	4.04E-03	11.8	12.5
	15-Jun-23	0.55	0.67	305.46	305.34	0.12	0.05	4.41E-03	11.9	15.3
	25-Jul-23	0.22	0.10	305.79	305.91	-0.12	-0.05	-4.41E-03	18.9	18.5
	08-Aug-23	0.49	0.63	305.52	305.39	0.14	0.06	5.04E-03	15.4	18.4
	07-Sep-23	0.54	0.72	305.47	305.29	0.18	0.08	6.62E-03	16.2	20.5
	26-Oct-23	0.60	0.67	305.42	305.34	0.07	0.03	2.76E-03	12.2	12.8
	16-Nov-23	0.62	0.66	305.39	305.35	0.04	0.02	1.47E-03	5.9	8.9
	18-Dec-23	0.66	0.67	305.35	305.34	0.01	0.00	3.68E-04	6.8	5.0
	08-Jan-24	0.77	0.67	305.25	305.34	-0.09	-0.04	-3.49E-03	6.1	2.4
	27-Feb-24	0.52	0.67	305.49	305.35	0.15	0.07	5.33E-03	6.3	3.9
	12-Mar-24	0.48	0.61	305.53	305.40	0.13	0.06	4.78E-03	5.5	4.4
	05-Apr-24	0.50	0.57	305.51	305.44	0.07	0.03	2.57E-03	5.9	4.6
	13-May-24	0.52	0.64	305.49	305.37	0.12	0.05	4.41E-03	10.9	13.5
	04-Jun-24	0.54	0.64	305.47	305.37	0.10	0.04	3.68E-03	13.1	17.5
	09-Jul-24	0.56	0.71	305.45	305.30	0.15	0.07	5.52E-03	15.1	20.6
	13-Aug-24	0.49	0.69	305.52	305.32	0.20	0.09	7.35E-03	17.7	14.9
	10-Sep-24	0.56	0.69	305.45	305.32	0.13	0.06	4.78E-03	14.5	14.4
	02-Oct-24	0.54	0.68	305.47	305.33	0.14	0.06	5.15E-03	14.3	14.5
	04-Nov-24	0.56	0.68	305.45	305.33	0.12	0.05	4.41E-03	10.1	9.2
	02-Dec-24	0.55	0.68	305.46	305.33	0.13	0.06	4.78E-03	(F)	1.2
2024 AVERAGE VALUES						0.11	0.05	4.11E-03	10.9	10.1
OVERALL AVERAGE VALUES						0.10	0.05	6.28E-03	10.7	10.8

NOTES:
- m ASL — metres above sea level
- (F) — Frozen
- L/s/m² — Litres per second per square metre
- Depth of screen midpoint below the creek bed is 2.23 m
- Assumed vertical permeability is 8.20E-05 m/s

TABLE B-6
WATER LEVEL SUMMARY - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

YEAR		BH1-I/BH1-R		BH2-I/2B/BH2-R		BH3-I/3B		BH4-I		BH5-I		BH6-I		BH7-II	
		Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)
2020	MAXIMUM	306.97	4.9	306.42	9	306.36	8.3	306.44	2.4	306.73	1.6	306.37	1.2		
	MINIMUM	306.13	4.1	305.82	8	305.67	7.6	305.81	1.7	306.24	1.2	305.89	0.7		
	AVERAGE	306.48	4.6	306.07	8	306.04	7.9	306.19	2.0	306.49	1.4	306.15	1.0		
	FLUCTUATION	0.84	0.8	1	1	0.69	0.7	0.63	0.6	0.49	0.5	0.48	0.5		
	NUMBER	7		7		10		12		12		12		0	
2021	MAXIMUM	306.39	4.9	305.88	8.7	305.79	8.3	305.89	2.5	306.32	1.9	305.99	1.3		
	MINIMUM	306.11	4.7	305.64	8.4	305.62	8.1	305.68	2.3	306.03	1.6	305.77	1.1		
	AVERAGE	306.25	4.8	305.76	8.6	305.69	8.2	305.78	2.4	306.19	1.7	305.87	1.2		
	FLUCTUATION	0.28	0.3	0.24	0.2	0.17	0.2	0.21	0.2	0.29	0.3	0.22	0.2		
	NUMBER	12		12		11		12		12		12		0	
2022	MAXIMUM	306.51	5.1	306.10	8.9	306.04	8.5	306.05	2.7	306.60	2.0	306.01	1.5		
	MINIMUM	305.93	4.6	305.42	8.2	305.45	7.9	305.48	2.1	305.90	1.3	305.60	1.1		
	AVERAGE	306.27	4.8	305.80	8.5	305.76	8.2	305.79	2.4	306.21	1.7	305.83	1.3		
	FLUCTUATION	0.58	0.6	0.68	0.7	0.59	0.6	0.57	0.6	0.70	0.7	0.42	0.4		
	NUMBER	12		12		12		12		12		12		0	
2023	MAXIMUM	306.36	5.0	305.93	8.8	305.92	8.4	305.91	2.6	306.30	1.9	305.96	1.4		
	MINIMUM	306.04	4.7	305.51	8.4	305.50	8.0	305.54	2.3	306.02	1.6	305.66	1.1		
	AVERAGE	306.24	4.8	305.75	8.6	305.76	8.2	305.77	2.4	306.18	1.7	305.82	1.3		
	FLUCTUATION	0.32	0.3	0.42	0.4	0.42	0.4	0.37	0.4	0.28	0.3	0.30	0.3		
	NUMBER	12		9		12		12		12		12		0	
2024	MAXIMUM	306.58	4.8			306.30	8.2	306.13	2.4	306.46	1.7	306.08	1.3		
	MINIMUM	306.23	4.5			305.74	7.6	305.74	2.0	306.17	1.4	305.79	1.0		
	AVERAGE	306.43	4.6			306.00	7.9	305.95	2.2	306.32	1.6	305.92	1.2		
	FLUCTUATION	0.35	0.4			0.56	0.6	0.39	0.4	0.29	0.3	0.29	0.3		
	NUMBER	12		0		12		12		12		11		0	
1986 to 2023	MAXIMUM	307.69	5.7	307.41	9.4	306.83	9.3	306.96	2.9	306.99	2.3	306.70	1.8	307.00	2.2
	MINIMUM	305.41	3.4	304.92	6.9	304.66	7.1	305.28	1.2	305.56	0.9	305.30	0.4	305.20	0.4
	AVERAGE	306.47	4.6	306.13	8.2	305.81	8.1	305.98	2.2	306.34	1.5	305.97	1.1	306.06	1.3
	FLUCTUATION	2.28	2.3	2.49	2.5	2.17	2.2	1.68	1.7	1.43	1.4	1.40	1.4	1.80	1.8
	NUMBER	472		341		386		404		518		504		303	

Notes: **mASL - Groundwater elevation in metres above sea level**
mBGL - Groundwater levels in metres below ground level
Number - Indicates number of readings taken during the indicated time period
Fluctuations - Difference between the maximum and minimum groundwater reading
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-6
WATER LEVEL SUMMARY - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

YEAR		BH11		BH12		BH13		BH14	
		Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)
2020	MAXIMUM	306.49	3.4			306.57	0.8	305.72	2.0
	MINIMUM	305.87	2.8			306.14	0.4	305.45	1.7
	AVERAGE	306.20	3.1			306.36	0.6	305.58	1.8
	FLUCTUATION	0.62	0.6			0.43	0.4	0.27	0.3
	NUMBER	12		0		12		12	
2021	MAXIMUM	305.94	3.6			306.36	1.1	305.80	2.0
	MINIMUM	305.72	3.4			305.89	0.6	305.42	1.6
	AVERAGE	305.82	3.5			306.16	0.8	305.53	1.9
	FLUCTUATION	0.22	0.2			0.47	0.5	0.38	0.4
	NUMBER	12		0		12		12	
2022	MAXIMUM	306.15	3.8			306.34	1.0	305.85	2.0
	MINIMUM	305.52	3.2			305.92	0.6	305.39	1.8
	AVERAGE	305.85	3.5			306.14	0.8	305.50	1.9
	FLUCTUATION	0.63	0.6			0.42	0.4	0.26	0.3
	NUMBER	12		0		12		12	
2023	MAXIMUM	305.98	3.7			306.33	0.9	305.84	2.0
	MINIMUM	305.64	3.3			306.00	0.6	305.44	1.6
	AVERAGE	305.82	3.5			306.15	0.8	305.53	1.9
	FLUCTUATION	0.34	0.3			0.32	0.3	0.40	0.4
	NUMBER	12		0		12		12	
2024	MAXIMUM	306.23	3.5			306.32	0.8	305.76	1.9
	MINIMUM	305.81	3.1			306.11	0.6	305.48	1.7
	AVERAGE	306.04	3.3			306.23	0.7	305.58	1.8
	FLUCTUATION	0.42	0.4			0.22	0.2	0.27	0.3
	NUMBER	12		0		12		12	
1986 to 2023	MAXIMUM	307.11	4.1	306.53	6.2	306.77	1.2	305.84	2.0
	MINIMUM	305.25	2.2	304.88	4.5	305.72	0.2	305.39	1.6
	AVERAGE	306.08	3.2	305.74	5.3	306.16	0.8	305.55	1.9
	FLUCTUATION	1.86	1.9	1.65	1.6	1.05	1.0	0.45	0.5
	NUMBER	271		180		455		104	

Notes: **mASL - Groundwater elevation in metres above sea level**
mBGL - Groundwater levels in metres below ground level
Number - Indicates number of readings taken during the indicated time period
Fluctuations - Difference between the maximum and minimum groundwater reading
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-6
WATER LEVEL SUMMARY - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

YEAR		TW16-79		OW1-84		OW2-84		OW4-84		OW5-84		OW16A-78	
		Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)
2020	MAXIMUM	303.82	0.2	303.81	0.3	303.75	0.4	303.81	0.2	303.73	0.1	303.82	-0.1
	MINIMUM	303.51	-0.1	303.49	0.0	303.46	0.1	303.53	-0.1	303.46	-0.1	303.57	-0.4
	AVERAGE	303.69	0.0	303.66	0.1	303.63	0.2	303.69	0.0	303.62	0.0	303.70	-0.2
	FLUCTUATION	0.31	0.3	0.32	0.3	0.29	0.3	0.28	0.3	0.27	0.3	0.25	0.3
	NUMBER	12		12		11		9		10		9	
2021	MAXIMUM	303.83	0.3	303.84	0.4	303.80	0.5	303.87	0.3	303.80	0.3	303.87	0.0
	MINIMUM	303.39	-0.2	303.39	0.0	303.39	0.1	303.42	-0.2	303.34	-0.2	303.42	-0.4
	AVERAGE	303.62	0.1	303.61	0.2	303.59	0.3	303.64	0.1	303.57	0.0	303.63	-0.2
	FLUCTUATION	0.44	0.4	0.45	0.4	0.41	0.4	0.45	0.4	0.46	0.5	0.45	0.4
	NUMBER	12		10		12		12		12		10	
2022	MAXIMUM	303.85	0.3	303.81	0.4	303.87	0.5	303.90	0.3	303.76	0.3	303.82	0.1
	MINIMUM	303.37	-0.2	303.37	0.0	303.34	0.0	303.40	-0.2	303.32	-0.2	303.39	-0.4
	AVERAGE	303.62	0.1	303.59	0.2	303.58	0.3	303.63	0.1	303.52	0.1	303.58	-0.1
	FLUCTUATION	0.48	0.5	0.44	0.4	0.53	0.5	0.50	0.5	0.44	0.4	0.43	0.4
	NUMBER	12		12		12		12		12		12	
2023	MAXIMUM	303.85	0.1	303.85	0.2	303.80	0.3	303.88	0.1	303.80	0.1	303.86	-0.2
	MINIMUM	303.59	-0.2	303.60	-0.1	303.53	0.1	303.63	-0.2	303.55	-0.2	303.63	-0.4
	AVERAGE	303.70	0.0	303.69	0.1	303.65	0.2	303.72	0.0	303.64	0.0	303.72	-0.3
	FLUCTUATION	0.26	0.3	0.25	0.3	0.27	0.3	0.25	0.2	0.25	0.2	0.23	0.2
	NUMBER	12		12		12		12		11		12	
2024	MAXIMUM	303.78	0.1	303.77	0.2	303.74	0.3	303.80	0.1	303.73	0.1	303.80	-0.2
	MINIMUM	303.60	-0.1	303.58	0.0	303.55	0.1	303.62	-0.1	303.52	-0.1	303.63	-0.3
	AVERAGE	303.68	0.0	303.66	0.1	303.62	0.2	303.70	0.0	303.62	0.0	303.69	-0.2
	FLUCTUATION	0.18	0.2	0.19	0.2	0.19	0.2	0.18	0.2	0.21	0.2	0.17	0.2
	NUMBER	12		12		12		12		12		12	
1986 to 2023	MAXIMUM	304.01	0.4	303.99	0.6	303.95	0.7	304.01	0.5	303.93	0.4	303.99	0.2
	MINIMUM	303.27	-0.3	303.19	-0.2	303.17	-0.1	303.21	-0.3	303.20	-0.3	303.26	-0.5
	AVERAGE	303.61	0.1	303.60	0.2	303.58	0.3	303.62	0.1	303.49	0.1	303.61	-0.2
	FLUCTUATION	0.74	0.7	0.80	0.8	0.78	0.8	0.80	0.8	0.73	0.7	0.73	0.7
	NUMBER	404		404		408		403		610		372	

Notes: **mASL - Groundwater elevation in metres above sea level**
mBGL - Groundwater levels in metres below ground level
Number - Indicates number of readings taken during the indicated time period
Fluctuations - Difference between the maximum and minimum groundwater reading
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-6
WATER LEVEL SUMMARY - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

YEAR		BH92-I/BH92-1R		BH92-5		BH92-8		BH92-12A		BH92-13		BH92-14	
		Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)
2020	MAXIMUM			306.84	2.0	306.72	1.9	305.97	1.7	306.58	3.5		
	MINIMUM			306.37	1.5	306.20	1.4	305.67	1.4	306.02	2.9		
	AVERAGE			306.63	1.7	306.51	1.6	305.83	1.5	306.36	3.1		
	FLUCTUATION			0.47	0.5	0.52	0.5	0.30	0.3	0.56	0.6		
	NUMBER	0		11		12		12		12		0	
2021	MAXIMUM	306.70	7.6	306.91	1.9	306.78	1.9	305.98	1.7	306.65	3.4		
	MINIMUM	306.12	7.0	306.38	1.4	306.24	1.4	305.66	1.4	306.09	2.8		
	AVERAGE	306.35	7.3	306.70	1.6	306.53	1.6	305.82	1.5	306.40	3.1		
	FLUCTUATION	0.58	0.6	0.53	0.5	0.54	0.5	0.32	0.3	0.56	0.6		
	NUMBER	7		10		11		12		12		0	
2022	MAXIMUM	306.37	8.0	306.55	2.3	306.41	2.2	305.84	1.9	306.27	3.8		
	MINIMUM	305.71	7.3	306.01	1.8	305.88	1.7	305.45	1.5	305.68	3.2		
	AVERAGE	306.08	7.6	306.32	2.0	306.15	2.0	305.64	1.7	305.98	3.5		
	FLUCTUATION	0.66	0.7	0.54	0.5	0.52	0.5	0.39	0.4	0.59	0.6		
	NUMBER	12		12		12		12		12		0	
2023	MAXIMUM	306.21	7.9	306.42	2.2	306.24	2.2	305.84	1.8	306.06	3.7		
	MINIMUM	305.82	7.5	306.12	1.9	305.94	1.9	305.53	1.5	305.76	3.4		
	AVERAGE	306.06	7.6	306.30	2.0	306.11	2.0	305.65	1.7	305.92	3.6		
	FLUCTUATION	0.38	0.4	0.30	0.3	0.30	0.3	0.32	0.3	0.30	0.3		
	NUMBER	12		12		12		12		12		0	
2024	MAXIMUM	306.46	7.6	306.64	2.0	306.48	2.0	305.80	1.7	306.31	3.6		
	MINIMUM	306.11	7.2	306.30	1.7	306.09	1.7	305.59	1.5	305.89	3.2		
	AVERAGE	306.28	7.4	306.49	1.8	306.27	1.9	305.69	1.6	306.10	3.4		
	FLUCTUATION	0.35	0.3	0.34	0.3	0.39	0.4	0.21	0.2	0.42	0.4		
	NUMBER	12		12		12		12		12		0	
1986 to 2023	MAXIMUM	307.46	8.3	307.43	2.9	307.13	3.3	306.37	1.9	307.27	4.0	307.54	2.9
	MINIMUM	305.42	6.2	305.47	0.9	304.83	1.0	305.45	1.0	305.46	2.2	305.95	1.3
	AVERAGE	306.37	7.3	306.47	1.9	306.16	2.0	305.81	1.5	306.26	3.2	306.67	2.2
	FLUCTUATION	2.04	2.0	1.96	2.0	2.30	2.3	0.92	0.9	1.81	1.8	1.59	1.6
	NUMBER	340		448		348		559		351		222	

Notes: **mASL - Groundwater elevation in metres above sea level**
mBGL - Groundwater levels in metres below ground level
Number - Indicates number of readings taken during the indicated time period
Fluctuations - Difference between the maximum and minimum groundwater reading
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-6
WATER LEVEL SUMMARY - GROUNDWATER MONITORS
MILL CREEK AGGREGATES PIT

YEAR		BH92-15		BH92-26		BH92-27		BH92-28		BH92-29		BH92-32		BH92-33	
		Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)	Groundwater Elevation (m ASL)	Groundwater Level (m BGL)
2020	MAXIMUM					304.83	0.6	304.67	1.4	304.99	1.5	304.48	0.9	304.70	1.1
	MINIMUM					304.50	0.3	304.42	1.1	304.61	1.1	304.05	0.5	304.37	0.8
	AVERAGE					304.68	0.4	304.57	1.2	304.79	1.3	304.22	0.7	304.54	1.0
	FLUCTUATION					0.33	0.3	0.25	0.3	0.38	0.4	0.43	0.4	0.33	0.3
	NUMBER	0		0		12		12		12		12		12	
2021	MAXIMUM					304.82	0.8	304.66	1.5	304.94	1.6	304.36	1.1	304.68	1.3
	MINIMUM					304.37	0.3	304.30	1.1	304.47	1.1	303.87	0.6	304.26	0.8
	AVERAGE					304.61	0.5	304.50	1.3	304.70	1.4	304.15	0.8	304.47	1.0
	FLUCTUATION					0.45	0.4	0.36	0.4	0.47	0.5	0.49	0.5	0.42	0.4
	NUMBER	0		0		12		12		12		12		12	
2022	MAXIMUM					304.74	0.7	304.71	1.5	304.87	1.7	304.38	1.0	304.61	1.3
	MINIMUM					304.39	0.4	304.34	1.1	304.40	1.2	303.98	0.6	304.27	0.9
	AVERAGE					304.57	0.6	304.49	1.3	304.64	1.4	304.17	0.8	304.44	1.1
	FLUCTUATION					0.35	0.3	0.37	0.4	0.47	0.5	0.40	0.4	0.34	0.3
	NUMBER	0		0		12		12		12		12		12	
2023	MAXIMUM					304.89	0.6	304.80	1.4	305.07	1.5	304.60	0.8	304.74	1.1
	MINIMUM					304.54	0.2	304.44	1.0	304.57	1.0	304.16	0.4	304.42	0.8
	AVERAGE					304.74	0.4	304.61	1.2	304.85	1.2	304.36	0.6	304.61	0.9
	FLUCTUATION					0.35	0.4	0.36	0.4	0.50	0.5	0.44	0.4	0.32	0.3
	NUMBER	0		0		12		12		12		12		12	
2024	MAXIMUM					304.89	0.4	304.75	1.2	305.14	1.2	304.39	0.7	304.78	1.0
	MINIMUM					304.69	0.2	304.58	1.1	304.85	0.9	304.25	0.6	304.56	0.7
	AVERAGE					304.78	0.3	304.65	1.2	304.96	1.1	304.32	0.6	304.64	0.9
	FLUCTUATION					0.20	0.2	0.17	0.2	0.30	0.3	0.14	0.1	0.22	0.2
	NUMBER	0		0		12		12		12		12		12	
1986 to 2023	MAXIMUM	307.21	2.9	305.29	1.7	305.18	1.1	305.06	1.7	305.58	1.9	304.93	1.2	305.04	1.5
	MINIMUM	305.53	1.2	303.74	0.1	304.01	-0.1	304.09	0.8	304.16	0.5	303.75	0.0	304.00	0.5
	AVERAGE	306.24	2.2	304.19	1.3	304.61	0.5	304.46	1.3	304.69	1.4	304.29	0.7	304.50	1.0
	FLUCTUATION	1.68	1.7	1.55	1.6	1.17	1.2	0.97	1.0	1.42	1.4	1.18	1.2	1.04	1.0
	NUMBER	239		436		352		627		363		370		359	

Notes: **mASL - Groundwater elevation in metres above sea level**
mBGL - Groundwater levels in metres below ground level
Number - Indicates number of readings taken during the indicated time period
Fluctuations - Difference between the maximum and minimum groundwater reading
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-7
WATER LEVEL SUMMARY - WETLAND DRIVE-POINTS
MILL CREEK AGGREGATES PIT

YEAR		DP6		DP7		DP8		DP9		DP10		DP11	
		GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)
2020	MAXIMUM	306.15	0.5	306.29	0.4	305.99	0.5	305.79	0.7	305.18	1.1	305.19	0.9
	MINIMUM	305.72	0.1	305.88	0.0	305.62	0.2	305.19	0.1	304.86	0.8	304.72	0.4
	AVERAGE	305.95	0.3	306.10	0.2	305.79	0.4	305.51	0.4	304.99	1.0	304.93	0.7
	FLUCTUATION	0.43	0.4	0.41	0.4	0.37	0.4	0.60	0.6	0.32	0.3	0.47	0.5
	NUMBER	12		12		11		10		12		12	
2021	MAXIMUM	305.98	0.6	305.98	0.6	305.77	0.7	305.66	0.8	305.38	1.2	305.05	0.9
	MINIMUM	305.61	0.3	305.74	0.3	305.48	0.4	305.09	0.3	304.80	0.6	304.66	0.6
	AVERAGE	305.75	0.5	305.84	0.5	305.64	0.5	305.43	0.5	304.98	1.0	304.86	0.7
	FLUCTUATION	0.37	0.4	0.24	0.2	0.29	0.3	0.57	0.6	0.58	0.6	0.39	0.4
	NUMBER	12		12		12		12		12		12	
2022	MAXIMUM	305.93	0.8	306.03	0.8	305.82	0.9	305.70	0.9	305.10	1.2	305.04	1.0
	MINIMUM	305.47	0.3	305.55	0.3	305.22	0.3	304.99	0.2	304.77	0.9	304.63	0.6
	AVERAGE	305.67	0.6	305.78	0.5	305.52	0.6	305.31	0.6	304.90	1.1	304.81	0.8
	FLUCTUATION	0.46	0.5	0.48	0.5	0.60	0.6	0.71	0.7	0.33	0.3	0.41	0.4
	NUMBER	12		12		12		12		12		12	
2023	MAXIMUM	305.77	0.7	305.85	0.7	305.68	0.7	305.59	0.7	305.11	1.1	305.03	0.9
	MINIMUM	305.55	0.5	305.62	0.5	305.42	0.5	305.23	0.3	304.86	0.6	304.74	0.6
	AVERAGE	305.66	0.6	305.75	0.6	305.56	0.6	305.41	0.5	304.96	1.0	304.88	0.7
	FLUCTUATION	0.22	0.2	0.23	0.2	0.26	0.3	0.37	0.4	0.55	0.5	0.29	0.3
	NUMBER	12		11		11		12		12		12	
2024	MAXIMUM	305.88	0.7	306.02	0.6	305.77	0.7	305.59	0.7	305.08	1.1	305.09	0.8
	MINIMUM	305.55	0.4	305.73	0.3	305.46	0.4	305.21	0.3	304.87	0.9	304.81	0.5
	AVERAGE	305.73	0.5	305.88	0.4	305.64	0.5	305.42	0.5	304.93	1.0	304.92	0.7
	FLUCTUATION	0.33	0.3	0.29	0.3	0.31	0.3	0.39	0.4	0.22	0.2	0.28	0.3
	NUMBER	12		12		12		11		12		12	
1989 to 2023	MAXIMUM	306.39	1.1	306.58	1.0	306.45	1.1	306.03	1.0	305.58	1.6	305.61	1.2
	MINIMUM	305.15	-0.1	305.31	-0.3	305.05	-0.3	304.93	-0.1	304.36	0.4	304.41	0.0
	AVERAGE	305.70	0.5	305.88	0.4	305.74	0.4	305.48	0.4	304.92	1.0	304.95	0.7
	FLUCTUATION	1.24	1.2	1.27	1.3	1.40	1.4	1.10	1.1	1.22	1.2	1.20	1.2
	NUMBER	665		386		381		379		394		387	

Notes: mASL - Groundwater elevation in metres above sea level
mBGL - Groundwater level in metres below ground level
Number - indicates number of readings taken during the indicated period
Fluctuation - difference between the maximum and minimum groundwater elevations
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-7
WATER LEVEL SUMMARY - WETLAND DRIVE-POINTS
MILL CREEK AGGREGATES PIT

YEAR		DP12		DP16		DP113	
		GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)	GROUNDWATER ELEVATION (m ASL)	GROUNDWATER LEVEL (m BGL)
2020	MAXIMUM	305.25	1.1	304.45	0.1	306.92	0.5
	MINIMUM	304.56	0.4	304.02	-0.4	306.58	0.1
	AVERAGE	304.83	0.8	304.22	-0.1	306.78	0.3
	FLUCTUATION	0.69	0.7	0.43	0.4	0.34	0.3
	NUMBER	12		12		12	
2021	MAXIMUM	304.87	1.1	304.29	0.0	306.79	0.5
	MINIMUM	304.54	0.8	304.04	-0.2	306.53	0.3
	AVERAGE	304.69	1.0	304.18	-0.1	306.63	0.4
	FLUCTUATION	0.33	0.3	0.25	0.3	0.26	0.3
	NUMBER	12		12		12	
2022	MAXIMUM	304.97	1.2	304.46	0.1	306.60	0.8
	MINIMUM	304.49	0.7	303.98	-0.4	306.25	0.5
	AVERAGE	304.75	0.9	304.22	-0.1	306.49	0.6
	FLUCTUATION	0.48	0.5	0.48	0.5	0.35	0.4
	NUMBER	12		12		11	
2023	MAXIMUM	305.18	1.0	304.59	-0.2	306.54	0.8
	MINIMUM	304.65	0.5	304.26	-0.5	306.29	0.5
	AVERAGE	304.92	0.7	304.38	-0.3	306.41	0.7
	FLUCTUATION	0.53	0.5	0.33	0.3	0.25	0.3
	NUMBER	12		12		12	
2024	MAXIMUM	305.12	0.8	304.49	-0.2	306.78	0.7
	MINIMUM	304.89	0.5	304.29	-0.4	306.39	0.3
	AVERAGE	305.00	0.7	304.37	-0.3	306.59	0.5
	FLUCTUATION	0.23	0.2	0.20	0.2	0.39	0.4
	NUMBER	12		12		12	
1989 to 2023	MAXIMUM	305.78	1.2	304.80	0.4	307.17	3.1
	MINIMUM	304.45	-0.1	303.69	-0.7	303.98	-0.1
	AVERAGE	305.14	0.5	304.25	-0.2	306.45	0.6
	FLUCTUATION	1.33	1.3	1.11	1.1	3.19	3.2
	NUMBER	412		380		390	

Notes: mASL - Groundwater elevation in metres above sea level
mBGL - Groundwater level in metres below ground level
Number - indicates number of readings taken during the indicated period
Fluctuation - difference between the maximum and minimum groundwater elevations
Negative groundwater levels indicate groundwater level above ground surface

TABLE B-8

COMPARISON OF GROUNDWATER INFLUX, 2020 CONDITIONS

MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	AVERAGE INFLUX (L/s/m²)						TOTAL GROUNDWATER INFLUX (L/s)					
				09-Mar-20	13-May-20	11-Jun-20	08-Jul-20	19-Aug-20	17-Sep-20	09-Mar-20	13-May-20	11-Jun-20	08-Jul-20	19-Aug-20	17-Sep-20
DP18	DP19	670	6.5	8.1E-04	2.6E-03	1.3E-03	7.6E-04	1.9E-03	1.1E-03	3.5	11.2	5.9	3.3	8.1	4.9
DP19	DP20	310	6.5	9.6E-04	2.0E-03	1.0E-03	4.6E-04	1.0E-03	1.0E-03	1.9	3.9	2.0	0.9	2.0	2.0
DP20	Hwy 401	270	6.5	8.5E-04	2.4E-03	1.5E-03	7.9E-04	1.4E-03	1.4E-03	1.5	4.2	2.7	1.4	2.4	2.5
Hwy 401	DP21	60	7.1	2.8E-03	3.5E-03	3.0E-03	1.8E-03	2.5E-03	2.1E-03	1.2	1.5	1.3	0.8	1.1	0.9
DP21	DP4/R	100	7.3	2.3E-03	3.1E-03	2.6E-03	3.0E-03	1.8E-03	1.8E-03	1.7	2.3	1.9	2.2	1.3	1.3
DP4/R	DP22	50	7.1	-7.5E-04	3.4E-03	4.2E-03	4.7E-03	3.9E-03	3.7E-03	-0.3	1.2	1.5	1.7	1.4	1.3
DP22	DP17/R	100	6.6	-1.8E-04	2.5E-03	3.6E-03	3.0E-03	3.7E-03	3.1E-03	-0.1	1.7	2.4	2.0	2.5	2.1
DP17/R	DP3	165	7.1	2.4E-03	1.2E-03	9.4E-04	6.9E-04	2.2E-03	1.8E-03	2.8	1.4	1.1	0.8	2.5	2.1
DP3	Galt Creek	420	6.0	1.5E-03	1.4E-03	1.1E-03	9.3E-04	2.4E-03	2.3E-03	3.9	3.5	2.7	2.3	6.1	5.7
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	6.2	6.2	6.2
Pond Creek	DP1	250	8.0	7.6E-03	8.3E-03	7.0E-03	7.3E-03	5.4E-03	6.1E-03	15.2	16.5	14.1	14.6	10.8	12.1
DP1	DP2	100	6.7	6.3E-03	7.2E-03	5.7E-03	5.8E-03	3.7E-03	4.5E-03	4.3	4.9	3.8	3.9	2.5	3.1
DP2	DP5CR	800	7.6	2.1E-03	2.6E-03	1.9E-03	1.7E-03	1.5E-03	1.6E-03	12.8	15.6	11.4	10.0	9.3	9.9
TOTALS										**54.5**	**74.1**	**56.8**	**50.1**	**56.1**	**54.2**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8

COMPARISON OF GROUNDWATER INFLUX, 2020 CONDITIONS

MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)						ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)					
				09-Mar-20	13-May-20	11-Jun-20	08-Jul-20	19-Aug-20	17-Sep-20	09-Mar-20	13-May-20	11-Jun-20	08-Jul-20	19-Aug-20	17-Sep-20
DP18	DP19	670	6.5	1.8	5.6	2.9	1.7	4.1	2.5	1.8	5.6	2.9	1.7	4.1	2.5
DP19	DP20	310	6.5	0.8	1.6	0.8	0.4	0.8	0.8	1.2	2.4	1.2	0.6	1.2	1.2
DP20	Hwy 401	270	6.5	0.6	1.7	1.1	0.6	1.0	1.0	0.9	2.5	1.6	0.8	1.4	1.5
Hwy 401	DP21	60	7.1	0.5	0.6	0.5	0.3	0.4	0.4	0.7	0.9	0.8	0.5	0.6	0.5
DP21	DP4/R	100	7.3	0.7	0.9	0.7	0.9	0.5	0.5	1.0	1.4	1.1	1.3	0.8	0.8
DP4/R	DP22	50	7.1	-0.1	0.5	0.59	0.7	0.6	0.5	-0.2	0.7	0.9	1.0	0.8	0.8
DP22	DP17/R	100	6.6	0.0	0.7	1.0	0.8	1.0	0.8	-0.1	1.0	1.4	1.2	1.5	1.2
DP17/R	DP3	165	7.1	1.1	0.6	0.4	0.3	1.0	0.9	1.7	0.9	0.7	0.5	1.5	1.3
DP3	Galt Creek	420	6.0	1.5	1.4	1.1	0.9	2.4	2.3	2.3	2.1	1.6	1.4	3.7	3.4
Galt Creek	Pond Creek	255	8.1	2.5	2.5	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	7.6	8.3	7.0	7.3	5.4	6.1	7.6	8.3	7.0	7.3	5.4	6.1
DP1	DP2	100	6.7	2.1	2.4	1.9	2.0	1.3	1.5	2.1	2.4	1.9	2.0	1.3	1.5
DP2	DP5CR	800	7.6	6.4	7.8	5.7	5.0	4.6	5.0	6.4	7.8	5.7	5.0	4.6	5.0
TOTALS				**25.4**	**34.5**	**26.2**	**23.2**	**25.5**	**24.7**	**29.1**	**39.6**	**30.6**	**26.9**	**30.6**	**29.5**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8

COMPARISON OF GROUNDWATER INFLUX, 2021 CONDITIONS

MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	AVERAGE INFLUX (L/s/m²)						TOTAL GROUNDWATER INFLUX (L/s)					
				19-May-21	27-Jul-21	30-Sep-21	27-Oct-21	10-Nov-21	16-Dec-21	19-May-21	27-Jul-21	30-Sep-21	27-Oct-21	10-Nov-21	16-Dec-21
DP18	DP19	670	6.5	1.4E-03	1.4E-03	3.6E-03	1.2E-03	1.6E-03	1.5E-03	6.3	6.2	15.7	5.3	7.1	6.4
DP19	DP20	310	6.5	1.1E-03	4.3E-04	6.9E-04	3.8E-04	6.5E-04	7.6E-04	2.2	0.9	1.4	0.8	1.3	1.5
DP20	Hwy 401	270	6.5	1.5E-03	7.9E-04	8.5E-04	5.6E-04	5.6E-04	7.9E-04	2.6	1.4	1.5	1.0	1.0	1.4
Hwy 401	DP21	60	7.1	2.1E-03	1.4E-03	2.0E-03	1.8E-04	1.6E-03	1.6E-03	0.9	0.6	0.8	0.1	0.7	0.7
DP21	DP4/R	100	7.3	1.8E-03	1.3E-03	1.9E-03	8.4E-04	1.4E-03	1.2E-03	1.3	1.0	1.4	0.6	1.0	0.9
DP4/R	DP22	50	7.1	3.7E-03	2.8E-03	3.3E-03	3.0E-03	3.0E-03	1.0E-03	1.3	1.0	1.2	1.1	1.1	0.4
DP22	DP17/R	100	6.6	3.1E-03	2.5E-03	2.9E-03	2.5E-03	2.7E-03	1.0E-03	2.1	1.7	1.9	1.7	1.8	0.7
DP17/R	DP3	165	7.1	1.8E-03	1.0E-03	1.4E-03	2.7E-03	1.3E-03	7.9E-04	2.1	1.2	1.6	3.1	1.6	0.9
DP3	Galt Creek	420	6.0	2.3E-03	1.4E-03	1.5E-03	3.0E-03	1.7E-03	9.3E-04	5.7	3.5	3.9	7.6	4.2	2.3
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	6.2	6.2	6.2
Pond Creek	DP1	250	8.0	7.9E-03	6.8E-03	7.3E-03	6.8E-03	7.2E-03	7.6E-03	15.7	13.7	14.6	13.5	14.3	15.2
DP1	DP2	100	6.7	6.4E-03	5.5E-03	6.2E-03	5.3E-03	5.9E-03	6.3E-03	4.3	3.7	4.1	3.6	4.0	4.2
DP2	DP5CR	800	7.6	2.0E-03	2.0E-03	2.1E-03	2.3E-03	2.3E-03	2.4E-03	11.8	12.4	12.8	13.8	14.0	14.8
TOTALS										**62.6**	**53.3**	**67.1**	**58.2**	**58.2**	**55.6**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

- September 2021 DP2 flux value is calculated using groundwater elevation measured on Oct. 6 and surface water elevation measured on Sept. 30, due to anomalous groundwater level on Sept. 30

TABLE B-8

COMPARISON OF GROUNDWATER INFLUX, 2021 CONDITIONS

MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)						ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)					
				19-May-21	27-Jul-21	30-Sep-21	27-Oct-21	10-Nov-21	16-Dec-21	19-May-21	27-Jul-21	30-Sep-21	27-Oct-21	10-Nov-21	16-Dec-21
DP18	DP19	670	6.5	3.2	3.1	7.8	2.6	3.5	3.2	3.2	3.1	7.8	2.6	3.5	3.2
DP19	DP20	310	6.5	0.9	0.3	0.6	0.3	0.5	0.6	1.3	0.5	0.8	0.5	0.8	0.9
DP20	Hwy 401	270	6.5	1.0	0.6	0.6	0.4	0.4	0.6	1.5	0.8	0.9	0.6	0.6	0.8
Hwy 401	DP21	60	7.1	0.4	0.2	0.3	0.0	0.3	0.3	0.5	0.4	0.5	0.0	0.4	0.4
DP21	DP4/R	100	7.3	0.5	0.4	0.5	0.2	0.4	0.4	0.8	0.6	0.8	0.4	0.6	0.5
DP4/R	DP22	50	7.1	0.5	0.4	0.47	0.4	0.4	0.1	0.8	0.6	0.7	0.6	0.6	0.2
DP22	DP17/R	100	6.6	0.8	0.7	0.8	0.7	0.7	0.3	1.2	1.0	1.1	1.0	1.1	0.4
DP17/R	DP3	165	7.1	0.9	0.5	0.6	1.2	0.6	0.4	1.3	0.7	1.0	1.9	0.9	0.6
DP3	Galt Creek	420	6.0	2.3	1.4	1.5	3.0	1.7	0.9	3.4	2.1	2.3	4.6	2.5	1.4
Galt Creek	Pond Creek	255	8.1	2.5	2.5	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	7.9	6.8	7.3	6.8	7.2	7.6	7.9	6.8	7.3	6.8	7.2	7.6
DP1	DP2	100	6.7	2.2	1.9	2.1	1.8	2.0	2.1	2.2	1.9	2.1	1.8	2.0	2.1
DP2	DP5CR	800	7.6	5.9	6.2	6.4	6.9	7.0	7.4	5.9	6.2	6.4	6.9	7.0	7.4
TOTALS				**28.8**	**24.9**	**31.6**	**26.9**	**27.2**	**26.3**	**33.7**	**28.4**	**35.5**	**31.3**	**31.0**	**29.3**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

- September 2021 DP2 flux value is calculated using groundwater elevation measured on Oct. 6 and surface water elevation measured on Sept. 30, due to anomalous groundwater level on Sept. 30

TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2022 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH	AVERAGE WIDTH	AVERAGE INFLUX (L/s/m²)										TOTAL GROUNDWATER INFLUX (L/s)									
		(m)	(m)	17-Mar-22	21-Apr-22	24-May-22	15-Jun-22	14-Jul-22	25-Aug-22	08-Sep-22	13-Oct-22	24-Nov-22	16-Dec-22	17-Mar-22	21-Apr-22	24-May-22	15-Jun-22	14-Jul-22	25-Aug-22	08-Sep-22	13-Oct-22	24-Nov-22	16-Dec-22
DP18	DP19	670	6.5	1.4E-03	1.0E-03	1.7E-03	1.5E-03	-3.0E-03	-5.5E-03	-3.8E-03	-6.3E-03	-6.0E-03	-3.8E-03	5.9	4.4	7.5	6.3	-13.0	-24.0	-16.6	-27.6	-26.3	-16.4
DP19	DP20	310	6.5	8.3E-04	9.3E-04	7.7E-04	6.0E-04	-3.4E-03	-3.6E-03	-3.8E-03	-4.0E-03	-3.3E-03	-3.1E-03	1.7	1.9	1.5	1.2	-6.9	-7.3	-7.8	-8.0	-6.6	-6.3
DP20	Hwy 401	270	6.5	1.5E-03	1.5E-03	1.1E-03	1.1E-03	-2.8E-03	-2.7E-03	-1.5E-03	-2.5E-03	-2.0E-03	-1.8E-03	2.6	2.7	2.0	1.9	-5.0	-4.7	-2.6	-4.4	-3.5	-3.2
Hwy 401	DP21	60	7.1	2.5E-03	2.7E-03	2.5E-03	1.8E-03	1.4E-03	1.6E-03	7.1E-04	5.3E-04	9.8E-04	1.2E-03	1.1	1.1	1.1	0.8	0.6	0.7	0.3	0.2	0.4	0.5
DP21	DP4	100	7.3	1.7E-03	2.1E-03	1.5E-03	1.5E-03	1.3E-03	1.2E-03	6.6E-04	4.2E-04	4.9E-04	8.8E-04	1.2	1.5	1.1	1.1	1.0	0.9	0.5	0.3	0.4	0.6
DP4	DP22	50	7.1	2.6E-03	3.5E-03	-1.2E-03	3.0E-03	3.2E-03	1.4E-03	1.4E-03	1.1E-03	1.3E-03	1.4E-03	0.9	1.2	-0.4	1.1	1.1	0.5	0.5	0.4	0.5	0.5
DP22	DP17	100	6.6	2.6E-03	3.2E-03	-9.8E-04	2.7E-03	2.8E-03	1.1E-03	1.1E-03	1.1E-03	1.5E-03	1.3E-03	1.7	2.2	-0.6	1.8	1.8	0.7	0.7	0.7	1.0	0.9
DP17	DP3	165	7.1	2.2E-03	1.7E-03	2.0E-03	1.6E-03	1.5E-03	1.5E-03	8.9E-04	1.5E-03	1.5E-03	1.5E-03	2.6	2.0	2.3	1.9	1.8	1.8	1.0	1.8	1.8	1.8
DP3	Galt Creek	420	6.0	2.3E-03	1.8E-03	2.1E-03	2.0E-03	2.0E-03	2.0E-03	1.5E-03	2.0E-03	2.0E-03	2.0E-03	5.9	4.6	5.4	5.0	5.0	5.0	3.9	5.0	5.0	5.0
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Pond Creek	DP1	250	8.0	8.3E-03	8.8E-03	9.4E-03	9.8E-03	8.1E-03	6.2E-03	7.3E-03	6.8E-03	7.2E-03	7.3E-03	16.5	17.7	18.8	19.6	16.3	12.4	14.6	13.7	14.3	14.6
DP1	DP2	100	6.7	7.1E-03	7.7E-03	8.5E-03	8.9E-03	6.6E-03	5.0E-03	5.9E-03	5.3E-03	5.4E-03	5.4E-03	4.8	5.2	5.7	6.0	4.4	3.4	4.0	3.5	3.6	3.6
DP2	DP5CR	800	7.6	2.6E-03	2.6E-03	2.8E-03	2.7E-03	1.7E-03	2.1E-03	1.8E-03	1.8E-03	1.7E-03	1.5E-03	15.5	15.9	17.1	16.6	10.5	12.8	10.8	10.9	10.6	9.1
TOTALS														**66.5**	**66.4**	**67.6**	**69.3**	**23.8**	**8.3**	**15.5**	**2.8**	**7.3**	**16.9**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2022 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH	AVERAGE WIDTH	ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)										ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)									
		(m)	(m)	17-Mar-22	21-Apr-22	24-May-22	15-Jun-22	14-Jul-22	25-Aug-22	08-Sep-22	13-Oct-22	24-Nov-22	16-Dec-22	17-Mar-22	21-Apr-22	24-May-22	15-Jun-22	14-Jul-22	25-Aug-22	08-Sep-22	13-Oct-22	24-Nov-22	16-Dec-22
DP18	DP19	670	6.5	2.9	2.2	3.8	3.2	-6.5	-12.0	-8.3	-13.8	-13.1	-8.2	2.9	2.2	3.8	3.2	-6.5	-12.0	-8.3	-13.8	-13.1	-8.2
DP19	DP20	310	6.5	0.7	0.7	0.6	0.5	-2.8	-2.9	-3.1	-3.2	-2.6	-2.5	1.0	1.1	0.9	0.7	-4.1	-4.4	-4.7	-4.8	-4.0	-3.8
DP20	Hwy 401	270	6.5	1.0	1.1	0.8	0.8	-2.0	-1.9	-1.0	-1.7	-1.4	-1.3	1.5	1.6	1.2	1.1	-3.0	-2.8	-1.5	-2.6	-2.1	-1.9
Hwy 401	DP21	60	7.1	0.4	0.5	0.4	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.6	0.7	0.6	0.5	0.4	0.4	0.2	0.1	0.2	0.3
DP21	DP4	100	7.3	0.5	0.6	0.5	0.4	0.4	0.4	0.2	0.1	0.1	0.3	0.7	0.9	0.7	0.7	0.6	0.5	0.3	0.2	0.2	0.4
DP4	DP22	50	7.1	0.4	0.5	-0.17	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.5	0.7	-0.2	0.6	0.7	0.3	0.3	0.2	0.3	0.3
DP22	DP17	100	6.6	0.7	0.9	-0.3	0.7	0.7	0.3	0.3	0.3	0.4	0.3	1.0	1.3	-0.4	1.1	1.1	0.4	0.4	0.4	0.6	0.5
DP17	DP3	165	7.1	1.0	0.8	0.9	0.8	0.7	0.7	0.4	0.7	0.7	0.7	1.5	1.2	1.4	1.1	1.1	1.1	0.6	1.1	1.1	1.1
DP3	Galt Creek	420	6.0	2.4	1.8	2.1	2.0	2.0	2.0	1.5	2.0	2.0	2.0	3.5	2.8	3.2	3.0	3.0	3.0	2.3	3.0	3.0	3.0
Galt Creek	Pond Creek	255	8.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	8.3	8.8	9.4	9.8	8.1	6.2	7.3	6.8	7.2	7.3	8.3	8.8	9.4	9.8	8.1	6.2	7.3	6.8	7.2	7.3
DP1	DP2	100	6.7	2.4	2.6	2.9	3.0	2.2	1.7	2.0	1.8	1.8	1.8	2.4	2.6	2.9	3.0	2.2	1.7	2.0	1.8	1.8	1.8
DP2	DP5CR	800	7.6	7.7	7.9	8.6	8.3	5.2	6.4	5.4	5.4	5.3	4.6	7.7	7.9	8.6	8.3	5.2	6.4	5.4	5.4	5.3	4.6
TOTALS				**30.9**	**30.9**	**31.9**	**32.6**	**11.3**	**3.8**	**7.5**	**1.2**	**3.2**	**7.8**	**35.6**	**35.5**	**35.6**	**36.7**	**12.5**	**4.5**	**8.0**	**1.6**	**4.2**	**9.0**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2023 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	AVERAGE INFLUX (L/s/m²)										TOTAL GROUNDWATER INFLUX (L/s)									
				14-Feb-23	17-Mar-23	27-Apr-23	26-May-23	15-Jun-23	08-Aug-23	07-Sep-23	26-Oct-23	16-Nov-23	18-Dec-23	14-Feb-23	17-Mar-23	27-Apr-23	26-May-23	15-Jun-23	08-Aug-23	07-Sep-23	26-Oct-23	16-Nov-23	18-Dec-23
DP18	DP19	670	6.5	-3.6E-03	-3.0E-03	-1.0E-03	-1.2E-03	5.6E-04	-8.4E-04	1.1E-03	-4.8E-03	-7.0E-04	1.0E-03	-15.8	-13.0	-4.5	-5.2	2.5	-3.7	4.9	-21.0	-3.0	4.4
DP19	DP20	310	6.5	-3.3E-03	-2.9E-03	9.6E-04	1.0E-03	-2.0E-04	7.0E-04	6.2E-04	-3.5E-03	-5.2E-04	-3.1E-03	-6.6	-5.9	1.9	2.0	-0.4	1.4	1.2	-7.1	-1.0	-6.3
DP20	Hwy 401	270	6.5	-2.3E-03	-1.2E-03	1.2E-03	1.4E-03	0.0E+00	1.1E-03	1.1E-03	-2.4E-03	-3.4E-04	-2.2E-03	-4.1	-2.2	2.1	2.4	0.0	2.0	1.9	-4.3	-0.6	-3.8
Hwy 401	DP21	60	7.1	1.8E-03	2.3E-03	2.2E-03	2.0E-03	1.9E-03	2.1E-03	2.5E-03	1.9E-03	1.6E-03	2.0E-03	0.8	1.0	0.9	0.8	0.8	0.9	1.1	0.8	0.7	0.8
DP21	DP4	100	7.3	1.9E-03	1.6E-03	1.9E-03	1.5E-03	2.0E-03	1.8E-03	3.2E-03	1.9E-03	1.1E-03	2.4E-03	1.4	1.2	1.4	1.1	1.5	1.3	2.3	1.4	0.8	1.7
DP4	DP22	50	7.1	3.2E-03	3.1E-03	7.1E-03	2.6E-03	3.3E-03	3.2E-03	5.3E-03	2.4E-03	1.0E-03	1.6E-03	1.1	1.1	2.5	0.9	1.2	1.1	1.9	0.8	0.4	0.6
DP22	DP17	100	6.6	3.1E-03	3.6E-03	6.8E-03	2.6E-03	2.8E-03	3.1E-03	4.1E-03	2.0E-03	1.3E-03	2.9E-03	2.0	2.4	4.5	1.7	1.9	2.1	2.7	1.3	0.9	1.9
DP17	DP3	165	7.1	2.3E-03	2.5E-03	2.1E-03	1.9E-03	1.2E-03	1.9E-03	2.3E-03	2.1E-03	1.9E-03	4.2E-03	2.7	2.9	2.5	2.2	1.4	2.3	2.7	2.5	2.2	4.8
DP3	Galt Creek	420	6.0	2.0E-03	2.1E-03	2.2E-03	2.0E-03	1.2E-03	2.0E-03	2.2E-03	2.1E-03	2.0E-03	2.0E-03	5.2	5.4	5.5	5.0	3.1	5.0	5.5	5.4	5.0	5.2
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Pond Creek	DP1	250	8.0	8.5E-03	9.4E-03	1.0E-02	1.0E-02	8.7E-03	8.3E-03	8.7E-03	8.0E-03	7.6E-03	8.5E-03	17.0	18.8	20.6	20.1	17.4	16.5	17.4	16.0	15.1	17.0
DP1	DP2	100	6.7	6.9E-03	7.5E-03	8.9E-03	8.5E-03	7.0E-03	6.4E-03	7.5E-03	6.3E-03	5.8E-03	6.7E-03	4.7	5.1	6.0	5.7	4.7	4.3	5.0	4.2	3.9	4.5
DP2	DP5CR	800	7.6	1.9E-03	1.9E-03	2.0E-03	1.9E-03	1.8E-03	1.5E-03	2.1E-03	1.6E-03	1.6E-03	1.7E-03	11.5	11.4	12.4	11.7	10.8	8.9	12.7	9.7	9.9	10.5
TOTALS														**26.0**	**34.4**	**62.1**	**54.8**	**50.9**	**48.3**	**65.6**	**15.9**	**40.3**	**47.4**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2023 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH	AVERAGE WIDTH	ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)										ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)									
		(m)	(m)	14-Feb-23	17-Mar-23	27-Apr-23	26-May-23	15-Jun-23	08-Aug-23	07-Sep-23	26-Oct-23	16-Nov-23	18-Dec-23	14-Feb-23	17-Mar-23	27-Apr-23	26-May-23	15-Jun-23	08-Aug-23	07-Sep-23	26-Oct-23	16-Nov-23	18-Dec-23
DP18	DP19	670	6.5	-7.9	-6.5	-2.2	-2.6	1.2	-1.8	2.5	-10.5	-1.5	2.2	-7.9	-6.5	-2.2	-2.6	1.2	-1.8	2.5	-10.5	-1.5	2.2
DP19	DP20	310	6.5	-2.6	-2.3	0.8	0.8	-0.2	0.6	0.5	-2.9	-0.4	-2.5	-3.9	-3.5	1.2	1.2	-0.2	0.8	0.7	-4.3	-0.6	-3.8
DP20	Hwy 401	270	6.5	-1.6	-0.9	0.8	1.0	0.0	0.8	0.8	-1.7	-0.2	-1.5	-2.4	-1.3	1.2	1.4	0.0	1.2	1.1	-2.6	-0.4	-2.3
Hwy 401	DP21	60	7.1	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.5
DP21	DP4	100	7.3	0.5	0.5	0.6	0.4	0.6	0.5	0.9	0.6	0.3	0.7	0.8	0.7	0.9	0.7	0.9	0.8	1.4	0.8	0.5	1.0
DP4	DP22	50	7.1	0.5	0.4	1.01	0.4	0.5	0.5	0.7	0.3	0.1	0.2	0.7	0.7	1.5	0.5	0.7	0.7	1.1	0.5	0.2	0.3
DP22	DP17	100	6.6	0.8	1.0	1.8	0.7	0.7	0.8	1.1	0.5	0.4	0.8	1.2	1.5	2.7	1.0	1.1	1.2	1.6	0.8	0.5	1.2
DP17	DP3	165	7.1	1.1	1.1	1.0	0.9	0.6	0.9	1.1	1.0	0.9	1.9	1.6	1.7	1.5	1.3	0.8	1.4	1.6	1.5	1.3	2.9
DP3	Galt Creek	420	6.0	2.1	2.1	2.2	2.0	1.2	2.0	2.2	2.1	2.0	2.1	3.1	3.2	3.3	3.0	1.9	3.0	3.3	3.2	3.0	3.1
Galt Creek	Pond Creek	255	8.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	8.5	9.4	10.3	10.1	8.7	8.3	8.7	8.0	7.6	8.5	8.5	9.4	10.3	10.1	8.7	8.3	8.7	8.0	7.6	8.5
DP1	DP2	100	6.7	2.3	2.5	3.0	2.9	2.4	2.1	2.5	2.1	2.0	2.2	2.3	2.5	3.0	2.9	2.4	2.1	2.5	2.1	2.0	2.2
DP2	DP5CR	800	7.6	5.8	5.7	6.2	5.9	5.4	4.4	6.4	4.9	4.9	5.3	5.8	5.7	6.2	5.9	5.4	4.4	6.4	4.9	4.9	5.3
TOTALS				**12.1**	**16.0**	**28.3**	**25.1**	**23.9**	**21.9**	**30.2**	**7.2**	**18.7**	**22.6**	**13.9**	**18.4**	**33.8**	**29.6**	**27.0**	**26.4**	**35.3**	**8.6**	**21.6**	**24.8**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2024 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	AVERAGE INFLUX (L/s/m²)										TOTAL GROUNDWATER INFLUX (L/s)									
				27-Feb-24	12-Mar-24	05-Apr-24	13-May-24	04-Jun-24	09-Jul-24	13-Aug-24	10-Sep-24	02-Oct-24	04-Nov-24	27-Feb-24	12-Mar-24	05-Apr-24	13-May-24	04-Jun-24	09-Jul-24	13-Aug-24	10-Sep-24	02-Oct-24	04-Nov-24
DP18	DP19	670	6.5	-3.6E-03	-3.9E-03	-8.5E-03	-1.9E-03	-2.3E-03	-1.7E-03	4.9E-03	3.3E-03	-5.2E-03	-7.0E-03	-15.5	-16.9	-37.1	-8.4	-10.2	-7.3	21.2	14.5	-22.7	-30.7
DP19	DP20	310	6.5	-2.8E-03	-2.4E-03	-3.4E-03	1.4E-03	1.1E-03	1.1E-03	1.7E-03	4.9E-04	-1.5E-03	-3.0E-03	-5.7	-4.9	-6.8	2.7	2.3	2.2	3.4	1.0	-3.1	-6.1
DP20	Hwy 401	270	6.5	-2.4E-03	-2.1E-03	-2.0E-03	1.6E-03	1.4E-03	1.4E-03	1.5E-03	4.5E-04	1.2E-03	-1.4E-03	-4.3	-3.8	-3.5	2.8	2.5	2.4	2.6	0.8	2.1	-2.5
Hwy 401	DP21	60	7.1	2.3E-03	2.0E-03	2.5E-03	2.1E-03	2.7E-03	2.5E-03	3.4E-03	2.5E-03	2.5E-03	1.8E-03	1.0	0.8	1.1	0.9	1.1	1.1	1.4	1.1	1.1	0.8
DP21	DP4	100	7.3	2.5E-03	2.1E-03	3.2E-03	2.5E-03	2.4E-03	2.6E-03	3.1E-03	3.5E-03	2.9E-03	2.0E-03	1.9	1.5	2.3	1.8	1.8	1.9	2.2	2.5	2.1	1.5
DP4	DP22	50	7.1	4.1E-03	3.5E-03	3.2E-03	3.6E-03	3.0E-03	4.2E-03	5.1E-03	4.6E-03	4.2E-03	3.3E-03	1.4	1.2	1.1	1.3	1.0	1.5	1.8	1.6	1.5	1.2
DP22	DP17	100	6.6	3.6E-03	3.4E-03	1.3E-03	2.6E-03	2.4E-03	3.2E-03	4.5E-03	2.8E-03	3.2E-03	3.0E-03	2.4	2.2	0.9	1.7	1.6	2.1	3.0	1.8	2.1	2.0
DP17	DP3	165	7.1	2.5E-03	2.5E-03	2.2E-03	1.6E-03	1.8E-03	1.4E-03	3.7E-03	1.8E-03	2.1E-03	2.3E-03	2.9	2.9	2.6	1.8	2.1	1.7	4.4	2.1	2.4	2.6
DP3	Galt Creek	420	6.0	2.3E-03	2.1E-03	2.9E-03	1.8E-03	1.8E-03	1.7E-03	3.6E-03	2.0E-03	2.1E-03	2.1E-03	5.7	5.4	7.2	4.6	4.6	4.2	9.1	5.2	5.4	5.4
Galt Creek	Pond Creek	255	8.1	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	3.0E-03	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Pond Creek	DP1	250	8.0	1.0E-02	8.3E-03	6.8E-03	8.8E-03	8.4E-03	8.4E-03	8.5E-03	9.5E-03	9.1E-03	8.8E-03	21.0	16.5	13.7	17.7	16.8	16.8	17.1	19.0	18.2	17.7
DP1	DP2	100	6.7	8.4E-03	6.4E-03	5.0E-03	7.0E-03	6.8E-03	6.8E-03	6.9E-03	7.8E-03	7.8E-03	7.5E-03	5.6	4.3	3.4	4.7	4.6	4.6	4.6	5.3	5.3	5.1
DP2	DP5CR	800	7.6	1.4E-03	1.5E-03	1.4E-03	1.6E-03	1.8E-03	1.7E-03	1.7E-03	1.6E-03	2.1E-03	2.1E-03	8.5	9.2	8.6	9.9	10.6	10.3	10.2	9.8	12.6	12.6
TOTALS														**31.1**	**24.7**	**-0.5**	**47.7**	**45.0**	**47.5**	**87.2**	**70.9**	**33.1**	**15.6**
TOTAL INFLUX FROM HWY 401 TO DP5CR														**56.5**	**50.3**	**47.0**	**50.6**	**50.4**	**50.3**	**60.0**	**54.6**	**56.8**	**54.8**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

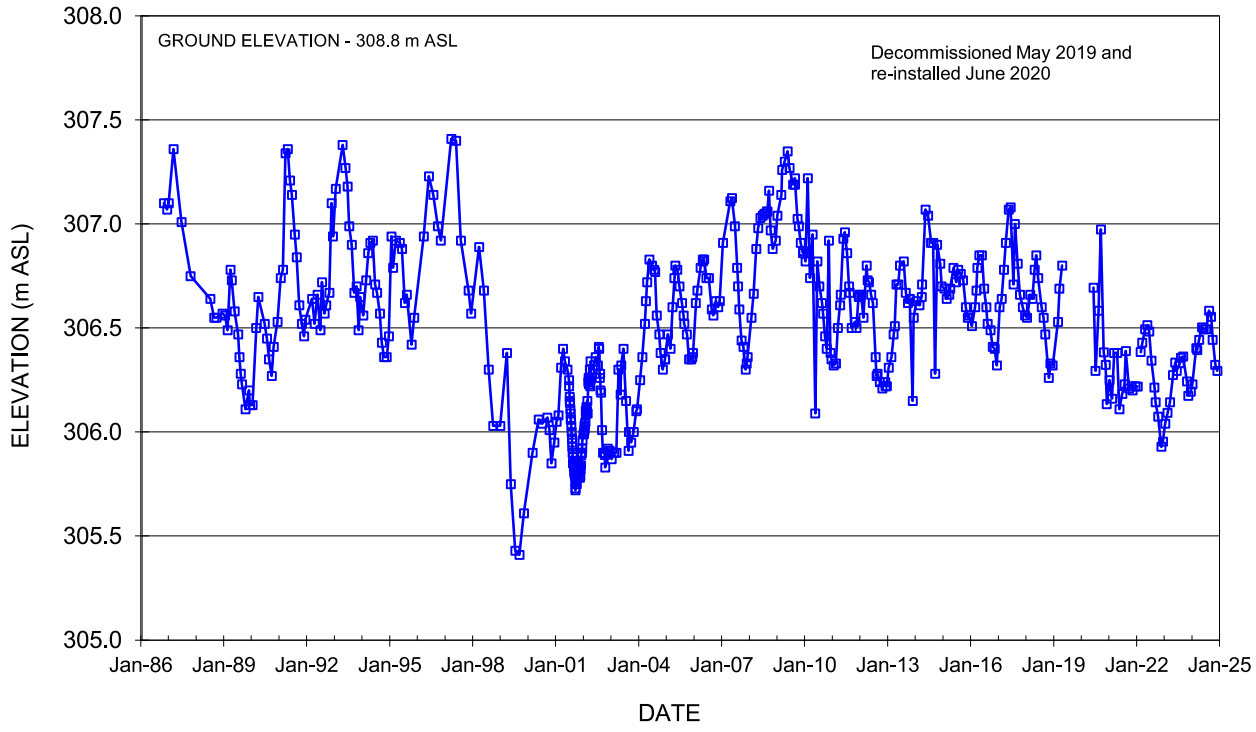
TABLE B-8
COMPARISON OF GROUNDWATER INFLUX, 2024 CONDITIONS
MILL CREEK AGGREGATES PIT

FROM	TO	LENGTH (m)	AVERAGE WIDTH (m)	ESTIMATED GROUNDWATER FLUX FROM NORTH SIDE OF CREEK (L/s)										ESTIMATED GROUNDWATER FLUX FROM SOUTH SIDE OF CREEK (L/s)									
				27-Feb-24	12-Mar-24	05-Apr-24	13-May-24	04-Jun-24	09-Jul-24	13-Aug-24	10-Sep-24	02-Oct-24	04-Nov-24	27-Feb-24	12-Mar-24	05-Apr-24	13-May-24	04-Jun-24	09-Jul-24	13-Aug-24	10-Sep-24	02-Oct-24	04-Nov-24
DP18	DP19	670	6.5	-7.7	-8.4	-18.6	-4.2	-5.1	-3.7	10.6	7.2	-11.3	-15.3	-7.7	-8.4	-18.6	-4.2	-5.1	-3.7	10.6	7.2	-11.3	-15.3
DP19	DP20	310	6.5	-2.3	-2.0	-2.7	1.1	0.9	0.9	1.4	0.4	-1.2	-2.4	-3.4	-3.0	-4.1	1.6	1.4	1.3	2.1	0.6	-1.9	-3.6
DP20	Hwy 401	270	6.5	-1.7	-1.5	-1.4	1.1	1.0	1.0	1.0	0.3	0.9	-1.0	-2.6	-2.3	-2.1	1.7	1.5	1.4	1.5	0.5	1.3	-1.5
Hwy 401	DP21	60	7.1	0.4	0.3	0.4	0.4	0.5	0.4	0.6	0.4	0.4	0.3	0.6	0.5	0.6	0.5	0.7	0.6	0.9	0.6	0.6	0.5
DP21	DP4	100	7.3	0.7	0.6	0.9	0.7	0.7	0.8	0.9	1.0	0.9	0.6	1.1	0.9	1.4	1.1	1.1	1.2	1.3	1.5	1.3	0.9
DP4	DP22	50	7.1	0.6	0.5	0.5	0.5	0.4	0.6	0.7	0.7	0.6	0.5	0.9	0.7	0.7	0.8	0.6	0.9	1.1	1.0	0.9	0.7
DP22	DP17	100	6.6	0.9	0.9	0.3	0.7	0.6	0.8	1.2	0.7	0.8	0.8	1.4	1.3	0.5	1.0	1.0	1.3	1.8	1.1	1.3	1.2
DP17	DP3	165	7.1	1.2	1.1	1.0	0.7	0.8	0.7	1.7	0.8	1.0	1.1	1.8	1.7	1.6	1.1	1.2	1.0	2.6	1.3	1.4	1.6
DP3	Galt Creek	420	6.0	2.3	2.1	2.9	1.8	1.8	1.7	3.6	2.1	2.1	2.1	3.4	3.2	4.3	2.8	2.8	2.5	5.5	3.1	3.2	3.2
Galt Creek	Pond Creek	255	8.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Pond Creek	DP1	250	8.0	10.5	8.3	6.8	8.8	8.4	8.4	8.5	9.5	9.1	8.8	10.5	8.3	6.8	8.8	8.4	8.4	8.5	9.5	9.1	8.8
DP1	DP2	100	6.7	2.8	2.1	1.7	2.4	2.3	2.3	2.3	2.6	2.6	2.5	2.8	2.1	1.7	2.4	2.3	2.3	2.3	2.6	2.6	2.5
DP2	DP5CR	800	7.6	4.2	4.6	4.3	5.0	5.3	5.1	5.1	4.9	6.3	6.3	4.2	4.6	4.3	5.0	5.3	5.1	5.1	4.9	6.3	6.3
TOTALS				**14.4**	**11.2**	**-1.4**	**21.4**	**20.2**	**21.4**	**40.2**	**33.2**	**14.6**	**6.7**	**16.7**	**13.5**	**0.9**	**26.2**	**24.8**	**26.1**	**47.0**	**37.7**	**18.5**	**8.9**
TOTAL INFLUX FROM HWY 401 TO DP5CR				**26.1**	**23.1**	**21.3**	**23.5**	**23.4**	**23.3**	**27.2**	**25.2**	**26.3**	**25.5**	**30.4**	**27.2**	**25.6**	**27.1**	**27.0**	**27.0**	**32.8**	**29.3**	**30.4**	**29.4**

Notes - Groundwater influx at Galt Creek and Pond Creek based on seepage data from May/June 1992

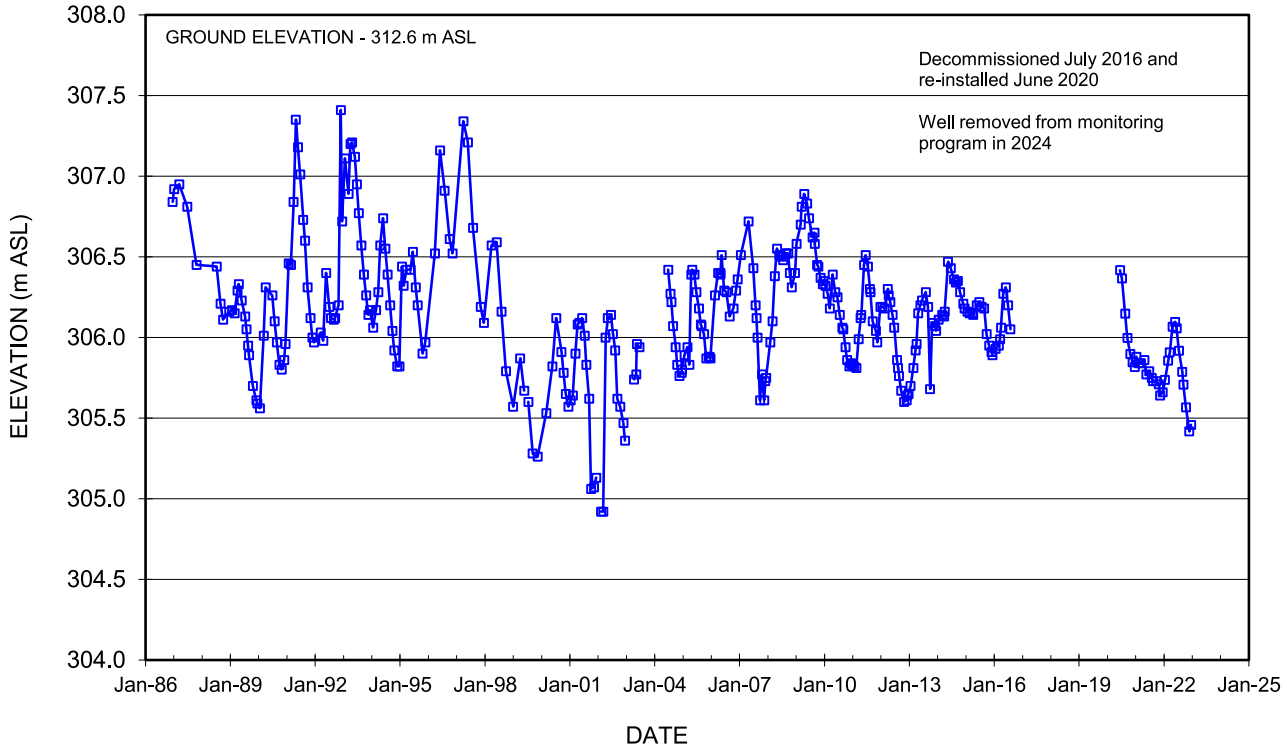
GROUNDWATER HYDROGRAPH
BOREHOLE 1-I/1-R

FIGURE B-1



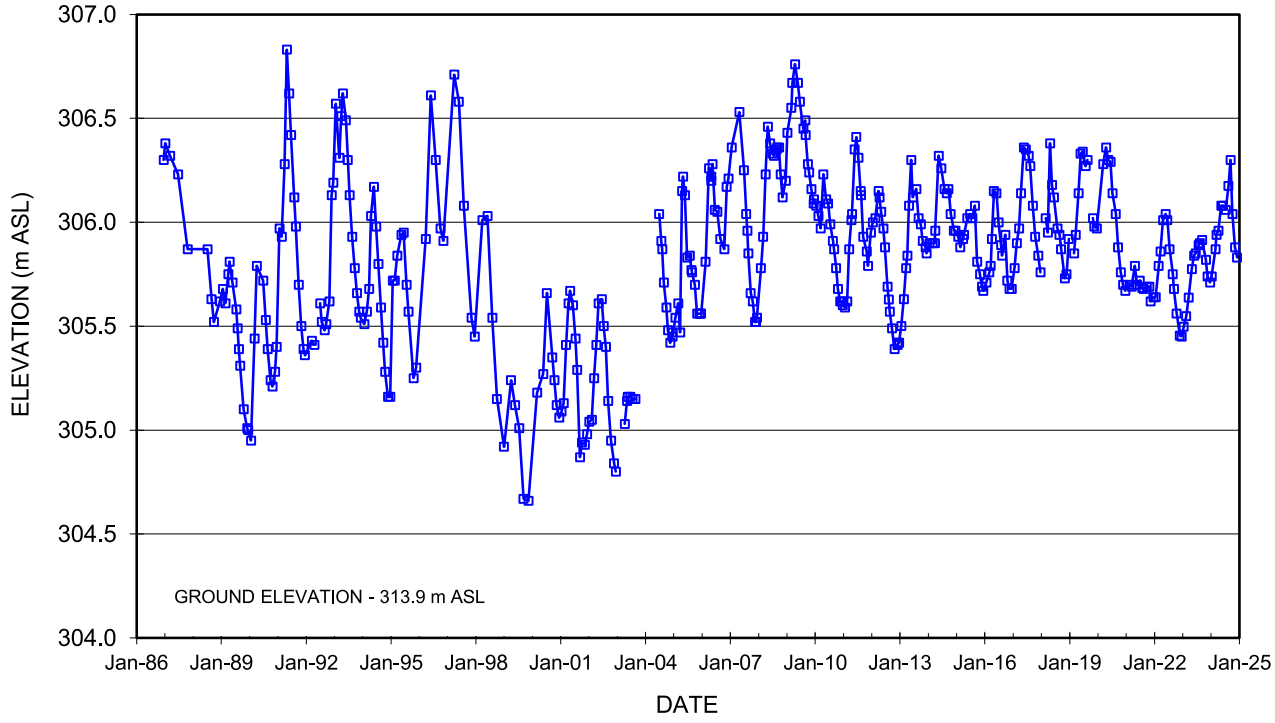
GROUNDWATER HYDROGRAPH
BOREHOLE 2/2B/2-R

FIGURE B-2



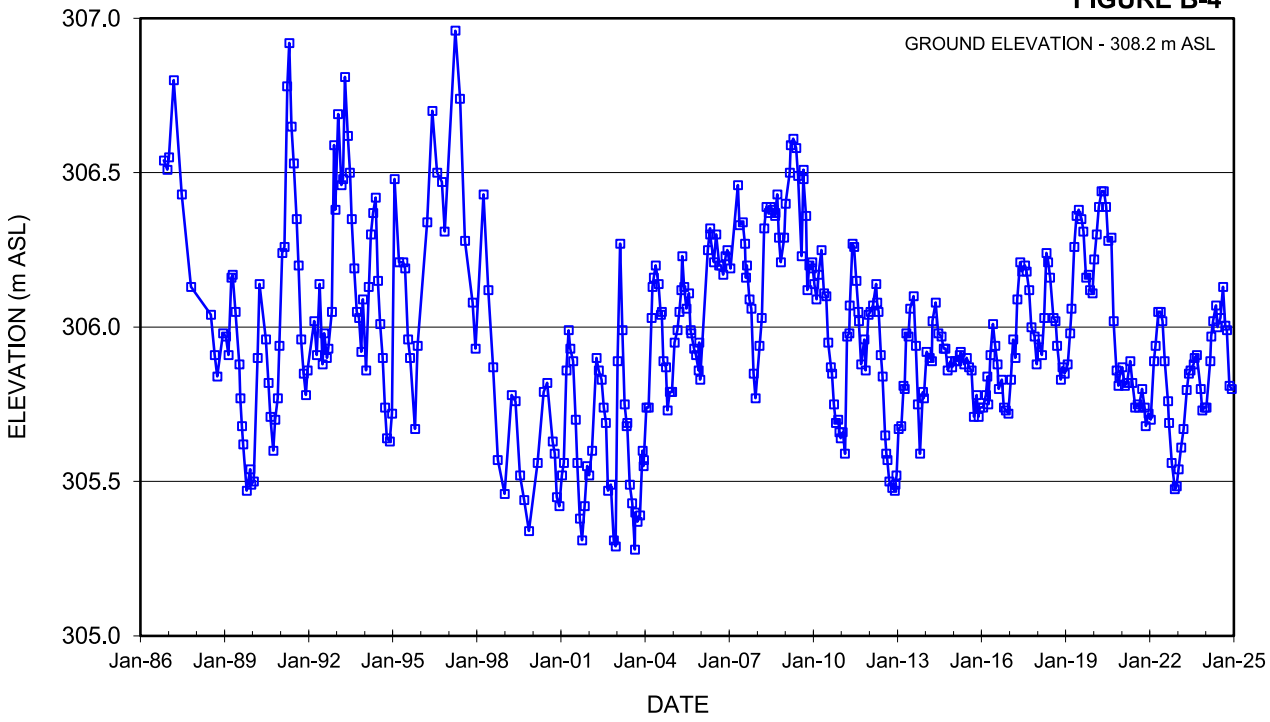
GROUNDWATER HYDROGRAPH
BOREHOLE 3

FIGURE B-3



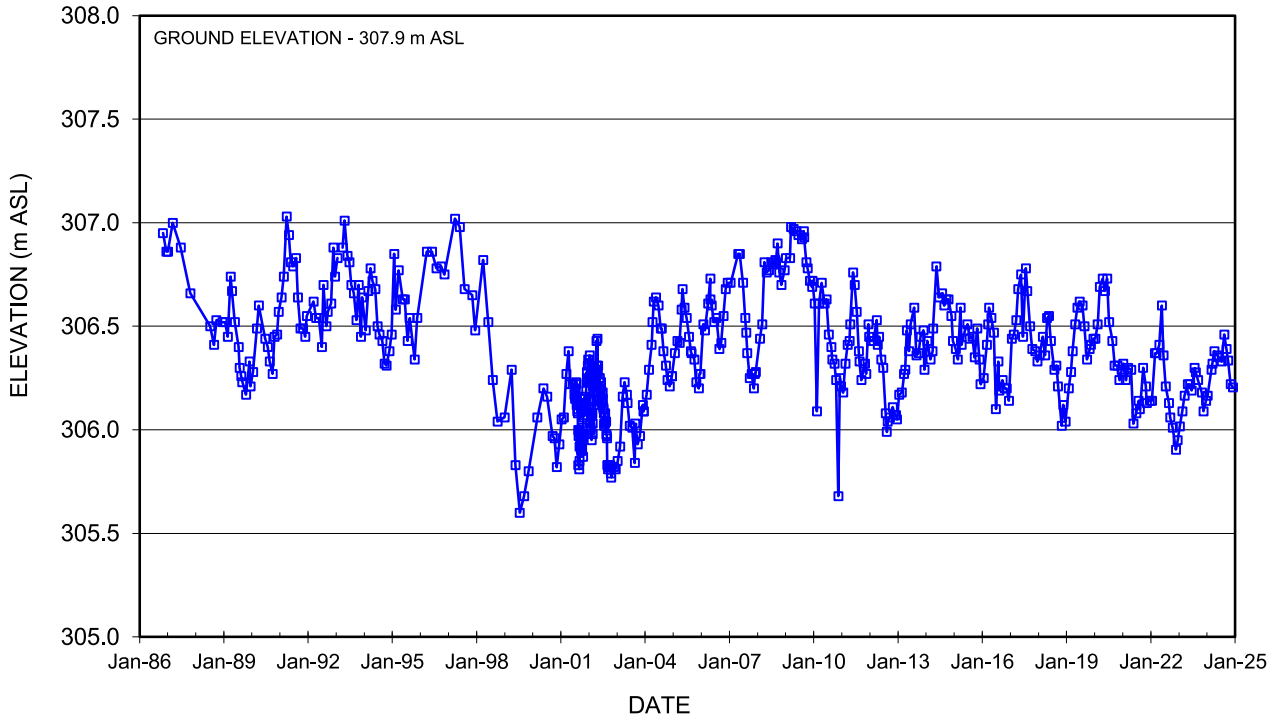
GROUNDWATER HYDROGRAPH
BOREHOLE 4-I

FIGURE B-4



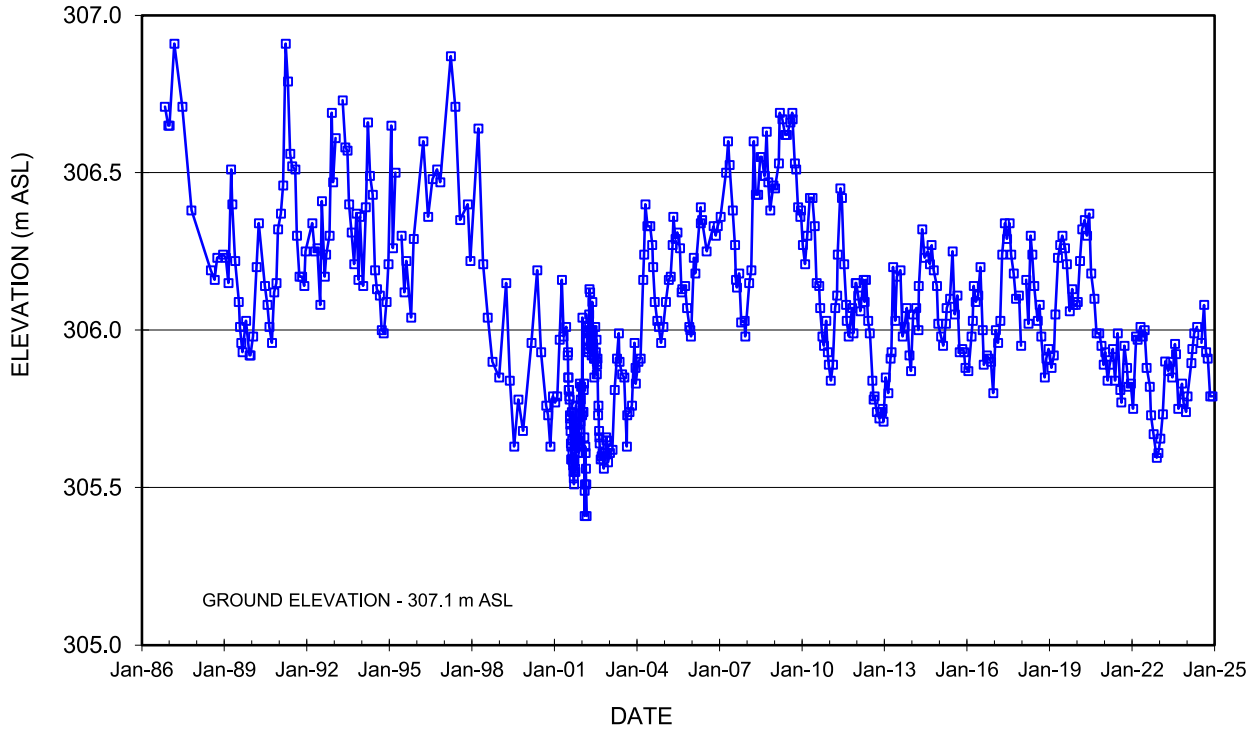
GROUNDWATER HYDROGRAPH
BOREHOLE 5-I

FIGURE B-5



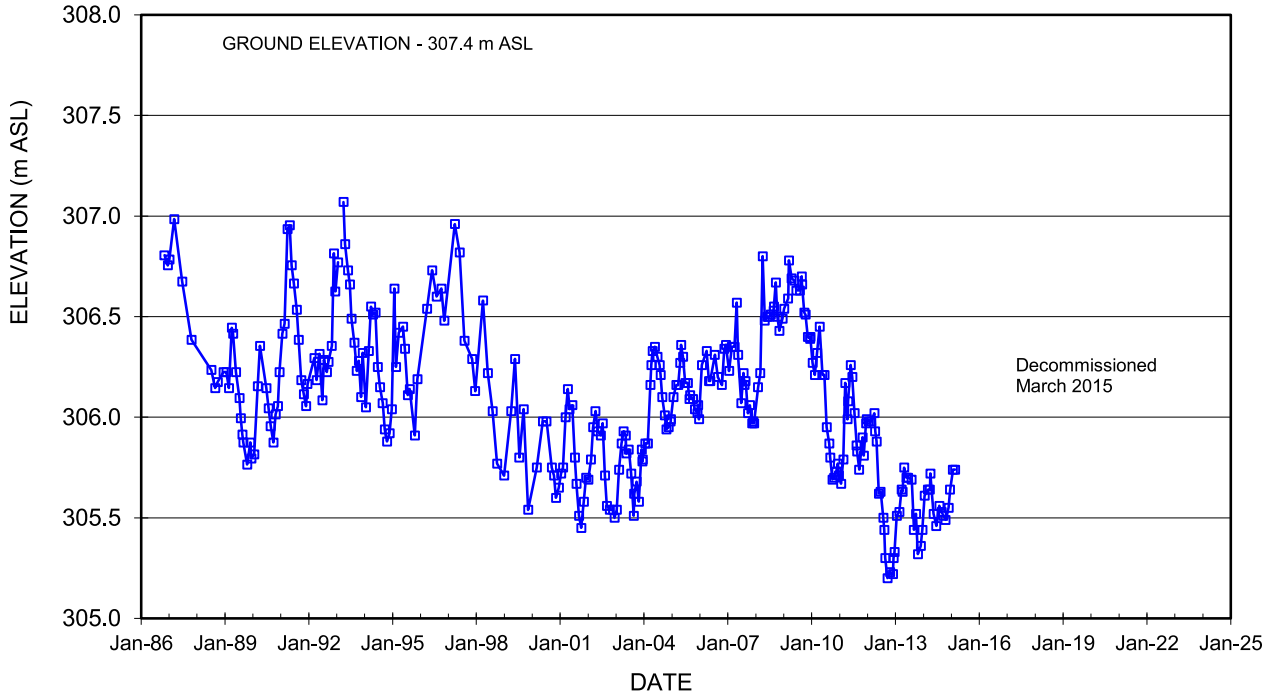
GROUNDWATER HYDROGRAPH
BOREHOLE 6-I

FIGURE B-6



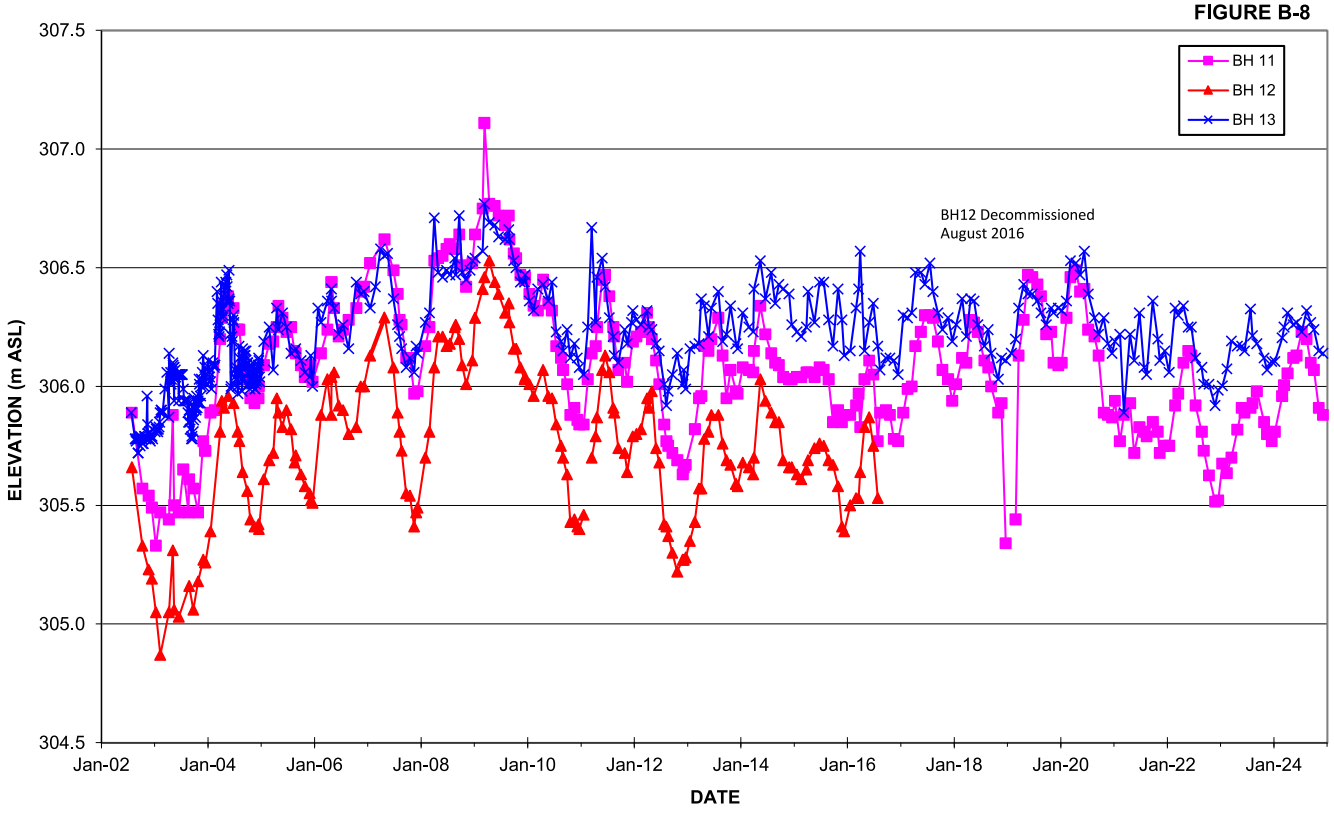
GROUNDWATER HYDROGRAPH
BOREHOLE 7

FIGURE B-7



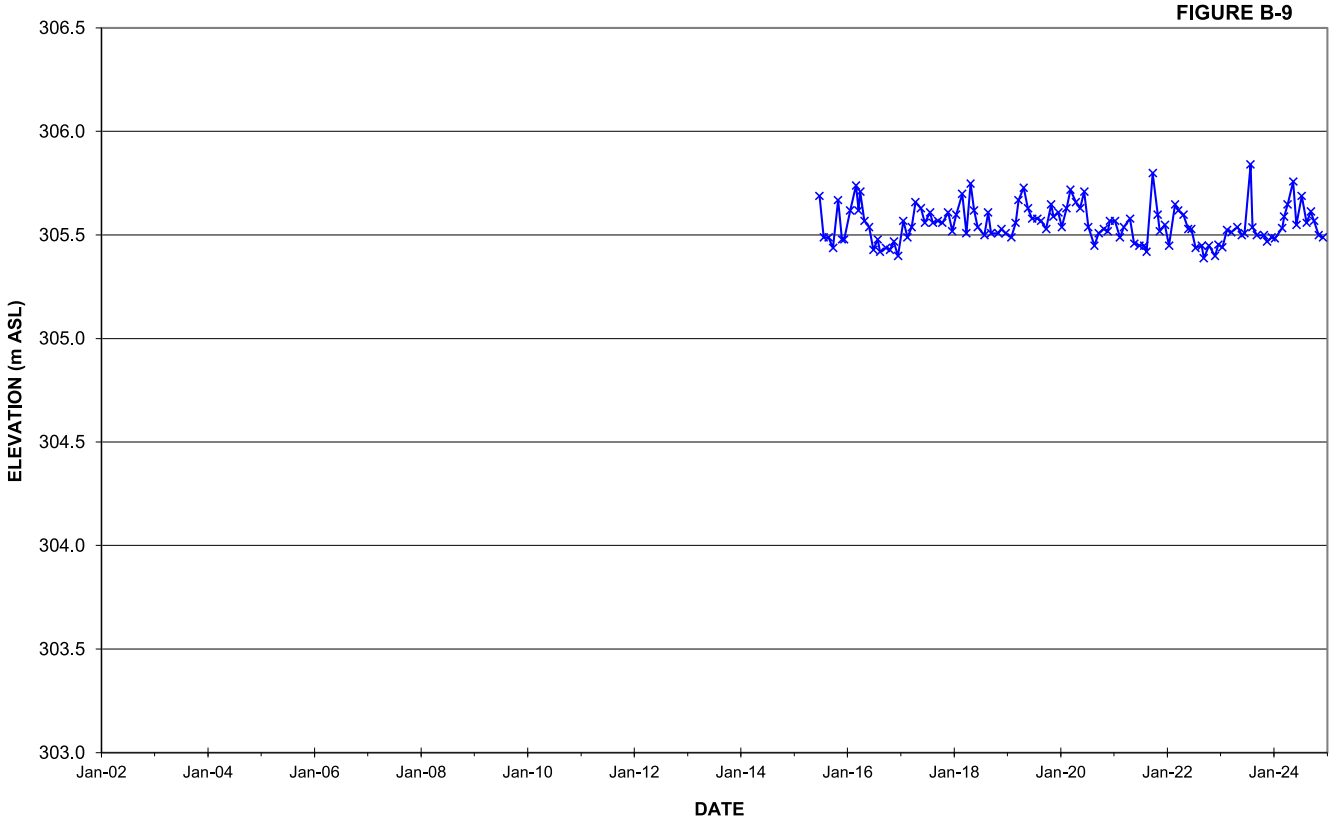
GROUNDWATER HYDROGRAPH
2002 MONITORS

FIGURE B-8



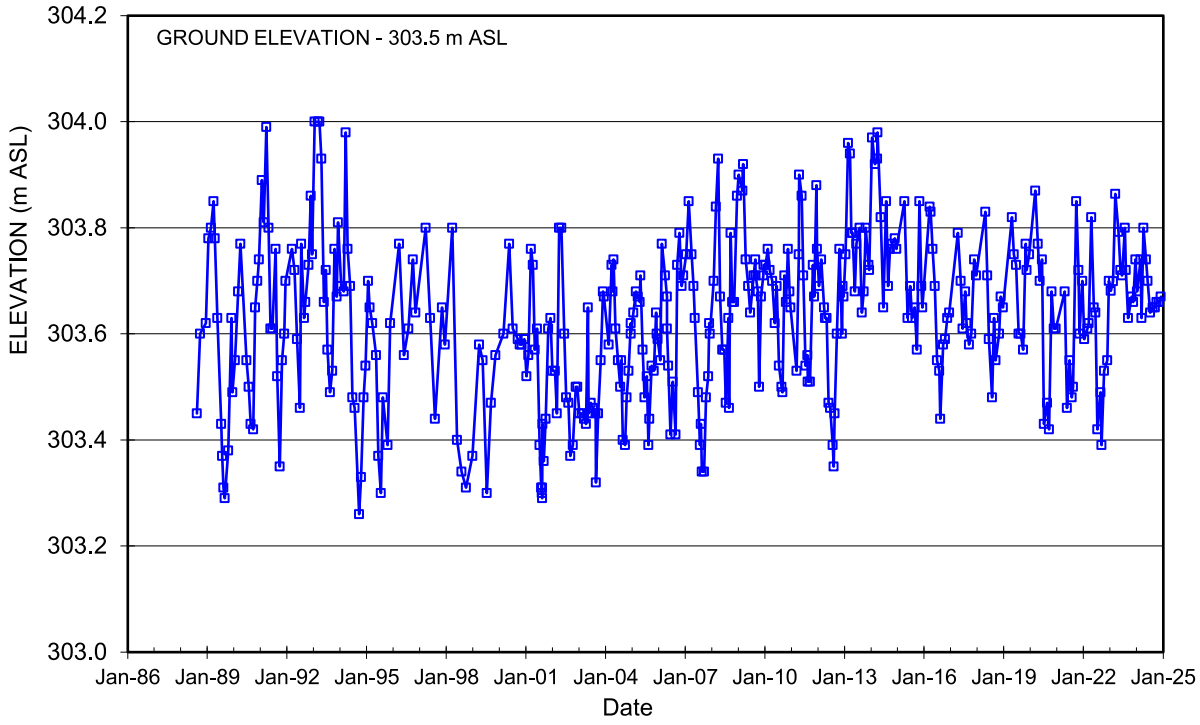
GROUNDWATER HYDROGRAPH
BOREHOLE 14

FIGURE B-9



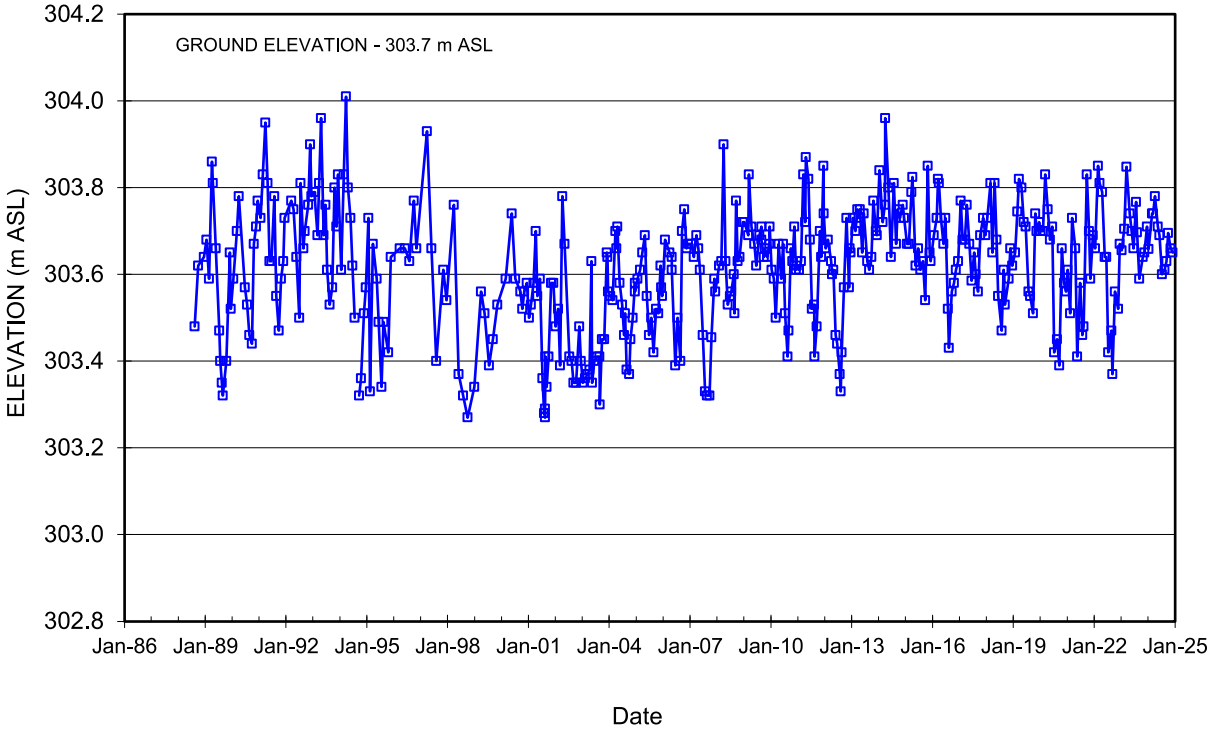
GROUNDWATER HYDROGRAPH
OW16A-78

FIGURE B-10



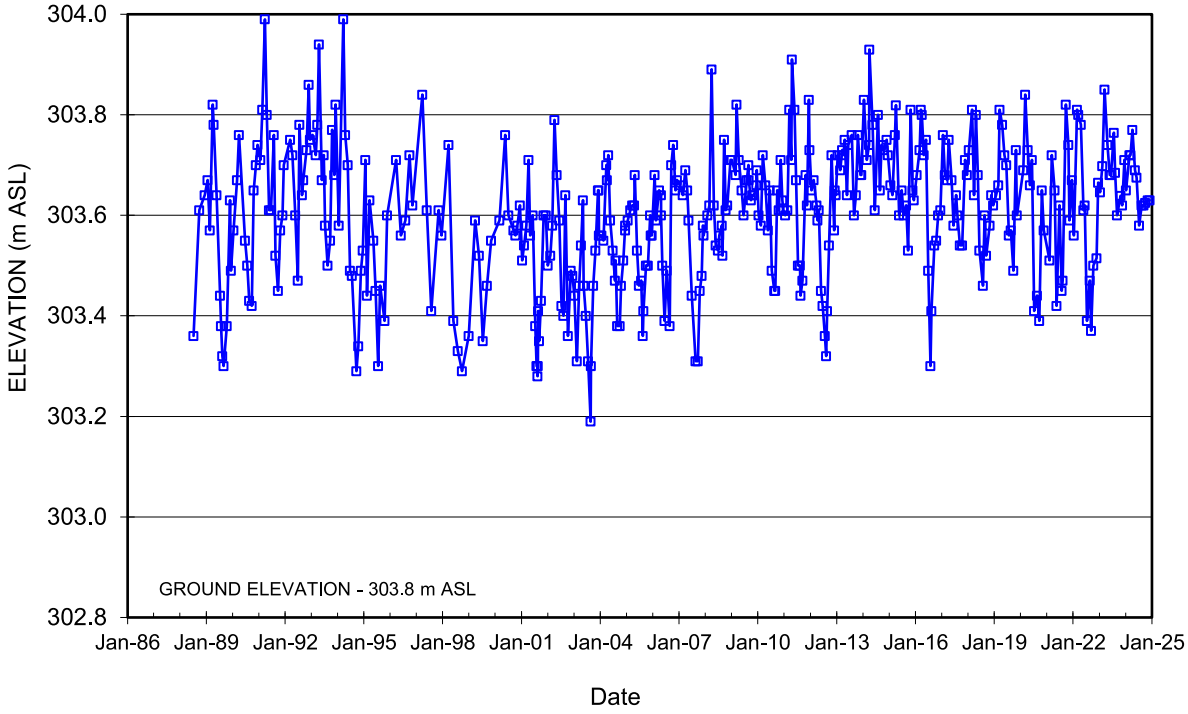
GROUNDWATER HYDROGRAPH
TW16-79

FIGURE B-11



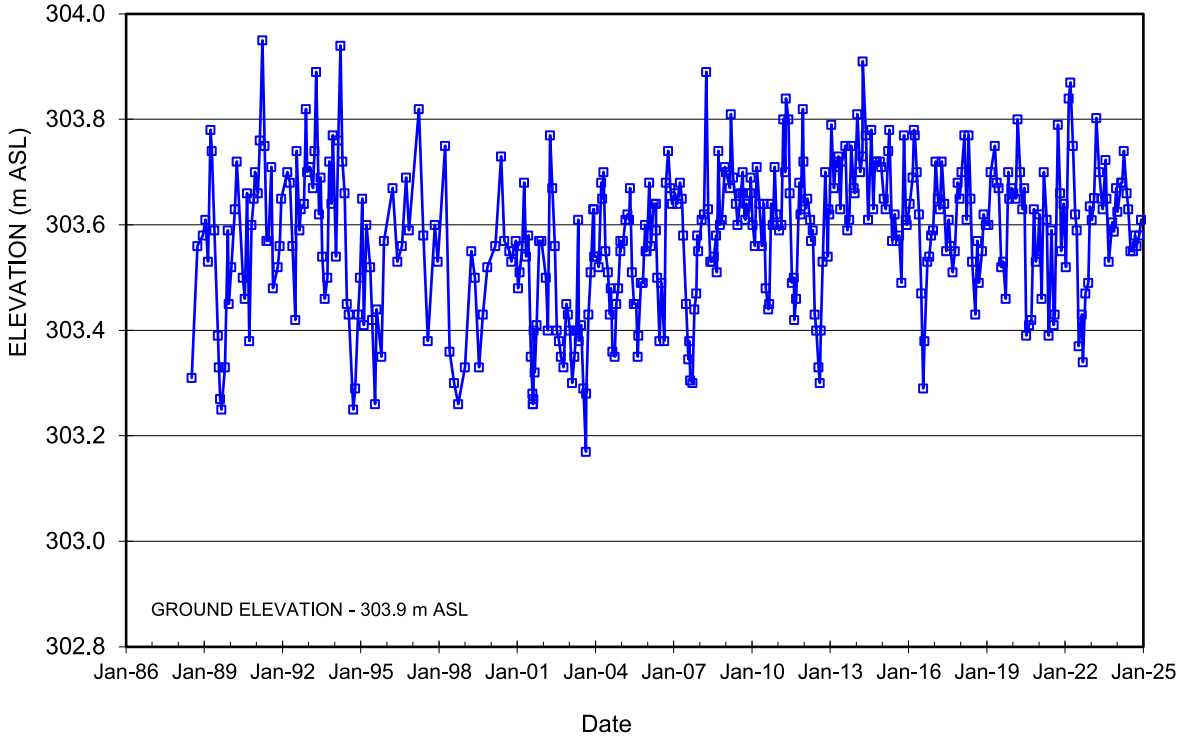
GROUNDWATER HYDROGRAPH
OW1-84

FIGURE B-12



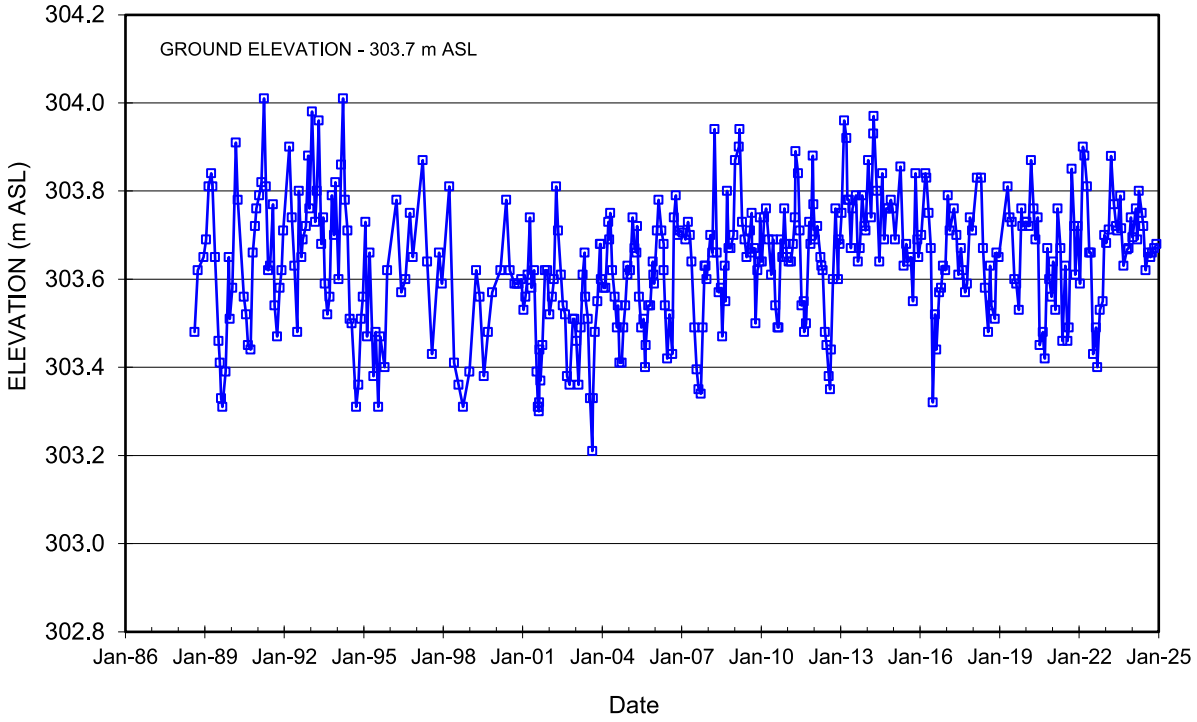
GROUNDWATER HYDROGRAPH
OW2-84

FIGURE B-13



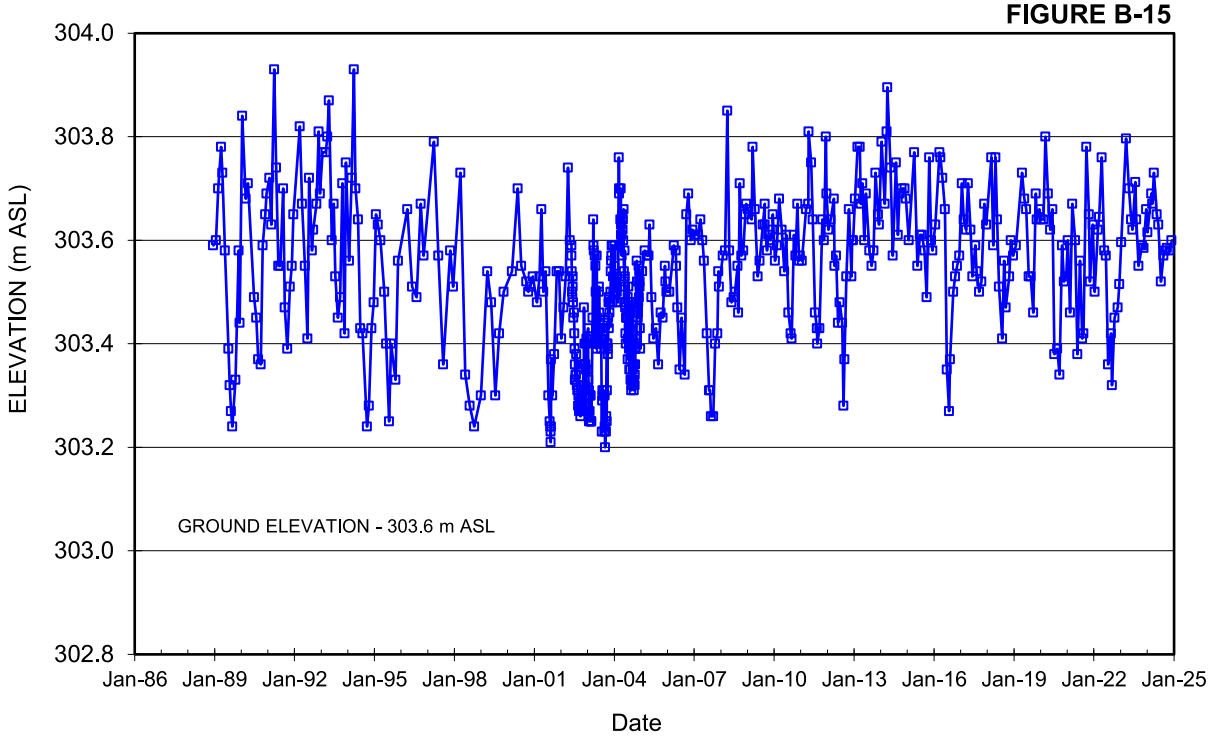
GROUNDWATER HYDROGRAPH
OW4-84

FIGURE B-14



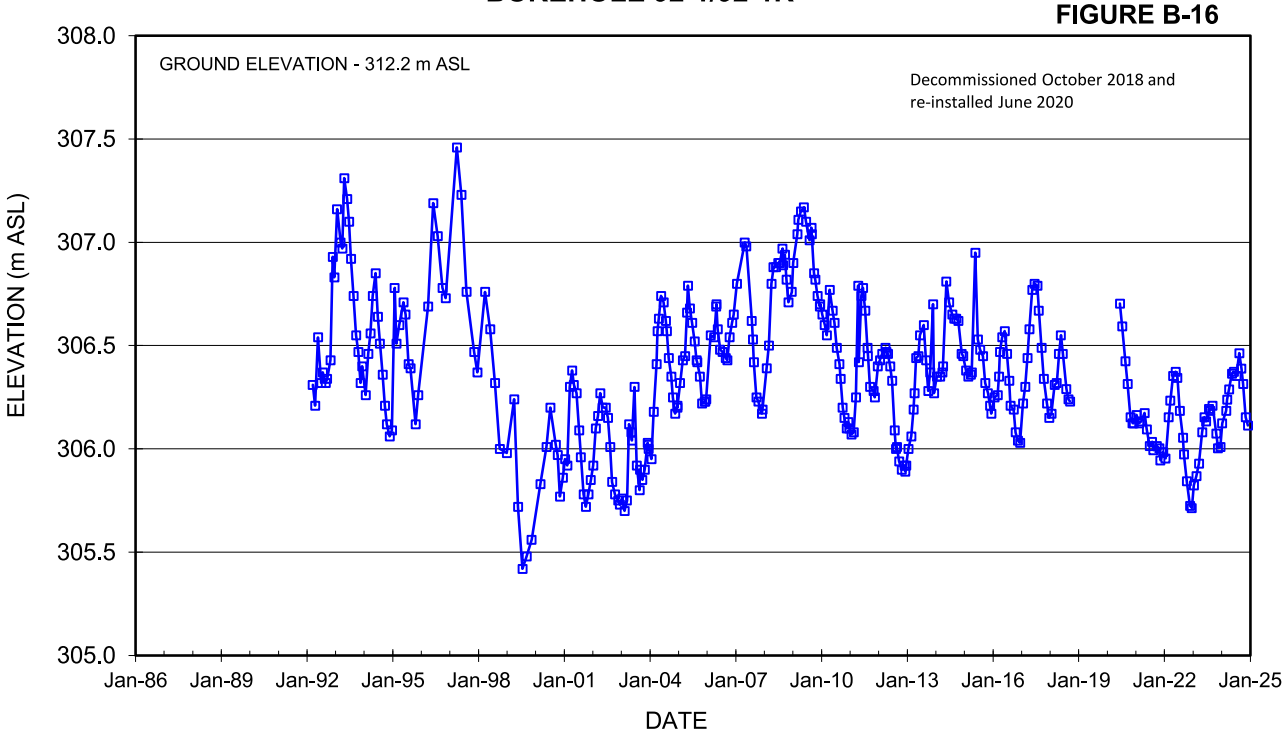
GROUNDWATER HYDROGRAPH
OW5-84

FIGURE B-15



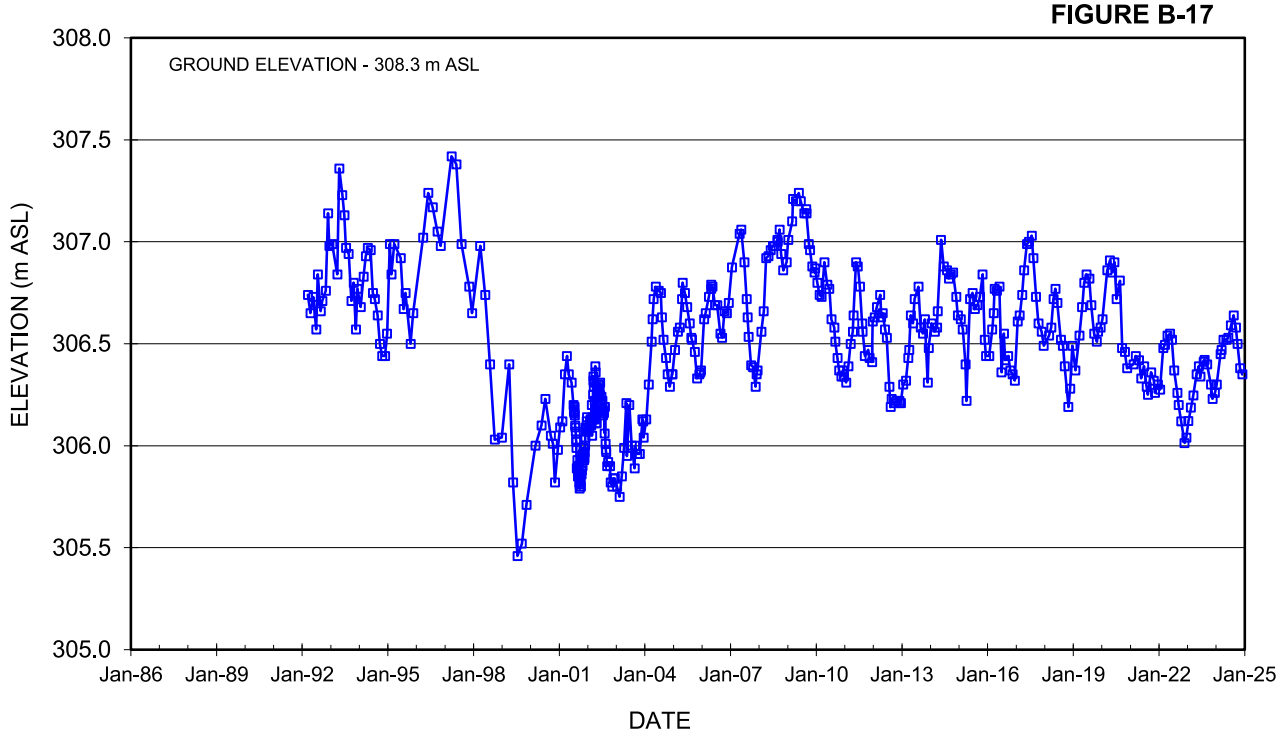
GROUNDWATER HYDROGRAPH
BOREHOLE 92-1/92-1R

FIGURE B-16



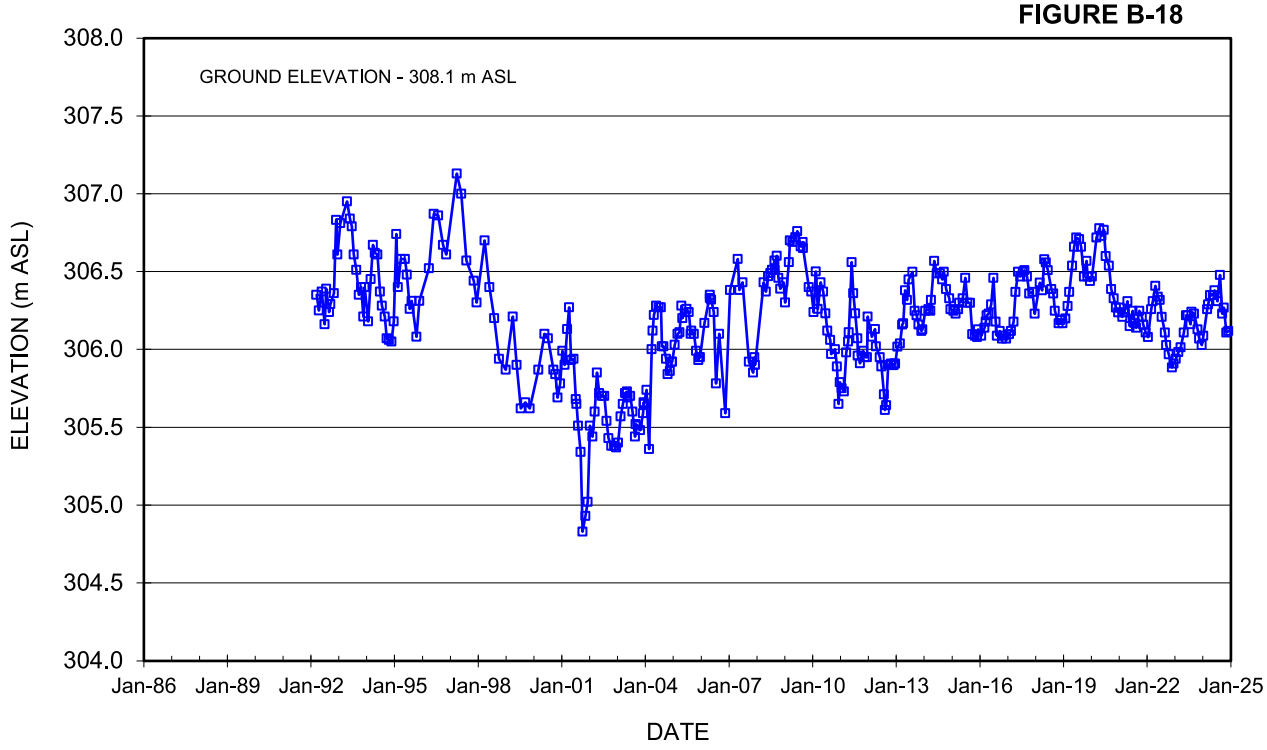
GROUNDWATER HYDROGRAPH
BOREHOLE 92-5

FIGURE B-17



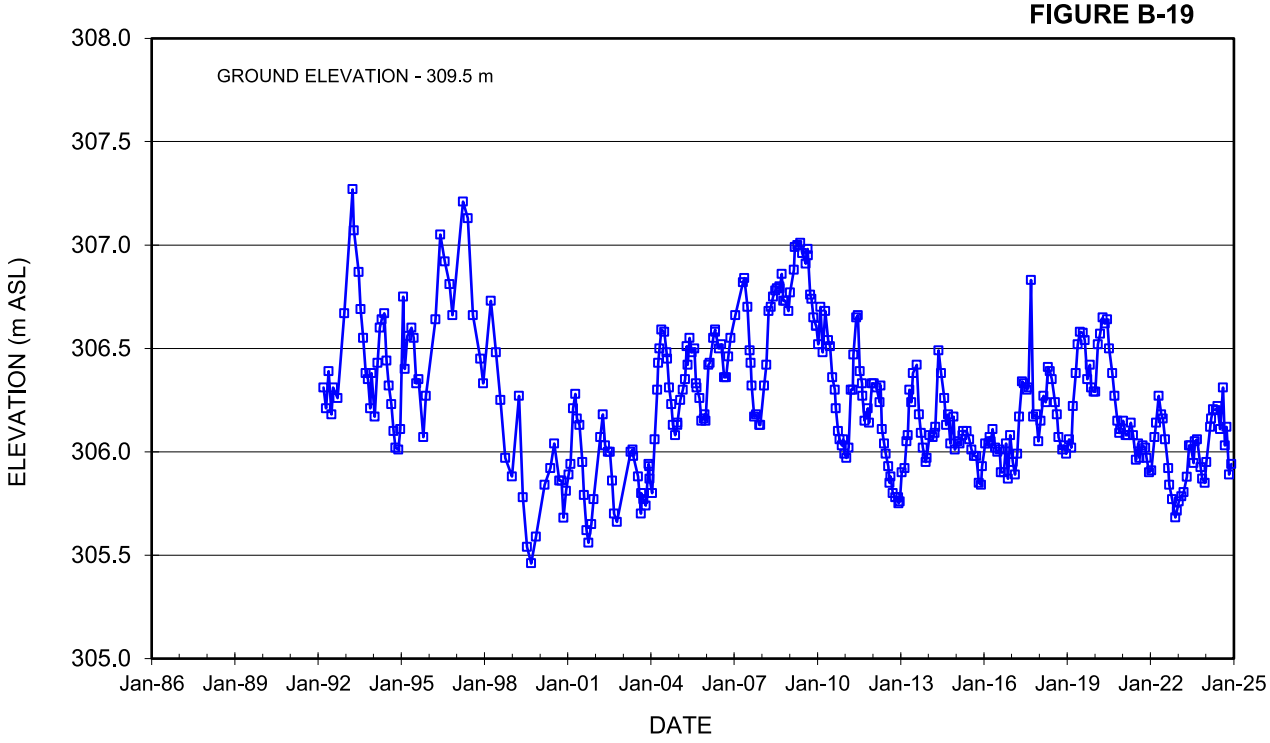
GROUNDWATER HYDROGRAPH
BOREHOLE 92-8

FIGURE B-18



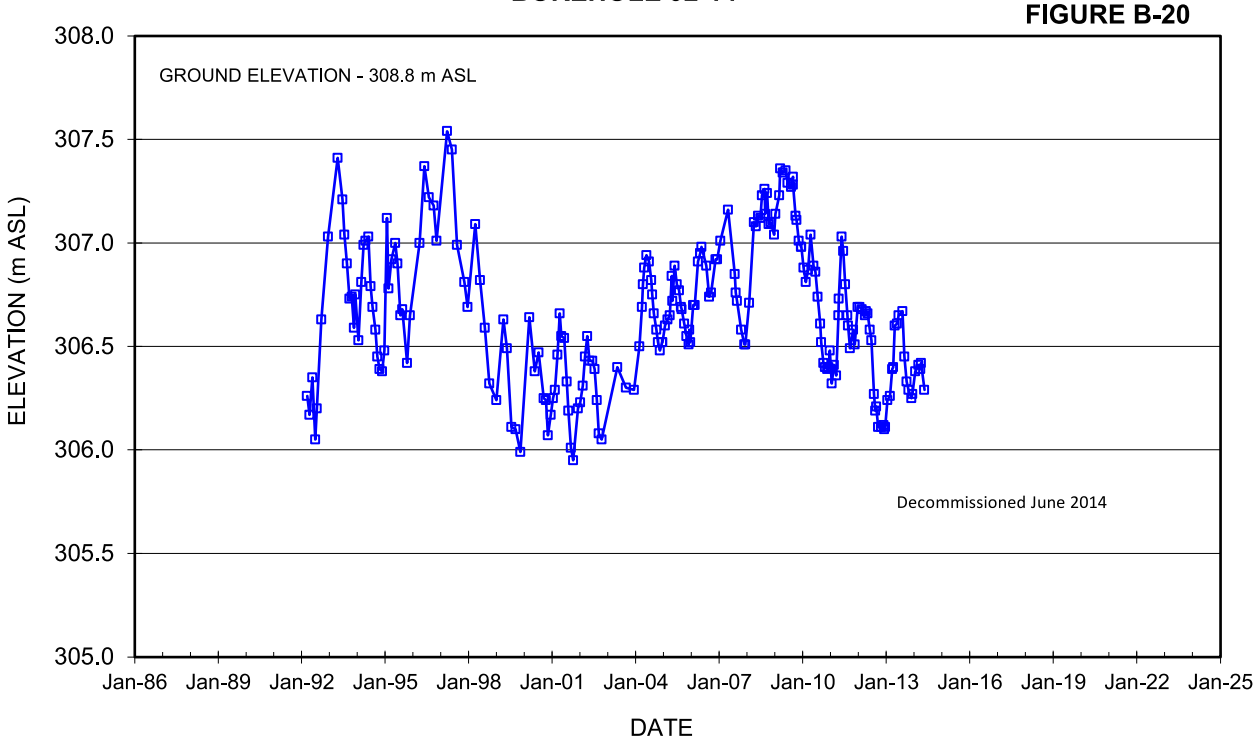
GROUNDWATER HYDROGRAPH
BOREHOLE 92-13

FIGURE B-19



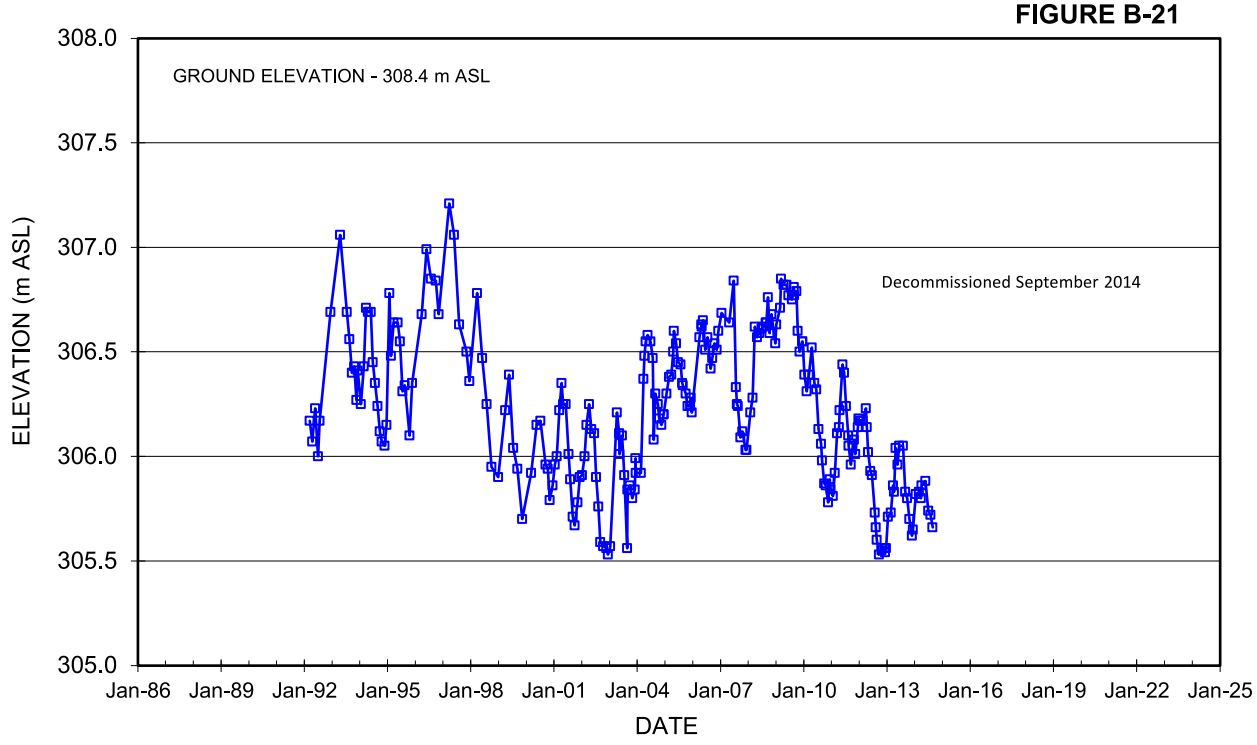
GROUNDWATER HYDROGRAPH
BOREHOLE 92-14

FIGURE B-20



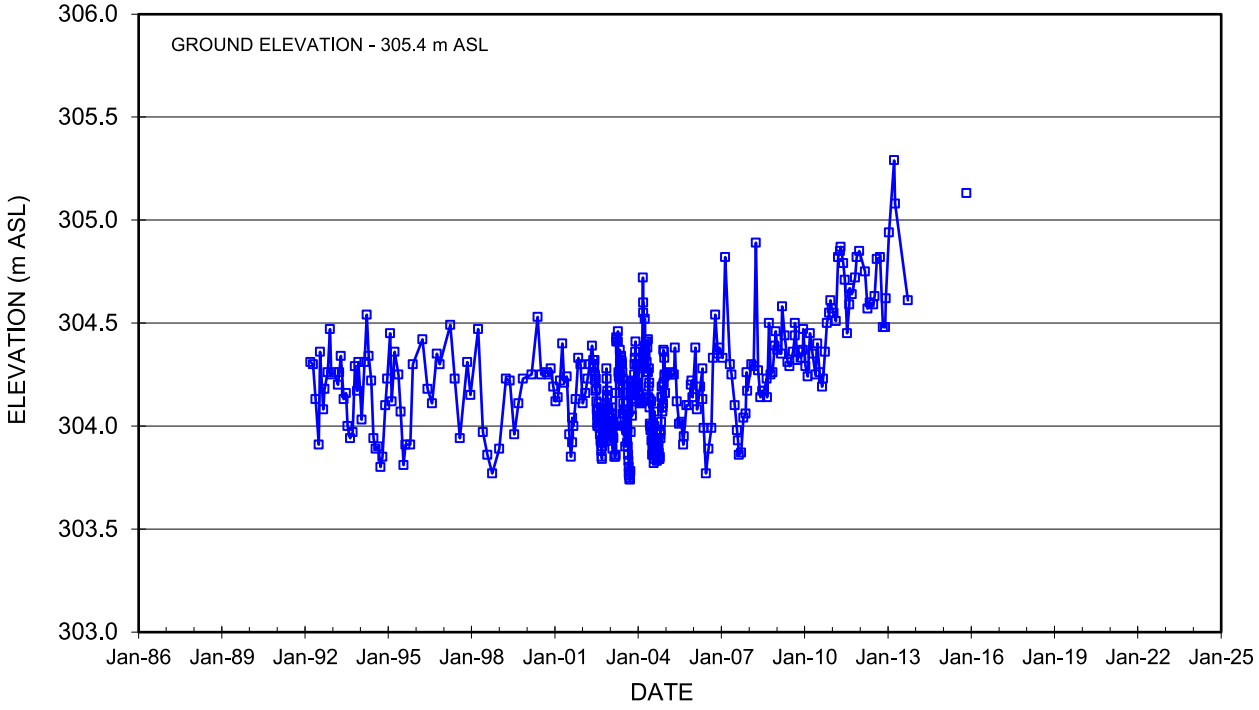
GROUNDWATER HYDROGRAPH
BOREHOLE 92-15

FIGURE B-21



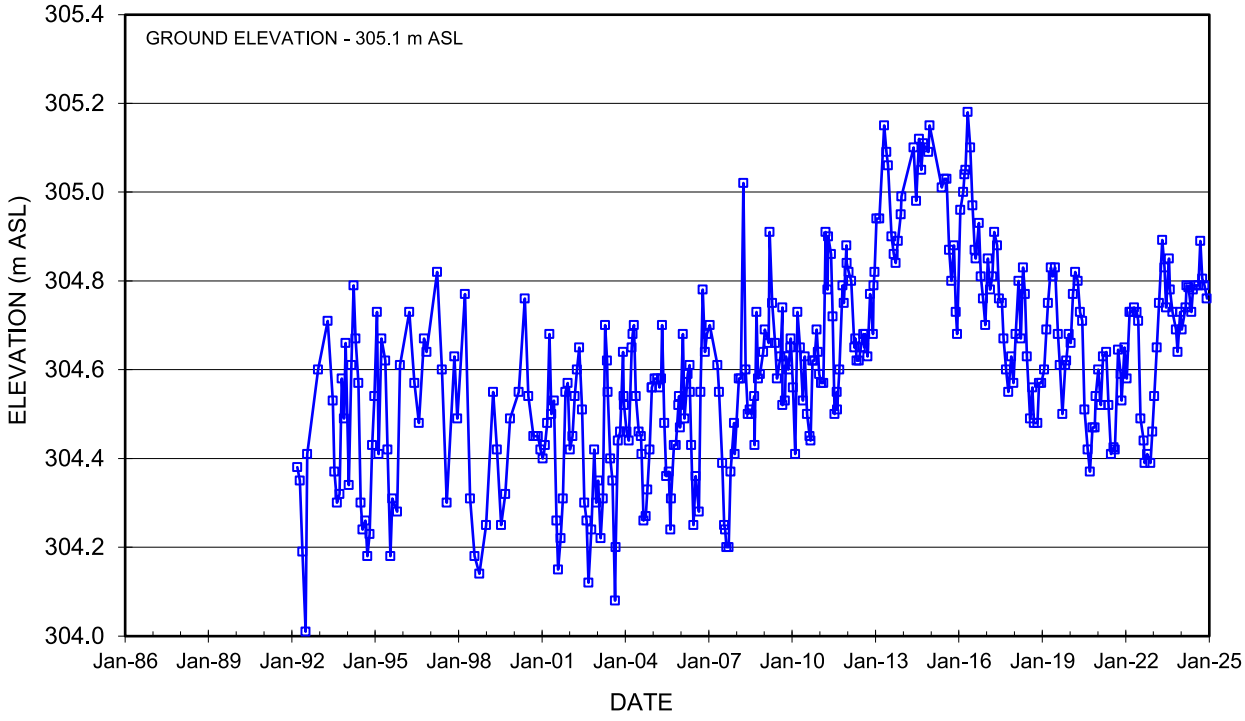
GROUNDWATER HYDROGRAPH
BOREHOLE 92-26

FIGURE B-22



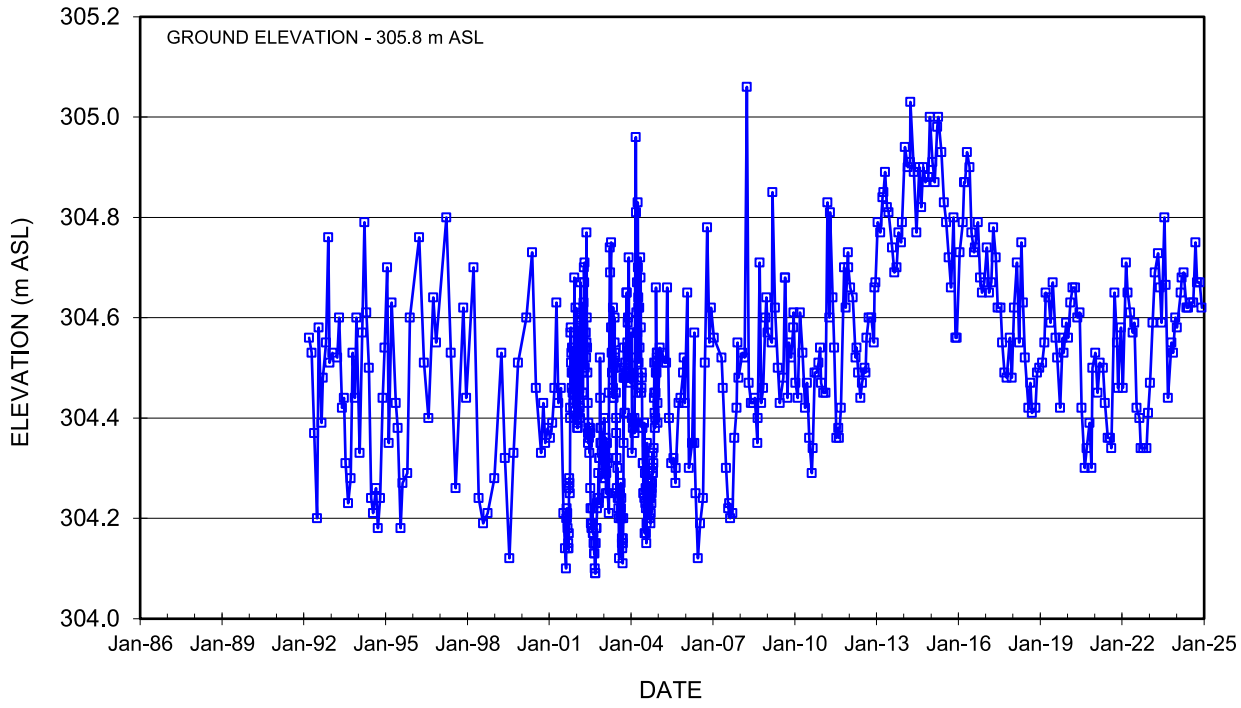
GROUNDWATER HYDROGRAPH
BOREHOLE 92-27

FIGURE B-23



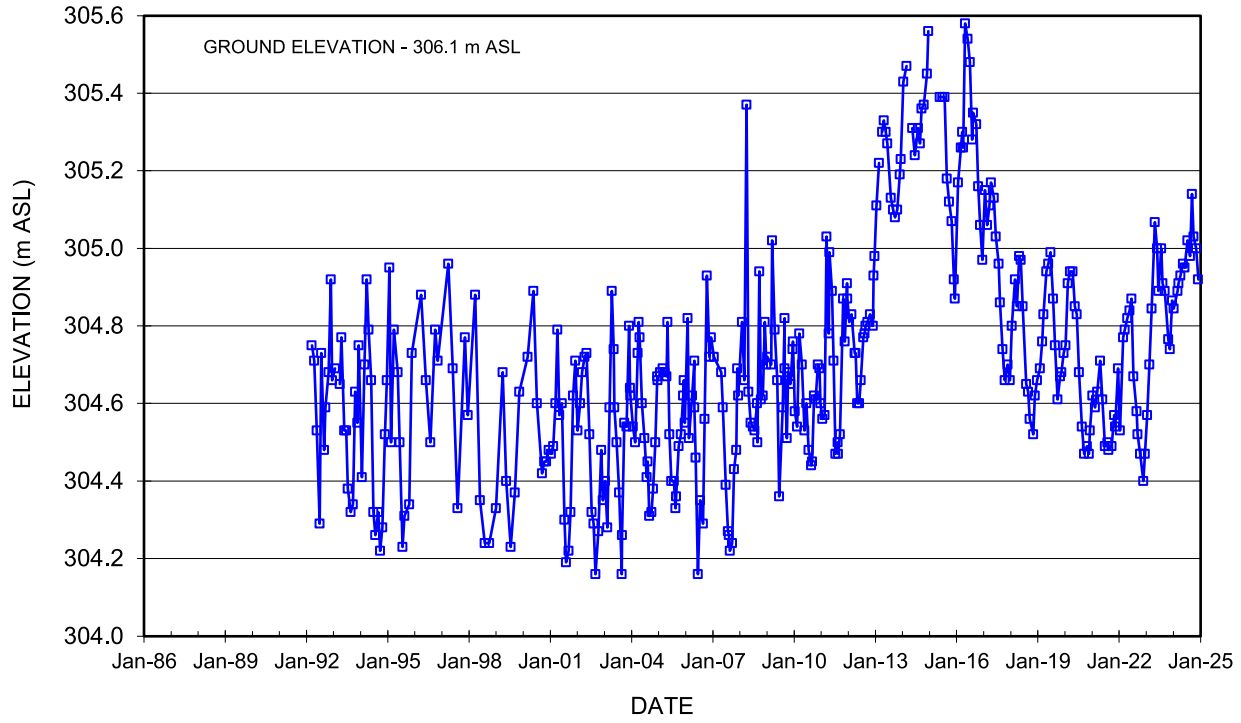
GROUNDWATER HYDROGRAPH
BOREHOLE 92-28

FIGURE B-24



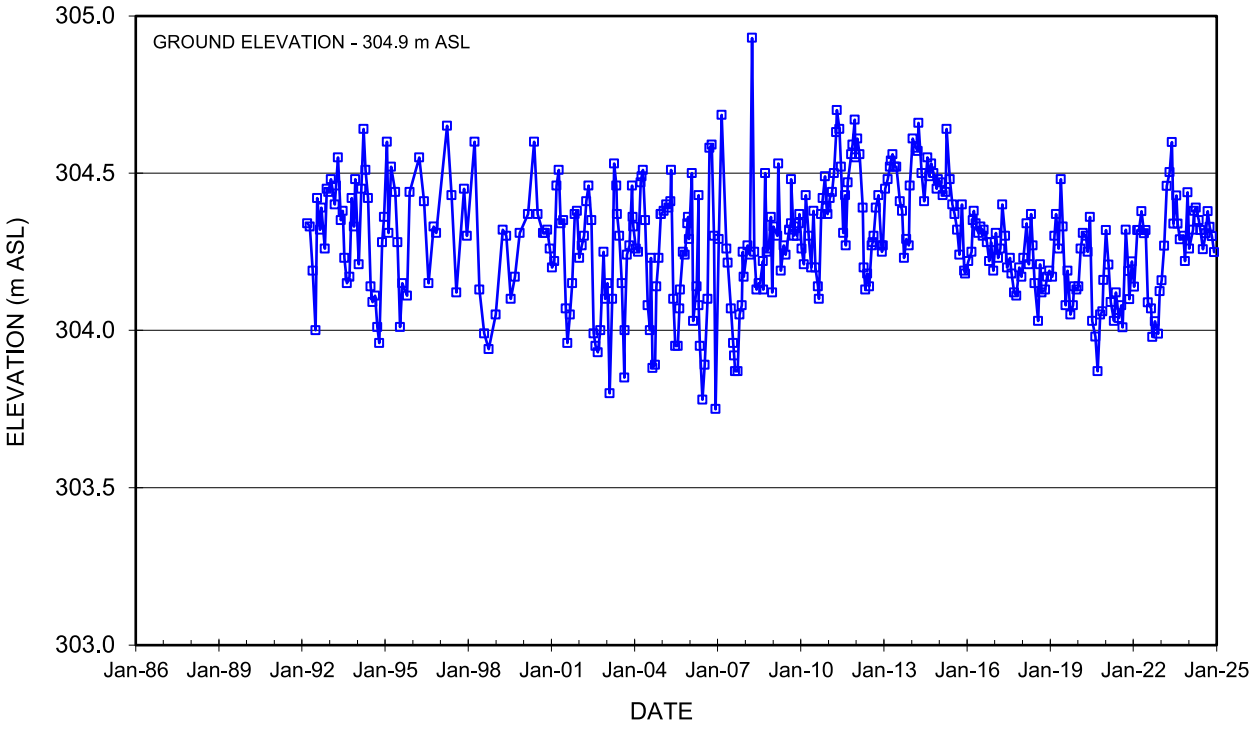
GROUNDWATER HYDROGRAPH
BOREHOLE 92-29

FIGURE B-25



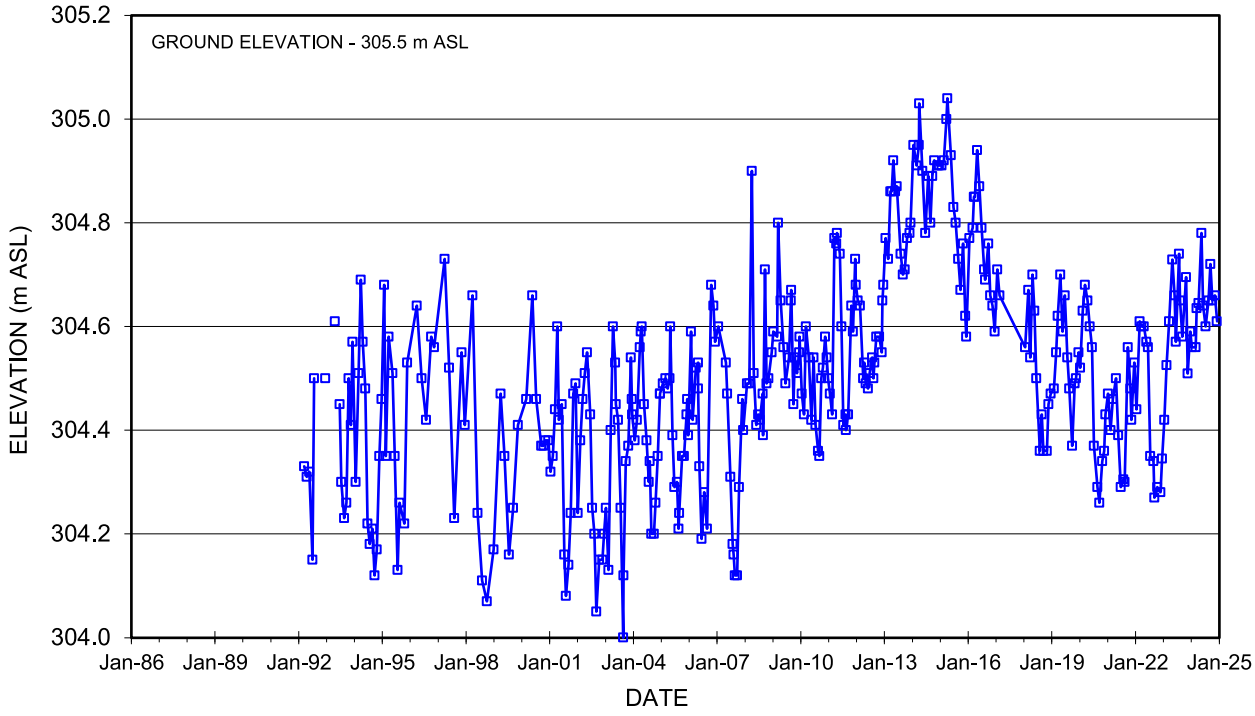
GROUNDWATER HYDROGRAPH
BOREHOLE 92-32

FIGURE B-26



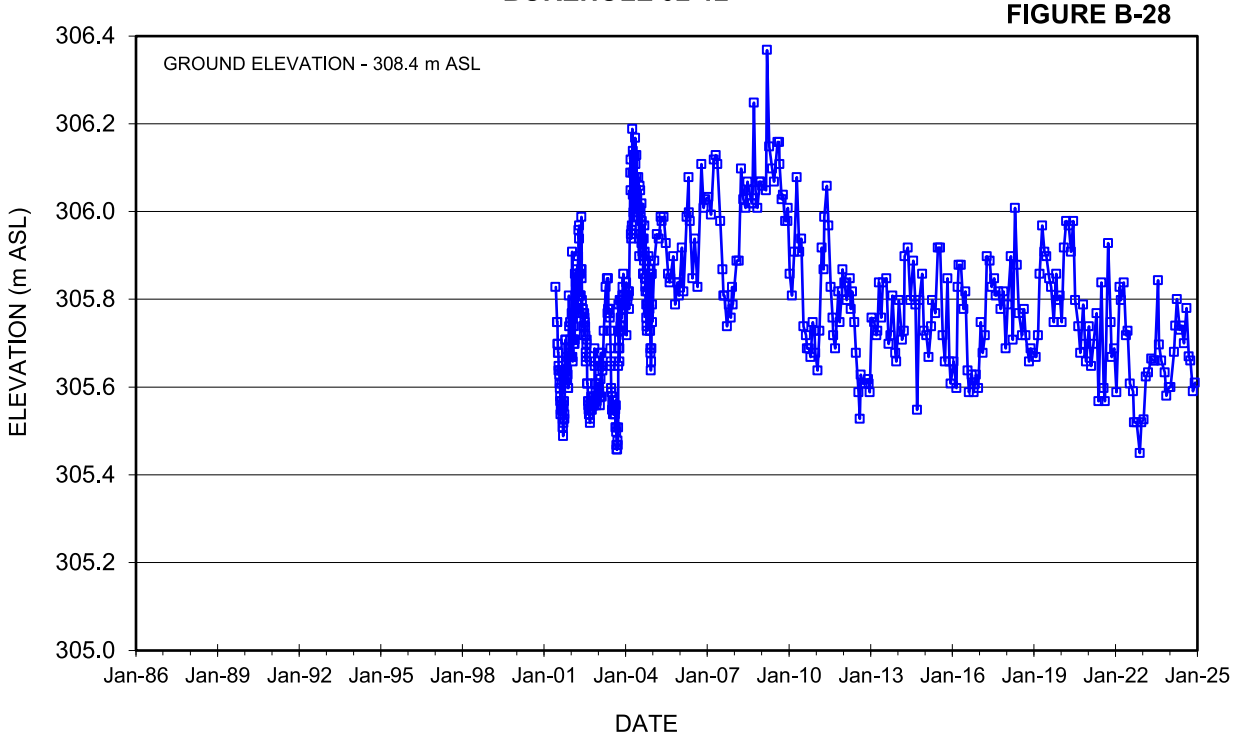
GROUNDWATER HYDROGRAPH
BOREHOLE 92-33

FIGURE B-27



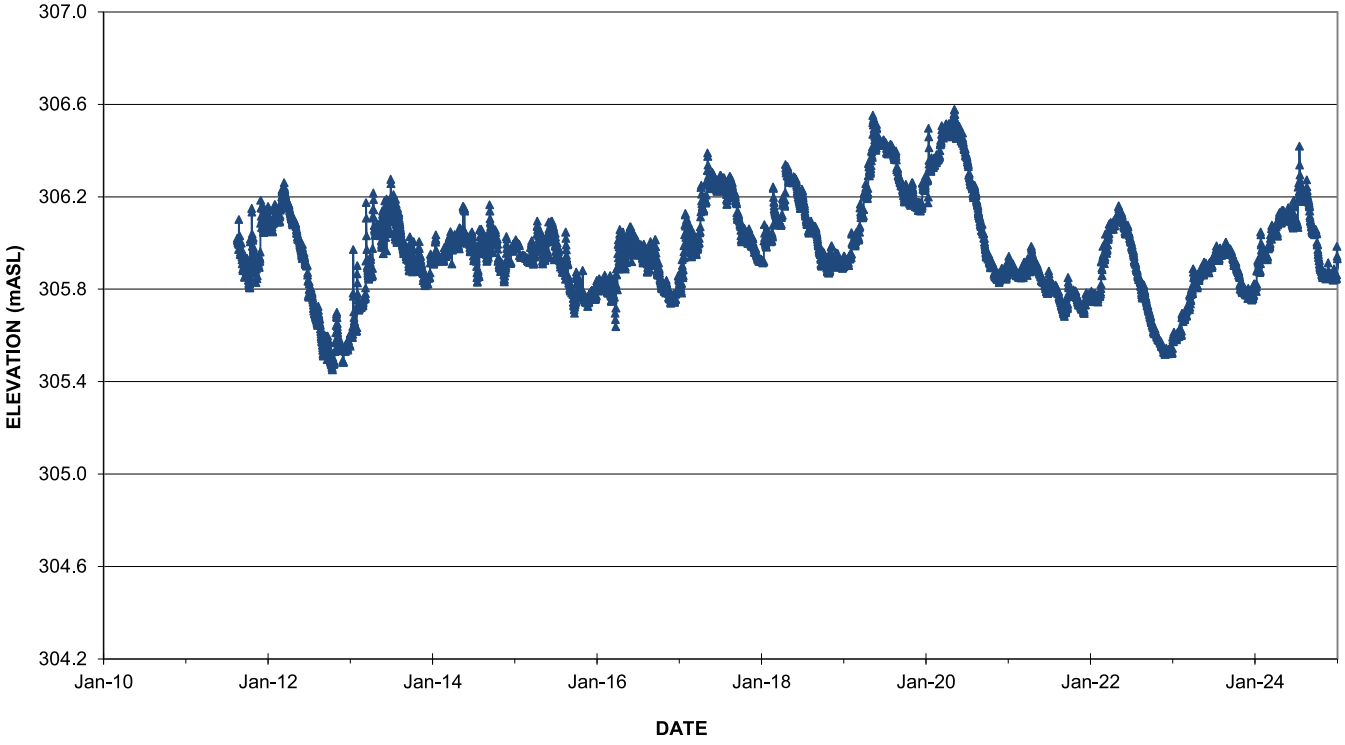
GROUNDWATER HYDROGRAPH
BOREHOLE 92-12

FIGURE B-28



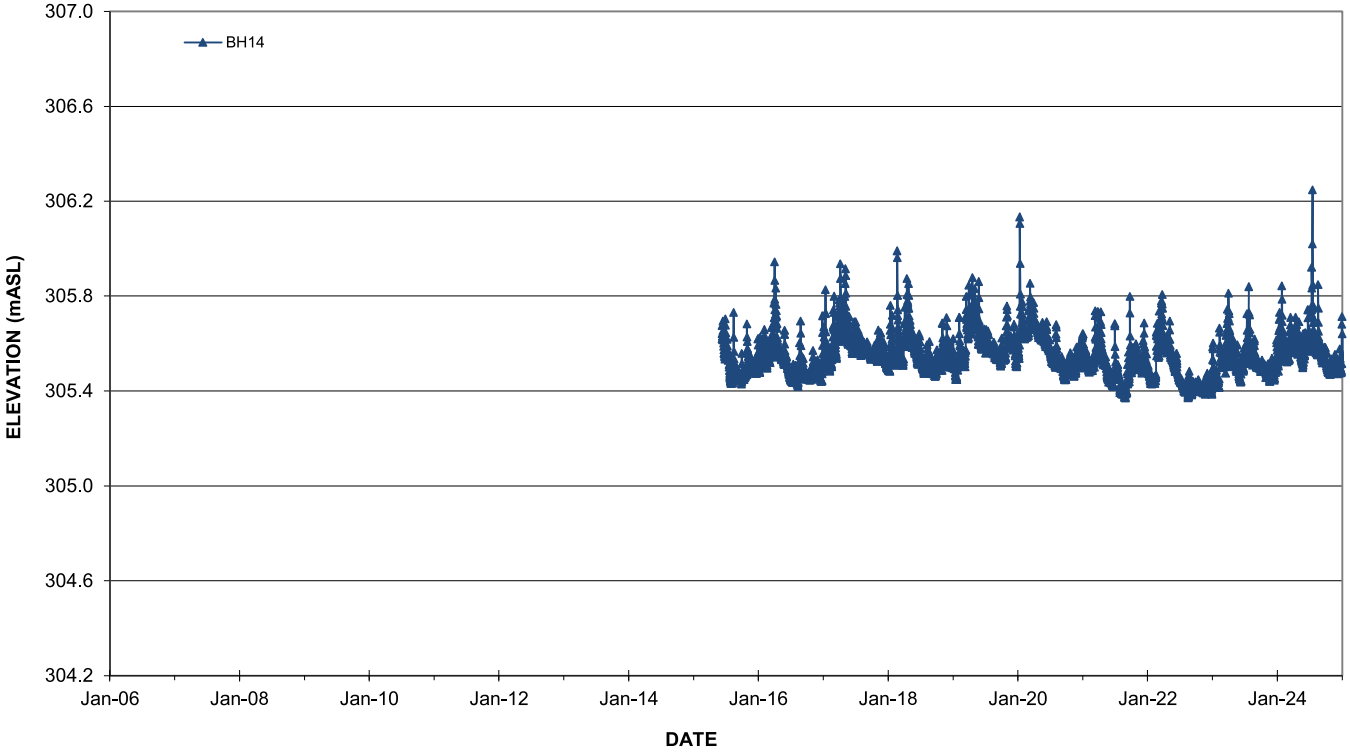
GROUNDWATER HYDROGRAPH
MONITOR BH4

FIGURE B-29



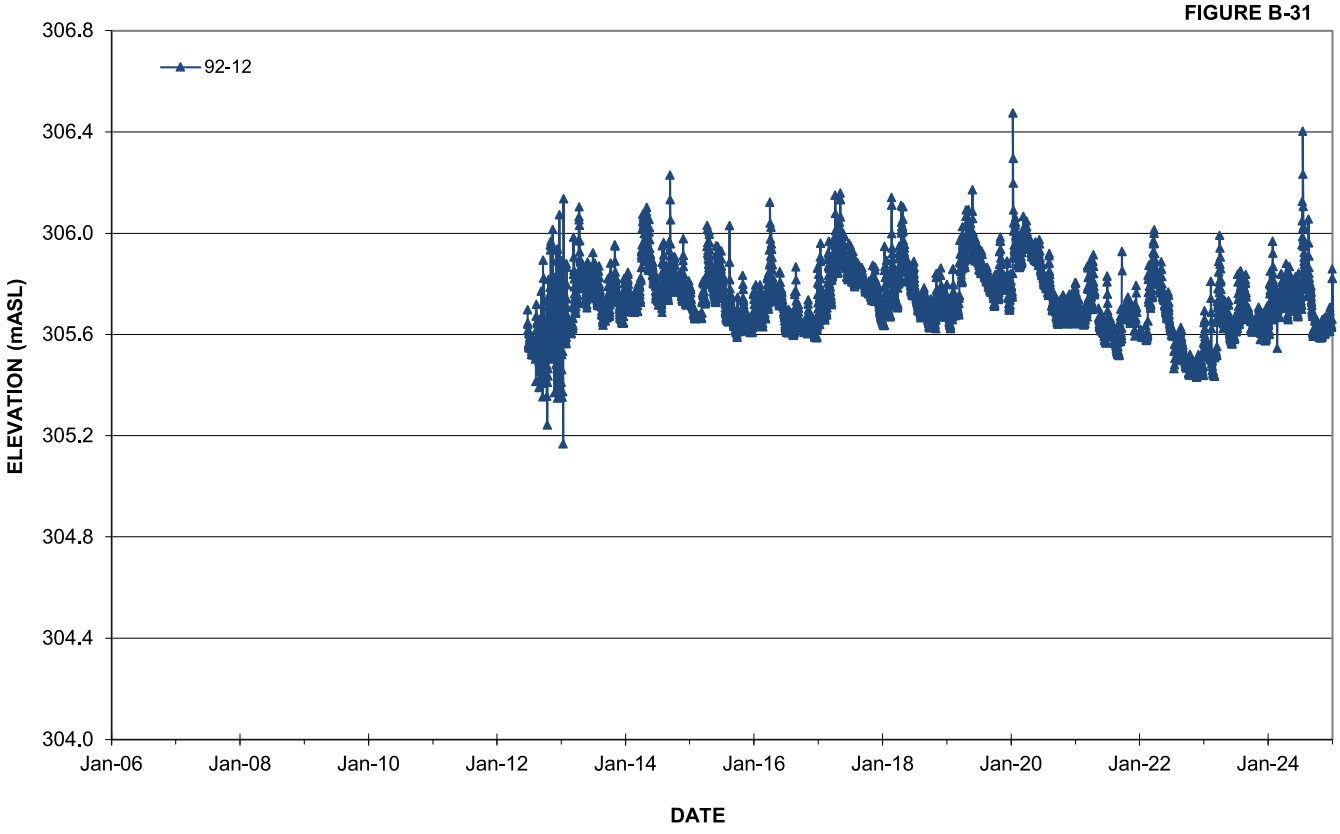
GROUNDWATER HYDROGRAPH
MONITOR BH14

FIGURE B-30



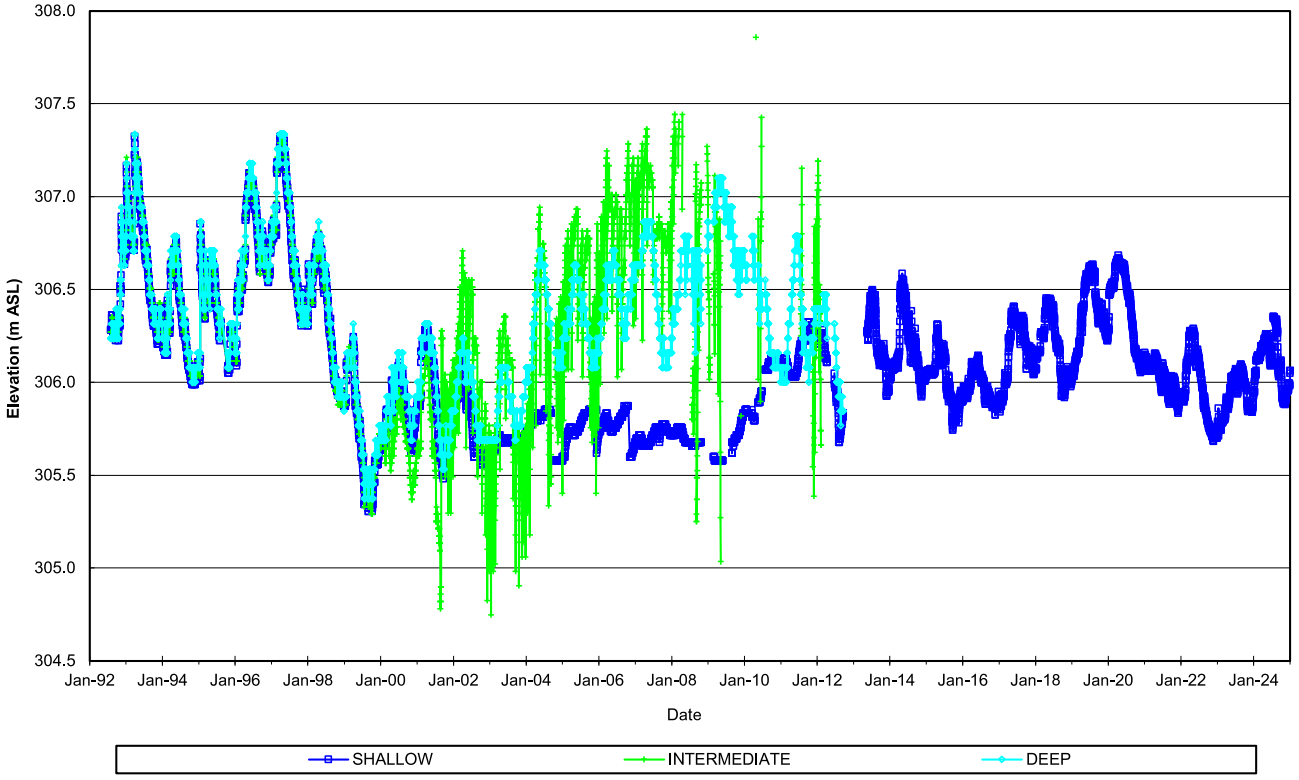
GROUNDWATER HYDROGRAPH
MONITOR 92-12

FIGURE B-31



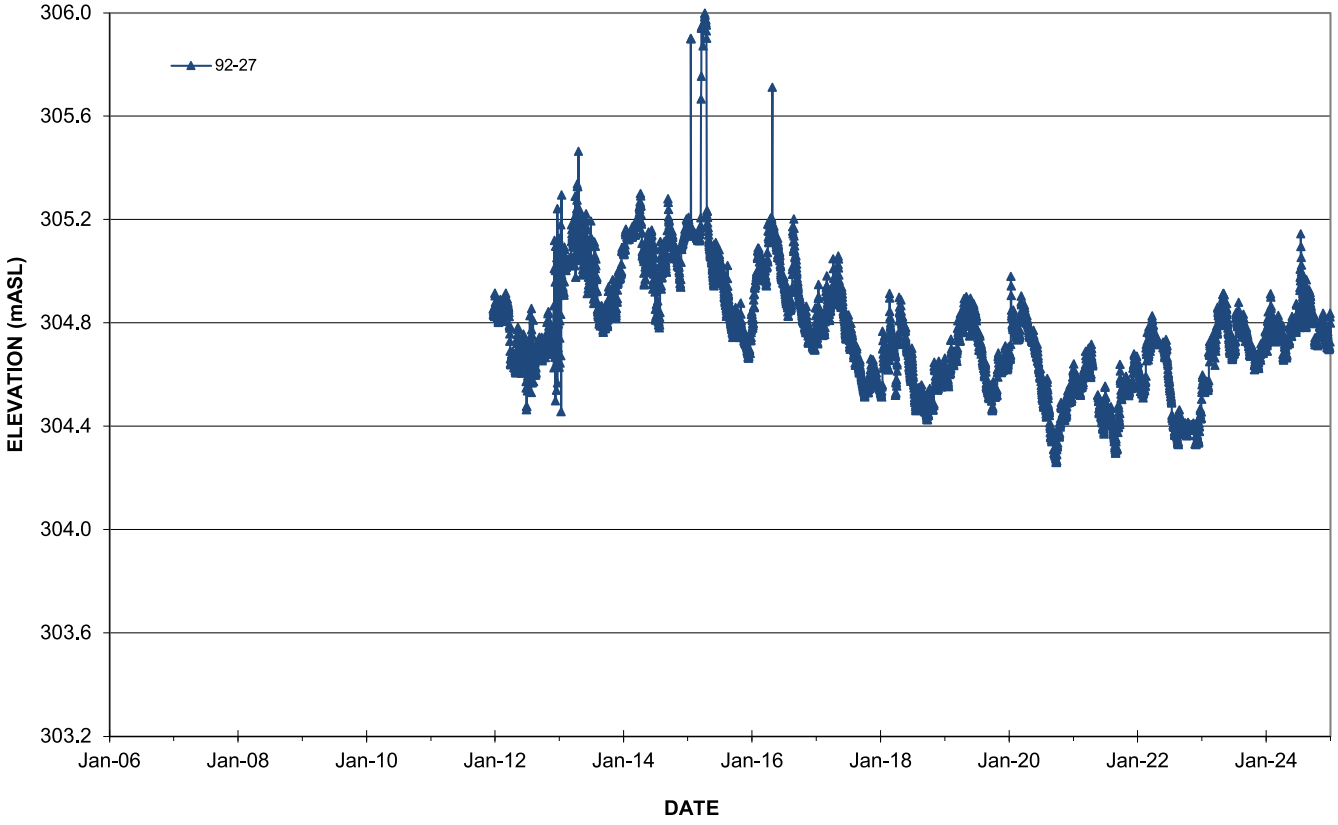
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-13

FIGURE B-32



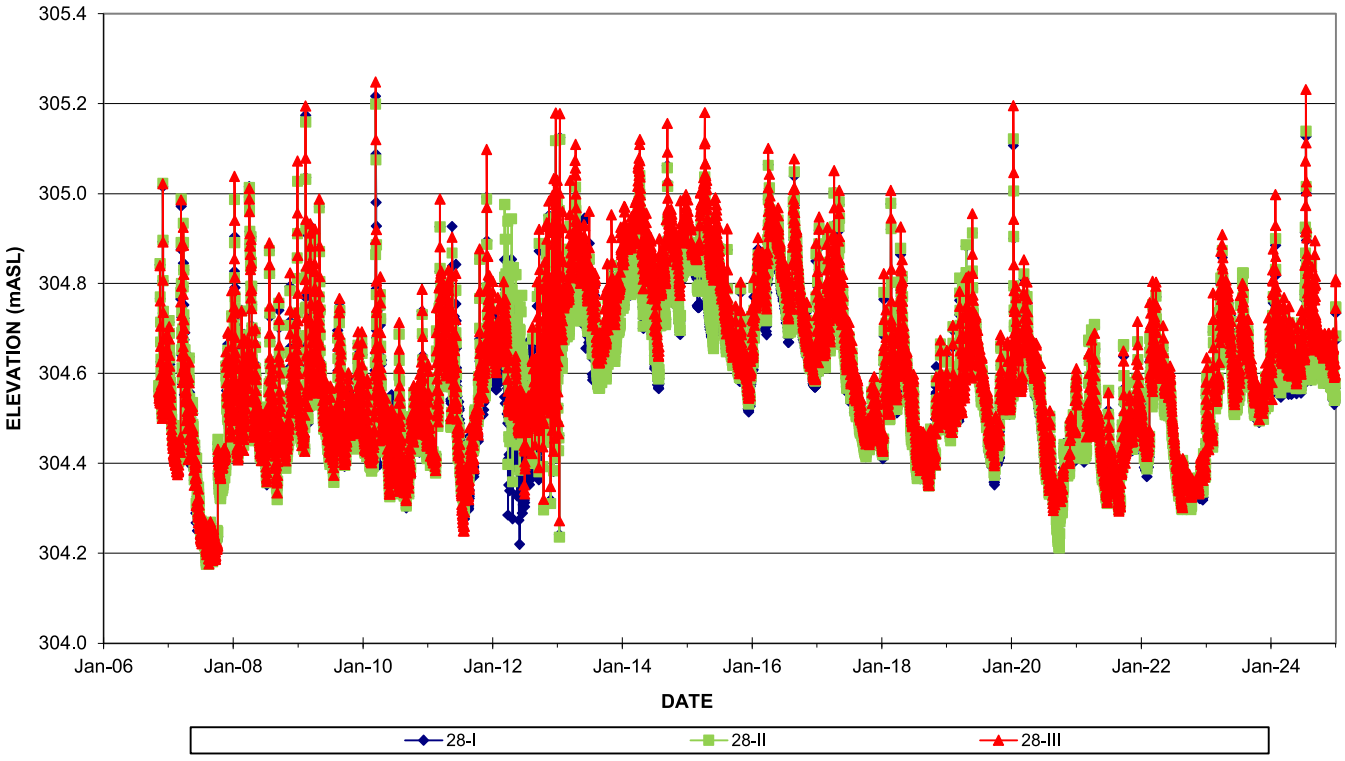
GROUNDWATER HYDROGRAPH
MONITOR 92-27

FIGURE B-33



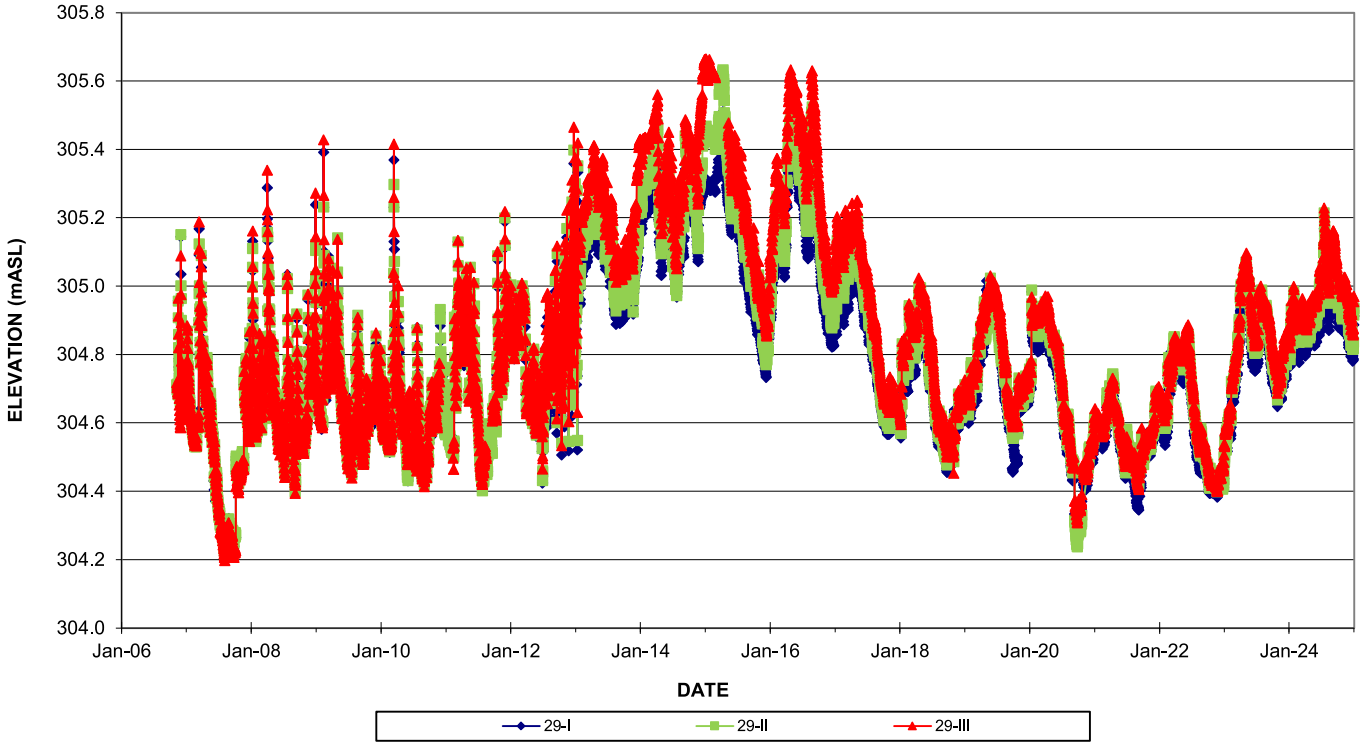
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-28

FIGURE B-34



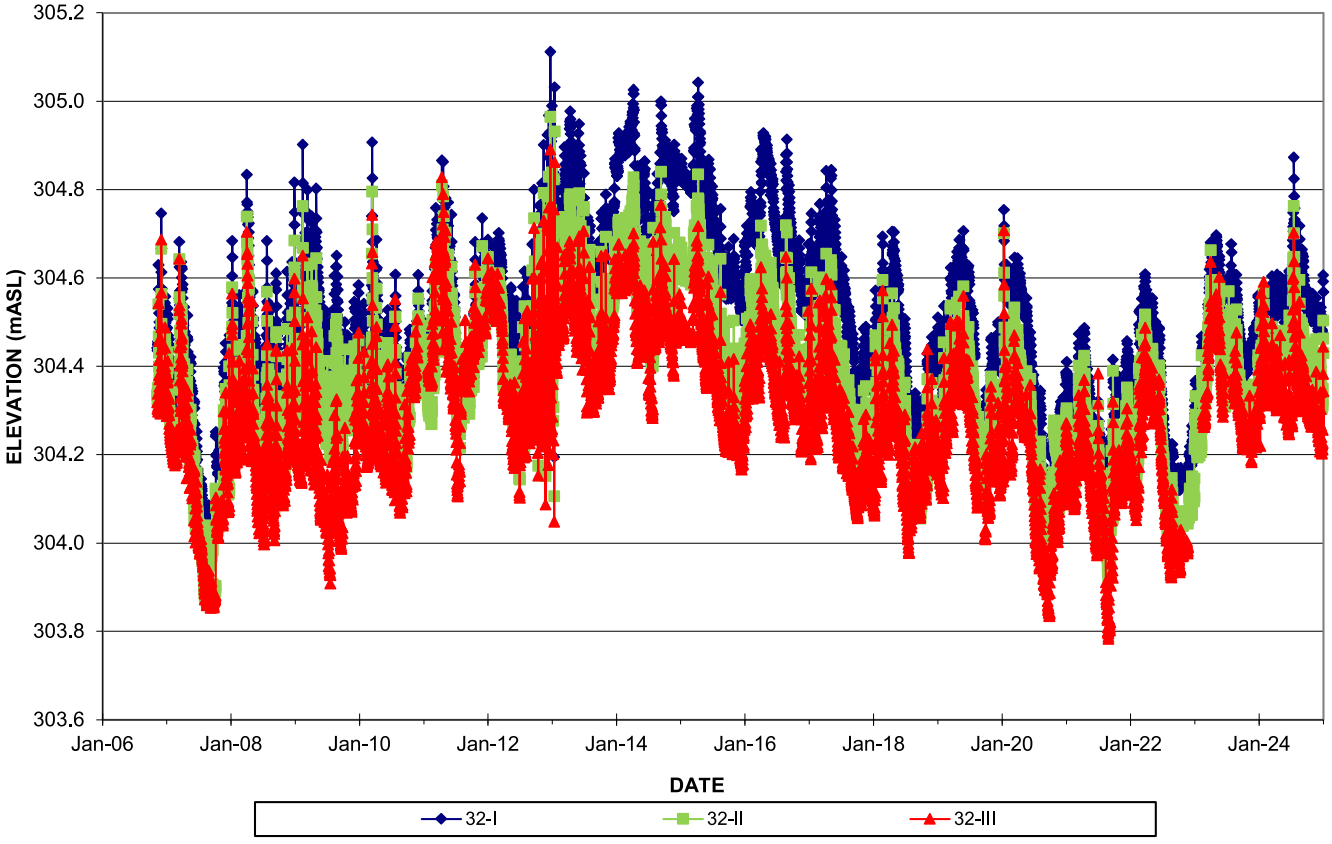
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-29

FIGURE B-35



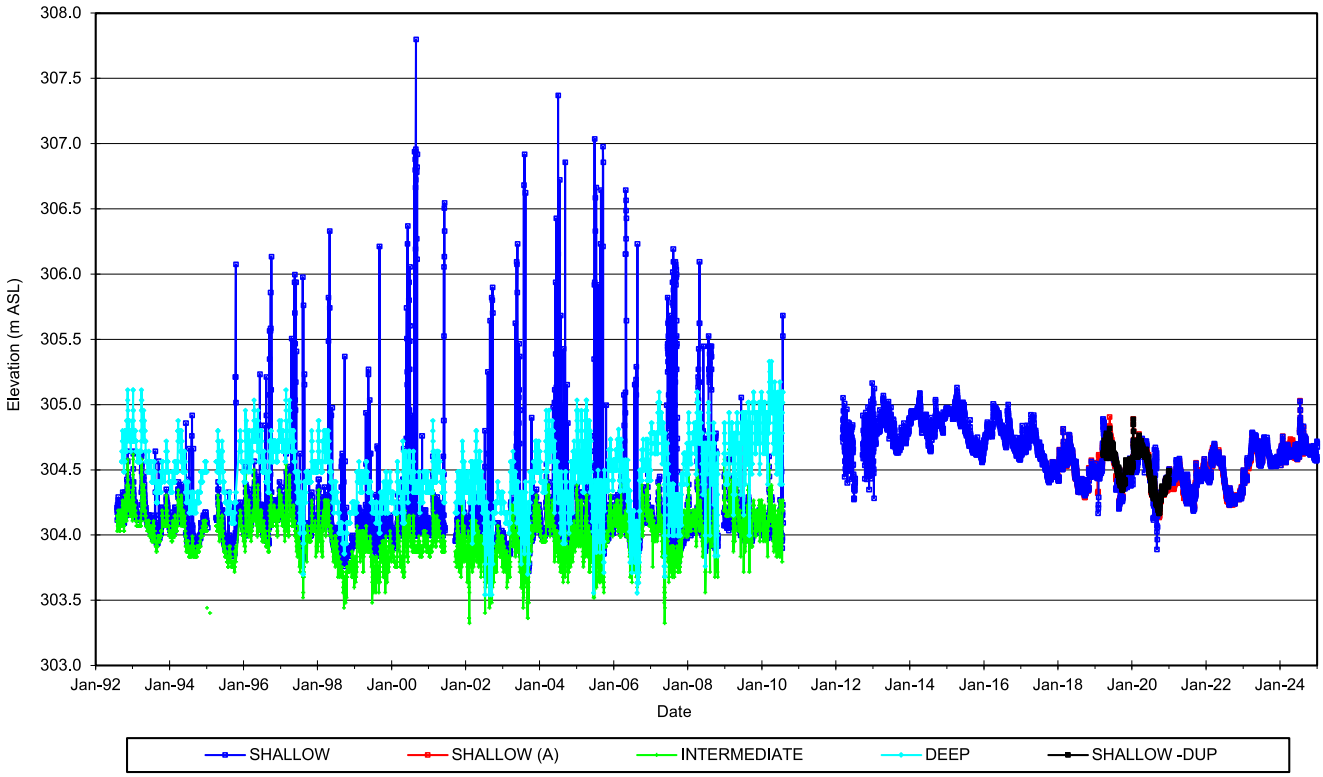
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-32

FIGURE B-36



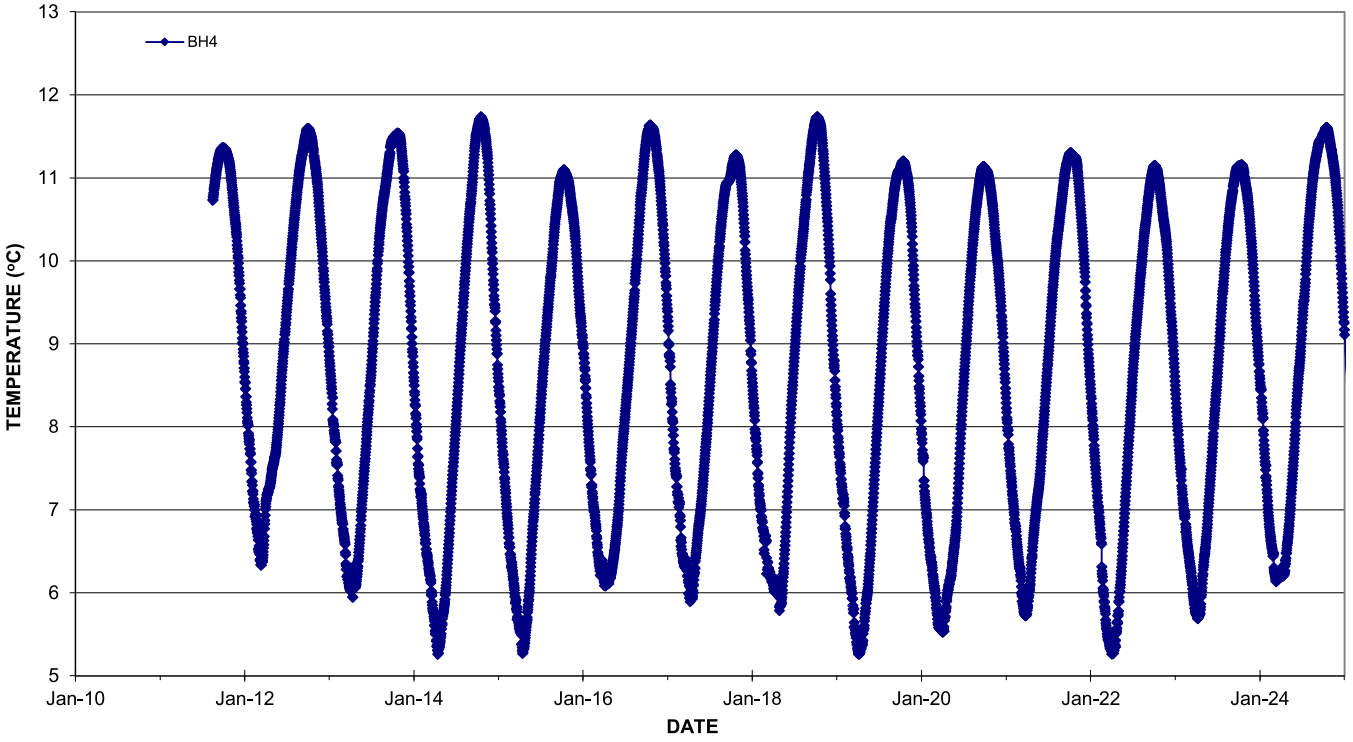
GROUNDWATER HYDROGRAPH
MULTI-LEVEL MONITOR 92-33

FIGURE B-37



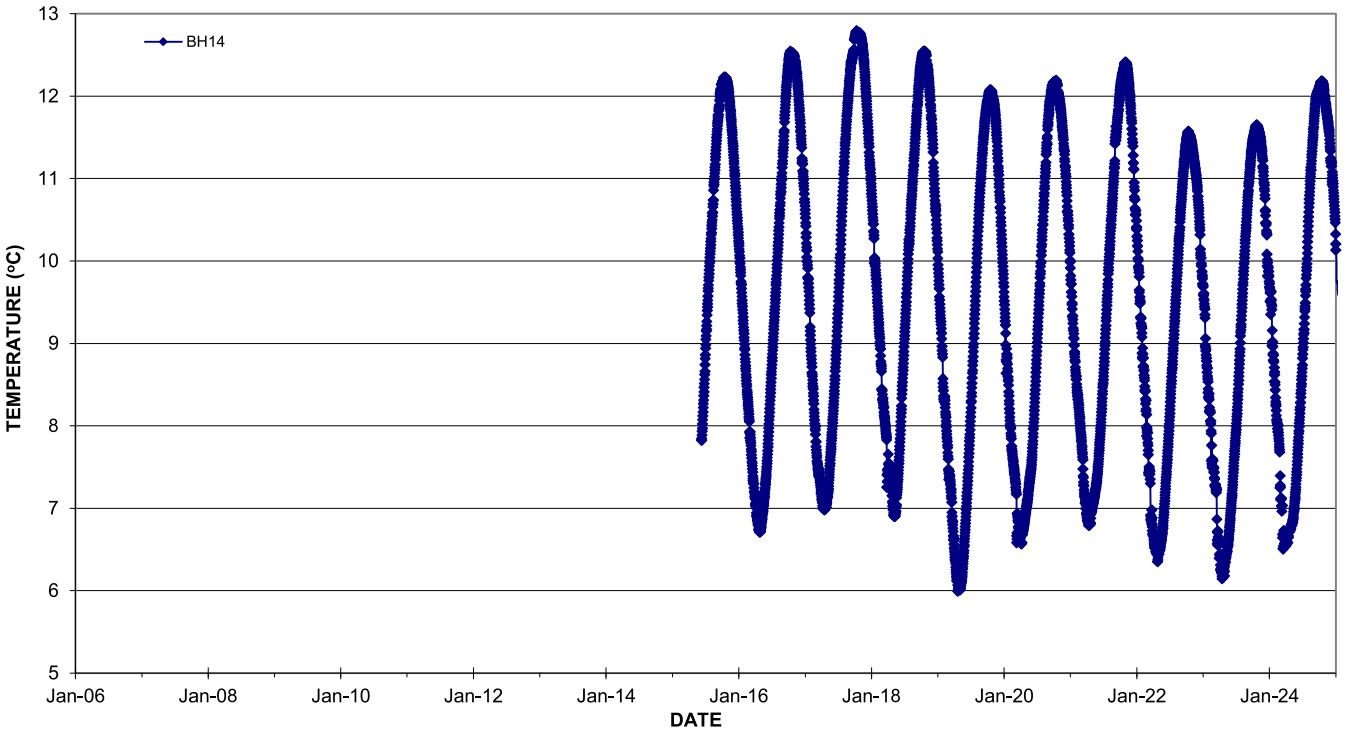
GROUNDWATER THERMOGRAPH
MONITOR BH4

FIGURE B-38



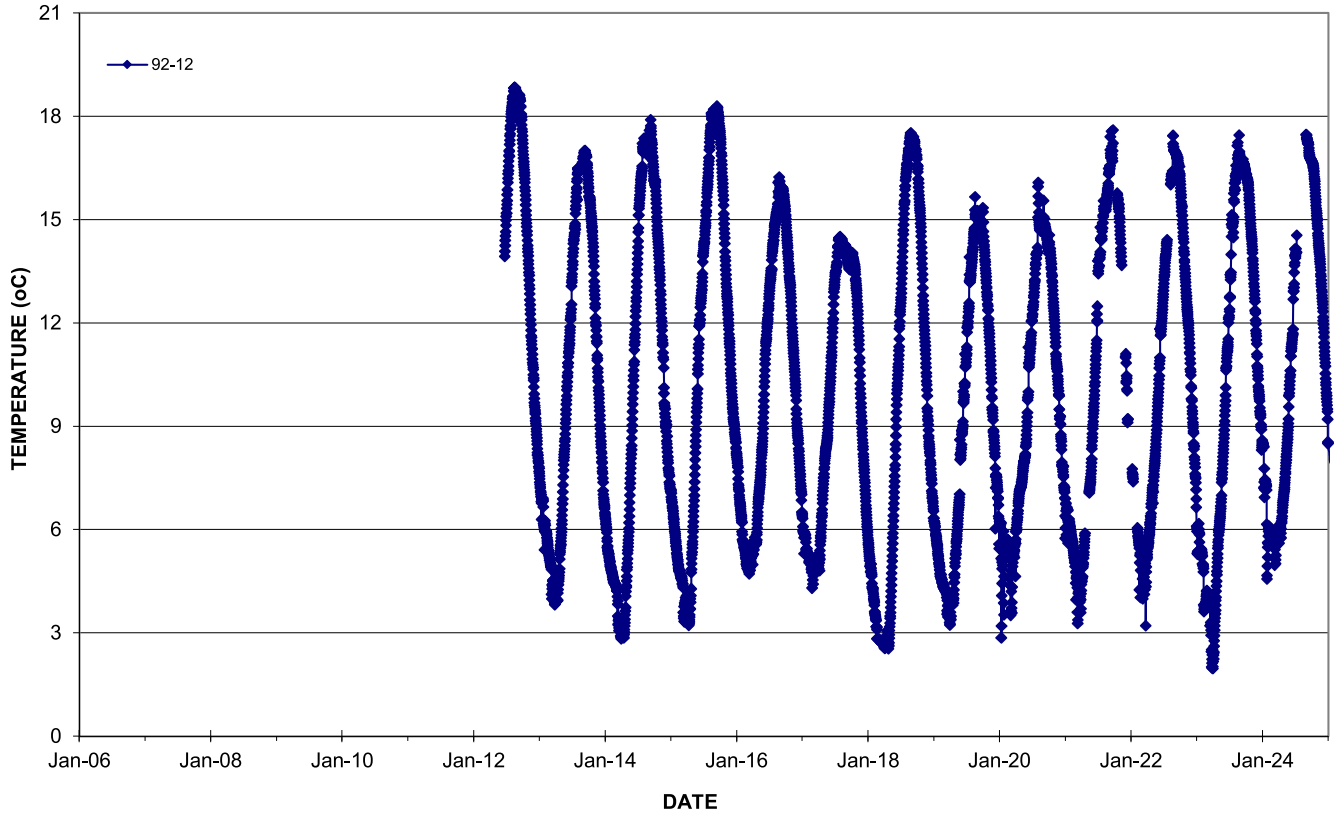
GROUNDWATER THERMOGRAPH
MONITOR BH14

FIGURE B-39



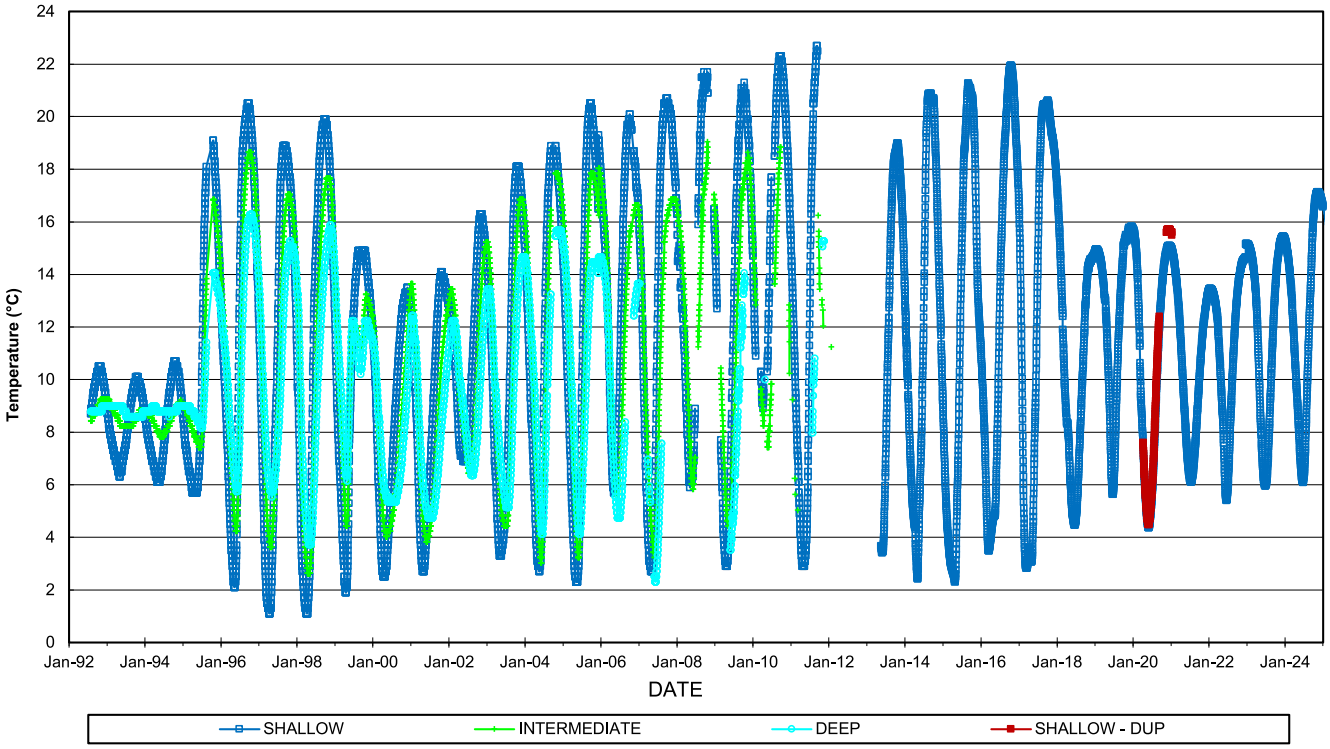
GROUNDWATER THERMOGRAPH
MONITOR 92-12

FIGURE B-40



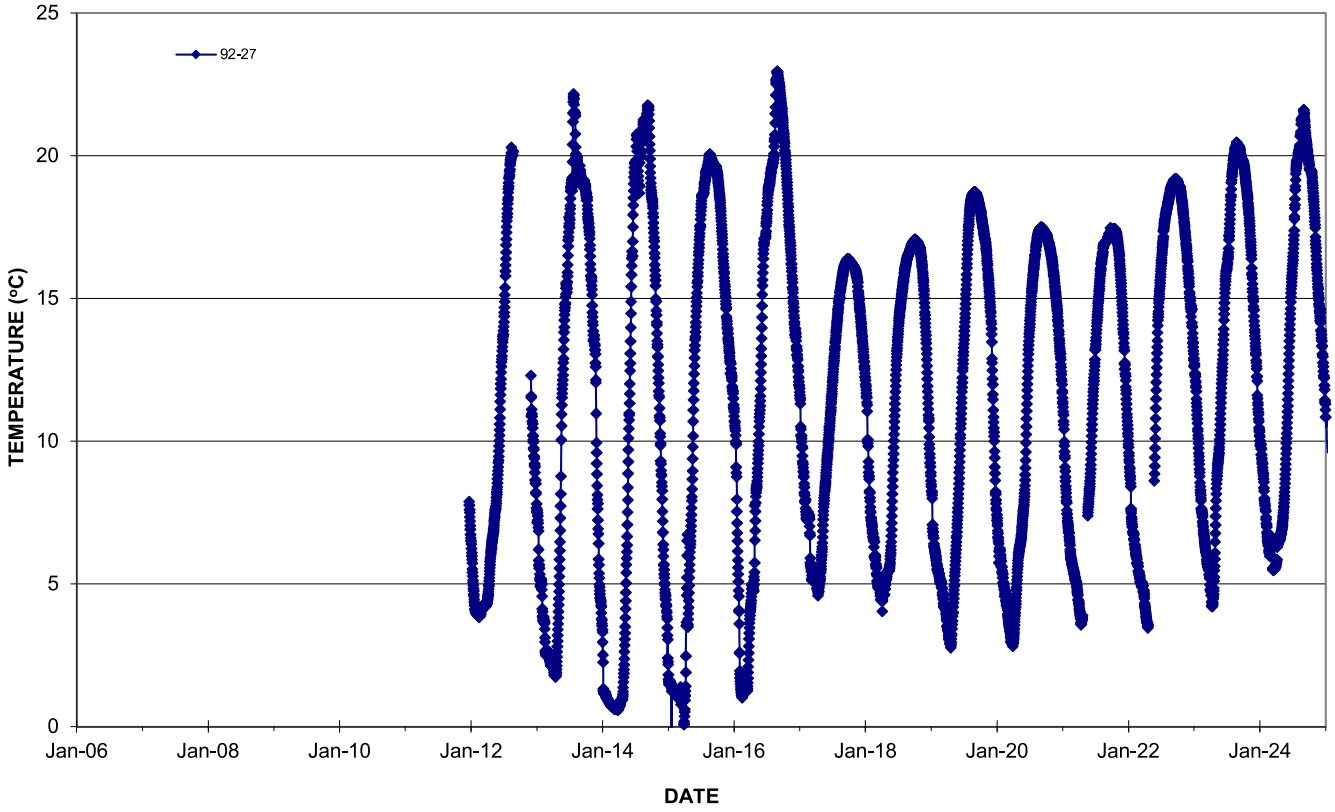
GROUNDWATER THERMOGRAPH
MULTI-LEVEL MONITOR 92-13

FIGURE B-41



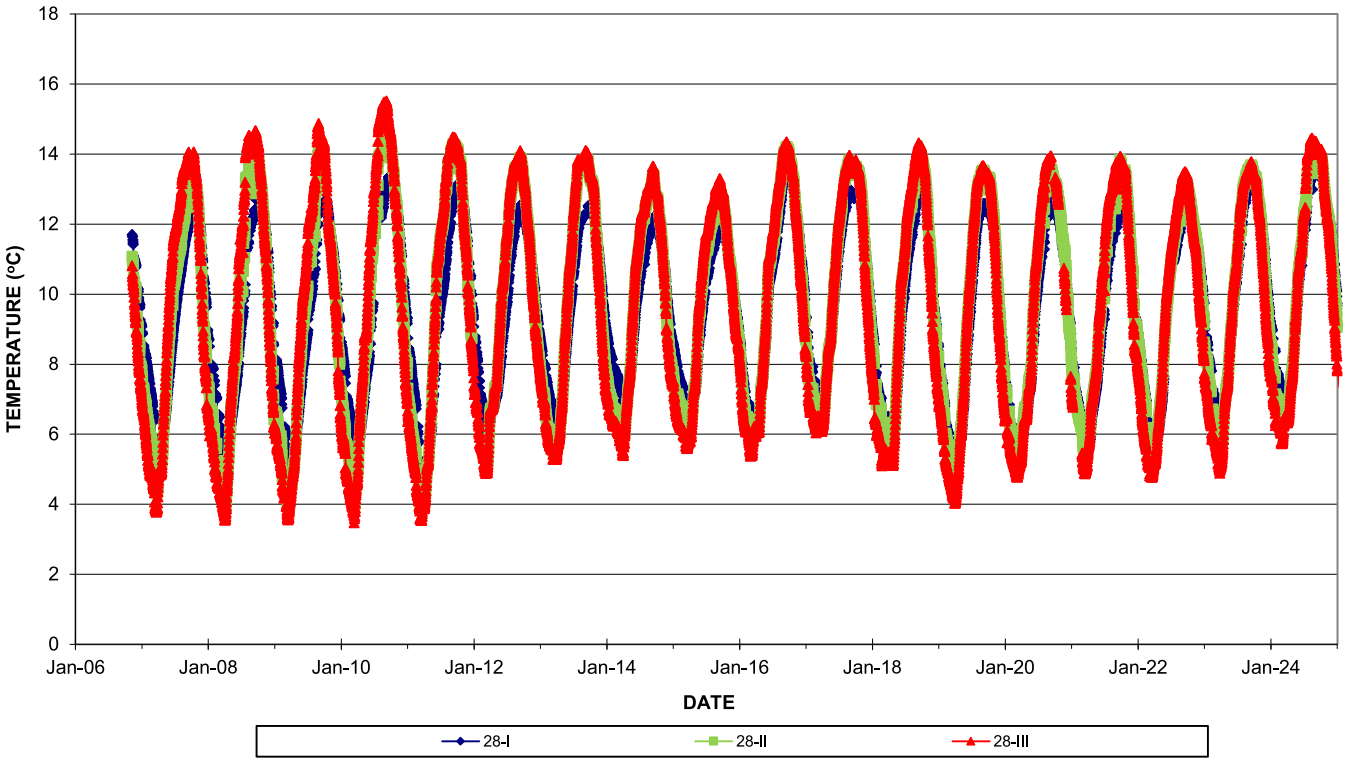
GROUNDWATER THERMOGRAPH
MONITOR 92-27

FIGURE B-42



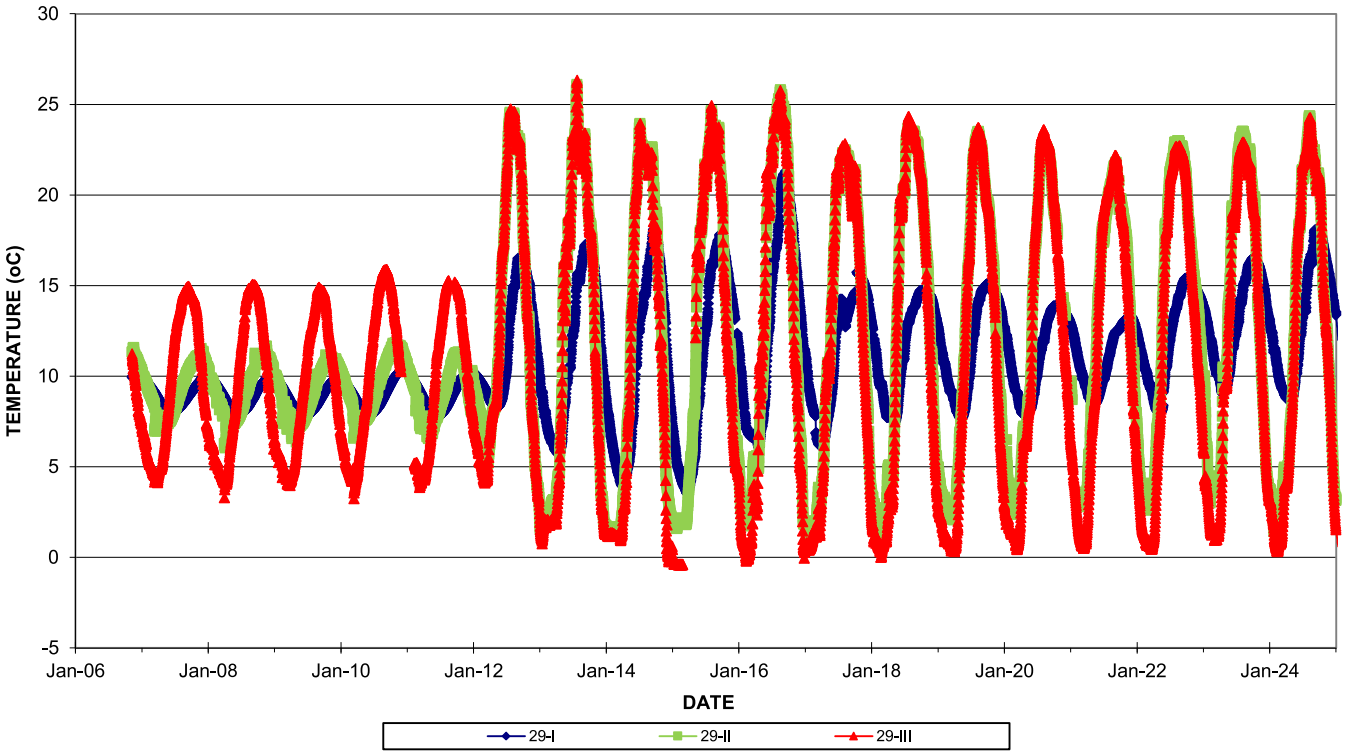
GROUNDWATER THERMOGRAPH
MULTI-LEVEL MONITOR 92-28

FIGURE B-43



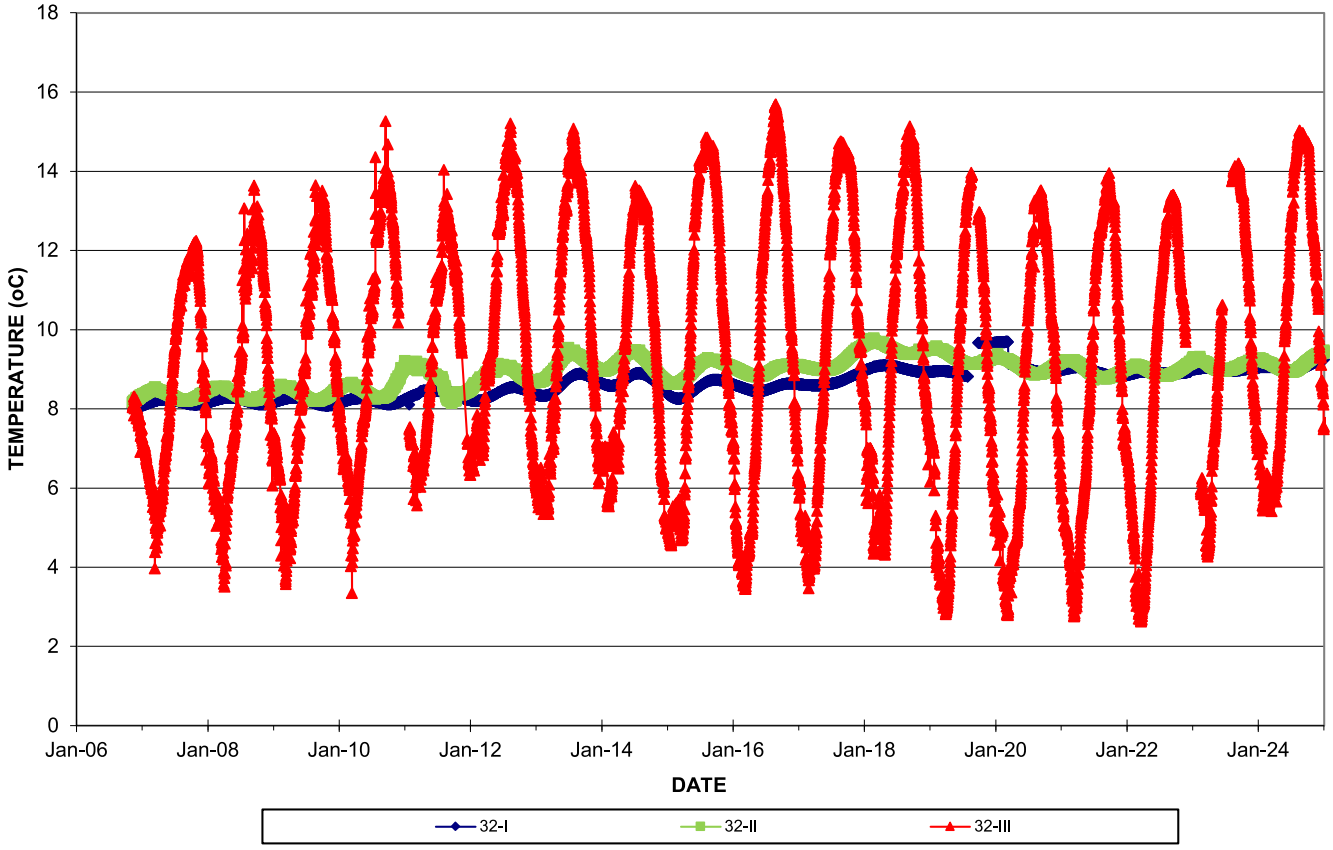
GROUNDWATER THERMOGRAPH
MULTI-LEVEL MONITOR 92-29

FIGURE B-44



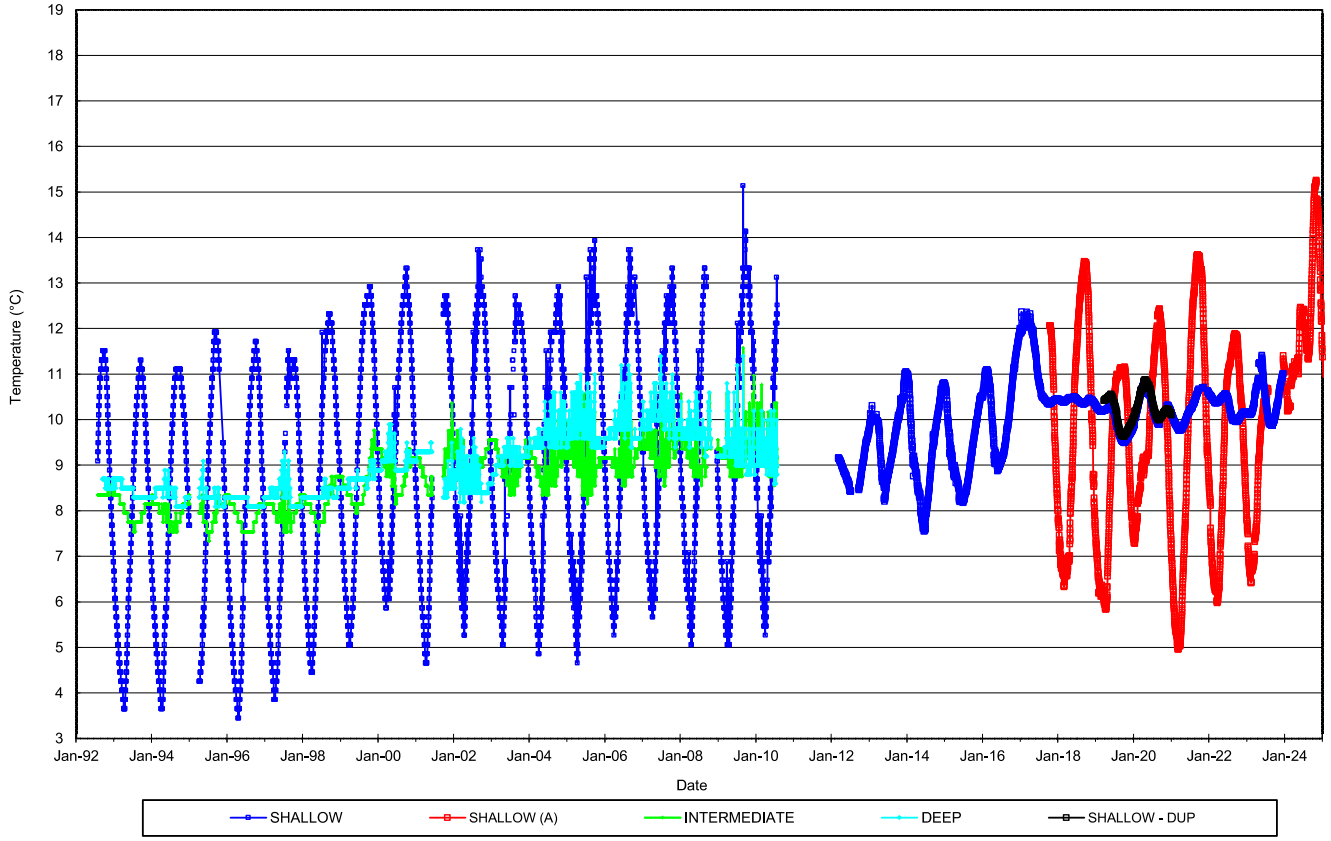
GROUNDWATER THERMOGRAPH
MULTI-LEVEL MONITOR 92-32

FIGURE B-45



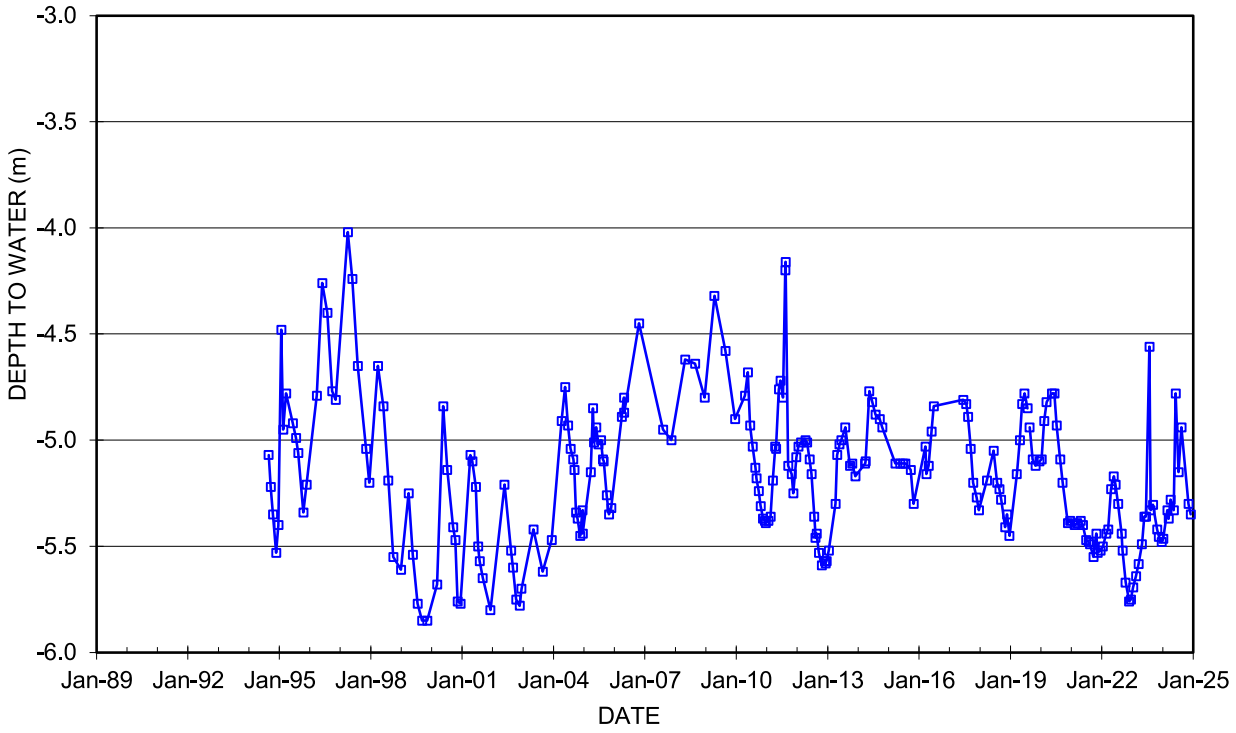
GROUNDWATER THERMOGRAPH
MULTI-LEVEL MONITOR 92-33

FIGURE B-46



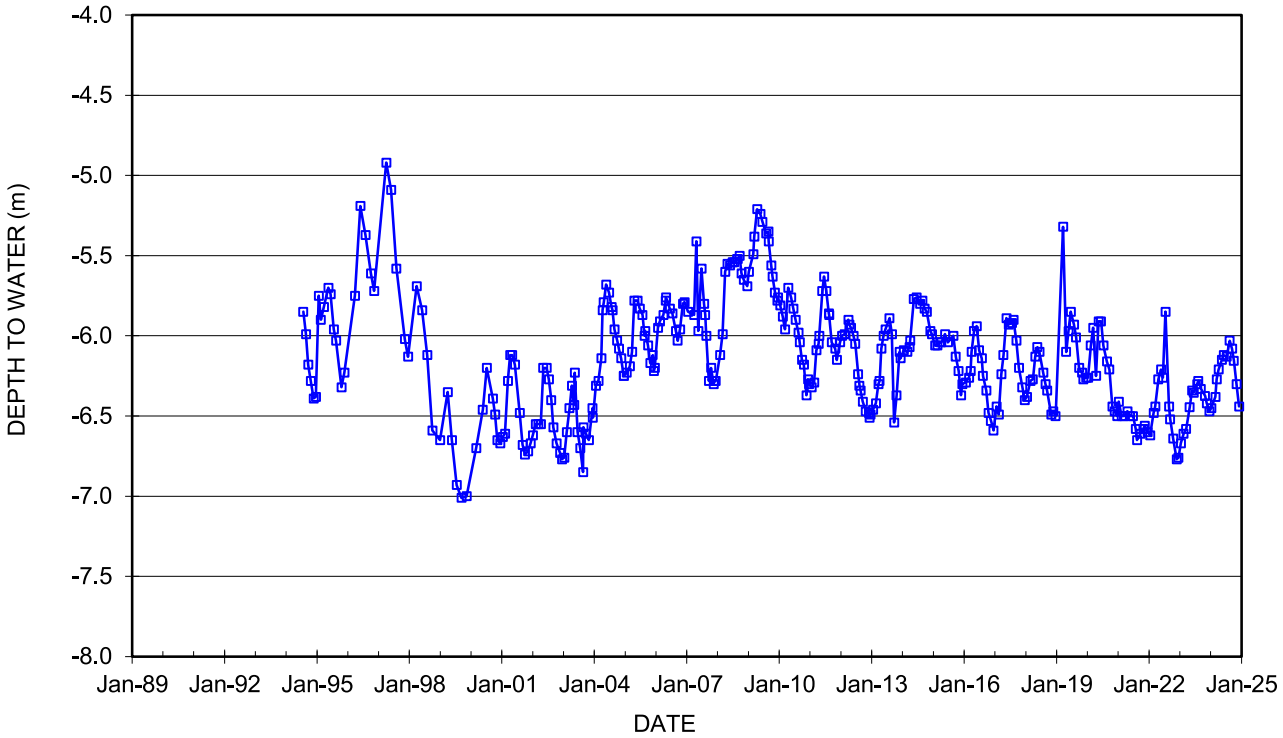
GROUNDWATER HYDROGRAPH
NORTH FARMHOUSE WELL (MOE WELL 4794)

FIGURE B-47



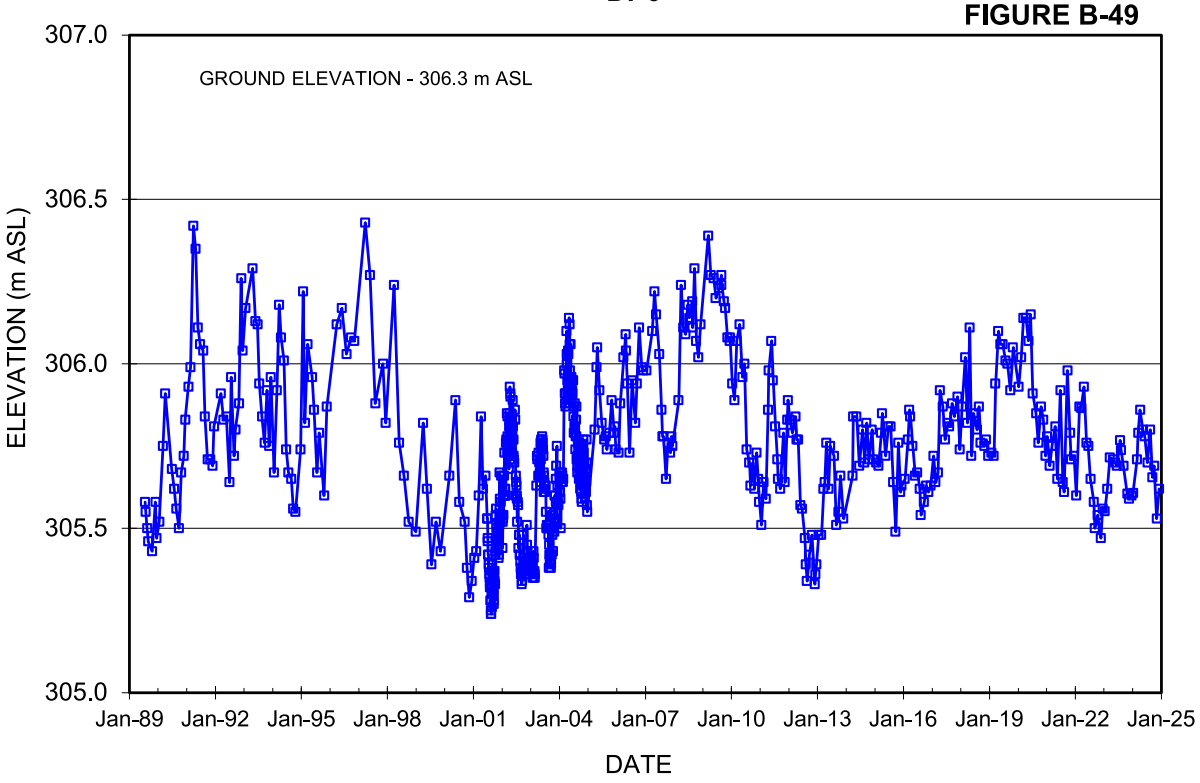
GROUNDWATER HYDROGRAPH
SMITH WELL

FIGURE B-48



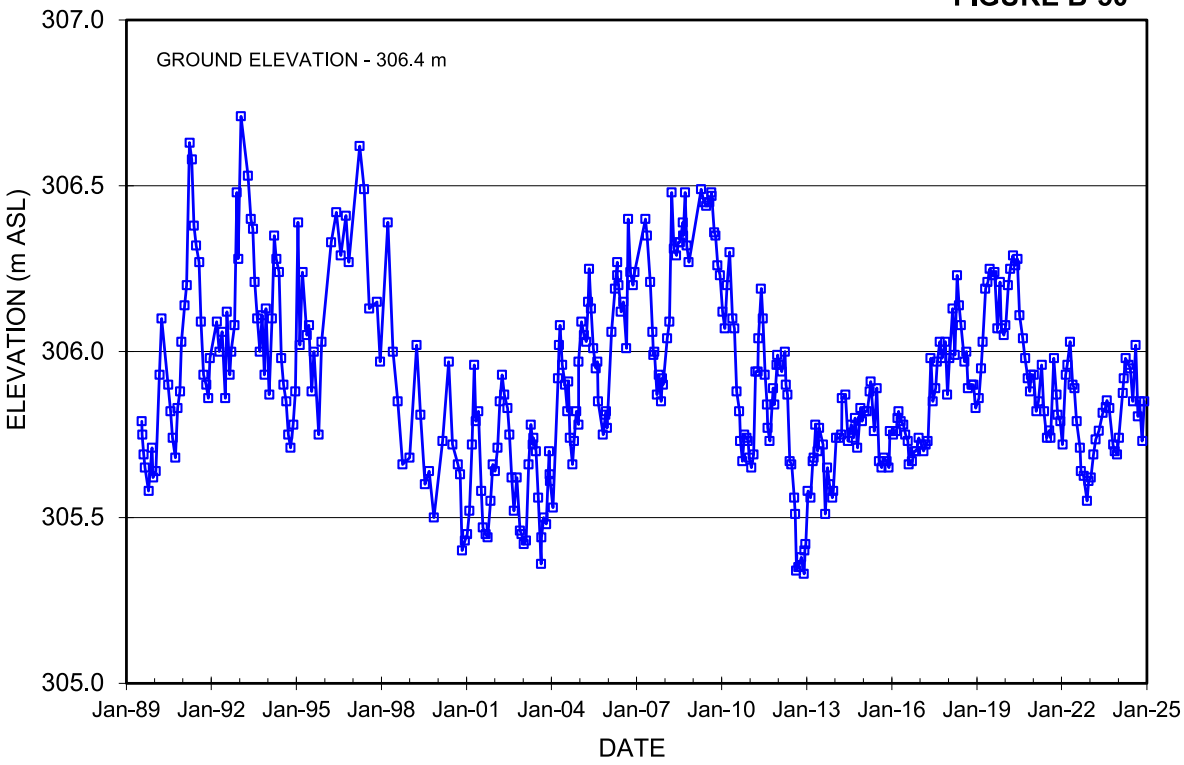
GROUNDWATER HYDROGRAPH
DP6

FIGURE B-49



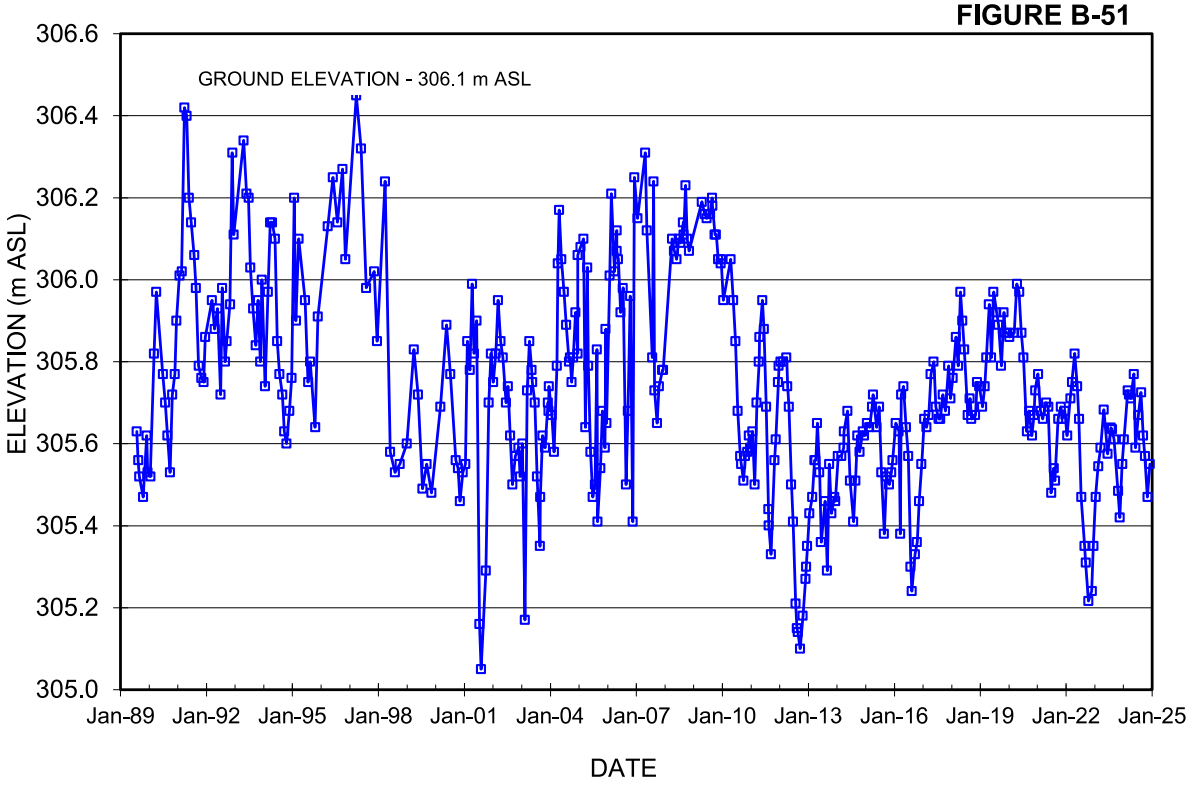
GROUNDWATER HYDROGRAPH
DP7

FIGURE B-50



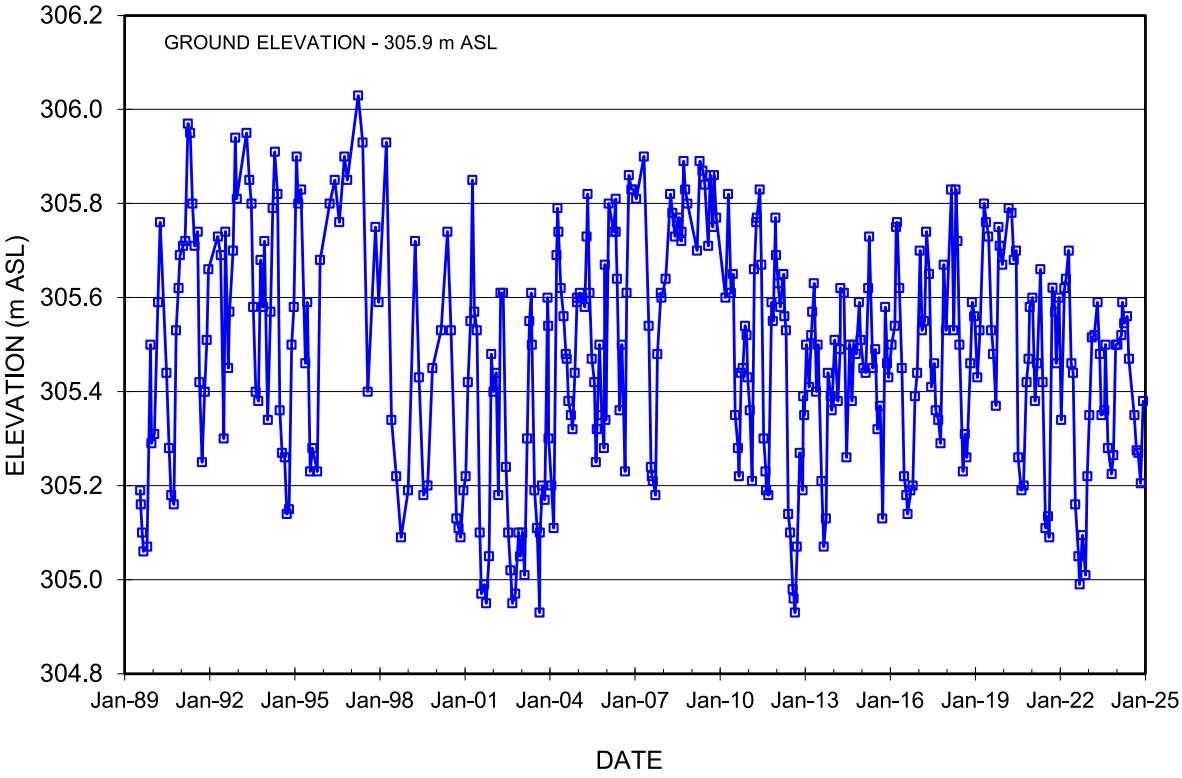
GROUNDWATER HYDROGRAPH
DP8

FIGURE B-51



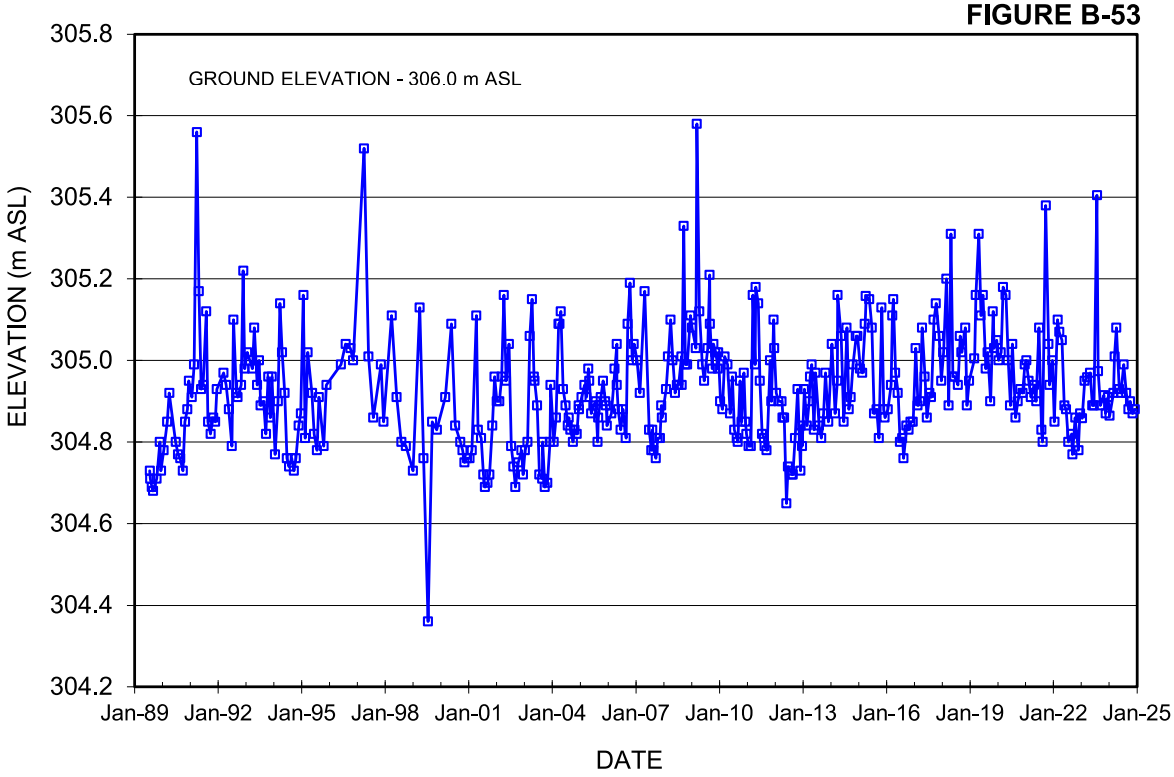
GROUNDWATER HYDROGRAPH
DP9

FIGURE B-52



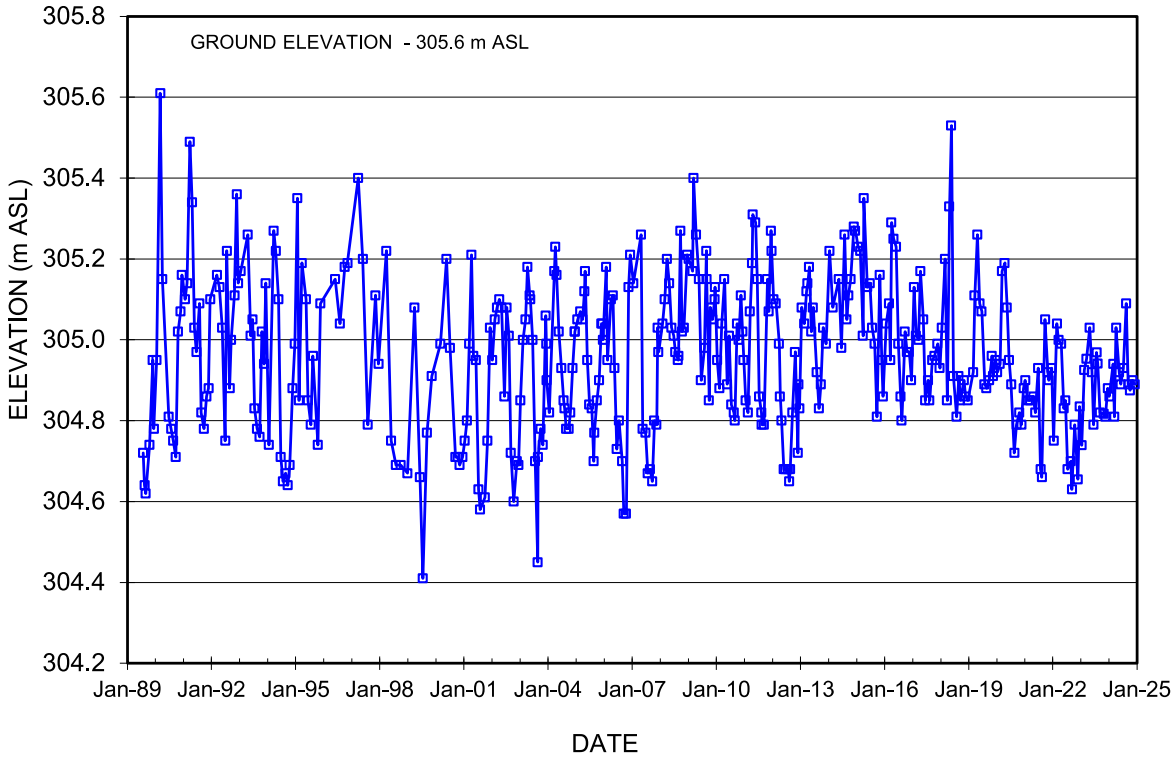
GROUNDWATER HYDROGRAPH
DP10

FIGURE B-53



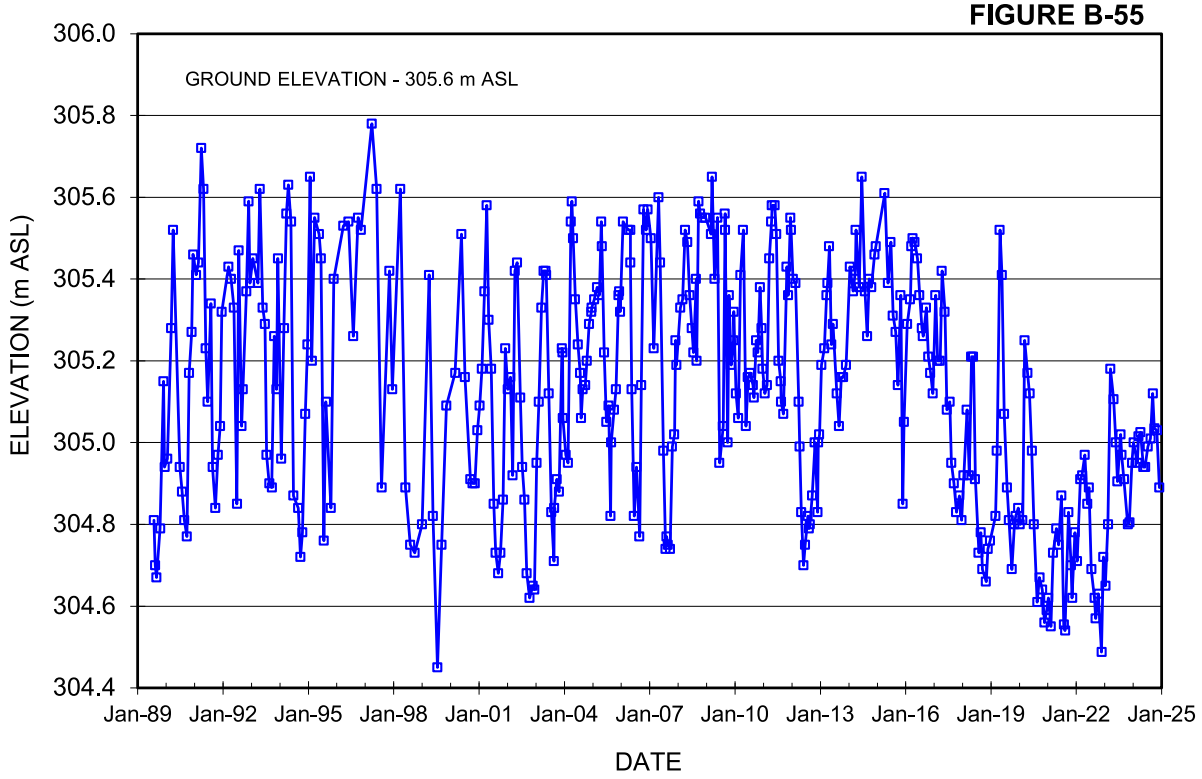
GROUNDWATER HYDROGRAPH
DP11

FIGURE B-54



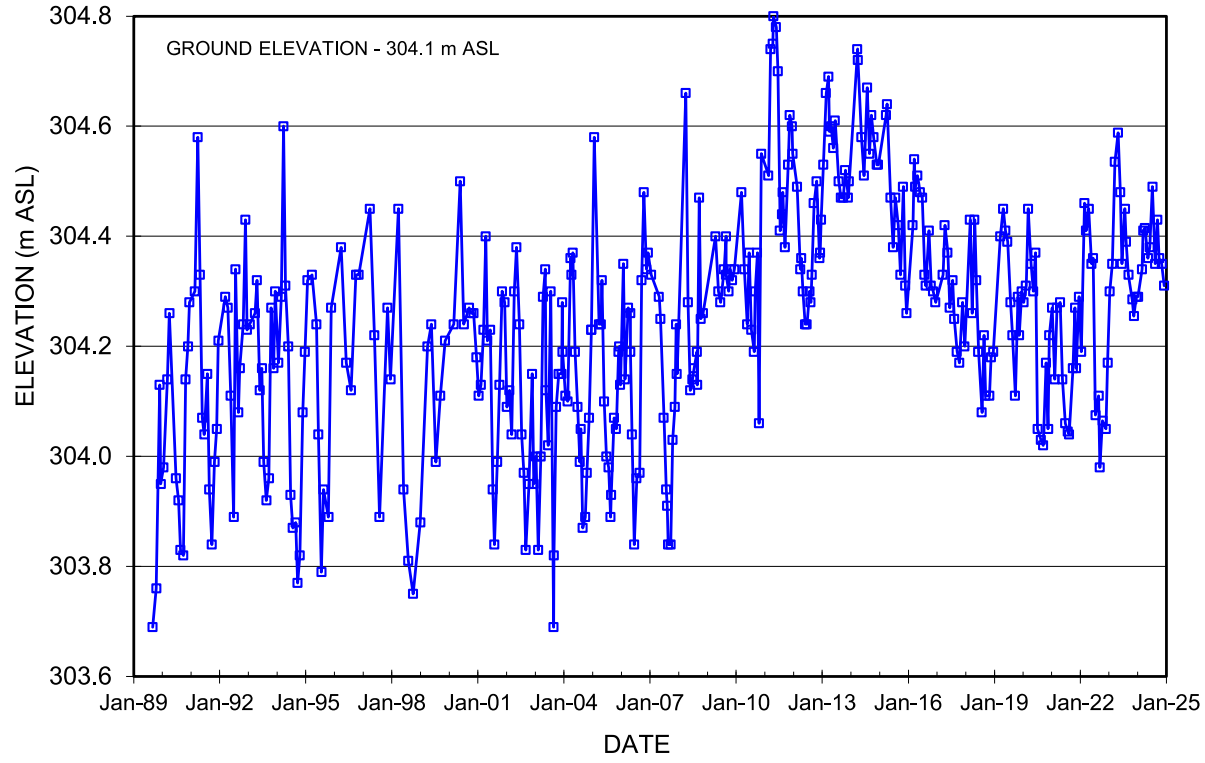
GROUNDWATER HYDROGRAPH
DP12

FIGURE B-55



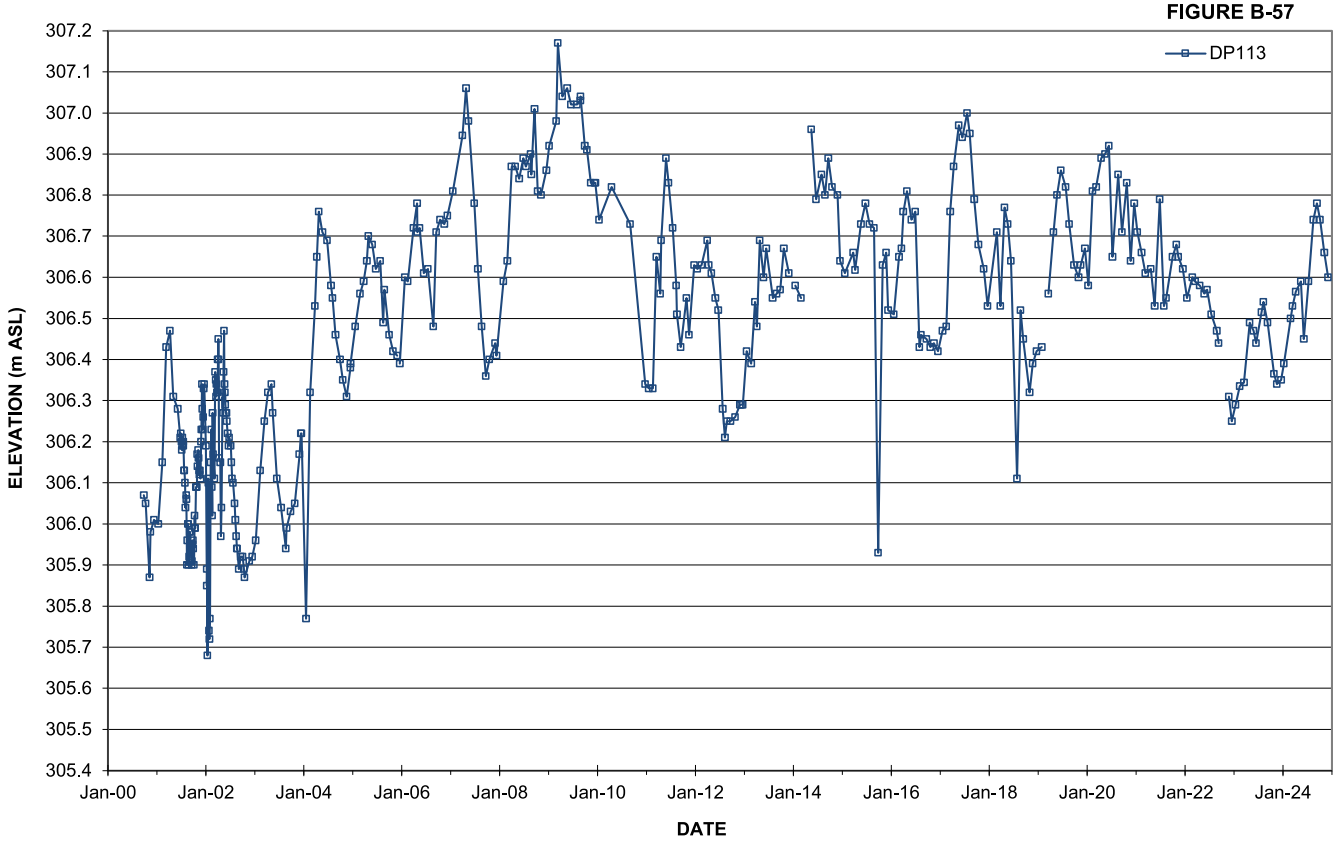
GROUNDWATER HYDROGRAPH
DP16

FIGURE B-56



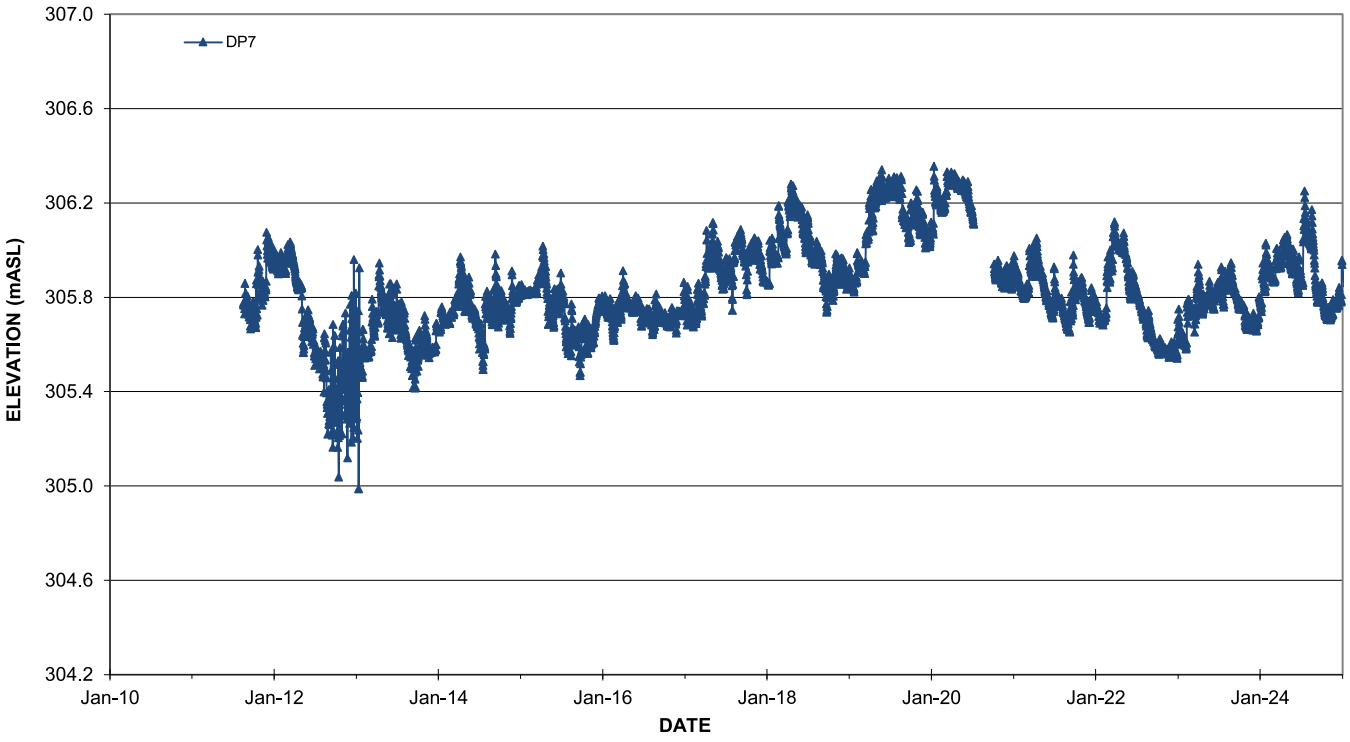
GROUNDWATER HYDROGRAPH
REID MONITOR

FIGURE B-57



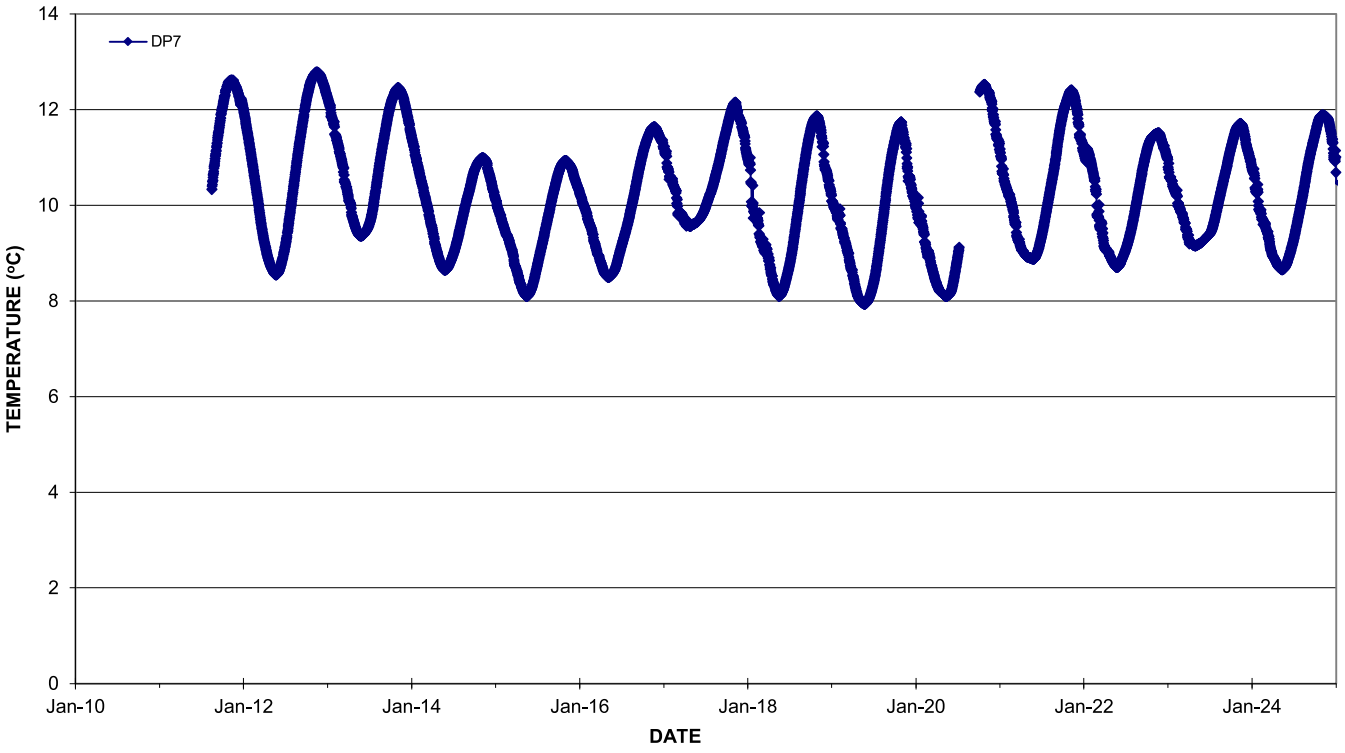
GROUNDWATER HYDROGRAPH
DP7

FIGURE B-58



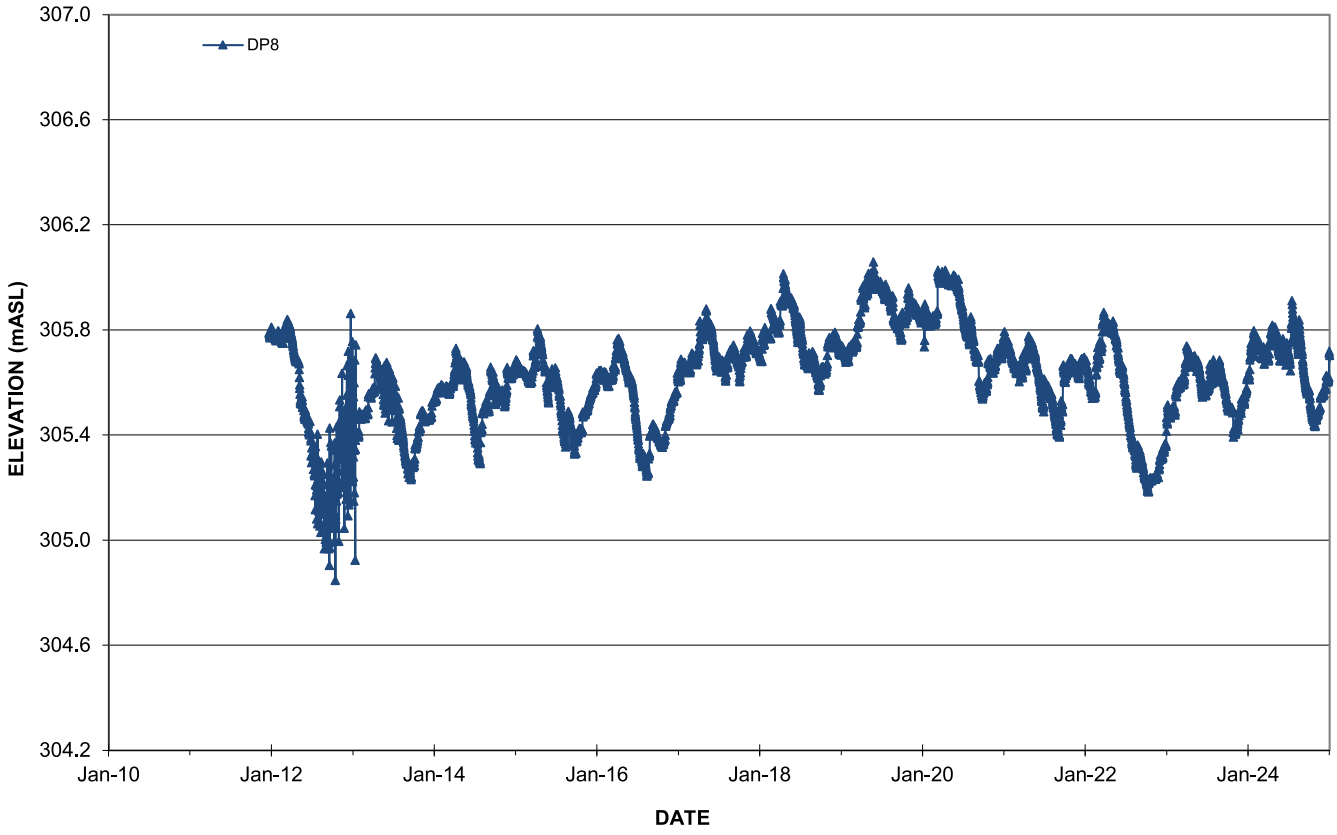
GROUNDWATER THERMOGRAPH
DP7

FIGURE B-59



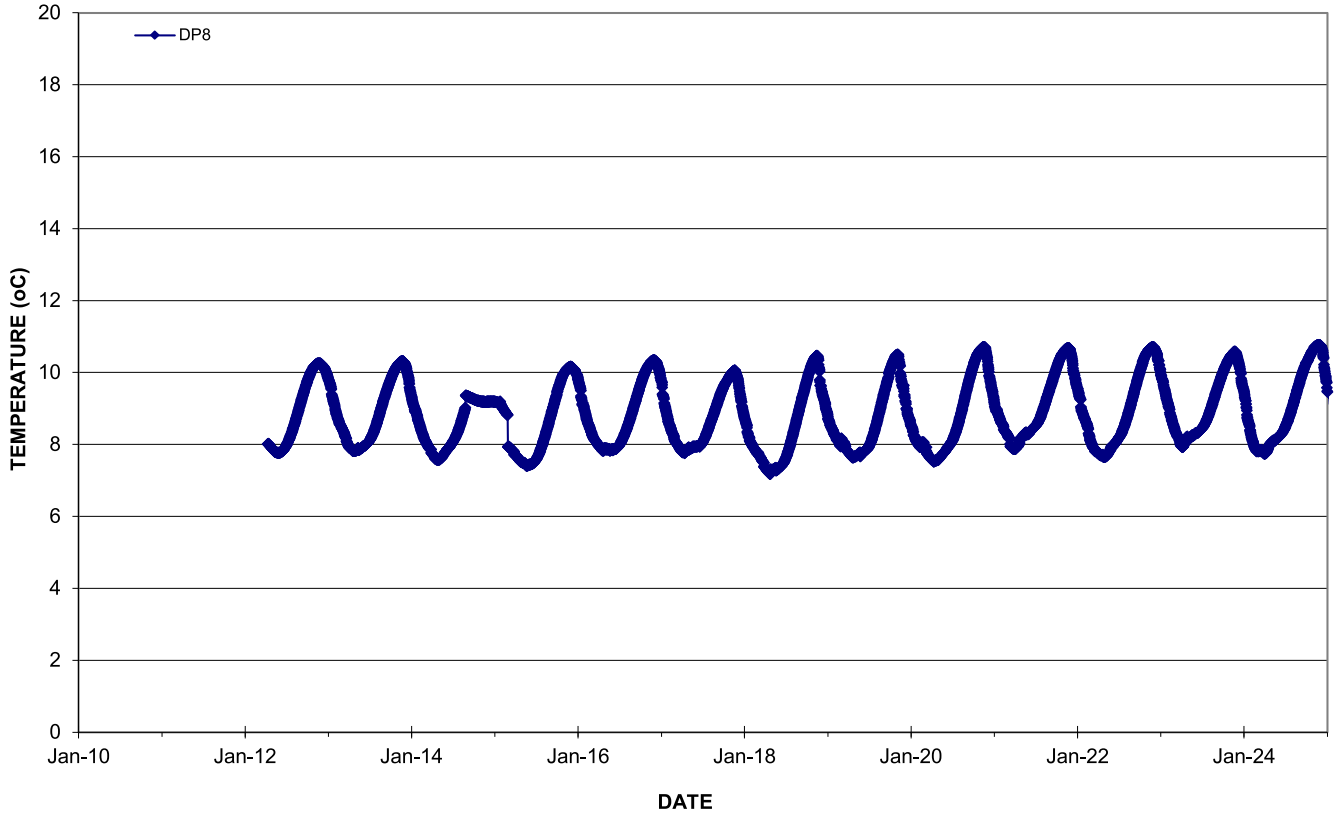
GROUNDWATER HYDROGRAPH
DP8

FIGURE B-60



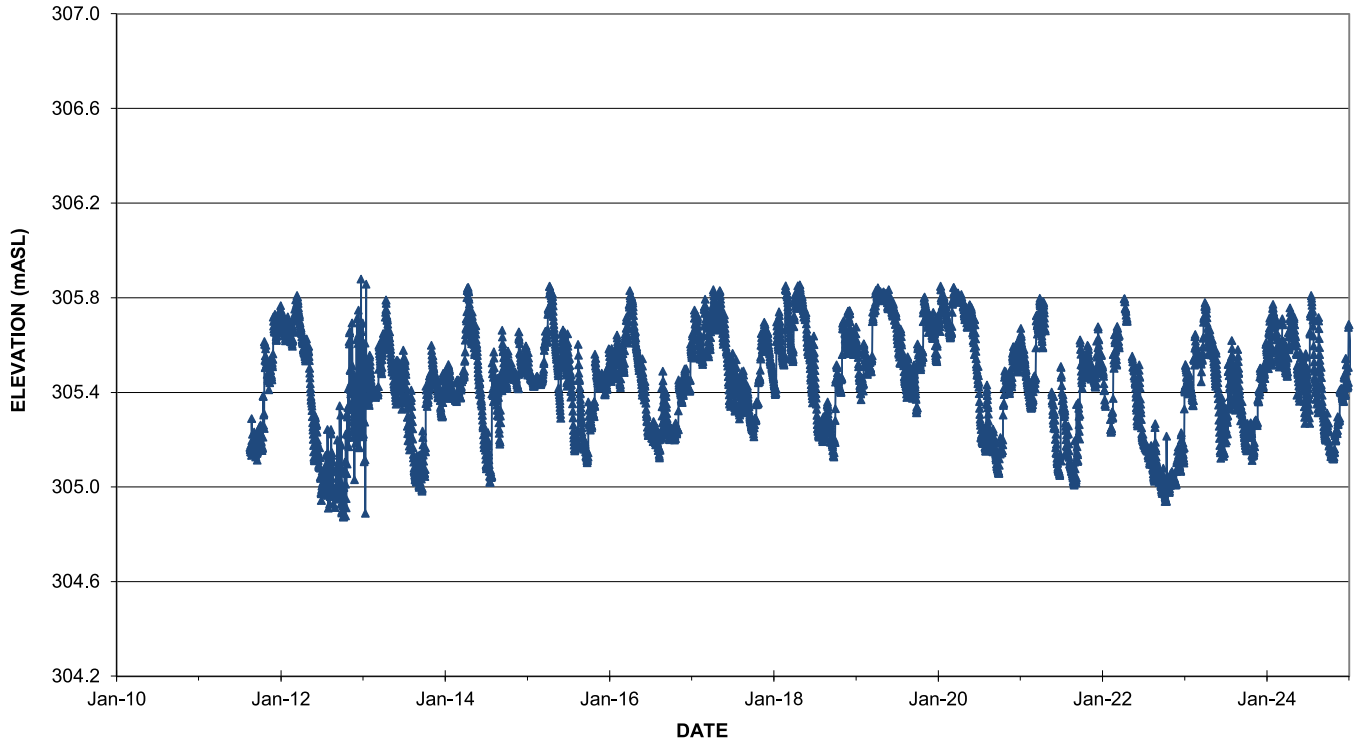
GROUNDWATER THERMOGRAPH
DP8

FIGURE B-61



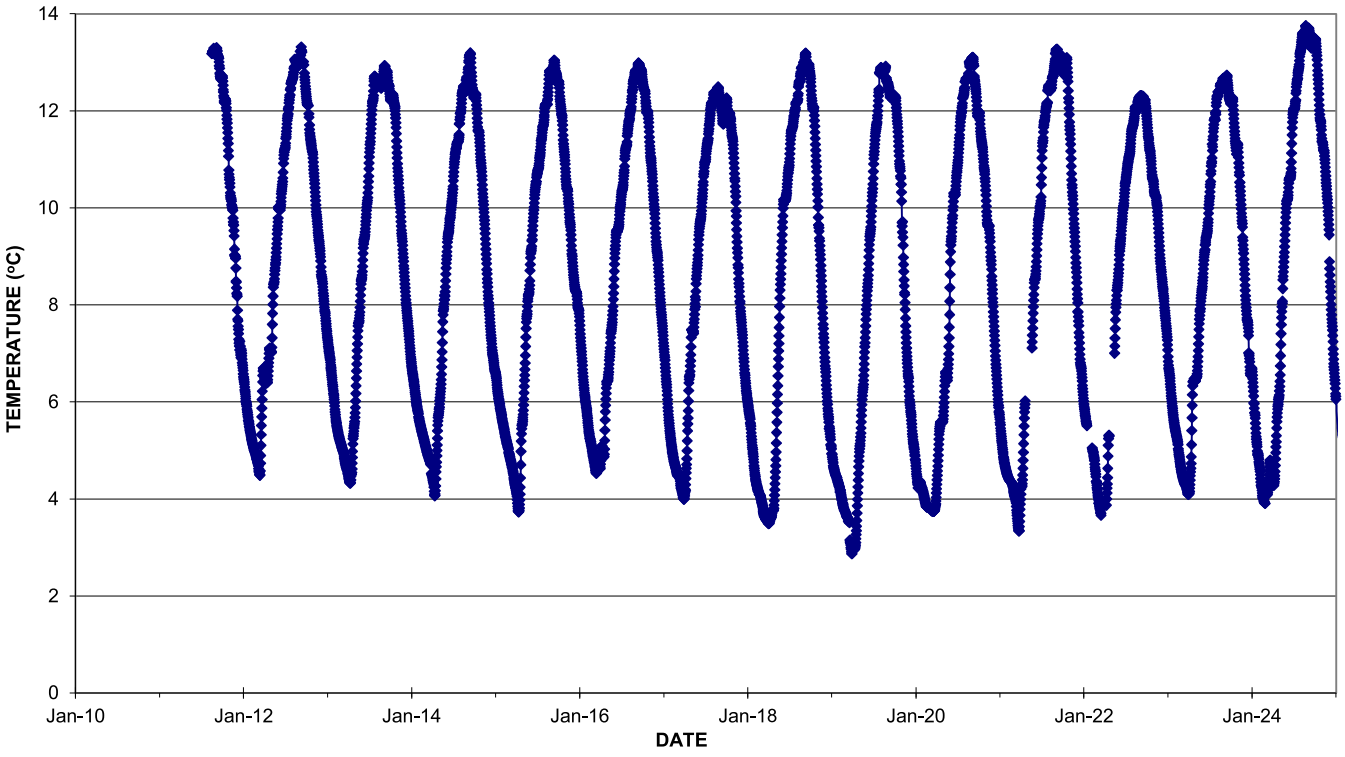
GROUNDWATER HYDROGRAPH
DP9

FIGURE B-62



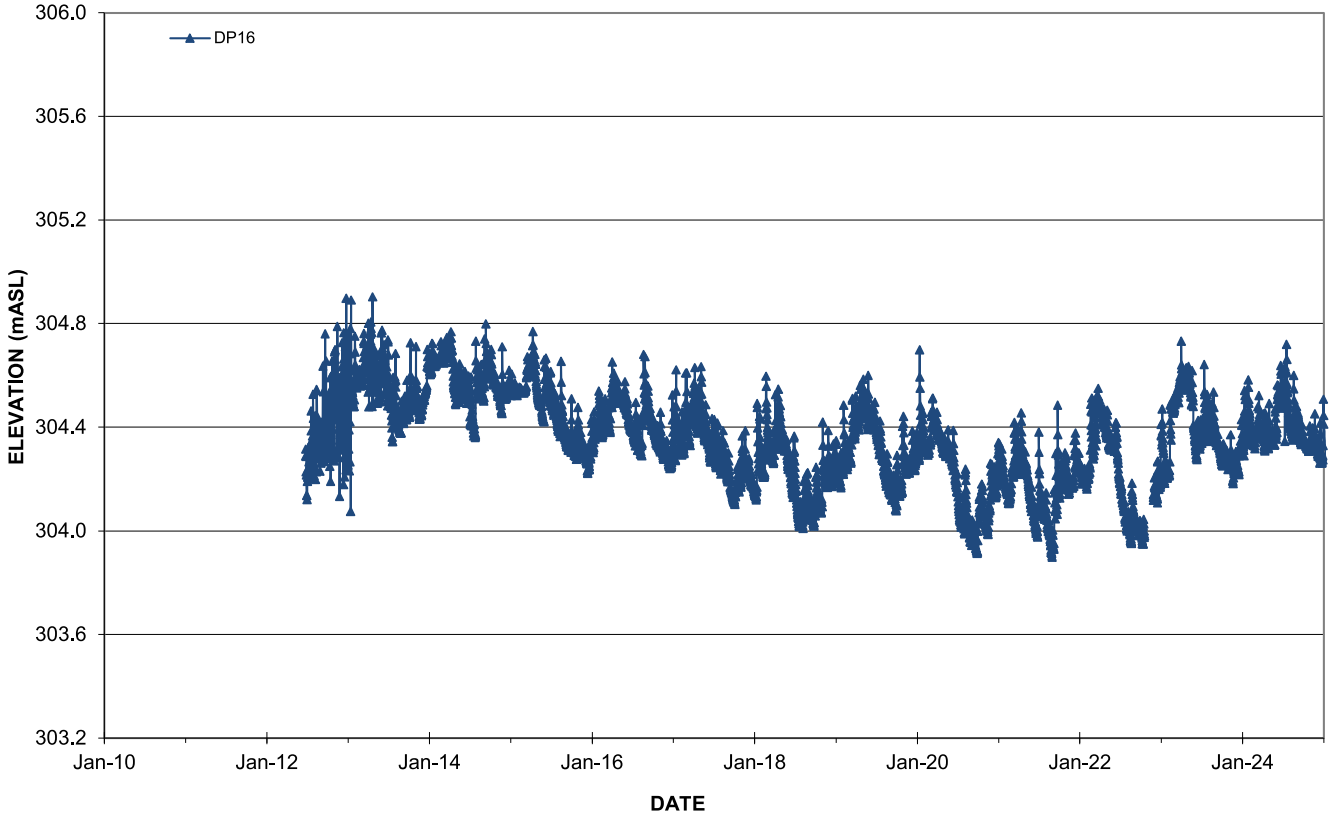
GROUNDWATER THERMOGRAPH
DP9

FIGURE B-63



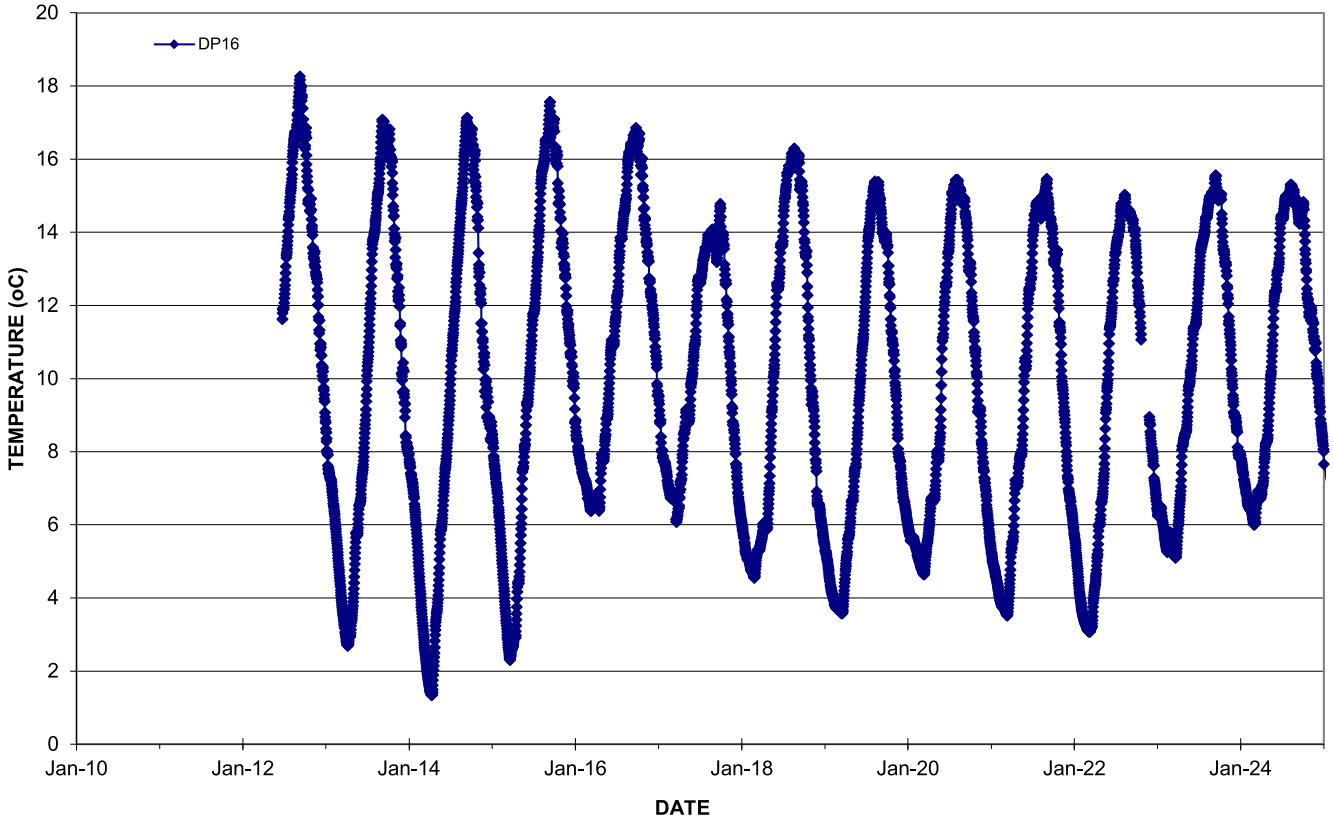
GROUNDWATER HYDROGRAPH
DP16

FIGURE B-64



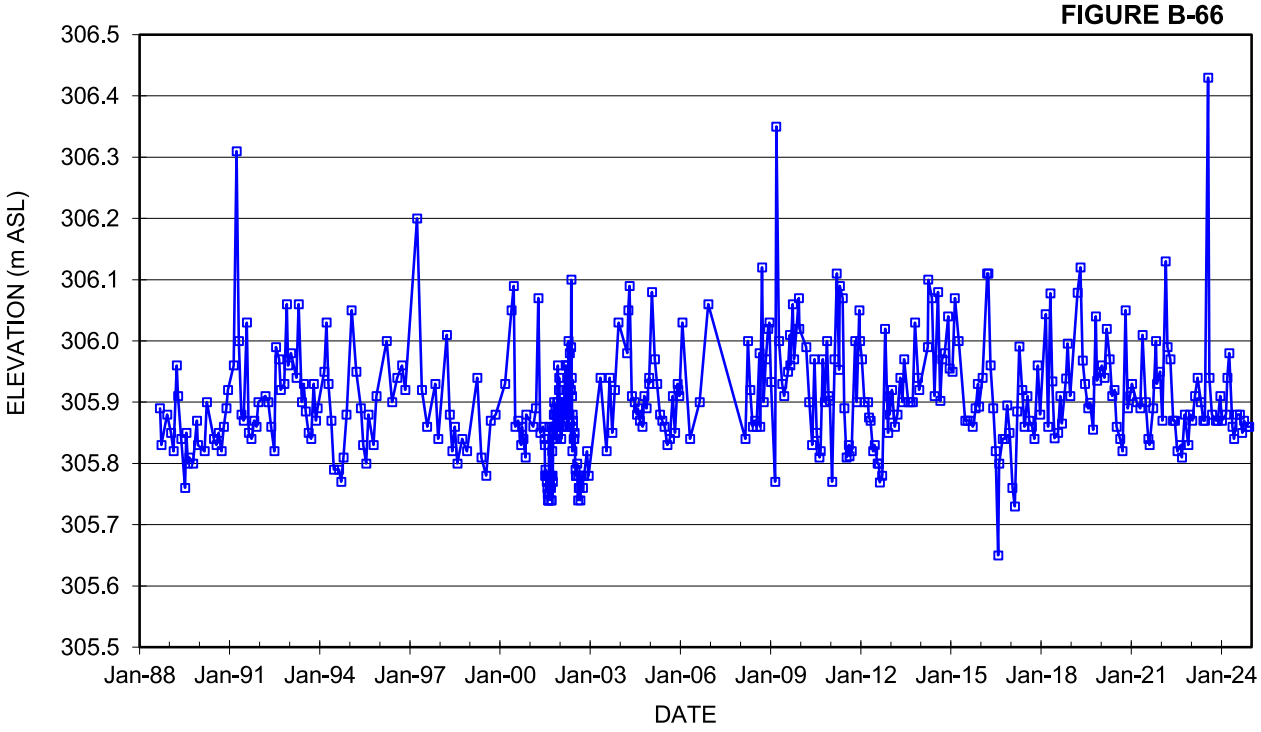
GROUNDWATER THERMOGRAPH
DP16

FIGURE B-65



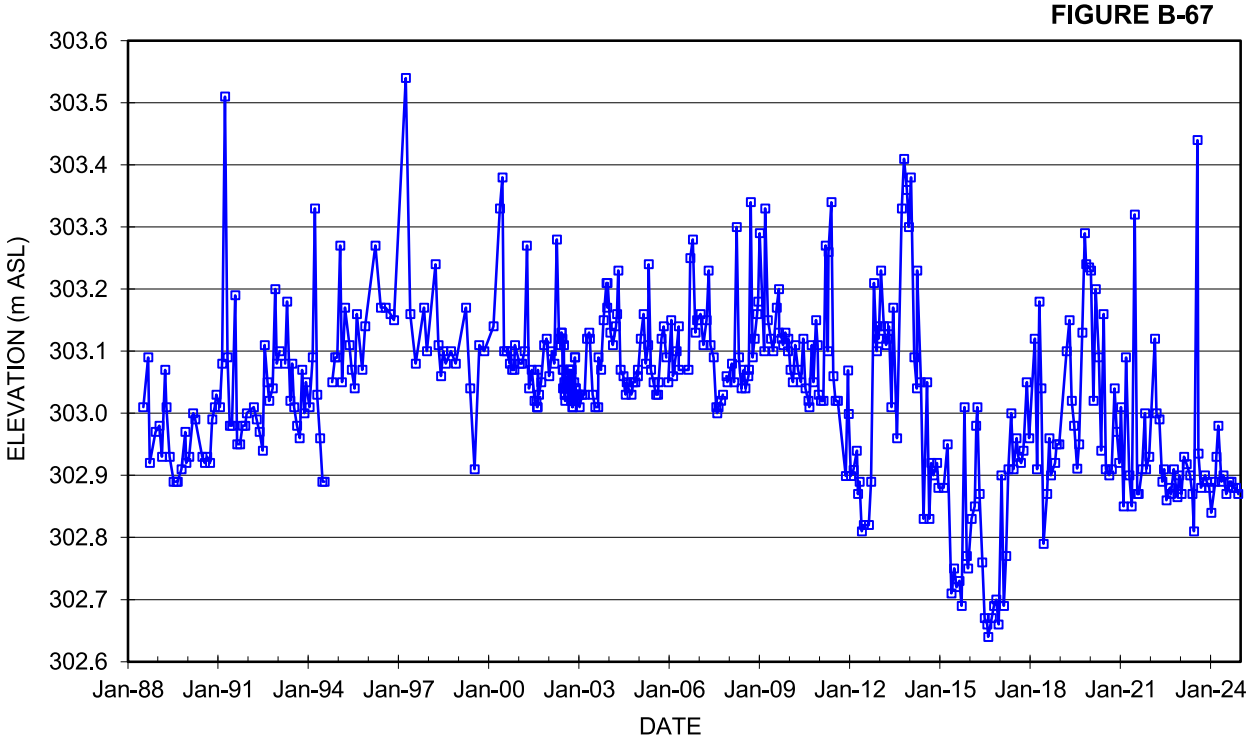
SURFACE WATER HYDROGRAPH
SW1

FIGURE B-66



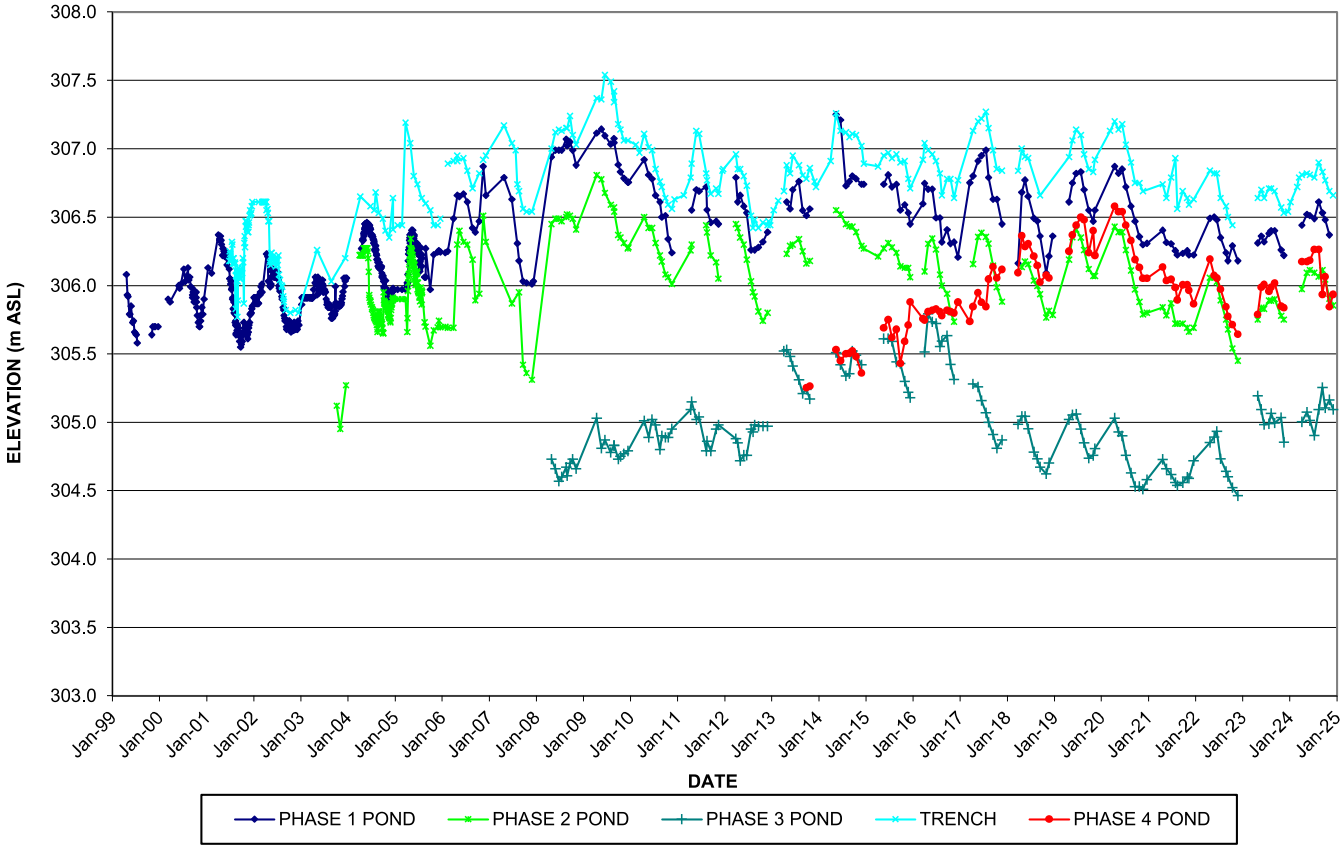
SURFACE WATER HYDROGRAPH
SW2

FIGURE B-67



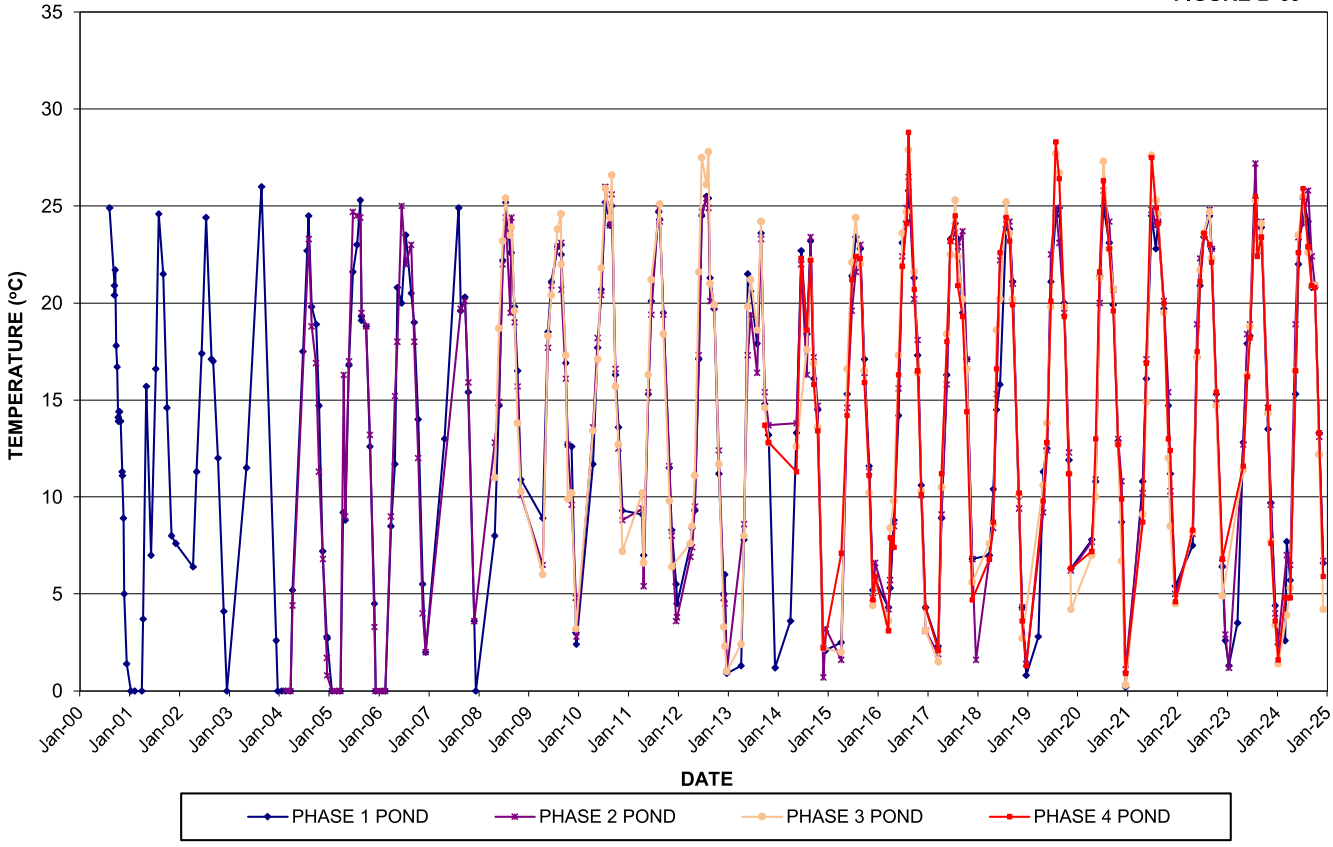
POND HYDROGRAPH

FIGURE B-68



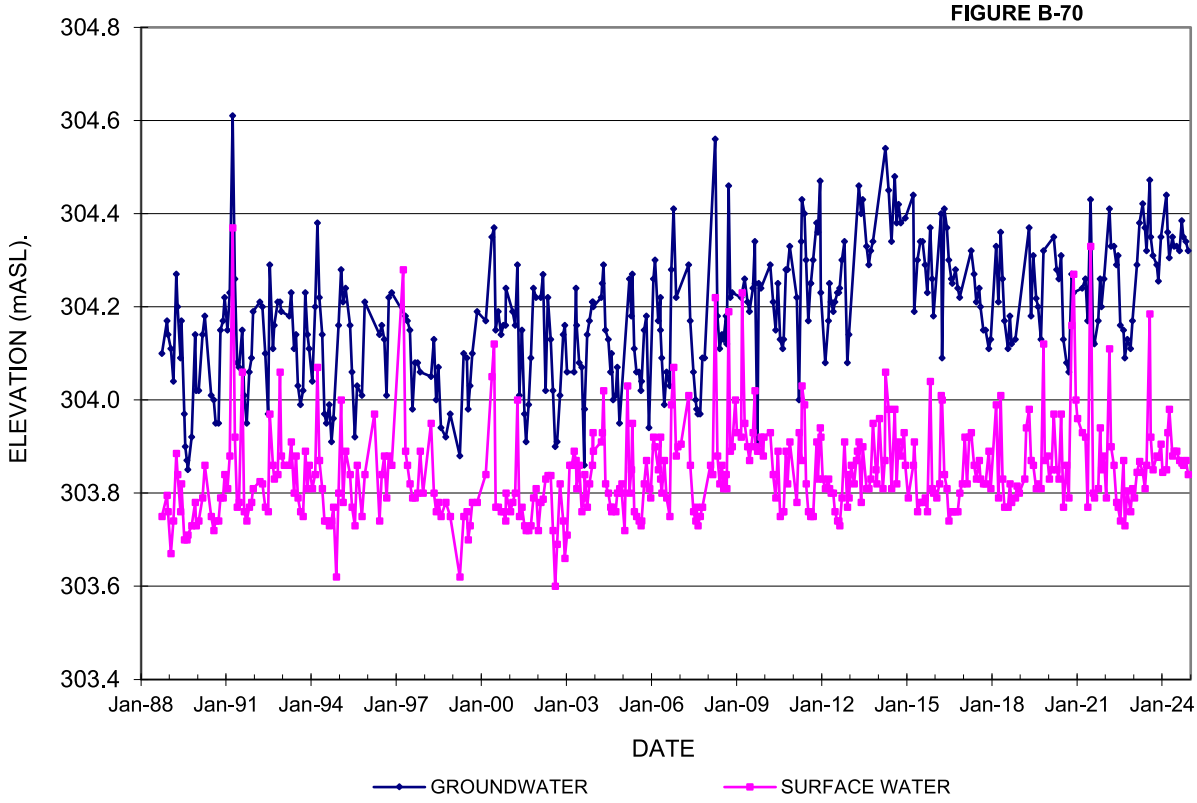
POND THERMOGRAPH

FIGURE B-69



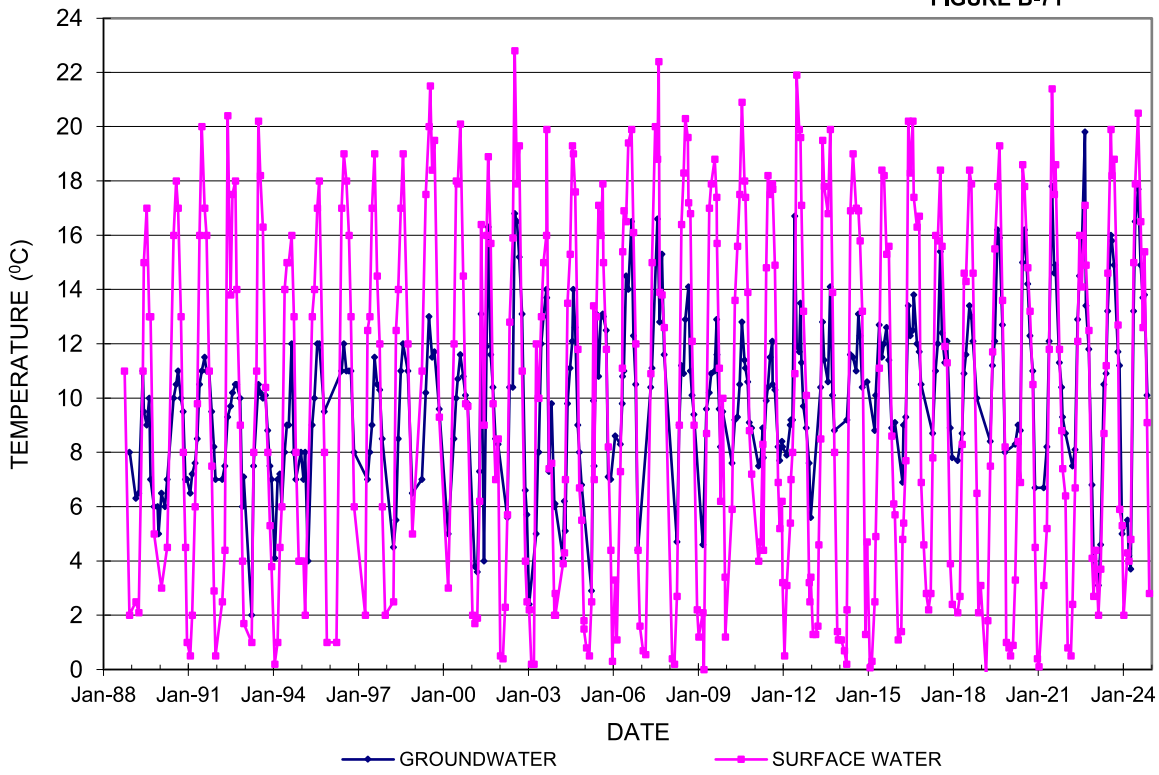
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP1

FIGURE B-70



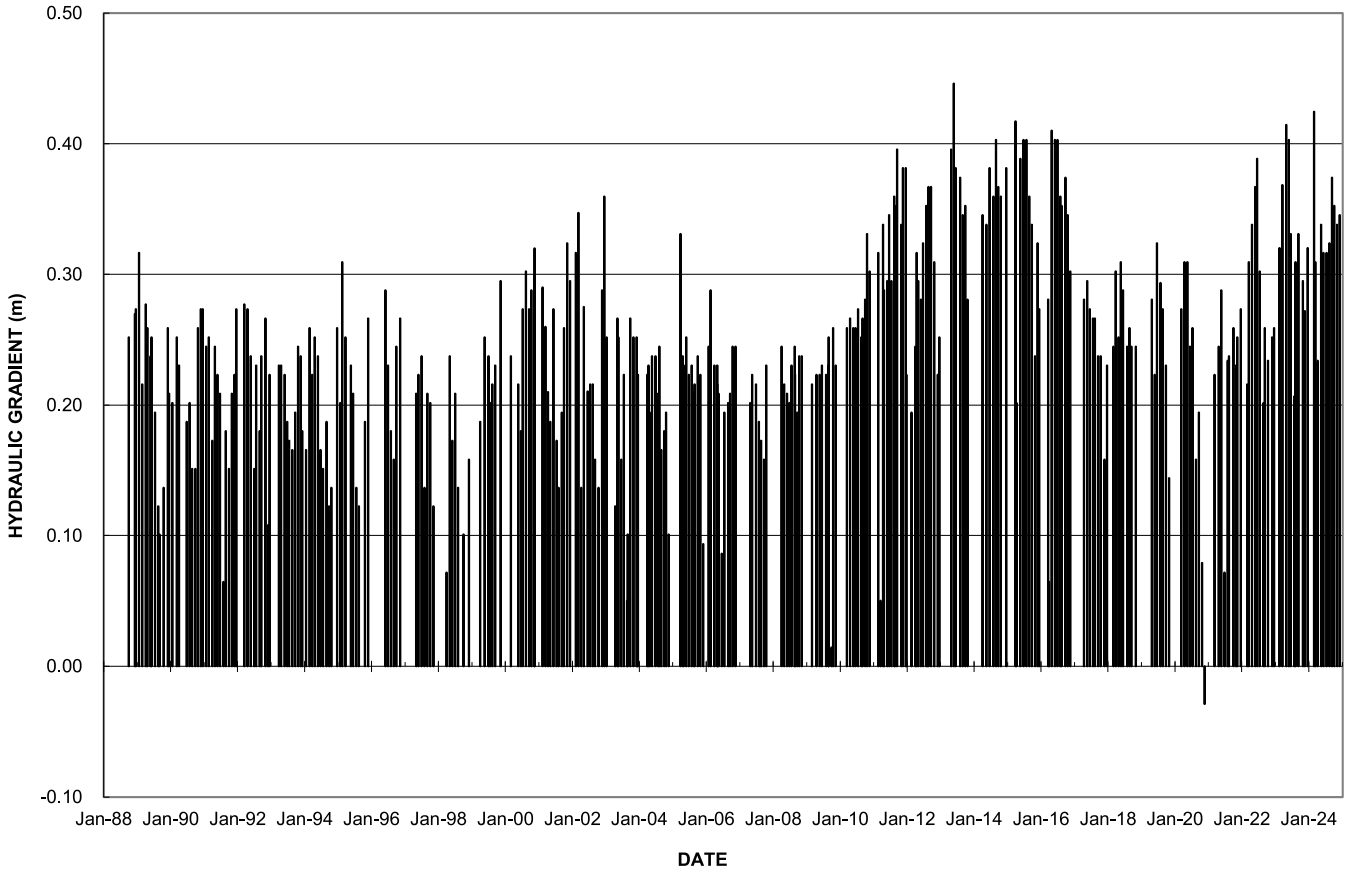
THERMOGRAPH
DP1

FIGURE B-71



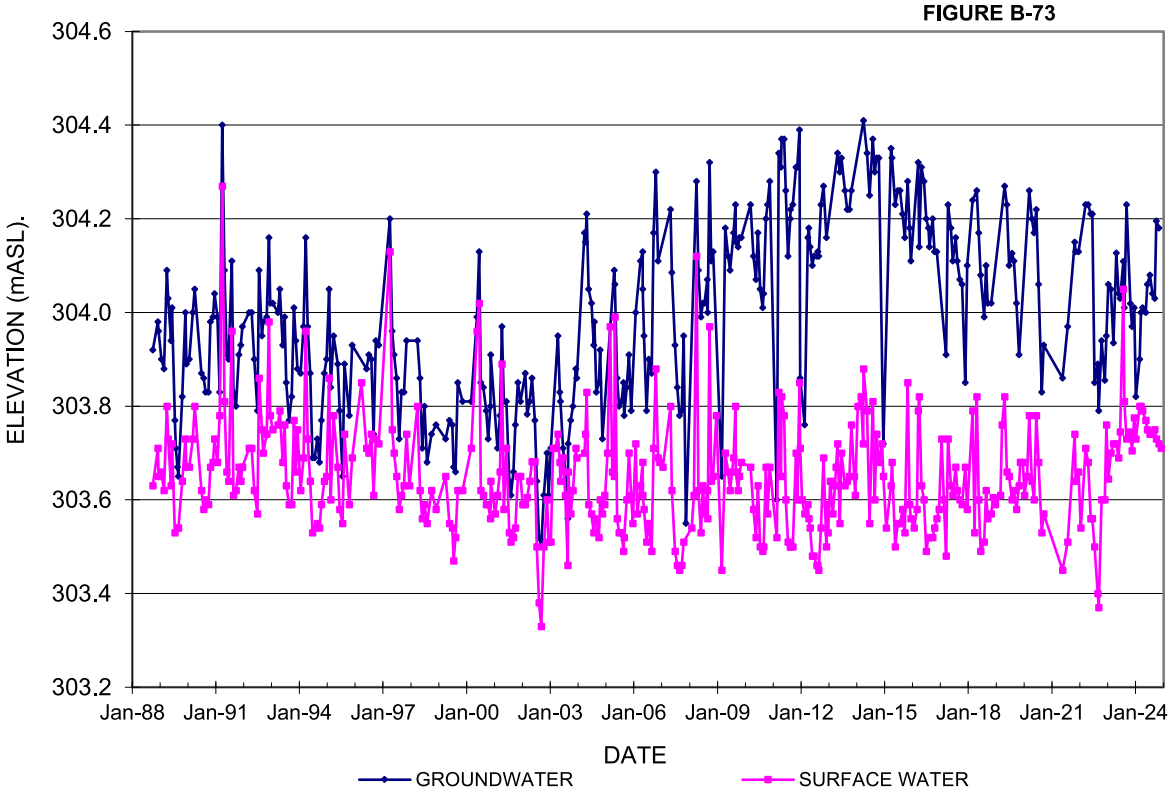
VERTICAL HYDRAULIC GRADIENT
DP1

FIGURE B-72



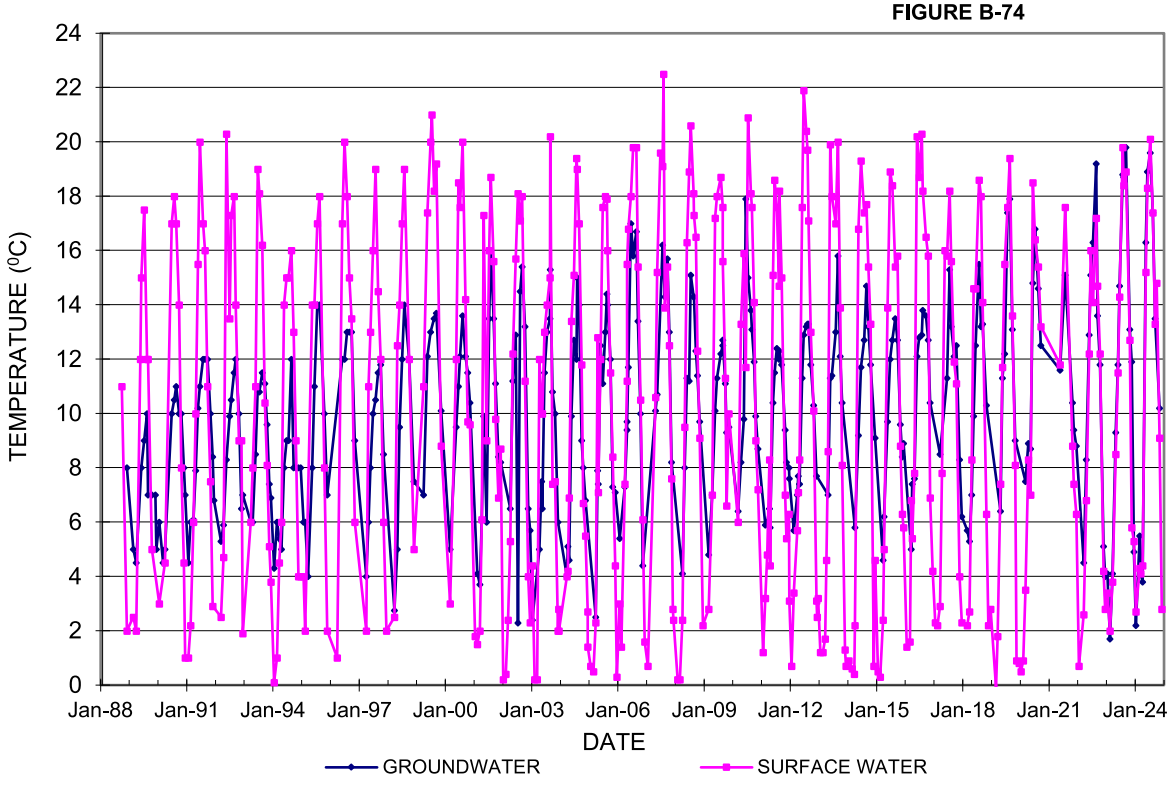
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP2

FIGURE B-73



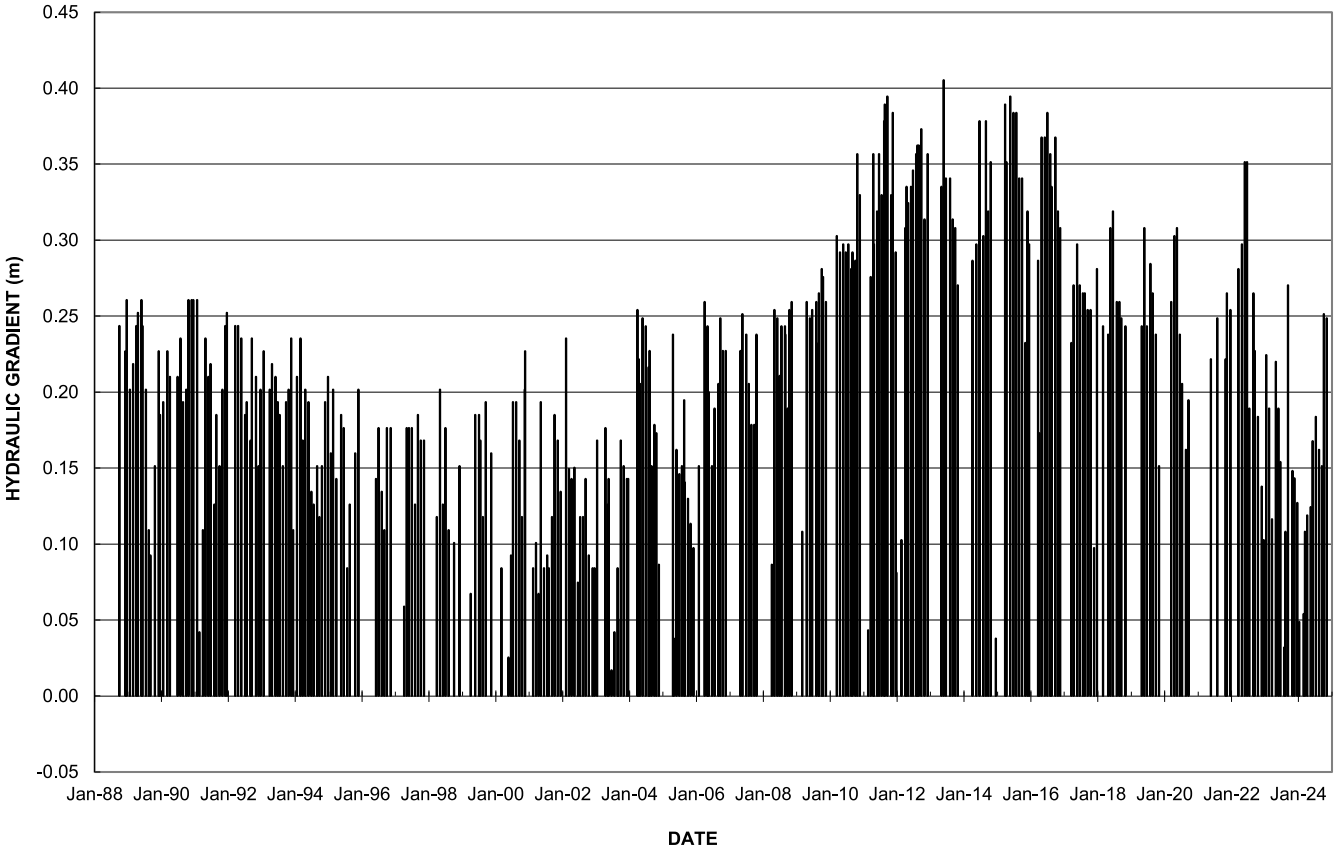
THERMOGRAPH
DP2

FIGURE B-74



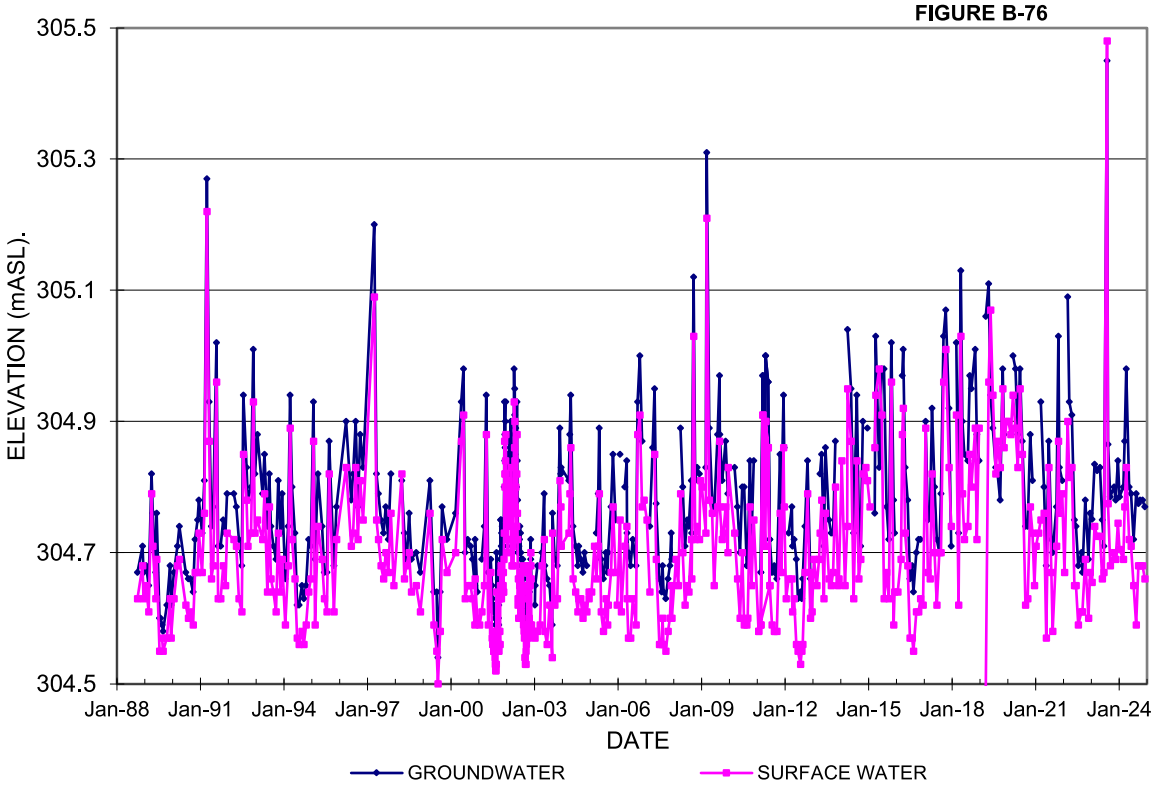
VERTICAL HYDRAULIC GRADIENT
DP2

FIGURE B-75



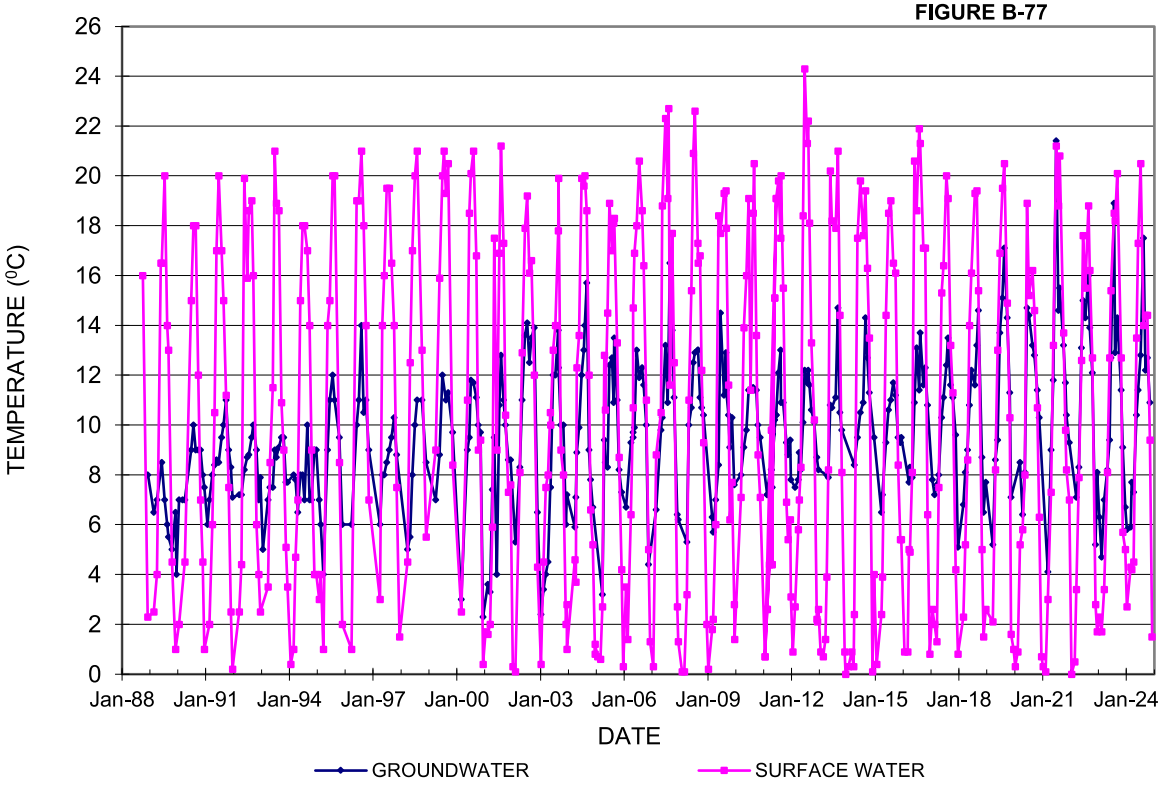
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP3

FIGURE B-76



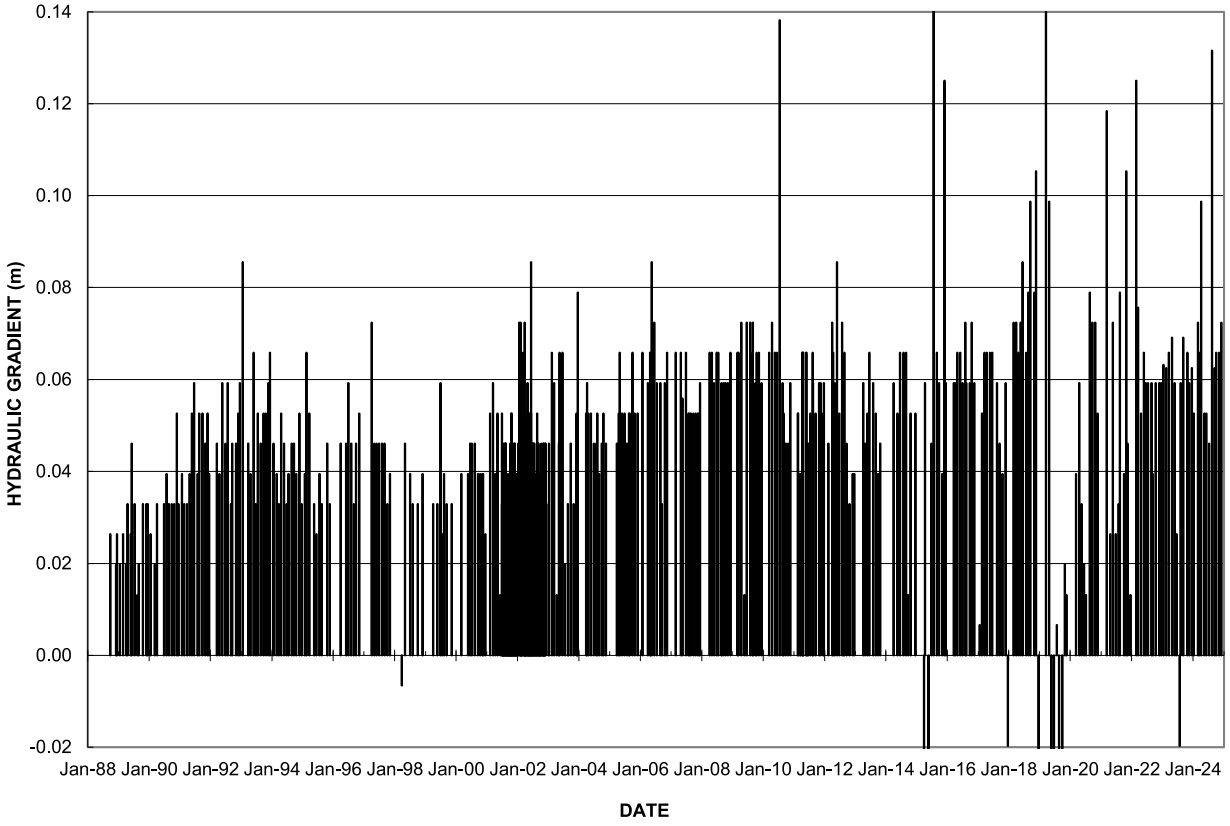
THERMOGRAPH
DP3

FIGURE B-77



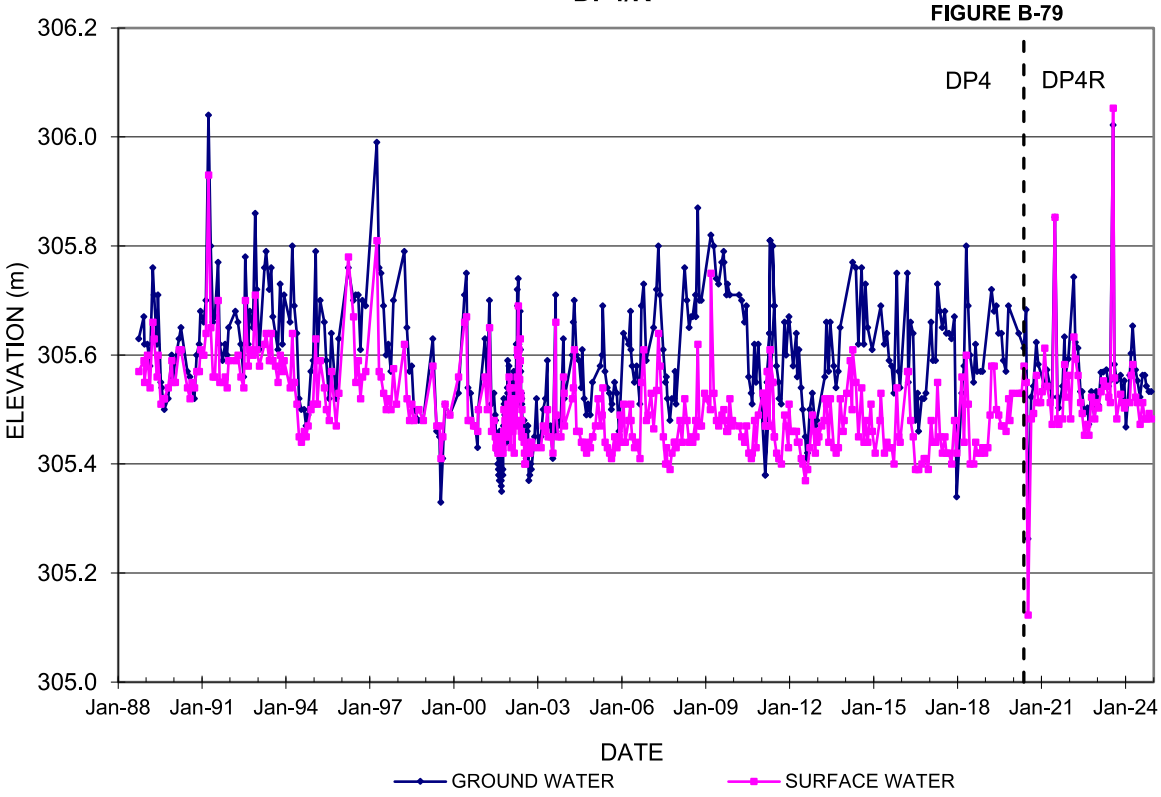
VERTICAL HYDRAULIC GRADIENT
DP3

FIGURE B-78



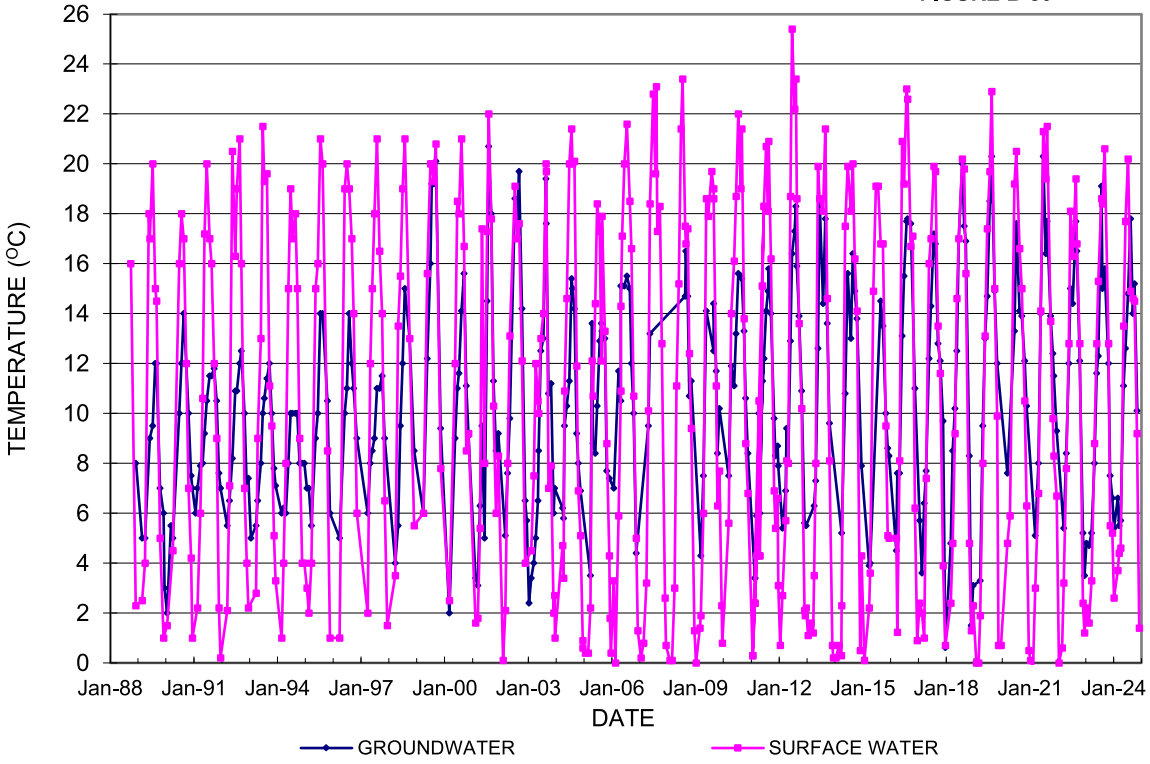
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP4/R

FIGURE B-79



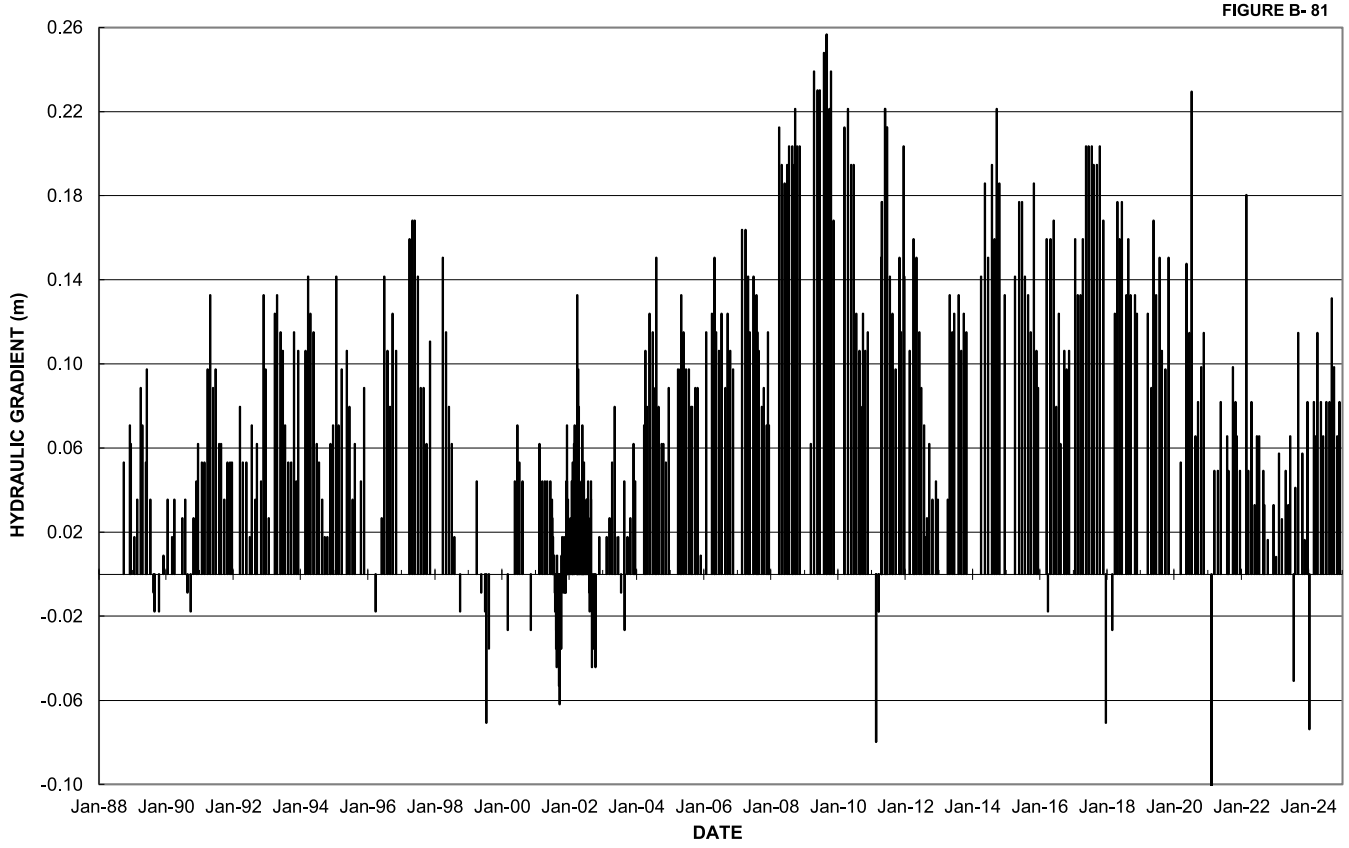
THERMOGRAPH
DP4/R

FIGURE B-80



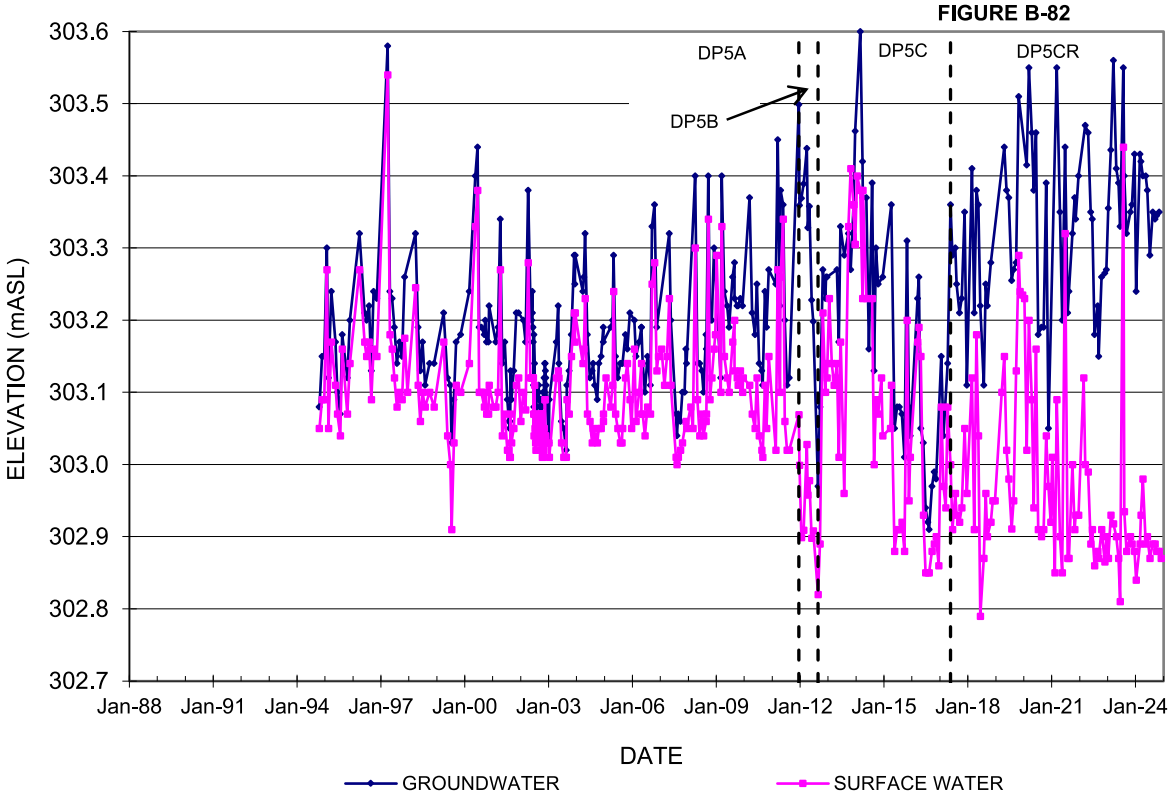
VERTICAL HYDRAULIC GRADIENT
DP4/R

FIGURE B- 81



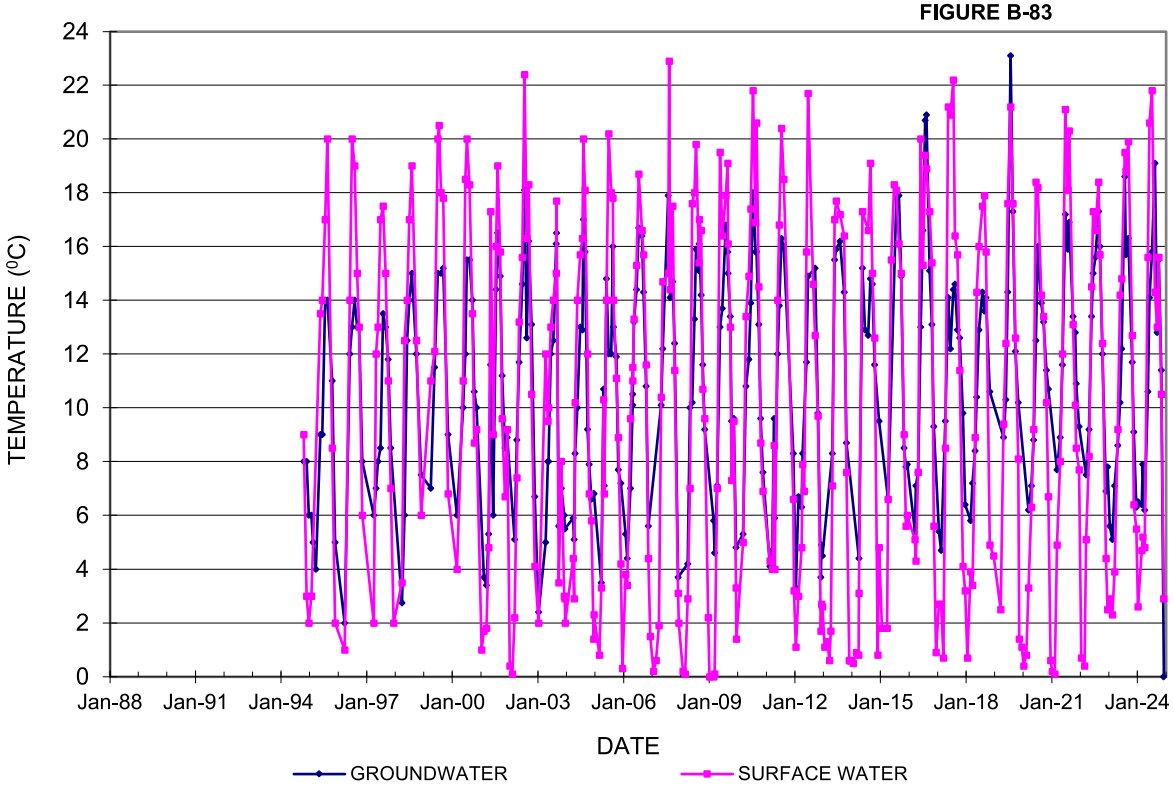
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP5A/B/C/CR

FIGURE B-82



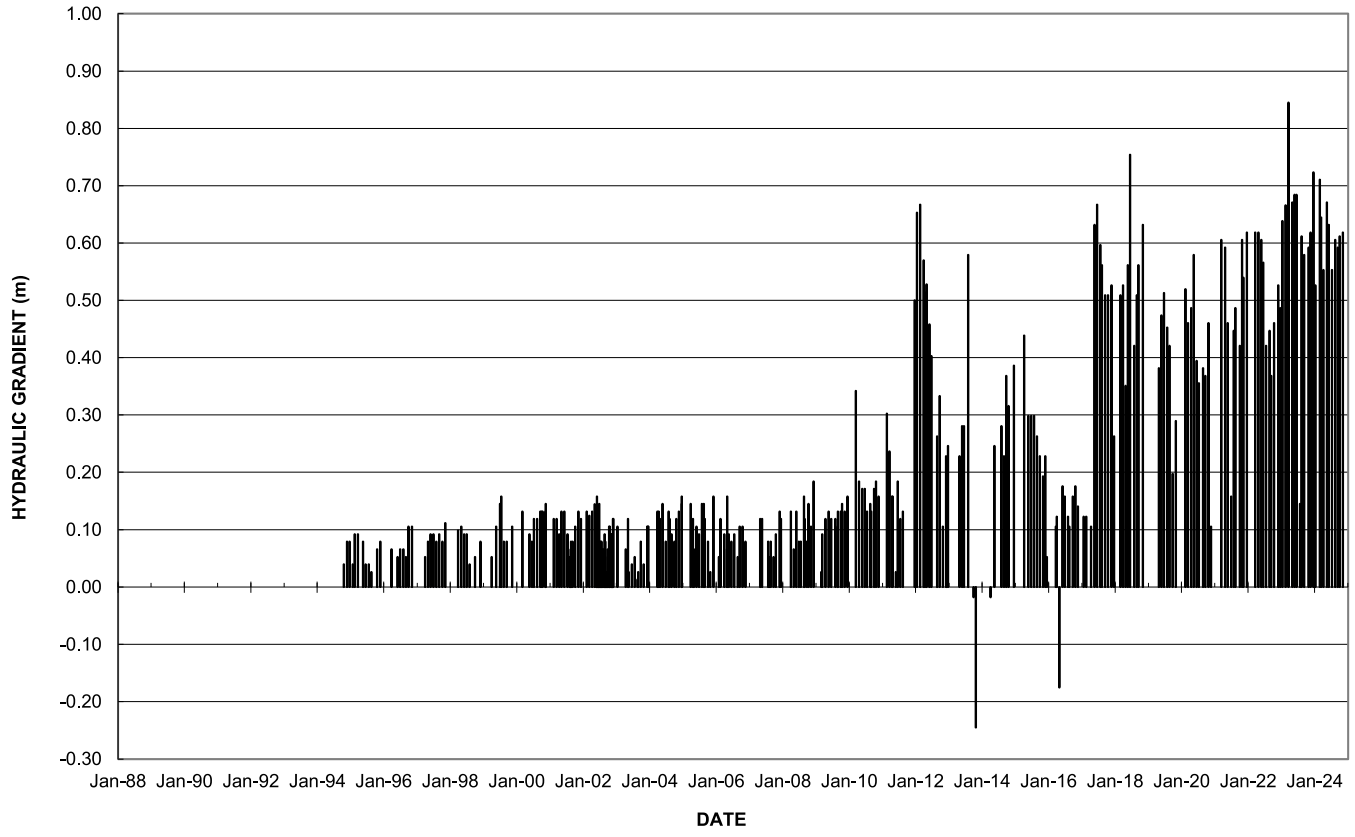
THERMOGRAPH
DP5A/B/C/CR

FIGURE B-83



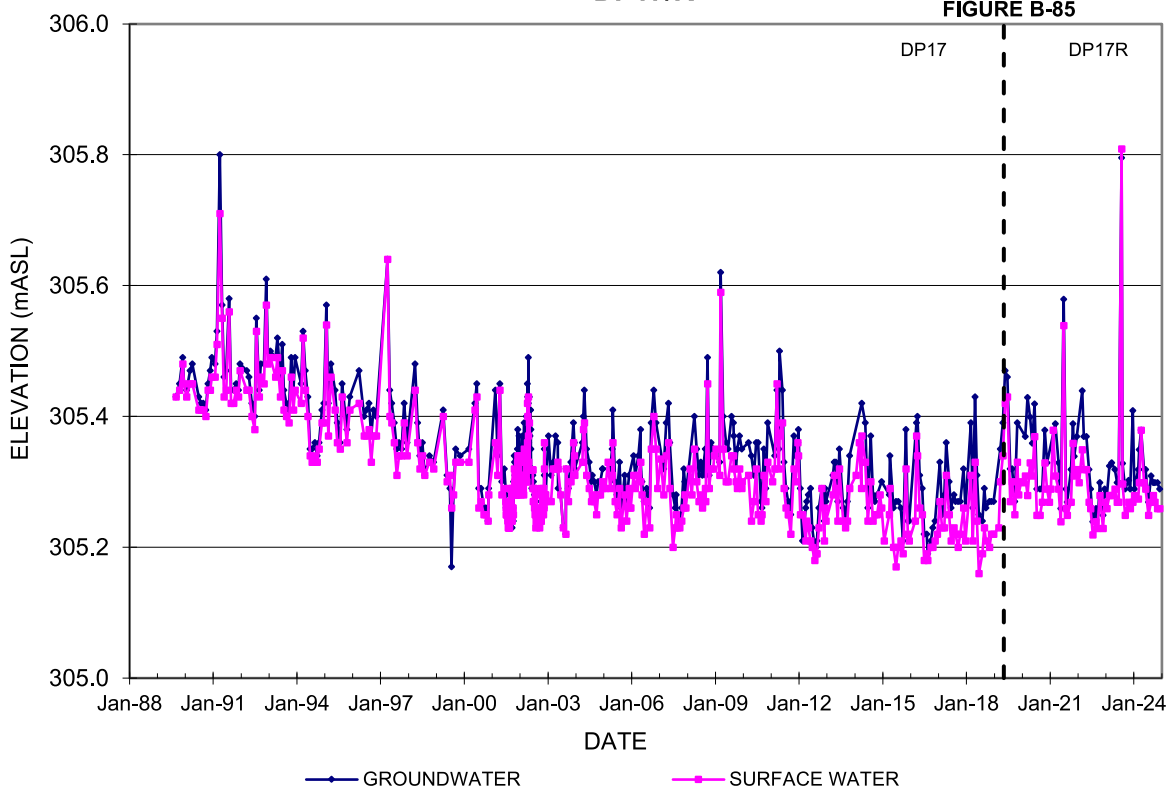
VERTICAL HYDRAULIC GRADIENT
DP5A/B/C/CR

FIGURE B-84



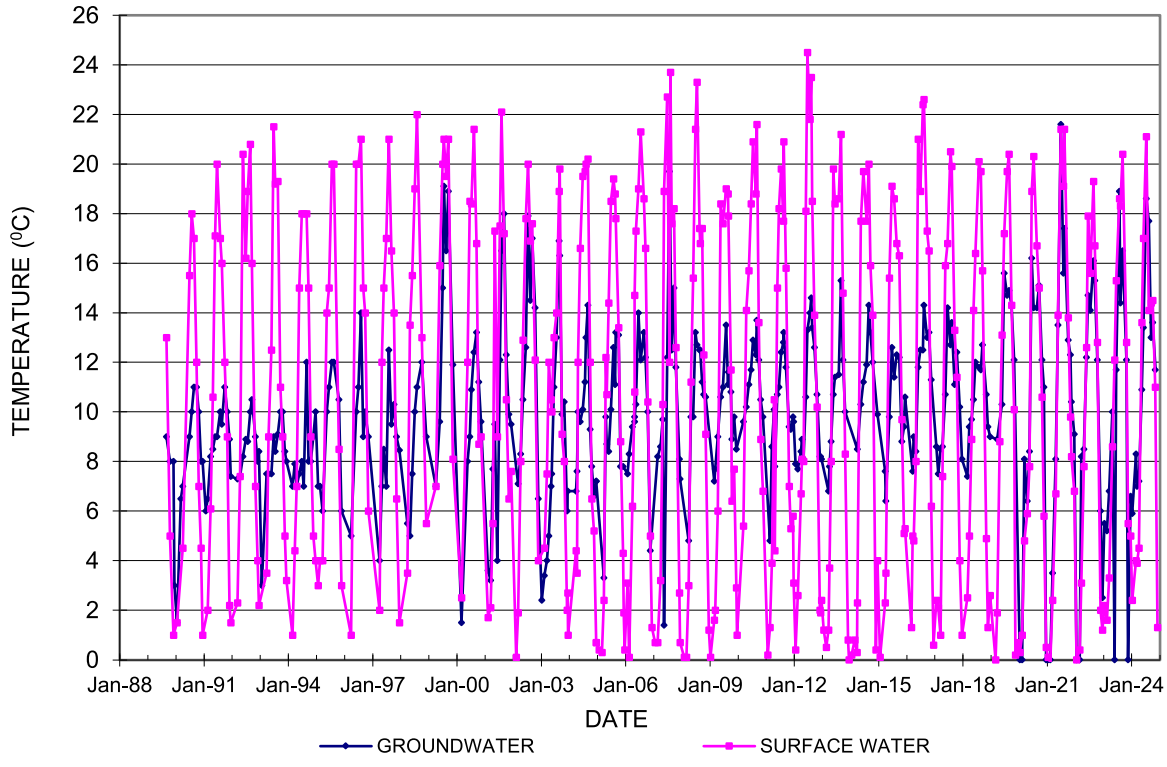
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP17/R

FIGURE B-85



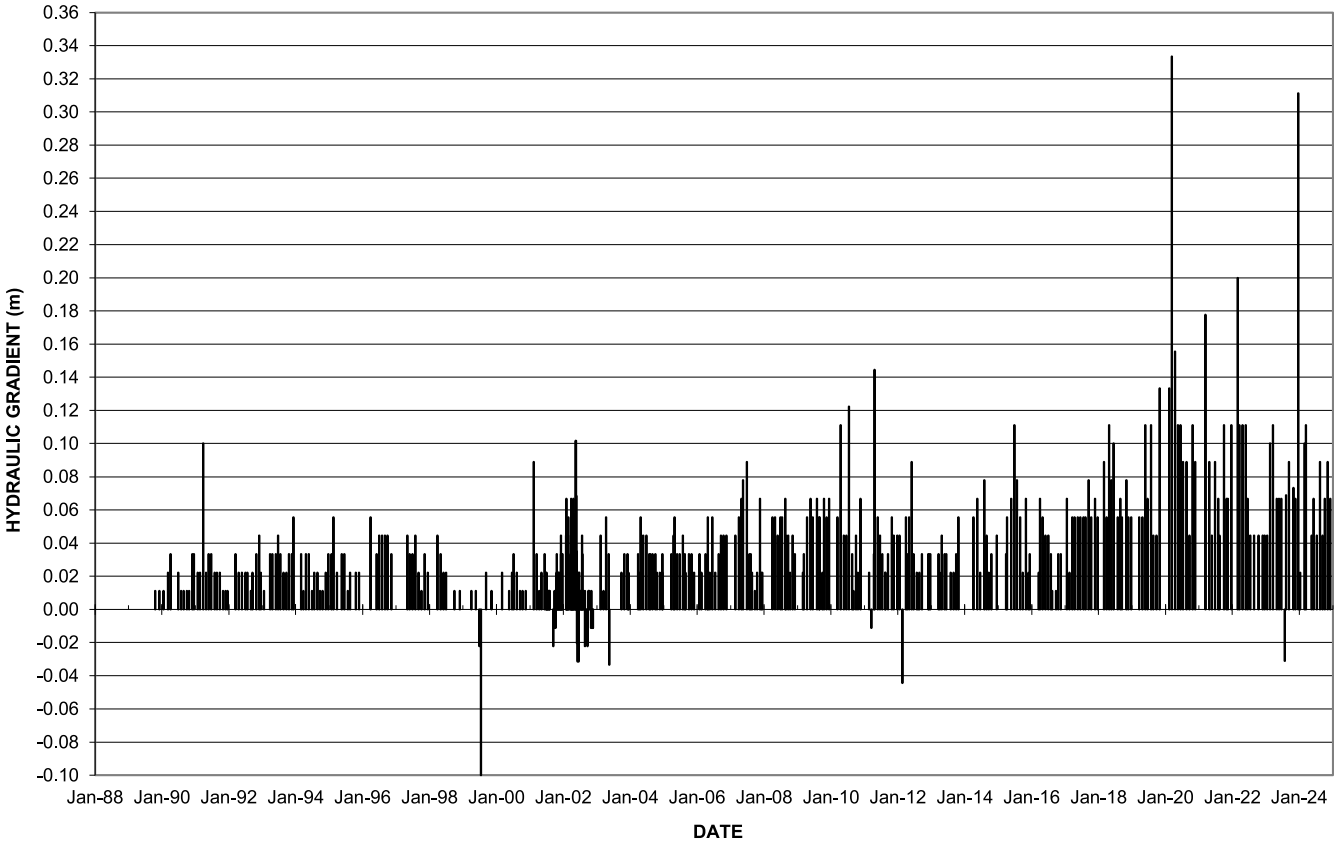
THERMOGRAPH
DP17/R

FIGURE B-86



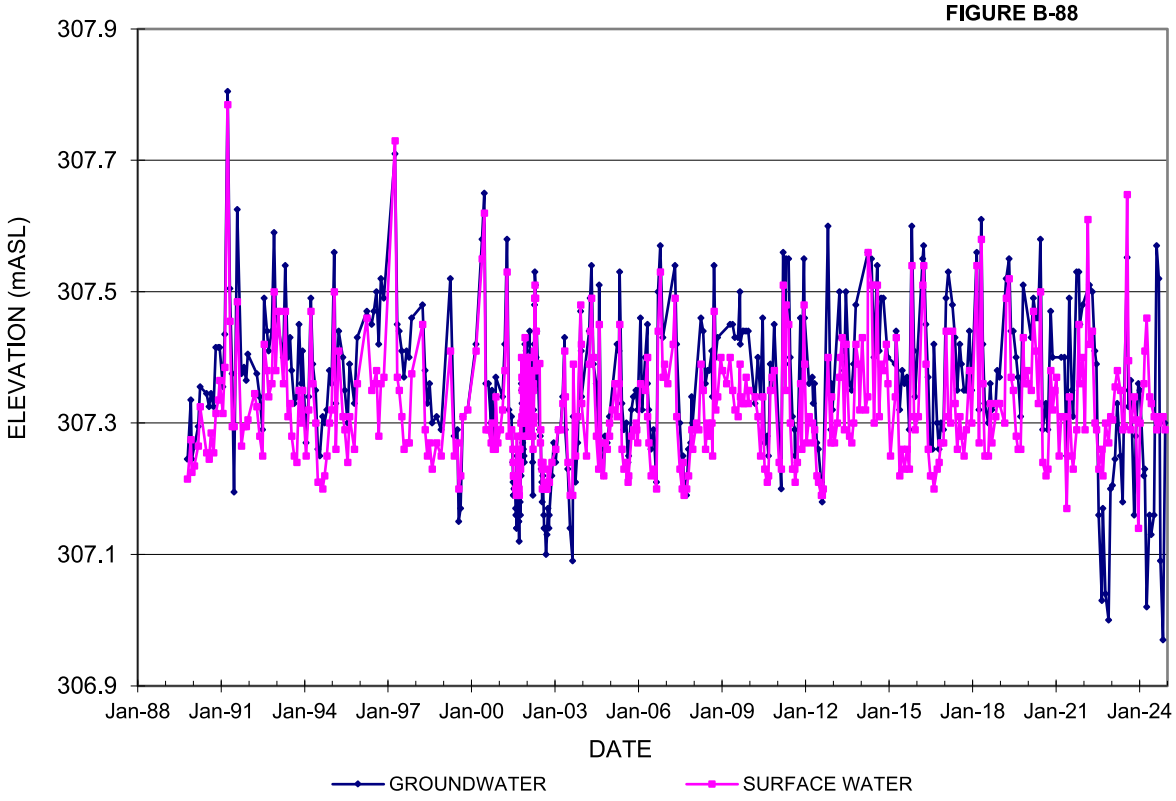
VERTICAL HYDRAULIC GRADIENT
DP17/R

FIGURE B-87



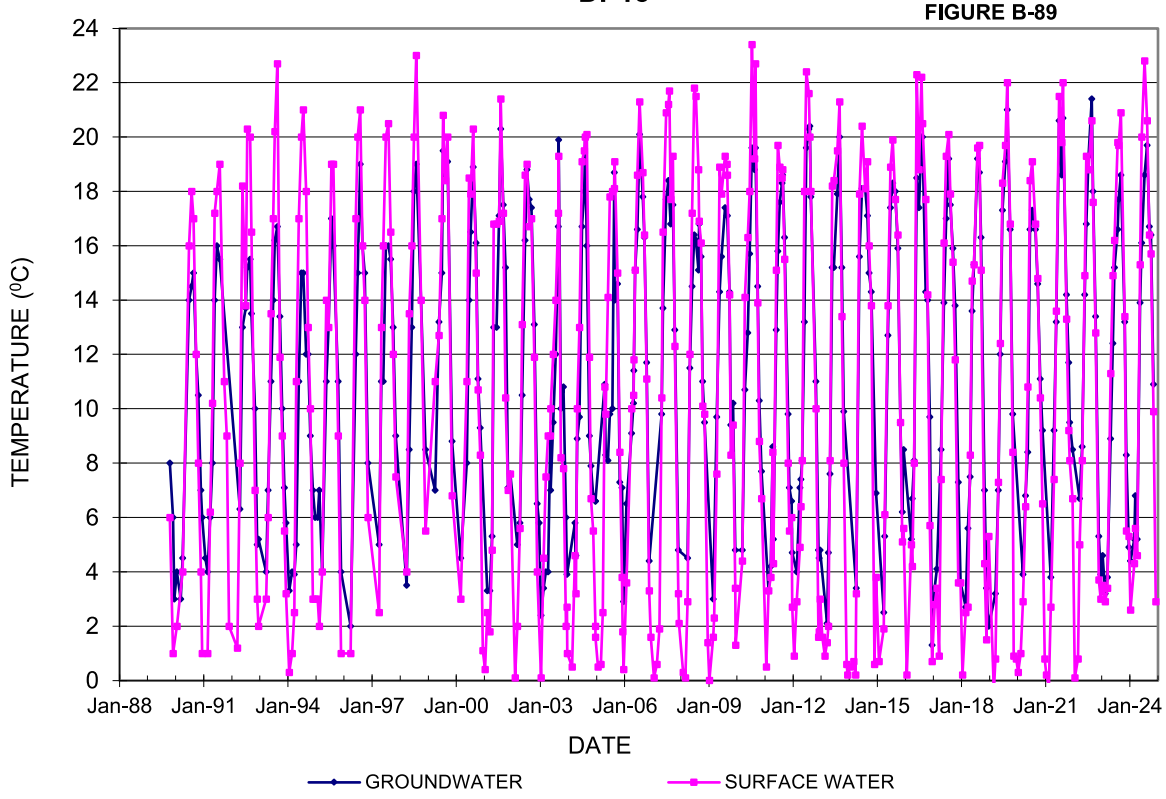
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP18

FIGURE B-88



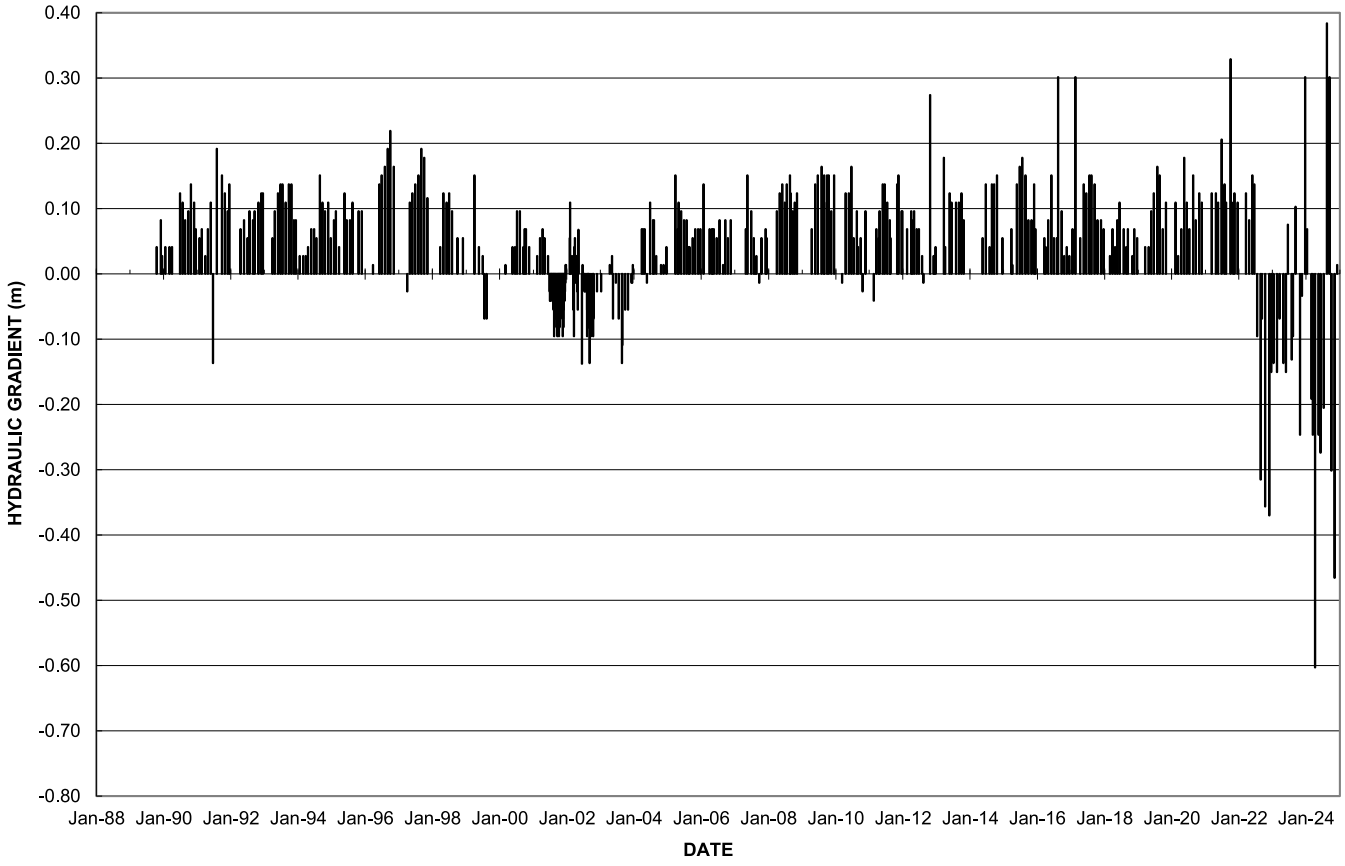
THERMOGRAPH
DP18

FIGURE B-89



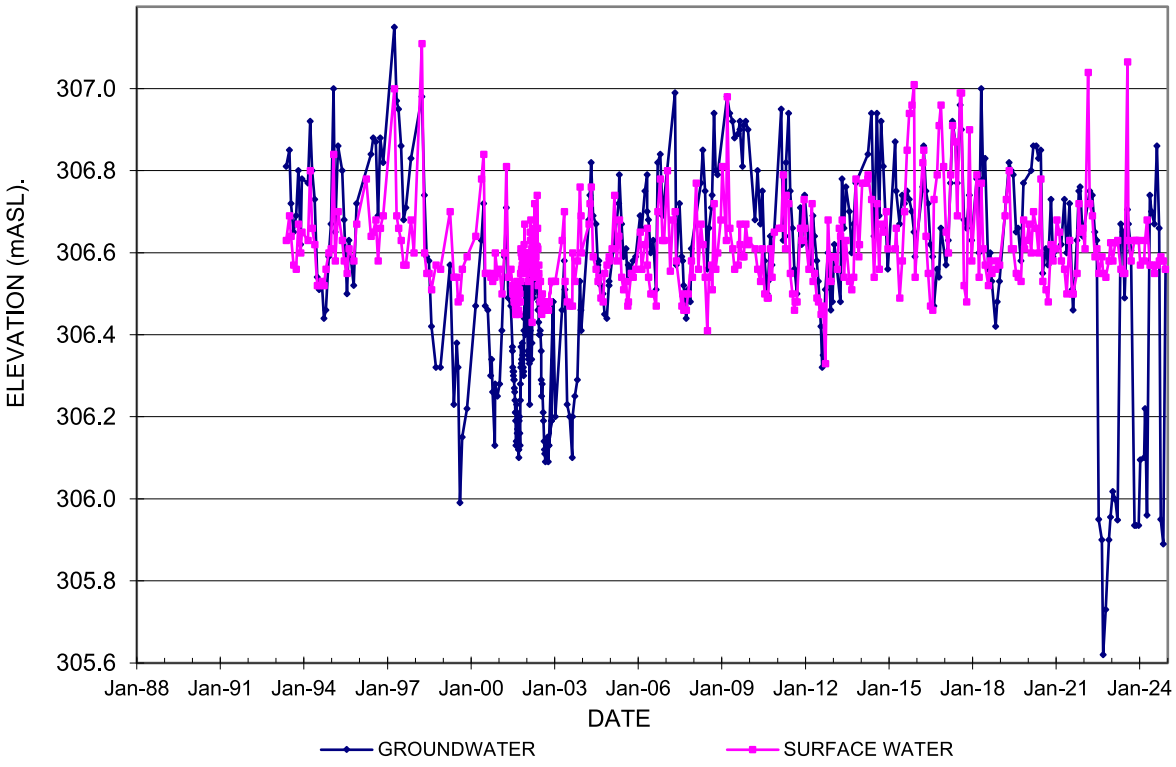
VERTICAL HYDRAULIC GRADIENT
DP18

FIGURE B-90



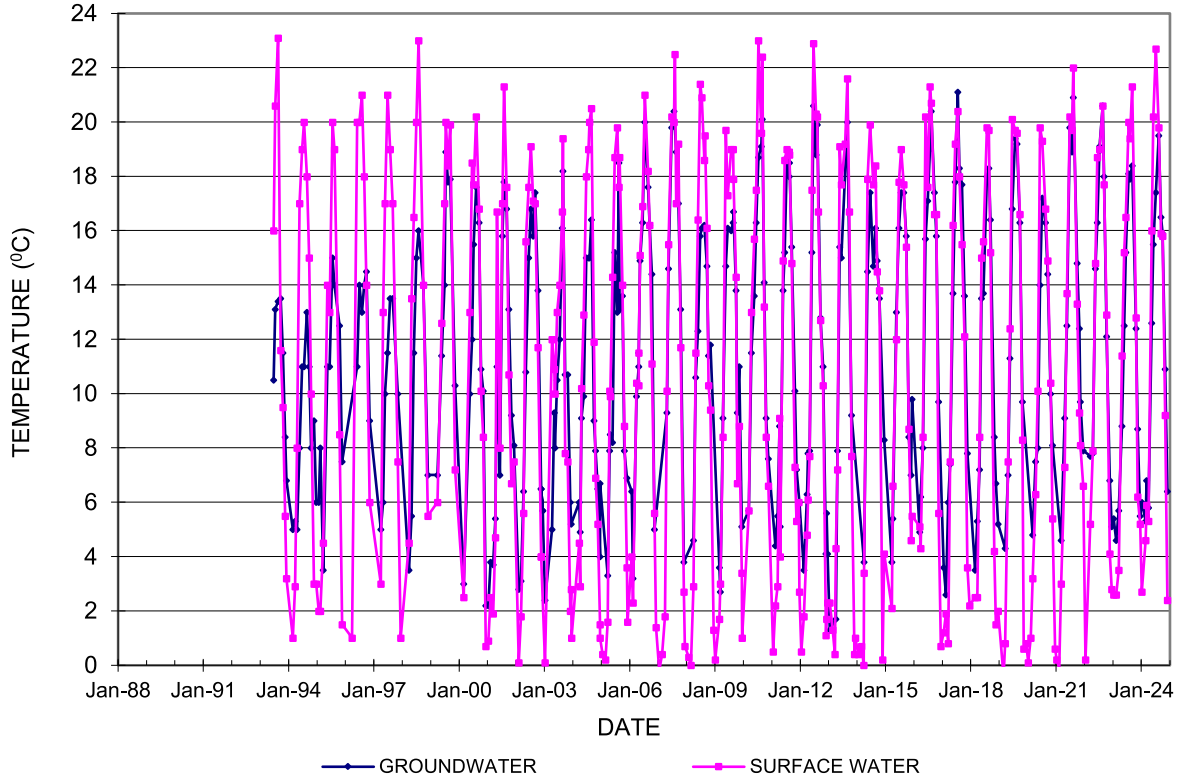
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP19

FIGURE B-91



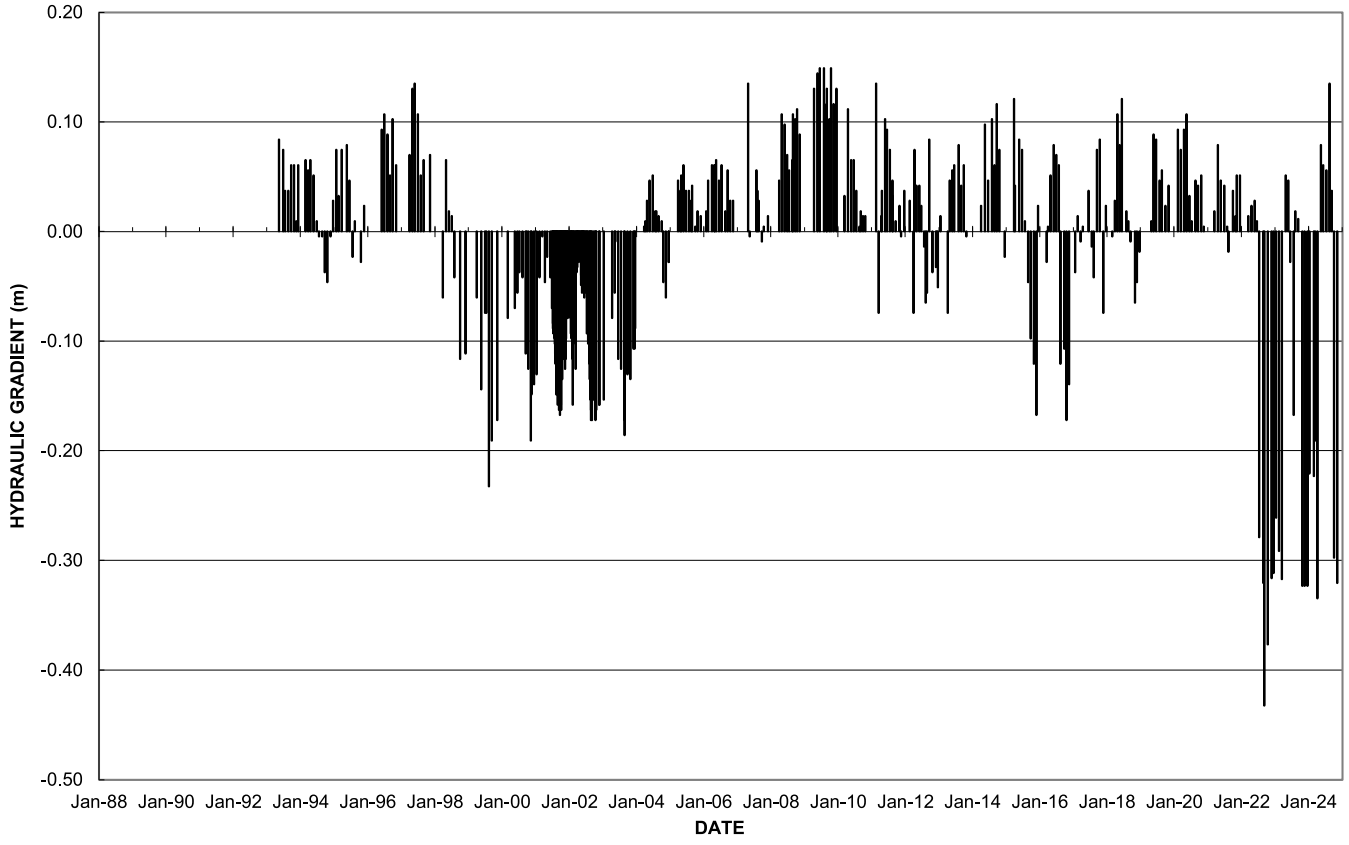
THERMOGRAPH
DP19

FIGURE B-92



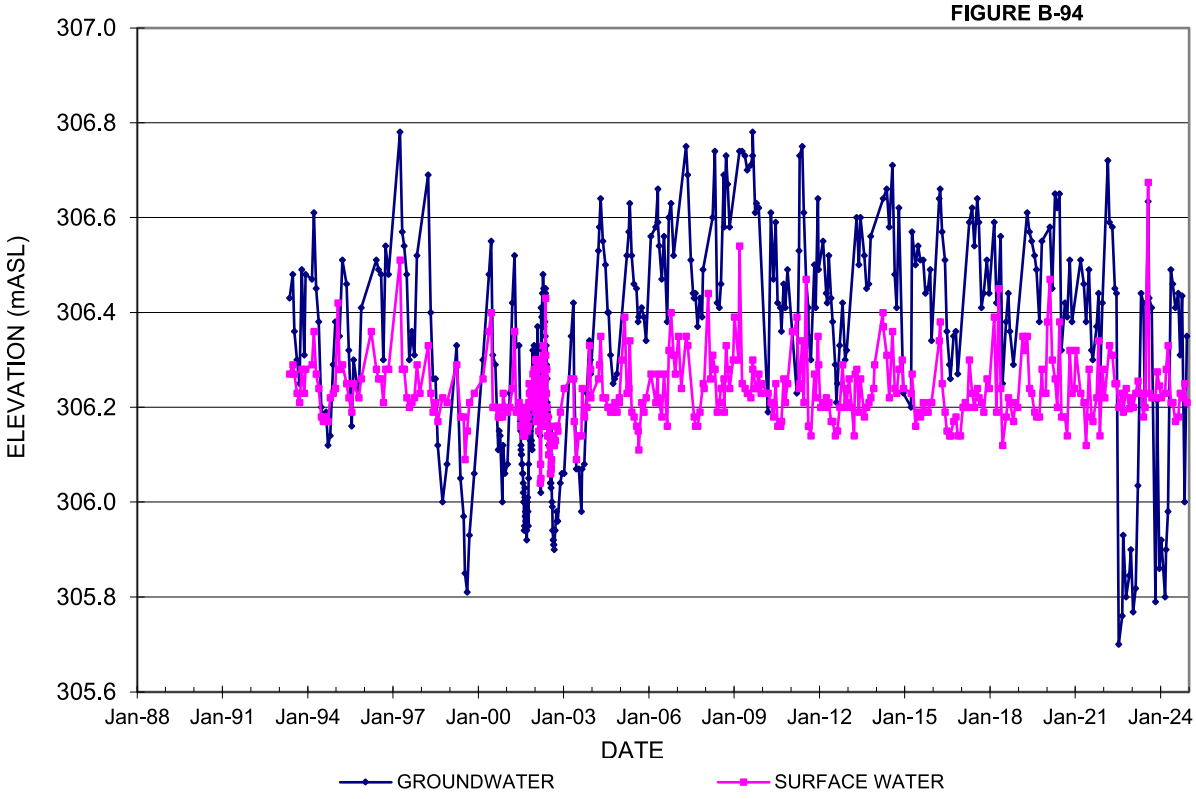
VERTICAL HYDRAULIC GRADIENT
DP19

FIGURE B-93



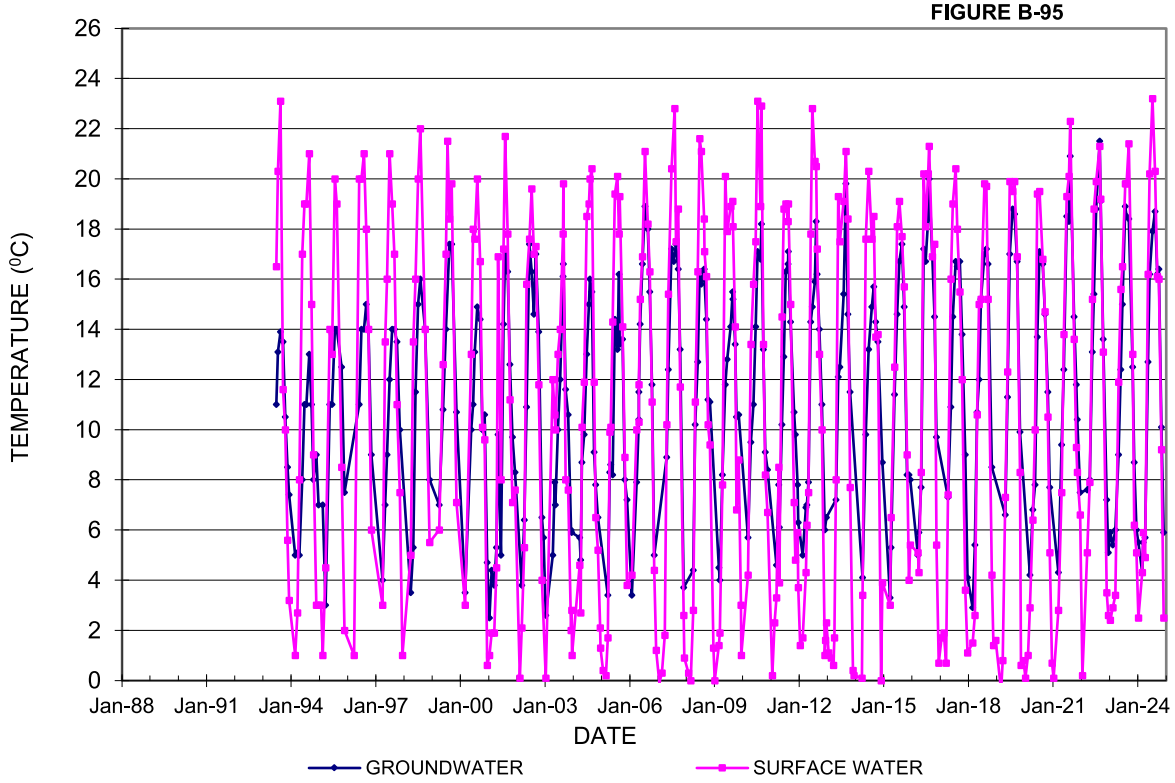
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP20

FIGURE B-94



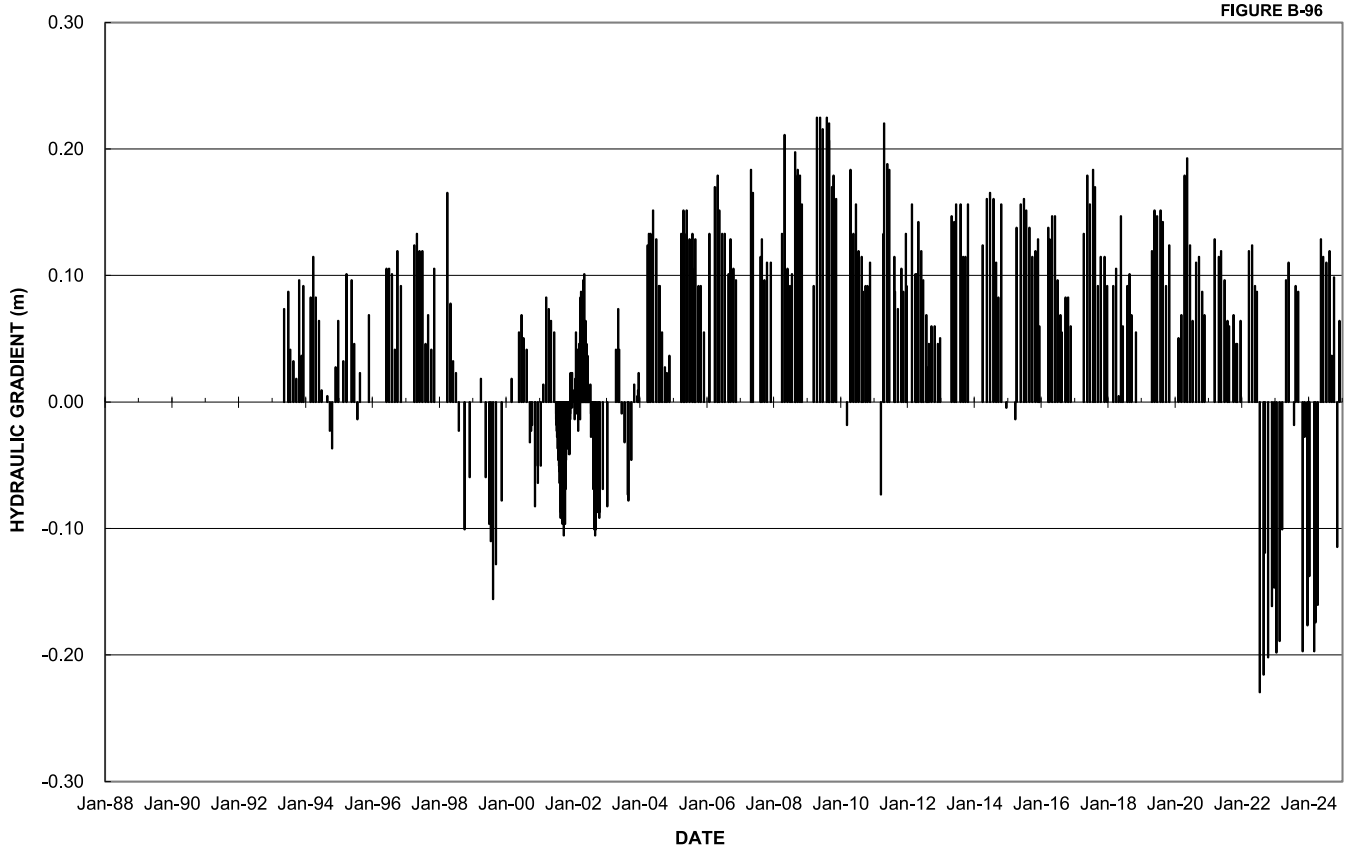
THERMOGRAPH
DP20

FIGURE B-95



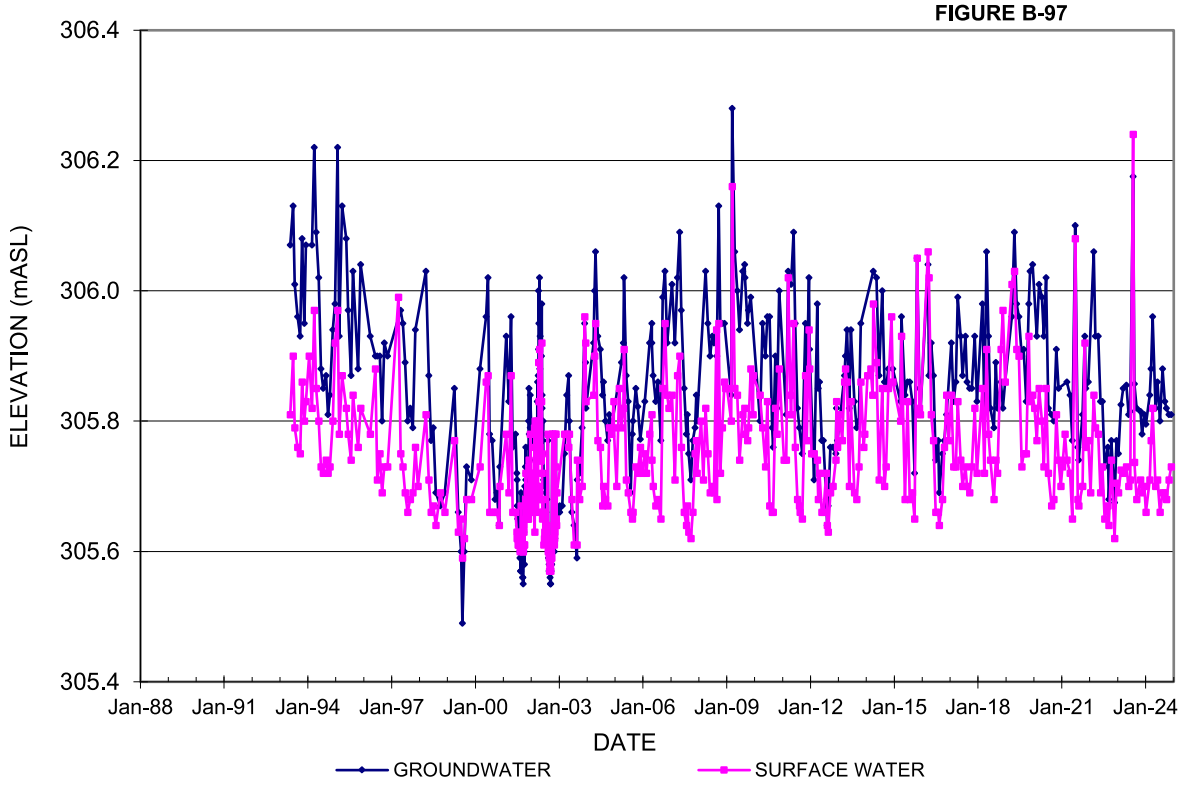
VERTICAL HYDRAULIC GRADIENT
DP20

FIGURE B-96



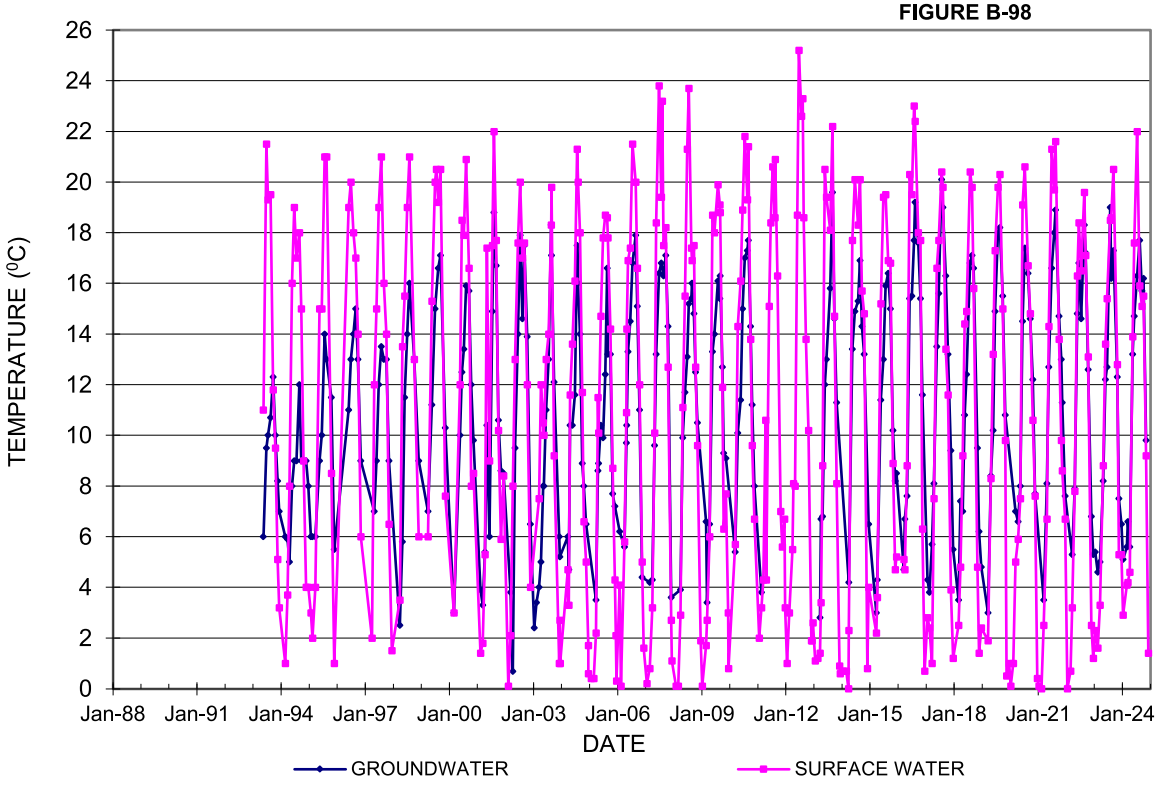
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP21

FIGURE B-97



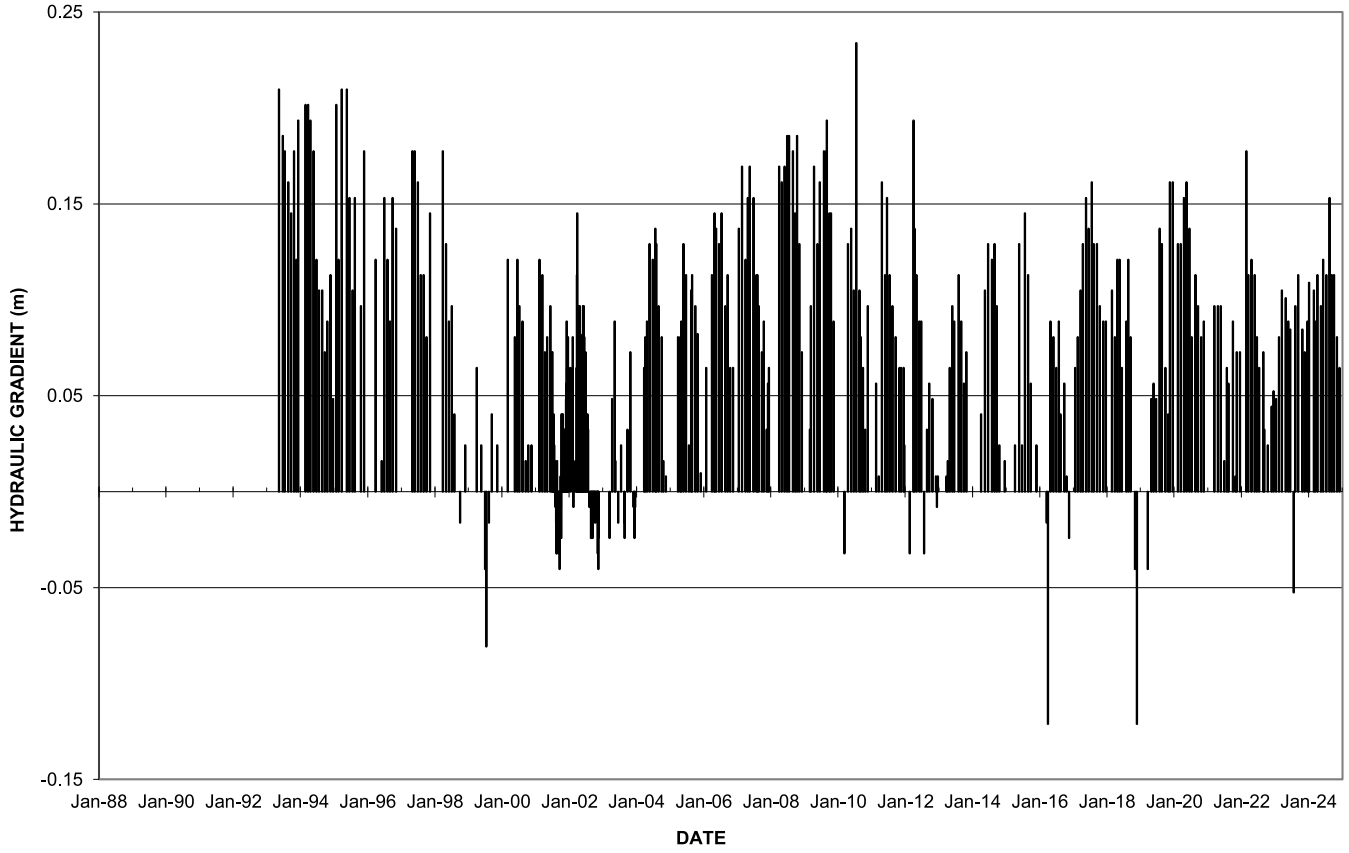
THERMOGRAPH
DP21

FIGURE B-98



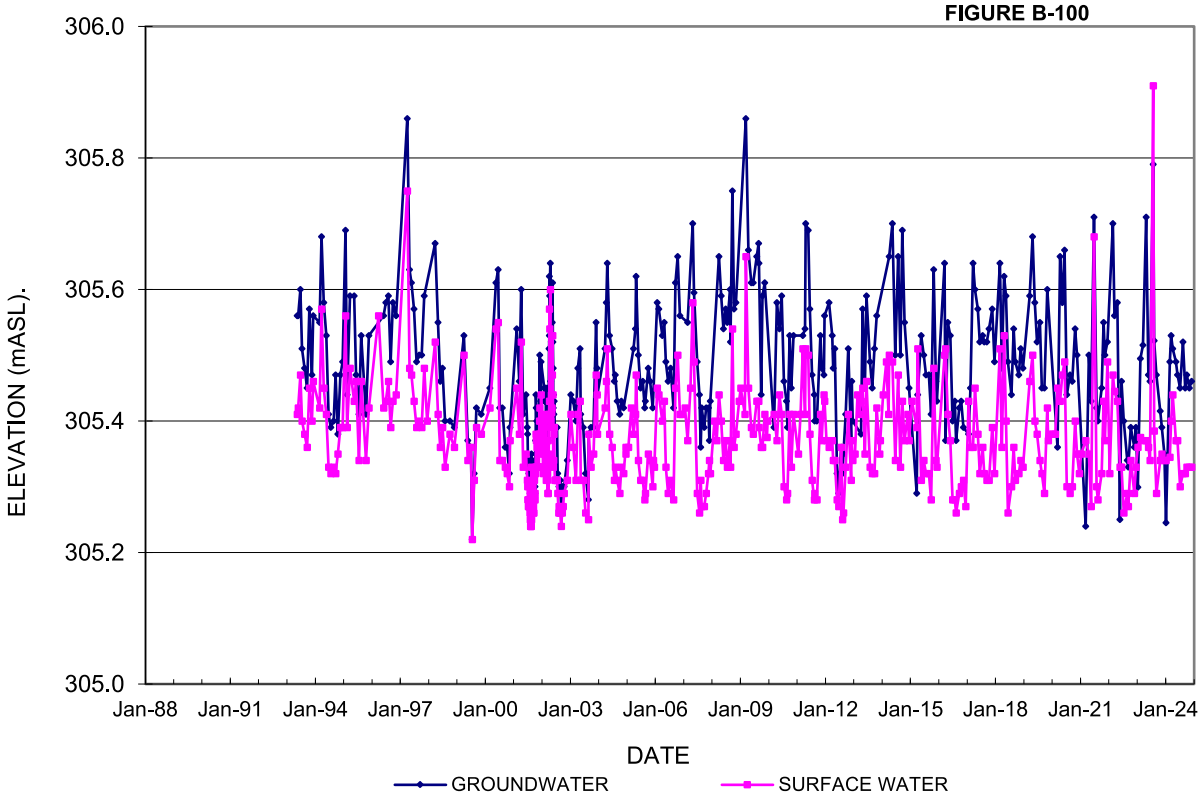
VERTICAL HYDRAULIC GRADIENT
DP21

FIGURE B-99



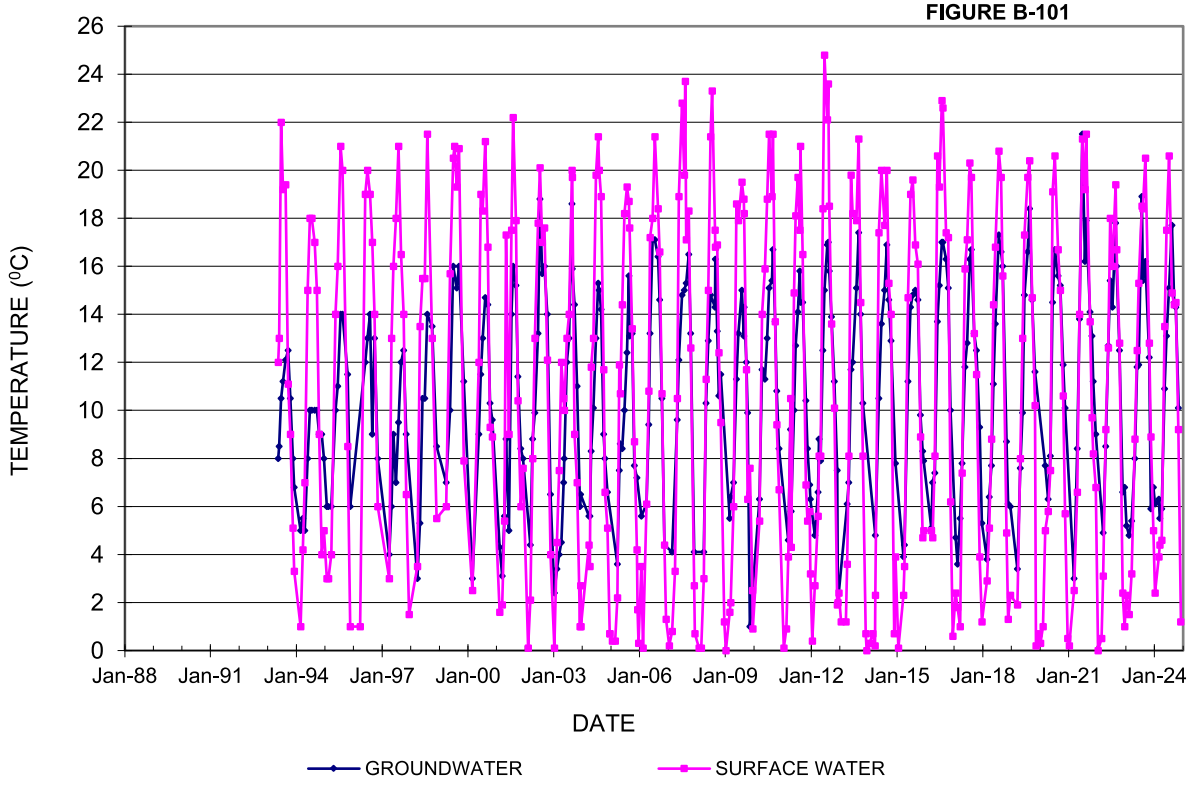
GROUNDWATER/SURFACE WATER HYDROGRAPH
DP22

FIGURE B-100



THERMOGRAPH
DP22

FIGURE B-101



VERTICAL HYDRAULIC GRADIENT
DP22

FIGURE B-102

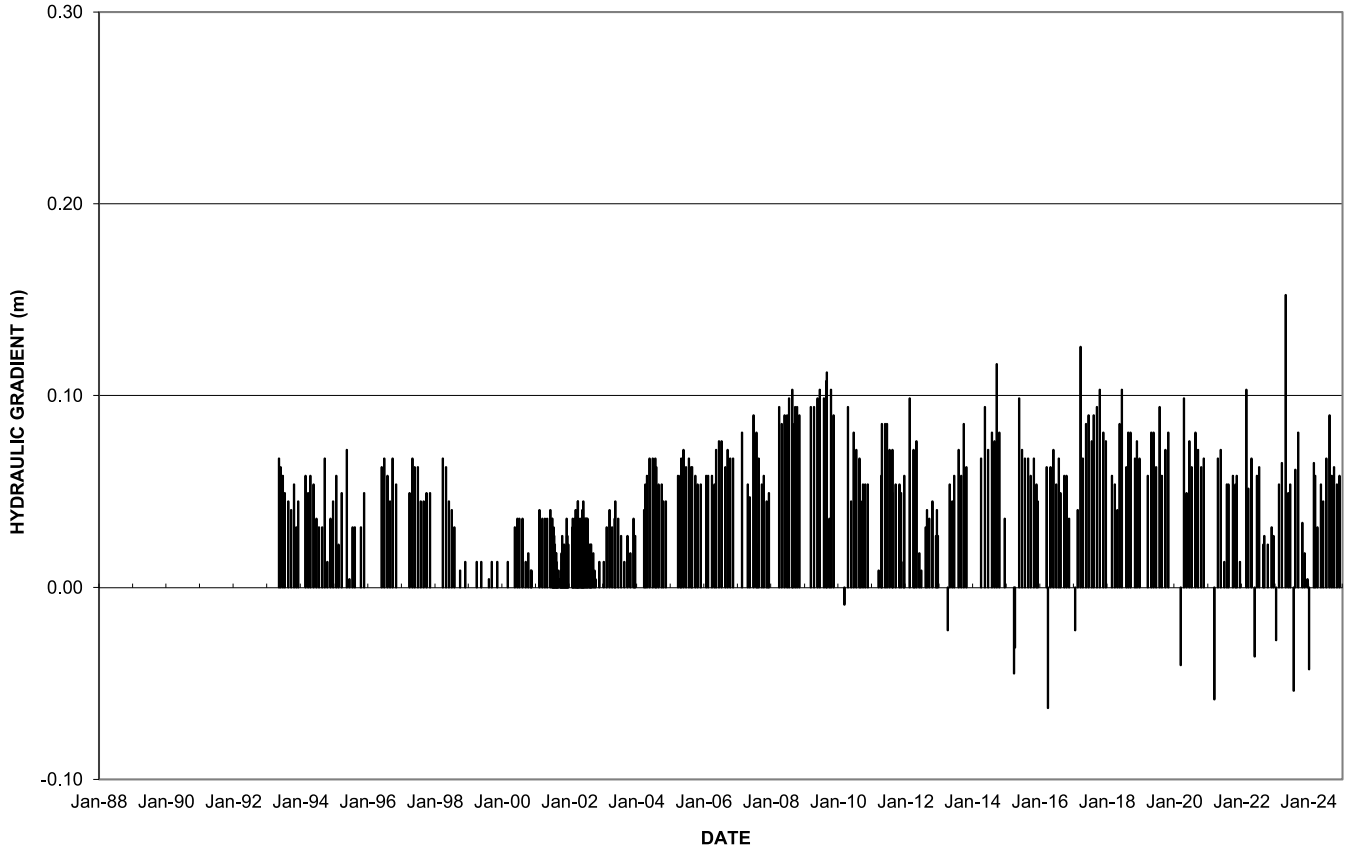


Figure B-103

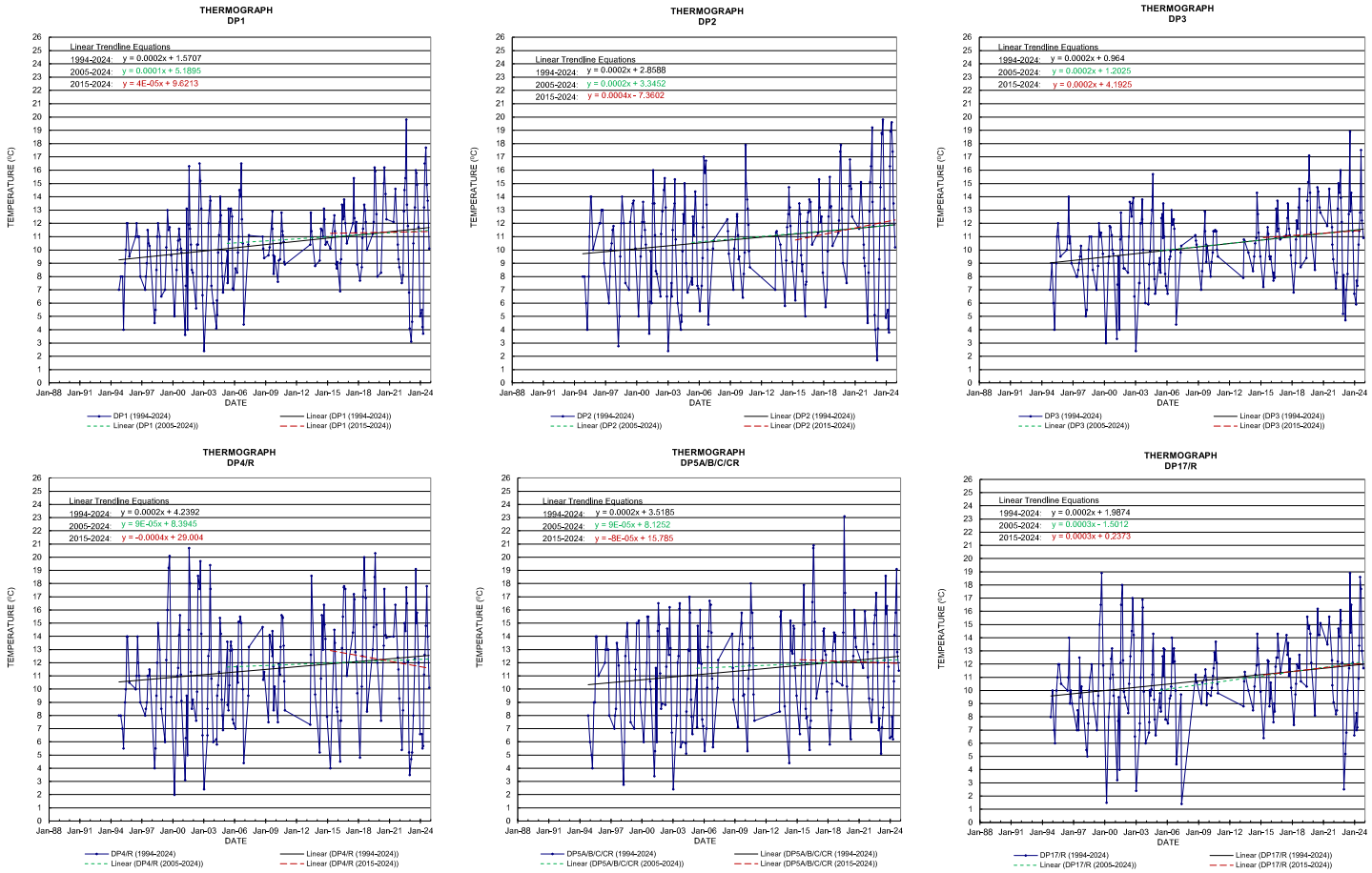
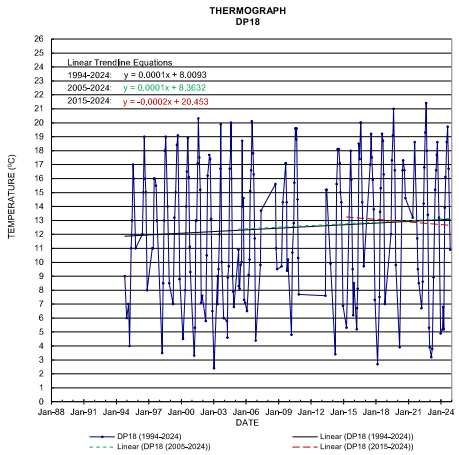
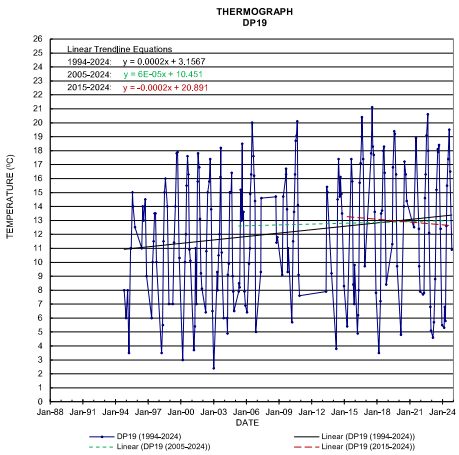
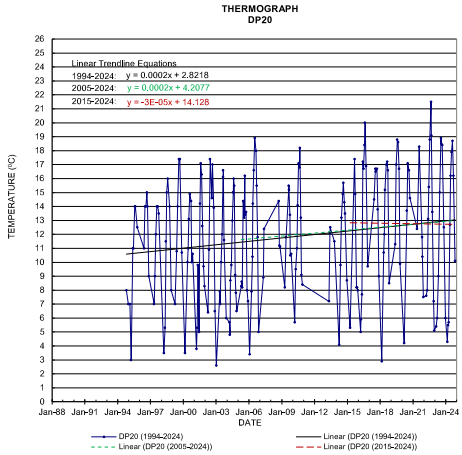
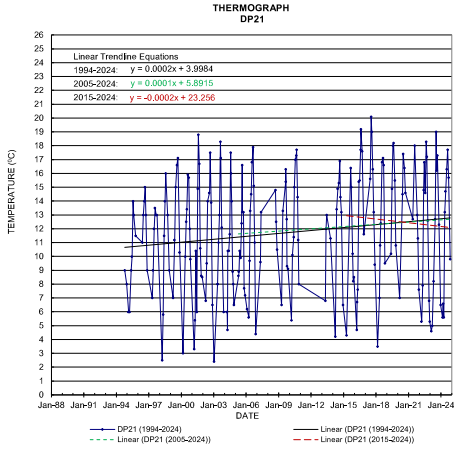

THERMOGRAPH
DP1
Linear Trendline Equations
1994-2024: y = 0.0002x + 1.5707
2005-2024: y = 0.0001x + 5.1895
2015-2024: y = 4E-05x + 9.6213
TEMPERATURE (°C)
DATE
DP1 (1994-2024)
Linear (DP1 (1994-2024))
Linear (DP1 (2005-2024))
Linear (DP1 (2015-2024))
THERMOGRAPH
DP2
Linear Trendline Equations
1994-2024: y = 0.0002x + 2.8588
2005-2024: y = 0.0002x + 3.3452
2015-2024: y = 0.0004x - 7.3602
TEMPERATURE (°C)
DATE
DP2 (1994-2024)
Linear (DP2 (1994-2024))
Linear (DP2 (2005-2024))
Linear (DP2 (2015-2024))
THERMOGRAPH
DP3
Linear Trendline Equations
1994-2024: y = 0.0002x + 0.964
2005-2024: y = 0.0002x + 1.2025
2015-2024: y = 0.0002x + 4.1925
TEMPERATURE (°C)
DATE
DP3 (1994-2024)
Linear (DP3 (1994-2024))
Linear (DP3 (2005-2024))
Linear (DP3 (2015-2024))
THERMOGRAPH
DP4/R
Linear Trendline Equations
1994-2024: y = 0.0002x + 4.2392
2005-2024: y = 9E-05x + 8.3945
2015-2024: y = -0.0004x + 29.004
TEMPERATURE (°C)
DATE
DP4/R (1994-2024)
Linear (DP4/R (1994-2024))
Linear (DP4/R (2005-2024))
Linear (DP4/R (2015-2024))
THERMOGRAPH
DP5A/B/C/CR
Linear Trendline Equations
1994-2024: y = 0.0002x + 3.5185
2005-2024: y = 9E-05x + 8.1252
2015-2024: y = -8E-05x + 15.785
TEMPERATURE (°C)
DATE
DP5A/B/C/CR (1994-2024)
Linear (DP5A/B/C/CR (1994-2024))
Linear (DP5A/B/C/CR (2005-2024))
Linear (DP5A/B/C/CR (2015-2024))
THERMOGRAPH
DP17/R
Linear Trendline Equations
1994-2024: y = 0.0002x + 1.9874
2005-2024: y = 0.0003x - 1.5012
2015-2024: y = 0.0003x + 0.2373
TEMPERATURE (°C)
DATE
DP17/R (1994-2024)
Linear (DP17/R (1994-2024))
Linear (DP17/R (2005-2024))
Linear (DP17/R (2015-2024))

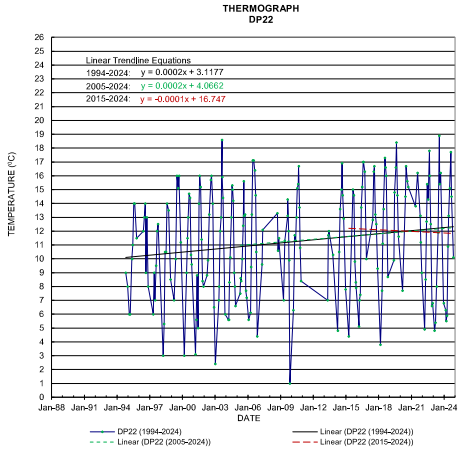
Figure B-104


THERMOGRAPH
DP18
Linear Trendline Equations
1994-2024: y = 0.0001x + 8.0093
2005-2024: y = 0.0001x + 8.3632
2015-2024: y = -0.0002x + 20.453
TEMPERATURE (°C)
DATE
DP18 (1994-2024)
Linear (DP18 (1994-2024))
Linear (DP18 (2005-2024))
Linear (DP18 (2015-2024))


THERMOGRAPH
DP19
Linear Trendline Equations
1994-2024: y = 0.0002x + 3.1567
2005-2024: y = 6E-05x + 10.451
2015-2024: y = -0.0002x + 20.891
TEMPERATURE (°C)
DATE
DP19 (1994-2024)
Linear (DP19 (1994-2024))
Linear (DP19 (2005-2024))
Linear (DP19 (2015-2024))


THERMOGRAPH
DP20
Linear Trendline Equations
1994-2024: y = 0.0002x + 2.8218
2005-2024: y = 0.0002x + 4.2077
2015-2024: y = -3E-05x + 14.128
TEMPERATURE (°C)
DATE
DP20 (1994-2024)
Linear (DP20 (1994-2024))
Linear (DP20 (2005-2024))
Linear (DP20 (2015-2024))


THERMOGRAPH
DP21
Linear Trendline Equations
1994-2024: y = 0.0002x + 3.9984
2005-2024: y = 0.0001x + 5.8915
2015-2024: y = -0.0002x + 23.256
TEMPERATURE (°C)
DATE
DP21 (1994-2024)
Linear (DP21 (1994-2024))
Linear (DP21 (2005-2024))
Linear (DP21 (2015-2024))


THERMOGRAPH
DP22
Linear Trendline Equations
1994-2024: y = 0.0002x + 3.1177
2005-2024: y = 0.0002x + 4.0662
2015-2024: y = -0.0001x + 16.747
TEMPERATURE (°C)
DATE
DP22 (1994-2024)
Linear (DP22 (1994-2024))
Linear (DP22 (2005-2024))
Linear (DP22 (2015-2024))

APPENDIX C

Groundwater/Surface Water Chemical Results

Technical Appendix B – 2024 Hydrogeology Report

TABLE C-1
WATER CHEMISTRY - FIELD MEASUREMENTS
MILL CREEK AGGREGATES PIT

LOCATION	DATE	TEMPERATURE (°C)	pH (as units)	CONDUCTIVITY (µS/cm)
BH1-I	December, 1992	9.0	7.4	800
	April, 1993	6.0	7.4	590
	December, 1993	9.6	7.7	455
	April, 1994	3.6	7.7	522
	December, 1994	12.0	7.3	NA
	May, 1995	9.3	7.8	570
	November, 1995	11.0	7.8	600
	November, 1996	11.5	7.4	610
	November, 1997	12.0	7.2	NA
	November, 1998	17.6	8.0	625
	November, 1999	12.9	7.9	600
	November, 2000	10.6	7.7	610
	March, 2001	5.1	7.9	NA
	November, 2001	12.5	7.5	618
	April, 2002	12.0	7.2	660
	November, 2002	13.0	7.2	590
	April, 2003	10.7	7.6	643
	November, 2003	11.1	7.2	716
	March, 2004	8.0	7.3	699
	November, 2004	13.6	7.8	655
	March, 2005	5.9	8.0	708
	December, 2005	11.8	7.8	596
	March,2006	4.2	7.9	681
	November, 2006	14.5	7.8	585
	April, 2007	16.4	7.7	511
	November, 2007	11.9	8.0	639
	April, 2008	11.4	7.8	610
	December,2008	11.9	7.2	649
	April, 2009	10.2	8.9	514
	November,2009	14.3	7.8	725
	April, 2010	NA	NA	NA
	November, 2010	13.6	7.6	724
	March, 2011	11.7	8.0	661
	November, 2011	15.1	8.0	663
	April, 2012	12.2	7.8	644
	December, 2012	11.0	8.1	725
	April, 2013	11.9	8.2	705
	December, 2013	9.1	7.7	712
	April, 2014	11.0	8.3	799
	December, 2014	12.5	7.8	820
	April, 2015	9.9	8.2	792
	December, 2015	12.7	7.7	1111 *
	March, 2016	11.9	7.8	776
	November, 2016	14.3	8.0	803
	March, 2017	12.4	8.1	800
	November, 2017	13.2	7.4	730
	March, 2018	11.9	8.0	750
	November, 2018	11.5	7.8	1072
	March, 2019	11.0	7.9	1085
BH1r	November, 2020	12.4	8.4	1020
	March, 2021	2.5	7.4	860
	November, 2021	15.3	8.0	1103
	March, 2022	3.8	8.0	1020
	November, 2022	11.6	8.1	969
	March, 2023	2.5	8.1	908
	November, 2023	13.6	8.0	1005
	March, 2024	4.8	8.0	1060
	September, 2024	21.6	7.9	981
BH92-5	November, 2019	10.1	7.7	1642
	March, 2020	8.8	8.1	984

LOCATION	DATE	TEMPERATURE (°C)	pH (as units)	CONDUCTIVITY (µS/cm)
BH92-8	December, 1992	9.2	7.3	775
	April, 1993	7.0	7.4	700
	December, 1993	9.1	7.6	466
	April, 1994	6.5	7.4	545
	December, 1994	10.0	7.2	NA
	May, 1995	8.3	7.7	600
	November, 1995	8.0	7.8	640
	November, 1996	9.0	7.3	692
	November, 1997	9.5	7.2	NA
	November, 1998	10.9	7.8	620
	November, 1999	13.3	7.8	700
	November, 2000	11.0	8.2	680
	March, 2001	5.0	8.0	NA
	November, 2001	12.5	7.5	670
	April, 2002	7.9	7.2	610
	November, 2002	12.0	7.2	775
	April, 2003	7.6	7.5	706
	November, 2003	11.5	7.4	770
	March, 2004	7.0	7.3	752
	November, 2004	12.0	8.2	725
	January, 2008	8.5	7.5	498
	April, 2008	7.7	7.9	560
	December, 2008	9.8	7.5	508
	April, 2009	8.3	8.2	450
	November, 2009	10.3	8.2	204
	April, 2010	8.8	7.8	289
	November, 2010	10.6	8.2	292
	March, 2011	9.5	8.0	470
	November, 2011	14.4	8.1	447
	April, 2012	8.2	7.4	657
	December, 2012	12.4	7.8	718
	April, 2013	10.0	8.3	710
	December, 2013	10.0	7.5	713
	April, 2014	8.5	8.1	831
	December, 2014	13.6	7.1	804
	April, 2015	7.4	8.1	805
	December, 2015	13.8	6.7	1036 *
	March, 2016	7.4	6.8	750
	November, 2016	16.3	7.6	800
	March, 2017	9.0	8.0	740
	April, 2017	8.7	8.1	740
	November, 2017	16.1	7.4	650
	March, 2018	10.7	8.1	660
	November 2018	13.1	7.7	959
	March, 2019	8.4	8.1	1048
	November, 2019	12.6	8.0	1003
	March, 2020	9.1	7.4	804
	November, 2020	12.6	8.0	900
	March, 2021	9.6	8.2	780
	November, 2021	14.4	8.3	986
	March, 2022	9.4	7.8	978
	November, 2022	13.3	7.8	918
	March, 2023	9.3	7.8	842
	November, 2023	13.7	7.7	957
	March, 2024	11.2	7.9	990
	September, 2024	14.7	7.8	941
BH6	March, 2005	5.0	7.9	762
	November, 2005	11.0	7.9	466
	March, 2006	4.1	7.9	475
	November, 2006	12.9	7.9	466
	April, 2007	13.1	8.0	430

Notes: NA = Reading not available.
' * ' denotes suspected instrument error.

TABLE C-1
WATER CHEMISTRY - FIELD MEASUREMENTS
MILL CREEK AGGREGATES PIT

LOCATION	DATE	TEMPERATURE (°C)	pH (as units)	CONDUCTIVITY (µS/cm)
BH8-I	December, 1992	5.8	8.2	710
	April, 1993	4.5	7.4	550
	December, 1993	5.7	7.4	423
	April, 1994	4.2	7.2	467
	December, 1994	8.0	7.2	NA
	May, 1995	7.3	7.5	450
	November, 1995	7.0	7.6	500
	November, 1996	9.0	7.4	634
	November, 1997	7.5	7.2	NA
	November, 1998	9.4	7.9	460
	November, 1999	10.7	7.5	500
	November, 2000	10.0	7.2	480
	March, 2001	5.1	8.1	NA
	November, 2001	10.0	7.5	560
	April, 2002	6.2	7.3	530
	November, 2002	9.0	7.2	590
	April, 2003	4.5	7.8	553
	November, 2003	9.9	7.2	700
	March, 2004	4.0	7.2	665
	November, 2004	10.8	7.6	598
	March,2005	5.9	7.8	571
	November, 2005	10.8	7.6	616
	March, 2006	4.0	7.7	553
	November, 2006	12.4	8.0	491
	April, 2007	11.5	7.7	515
	November, 2007	11.7	8.1	509
	April, 2008	7.1	7.8	465
	December, 2008	6.9	7.2	610
	April, 2009	7.7	8.7	439
	November, 2009	9.9	7.7	668
	April, 2010	9.1	7.2	634
	November, 2010	9.6	7.2	665
	March, 2011	7.0	8.5	658
BH32-III	November, 2011	10.1	7.5	739
	April, 2012	9.7	7.1	791
	December, 2012	7.5	8.2	935
	April, 2013	8.4	7.6	886
	December, 2013	8.5	7.9	741
	April, 2014	7.1	7.3	987
	December, 2014	5.9	7.7	962
	April, 2015	5.8	7.5	983
	December, 2015	8.5	7.4	1148 *
	March, 2016	5.4	7.8	840
	November, 2016	10.8	7.9	840
	March, 2017	5.2	7.4	1050
	April, 2017	5.3	7.5	1000
	November, 2017	10.7	7.2	680
	March, 2018	6.1	8.3	720
	November, 2018	9.5	7.0	610
	March, 2019	5.3	8.4	931
	November, 2019	10.3	7.7	921
	March, 2020	5.2	8.0	864
	November, 2020	10.9	8.0	848
	March, 2021	8.7	7.9	800
	November, 2021	11.8	7.9	944
	March, 2022	6.2	7.2	1074
	November, 2022	10.5	7.4	814
	March, 2023	5.7	7.0	798
	November, 2023	11.1	7.8	725
	March, 2024	7.1	7.4	920
	September, 2024	14.9	7.9	653

LOCATION	DATE	TEMPERATURE (°C)	pH (as units)	CONDUCTIVITY (µS/cm)
PHASE 1 POND	December, 2000	1.4	6.4	320
	April, 2001	3.8	8.5	NA
	November, 2001	10.0	7.8	673
	April, 2002	7.2	7.2	590
	November, 2002	6.0	7.4	540
	April, 2003	9.8	7.9	648
	November, 2003	9.4	8.1	620
	March, 2004	2.7	7.9	179
	November, 2004	10.9	8.4	677
	April, 2005	10.9	7.9	298
	November, 2005	9.3	8.5	677
	April, 2006	9.0	7.9	350
	November, 2006	10	8.1	545
	April, 2007	13.4	8.4	475
	November, 2007	9.9	8.3	605
	April, 2008	12.4	7.0	582
	December, 2008	0.7	7.2	586
	April, 2009	8.9	8.4	497
	November, 2009	8.3	8.4	703
	April, 2010	11.1	7.9	638
	November, 2010	5.3	8.3	670
	April, 2011	9.1	8.8	621
	November, 2011	9.9	8.6	652
	April, 2012	8.0	8.4	626
	December, 2012	6.0	8.3	672
	April, 2013	1.3	7.6	131
	December, 2013	1.2	7.5	930
	April, 2014	3.6	8.4	773
	December, 2014	2.1	8.2	853
	April, 2015	2.5	9.2	325
	December, 2015	5.7	7.7	1078 *
	March, 2016	5.3	7.9	686
	November, 2016	10.6	8.0	1090 *
	March, 2017	2.3	8.5	710
	November, 2017	6.7	7.6	640
	March, 2018	6.8	8.4	650
	November, 2018	4.3	8.2	981
	March, 2019	2.8	8.5	925
	November, 2019	6.1	7.5	1008
	March, 2020	1.6	7.9	711
	November, 2020	8.7	7.9	940
	March, 2021	4.3	7.6	700
	November, 2021	11.2	8.2	916
	March, 2022	4.8	7.9	903
	November, 2022	6.1	8.5	930
	March, 2023	3.5	8.0	868
	November, 2023	8.6	8.4	960
	March, 2024	8.5	8.3	1010
	September, 2024	21.1	8.5	910

Notes: NA = Reading not available.
' * ' denotes suspected instrument error.

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH1-I												
Date			16-Dec-92	20-Apr-93	13-Dec-93	20-Apr-94	21-Dec-94	16-May-95	22-Nov-95	7-Nov-96	26-Nov-97	18-Nov-98	9-Nov-99	8-Nov-00	13-Mar-01
Sodium	mg/L	200 [2]	27.6	20.2	29.1	36.9	35.6	37	38.5	39.4	43	49.5	47.8	46.1	45.4
Potassium	mg/L		2.8	2.1	2.2	1.4	2.1	1.6	2	1.6	1.7	2.2	2	2	1
Calcium	mg/L		72.6	73.8	68.2	64.6	69.3	57.5	58	55.7	50.1	48.4	51.8	49.4	48.1
Magnesium	mg/L		30.2	29	26.9	27.9	25.2	20.7	22.6	20.1	23	23.8	25.7	26	25.6
Alkalinity (as CaCO3)	mg/L	30-500 [3]	231	222	215	172	165	156	160	126	145	137	149	171	143
Sulphate	mg/L	500 [2]	42	40	47	57	61	54	54	46	45	49	45	47.7	47.9
Chloride	mg/L	250 [2]	59.1	49.4	53	69.3	74.3	76.1	74.3	67.8	93.4	91.6	90	101	99.4
Orthophosphate (as P)	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.3	<0.3	<0.3
Nitrate and Nitrite (as N)	mg/L	10 [1]	7.2	9.4	7	0.56	0.34	0.53	0.17	0.33	0.48	0.44	0.3	0.6	0.4
Ammonia (as N)	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.04	0.08	<0.03
Iron	mg/L	0.3 [2]	0.5	0.49	0.13	2.07	1.61	0.03	0.03	<0.02	<0.02	0.06	0.07	<0.01	<0.01
Manganese	mg/L	0.05 [2]	0.19	0.04	<0.01	0.35	0.26	<0.01	<0.01	<0.01	<0.01	<0.01	0.008	<0.005	<0.005
Copper	mg/L	1 [2]	0.01	<0.01	<0.01	0.01	<0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.003	<0.003	<0.003
Zinc	mg/L	5 [2]	0.18	0.19	0.06	0.15	0.19	0.02	0.02	0.01	<0.01	<0.01	0.012	0.018	0.015
Conductivity	µS/cm		825	762	831	675	711	634	688	537	620	641	680	633	646
pH	Units	6.5-8.5 [3]	7.4	7.7	7.9	7.7	7.7	7.4	7.5	7.8	8.2	8.1	7.95	7.84	7.91
Dissolved Organic Carbon	mg/L	5[2]	1.2	<0.5	<0.5	0.6	0.6	<0.5	<0.5	<0.5	0.8	0.6	0.6	1.6	<0.2
Hardness (as CaCO3)	mg/L	80-100 [3]	306	304	281	276	277	229	238	222	220	219	235	230	226
Bicarbonate (as CaCO3)	mg/L		230	221	213	171	164	156	160	125	143	135	148	170	142
Carbonate (as CaCO3)	mg/L		0.54	1.04	1.59	1	1	<1.00	0.5	<1.00	2	2	1	1	1
Total Dissolved Solids	mg/L	500 [2]	411	395	392	366	NA	NA	NA	312	349	354	357	381	359
Cation Sum	meq/L		7.38	7	6.94	7.16	7.13	6.1	6.39	6.19	6.3	6.58	6.82	6.65	6.52
Anion Sum	meq/L		7.67	7.34	7.27	6.62	6.69	6.43	6.43	5.4	6.49	6.38	6.48	7.3	6.69
Ion Balance	%		1.95	2.33	2.34	3.92	3.23	2.59	0.33	6.8	1.48	1.56	2.61	4.65	1.25
Total Oil and Grease	mg/L		<1	<1	<1	<1	<1	<1	<1					<1	<1

PARAMETER	UNITS	ODWQS	BH1-I												
Date			6-Nov-01	12-Apr-02	20-Nov-02	23-Apr-03	6-Nov-03	10-Mar-04	5-Nov-04	18-Mar-05	7-Dec-05	3-Mar-06	6-Nov-06	30-Apr-07	15-Nov-07
Sodium	mg/L	200 [2]	51.8	47.1	50.5	50.5	51.2	49	54.7	56.6	54	63.2	63.6	65	69.8
Potassium	mg/L		2	2	1	2	2	1	1	2	2.4	2	2	1.8	2
Calcium	mg/L		52.2	53	47.8	51.9	45.9	47.3	47	47	41	58.8	47	47	46.2
Magnesium	mg/L		27.8	28	27.3	27.8	26.6	27.6	27.6	27.5	26	36.1	27.8	31	28.6
Alkalinity (as CaCO3)	mg/L	30-500 [3]	172	179	153	160	169	163	145	140	123	145	171	147	156
Sulphate	mg/L	500 [2]	45.9	48.7	48.4	45.7	37.1	44.4	42.9	44.7	35	53	43	47	42
Chloride	mg/L	250 [2]	89.7	93.3	99.9	95.2	102	99.6	107	118	94	115	132	120	120
Orthophosphate (as P)	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.189	<0.01	<0.01	<0.01	0.03
Nitrate and Nitrite (as N)	mg/L	10 [1]	0.5	0.5	0.5	0.7	<0.2	1	0.6	0.5	2.9	0.4	0.3	0.4	0.3
Ammonia (as N)	mg/L		0.04	<0.03	<0.03	<0.03	4.23	<0.03	0.03	<0.03	<0.05	<0.05	0.22	0.08	0.14
Iron	mg/L	0.3 [2]	<0.01	<0.01	0.02	0.02	0.12	0.07	0.17	<0.01	<0.05	0.54	<0.02	0.14	0.14
Manganese	mg/L	0.05 [2]	0.01	<0.005	0.011	0.005	0.112	0.039	0.031	<0.005	<0.002	<0.01	<0.01	0.02	0.03
Copper	mg/L	1 [2]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.003	<0.02	<0.02	0.002	<0.02
Zinc	mg/L	5 [2]	0.015	0.016	0.013	0.081	<0.005	0.29	0.034	0.017	0.025	0.01	<0.01	0.058	0.03
Conductivity	µS/cm		669	699	660	646	680	656	678	713	571	734	779	751	766
pH	Units	6.5-8.5 [3]	7.74	7.98	8.07	7.93	7.51	8	7.99	7.95	8.1	8.1	8.2	8.2	8.2
Dissolved Organic Carbon	mg/L	5[2]	0.4	0.8	0.6	0.4	10	0.8	1.2	0.8	0.8	0.4	1	0.5	0.5
Hardness (as CaCO3)	mg/L	80-100 [3]	245	247	232	244	224	232	231	231	210	300	230	250	230
Bicarbonate (as CaCO3)	mg/L		171	177	151	159	168	161	144	139	121	143	168	144	154
Carbonate (as CaCO3)	mg/L		<1	2	2	1	<1	2	1	1	1	2	3	2	2
Total Dissolved Solids	mg/L	500 [2]	380	386	373	376	376	375	374	386	326	415	419	405	408
Cation Sum	meq/L		7.21	7.05	6.86	7.12	7.06	6.8	7.03	7.14	6.6	8.72	7.47	7.84	7.77
Anion Sum	meq/L		6.96	7.26	6.92	6.89	7.03	7.06	6.85	7.09	6.02	7.26	8.05	7.26	7.41
Ion Balance	%		1.78	1.46	0.43	1.68	0.22	1.92	1.31	0.3	4.63	9.13	3.78	3.83	2.41
Total Oil and Grease	mg/L		1	<1	<1	<1	22	<1	1	<1	<0.5	<0.5	<0.5	<0.5	1.2

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH1-I											
Date			29-Apr-08	17-Dec-08	15-Apr-09	25-Nov-09	16-Apr-10	29-Nov-10	29-Mar-11	16-Nov-11	10-Apr-12	6-Dec-12	4-Apr-13	10-Dec-13	1-Apr-14
Sodium	mg/L	200 [2]	64.3	58.1	59.1	62.1	62.4	51	63.4	60	58.9	62.6	61.2	63	60
Potassium	mg/L		2	<1	2	2	2	2.1	2	2.5	1	2	2	2	2
Calcium	mg/L		46.5	41.2	42.3	44	45.2	38.9	46.1	43	44.5	46.5	46.3	45	43
Magnesium	mg/L		28.6	25.6	27.4	29.1	29.7	24.2	29	28	26.6	30.4	31.4	32	30
Alkalinity (as CaCO3)	mg/L	30-500 [3]	99	159	147	153	148	144	143	137	130	160	160	150	160
Sulphate	mg/L	500 [2]	91	39	39	35	37	32	38	35	38	37	38	37	36
Chloride	mg/L	250 [2]	120	120	120	110	130	110	130	120	120	120	130	130	140
Orthophosphate (as P)	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate and Nitrite (as N)	mg/L	10 [1]	0.4	0.4	0.5	0.3	0.4	0.3	0.2	0.2	<0.1	0.2	0.16	0.1	<0.1
Ammonia (as N)	mg/L		<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.072
Iron	mg/L	0.3 [2]	<0.02	<0.02	<0.02	<0.02	<0.02	0.027	<0.02	<0.1	<0.02	<0.02	<0.02	0.04	<0.02
Manganese	mg/L	0.05 [2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	1 [2]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.001	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	5 [2]	<0.01	0.01	0.01	0.02	0.01	0.012	0.01	0.014	<0.01	0.01	0.01	0.02	0.02
Conductivity	µS/cm		779	771	724	731	770	716	756	740	690	780	770	770	770
pH	Units	6.5-8.5 [3]	7.8	8	7.9	7.9	8.1	8.09	8.05	8.02	8	7.58	8.11	8.06	7.93
Dissolved Organic Carbon	mg/L	5[2]	0.6	0.4	0.5	0.8	0.5	0.8	0.5	0.7	0.36	0.37	0.41	0.36	0.37
Hardness (as CaCO3)	mg/L	80-100 [3]	230	210	220	230	230	200	230	220	220	240	240	250	230
Bicarbonate (as CaCO3)	mg/L		98	157	146	152	146	142	141	135	130	160	150	150	150
Carbonate (as CaCO3)	mg/L		<1	2	1	1	2	2	1	1	1.2	<1	1.9	1.6	1.2
Total Dissolved Solids	mg/L	500 [2]	421	380	381	380	401	353	398	374	369	400	406	400	400
Cation Sum	meq/L		7.53	6.7	6.98	7.35	7.46	6.21	7.5	7.08	7	7.61	7.62	7.7	7.28
Anion Sum	meq/L		7.37	7.28	7.12	6.94	7.45	6.77	7.33	6.85	6.73	7.39	7.55	7.26	7.67
Ion Balance	%		1.12	4.16	0.99	2.85	0.07	4.33	1.18	1.67	1.97	1.47	0.45	2.9	2.62
Total Oil and Grease	mg/L		<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

PARAMETER	UNITS	ODWQS	BH1-I										BH1-R		
Date			15-Dec-14	6-Apr-15	10-Dec-15	30-Mar-16	14-Nov-16	17-Mar-17	21-Nov-17	26-Mar-18	21-Nov-18	19-Mar-19	19-Nov-20	10-Mar-21	10-Nov-21
Sodium	mg/L	200 [2]	61	65	66	70	75	70	76	73	80	82	95	110	86
Potassium	mg/L		2	2	3	2	3	2.6	2.9	2.7	2.5	2.8	2.6	3.0	2.4
Calcium	mg/L		41	41	44	44	45	42	43	42	42	45	40	48	40
Magnesium	mg/L		30	28	32	32	32	32	32	31	33	32	32	34	29
Alkalinity (as CaCO3)	mg/L	30-500 [3]	140	130	150	150	160	160	160	160	170	140	130	140	130
Sulphate	mg/L	500 [2]	36	36	37	38	36	35	32	35	31	36	35	37	36
Chloride	mg/L	250 [2]	120	150	130	140	140	140	140	150	160	160	180	180	180
Orthophosphate (as P)	mg/L		<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L	10 [1]	0.17	<0.1	<0.1	0.21	<0.10	<0.10	0.17	<0.10	<0.10	0.16	0.11	0.16	0.10
Ammonia (as N)	mg/L		0.058	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.12	<0.050	0.056	<0.050	0.19
Iron	mg/L	0.3 [2]	<0.02	0.05	<0.02	<0.02	<0.02	<0.1	<0.1	<0.10	<0.10	<0.1	<0.1	<0.1	0.200
Manganese	mg/L	0.05 [2]	<0.01	<0.01	0.02	<0.01	<0.01	<0.002	0.0069	<0.002	<0.002	<0.002	<0.0020	<0.0020	0.030
Copper	mg/L	1 [2]	<0.02	<0.02	<0.02	<0.02	<0.02	0.0017	<0.001	<0.001	0.0036	0.0015	<0.00090	<0.00090	0.0010
Zinc	mg/L	5 [2]	0.01	0.01	0.01	0.02	0.01	0.011	<0.010	0.011	0.013	0.025	<0.0050	0.0052	0.029
Conductivity	µS/cm		750	800	830	830	860	880	890	900	920	900	940	980	910
pH	Units	6.5-8.5 [3]	7.87	7.81	8.13	8.04	8.12	8.08	8.07	8.01	8.13	7.90	8.09	8.16	7.89
Dissolved Organic Carbon	mg/L	5[2]	0.64	0.42	0.6	0.52	0.99	0.65	0.74	<0.50	0.67	<0.50	0.47	0.74	<0.40
Hardness (as CaCO3)	mg/L	80-100 [3]	230	220	240	240	250	230	240	230	240	240	230	260	220
Bicarbonate (as CaCO3)	mg/L		140	130	150	150	160	160	160	160	160	140	130	140	130
Carbonate (as CaCO3)	mg/L		<1.0	<1.0	1.9	1.5	2.0	1.8	1.8	1.5	2.1	1.0	1.5	1.9	<1.0
Total Dissolved Solids	mg/L	500 [2]	380	400	410	420	430	456	445	395	485	455	520	490	435
Cation Sum	meq/L		7.24	7.23	7.76	7.88	8.25	7.78	8.17	7.93	8.37	8.54	8.8	9.87	8.21
Anion Sum	meq/L		7.11	7.53	7.59	7.63	7.99	7.87	7.93	8.16	8.52	7.97	8.43	8.68	8.33
Ion Balance	%		0.93	2.06	1.11	1.63	1.65	0.540	1.50	1.42	0.88	3.49	2.12	6.43	0.72
Total Oil and Grease	mg/L		0.5	1	<0.5	<0.50	<0.50	0.60	0.70	<0.50	0.80	<0.50	<0.50	<0.50	0.60

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH1-R						BH92-5		BH6				
Date			17-Mar-22	25-Nov-22	15-Mar-23	17-Nov-23	13-Mar-24	11-Sep-24	13-Nov-19	09-Mar-20	18-Mar-05	11-Nov-05	3-Mar-06	6-Nov-06	30-Apr-07
Sodium	mg/L	200 [2]	91	100	110	110	99	100	150	88	44	48.9	46.1	23	38
Potassium	mg/L		2.5	2.5	2.8	2.7	2.7	2.9	2.1	2.1	2	3	2	2	1.8
Calcium	mg/L		44	46	50	46	49	45	86	64	72.4	64.2	88.2	43.3	65
Magnesium	mg/L		30	33	34	33	31	31	34	37	26.9	41	32.9	17.9	28
Alkalinity (as CaCO3)	mg/L	30-500 [3]	140	140	150	140	140	130	260	250	145	135	163	122	154
Sulphate	mg/L	500 [2]	31	36	34	34	34	38	33	32	97.1	79	86	49	82
Chloride	mg/L	250 [2]	160	190	190	200	200	190	260	140	105	128	90	63	71
Orthophosphate (as P)	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.3	<0.005	<0.01	<0.01	<0.01
Nitrate and Nitrite (as N)	mg/L	10 [1]	0.16	<0.10	0.12	0.12	0.20	0.13	<0.10	<0.10	<0.2	0.3	<0.1	0.11	<0.1
Ammonia (as N)	mg/L		0.24	0.22	<0.050	<0.050	<0.050	0.14	<0.050	<0.050	0.37	<0.05	<0.05	0.25	0.16
Iron	mg/L	0.3 [2]	0.14	<0.10	<0.10	<0.100	<0.100	<0.100	0.32	0.18	0.05	<0.02	0.02	<0.02	<0.05
Manganese	mg/L	0.05 [2]	0.022	<0.0020	0.0026	<0.0020	0.0066	0.0022	0.12	0.094	0.174	<0.01	0.04	<0.01	<0.002
Copper	mg/L	1 [2]	0.0056	<0.00090	<0.00090	<0.00090	<0.00090	<0.00090	0.001	<0.001	0.006	<0.02	<0.02	<0.02	<0.001
Zinc	mg/L	5 [2]	0.026	0.0053	<0.0050	<0.0050	0.0064	0.0059	0.13	0.11	0.066	0.16	0.78	<0.01	0.43
Conductivity	µS/cm		900	990	1000	1000	1000	980	1400	1000	785	841	763	511	680
pH	Units	6.5-8.5 [3]	8.13	8.19	8.18	8.20	8.11	8.06	8.04	7.86	7.76	8.09	8.1	8.2	8.2
Dissolved Organic Carbon	mg/L	5[2]	0.75	0.64	0.69	1.0	0.82	0.52	0.59	0.55	5	1.1	0.9	2.2	1.5
Hardness (as CaCO3)	mg/L	80-100 [3]	230	250	270	250	250	240	350	310	292	330	360	180	280
Bicarbonate (as CaCO3)	mg/L		140	140	140	140	140	130	260	250	144	134	161	120	152
Carbonate (as CaCO3)	mg/L		1.7	2.0	2.0	2.0	1.7	1.4	2.7	1.7	<1	2	2	2	2
Total Dissolved Solids	mg/L	500 [2]	430	455	485	515	520	545	710	540	439	445	442	272	383
Cation Sum	meq/L		8.72	9.66	10	9.76	9.37	9.41	13.9	10.1	7.82	8.78	9.16	4.71	7.29
Anion Sum	meq/L		8.05	8.91	8.86	9.04	9.14	8.82	13.3	9.68	7.88	7.98	7.56	5.22	6.79
Ion Balance	%		4.02	4.02	6.26	3.88	1.26	3.23	2.30	2.09	0.4	4.78	9.56	5.19	3.58
Total Oil and Grease	mg/L		1.0	<0.50	<0.50	1.2	<0.50	1.1	0.80	<0.50	1	1.3	<0.5	1.3	<0.5

PARAMETER	UNITS	ODWQS	BH8-I												
Date			16-Dec-92	20-Apr-93	13-Dec-93	20-Apr-94	21-Dec-94	16-May-95	22-Nov-95	7-Nov-96	26-Nov-97	18-Nov-98	9-Nov-99	8-Nov-00	13-Mar-01
Sodium	mg/L	200 [2]	4.1	2.1	2.3	1.6	1.9	2.7	2.2	1.9	1.5	2.0	2.9	4.4	3.6
Potassium	mg/L		2.7	1.2	1.4	1.2	0.9	0.8	0.6	0.7	<0.5	<1	<1	<1	<1
Calcium	mg/L		89.9	77.6	83.9	208	103	85.6	87.5	91.5	85.8	78.4	98.8	79.1	86.4
Magnesium	mg/L		31.7	26.0	32.1	31.0	33.4	26.5	29.5	28.9	29.2	26.1	32.9	28.4	29.6
Alkalinity (as CaCO3)	mg/L	30-500 [3]	305	261	292	575	288	266	270	290	277	262	320	270	280
Sulphate	mg/L	500 [2]	69	50	67	40	66	44	50	39	49	23	43	43.2	36
Chloride	mg/L	250 [2]	7.6	7.0	5.5	2.3	4.1	5.5	5.0	4.2	4.5	4.4	7.4	18.7	14.2
Orthophosphate (as P)	mg/L		<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.3	<0.3	<0.3
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.5	<0.2	0.3	<0.2
Ammonia (as N)	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	0.06	<0.05	0.03	0.31	<0.03
Iron	mg/L	0.3 [2]	4.10	4.45	1.27	16.0	2.67	0.14	0.56	0.57	0.61	0.56	0.64	<0.01	<0.01
Manganese	mg/L	0.05 [2]	0.88	1.04	0.36	1.04	0.42	0.20	0.23	0.24	0.25	0.16	0.247	0.176	0.329
Copper	mg/L	1 [2]	0.01	<0.01	<0.01	0.09	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.003	<0.003	<0.003
Zinc	mg/L	5 [2]	2.30	2.63	1.08	1.36	0.88	0.24	<0.01	<0.01	<0.01	0.02	0.006	0.649	0.094
Conductivity	µS/cm		800	634	743	1230	723	670	647	572	581	508	669	553	595
pH	Units	6.5-8.5 [3]	7.1	7.4	7.6	7.4	7.4	7.3	7.7	7.2	7.6	8.1	7.56	7.59	7.7
Dissolved Organic Carbon	mg/L	5 [2]	6.0	2.9	4.7	2.3	4.5	2.6	2.8	3.0	4.4	1.5	3.2	3.4	2.9
Hardness (as CaCO3)	mg/L	80-100 [3]	355	301	342	647	395	323	340	347	334	303	382	315	338
Bicarbonate (as CaCO3)	mg/L		305	260	291	574	287	265	269	290	276	259	319	269	279
Carbonate (as CaCO3)	mg/L		0.36	0.61	1.09	1	1	<1	1.3	<1	1	3	1	<1	1
Total Dissolved Solids	mg/L	500 [2]	393	325	372	633	NA	NA	NA	345	342	299	384	343	343
Cation Sum	meq/L		7.34	6.13	6.96	13.0	7.99	6.49	6.42	7.05	6.76	6.18	7.79	6.51	6.92
Anion Sum	meq/L		7.75	6.46	7.39	12.4	7.25	6.40	6.58	6.72	6.69	5.83	7.50	6.85	6.75
Ion Balance	%		2.70	2.57	2.96	2.49	4.89	0.77	1.23	2.36	0.54	2.85	1.88	2.52	1.27
Total Oil and Grease	mg/L		3.9	<1	<1	<1	<1	<1	<1					1	<1

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH8-I												
Date			6-Nov-01	12-Apr-02	20-Nov-02	23-Apr-03	6-Nov-03	10-Mar-04	5-Nov-04	18-Mar-05	11-Nov-05	3-Mar-06	6-Nov-06	30-Apr-07	15-Nov-07
Sodium	mg/L	200 [2]	3.8	4.4	4.9	4.0	4.3	4.9	2.6	2.2	3.5	2.8	2.7	6.4	3.8
Potassium	mg/L		<1	1	<1	<1	1	<1	<1	1	<1	<1	<1	1.2	1
Calcium	mg/L		87.6	87.5	99.9	98.6	97.7	97.7	86.7	83.6	88.1	92.7	69.8	89	*265
Magnesium	mg/L		31.4	29.8	35.2	32.0	33.9	34.4	29.9	28.2	30.3	31.5	22.1	32	*70.3
Alkalinity (as CaCO3)	mg/L	30-500 [3]	280	292	272	254	254	300	213	233	224	233	228	261	266
Sulphate	mg/L	500 [2]	48.7	36.8	91.4	83.4	102	64.0	99.1	78	93	50	57	76	36
Chloride	mg/L	250 [2]	26.3	20.5	25.9	21.5	21.6	18.4	17.9	10.4	13	4	4	12	11
Orthophosphate (as P)	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.012	0.06	<0.01	<0.01	<0.01
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia (as N)	mg/L		0.16	0.77	<0.03	<0.03	0.05	<0.03	0.04	0.04	<0.05	<0.05	0.2	0.12	0.08
Iron	mg/L	0.3 [2]	0.35	0.57	0.52	0.58	0.52	0.66	0.43	0.47	0.49	0.57	0.33	<0.05	*5.82
Manganese	mg/L	0.05 [2]	0.212	0.229	0.247	0.236	0.249	0.258	0.211	0.201	0.20	0.19	0.17	0.16	*0.71
Copper	mg/L	1 [2]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.02	<0.001	*0.04
Zinc	mg/L	5 [2]	<0.005	0.007	<0.005	0.140	0.008	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	0.47	*1.64
Conductivity	µS/cm		623	614	670	609	683	645	594	600	519	506	507	632	574
pH	Units	6.5-8.5 [3]	7.75	7.36	7.86	7.60	7.79	7.69	8.12	7.6	8.21	8	8.2	8.3	8.1
Dissolved Organic Carbon	mg/L	5 [2]	1.2	23.9	1.6	2.0	2.5	3.2	2.1	2.5	2.3	1.8	2.1	2	2
Hardness (as CaCO3)	mg/L	80-100 [3]	348	341	395	378	384	385	340	325	340	360	270	350	*950
Bicarbonate (as CaCO3)	mg/L		278	291	270	253	253	299	210	232	221	231	224	257	263
Carbonate (as CaCO3)	mg/L		1	<1	2	<1	1	1	3	<1	3	2	3	4	3
Total Dissolved Solids	mg/L	500 [2]	371	361	427	397	418	404	370	347	363	321	293	378	562
Cation Sum	meq/L		7.13	7.10	8.12	7.75	7.89	7.94	6.92	6.62	7.06	7.36	5.45	7.38	19.6
Anion Sum	meq/L		7.35	7.18	8.07	7.42	7.81	7.85	6.83	6.58	6.77	5.81	5.85	7.13	6.37
Ion Balance	%		1.52	0.60	0.29	2.14	0.48	0.55	0.71	0.34	2.08	11.8	3.57	1.74	*51
Total Oil and Grease	mg/L		16	4	<1	<1	<1	<1	<1	<1	0.6	<0.5	<0.5	<0.5	<0.5

PARAMETER	UNITS	ODWQS	BH8-I							BH92-32-III					
Date			29-Apr-08	17-Dec-08	15-Apr-09	25-Nov-09	16-Apr-10	29-Nov-10	29-Mar-11	16-Nov-11	10-Apr-12	6-Dec-12	4-Apr-13	10-Dec-13	1-Apr-14
Sodium	mg/L	200 [2]	6.6	4.1	5	27.3	29.1	42.6	33.9	28.0	39.4	39.2	40.6	43.0	40
Potassium	mg/L		2	<1	<1	1	<1	1.1	<1	0.86	1	<1	<1	<1	<1
Calcium	mg/L		83.5	71.9	88.1	70.2	74.4	76.3	76.3	88.0	99.2	113	110	97	92
Magnesium	mg/L		27.2	24.2	30.8	24.0	24.3	25.7	25.5	33.0	34.9	42.8	41.8	39	38
Alkalinity (as CaCO3)	mg/L	30-500 [3]	249	271	253	157	140	166	173	253	250	320	270	280	310
Sulphate	mg/L	500 [2]	56	40	59	82	99	60	67	50	79	78	91	81	76
Chloride	mg/L	250 [2]	13	6.0	26	65	76	95	79	82	97	88	93	97	89
Orthophosphate (as P)	mg/L		<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.18	<0.1	<0.1
Ammonia (as N)	mg/L		<0.05	0.1	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	0.089
Iron	mg/L	0.3 [2]	0.39	0.39	0.52	0.32	0.42	0.45	1.44	<0.1	<0.02	0.04	<0.02	0.2	0.04
Manganese	mg/L	0.05 [2]	0.2	0.2	0.25	0.21	0.22	0.26	0.52	0.16	0.03	0.06	0.05	0.15	0.22
Copper	mg/L	1 [2]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.001	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	5 [2]	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.098	0.130	0.150	0.190	0.140	0.140
Conductivity	µS/cm		592	579	631	685	694	759	717	823	850	1000	970	980	980
pH	Units	6.5-8.5 [3]	8.20	7.90	7.7	7.8	8.0	8.0	7.91	7.94	7.84	7.88	7.99	7.78	7.63
Dissolved Organic Carbon	mg/L	5 [2]	3.9	1.4	2.3	1.6	1.4	1.5	2.7	2.1	1.2	1.4	1.3	1.2	1.3
Hardness (as CaCO3)	mg/L	80-100 [3]	320	280	350	270	290	300	300	360	390	460	450	400	390
Bicarbonate (as CaCO3)	mg/L		246	269	252	156	139	164	172	251	250	320	260	280	310
Carbonate (as CaCO3)	mg/L		3	2	1	<1	1	2	1	2	2	2	2	2	1
Total Dissolved Solids	mg/L	500 [2]	343	314	366	369	391	406	392	439	505	562	543	530	530
Cation Sum	meq/L		6.76	5.78	7.17	6.71	7.00	7.82	7.43	8.36	9.57	10.9	10.7	9.9	9.5
Anion Sum	meq/L		6.51	6.41	7	6.67	6.99	7.25	7.10	8.40	9.34	10.6	9.85	10.0	10.3
Ion Balance	%		1.88	5.22	1.19	0.26	0.07	3.79	2.28	0.24	1.22	1.45	4.03	0.57	4.36
Total Oil and Grease	mg/L		<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH92-32-III												
Date			15-Dec-14	6-Apr-15	10-Dec-15	30-Mar-16	14-Nov-16	17-Mar-17	4-Apr-17	21-Nov-17	26-Mar-18	21-Nov-18	19-Mar-19	13-Nov-19	09-Mar-20
Sodium	mg/L	200 [2]	42	43	41	33	42	28	24	38	34	34	34	32	28
Potassium	mg/L		<1	<1	1	<1	<1	0.90	0.94	0.87	0.76	0.98	0.78	1.0	0.92
Calcium	mg/L		87	100	77	100	82	130	120	78	80	94	92	80	92
Magnesium	mg/L		35	40	31	41	31	57	55	31	33	38	37	34	44
Alkalinity (as CaCO3)	mg/L	30-500 [3]	240	320	220	360	210	430	430	220	260	330	300	240	340
Sulphate	mg/L	500 [2]	81	66	64	50	68	150	120	62	77	50	56	46	58
Chloride	mg/L	250 [2]	99	85	88	62	100	46	39	90	68	74	40	75	48
Orthophosphate (as P)	mg/L		<0.01	0.028	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia (as N)	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.052	<0.050	0.19	0.066	<0.050	0.082
Iron	mg/L	0.3 [2]	0.05	0.15	0.06	0.04	0.04	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1
Manganese	mg/L	0.05 [2]	0.45	0.63	0.48	0.91	0.51	0.93	0.96	0.60	0.60	0.70	0.69	0.62	0.83
Copper	mg/L	1 [2]	<0.02	<0.02	<0.02	<0.02	<0.02	0.0019	<0.001	0.0012	0.0015	<0.001	0.0081	<0.001	0.0012
Zinc	mg/L	5 [2]	0.14	0.180	0.070	0.19	0.06	0.18	0.19	0.063	0.079	0.084	0.092	0.061	0.10
Conductivity	µS/cm		910	970	850	930	830	1200	1100	820	830	890	810	770	890
pH	Units	6.5-8.5 [3]	7.84	7.66	7.93	7.86	8.04	7.70	7.79	7.85	7.84	7.87	7.78	7.98	7.62
Dissolved Organic Carbon	mg/L	5 [2]	1.4	1.7	1.5	2.3	1.6	2.7	2.7	1.3	1.6	1.5	1.7	1.1	1.9
Hardness (as CaCO3)	mg/L	80-100 [3]	360	420	320	430	330	560	540	320	340	390	380	340	410
Bicarbonate (as CaCO3)	mg/L		240	320	220	360	210	430	430	220	250	320	300	230	340
Carbonate (as CaCO3)	mg/L		2	1.4	1.8	2.4	2.2	2.0	2.5	1.5	1.6	2.3	1.7	2.1	1.3
Total Dissolved Solids	mg/L	500 [2]	490	530	440	510	460	692	666	430	395	510	435	390	510
Cation Sum	meq/L		9.04	10.2	8.2	10	8.46	12.5	11.8	8.09	8.21	9.38	8.7	8.25	9.43
Anion Sum	meq/L		9.31	10.1	8.3	9.98	8.53	13.1	12.2	8.27	8.64	9.63	8.38	7.77	9.37
Ion Balance	%		1.51	0.59	0.24	0.19	0.380	2.42	1.62	1.14	2.59	1.28	1.89	2.99	0.32
Total Oil and Grease	mg/L		0.80	1	<0.5	<0.50	<0.50	1.4	<0.50	0.50	<0.50	<0.50	<0.50	1.0	<0.50

PARAMETER	UNITS	ODWQS	BH92-32-III								
Date			19-Nov-20	10-Mar-21	10-Nov-21	17-Mar-22	25-Nov-22	15-Mar-23	17-Nov-23	13-Mar-24	11-Sep-24
Sodium	mg/L	200 [2]	29	27	25	21	33	31	37	33	34
Potassium	mg/L		1.4	1.3	1.4	1.1	1.4	1.5	1.3	1.3	1.5
Calcium	mg/L		96	110	96	110	96	110	66	90	64
Magnesium	mg/L		40	43	33	41	36	43	27	40	26
Alkalinity (as CaCO3)	mg/L	30-500 [3]	310	340	330	400	290	320	180	330	200
Sulphate	mg/L	500 [2]	48	46	43	40	34	37	38	35	32
Chloride	mg/L	250 [2]	71	57	60	40	80	70	81	70	68
Orthophosphate (as P)	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia (as N)	mg/L		0.068	<0.050	0.054	0.24	0.18	<0.050	<0.050	<0.050	<0.050
Iron	mg/L	0.3 [2]	<0.1	<0.1	<0.100	<0.1	<0.10	<0.10	<0.100	0.11	<0.100
Manganese	mg/L	0.05 [2]	0.64	0.67	0.66	0.78	0.63	0.61	0.56	0.84	0.52
Copper	mg/L	1 [2]	0.0023	0.001	<0.00090	0.001	0.0011	<0.00090	<0.00090	<0.00090	0.00092
Zinc	mg/L	5 [2]	0.11	0.11	0.095	0.13	0.071	0.088	0.028	0.067	0.030
Conductivity	µS/cm		850	910	840	890	830	880	710	870	660
pH	Units	6.5-8.5 [3]	7.99	7.78	7.63	7.86	7.83	7.82	8.03	7.76	7.98
Dissolved Organic Carbon	mg/L	5 [2]	1.1	1.5	1.5	2.3	1.4	2.0	1.2	2.2	1.3
Hardness (as CaCO3)	mg/L	80-100 [3]	400	460	380	450	390	440	280	390	270
Bicarbonate (as CaCO3)	mg/L		300	340	330	390	290	310	180	320	190
Carbonate (as CaCO3)	mg/L		2.8	1.9	1.3	2.7	1.8	2.0	1.9	1.7	1.7
Total Dissolved Solids	mg/L	500 [2]	475	465	420	470	370	455	350	495	335
Cation Sum	meq/L		9.4	10.5	8.65	10.0	9.27	10.2	7.19	9.27	6.88
Anion Sum	meq/L		9.1	9.37	9.22	9.86	8.73	9.08	6.78	9.19	6.51
Ion Balance	%		1.63	5.47	3.22	0.81	3.00	5.67	3.00	0.460	2.73
Total Oil and Grease	mg/L		0.6	<0.50	0.60	<0.50	0.7	<0.50	1.2	<0.50	1.2

NOTES: · ODWQS Ontario Drinking Water Quality Standards (2006) · (1) Maximum Acceptable Concentration · (2) Aesthetic Objective · (3) Operational Guideline
· * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH92-8												
Date			16-Dec-92	20-Apr-93	13-Dec-93	20-Apr-94	21-Dec-94	16-May-95	22-Nov-95	7-Nov-96	26-Nov-97	18-Nov-98	9-Nov-99	8-Nov-00	13-Mar-01
Sodium	mg/L	200 [2]	27.4	26.3	27.3	29.7	27.5	27.8	29.9	28.4	33.2	34.4	43	36.6	36.9
Potassium	mg/L		2.7	2.2	2.3	2.0	2.0	1.8	2.0	1.9	0.8	2.1	2	2	2
Calcium	mg/L		71.9	73.1	74.1	50.0	84.5	74.6	75.1	77	69.9	73.2	93.6	99.2	80.8
Magnesium	mg/L		28.0	27.1	29.3	47.3	30.6	26.1	29.1	27.5	26.4	26.0	33.5	35.8	29.4
Alkalinity (as CaCO3)	mg/L	30-500 [3]	244	234	231	219	219	222	208	196	194	192	175	192	198
Sulphate	mg/L	500 [2]	47	52	67	59	73	57	60	59	58	60	129	179	81.5
Chloride	mg/L	250 [2]	44.7	51.0	48.3	80.0	50.5	57.5	59.6	64.4	75.9	65.8	95	91.5	83.8
Orthophosphate (as P)	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.3	<0.3	<0.3
Nitrate and Nitrite (as N)	mg/L	10 [1]	2.20	1.44	1.45	0.99	0.42	0.26	<0.05	0.69	0.09	<0.5	<0.2	0.6	<0.2
Ammonia (as N)	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	0.03	0.10	<0.03
Iron	mg/L	0.3 [2]	7.45	1.15	1.87	9.53	1.61	0.89	<0.02	0.13	0.03	0.5	0.05	<0.01	<0.01
Manganese	mg/L	0.05 [2]	1.45	0.57	0.60	0.44	0.22	0.03	0.05	0.04	0.04	0.05	0.018	<0.005	0.026
Copper	mg/L	1 [2]	0.14	0.05	0.05	0.05	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.003	<0.003	<0.003
Zinc	mg/L	5 [2]	6.12	1.37	1.83	1.67	1.12	0.53	0.39	0.43	0.42	0.22	0.249	0.299	0.43
Conductivity	µS/cm		780	805	823	840	814	724	760	639	663	669	889	829	735
pH	Units	6.5-8.5 [3]	7.4	7.5	8.1	7.5	7.5	8.0	7.7	7.4	8.1	7.9	7.86	7.71	7.88
Dissolved Organic Carbon	mg/L	5 [2]	1.5	2.6	<0.5	1.6	1.0	<0.5	<0.5	<0.5	1.1	1.2	3.5	1.6	1.0
Hardness (as CaCO3)	mg/L	80-100 [3]	295	294	306	320	337	294	307	305	283	290	372	395	323
Bicarbonate (as CaCO3)	mg/L		243	233	228	218	218	220	207	195	192	191	174	191	197
Carbonate (as CaCO3)	mg/L		0.57	0.69	2.7	1	1	2	1	<1	2	1	1	<1	1
Total Dissolved Solids	mg/L	500 [2]	384	384	399	409	NA	NA	NA	385	386	384	506	567	439
Cation Sum	meq/L		7.15	7.08	7.36	7.73	7.98	6.97	7.13	7.40	7.13	7.34	9.34	9.54	8.10
Anion Sum	meq/L		7.28	7.30	7.48	7.93	7.35	7.27	7.09	7.02	7.23	6.94	8.86	10.20	8.02
Ion Balance	%		0.85	1.56	0.83	1.30	4.11	2.04	0.26	2.60	0.68	2.85	2.64	3.26	0.52
Total Oil and Grease	mg/L		<1	<1	<1	<1	<1	<1	<1					<1	<1

PARAMETER	UNITS	ODWQS	BH92-8												
Date			6-Nov-01	12-Apr-02	20-Nov-02	23-Apr-03	6-Nov-03	10-Mar-04	5-Nov-04	23-Jan-08	29-Apr-08	17-Dec-08	15-Apr-09	25-Nov-09	16-Apr-10
Sodium	mg/L	200 [2]	31.8	33.6	38.1	36.5	42.9	52.0	15.1	38.5	50.9	11.6	42.3	7.7	17
Potassium	mg/L		3	3	1	1	2	2	2	3	2	<1	1	1.0	1.0
Calcium	mg/L		85.1	95.8	99.6	85.4	79.1	72.1	37.6	48.9	56.9	26.7	50.9	20.9	32.0
Magnesium	mg/L		29.8	33.4	34.8	30.2	27.0	25.7	10.9	19.3	24	7.19	20.4	6.4	12.9
Alkalinity (as CaCO3)	mg/L	30-500 [3]	198	200	180	180	166	160	91	126	143	81	135	84	104
Sulphate	mg/L	500 [2]	112	126	175	116	96.6	83.4	26.4	52	50	17	44	13	25
Chloride	mg/L	250 [2]	69.1	77.7	70.4	83.1	100	104	29.2	89	100	25.0	98	16	37
Orthophosphate (as P)	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.2	0.5	<0.2	<0.2	<0.2	<0.2	0.6	0.1	0.2	0.5	<0.1	0.3	0.3
Ammonia (as N)	mg/L		<0.03	<0.03	<0.03	<0.03	0.11	<0.03	0.03	0.09	0.5	0.15	<0.05	0.17	0.13
Iron	mg/L	0.3 [2]	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.03	0.04	0.03	<0.02	<0.02	<0.02
Manganese	mg/L	0.05 [2]	<0.005	0.019	0.035	0.064	0.095	0.053	<0.005	0.09	0.1	<0.01	0.03	0.02	0.02
Copper	mg/L	1 [2]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	5 [2]	0.115	0.359	0.475	0.494	0.353	0.310	0.025	<0.01	0.03	<0.01	0.03	<0.01	0.01
Conductivity	µS/cm		752	812	826	730	757	727	303	637	708	290	642	238	375
pH	Units	6.5-8.5 [3]	7.80	7.88	7.88	7.83	7.94	7.94	8.18	8.1	8.20	8.00	7.7	7.9	8.2
Dissolved Organic Carbon	mg/L	5 [2]	1.8	2.0	1.2	0.9	2.7	1.3	2.5	2.3	8.0	0.7	0.5	1.1	0.6
Hardness (as CaCO3)	mg/L	80-100 [3]	335	377	392	338	309	286	139	200	240	96	210	79	130
Bicarbonate (as CaCO3)	mg/L		197	199	179	179	165	159	90	125	141	80	134	83	130
Carbonate (as CaCO3)	mg/L		1	1	1	1	1	1	1	2	2	<1	<1	<1	1
Total Dissolved Solids	mg/L	500 [2]	454	497	533	466	453	441	181	331	377	141	340	120	191
Cation Sum	meq/L		8.15	9.06	9.53	8.37	8.10	8.02	3.48	5.77	7.12	2.44	6.09	1.96	3.44
Anion Sum	meq/L		8.24	8.85	9.23	8.36	8.15	7.87	3.24	6.14	6.79	2.73	6.37	2.44	3.67
Ion Balance	%		0.56	1.21	1.6	0.11	0.31	0.97	3.61	3.11	2.36		2.25		3.29
Total Oil and Grease	mg/L		<1	1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	1.4	0.6

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH92-8												
Date			29-Nov-10	10-Apr-12	29-Mar-11	16-Nov-11	06-Dec-12	04-Apr-13	10-Dec-13	01-Apr-14	15-Dec-14	06-Apr-15	10-Dec-15	30-Mar-16	14-Nov-16
Sodium	mg/L	200 [2]	4.3	52.9	39.1	31	51.2	52.9	51	49	48	51	51	52	56
Potassium	mg/L		1.5	2	2.0	2.5	3	2	3	2	3	2	3	2	3
Calcium	mg/L		26.2	54.6	45.9	46.0	52.8	54.9	54	55	52	58	53	57	56
Magnesium	mg/L		6.3	28.4	19.8	18.0	28.8	31.5	31	32	29	31	30	31	30
Alkalinity (as CaCO3)	mg/L	30-500 [3]	73	150	124	126	150	140	150	140	140	140	140	140	150
Sulphate	mg/L	500 [2]	14	52	39	37	58	75	68	79	75	80	64	77	64
Chloride	mg/L	250 [2]	18	110	79	67	110	120	110	120	110	110	110	110	130
Orthophosphate (as P)	mg/L		0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.066	<0.01	<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L	10 [1]	0.4	<0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10
Ammonia (as N)	mg/L		0.10	<0.05	0.15	0.32	0.19	0.16	0.07	0.15	0.1	<0.050	<0.05	<0.050	<0.050
Iron	mg/L	0.3 [2]	<0.02	<0.02	<0.02	<0.1	0.25	0.17	0.11	0.11	0.04	0.05	0.04	<0.02	0.03
Manganese	mg/L	0.05 [2]	<0.01	0.10	0.06	0.11	0.13	0.15	0.16	0.16	0.16	0.15	0.16	0.14	0.16
Copper	mg/L	1 [2]	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	5 [2]	<0.01	<0.01	0.01	0.012	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04
Conductivity	µS/cm		234	710	579	538	780	780	800	800	780	800	780	800	800
pH	Units	6.5-8.5 [3]	8.1	8.01	8.1	8.1	7.5	8.15	8.01	7.92	7.95	7.77	8.08	7.97	8.10
Dissolved Organic Carbon	mg/L	5 [2]	0.7	0.72	0.7	1.0	0.9	0.66	0.55	0.37	0.7	0.66	0.62	0.62	0.85
Hardness (as CaCO3)	mg/L	80-100 [3]	92	250	200	190	250	270	260	270	250	270	260	270	260
Bicarbonate (as CaCO3)	mg/L		72	150	123	125	150	140	140	140	140	140	140	130	150
Carbonate (as CaCO3)	mg/L		<1	2	1	1	<1	1.9	1.4	1.1	1.2	<1	1.6	1.2	1.8
Total Dissolved Solids	mg/L	500 [2]	119	394	303	282	397	422	410	420	410	430	400	420	430
Cation Sum	meq/L		2.06	7.42	5.68	5.21	7.32	7.71	7.55	7.55	7.17	7.72	7.39	7.71	7.76
Anion Sum	meq/L		2.30	7.18	5.53	5.19	7.27	7.64	7.51	7.78	7.52	7.76	7.3	7.49	7.94
Ion Balance	%			1.61	1.29	0.210	0.33	0.46	0.29	1.5	2.4	0.28	0.60	1.41	1.09
Total Oil and Grease	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	1.2	<0.5	<0.50	<0.50

PARAMETER	UNITS	ODWQS	BH92-8												
Date			17-Mar-17	04-Apr-17	Apr-17 (dup)	21-Nov-17	Nov-17 (dup)	26-Mar-18	Mar-18 (dup)	21-Nov-18	Nov-18 (dup)	19-Mar-19	Mar-19 (dup)	13-Nov-19	Nov-19 (dup)
Sodium	mg/L	200 [2]	51			53		52		55		56		62	
Potassium	mg/L		2.4			2.8		2.5		2.6		2.4		3.1	
Calcium	mg/L		54			52		49		50		51		54	
Magnesium	mg/L		31			31		30		31		31		34	
Alkalinity (as CaCO3)	mg/L	30-500 [3]	140			160		150		150		150		150	
Sulphate	mg/L	500 [2]	63			56		57		77		50		54	
Chloride	mg/L	250 [2]	120			130		120		130		120		140	
Orthophosphate (as P)	mg/L		<0.010			<0.010		<0.010		<0.010		<0.010		<0.010	
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.10			<0.10		<0.10		<0.10		<0.10		<0.10	
Ammonia (as N)	mg/L		<0.050			0.051		0.054		0.19		0.079		<0.050	
Iron	mg/L	0.3 [2]	0.19			0.11		<0.10		<0.10		<0.10		<0.10	
Manganese	mg/L	0.05 [2]	0.14			0.15		0.12		0.16		0.12		0.17	
Copper	mg/L	1 [2]	0.044			<0.001		0.0013		0.0044		<0.001		0.0017	
Zinc	mg/L	5 [2]	0.079			0.023		0.023		0.022		0.026		0.045	
Conductivity	µS/cm		810			810		800		810		810		830	
pH	Units	6.5-8.5 [3]	8.02			8.02		8.01		8.06		8.02		8.14	
Dissolved Organic Carbon	mg/L	5 [2]	0.78			0.67		0.56		0.81		<0.50		<0.50	
Hardness (as CaCO3)	mg/L	80-100 [3]	260			260		250		250		250		280	
Bicarbonate (as CaCO3)	mg/L		140			160		150		150		150		150	
Carbonate (as CaCO3)	mg/L		1.4			1.5		1.4		1.6		1.5		1.9	
Total Dissolved Solids	mg/L	500 [2]	418			395		350		480		415		410	
Cation Sum	meq/L		7.56			7.52		7.26		7.51		7.58		8.31	
Anion Sum	meq/L		7.62			7.84		7.66		8.31		7.57		7.97	
Ion Balance	%		0.36			2.10		2.64		5.06		0.06		2.08	
Total Oil and Grease	mg/L		2.1*	1.0	<0.50	<0.50	0.80	<0.50	<0.50	0.70	0.90	<0.50	<0.50	0.90	0.80

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-2
GROUNDWATER CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	ODWQS	BH92-8												
Date			09-Mar-20	Mar-20 (dup)	16-Apr-20	19-Nov-20	Nov-20 (dup)	10-Mar-21	Mar-21 (dup)	10-Nov-21	Nov-21 (dup)	17-Mar-22	Mar-22 (dup)	25-Nov-22	Nov-22 (dup)
Sodium	mg/L	200 [2]	60			66		72		64		71		82	
Potassium	mg/L		2.6			3.1		2.8		2.6		2.5		3.0	
Calcium	mg/L		49			53		55		52		52		53	
Magnesium	mg/L		33			34		36		32		33		35	
Alkalinity (as CaCO3)	mg/L	30-500 [3]	150			150		160		150		160		160	
Sulphate	mg/L	500 [2]	50			56		44		54		44		40	
Chloride	mg/L	250 [2]	140			130		130		150		150		160	
Orthophosphate (as P)	mg/L		<0.010			<0.010		<0.010		<0.010		<0.010		0.013	
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.10			<0.10		<0.10		<0.10		<0.10		<0.10	
Ammonia (as N)	mg/L		<0.050			<0.050		<0.050		<0.050		0.22		<0.050	
Iron	mg/L	0.3 [2]	<0.1			<0.1		<0.1		<0.100		<0.1		<0.10	
Manganese	mg/L	0.05 [2]	0.14			0.13		0.1		0.210		0.12		0.20	
Copper	mg/L	1 [2]	<0.001			<0.00090		0.0011		<0.00090		<0.00090		<0.00090	
Zinc	mg/L	5 [2]	0.04			0.049		0.037		0.040		0.039		0.043	
Conductivity	µS/cm		830			850		880		880		910		940	
pH	Units	6.5-8.5 [3]	8.02			8.09		8.07		7.97		8.02		8.08	
Dissolved Organic Carbon	mg/L	5 [2]	0.53			0.47		0.51		<0.40		0.67		0.56	
Hardness (as CaCO3)	mg/L	80-100 [3]	260			270		280		260		270		280	
Bicarbonate (as CaCO3)	mg/L		150			150		160		150		160		160	
Carbonate (as CaCO3)	mg/L		1.4			1.7		1.7		1.3		1.6		1.8	
Total Dissolved Solids	mg/L	500 [2]	430			475		450		435		415		415	
Cation Sum	meq/L		7.8			8.42		8.88		8.11		8.52		9.17	
Anion Sum	meq/L		7.86			7.89		7.78		8.34		8.35		8.58	
Ion Balance	%		0.38			3.26		6.63		1.41		1.02		3.36	
Total Oil and Grease	mg/L		<0.50	2.9*	<0.50	<0.50	<0.5	<0.50	<0.50	0.5	0.6	0.8	1.5	0.9	<0.50

PARAMETER	UNITS	ODWQS	BH92-8							
Date			15-Mar-23	Mar-23 (dup)	17-Nov-23	Nov-23 (dup)	13-Mar-24	Mar-24 (dup)	11-Sep-24	Sep-24 (dup)
Sodium	mg/L	200 [2]	88		58		75		77	
Potassium	mg/L		2.9		3.3		2.9		3.1	
Calcium	mg/L		55		66		55		56	
Magnesium	mg/L		37		46		38		38	
Alkalinity (as CaCO3)	mg/L	30-500 [3]	160		210		180		160	
Sulphate	mg/L	500 [2]	46		46		45		48	
Chloride	mg/L	250 [2]	160		150		150		170	
Orthophosphate (as P)	mg/L		<0.010		<0.010		<0.010		<0.010	
Nitrate and Nitrite (as N)	mg/L	10 [1]	<0.10		<0.10		<0.10		<0.10	
Ammonia (as N)	mg/L		<0.050		<0.050		<0.050		<0.050	
Iron	mg/L	0.3 [2]	<0.10		<0.100		0.31		<0.100	
Manganese	mg/L	0.05 [2]	0.13		0.26		0.26		0.18	
Copper	mg/L	1 [2]	0.0015		<0.00090		0.0023		<0.00090	
Zinc	mg/L	5 [2]	0.045		0.078		0.13		0.057	
Conductivity	µS/cm		940		990		960		950	
pH	Units	6.5-8.5 [3]	8.13		8.08		7.98		8.03	
Dissolved Organic Carbon	mg/L	5 [2]	0.51		0.50		0.48		0.50	
Hardness (as CaCO3)	mg/L	80-100 [3]	290		350		290		300	
Bicarbonate (as CaCO3)	mg/L		160		200		180		160	
Carbonate (as CaCO3)	mg/L		2		2.3		1.6		1.6	
Total Dissolved Solids	mg/L	500 [2]	475		495		470		535	
Cation Sum	meq/L		9.71		9.68		9.26		9.33	
Anion Sum	meq/L		8.57		9.23		8.77		9.05	
Ion Balance	%		6.23		2.39		2.69		1.54	
Total Oil and Grease	mg/L		<0.50	<0.50	2.0	<0.50	<0.50	<0.50	<0.50	1.1

NOTES:
- ODWQS Ontario Drinking Water Quality Standards (2006)
- (1) Maximum Acceptable Concentration
- (2) Aesthetic Objective
- (3) Operational Guideline
- * Concentration considered anomalous

TABLE C-3
PHASE 1 POND CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	PWQO												
Date			14-Dec-00	10-Apr-01	06-Nov-01	12-Apr-02	20-Nov-02	23-Apr-03	06-Nov-03	10-Mar-04	05-Nov-04	18-Apr-05	11-Nov-05	27-Apr-06	06-Nov-06
Sodium	mg/L		48.1	42.4	48	46.1	50.8	51.2	50.6	11.1	50.6	46.8	53.8	49.9	52
Potassium	mg/L		3	2	2	2	2	2	2	<1	2	2	2	2	2
Calcium	mg/L		51.3	45.6	53.1	55.4	51.9	52.5	46.1	14.7	52.0	43.9	45.1	46.1	43
Magnesium	mg/L		27.3	22.7	25.9	25.4	28.9	28.5	28.9	5.96	32.8	28.1	32	30.2	30
Alkalinity (as CaCO3)	mg/L		146	126	150	158	136	139	129	41	137	140	127	147	140
Sulphate	mg/L		62	58.4	68.9	64.5	69.5	67.4	71.2	16.2	68.4	59.7	55	42	57
Chloride	mg/L		97.8	83.5	97	91.7	99.7	98.1	105	23.3	105	105	105	107	114
Orthophosphate (as P)	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.005	0.01	<0.01
Nitrate and Nitrite (as N)	mg/L		0.3	<0.2	<0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	<0.1
Ammonia (as N)	mg/L		<0.05	<0.03	<0.03	0.04	<0.03	<0.03	0.04	0.13	<0.03	<0.03	<0.05	<0.05	0.08
Un-ionized Ammonia	mg/L	0.02	<0.05	<0.03	<0.03	0.001	<0.0009	<0.001	0.002	0.001	<0.001	<0.001	<0.001	<0.001	0.003
Iron	mg/L	0.3	0.01	0.04	0.32	0.48	0.04	0.08	0.05	0.18	0.41	0.04	0.04	0.07	0.02
Manganese	mg/L		<0.005	0.007	0.021	0.025	0.009	0.006	0.006	0.009	0.047	0.005	<0.01	0.01	<0.01
Copper	mg/L	0.005	<0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.02
Zinc	mg/L	0.03	0.009	0.006	0.038	0.105	0.018	0.021	0.01	0.019	0.033	0.01	<0.01	0.02	<0.01
Colour	TCU		<3	<3	18	31	<3	<3	4	16	22	<2			
Turbidity	NTU		0.6	0.9	10.2	18.6	3.6	3	0.9	5.9	25	2			
Conductivity	µS/cm		651	571	713	692	683	653	683	185	686	707	606	724	723
pH	Units	6.5-8.5	8.1	8.04	8.13	8.24	8.28	8.25	8.31	7.79	8.35	8.4	8.31	8.3	8.3
Dissolved Organic Carbon	mg/L		0.9	0.7	0.5	0.9	1	0.8	1.1	0.7	1.1	0.9	1.4	1.4	1.8
Hardness (as CaCO3)	mg/L		240	207	239	243	249	249	234	61.2	265	225	240	240	220
Bicarbonate (as CaCO3)	mg/L		144	125	148	155	134	137	126	41	134	137	125	144	138
Carbonate (as CaCO3)	mg/L		2	1	2	3	2	2	2	<1	3	3	2	3	3
Total Dissolved Solids	mg/L		382	333	389	385	389	387	384	99	396	372	370	366	378
Cation Sum	meq/L		6.96	6.03	6.91	6.90	7.23	7.24	6.94	1.73	7.56	6.59	7.29	7.02	6.68
Anion Sum	meq/L		6.99	6.09	7.17	7.11	7	6.97	7.04	1.84	7.15	7.02	6.66	6.83	7.21
% Difference	%		0.2	0.53	1.83	1.46	1.6	1.92	0.76	3.00	2.81	3.2	4.47	1.42	3.85
Animal/Vegetable Oil	mg/L		<1	<1	<1	<1	<1								<0.5
Mineral Oil	mg/L				<1	<1	<1								<0.5
Total Oil and Grease	mg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.8	<0.5	<0.5
Reactive Silica	mg/L		3.9	3.3	4.1	3.8	3.8	3.1	1.6	1.3	1.1	0.8			

NOTE: PWQO - Provincial Water Quality Objectives (February 1999)

TABLE C-3
PHASE 1 POND CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	PWQO												
Date			30-Apr-07	15-Nov-07	29-Apr-08	17-Dec-08	15-Apr-09	25-Nov-09	16-Apr-10	29-Nov-10	13-Apr-11	16-Nov-11	10-Apr-12	06-Dec-12	04-Apr-13
Sodium	mg/L		53	55	59	42	54.3	57	54	57	60	54	57	56	9.6*
Potassium	mg/L		2.4	2.6	2.5	2.0	2	2.4	2.2	2.6	2.6	2.5	2.5	2.5	<1*
Calcium	mg/L		45	44	46	52	43.9	44.7	44	46	49	45	46	50	9.88*
Magnesium	mg/L		31	32	34	26	29.6	29.7	29	33	33	30	31	31	4.48*
Alkalinity (as CaCO3)	mg/L		142	130	141	185	150	140	141	134	137	134	140	150	28
Sulphate	mg/L		81	64	46	40	45	46	46	48	47	54	52	58	8
Chloride	mg/L		110	120	110	83	110	110	120	110	120	110	110	110	19
Orthophosphate (as P)	mg/L		<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013
Nitrate and Nitrite (as N)	mg/L		<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia (as N)	mg/L		0.07	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.14
Un-ionized Ammonia	mg/L	0.02	0.004	<0.001	<0.0001	0.0001	<0.0001	<0.0001	0.0004	0.0006		0.001	<0.001	<0.001	<0.001
Iron	mg/L	0.3	<0.05	<0.1	<0.1	<0.02	0.04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.05*
Manganese	mg/L		0.005	0.007	0.004	<0.01	<0.01	<0.002	0.004	0.005	0.005	0.003	0.0045	0.0047	<0.01*
Copper	mg/L	0.005	0.005	0.001	<0.001	<0.02	<0.02	<0.001	0.001	0.002	0.001	0.001	0.0022	0.0012	<0.02*
Zinc	mg/L	0.03	0.01	0.013	0.01	<0.01	0.01	0.006	0.005	0.010	0.008	0.012	0.012	0.0091	<0.01*
Turbidity	NTU		1.9	2.5	1.2	2.1					1.1	1.3	0.9	1.6	
Conductivity	µS/cm		722	749	723	692	718	736	724	730	725	741	680	780	140
pH	Units	6.5-8.5	8.3	8.1	8.3	8.0	7.8	8.2	8.2	8.3	8.2	8.3	8.2	7.84	7.27
Dissolved Organic Carbon	mg/L						1.4	1.4		1.5					0.31
Total Organic Carbon	mg/L														
Hardness (as CaCO3)	mg/L		230	220	220	240	230	230	220	240	220	230	230	250	43
Bicarbonate (as CaCO3)	mg/L		139	130	138	183	149	138	139	131	134	131	130	150	28
Carbonate (as CaCO3)	mg/L		2	2	3	2	<1	2	2	3	2	2	2	<1.0	<1.0
Total Dissolved Solids	mg/L			389	362	357	379	373	377	377	372		372	404	68.0
Cation Sum	meq/L						7.05	7.09		7.32					1.30
Anion Sum	meq/L						7.11	6.88		6.86					1.27
% Difference	%						0.46	1.5		3.29					
Animal/Vegetable Oil	mg/L		<0.5				<0.5	1.6		<0.5					
Mineral Oil	mg/L		<0.5				<0.5	<0.5		<0.5	<0.5				
Total Oil and Grease	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.70

NOTE: PWQO - Provincial Water Quality Objectives (February 1999) * Dissolved concentration

TABLE C-3
PHASE 1 POND CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	PWQO												
Date			10-Dec-13	01-Apr-14	15-Dec-14	06-Apr-15	10-Dec-15	30-Mar-16	14-Nov-16	17-Mar-17	21-Nov-17	26-Mar-18	21-Nov-18	19-Mar-19	13-Nov-19
Sodium	mg/L		55	12	53	1.8	52	58	56	49	56	56	62	55	67
Potassium	mg/L		2.6	0.95	2.7	<0.2	3	3	3	2.6	2.6	2.8	2.8	2.4	3.0
Calcium	mg/L		55	26	53	3.1	46	52	42	45	42	41	40	36	51
Magnesium	mg/L		34	12	32	1.1	32	34	32	31	33	33	35	28	36
Alkalinity (as CaCO3)	mg/L		140	64	140	6.5	130	140	130	140	130	140	140	120	140
Sulphate	mg/L		66	12	64	1	62	60	60	60	50	49	43	39	39
Chloride	mg/L		120	22	110	4	110	110	130	120	130	120	140	130	130
Orthophosphate (as P)	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L		<0.1	0.48	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.11
Ammonia (as N)	mg/L		<0.05	0.33	0.056	0.088	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.073	0.062	<0.050
Un-ionized Ammonia	mg/L	0.02	<0.001	0.009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001
Iron	mg/L	0.3	<0.1	0.75	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	0.41	<0.10	0.2
Manganese	mg/L		0.011	0.042	0.002	0.011	0.003	0.0087	0.0029	0.0097	0.0029	0.0064	0.047	0.0064	0.013
Copper	mg/L	0.005	0.0012	0.0034	0.0011	0.0017	0.0010	0.0011	0.0012	<0.1	<0.001	<0.001	0.0022	<0.0010	0.0026
Zinc	mg/L	0.03	0.032	0.042	0.009	0.026	0.005	0.014	0.0051	0.017	0.0053	0.011	0.048	0.011	0.087
Turbidity	NTU		3.3	23	0.5	0.7	0.5	1.6	0.7	0.7	0.5	0.9	6.3	0.7	3.2
Conductivity	µS/cm		780	220	760	29	760	770	760	780	780	770	790	730	810
pH	Units	6.5-8.5	8.24	7.82	8.09	6.71	8.26	8.17	8.26	8.19	8.26	8.1	8.04	8.16	8.30
Dissolved Organic Carbon	mg/L														
Total Organic Carbon	mg/L		1.3	2.2	1.4	0.28	1.2	1.1	1.4	0.98	1.2	1.1	1.1	1.1	1.2
Hardness (as CaCO3)	mg/L		250	84	260	8.7	260	270	240	240	250	250	260	210	280
Bicarbonate (as CaCO3)	mg/L		140	64	140	6.5	130	140	130	140	130	140	130	120	130
Carbonate (as CaCO3)	mg/L		2.3	<1.0	1.6	<1.0	2.2	1.9	2.2	2.0	2.3	1.6	1.4	1.7	2.5
Total Dissolved Solids	mg/L		400	120	400	14	400	400	400	398	370	360	430	345	395
Cation Sum	meq/L														
Anion Sum	meq/L														
% Difference	%														
Animal/Vegetable Oil	mg/L														
Mineral Oil	mg/L														
Total Oil and Grease	mg/L		<0.5	<0.5	<0.5	0.80	<0.5	<0.50	<0.50	0.90	0.80	<0.50	0.60	<0.50	0.50

NOTE: PWQO - Provincial Water Quality Objectives (February 1999)

TABLE C-3
PHASE 1 POND CHEMICAL RESULTS
MILL CREEK AGGREGATES PIT

PARAMETER	UNITS	PWQO													
Date			09-Mar-20	19-Nov-20	10-Mar-21	10-Nov-21	17-Mar-22	25-Nov-22	16-Dec-22	16-Dec-22 (dup)	15-Mar-23	17-Nov-23	17-Nov-23 (dup)	13-Mar-24	11-Sep-24
Sodium	mg/L		13	73	71	75	76	91			89	95		93	88
Potassium	mg/L		0.7	3.2	3.0	3.4	3.1	3.6			3.7	3.5		3.3	3.3
Calcium	mg/L		12	44	40	39	40	42			41	42		43	40
Magnesium	mg/L		5	35	33	35	33	38			38	36		35	33
Alkalinity (as CaCO3)	mg/L		36	140	130	130	100	140			140	130		130	120
Sulphate	mg/L		6.9	40	41	42	32	38			44	41		39	43
Chloride	mg/L		30	140	140	150	120	170			170	180		180	190
Orthophosphate (as P)	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			<0.010	<0.010		<0.010	<0.010
Nitrate and Nitrite (as N)	mg/L		0.15	<0.10	<0.10	<0.10	0.14	<0.10			<0.10	<0.10		<0.10	<0.10
Ammonia (as N)	mg/L		0.18	<0.050	<0.050	<0.050	0.062	<0.050			<0.050	<0.050		<0.050	<0.050
Un-ionized Ammonia	mg/L	0.02	0.001	<0.001	<0.001	<0.002	<0.001	<0.002			<0.001	<0.002		<0.001	<0.011
Iron	mg/L	0.3	0.17	0.66	0.18	0.11	0.12	0.15			<0.1	0.24		<0.1	<0.1
Manganese	mg/L		0.018	0.045	0.015	0.0098	0.013	0.019			0.0073	0.019		0.0028	0.0036
Copper	mg/L	0.005	0.0011	0.0035	0.0014	<0.00090	0.0010	0.0017			0.0013	0.0012		<0.00090	<0.00090
Zinc	mg/L	0.03	0.026	0.066	0.024	0.016	0.021	0.053			0.028	0.0062		<0.005	<0.005
Turbidity	NTU		3.4	13	3.9	6.2	9.6	3.1			0.5	2.5		0.2	1.0
Conductivity	µS/cm		190	870	850	870	690	950			960	960		930	940
pH	Units	6.5-8.5	7.83	8.27	8.30	8.21	8.12	8.32			8.12	8.31		8.19	8.34
Dissolved Organic Carbon	mg/L														
Total Organic Carbon	mg/L		1.2	1.0	1.1	0.77	0.86	0.86			1.0	1.0		4.2	0.87
Hardness (as CaCO3)	mg/L		46	240	230	240	190	250			250	250		260	230
Bicarbonate (as CaCO3)	mg/L		36	140	130	130	100	140			140	130		130	120
Carbonate (as CaCO3)	mg/L		<1.0	2.4	2.4	2.0	1.3	2.7			1.7	2.5		1.8	2.4
Total Dissolved Solids	mg/L		60	495	395	475	360	400			445	470		475	505
Cation Sum	meq/L														
Anion Sum	meq/L														
% Difference	%														
Animal/Vegetable Oil	mg/L														
Mineral Oil	mg/L														
Total Oil and Grease	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	2.6	<0.50	<0.50	<0.50	1.0	0.60	<0.50	0.60

NOTE: PWQO - Provincial Water Quality Objectives (February 1999)

Your Project #: CA0019938.6257-200
Your C.O.C. #: 1011210-01-01

Attention: Rebecca Warrack

WSP Canada Inc.
55 King St
Suite 700
St. Catharines, ON
CANADA L2R3H5

Report Date: 2024/09/19
Report #: R8327361
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4S3873
Received: 2024/09/11, 14:26

Sample Matrix: Ground Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	3	N/A	2024/09/16	CAM SOP-00448	SM 24 2320 B m
Carbonate, Bicarbonate and Hydroxide	3	N/A	2024/09/17	CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	3	N/A	2024/09/17	CAM SOP-00463	SM 24 4500-Cl E m
Conductivity	3	N/A	2024/09/16	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1)	3	N/A	2024/09/16	CAM SOP-00446	SM 24 5310 B m
Hardness (calculated as CaCO3)	3	N/A	2024/09/16	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Metals by ICPMS	3	N/A	2024/09/13	CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference)	3	N/A	2024/09/17		
Anion and Cation Sum	3	N/A	2024/09/17		
Total Ammonia-N	3	N/A	2024/09/14	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (2)	3	N/A	2024/09/16	CAM SOP-00440	SM 24 4500-NO3I/NO2B
Total Oil and Grease	4	2024/09/13	2024/09/13	CAM SOP-00326	EPA1664B m,SM5520B m
pH (3)	3	2024/09/14	2024/09/16	CAM SOP-00413	SM 24th - 4500H+ B
Orthophosphate	3	N/A	2024/09/16	CAM SOP-00461	SM 24 4500-P E
Sulphate by Automated Turbidimetry	3	N/A	2024/09/16	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	3	2024/09/13	2024/09/16	CAM SOP-00428	SM 24 2540C m

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	1	N/A	2024/09/17	CAM SOP-00448	SM 24 2320 B m
Carbonate, Bicarbonate and Hydroxide	1	N/A	2024/09/17	CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	1	N/A	2024/09/17	CAM SOP-00463	SM 24 4500-Cl E m
Conductivity	1	N/A	2024/09/17	CAM SOP-00414	SM 24 2510 m
Hardness (calculated as CaCO3)	1	N/A	2024/09/19	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Calcium and Magnesium	1	2024/09/17	2024/09/17	CAM SOP-00408	EPA 6010D m
Total Metals Analysis by ICPMS	1	2024/09/16	2024/09/16	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	1	N/A	2024/09/14	CAM SOP-00441	USGS I-2522-90 m

Your Project #: CA0019938.6257-200
Your C.O.C. #: 1011210-01-01

Attention: Rebecca Warrack

WSP Canada Inc.
55 King St
Suite 700
St. Catharines, ON
CANADA L2R3H5

Report Date: 2024/09/19
Report #: R8327361
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4S3873
Received: 2024/09/11, 14:26

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate & Nitrite as Nitrogen in Water (2)	1	N/A	2024/09/16	CAM SOP-00440	SM 24 4500-NO3I/NO2B
Total Oil and Grease	1	2024/09/13	2024/09/13	CAM SOP-00326	EPA1664B m,SM5520B m
pH (3)	1	2024/09/17	2024/09/17	CAM SOP-00413	SM 24th - 4500H+ B
Orthophosphate	1	N/A	2024/09/17	CAM SOP-00461	SM 24 4500-P E
Sulphate by Automated Turbidimetry	1	N/A	2024/09/17	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	1	2024/09/13	2024/09/16	CAM SOP-00428	SM 24 2540C m
Total Organic Carbon (TOC) (4)	1	N/A	2024/09/17	CAM SOP-00446	SM 24 5310B m
Turbidity	1	N/A	2024/09/13	CAM SOP-00417	SM 24 2130 B

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Your Project #: CA0019938.6257-200
Your C.O.C. #: 1011210-01-01

Attention: Rebecca Warrack

WSP Canada Inc.
55 King St
Suite 700
St. Catharines, ON
CANADA L2R3H5

Report Date: 2024/09/19
Report #: R8327361
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4S3873

Received: 2024/09/11, 14:26

(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(4) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
Email: ashton.gibson@bureauveritas.com
Phone# (905)817-5765

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4S3873
Report Date: 2024/09/19

WSP Canada Inc.
Client Project #: CA0019938.6257-200
Sampler Initials: KB

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		ACNN94		ACNN95			ACNN96		
Sampling Date		2024/09/11 09:40		2024/09/11 10:40			2024/09/11 11:05		
COC Number		1011210-01-01		1011210-01-01			1011210-01-01		
	UNITS	92-32III	RDL	BHIR	RDL	QC Batch	92-8	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	6.51	N/A	8.82	N/A	9633850	9.05	N/A	9633850
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	190	1.0	130	1.0	9633860	160	1.0	9633860
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.7	1.0	1.4	1.0	9633860	1.6	1.0	9633860
Cation Sum	me/L	6.88	N/A	9.41	N/A	9633850	9.33	N/A	9633850
Hardness (CaCO3)	mg/L	270	1.0	240	1.0	9633643	300	1.0	9635884
Ion Balance (% Difference)	%	2.73	N/A	3.23	N/A	9633849	1.54	N/A	9633849
Inorganics									
Total Ammonia-N	mg/L	<0.050	0.050	0.14	0.050	9637309	<0.050	0.050	9637309
Conductivity	umho/cm	660	1.0	980	1.0	9639507	950	1.0	9639507
Total Dissolved Solids	mg/L	335	10	545	10	9637249	535	10	9637249
Dissolved Organic Carbon	mg/L	1.3	0.40	0.52	0.40	9640132	0.50	0.40	9640132
Orthophosphate (P)	mg/L	<0.010	0.010	<0.010	0.010	9640028	<0.010	0.010	9640028
pH	pH	7.98		8.06		9639476	8.03		9639476
Dissolved Sulphate (SO4)	mg/L	32	1.0	38	1.0	9640036	48	1.0	9640036
Alkalinity (Total as CaCO3)	mg/L	200	1.0	130	1.0	9639475	160	1.0	9639475
Dissolved Chloride (Cl-)	mg/L	68	1.0	190	2.0	9639496	170	1.0	9639496
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	9639357	<0.010	0.010	9639357
Nitrate (N)	mg/L	<0.10	0.10	0.13	0.10	9639357	<0.10	0.10	9639357
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	0.13	0.10	9639357	<0.10	0.10	9639357
Petroleum Hydrocarbons									
Total Oil & Grease	mg/L	1.2	0.50	1.1	0.50	9637248	<0.50	0.50	9637248

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		ACNN98		
Sampling Date		2024/09/11		
COC Number		1011210-01-01		
	UNITS	DUP1	RDL	QC Batch
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	1.1	0.50	9637248

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

ELEMENTS BY ATOMIC SPECTROSCOPY (GROUND WATER)

Bureau Veritas ID		ACNN94	ACNN95	ACNN96		
Sampling Date		2024/09/11 09:40	2024/09/11 10:40	2024/09/11 11:05		
COC Number		1011210-01-01	1011210-01-01	1011210-01-01		
	UNITS	92-32III	BHIR	92-8	RDL	QC Batch
Metals						
Dissolved Calcium (Ca)	ug/L	64000	45000	56000	200	9637187
Dissolved Copper (Cu)	ug/L	0.92	<0.90	<0.90	0.90	9637187
Dissolved Iron (Fe)	ug/L	<100	<100	<100	100	9637187
Dissolved Magnesium (Mg)	ug/L	26000	31000	38000	50	9637187
Dissolved Manganese (Mn)	ug/L	520	2.2	180	2.0	9637187
Dissolved Potassium (K)	ug/L	1500	2900	3100	200	9637187
Dissolved Sodium (Na)	ug/L	34000	100000	77000	100	9637187
Dissolved Zinc (Zn)	ug/L	30	5.9	57	5.0	9637187

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		ACNN97		
Sampling Date		2024/09/11 11:30		
COC Number		1011210-01-01		
	UNITS	POND 1	RDL	QC Batch
Calculated Parameters				
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	120	1.0	9633860
Carb. Alkalinity (calc. as CaCO3)	mg/L	2.4	1.0	9633860
Hardness (CaCO3)	mg/L	230	1.0	9633643
Inorganics				
Total Ammonia-N	mg/L	<0.050	0.050	9637309
Conductivity	umho/cm	940	1.0	9642480
Total Dissolved Solids	mg/L	505	10	9637249
Total Organic Carbon (TOC)	mg/L	0.87	0.40	9640861
Orthophosphate (P)	mg/L	<0.010	0.010	9642446
pH	pH	8.34		9640410
Dissolved Sulphate (SO4)	mg/L	43	1.0	9642448
Turbidity	NTU	1.0	0.1	9637377
Alkalinity (Total as CaCO3)	mg/L	120	1.0	9642475
Dissolved Chloride (Cl-)	mg/L	190	1.0	9642447
Nitrite (N)	mg/L	<0.010	0.010	9637726
Nitrate (N)	mg/L	<0.10	0.10	9637726
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	9637726
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	0.60	0.50	9637248

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

ELEMENTS BY ATOMIC SPECTROSCOPY (SURFACE WATER)

Bureau Veritas ID		ACNN97		
Sampling Date		2024/09/11 11:30		
COC Number		1011210-01-01		
	UNITS	POND 1	RDL	QC Batch
Metals				
Dissolved Calcium (Ca)	mg/L	39	0.050	9643526
Dissolved Magnesium (Mg)	mg/L	33	0.050	9643526
Total Calcium (Ca)	ug/L	40000	200	9640462
Total Copper (Cu)	ug/L	<0.90	0.90	9640462
Total Iron (Fe)	ug/L	<100	100	9640462
Total Magnesium (Mg)	ug/L	33000	50	9640462
Total Manganese (Mn)	ug/L	3.6	2.0	9640462
Total Potassium (K)	ug/L	3300	200	9640462
Total Sodium (Na)	ug/L	88000	100	9640462
Total Zinc (Zn)	ug/L	<5.0	5.0	9640462

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	18.3°C

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9637187	IHP	Matrix Spike	Dissolved Calcium (Ca)	2024/09/13		NC	%	80 - 120
			Dissolved Copper (Cu)	2024/09/13		93	%	80 - 120
			Dissolved Iron (Fe)	2024/09/13		96	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/13		93	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/13		91	%	80 - 120
			Dissolved Potassium (K)	2024/09/13		97	%	80 - 120
			Dissolved Sodium (Na)	2024/09/13		NC	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/13		96	%	80 - 120
9637187	IHP	Spiked Blank	Dissolved Calcium (Ca)	2024/09/13		96	%	80 - 120
			Dissolved Copper (Cu)	2024/09/13		98	%	80 - 120
			Dissolved Iron (Fe)	2024/09/13		97	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/13		97	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/13		91	%	80 - 120
			Dissolved Potassium (K)	2024/09/13		96	%	80 - 120
			Dissolved Sodium (Na)	2024/09/13		92	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/13		96	%	80 - 120
9637187	IHP	Method Blank	Dissolved Calcium (Ca)	2024/09/13	<200		ug/L	
			Dissolved Copper (Cu)	2024/09/13	<0.90		ug/L	
			Dissolved Iron (Fe)	2024/09/13	<100		ug/L	
			Dissolved Magnesium (Mg)	2024/09/13	<50		ug/L	
			Dissolved Manganese (Mn)	2024/09/13	<2.0		ug/L	
			Dissolved Potassium (K)	2024/09/13	<200		ug/L	
			Dissolved Sodium (Na)	2024/09/13	<100		ug/L	
			Dissolved Zinc (Zn)	2024/09/13	<5.0		ug/L	
9637187	IHP	RPD	Dissolved Calcium (Ca)	2024/09/13	0.31		%	20
			Dissolved Copper (Cu)	2024/09/13	NC		%	20
			Dissolved Iron (Fe)	2024/09/13	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/13	2.7		%	20
			Dissolved Manganese (Mn)	2024/09/13	NC		%	20
			Dissolved Potassium (K)	2024/09/13	0.42		%	20
			Dissolved Sodium (Na)	2024/09/13	1.1		%	20
			Dissolved Zinc (Zn)	2024/09/13	NC		%	20
9637248	AW5	Spiked Blank	Total Oil & Grease	2024/09/13		98	%	80 - 110
9637248	AW5	RPD	Total Oil & Grease	2024/09/13	0.25		%	25
9637248	AW5	Method Blank	Total Oil & Grease	2024/09/13	<0.50		mg/L	
9637249	RTB	Spiked Blank	Total Dissolved Solids	2024/09/16		98	%	80 - 120
9637249	RTB	Method Blank	Total Dissolved Solids	2024/09/16	<10		mg/L	
9637249	RTB	RPD [ACNN97-03]	Total Dissolved Solids	2024/09/16	2.9		%	20
9637309	MUM	Matrix Spike [ACNN94-06]	Total Ammonia-N	2024/09/14		91	%	75 - 125
9637309	MUM	Spiked Blank	Total Ammonia-N	2024/09/14		102	%	80 - 120
9637309	MUM	Method Blank	Total Ammonia-N	2024/09/14	<0.050		mg/L	
9637309	MUM	RPD [ACNN94-06]	Total Ammonia-N	2024/09/14	NC		%	20
9637377	GTK	Spiked Blank	Turbidity	2024/09/13		93	%	80 - 120
9637377	GTK	Method Blank	Turbidity	2024/09/13	<0.1		NTU	
9637377	GTK	RPD	Turbidity	2024/09/13	NC		%	20
9637726	C_N	Matrix Spike	Nitrite (N)	2024/09/16		NC	%	80 - 120
			Nitrate (N)	2024/09/16		NC	%	80 - 120
9637726	C_N	Spiked Blank	Nitrite (N)	2024/09/16		106	%	80 - 120
			Nitrate (N)	2024/09/16		95	%	80 - 120
9637726	C_N	Method Blank	Nitrite (N)	2024/09/16	<0.010		mg/L	
			Nitrate (N)	2024/09/16	<0.10		mg/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9637726	C_N	RPD	Nitrate (N)	2024/09/16	0.75		%	20
9639357	C_N	Matrix Spike	Nitrite (N)	2024/09/16		105	%	80 - 120
			Nitrate (N)	2024/09/16		91	%	80 - 120
9639357	C_N	Spiked Blank	Nitrite (N)	2024/09/16		107	%	80 - 120
			Nitrate (N)	2024/09/16		93	%	80 - 120
9639357	C_N	Method Blank	Nitrite (N)	2024/09/16	<0.010		mg/L	
			Nitrate (N)	2024/09/16	<0.10		mg/L	
9639357	C_N	RPD	Nitrite (N)	2024/09/16	NC		%	20
			Nitrate (N)	2024/09/16	2.9		%	20
9639475	SAU	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/16		94	%	85 - 115
9639475	SAU	Method Blank	Alkalinity (Total as CaCO3)	2024/09/16	<1.0		mg/L	
9639475	SAU	RPD	Alkalinity (Total as CaCO3)	2024/09/16	0.0016		%	20
9639476	SAU	Spiked Blank	pH	2024/09/16		102	%	98 - 103
9639476	SAU	RPD	pH	2024/09/16	1.2		%	N/A
9639496	MJ1	Matrix Spike	Dissolved Chloride (Cl-)	2024/09/17		NC	%	80 - 120
9639496	MJ1	Spiked Blank	Dissolved Chloride (Cl-)	2024/09/17		96	%	80 - 120
9639496	MJ1	Method Blank	Dissolved Chloride (Cl-)	2024/09/17	<1.0		mg/L	
9639496	MJ1	RPD	Dissolved Chloride (Cl-)	2024/09/17	2.7		%	20
9639507	SAU	Spiked Blank	Conductivity	2024/09/16		102	%	85 - 115
9639507	SAU	Method Blank	Conductivity	2024/09/16	<1.0		umho/cm	
9639507	SAU	RPD	Conductivity	2024/09/16	0.072		%	10
9640028	MJ1	Matrix Spike	Orthophosphate (P)	2024/09/16		94	%	75 - 125
9640028	MJ1	Spiked Blank	Orthophosphate (P)	2024/09/16		101	%	80 - 120
9640028	MJ1	Method Blank	Orthophosphate (P)	2024/09/16	<0.010		mg/L	
9640028	MJ1	RPD	Orthophosphate (P)	2024/09/16	3.0		%	20
9640036	MJ1	Matrix Spike	Dissolved Sulphate (SO4)	2024/09/16		NC	%	75 - 125
9640036	MJ1	Spiked Blank	Dissolved Sulphate (SO4)	2024/09/16		100	%	80 - 120
9640036	MJ1	Method Blank	Dissolved Sulphate (SO4)	2024/09/16	<1.0		mg/L	
9640036	MJ1	RPD	Dissolved Sulphate (SO4)	2024/09/16	0.16		%	20
9640132	GID	Matrix Spike	Dissolved Organic Carbon	2024/09/16		97	%	80 - 120
9640132	GID	Spiked Blank	Dissolved Organic Carbon	2024/09/16		97	%	80 - 120
9640132	GID	Method Blank	Dissolved Organic Carbon	2024/09/16	<0.40		mg/L	
9640132	GID	RPD	Dissolved Organic Carbon	2024/09/16	0.24		%	20
9640410	SAU	Spiked Blank	pH	2024/09/17		102	%	98 - 103
9640410	SAU	RPD	pH	2024/09/17	0.19		%	N/A
9640462	AFZ	Matrix Spike [ACNN97-05]	Total Calcium (Ca)	2024/09/16		NC	%	80 - 120
			Total Copper (Cu)	2024/09/16		99	%	80 - 120
			Total Iron (Fe)	2024/09/16		97	%	80 - 120
			Total Magnesium (Mg)	2024/09/16		NC	%	80 - 120
			Total Manganese (Mn)	2024/09/16		96	%	80 - 120
			Total Potassium (K)	2024/09/16		95	%	80 - 120
			Total Sodium (Na)	2024/09/16		NC	%	80 - 120
			Total Zinc (Zn)	2024/09/16		98	%	80 - 120
9640462	AFZ	Spiked Blank	Total Calcium (Ca)	2024/09/16		103	%	80 - 120
			Total Copper (Cu)	2024/09/16		101	%	80 - 120
			Total Iron (Fe)	2024/09/16		102	%	80 - 120
			Total Magnesium (Mg)	2024/09/16		102	%	80 - 120
			Total Manganese (Mn)	2024/09/16		100	%	80 - 120
			Total Potassium (K)	2024/09/16		99	%	80 - 120
			Total Sodium (Na)	2024/09/16		102	%	80 - 120
			Total Zinc (Zn)	2024/09/16		105	%	80 - 120

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9640462	AFZ	Method Blank	Total Calcium (Ca)	2024/09/16	<200		ug/L	
			Total Copper (Cu)	2024/09/16	<0.90		ug/L	
			Total Iron (Fe)	2024/09/16	<100		ug/L	
			Total Magnesium (Mg)	2024/09/16	<50		ug/L	
			Total Manganese (Mn)	2024/09/16	<2.0		ug/L	
			Total Potassium (K)	2024/09/16	<200		ug/L	
			Total Sodium (Na)	2024/09/16	<100		ug/L	
			Total Zinc (Zn)	2024/09/16	<5.0		ug/L	
9640462	AFZ	RPD [ACNN97-05]	Total Calcium (Ca)	2024/09/16	2.2		%	20
			Total Copper (Cu)	2024/09/16	NC		%	20
			Total Iron (Fe)	2024/09/16	NC		%	20
			Total Magnesium (Mg)	2024/09/16	1.7		%	20
			Total Manganese (Mn)	2024/09/16	1.7		%	20
			Total Potassium (K)	2024/09/16	2.8		%	20
			Total Sodium (Na)	2024/09/16	2.3		%	20
			Total Zinc (Zn)	2024/09/16	NC		%	20
9640861	GID	Matrix Spike [ACNN97-04]	Total Organic Carbon (TOC)	2024/09/17		96	%	80 - 120
9640861	GID	Spiked Blank	Total Organic Carbon (TOC)	2024/09/16		100	%	80 - 120
9640861	GID	Method Blank	Total Organic Carbon (TOC)	2024/09/16	<0.40		mg/L	
9640861	GID	RPD [ACNN97-04]	Total Organic Carbon (TOC)	2024/09/17	1.7		%	20
9642446	MJ1	Matrix Spike	Orthophosphate (P)	2024/09/17		NC	%	75 - 125
9642446	MJ1	Spiked Blank	Orthophosphate (P)	2024/09/17		96	%	80 - 120
9642446	MJ1	Method Blank	Orthophosphate (P)	2024/09/17	<0.010		mg/L	
9642446	MJ1	RPD	Orthophosphate (P)	2024/09/17	0.23		%	20
			Orthophosphate (P)	2024/09/17	1.8		%	20
			Orthophosphate (P)	2024/09/17	0.17		%	20
			Orthophosphate (P)	2024/09/17	5.0		%	20
			Orthophosphate (P)	2024/09/17	10		%	20
			Orthophosphate (P)	2024/09/17	0.76		%	20
9642447	MJ1	Matrix Spike	Dissolved Chloride (Cl-)	2024/09/17		NC	%	80 - 120
9642447	MJ1	Spiked Blank	Dissolved Chloride (Cl-)	2024/09/17		97	%	80 - 120
9642447	MJ1	Method Blank	Dissolved Chloride (Cl-)	2024/09/17	<1.0		mg/L	
9642447	MJ1	RPD	Dissolved Chloride (Cl-)	2024/09/17	0.87		%	20
9642448	MJ1	Matrix Spike	Dissolved Sulphate (SO4)	2024/09/17		NC	%	75 - 125
9642448	MJ1	Spiked Blank	Dissolved Sulphate (SO4)	2024/09/17		97	%	80 - 120
9642448	MJ1	Method Blank	Dissolved Sulphate (SO4)	2024/09/17	<1.0		mg/L	
9642448	MJ1	RPD	Dissolved Sulphate (SO4)	2024/09/17	0.54		%	20
9642475	SAU	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/17		95	%	85 - 115
9642475	SAU	Method Blank	Alkalinity (Total as CaCO3)	2024/09/17	<1.0		mg/L	
9642475	SAU	RPD	Alkalinity (Total as CaCO3)	2024/09/17	0.55		%	20
9642480	SAU	Spiked Blank	Conductivity	2024/09/17		101	%	85 - 115
9642480	SAU	Method Blank	Conductivity	2024/09/17	<1.0		umho/cm	
9642480	SAU	RPD	Conductivity	2024/09/17	0.31		%	10
9643526	SUK	Matrix Spike	Dissolved Calcium (Ca)	2024/09/17		98	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/17		96	%	80 - 120
9643526	SUK	Spiked Blank	Dissolved Calcium (Ca)	2024/09/17		96	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/17		95	%	80 - 120
9643526	SUK	Method Blank	Dissolved Calcium (Ca)	2024/09/17	<0.050		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Magnesium (Mg)	2024/09/17	<0.050		mg/L	

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Supervisor-Afternoon Shift

Cristina Carriere, Senior Scientific Specialist

Louise Harding, Scientific Specialist

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Your Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Your C.O.C. #: 979626-01-01

Attention: Matthew Hamming

WSP Canada Inc.
582 Lancaster St W
Kitchener, ON
Canada N2K 1M3

Report Date: 2024/03/20
Report #: R8074304
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C478561
Received: 2024/03/14, 14:34

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	4	N/A	2024/03/19	CAM SOP-00448	SM 24 2320 B m
Carbonate, Bicarbonate and Hydroxide	4	N/A	2024/03/20	CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	4	N/A	2024/03/20	CAM SOP-00463	SM 24 4500-Cl E m
Conductivity	4	N/A	2024/03/19	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1)	3	N/A	2024/03/19	CAM SOP-00446	SM 24 5310 B m
Hardness (calculated as CaCO3)	4	N/A	2024/03/20	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Calcium and Magnesium	1	2024/03/19	2024/03/20	CAM SOP-00408	EPA 6010D m
Dissolved Metals by ICPMS	3	N/A	2024/03/19	CAM SOP-00447	EPA 6020B m
Total Metals Analysis by ICPMS	1	2024/03/19	2024/03/19	CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference)	3	N/A	2024/03/20		
Anion and Cation Sum	3	N/A	2024/03/20		
Total Ammonia-N	4	N/A	2024/03/19	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (2)	4	N/A	2024/03/19	CAM SOP-00440	SM 24 4500-NO3I/NO2B
Total Oil and Grease	5	2024/03/19	2024/03/19	CAM SOP-00326	EPA1664B m,SM5520B m
pH (3)	4	2024/03/19	2024/03/19	CAM SOP-00413	SM 24th - 4500H+ B
Orthophosphate	4	N/A	2024/03/20	CAM SOP-00461	SM 24 4500-P E
Sulphate by Automated Turbidimetry	4	N/A	2024/03/20	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	3	2024/03/18	2024/03/19	CAM SOP-00428	SM 24 2540C m
Total Dissolved Solids	1	2024/03/19	2024/03/20	CAM SOP-00428	SM 24 2540C m
Total Organic Carbon (TOC) (4)	1	N/A	2024/03/20	CAM SOP-00446	SM 24 5310B m
Turbidity	1	N/A	2024/03/19	CAM SOP-00417	SM 24 2130 B

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Your Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Your C.O.C. #: 979626-01-01

Attention: Matthew Hamming

WSP Canada Inc.
582 Lancaster St W
Kitchener, ON
Canada N2K 1M3

Report Date: 2024/03/20
Report #: R8074304
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C478561
Received: 2024/03/14, 14:34

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(4) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
Email: Ashton.Gibson@bureauveritas.com
Phone# (905)817-5765

==========

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Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		YQI625			YQI625			YQI626		
Sampling Date		2024/03/13			2024/03/13			2024/03/13		
COC Number		979626-01-01			979626-01-01			979626-01-01		
	UNITS	POND 1	RDL	QC Batch	POND 1 Lab-Dup	RDL	QC Batch	BH1-R	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L							9.14	N/A	9278118
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	130	1.0	9280908				140	1.0	9276460
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.8	1.0	9280908				1.7	1.0	9276460
Cation Sum	me/L							9.37	N/A	9278118
Hardness (CaCO3)	mg/L	260	1.0	9280783				250	1.0	9276458
Ion Balance (% Difference)	%							1.26	N/A	9277316
Inorganics										
Total Ammonia-N	mg/L	<0.050	0.050	9282414	<0.050	0.050	9282414	<0.050	0.050	9282414
Conductivity	umho/cm	930	1.0	9282693				1000	1.0	9282693
Total Dissolved Solids	mg/L	475	10	9280156				520	10	9280156
Dissolved Organic Carbon	mg/L							0.82	0.40	9282282
Total Organic Carbon (TOC)	mg/L	4.2	0.40	9282420						
Orthophosphate (P)	mg/L	<0.010	0.010	9282958				<0.010	0.010	9282958
pH	pH	8.19		9282682				8.11		9282682
Dissolved Sulphate (SO4)	mg/L	39	1.0	9282955				34	1.0	9282955
Turbidity	NTU	0.2	0.1	9281533						
Alkalinity (Total as CaCO3)	mg/L	130	1.0	9282692				140	1.0	9282692
Dissolved Chloride (Cl-)	mg/L	180	1.0	9282933				200	1.0	9282933
Nitrite (N)	mg/L	<0.010	0.010	9282507				<0.010	0.010	9282507
Nitrate (N)	mg/L	<0.10	0.10	9282507				0.20	0.10	9282507
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	9282507				0.20	0.10	9282507
Petroleum Hydrocarbons										
Total Oil & Grease	mg/L	<0.50	0.50	9282196				<0.50	0.50	9282196

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		YQI627		YQI628			YQI629		
Sampling Date		2024/03/13		2024/03/13			2024/03/13		
COC Number		979626-01-01		979626-01-01			979626-01-01		
	UNITS	BH92-8	QC Batch	BH92-32-111	RDL	QC Batch	BLIND DUP	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	8.77	9278118	9.19	N/A	9278118			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	180	9276460	320	1.0	9276460			
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.6	9276460	1.7	1.0	9276460			
Cation Sum	me/L	9.26	9278118	9.27	N/A	9278118			
Hardness (CaCO3)	mg/L	290	9281923	390	1.0	9281923			
Ion Balance (% Difference)	%	2.69	9277316	0.460	N/A	9277316			
Inorganics									
Total Ammonia-N	mg/L	<0.050	9282414	<0.050	0.050	9282414			
Conductivity	umho/cm	960	9282693	870	1.0	9282693			
Total Dissolved Solids	mg/L	470	9280156	495	10	9282665			
Dissolved Organic Carbon	mg/L	0.48	9282282	2.2	0.40	9282282			
Orthophosphate (P)	mg/L	<0.010	9282958	<0.010	0.010	9282958			
pH	pH	7.98	9282682	7.76		9282682			
Dissolved Sulphate (SO4)	mg/L	45	9282955	35	1.0	9282955			
Alkalinity (Total as CaCO3)	mg/L	180	9282692	330	1.0	9282692			
Dissolved Chloride (Cl-)	mg/L	150	9282933	70	1.0	9282933			
Nitrite (N)	mg/L	<0.010	9282507	<0.010	0.010	9282507			
Nitrate (N)	mg/L	<0.10	9282507	<0.10	0.10	9282507			
Nitrate + Nitrite (N)	mg/L	<0.10	9282507	<0.10	0.10	9282507			
Petroleum Hydrocarbons									
Total Oil & Grease	mg/L	<0.50	9282196	<0.50	0.50	9282196	<0.50	0.50	9282196

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		YQI625			YQI625			YQI626	YQI626		
Sampling Date		2024/03/13			2024/03/13			2024/03/13	2024/03/13		
COC Number		979626-01-01			979626-01-01			979626-01-01	979626-01-01		
	UNITS	POND 1	RDL	QC Batch	POND 1 Lab-Dup	RDL	QC Batch	BH1-R	BH1-R Lab-Dup	RDL	QC Batch
Metals											
Dissolved Calcium (Ca)	mg/L	43	0.050	9283330							
Dissolved Magnesium (Mg)	mg/L	36	0.050	9283330							
Dissolved Calcium (Ca)	ug/L							49000	48000	200	9283021
Total Calcium (Ca)	ug/L	43000	200	9283052	40000	200	9283052				
Dissolved Copper (Cu)	ug/L							<0.90	<0.90	0.90	9283021
Total Copper (Cu)	ug/L	<0.90	0.90	9283052	<0.90	0.90	9283052				
Dissolved Iron (Fe)	ug/L							<100	<100	100	9283021
Total Iron (Fe)	ug/L	<100	100	9283052	<100	100	9283052				
Dissolved Magnesium (Mg)	ug/L							31000	31000	50	9283021
Total Magnesium (Mg)	ug/L	35000	50	9283052	33000	50	9283052				
Dissolved Manganese (Mn)	ug/L							6.6	6.3	2.0	9283021
Total Manganese (Mn)	ug/L	2.8	2.0	9283052	2.8	2.0	9283052				
Dissolved Potassium (K)	ug/L							2700	2800	200	9283021
Total Potassium (K)	ug/L	3300	200	9283052	3100	200	9283052				
Dissolved Sodium (Na)	ug/L							99000	98000	100	9283021
Total Sodium (Na)	ug/L	93000	100	9283052	89000	100	9283052				
Dissolved Zinc (Zn)	ug/L							6.4	5.8	5.0	9283021
Total Zinc (Zn)	ug/L	<5.0	5.0	9283052	<5.0	5.0	9283052				

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		YQI627	YQI628		
Sampling Date		2024/03/13	2024/03/13		
COC Number		979626-01-01	979626-01-01		
	UNITS	BH92-8	BH92-32-111	RDL	QC Batch
Metals					
Dissolved Calcium (Ca)	ug/L	55000	90000	200	9283021
Dissolved Copper (Cu)	ug/L	2.3	<0.90	0.90	9283021
Dissolved Iron (Fe)	ug/L	310	110	100	9283021
Dissolved Magnesium (Mg)	ug/L	38000	40000	50	9283021
Dissolved Manganese (Mn)	ug/L	260	840	2.0	9283021
Dissolved Potassium (K)	ug/L	2900	1300	200	9283021
Dissolved Sodium (Na)	ug/L	75000	33000	100	9283021
Dissolved Zinc (Zn)	ug/L	130	67	5.0	9283021

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

TEST SUMMARY

Bureau Veritas ID: YQI625
Sample ID: POND 1
Matrix: Water

Collected: 2024/03/13
Shipped:
Received: 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9282692	N/A	2024/03/19	Nachiketa Gohil
Carbonate, Bicarbonate and Hydroxide	CALC	9280908	N/A	2024/03/20	Automated Statchk
Chloride by Automated Colourimetry	SKAL	9282933	N/A	2024/03/20	Geetee Noorzaad
Conductivity	AT	9282693	N/A	2024/03/19	Nachiketa Gohil
Hardness (calculated as CaCO3)		9280783	N/A	2024/03/20	Automated Statchk
Dissolved Calcium and Magnesium	ICP	9283330	2024/03/19	2024/03/20	Suban Kanapathippllai
Total Metals Analysis by ICPMS	ICP/MS	9283052	2024/03/19	2024/03/19	Prempal Bhatti
Total Ammonia-N	LACH/NH4	9282414	N/A	2024/03/19	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	9282507	N/A	2024/03/19	Jinal Chavda
Total Oil and Grease	BAL	9282196	2024/03/19	2024/03/19	Navneet Singh
pH	AT	9282682	2024/03/19	2024/03/19	Nachiketa Gohil
Orthophosphate	KONE	9282958	N/A	2024/03/20	Geetee Noorzaad
Sulphate by Automated Turbidimetry	SKAL	9282955	N/A	2024/03/20	Geetee Noorzaad
Total Dissolved Solids	BAL	9280156	2024/03/18	2024/03/19	Madhav Somani
Total Organic Carbon (TOC)	TOCV/NDIR	9282420	N/A	2024/03/20	Gyulshen Idriz
Turbidity	AT	9281533	N/A	2024/03/19	Gurparteek KAUR

Bureau Veritas ID: YQI625 Dup
Sample ID: POND 1
Matrix: Water

Collected: 2024/03/13
Shipped:
Received: 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Metals Analysis by ICPMS	ICP/MS	9283052	2024/03/19	2024/03/19	Prempal Bhatti
Total Ammonia-N	LACH/NH4	9282414	N/A	2024/03/19	Prabhjot Kaur

Bureau Veritas ID: YQI626
Sample ID: BH1-R
Matrix: Water

Collected: 2024/03/13
Shipped:
Received: 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9282692	N/A	2024/03/19	Nachiketa Gohil
Carbonate, Bicarbonate and Hydroxide	CALC	9276460	N/A	2024/03/20	Automated Statchk
Chloride by Automated Colourimetry	SKAL	9282933	N/A	2024/03/20	Geetee Noorzaad
Conductivity	AT	9282693	N/A	2024/03/19	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9282282	N/A	2024/03/19	Gyulshen Idriz
Hardness (calculated as CaCO3)		9276458	N/A	2024/03/20	Automated Statchk
Dissolved Metals by ICPMS	ICP/MS	9283021	N/A	2024/03/19	Thuy Linh Nguyen
Ion Balance (% Difference)	CALC	9277316	N/A	2024/03/20	Automated Statchk
Anion and Cation Sum	CALC	9278118	N/A	2024/03/20	Automated Statchk
Total Ammonia-N	LACH/NH4	9282414	N/A	2024/03/19	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	9282507	N/A	2024/03/19	Jinal Chavda
Total Oil and Grease	BAL	9282196	2024/03/19	2024/03/19	Navneet Singh
pH	AT	9282682	2024/03/19	2024/03/19	Nachiketa Gohil
Orthophosphate	KONE	9282958	N/A	2024/03/20	Geetee Noorzaad

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

TEST SUMMARY

Bureau Veritas ID: YQI626 **Collected:** 2024/03/13
Sample ID: BH1-R **Shipped:**
Matrix: Water **Received:** 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Turbidimetry	SKAL	9282955	N/A	2024/03/20	Geetee Noorzaad
Total Dissolved Solids	BAL	9280156	2024/03/18	2024/03/19	Madhav Somani

Bureau Veritas ID: YQI626 Dup **Collected:** 2024/03/13
Sample ID: BH1-R **Shipped:**
Matrix: Water **Received:** 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	9283021	N/A	2024/03/19	Thuy Linh Nguyen

Bureau Veritas ID: YQI627 **Collected:** 2024/03/13
Sample ID: BH92-8 **Shipped:**
Matrix: Water **Received:** 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9282692	N/A	2024/03/19	Nachiketa Gohil
Carbonate, Bicarbonate and Hydroxide	CALC	9276460	N/A	2024/03/20	Automated Statchk
Chloride by Automated Colourimetry	SKAL	9282933	N/A	2024/03/20	Geetee Noorzaad
Conductivity	AT	9282693	N/A	2024/03/19	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9282282	N/A	2024/03/19	Gyulshen Idriz
Hardness (calculated as CaCO3)		9281923	N/A	2024/03/20	Automated Statchk
Dissolved Metals by ICPMS	ICP/MS	9283021	N/A	2024/03/19	Thuy Linh Nguyen
Ion Balance (% Difference)	CALC	9277316	N/A	2024/03/20	Automated Statchk
Anion and Cation Sum	CALC	9278118	N/A	2024/03/20	Automated Statchk
Total Ammonia-N	LACH/NH4	9282414	N/A	2024/03/19	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	9282507	N/A	2024/03/19	Jinal Chavda
Total Oil and Grease	BAL	9282196	2024/03/19	2024/03/19	Navneet Singh
pH	AT	9282682	2024/03/19	2024/03/19	Nachiketa Gohil
Orthophosphate	KONE	9282958	N/A	2024/03/20	Geetee Noorzaad
Sulphate by Automated Turbidimetry	SKAL	9282955	N/A	2024/03/20	Geetee Noorzaad
Total Dissolved Solids	BAL	9280156	2024/03/18	2024/03/19	Madhav Somani

Bureau Veritas ID: YQI628 **Collected:** 2024/03/13
Sample ID: BH92-32-111 **Shipped:**
Matrix: Water **Received:** 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9282692	N/A	2024/03/19	Nachiketa Gohil
Carbonate, Bicarbonate and Hydroxide	CALC	9276460	N/A	2024/03/20	Automated Statchk
Chloride by Automated Colourimetry	SKAL	9282933	N/A	2024/03/20	Geetee Noorzaad
Conductivity	AT	9282693	N/A	2024/03/19	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9282282	N/A	2024/03/19	Gyulshen Idriz
Hardness (calculated as CaCO3)		9281923	N/A	2024/03/20	Automated Statchk
Dissolved Metals by ICPMS	ICP/MS	9283021	N/A	2024/03/19	Thuy Linh Nguyen

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

TEST SUMMARY

Bureau Veritas ID: YQI628
Sample ID: BH92-32-111
Matrix: Water

Collected: 2024/03/13
Shipped:
Received: 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance (% Difference)	CALC	9277316	N/A	2024/03/20	Automated Statchk
Anion and Cation Sum	CALC	9278118	N/A	2024/03/20	Automated Statchk
Total Ammonia-N	LACH/NH4	9282414	N/A	2024/03/19	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	9282507	N/A	2024/03/19	Jinal Chavda
Total Oil and Grease	BAL	9282196	2024/03/19	2024/03/19	Navneet Singh
pH	AT	9282682	2024/03/19	2024/03/19	Nachiketa Gohil
Orthophosphate	KONE	9282958	N/A	2024/03/20	Geetee Noorzaad
Sulphate by Automated Turbidimetry	SKAL	9282955	N/A	2024/03/20	Geetee Noorzaad
Total Dissolved Solids	BAL	9282665	2024/03/19	2024/03/20	Razieh Tabesh

Bureau Veritas ID: YQI629
Sample ID: BLIND DUP
Matrix: Water

Collected: 2024/03/13
Shipped:
Received: 2024/03/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Oil and Grease	BAL	9282196	2024/03/19	2024/03/19	Navneet Singh

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	5.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9280156	MV1	Spiked Blank	Total Dissolved Solids	2024/03/19		95	%	80 - 120
9280156	MV1	Method Blank	Total Dissolved Solids	2024/03/19	<10		mg/L	
9280156	MV1	RPD	Total Dissolved Solids	2024/03/19	7.2		%	20
9281533	GTK	Spiked Blank	Turbidity	2024/03/19		101	%	80 - 120
9281533	GTK	Method Blank	Turbidity	2024/03/19	<0.1		NTU	
9281533	GTK	RPD	Turbidity	2024/03/19	2.0		%	20
9282196	NSG	Spiked Blank	Total Oil & Grease	2024/03/19		99	%	80 - 110
9282196	NSG	RPD	Total Oil & Grease	2024/03/19	0.51		%	25
9282196	NSG	Method Blank	Total Oil & Grease	2024/03/19	<0.50		mg/L	
9282282	GID	Matrix Spike	Dissolved Organic Carbon	2024/03/19		92	%	80 - 120
9282282	GID	Spiked Blank	Dissolved Organic Carbon	2024/03/19		93	%	80 - 120
9282282	GID	Method Blank	Dissolved Organic Carbon	2024/03/19	<0.40		mg/L	
9282282	GID	RPD	Dissolved Organic Carbon	2024/03/19	0.32		%	20
9282414	KPJ	Matrix Spike [YQI625-06]	Total Ammonia-N	2024/03/19		99	%	75 - 125
9282414	KPJ	Spiked Blank	Total Ammonia-N	2024/03/19		99	%	80 - 120
9282414	KPJ	Method Blank	Total Ammonia-N	2024/03/19	<0.050		mg/L	
9282414	KPJ	RPD [YQI625-06]	Total Ammonia-N	2024/03/19	NC		%	20
9282420	GID	Matrix Spike	Total Organic Carbon (TOC)	2024/03/20		90	%	80 - 120
9282420	GID	Spiked Blank	Total Organic Carbon (TOC)	2024/03/20		94	%	80 - 120
9282420	GID	Method Blank	Total Organic Carbon (TOC)	2024/03/20	<0.40		mg/L	
9282420	GID	RPD	Total Organic Carbon (TOC)	2024/03/20	NC		%	20
9282507	J1C	Matrix Spike	Nitrite (N)	2024/03/19		108	%	80 - 120
			Nitrate (N)	2024/03/19		93	%	80 - 120
9282507	J1C	Spiked Blank	Nitrite (N)	2024/03/19		108	%	80 - 120
			Nitrate (N)	2024/03/19		103	%	80 - 120
9282507	J1C	Method Blank	Nitrite (N)	2024/03/19	<0.010		mg/L	
			Nitrate (N)	2024/03/19	<0.10		mg/L	
9282507	J1C	RPD	Nitrite (N)	2024/03/19	NC		%	20
			Nitrate (N)	2024/03/19	NC		%	20
9282665	RTB	Spiked Blank	Total Dissolved Solids	2024/03/20		93	%	80 - 120
9282665	RTB	Method Blank	Total Dissolved Solids	2024/03/20	<10		mg/L	
9282665	RTB	RPD	Total Dissolved Solids	2024/03/20	0		%	20
9282682	NGI	Spiked Blank	pH	2024/03/19		102	%	98 - 103
9282682	NGI	RPD	pH	2024/03/19	0.17		%	N/A
9282692	NGI	Spiked Blank	Alkalinity (Total as CaCO3)	2024/03/19		95	%	85 - 115
9282692	NGI	Method Blank	Alkalinity (Total as CaCO3)	2024/03/19	<1.0		mg/L	
9282692	NGI	RPD	Alkalinity (Total as CaCO3)	2024/03/19	0.39		%	20
9282693	NGI	Spiked Blank	Conductivity	2024/03/19		103	%	85 - 115
9282693	NGI	Method Blank	Conductivity	2024/03/19	<1.0		umho/cm	
9282693	NGI	RPD	Conductivity	2024/03/19	1.2		%	10
9282933	GNO	Matrix Spike	Dissolved Chloride (Cl-)	2024/03/20		NC	%	80 - 120
9282933	GNO	Spiked Blank	Dissolved Chloride (Cl-)	2024/03/20		98	%	80 - 120
9282933	GNO	Method Blank	Dissolved Chloride (Cl-)	2024/03/20	<1.0		mg/L	
9282933	GNO	RPD	Dissolved Chloride (Cl-)	2024/03/20	0.27		%	20
9282955	GNO	Matrix Spike	Dissolved Sulphate (SO4)	2024/03/20		NC	%	75 - 125
9282955	GNO	Spiked Blank	Dissolved Sulphate (SO4)	2024/03/20		96	%	80 - 120
9282955	GNO	Method Blank	Dissolved Sulphate (SO4)	2024/03/20	<1.0		mg/L	
9282955	GNO	RPD	Dissolved Sulphate (SO4)	2024/03/20	2.4		%	20
9282958	GNO	Matrix Spike	Orthophosphate (P)	2024/03/20		98	%	75 - 125
9282958	GNO	Spiked Blank	Orthophosphate (P)	2024/03/20		99	%	80 - 120
9282958	GNO	Method Blank	Orthophosphate (P)	2024/03/20	<0.010		mg/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9282958	GNO	RPD	Orthophosphate (P)	2024/03/20	NC		%	20
9283021	TLG	Matrix Spike [YQI626-05]	Dissolved Calcium (Ca)	2024/03/19		NC	%	80 - 120
			Dissolved Copper (Cu)	2024/03/19		103	%	80 - 120
			Dissolved Iron (Fe)	2024/03/19		97	%	80 - 120
			Dissolved Magnesium (Mg)	2024/03/19		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/03/19		99	%	80 - 120
			Dissolved Potassium (K)	2024/03/19		105	%	80 - 120
			Dissolved Sodium (Na)	2024/03/19		NC	%	80 - 120
			Dissolved Zinc (Zn)	2024/03/19		99	%	80 - 120
9283021	TLG	Spiked Blank	Dissolved Calcium (Ca)	2024/03/19		99	%	80 - 120
			Dissolved Copper (Cu)	2024/03/19		101	%	80 - 120
			Dissolved Iron (Fe)	2024/03/19		97	%	80 - 120
			Dissolved Magnesium (Mg)	2024/03/19		99	%	80 - 120
			Dissolved Manganese (Mn)	2024/03/19		99	%	80 - 120
			Dissolved Potassium (K)	2024/03/19		99	%	80 - 120
			Dissolved Sodium (Na)	2024/03/19		96	%	80 - 120
			Dissolved Zinc (Zn)	2024/03/19		99	%	80 - 120
9283021	TLG	Method Blank	Dissolved Calcium (Ca)	2024/03/19	<200		ug/L	
			Dissolved Copper (Cu)	2024/03/19	<0.90		ug/L	
			Dissolved Iron (Fe)	2024/03/19	<100		ug/L	
			Dissolved Magnesium (Mg)	2024/03/19	<50		ug/L	
			Dissolved Manganese (Mn)	2024/03/19	<2.0		ug/L	
			Dissolved Potassium (K)	2024/03/19	<200		ug/L	
			Dissolved Sodium (Na)	2024/03/19	<100		ug/L	
			Dissolved Zinc (Zn)	2024/03/19	<5.0		ug/L	
9283021	TLG	RPD [YQI626-05]	Dissolved Calcium (Ca)	2024/03/19	2.0		%	20
			Dissolved Copper (Cu)	2024/03/19	NC		%	20
			Dissolved Iron (Fe)	2024/03/19	NC		%	20
			Dissolved Magnesium (Mg)	2024/03/19	0.056		%	20
			Dissolved Manganese (Mn)	2024/03/19	4.5		%	20
			Dissolved Potassium (K)	2024/03/19	1.1		%	20
			Dissolved Sodium (Na)	2024/03/19	0.67		%	20
			Dissolved Zinc (Zn)	2024/03/19	9.4		%	20
9283052	PBA	Matrix Spike [YQI625-05]	Total Calcium (Ca)	2024/03/19		NC	%	80 - 120
			Total Copper (Cu)	2024/03/19		96	%	80 - 120
			Total Iron (Fe)	2024/03/19		101	%	80 - 120
			Total Magnesium (Mg)	2024/03/19		NC	%	80 - 120
			Total Manganese (Mn)	2024/03/19		95	%	80 - 120
			Total Potassium (K)	2024/03/19		96	%	80 - 120
			Total Sodium (Na)	2024/03/19		NC	%	80 - 120
			Total Zinc (Zn)	2024/03/19		99	%	80 - 120
9283052	PBA	Spiked Blank	Total Calcium (Ca)	2024/03/19		100	%	80 - 120
			Total Copper (Cu)	2024/03/19		101	%	80 - 120
			Total Iron (Fe)	2024/03/19		104	%	80 - 120
			Total Magnesium (Mg)	2024/03/19		102	%	80 - 120
			Total Manganese (Mn)	2024/03/19		99	%	80 - 120
			Total Potassium (K)	2024/03/19		101	%	80 - 120
			Total Sodium (Na)	2024/03/19		104	%	80 - 120
			Total Zinc (Zn)	2024/03/19		105	%	80 - 120
9283052	PBA	Method Blank	Total Calcium (Ca)	2024/03/19	<200		ug/L	
			Total Copper (Cu)	2024/03/19	<0.90		ug/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Iron (Fe)	2024/03/19	<100		ug/L	
			Total Magnesium (Mg)	2024/03/19	<50		ug/L	
			Total Manganese (Mn)	2024/03/19	<2.0		ug/L	
			Total Potassium (K)	2024/03/19	<200		ug/L	
			Total Sodium (Na)	2024/03/19	120, RDL=100		ug/L	
			Total Zinc (Zn)	2024/03/19	<5.0		ug/L	
9283052	PBA	RPD [YQI625-05]	Total Calcium (Ca)	2024/03/19	5.9		%	20
			Total Copper (Cu)	2024/03/19	NC		%	20
			Total Iron (Fe)	2024/03/19	NC		%	20
			Total Magnesium (Mg)	2024/03/19	5.2		%	20
			Total Manganese (Mn)	2024/03/19	2.1		%	20
			Total Potassium (K)	2024/03/19	7.3		%	20
			Total Sodium (Na)	2024/03/19	4.5		%	20
			Total Zinc (Zn)	2024/03/19	NC		%	20
9283330	SUK	Matrix Spike	Dissolved Calcium (Ca)	2024/03/20		NC	%	80 - 120
			Dissolved Magnesium (Mg)	2024/03/20		NC	%	80 - 120
9283330	SUK	Spiked Blank	Dissolved Calcium (Ca)	2024/03/20		102	%	80 - 120
			Dissolved Magnesium (Mg)	2024/03/20		103	%	80 - 120
9283330	SUK	Method Blank	Dissolved Calcium (Ca)	2024/03/20	<0.050		mg/L	
			Dissolved Magnesium (Mg)	2024/03/20	<0.050		mg/L	

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C478561
Report Date: 2024/03/20

WSP Canada Inc.
Client Project #: CA0019938.6257-2002
Site Location: MILL CREEK
Sampler Initials: SRF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

[redacted]
Anastassia Hamanov, Scientific Specialist

[redacted]
Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

APPENDIX D

Climate Data

Technical Appendix B – 2024 Hydrogeology Report

TABLE D-1
1951 - 1980 WATER BUDGET SUMMARY - GUELPH ARBORETUM
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-7.2	0.00	0.00	0.82	0.00	56.3	100.0	56.3	0.0
FEBRUARY	-6.5	0.00	0.00	0.82	0.00	50.5	100.0	50.5	0.0
MARCH	-1.9	0.00	0.00	1.03	0.00	62.5	100.0	62.5	0.0
APRIL	5.8	1.25	27.58	1.12	30.89	73.9	100.0	43.0	0.0
MAY	11.7	3.61	57.43	1.27	72.94	72.7	99.8	0.0	0.0
JUNE	17.4	6.57	86.96	1.28	111.31	70.6	59.0	0.0	0.0
JULY	19.7	7.93	99.02	1.30	128.72	82.4	12.7	0.0	0.0
AUGUST	18.8	7.39	94.29	1.20	113.15	81.5	0.0	0.0	18.9
SEPTEMBER	15	5.25	74.47	1.04	77.44	63.4	0.0	0.0	14.0
OCTOBER	9.2	2.51	44.67	0.95	42.44	73.4	31.0	0.0	0.0
NOVEMBER	2.5	0.35	11.44	0.81	9.27	74.9	96.6	0.0	0.0
DECEMBER	-4.1	0.00	0.00	0.78	0.00	71.2	100.0	67.8	0.0
Total		**34.87**			**586.16**	**833.3**		**280.2**	**33.0**
						Net Water Surplus		**247.2**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils
- Data is from the 1951 to 1980 Canadian Climate Normals for the Guelph Arboretum Climatological Station located at 43°31'N 80°14'W, elevation 334 m ASL.

TABLE D-2
1961 - 1990 WATER BUDGET SUMMARY - PRESTON
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-7.1	0.00	0.00	0.82	0.00	62.2	100.0	62.2	0.0
FEBRUARY	-6.4	0.00	0.00	0.82	0.00	59.7	100.0	59.7	0.0
MARCH	-1.1	0.00	0.00	1.03	0.00	69.8	100.0	69.8	0.0
APRIL	6.0	1.32	27.84	1.12	31.18	74.8	100.0	43.6	0.0
MAY	12.5	3.99	60.74	1.27	77.14	75.1	98.0	0.0	0.0
JUNE	17.5	6.63	86.86	1.28	111.18	83.9	70.7	0.0	0.0
JULY	20.3	8.30	101.70	1.30	132.21	82.7	21.2	0.0	0.0
AUGUST	19.2	7.63	95.85	1.20	115.02	93.5	0.0	0.0	0.3
SEPTEMBER	15.2	5.36	74.78	1.04	77.77	85.5	7.7	0.0	0.0
OCTOBER	8.9	2.39	42.34	0.95	40.22	73.9	41.4	0.0	0.0
NOVEMBER	2.9	0.44	12.86	0.81	10.41	87.0	100.0	18.0	0.0
DECEMBER	-3.8	0.00	0.00	0.78	0.00	83.6	100.0	83.6	0.0
Total		**36.05**			**595.13**	**931.7**		**336.9**	**0.3**
						Net Water Surplus		**336.6**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils
- Data is from the 1951 to 1980 Canadian Climate Normals for the Preston Climatological Station located at 43°24'N 80°25'W, elevation 291 m ASL.

TABLE D-3
1971 - 2000 WATER BUDGET SUMMARY - WATERLOO-WELLINGTON
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-7.1	0.00	0.00	0.82	0.00	64.4	100.0	64.4	0.0
FEBRUARY	-6.4	0.00	0.00	0.82	0.00	51.5	100.0	51.5	0.0
MARCH	-1.2	0.00	0.00	1.03	0.00	69.9	100.0	69.9	0.0
APRIL	5.8	1.25	27.88	1.12	31.22	76.9	100.0	45.7	0.0
MAY	12.5	3.99	61.88	1.27	78.58	78.3	99.7	0.0	0.0
JUNE	17.3	6.52	86.71	1.28	110.98	81.3	70.0	0.0	0.0
JULY	19.8	7.99	99.75	1.30	129.67	91.8	32.2	0.0	0.0
AUGUST	18.7	7.33	94.00	1.20	112.80	86.3	5.7	0.0	0.0
SEPTEMBER	14.3	4.89	71.15	1.04	74.00	85.8	17.5	0.0	0.0
OCTOBER	8.2	2.11	39.94	0.95	37.94	65.6	45.1	0.0	0.0
NOVEMBER	2.3	0.31	10.67	0.81	8.64	82.7	100.0	19.2	0.0
DECEMBER	-3.8	0.00	0.00	0.78	0.00	73.6	100.0	73.6	0.0
Total		**34.38**			**583.85**	**908.1**		**324.2**	**0.0**
						Net Water Surplus		**324.2**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils
- Data is from Canadian Climate Normals for the Waterloo-Wellington Climatological Station.

TABLE D-4
1983 - 2012 WATER BUDGET SUMMARY - ELORA CLIMATE STATIONS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-7.0	0.00	0.00	0.82	0.00	63.4	100.0	63.4	0.0
FEBRUARY	-6.5	0.00	0.00	0.82	0.00	46.0	100.0	46.0	0.0
MARCH	-1.3	0.00	0.00	1.03	0.00	59.1	100.0	59.1	0.0
APRIL	6.1	1.35	29.51	1.12	33.06	70.0	100.0	36.9	0.0
MAY	12.1	3.80	59.97	1.27	76.16	78.8	100.0	2.6	0.0
JUNE	17.2	6.46	86.30	1.28	110.47	85.1	74.6	0.0	0.0
JULY	19.6	7.87	98.80	1.30	128.44	83.0	29.2	0.0	0.0
AUGUST	18.5	7.21	93.06	1.20	111.68	82.5	0.0	0.0	0.0
SEPTEMBER	14.6	5.04	72.84	1.04	75.75	77.3	1.6	0.0	0.0
OCTOBER	8.2	2.11	40.09	0.95	38.08	74.8	38.3	0.0	0.0
NOVEMBER	2.4	0.33	11.24	0.81	9.10	76.3	100.0	5.5	0.0
DECEMBER	-3.8	0.00	0.00	0.78	0.00	60.5	100.0	60.5	0.0
Total		**34.17**			**582.73**	**856.8**		**274.1**	**0.0**
						Net Water Surplus		**274.1**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils
- Data is from the 1983 to 2012 Canadian Climate Normals for the Elora Research Station (1983-1985), Elora Automatic Climate Station (1986-2003) and Elora RCS (2003-2012)
- Climatological Station located at 43°39'N 80°25'W, elevation 376 m ASL.

TABLE D-5
1991 - 2020 WATER BUDGET SUMMARY - SHADE'S MILLS CLIMATE STATION
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-5.5	0.00	0.00	0.82	0.00	77.2	100.0	77.2	0.0
FEBRUARY	-4.9	0.00	0.00	0.82	0.00	58.2	100.0	58.2	0.0
MARCH	-0.2	0.00	0.00	1.03	0.00	63.6	100.0	63.6	0.0
APRIL	6.5	1.50	27.57	1.12	30.88	84.2	100.0	53.3	0.0
MAY	13.8	4.66	64.58	1.27	82.01	82.2	100.0	0.2	0.0
JUNE	19.5	7.79	95.14	1.28	121.78	84.7	62.9	0.0	0.0
JULY	21.9	9.31	108.75	1.30	141.38	95.4	16.9	0.0	0.0
AUGUST	20.2	8.24	99.19	1.20	119.02	76.9	0.0	0.0	25.2
SEPTEMBER	16.7	6.18	79.89	1.04	83.09	82.5	0.0	0.0	0.6
OCTOBER	9.8	2.76	43.53	0.95	41.36	81.6	40.2	0.0	0.0
NOVEMBER	3.5	0.58	13.41	0.81	10.86	76.6	100.0	5.9	0.0
DECEMBER	-1.9	0.00	0.00	0.78	0.00	71.4	100.0	71.4	0.0
Total		**41.01**			**630.38**	**934.6**		**330.0**	**25.7**
						Net Water Surplus		**304.2**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils
- Data is from the 1991 to 2020 Canadian Climate Normals for the Shade's Mills Climatological Station located at 43°23'N 80°17'W, which was provided by GRCA.

TABLE D-6
2020 WATER BUDGET - SHADE'S MILLS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-1.4	0.00	0.00	0.82	0.0	130.9	100.0	130.9	0.0
FEBRUARY	-3.6	0.00	0.00	0.82	0.0	38.6	100.0	38.6	0.0
MARCH	2.4	0.33	7.70	1.03	7.9	83.4	100.0	75.5	0.0
APRIL	5.8	1.25	22.05	1.12	24.7	43.3	100.0	18.6	0.0
MAY	12.7	4.09	56.15	1.27	71.3	52.7	81.4	0.0	0.0
JUNE	20.5	8.42	99.39	1.28	127.2	61.7	15.9	0.0	0.0
JULY	25.0	11.36	125.94	1.30	163.7	58.9	0.0	0.0	88.9
AUGUST	22.2	9.50	109.30	1.20	131.2	72.6	0.0	0.0	58.6
SEPTEMBER	16.1	5.85	74.51	1.04	77.5	46.4	0.0	0.0	31.1
OCTOBER	9.3	2.55	38.72	0.95	36.8	91.4	54.6	0.0	0.0
NOVEMBER	6.4	1.45	24.79	0.81	20.1	57.7	92.2	0.0	0.0
DECEMBER	-0.6	0.00	0.00	0.78	0.0	110.0	100.0	102.2	0.0
Total		**44.80**			**660.3**	**847.6**		**365.9**	**178.6**
						Net Water Surplus		**187.3**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils.
- Data from the Shade's Mills Climatological Station except for missing temperature data on Janaury 18, which is from Guelph Lake Climatological Station.

TABLE D-7
2021 WATER BUDGET - SHADE'S MILLS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-2.7	0.00	0.00	0.82	0.0	32.6	100.0	32.6	0.0
FEBRUARY	-6.1	0.00	0.00	0.82	0.0	54.2	100.0	54.2	0.0
MARCH	3.4	0.56	10.28	1.03	10.5	53.4	100.0	42.9	0.0
APRIL	8.9	2.38	34.38	1.12	38.5	64.9	100.0	26.4	0.0
MAY	14.1	4.80	61.45	1.27	78.0	33.0	55.0	0.0	0.0
JUNE	22.1	9.45	107.76	1.28	137.9	132.2	49.2	0.0	0.0
JULY	21.3	8.95	102.94	1.30	133.8	95.3	10.7	0.0	0.0
AUGUST	23.8	10.56	118.15	1.20	141.8	83.5	0.0	0.0	47.6
SEPTEMBER	17.5	6.62	80.22	1.04	83.4	222.7	100.0	39.3	0.0
OCTOBER	13.9	4.70	60.37	0.95	57.4	129.7	100.0	72.3	0.0
NOVEMBER	3.6	0.60	10.97	0.81	8.9	46.1	100.0	37.2	0.0
DECEMBER	0.9	0.08	2.00	0.78	1.6	72.4	100.0	70.8	0.0
Total		**48.70**			**691.9**	**1020.0**		**375.7**	**47.6**
						Net Water Surplus		**328.1**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils.
- Data from the Shade's Mills Climatological Station

TABLE D-8
2022 WATER BUDGET - SHADE'S MILLS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-8.4	0.00	0.00	0.82	0.0	36.6	100.0	36.6	0.0
FEBRUARY	-5.4	0.00	0.00	0.82	0.0	109.7	100.0	109.7	0.0
MARCH	1.0	0.09	2.61	1.03	2.7	64.4	100.0	61.7	0.0
APRIL	6.9	1.63	26.72	1.12	29.9	36.6	100.0	6.7	0.0
MAY	16.1	5.84	73.99	1.27	94.0	55.1	61.1	0.0	0.0
JUNE	19.8	8.01	95.25	1.28	121.9	57.2	0.0	0.0	3.6
JULY	22.7	9.83	112.11	1.30	145.7	33.0	0.0	0.0	0.0
AUGUST	22.3	9.58	109.81	1.20	131.8	87.2	0.0	0.0	44.6
SEPTEMBER	17.8	6.82	83.76	1.04	87.1	28.2	0.0	0.0	58.9
OCTOBER	10.0	2.83	41.61	0.95	39.5	52.5	13.0	0.0	0.0
NOVEMBER	4.7	0.91	16.87	0.81	13.7	39.7	39.0	0.0	0.0
DECEMBER	-0.9	0.00	0.00	0.78	0.0	82.1	100.0	21.1	0.0
Total		**45.53**			**666.3**	**682.3**		**235.8**	**107.1**
						Net Water Surplus		**128.7**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils.
- Data from the Shade's Mills Climatological Station , except for missing air temperature data on January 4, which is from Guelph Lake Climatological Station.

TABLE D-9
2023 WATER BUDGET - SHADE'S MILLS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-2.3	0.00	0.00	0.82	0.0	71.2	100.0	71.2	0.0
FEBRUARY	-2.8	0.00	0.00	0.82	0.0	45.2	100.0	45.2	0.0
MARCH	-0.6	0.00	0.00	1.03	0.0	121.3	100.0	121.3	0.0
APRIL	7.8	1.94	36.41	1.12	40.8	87.2	100.0	46.4	0.0
MAY	12.2	3.86	59.11	1.27	75.1	55.6	80.5	0.0	0.0
JUNE	17.4	6.60	86.41	1.28	110.6	81.1	51.0	0.0	0.0
JULY	19.5	7.80	97.26	1.30	126.4	203.2	100.0	27.8	0.0
AUGUST	17.8	6.82	88.45	1.20	106.1	116.5	100.0	10.4	0.0
SEPTEMBER	16.2	5.92	79.98	1.04	83.2	22.1	38.9	0.0	0.0
OCTOBER	10.2	2.91	48.50	0.95	46.1	61.0	53.8	0.0	0.0
NOVEMBER	2.2	0.28	9.34	0.81	7.6	42.7	89.0	0.0	0.0
DECEMBER	1.8	0.21	7.65	0.78	6.0	75.9	100.0	58.9	0.0
Total		**36.35**			**601.8**	**983.0**		**381.2**	**0.0**
						Net Water Surplus		**381.2**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils.
- Precipitation data from the Shade's Mills Climatological Station
- Temperature data from the Kitchener/Waterloo Climatological Station

TABLE D-10
2024 WATER BUDGET - SHADE'S MILLS
MILL CREEK AGGREGATES PIT

Month	Mean Temperature (°C)	I	E (mm)	Daylight Factor	E adj. (mm)	Total Precipitation (mm)	WHC (mm)	Surplus (mm)	Deficit (mm)
JANUARY	-3.2	0.00	0.00	0.82	0.0	118	100.0	118.0	0.0
FEBRUARY	0.5	0.03	0.90	0.82	0.7	26.9	100.0	26.2	0.0
MARCH	3.3	0.53	9.73	1.03	10.0	71.4	100.0	61.4	0.0
APRIL	8.5	2.23	32.14	1.12	36.0	116.4	100.0	80.4	0.0
MAY	16.5	6.07	74.23	1.27	94.3	99.7	100.0	5.4	0.0
JUNE	21	8.73	100.65	1.28	128.8	81.8	53.0	0.0	0.0
JULY	22.9	9.95	112.28	1.30	146.0	153.3	60.3	0.0	0.0
AUGUST	21.9	9.30	106.12	1.20	127.3	104.3	37.3	0.0	0.0
SEPTEMBER	19	7.51	88.70	1.04	92.3	28.8	0.0	0.0	26.2
OCTOBER	11.6	3.56	47.58	0.95	45.2	35.2	0.0	0.0	10.0
NOVEMBER	6.5	1.49	22.90	0.81	18.6	53.1	34.5	0.0	0.0
DECEMBER	-1.5	0.00	0.00	0.78	0.0	87.5	100.0	22.0	0.0
Total		**49.40**			**699.1**	**976.4**		**313.5**	**36.2**
						Net Water Surplus		**277.3**	**mm**

Notes:
- I - Heat Index
- E - Evaporation
- WHC - Water Holding Capacity
- A value of 100 mm was used for the water holding capacity of the soils.
- Precipitation and temperature data from the Shade's Mills Climatological Station

FIGURE D-1
2020 TEMPERATURE DATA
SHADE'S MILLS CLIMATE STATION

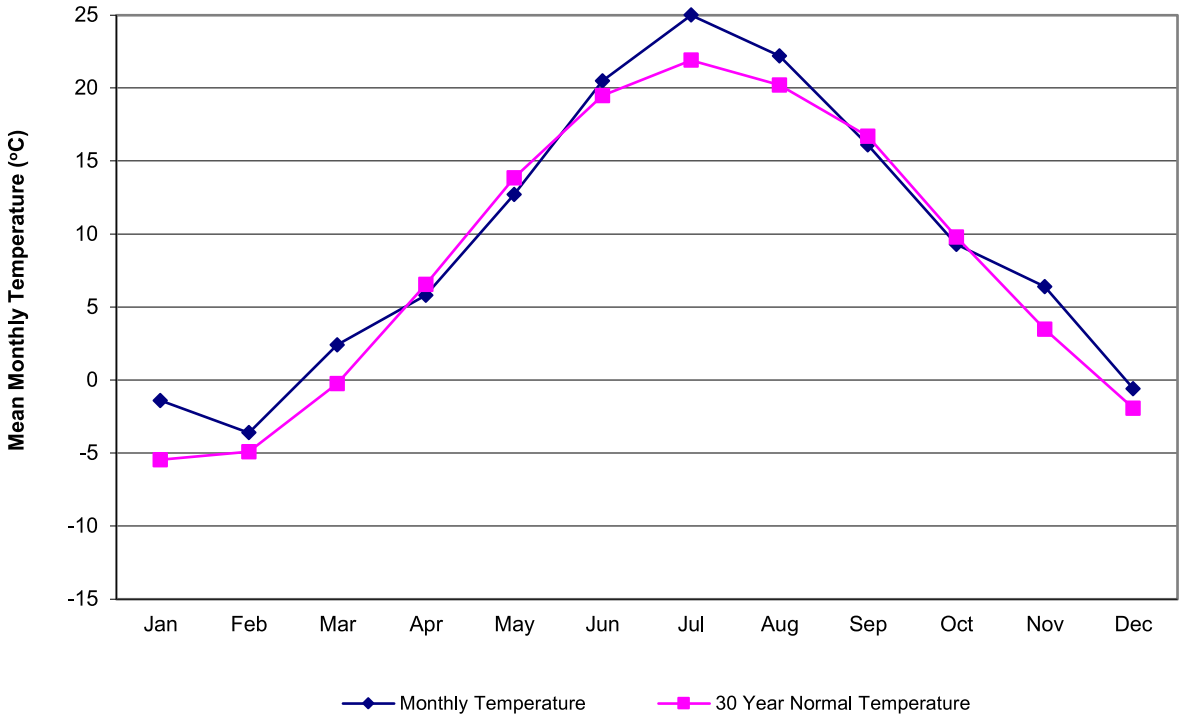


FIGURE D-2
2021 TEMPERATURE DATA
SHADE'S MILLS CLIMATE STATION

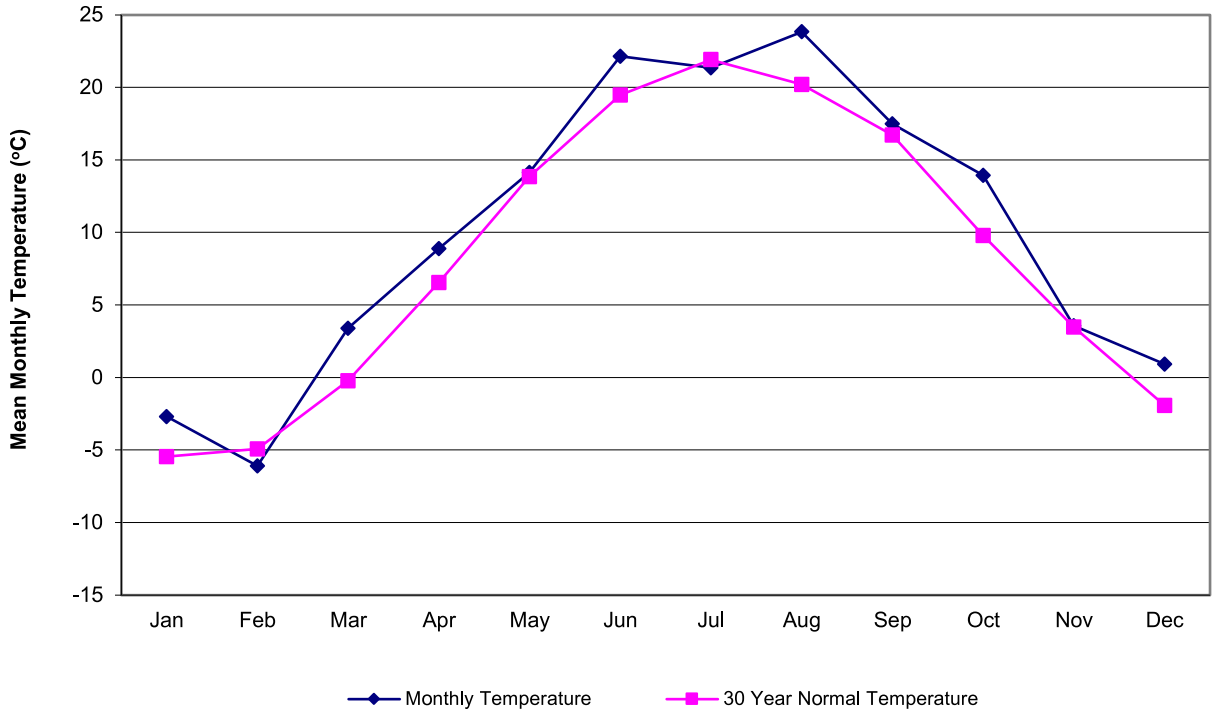


FIGURE D-3
2022 TEMPERATURE DATA
SHADE'S MILLS CLIMATE STATION

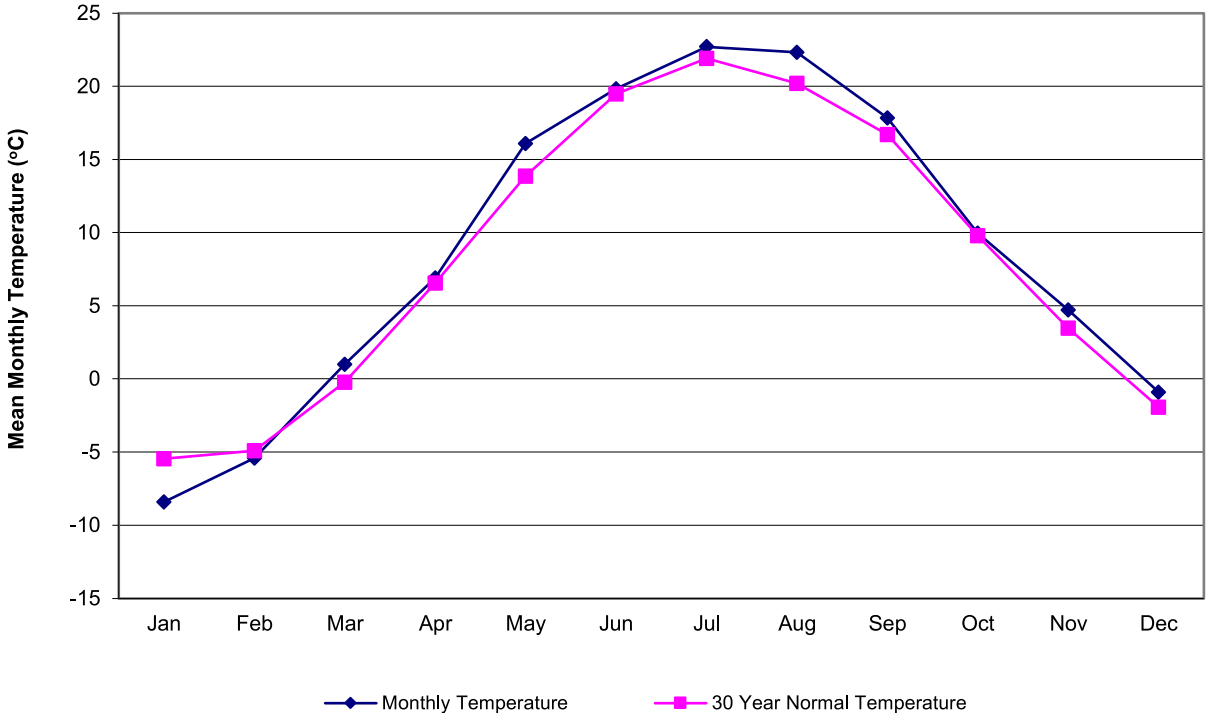


FIGURE D-4
2023 TEMPERATURE DATA
KITCHENER/WATERLOO CLIMATE STATION

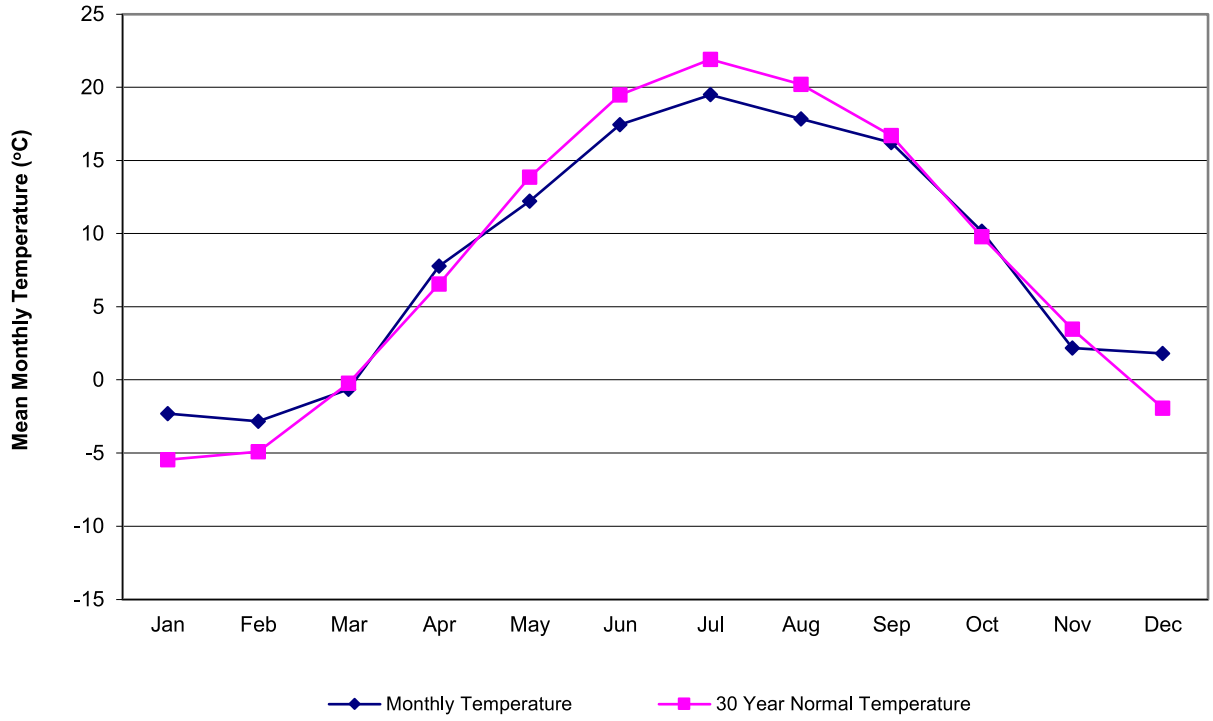


FIGURE D-5
2024 TEMPERATURE DATA
SHADE'S MILLS CLIMATE STATION

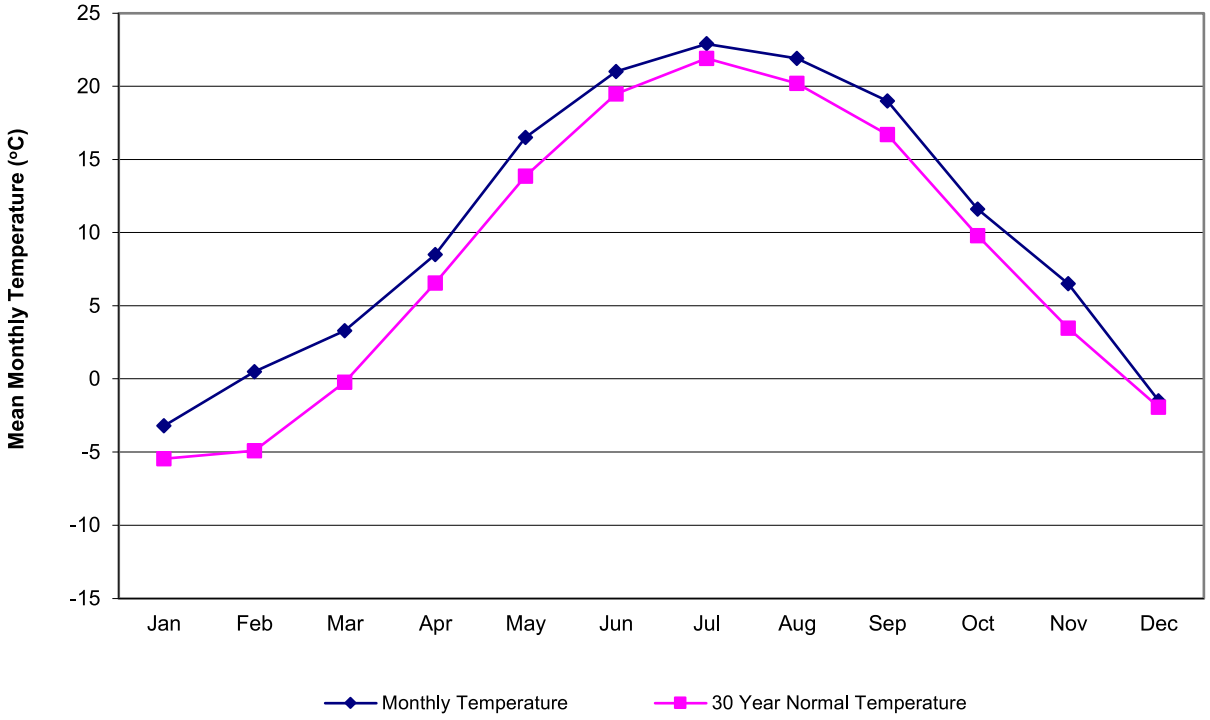


FIGURE D-6
2020 PRECIPITATION DATA
SHADE'S MILLS CLIMATE STATION

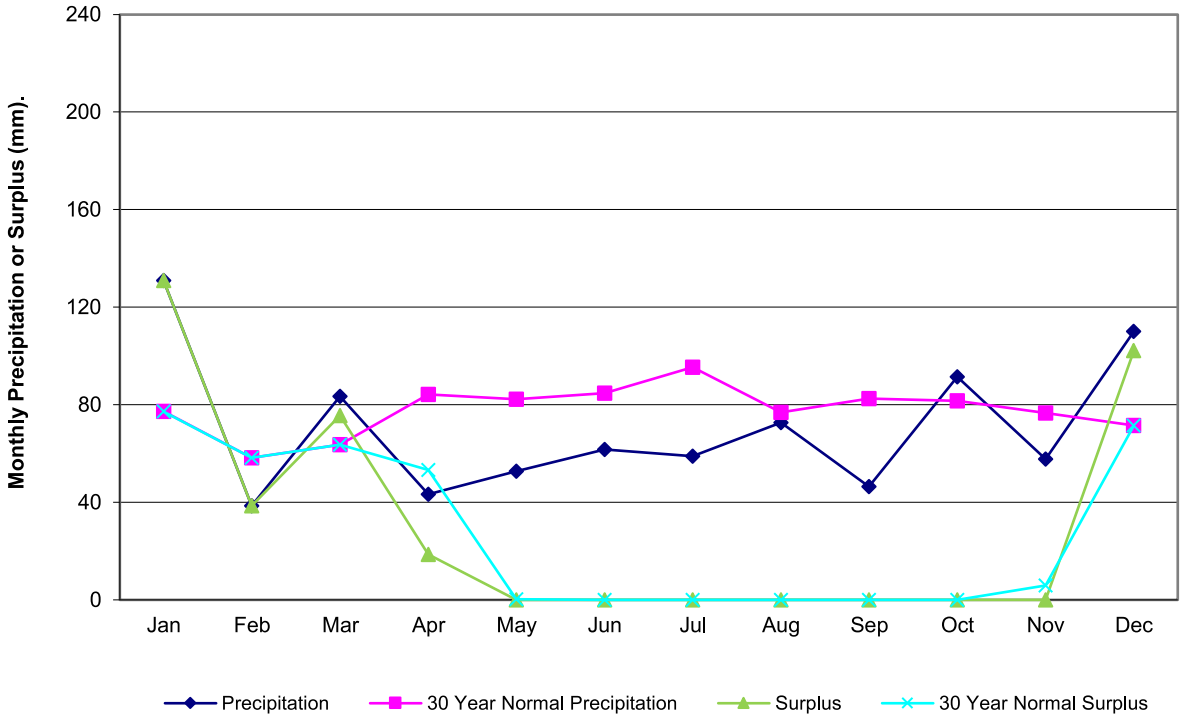


FIGURE D-7
2021 PRECIPITATION DATA
SHADE'S MILLS CLIMATE STATION

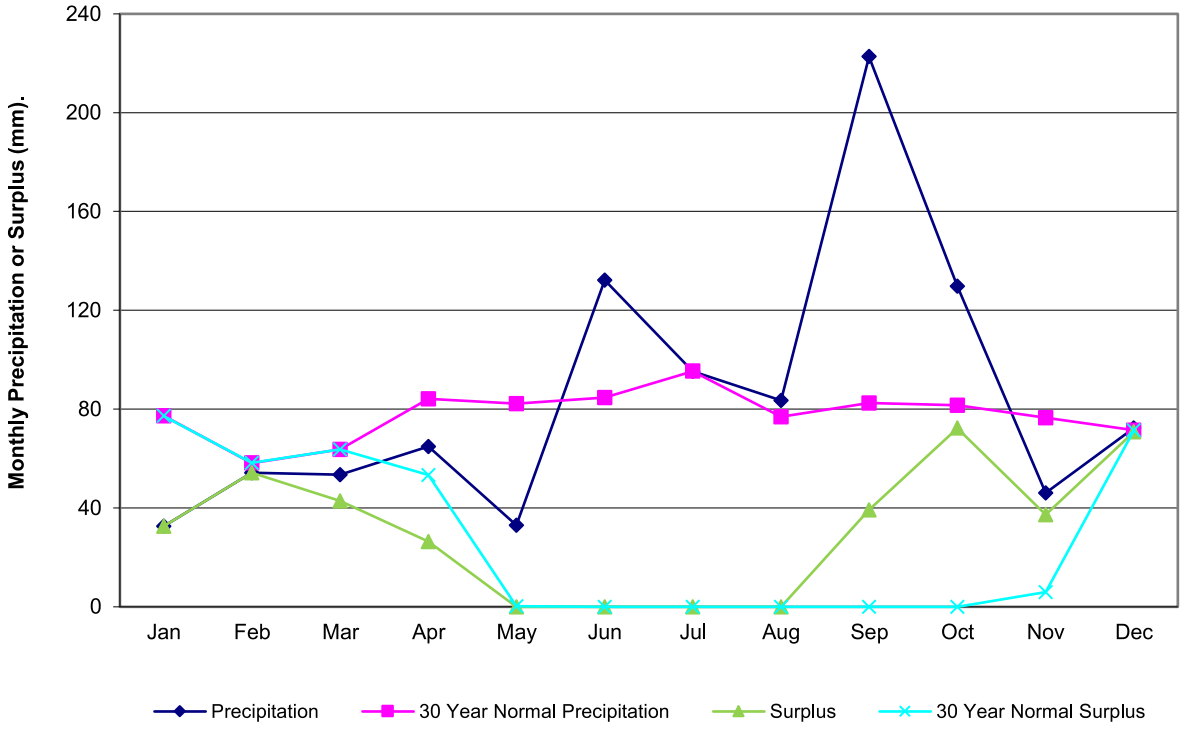


FIGURE D-8
2022 PRECIPITATION DATA
SHADE'S MILLS CLIMATE STATION

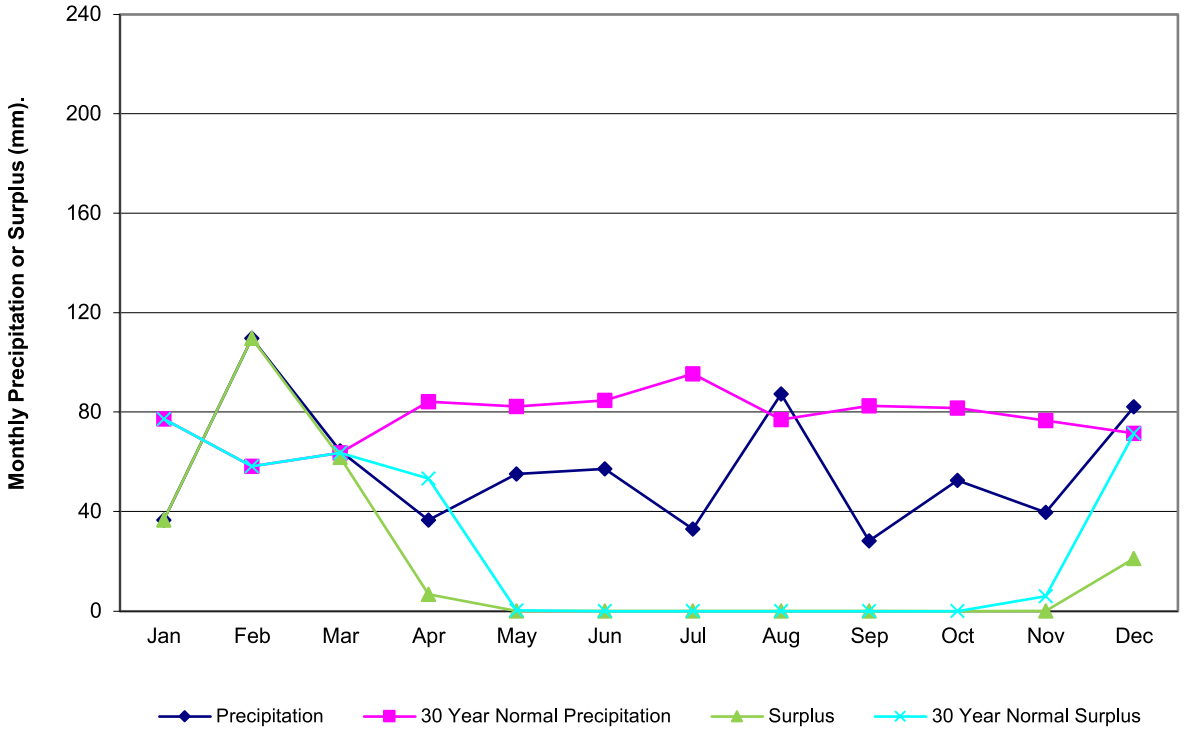


FIGURE D-9
2023 PRECIPITATION DATA
SHADE'S MILLS CLIMATE STATION

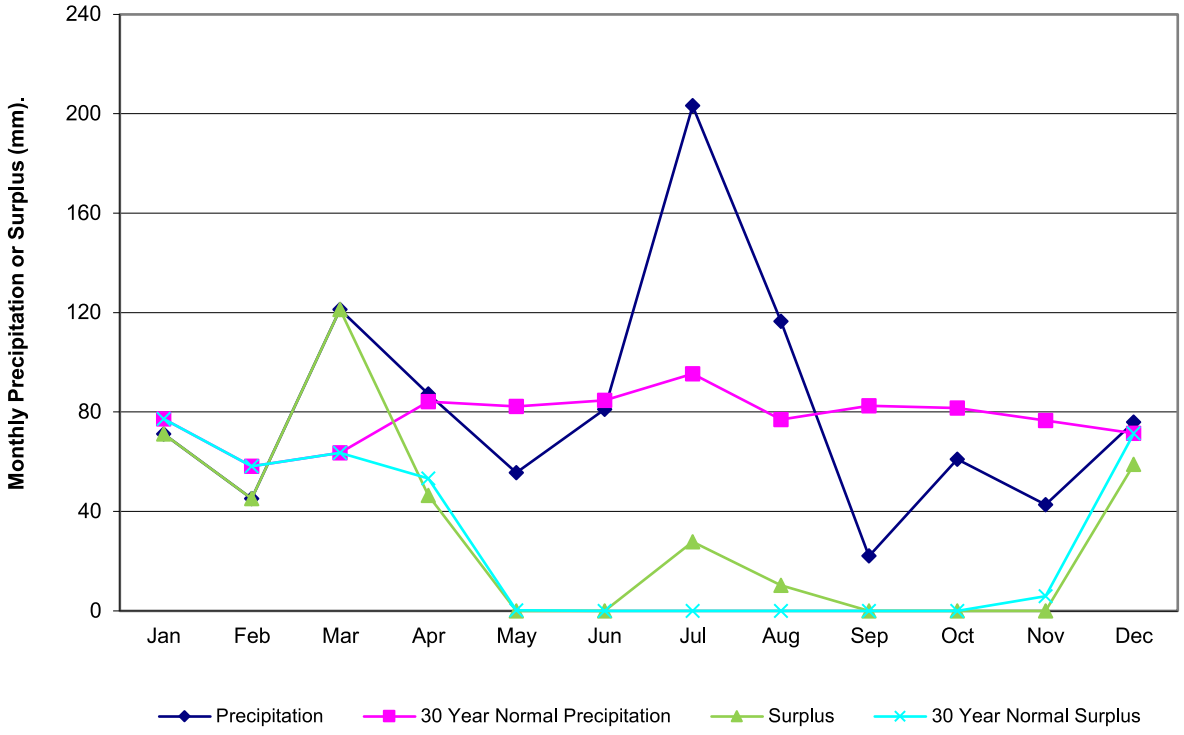
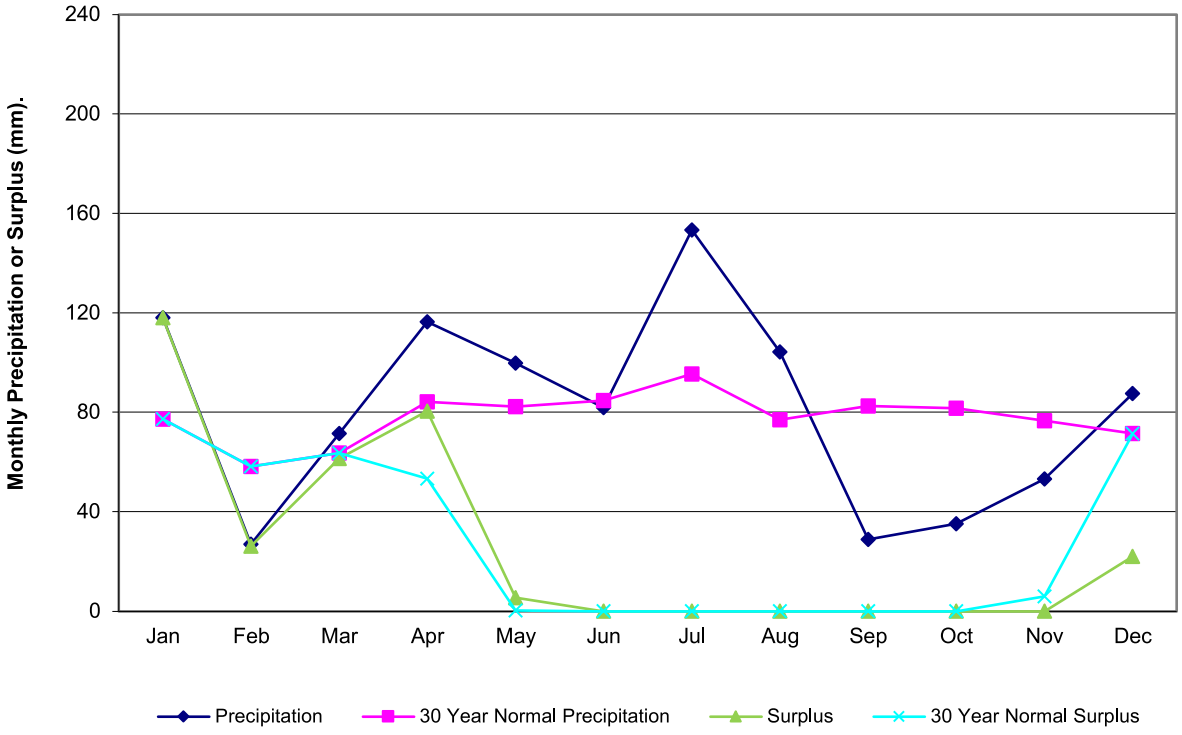


FIGURE D-10
2024 PRECIPITATION DATA
SHADE'S MILLS CLIMATE STATION



APPENDIX E

Pumping Data

Technical Appendix B – 2024 Hydrogeology Report

TABLE E-1
2024 PUMPING DATA - MARCH AND APRIL
MILL CREEK AGGREGATES PIT

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Mar-24	0	0	0	0	0	0
2-Mar-24	0	0	0	0	0	0
3-Mar-24	0	0	0	0	0	0
4-Mar-24	0	0	0	0	0	0
5-Mar-24	0	0	0	0	0	0
6-Mar-24	0	0	0	0	0	0
7-Mar-24	0	0	0	0	0	0
8-Mar-24	0	0	0	0	0	0
9-Mar-24	0	0	0	0	0	0
10-Mar-24	0	0	0	0	0	0
11-Mar-24	0	0	0	0	0	0
12-Mar-24	0	0	0	0	0	0
13-Mar-24	0	0	0	0	0	0
14-Mar-24	0	0	0	0	0	0
15-Mar-24	0	0	0	0	0	0
16-Mar-24	0	0	0	0	0	0
17-Mar-24	0	0	0	0	0	0
18-Mar-24	0	0	0	0	0	0
19-Mar-24	1,555,183	77,759	1,477,423	0	-77,759	0
20-Mar-24	1,280,441	64,022	1,216,419	0	-64,022	0
21-Mar-24	0	0	0	0	0	0
22-Mar-24	0	0	0	0	0	0
23-Mar-24	0	0	0	0	0	0
24-Mar-24	0	0	0	0	0	0
25-Mar-24	1,253,165	62,658	1,190,507	0	-62,658	0
26-Mar-24	1,618,534	80,927	1,537,607	0	-80,927	0
27-Mar-24	1,745,676	87,284	1,658,392	0	-87,284	0
28-Mar-24	1,605,776	80,289	1,525,487	0	-80,289	0
29-Mar-24	0	0	0	0	0	0
30-Mar-24	0	0	0	0	0	0
31-Mar-24	0	0	0	0	0	0
TOTAL	9,058,774	452,939	8,605,835	0	-452,939	0

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Apr-24	1,209,611	60,481	1,149,130	0	-60,481	0
2-Apr-24	1,740,177	87,009	1,653,168	0	-87,009	0
3-Apr-24	1,503,490	75,175	1,428,316	0	-75,175	0
4-Apr-24	1,451,357	72,568	1,378,789	0	-72,568	0
5-Apr-24	1,757,554	87,878	1,669,676	0	-87,878	0
6-Apr-24	0	0	0	0	0	0
7-Apr-24	0	0	0	0	0	0
8-Apr-24	1,765,033	88,252	1,676,781	0	-88,252	0
9-Apr-24	1,754,255	87,713	1,666,542	0	-87,713	0
10-Apr-24	1,727,638	86,382	1,641,256	0	-86,382	0
11-Apr-24	1,744,576	87,229	1,657,347	0	-87,229	0
12-Apr-24	1,695,963	84,798	1,611,165	0	-84,798	0
13-Apr-24	0	0	0	0	0	0
14-Apr-24	0	0	0	0	0	0
15-Apr-24	1,776,912	88,846	1,688,066	0	-88,846	0
16-Apr-24	1,755,795	87,790	1,668,005	0	-87,790	0
17-Apr-24	1,769,873	88,494	1,681,379	0	-88,494	0
18-Apr-24	1,146,480	57,324	1,089,156	0	-57,324	0
19-Apr-24	1,236,227	61,811	1,174,416	0	-61,811	0
20-Apr-24	0	0	0	0	0	0
21-Apr-24	0	0	0	0	0	0
22-Apr-24	1,699,922	84,996	1,614,926	0	-84,996	0
23-Apr-24	1,712,681	85,634	1,627,047	0	-85,634	0
24-Apr-24	1,693,763	84,688	1,609,075	0	-84,688	0
25-Apr-24	1,751,395	87,570	1,663,825	0	-87,570	0
26-Apr-24	1,791,869	89,593	1,702,276	0	-89,593	0
27-Apr-24	0	0	0	0	0	0
28-Apr-24	0	0	0	0	0	0
29-Apr-24	1,768,553	88,428	1,680,125	0	-88,428	0
30-Apr-24	1,761,734	88,087	1,673,647	0	-88,087	0
TOTAL	36,214,858	1,810,743	34,404,115	0	-1,810,743	0

NOTES: 1) All values are imperial gallons.
2) Lost in Production is the estimated volume of water that is carried out with produced material.

TABLE E-1
2024 PUMPING DATA - MAY AND JUNE
MILL CREEK AGGREGATES PIT

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-May-24	1,619,634	80,982	1,538,652	0	-80,982	0
2-May-24	1,778,231	88,912	1,689,319	0	-88,912	0
3-May-24	1,789,890	89,495	1,700,396	0	-89,495	0
4-May-24	0	0	0	0	0	0
5-May-24	0	0	0	0	0	0
6-May-24	1,757,774	87,889	1,669,885	0	-87,889	0
7-May-24	1,795,169	89,758	1,705,411	0	-89,758	0
8-May-24	1,739,737	86,987	1,652,750	0	-86,987	0
9-May-24	1,738,197	86,910	1,651,287	0	-86,910	0
10-May-24	1,756,454	87,823	1,668,631	0	-87,823	0
11-May-24	0	0	0	0	0	0
12-May-24	0	0	0	0	0	0
13-May-24	1,753,155	87,658	1,665,497	0	-87,658	0
14-May-24	1,762,174	88,109	1,674,065	0	-88,109	0
15-May-24	1,769,653	88,483	1,681,170	0	-88,483	0
16-May-24	1,785,930	89,297	1,696,634	0	-89,297	0
17-May-24	1,132,622	56,631	1,075,991	0	-56,631	0
18-May-24	0	0	0	0	0	0
19-May-24	0	0	0	0	0	0
20-May-24	0	0	0	0	0	0
21-May-24	1,740,837	87,042	1,653,795	0	-87,042	0
22-May-24	1,744,356	87,218	1,657,138	0	-87,218	0
23-May-24	1,768,773	88,439	1,680,334	0	-88,439	0
24-May-24	1,694,863	84,743	1,610,120	0	-84,743	0
25-May-24	0	0	0	0	0	0
26-May-24	0	0	0	0	0	0
27-May-24	1,753,155	87,658	1,665,497	0	-87,658	0
28-May-24	1,757,774	87,889	1,669,885	0	-87,889	0
29-May-24	1,771,412	88,571	1,682,841	0	-88,571	0
30-May-24	1,781,091	89,055	1,692,036	0	-89,055	0
31-May-24	1,781,751	89,088	1,692,663	0	-89,088	0
TOTAL	37,972,632	1,898,632	36,074,000	0	-1,898,632	0

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Jun-24	0	0	0	0	0	0
2-Jun-24	0	0	0	0	0	0
3-Jun-24	1,766,573	88,329	1,678,244	0	-88,329	0
4-Jun-24	1,749,415	87,471	1,661,944	0	-87,471	0
5-Jun-24	1,752,055	87,603	1,664,452	0	-87,603	0
6-Jun-24	1,782,411	89,121	1,693,290	0	-89,121	0
7-Jun-24	1,749,415	87,471	1,661,944	0	-87,471	0
8-Jun-24	0	0	0	0	0	0
9-Jun-24	0	0	0	0	0	0
10-Jun-24	1,752,495	87,625	1,664,870	0	-87,625	0
11-Jun-24	1,762,614	88,131	1,674,483	0	-88,131	0
12-Jun-24	1,773,612	88,681	1,684,931	0	-88,681	0
13-Jun-24	1,755,575	87,779	1,667,796	0	-87,779	0
14-Jun-24	1,763,933	88,197	1,675,736	0	-88,197	0
15-Jun-24	0	0	0	0	0	0
16-Jun-24	0	0	0	0	0	0
17-Jun-24	1,446,078	72,304	1,373,774	0	-72,304	0
18-Jun-24	1,714,220	85,711	1,628,509	0	-85,711	0
19-Jun-24	1,772,512	88,626	1,683,886	0	-88,626	0
20-Jun-24	1,665,387	83,269	1,582,118	0	-83,269	0
21-Jun-24	1,712,021	85,601	1,626,420	0	-85,601	0
22-Jun-24	584,678	29,234	555,444	0	-29,234	0
23-Jun-24	0	0	0	0	0	0
24-Jun-24	1,758,654	87,933	1,670,721	0	-87,933	0
25-Jun-24	1,734,238	86,712	1,647,526	0	-86,712	0
26-Jun-24	1,725,219	86,261	1,638,958	0	-86,261	0
27-Jun-24	1,772,072	88,604	1,683,468	0	-88,604	0
28-Jun-24	1,766,793	88,340	1,678,453	0	-88,340	0
29-Jun-24	0	0	0	0	0	0
30-Jun-24	0	0	0	0	0	0
TOTAL	35,259,970	1,762,999	33,496,972	0	-1,762,999	0

NOTES: 1) All values are imperial gallons.
2) Lost in Production is the estimated volume of water that is carried out with produced material.

TABLE E-1
2024 PUMPING DATA - JULY AND AUGUST
MILL CREEK AGGREGATES PIT

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Jul-24	0	0	0	0	0	0
2-Jul-24	1,757,774	87,889	1,669,885	0	-87,889	0
3-Jul-24	1,745,676	87,284	1,658,392	0	-87,284	0
4-Jul-24	1,761,294	88,065	1,673,229	0	-88,065	0
5-Jul-24	1,503,930	75,197	1,428,734	0	-75,197	0
6-Jul-24	0	0	0	0	0	0
7-Jul-24	0	0	0	0	0	0
8-Jul-24	1,722,139	86,107	1,636,032	0	-86,107	0
9-Jul-24	1,741,277	87,064	1,654,213	0	-87,064	0
10-Jul-24	1,750,515	87,526	1,662,989	0	-87,526	0
11-Jul-24	1,762,614	88,131	1,674,483	0	-88,131	0
12-Jul-24	1,643,170	82,159	1,561,012	0	-82,159	0
13-Jul-24	0	0	0	0	0	0
14-Jul-24	0	0	0	0	0	0
15-Jul-24	1,157,258	57,863	1,099,395	0	-57,863	0
16-Jul-24	1,616,774	80,839	1,535,935	0	-80,839	0
17-Jul-24	1,277,581	63,879	1,213,702	0	-63,879	0
18-Jul-24	1,776,912	88,846	1,688,066	0	-88,846	0
19-Jul-24	1,779,551	88,978	1,690,573	0	-88,978	0
20-Jul-24	775,172	38,759	736,413	0	-38,759	0
21-Jul-24	0	0	0	0	0	0
22-Jul-24	1,762,834	88,142	1,674,692	0	-88,142	0
23-Jul-24	1,773,172	88,659	1,684,513	0	-88,659	0
24-Jul-24	1,771,632	88,582	1,683,050	0	-88,582	0
25-Jul-24	1,773,832	88,692	1,685,140	0	-88,692	0
26-Jul-24	1,747,216	87,361	1,659,855	0	-87,361	0
27-Jul-24	772,092	38,605	733,487	0	-38,605	0
28-Jul-24	0	0	0	0	0	0
29-Jul-24	1,754,035	87,702	1,666,333	0	-87,702	0
30-Jul-24	1,743,696	87,185	1,656,511	0	-87,185	0
31-Jul-24	1,747,216	87,361	1,659,855	0	-87,361	0
TOTAL	38,617,362	1,930,868	36,686,494	0	-1,930,868	0

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Aug-24	1,196,633	59831.65	1,136,801	0	-59,832	0
2-Aug-24	1,723,899	86,195	1,637,704	0	-86,195	0
3-Aug-24	0	0	0	0	0	0
4-Aug-24	0	0	0	0	0	0
5-Aug-24	0	0	0	0	0	0
6-Aug-24	1,717,300	85,865	1,631,435	0	-85,865	0
7-Aug-24	761,094	38,055	723,039	0	-38,055	0
8-Aug-24	1,744,136	87,207	1,656,929	0	-87,207	0
9-Aug-24	1,737,317	86,866	1,650,451	0	-86,866	0
10-Aug-24	0	0	0	0	0	0
11-Aug-24	0	0	0	0	0	0
12-Aug-24	1,762,834	88,142	1,674,692	0	-88,142	0
13-Aug-24	1,754,915	87,746	1,667,169	0	-87,746	0
14-Aug-24	1,759,094	87,955	1,671,139	0	-87,955	0
15-Aug-24	1,766,573	88,329	1,678,244	0	-88,329	0
16-Aug-24	1,541,984	77,099	1,464,885	0	-77,099	0
17-Aug-24	0	0	0	0	0	0
18-Aug-24	0	0	0	0	0	0
19-Aug-24	1,768,333	88,417	1,679,916	0	-88,417	0
20-Aug-24	1,366,009	68,300	1,297,709	0	-68,300	0
21-Aug-24	1,779,551	88,978	1,690,573	0	-88,978	0
22-Aug-24	1,609,295	80,465	1,528,830	0	-80,465	0
23-Aug-24	1,653,069	82,653	1,570,416	0	-82,653	0
24-Aug-24	0	0	0	0	0	0
25-Aug-24	0	0	0	0	0	0
26-Aug-24	1,391,305	69,565	1,321,740	0	-69,565	0
27-Aug-24	1,749,415	87,471	1,661,944	0	-87,471	0
28-Aug-24	1,355,890	67,795	1,288,096	0	-67,795	0
29-Aug-24	1,734,238	86,712	1,647,526	0	-86,712	0
30-Aug-24	1,721,259	86,063	1,635,196	0	-86,063	0
31-Aug-24	0	0	0	0	0	0
TOTAL	33,594,143	1,679,707	31,914,436	0	-1,679,707	0

NOTES: 1) All values are imperial gallons.
2) Lost in Production is the estimated volume of water that is carried out with produced material.

TABLE E-1
2024 PUMPING DATA - SEPTEMBER
MILL CREEK AGGREGATES PIT

Date	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
					Phase 1 Pond	Phase 4 Pond
1-Sep-24	0	0	0	0	0	0
2-Sep-24	0	0	0	0	0	0
3-Sep-24	92,607	4,630	87,977	0	-4,630	0
4-Sep-24	159,918	7,996	151,922	0	-7,996	0
5-Sep-24	166,077	8,304	157,773	0	-8,304	0
6-Sep-24	163,217	8,161	155,056	0	-8,161	0
7-Sep-24	0	0	0	0	0	0
8-Sep-24	0	0	0	0	0	0
9-Sep-24	212,490	10,625	201,866	0	-10,625	0
10-Sep-24	0	0	0	0	0	0
11-Sep-24	0	0	0	0	0	0
12-Sep-24	0	0	0	0	0	0
13-Sep-24	0	0	0	0	0	0
14-Sep-24	0	0	0	0	0	0
15-Sep-24	0	0	0	0	0	0
16-Sep-24	0	0	0	0	0	0
17-Sep-24	0	0	0	0	0	0
18-Sep-24	0	0	0	0	0	0
19-Sep-24	0	0	0	0	0	0
20-Sep-24	0	0	0	0	0	0
21-Sep-24	0	0	0	0	0	0
22-Sep-24	0	0	0	0	0	0
23-Sep-24	0	0	0	0	0	0
24-Sep-24	0	0	0	0	0	0
25-Sep-24	0	0	0	0	0	0
26-Sep-24	0	0	0	0	0	0
27-Sep-24	0	0	0	0	0	0
28-Sep-24	0	0	0	0	0	0
29-Sep-24	0	0	0	0	0	0
30-Sep-24	0	0	0	0	0	0
TOTAL	794,309	39,715	754,594	0	-39,715	0

NOTES: 1) All values are imperial gallons.
2) Lost in Production is the estimated volume of water that is carried out with produced material.

TABLE E-2
2024 PUMPING DATA - MONTHLY TOTALS
MILL CREEK AGGREGATES PIT

Month	Units	From Phase 1 Pond for Washing	Production Losses (5%)	Discharge to Phase 1 Pond	From Phase 4 to Phase 1 Pond	Change in Volume from Processing	
						Phase 1 Pond	Phase 4 Pond
March	Imperial Gallons	9,058,774	452,939	8,605,835	0	-452,939	0
	Cubic Metres	41,182	2,059	39,123	0	-2,059	0
April	Imperial Gallons	36,214,858	1,810,743	34,404,115	0	-1,810,743	0
	Cubic Metres	164,636	8,232	156,404	0	-8,232	0
May	Imperial Gallons	37,972,632	1,898,632	36,074,000	0	-1,898,632	0
	Cubic Metres	172,627	8,631	163,996	0	-8,631	0
June	Imperial Gallons	35,259,970	1,762,999	33,496,972	0	-1,762,999	0
	Cubic Metres	160,295	8,015	152,280	0	-8,015	0
July	Imperial Gallons	38,617,362	1,930,868	36,686,494	0	-1,930,868	0
	Cubic Metres	175,558	8,778	166,780	0	-8,778	0
August	Imperial Gallons	33,594,143	1,679,707	31,914,436	0	-1,679,707	0
	Cubic Metres	152,722	7,636	145,086	0	-7,636	0
September	Imperial Gallons	794,309	39,715	754,594	0	-39,715	0
	Cubic Metres	3,611	181	3,430	0	-181	0
TOTAL	Imperial Gallons	191,512,048	9,575,602	181,936,445	0	-9,575,602	0
	Cubic Metres	870,631	43,532	827,100	0	-43,532	0

APPENDIX F

Correspondence

Technical Appendix B – 2024 Hydrogeology Report

October 16, 2024 Project No. CA0019938.6257

Mr. Kevin Mitchell
Dufferin Aggregates, a CRH Company
3300 Steeles Avenue West
4th Floor
Concord, ON L4K 5X6

REVIEW OF MONITORING PROGRAM: MONITORING WELL BH2-R
MILL CREEK PIT, LICENCE NO. 5738

Dear Mr. Mitchell,

The Mill Creek Pit is located on the north and south sides of Concession Road 2, between Sideroad 20 South and Sideroad 25 South, in the Township of Puslinch. The Licensee for the Mill Creek Pit (Licence 5738) is the University of Guelph and the pit is operated by Dufferin Aggregates, a CRH Company (herein referred to as 'Dufferin'). The approved extraction at the Mill Creek Pit consists of six phases which each involve below-water extraction. Phases 1, 3, 4 and 5 are located on the north side of Concession Road 2, while Phases 2 and 6 are located on the south side.

A comprehensive hydrogeological monitoring program has been completed at the site since 1986, including measurement of monthly groundwater/surface water levels at more than 45 locations on and near the Mill Creek Pit site. WSP Canada Inc. has been involved with the hydrogeological monitoring and reporting program at the Mill Creek Pit for over 30 years.

Extraction in Phases 2 and 6 (both located south of Concession Road 2) is complete and final rehabilitation efforts are ongoing. As a result of aggregate extraction and rehabilitation efforts in Phases 2 and 6, monitoring well BH2-R is no longer accessible. Monitoring well BH2-R is located at the eastern boundary of the Phase 2 pond, south of Concession Road 2, as shown on the attached Site Plan (**Figure 1**). The purpose of this letter is to provide a recommendation regarding the ongoing monitoring of well BH2-R.

Monitoring Well BH2/BH2-R

Original monitoring well BH2 was installed in 1986 to determine baseline groundwater levels prior to extraction at the Site. Extraction within Phase 2 occurred primarily between 2002 and 2012, and the water levels in the Phase 2 pond, which was created by below-water extraction in Phase 2, have since stabilized. In accordance with the routine monitoring program for the Mill Creek Pit, manual water level readings in the Phase 2 pond are recorded daily by on-Site staff during the ice-free period of the year. It is noted that BH2 was removed during extraction activities and replaced with monitoring well BH2-R in 2020. Now that extraction in Phase 2 is complete, monitoring location BH2-R is located immediately adjacent to the Phase 2 pond and is hydraulically connected to

the pond. Therefore, the groundwater elevation in monitoring well BH2-R generally reflects the water level elevation in the Phase 2 pond, as shown on the attached hydrographs (**Figure 2**). As such, there is no hydrogeological value in continuing to monitor groundwater levels at BH2-R.

Recommendation

It is recommended that Dufferin seek formal approval from the Ministry of Natural Resources to discontinue groundwater level monitoring at BH2-R. If approval to remove BH2-R from the monitoring program is granted, the well should be abandoned by a licenced well contractor in accordance with Ontario Regulation 903.

Sincerely,

WSP Canada Inc.

[redacted]

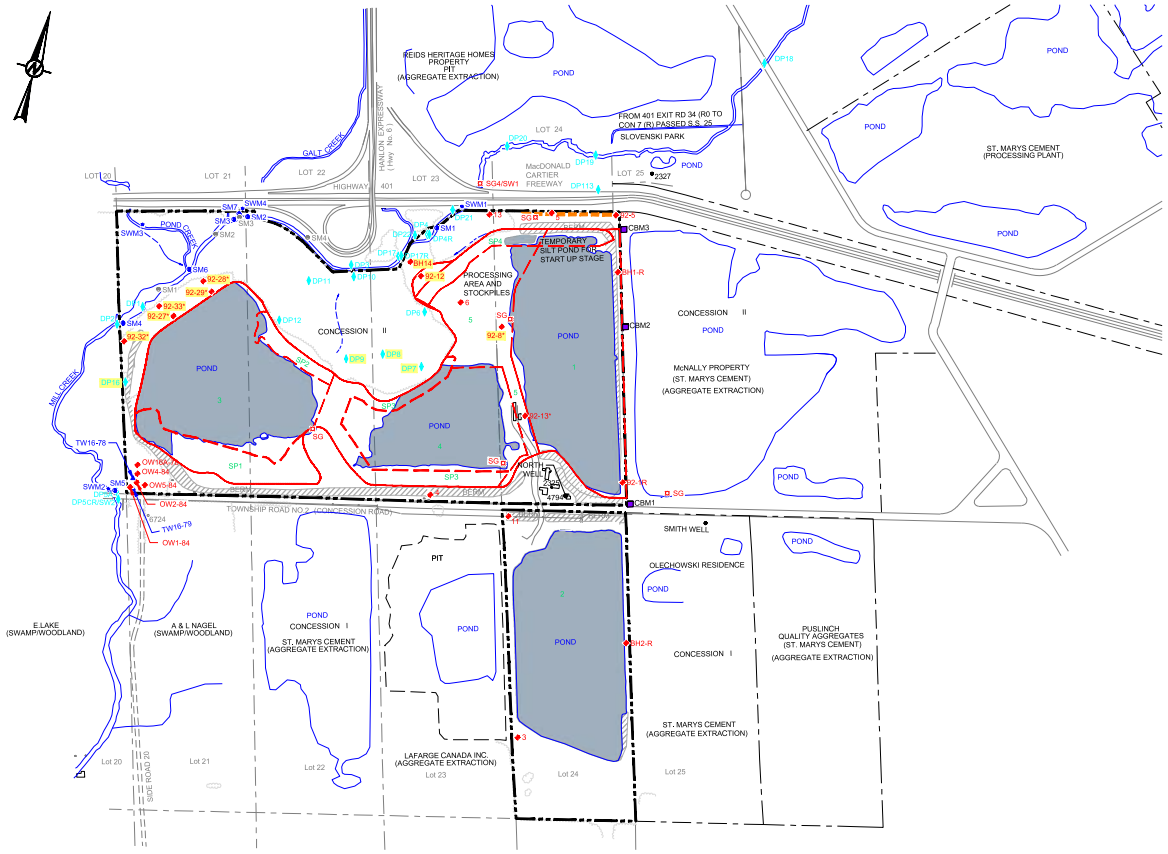
Rebecca Warrack, P.Eng.
Project Engineer, Earth & Environment

[redacted]

Greg R. Siiskonen, P.Eng.
Director, Earth & Environment

Attachments: Figures 1 and 2

https://wsponlinecan.sharepoint.com/sites/ca-ca00199386257/shared documents/05. technical/2024 gw monitoring/letter re bh2r/letter bh2r_sept 2024 - f.docx


REIDS HERITAGE HOMES PIT (AGGREGATE EXTRACTION)
HANLON EXPRESSWAY (Hwy No. 6)
GALT CREEK
HIGHWAY 401
MacDONALD CARTIER FREEWAY
FROM 401 EXIT RD 34 (R0 TO CON 7 (R) PASSED S.S. 25
SLOVENSKI PARK
ST. MARYS CEMENT (PROCESSING PLANT)
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 25
POND CREEK
MILL CREEK
TEMPORARY SILT POND 4 OF 5 START UP STAGE
PROCESSING AREA AND STOCKPILES
CONCESSION II
CONCESSION I
McNALLY PROPERTY (ST. MARYS CEMENT) (AGGREGATE EXTRACTION)
NORTH WELL
SMITH WELL
OLECHOWSKI RESIDENCE
PUSLINCH QUALITY AGGREGATES (ST. MARYS CEMENT) (AGGREGATE EXTRACTION)
PIT
E.LAKE (SWAMP/WOODLAND)
A & L NAGEL (SWAMP/WOODLAND)
LAFARGE CANADA INC. (AGGREGATE EXTRACTION)
SIDE ROAD 20
TOWNSHIP ROAD NO 2 (CONCESSION ROAD)
POND
SP1
SP2
SP3
SP4
SP5
SG4/SW1
SG5
SG6
SG7
SG8
CBM1
CBM2
CBM3
BH1-R
BH2-R
BH4
BH5
BH6
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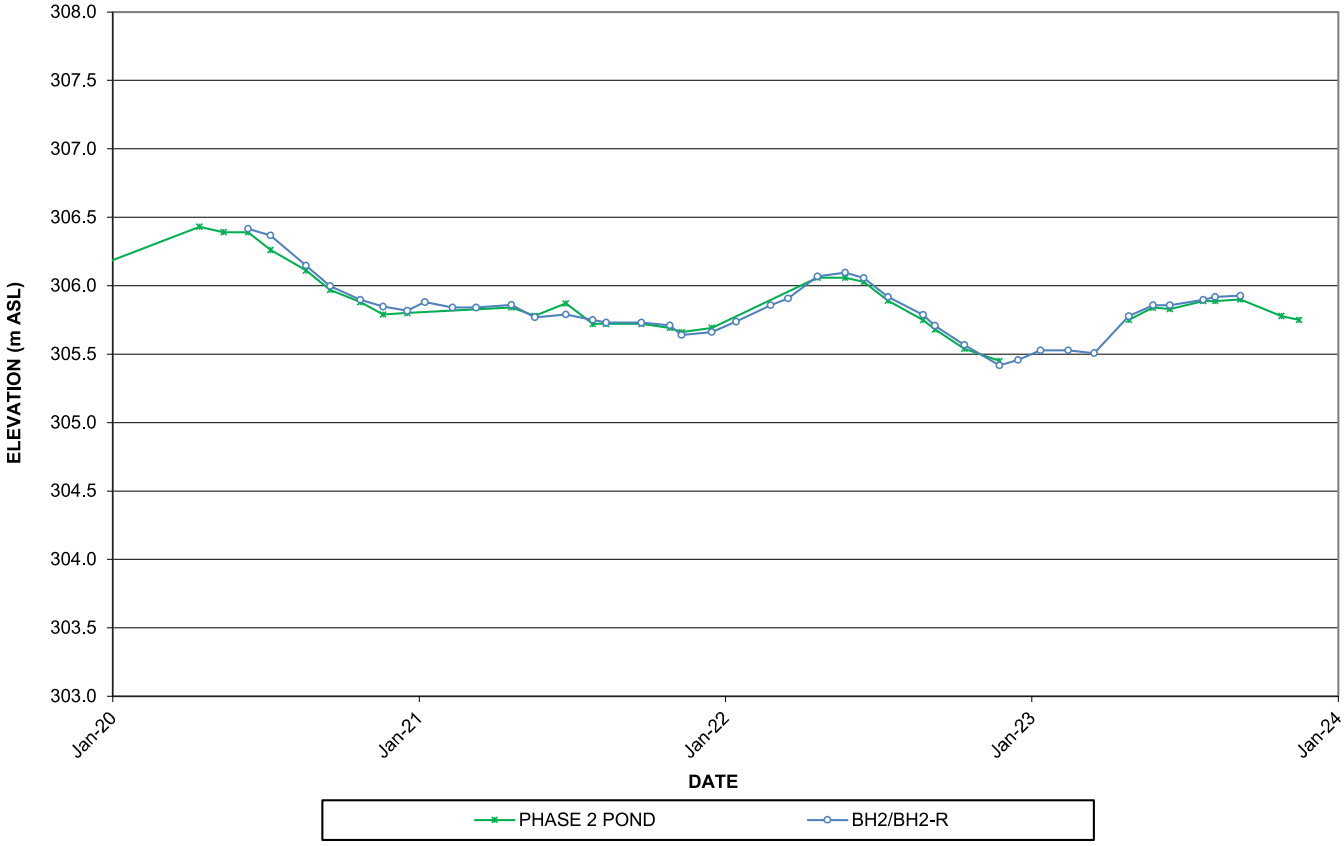
BH41
BH42
BH43

FIGURE 2
PHASE 2 POND AND BH2/BH2-R HYDROGRAPHS



Warrack, Rebecca

From: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Sent: October 25, 2024 5:52 AM
To: Bradley, Martin (CRH Canada Group Inc.); Pettenuzzo, Jennah (CRH Canada Group Inc.); Siiskonen, Greg; Warrack, Rebecca
Subject: Fw: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

Good Morning

FYI below

Kevin

Get Outlook for iOS

From: Ivanov, Oleg (MNR) <Oleg.Ivanov@ontario.ca>
Sent: Thursday, October 24, 2024 8:46 PM
To: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Cc: ARA Approvals (MNR) <ARAApprovals@ontario.ca>; Gilkinson, Kimberly (MNR) <Kimberly.Gilkinson@ontario.ca>
Subject: RE: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and know the contents are safe. If you believe this email may be phishing or malicious, please use the Report Phish button.

Hello Kevin,

Thank you for submitting this letter, MNR accepts the proposed removal of monitoring well BH-2R from the monitoring program as outlined in the letter “REVIEW OF MONITORING PROGRAM: MONITORING WELL BH2-R MILL CREEK PIT, LICENCE NO. 5738” of October 16, 2024 prepared by WSP Canada Inc.

Best Regards,
Oleg

Oleg Ivanov, M.Sc., P.Geo
Hydrogeologist | Aggregates Section, Regional Operations Division
Ministry of Natural Resources | Ontario Public Service
705-927-5318| oleg.ivanov@ontario.ca

Ontario

Taking pride in strengthening Ontario, its places and its people

From: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Sent: Wednesday, October 16, 2024 5:01 PM
To: ARA Approvals (MNR) <ARAApprovals@ontario.ca>
Cc: Ivanov, Oleg (MNR) <Oleg.Ivanov@ontario.ca>; Gilkinson, Kimberly (MNR) <Kimberly.Gilkinson@ontario.ca>
Subject: Re: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

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Good Afternoon

I have not completed a form as our request is to modify one aspect of the monitoring program, not an amendment to the site plans.
The attached letter from our hydrogeologist, WSP, confirms they do not believe it is necessary to monitor ground water levels in BH-2.
Thank you

Kevin Mitchell

Director Approvals & Environmental Practices

CRH Canada Group Inc.

416-788-0015

From: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>
Sent: Tuesday, July 2, 2024 10:27 AM
To: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Cc: Ivanov, Oleg (MNRF) <Oleg.Ivanov@ontario.ca>; Gilkinson, Kimberly (MNRF) <Kimberly.Gilkinson@ontario.ca>
Subject: RE: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

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Hi Kevin,

Thank you for your inquiry. You can apply to make changes to your site plan, licence, or permit at anytime. General information about submitting an amendment can be found on the Aggregate resources website (https://www.ontario.ca/page/aggregate-resources) and Aggregate resources policies and procedures page, located here: https://www.ontario.ca/page/aggregate-resources-policies-and-procedures. Outlined in the ARA policies and Procedures Policy & Procedure - A.R. 2.03.00 licence site plan amendment procedure & A.R. 4.04.00 a aggregate permit site plan amendments
When you are ready to submit your amendment application complete an Amendment Form and email it to ARAApprovals@ontario.ca, along with a site plan.
If you cannot submit the Amendment Form by email it can be sent in by mail. A fee is required for the processing of significant licence site plan amendments ($500 Class A, $300 Class B) cheque (only) payable to the Minister of Finance and send to:

Aggregate Section

ATTN: Katie O'Connell
300 Water St, 4th Floor S
Peterborough, ON K9J 3C7
Please make state the Licence ##### on the note section of the cheque for quick processing.

Please review the information linked in this e-mail, if you have further questions please send these to ARAApprovals@ontario.ca.

Regards,

Best regards, Sandii on behalf of the Aggregates Section

From: Ivanov, Oleg (MNRF) <Oleg.Ivanov@ontario.ca>
Sent: Friday, June 28, 2024 1:44 PM
To: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>
Cc: Gilkinson, Kimberly (MNRF) <Kimberly.Gilkinson@ontario.ca>
Subject: FW: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

Hi Sandii,
Can I leave this in your hands for now?
Thanks
Oleg

From: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Sent: Friday, June 28, 2024 1:06 PM
To: Ivanov, Oleg (MNRF) <Oleg.Ivanov@ontario.ca>
Cc: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>; Gilkinson, Kimberly (MNRF) <Kimberly.Gilkinson@ontario.ca>
Subject: Re: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

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Thank you Oleg.
Does this require the form to be completed for a site plan amendment (it is not really an amendment as the change is within the monitoring program) or is the letter that was provided sufficient?

Kevin Mitchell

Director Approvals & Environmental Practices

CRH Canada Group Inc.

416-788-0015

From: Ivanov, Oleg (MNRF) <Oleg.Ivanov@ontario.ca>
Sent: Friday, June 28, 2024 12:53 PM
To: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Cc: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>; Gilkinson, Kimberly (MNRF) <Kimberly.Gilkinson@ontario.ca>
Subject: [EXT] RE: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

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Hello Kevin,
Perhaps you could send it to me this time and I will direct it to the appropriate person to manage.
Have a good weekend,

Regards
Oleg

From: Mitchell, Kevin (CRH Canada Group Inc.) <kevin.mitchell@ca.crh.com>
Sent: Friday, June 28, 2024 11:18 AM
To: Ivanov, Oleg (MNRF) <Oleg.Ivanov@ontario.ca>
Subject: Mill Creek Pit, Township of Puslinch, Licence ID No. 5738

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning Oleg

I hope this email finds you well.
We have a request to eliminate a monitoring well due to extraction being completed and wanting to complete final grading. Is this something you can review and approve or should I be directing this to the ARA approval email address?
Thank you and enjoy the long weekend.
Regards

Kevin Mitchell

Director Approvals & Environmental Practices

CRH Canada Group Inc.

416-788-0015

ATTENTION: Ce courriel vient de l'exterieur de l'entreprise. Ne cliquez pas sur les liens, et n'ouvrez pas les pièces jointes, à moins que vous ne connaissiez l'expéditeur du courriel et savez que le contenu est sécuritaire. Si vous pensez qu'il s'agit d'un courriel d'hameçonnage ou malveillant, veuillez cliquer sur le bouton Signaler une tentative d'hameçonnage.

ATTENTION: Ce courriel vient de l'exterieur de l'entreprise. Ne cliquez pas sur les liens, et n'ouvrez pas les pièces jointes, à moins que vous ne connaissiez l'expéditeur du courriel et savez que le contenu est sécuritaire. Si vous pensez qu'il s'agit d'un courriel d'hameçonnage ou malveillant, veuillez cliquer sur le bouton Signaler une tentative d'hameçonnage.

ATTENTION: Ce courriel vient de l'exterieur de l'entreprise. Ne cliquez pas sur les liens, et n'ouvrez pas les pièces jointes, à moins que vous ne connaissiez l'expéditeur du courriel et savez que le contenu est sécuritaire. Si vous pensez qu'il s'agit d'un courriel d'hameçonnage ou malveillant, veuillez cliquer sur le bouton Signaler une tentative d'hameçonnage.

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

February 13, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – January 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of January 2024 for those monitoring wells that could be measured. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Monthly Reporting
Mill Creek Aggregates Pit
January 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	Frozen	305.66	NO
8-Jan-24	305.80	305.66	NO
17-Jan-24	Frozen	305.66	NO
26-Jan-24	306.04	305.66	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	306.15	Frozen	-	0.11	NO
8-Jan-24	306.11	305.80	0.31	0.11	NO
17-Jan-24	306.14	Frozen	-	0.11	NO
26-Jan-24	306.35	306.04	0.31	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	305.31	305.17	NO
8-Jan-24	305.29	305.17	NO
17-Jan-24	305.26	305.17	NO
26-Jan-24	305.44	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	305.65	305.31	0.34	0.07	NO
8-Jan-24	305.60	305.29	0.31	0.07	NO
17-Jan-24	305.73	305.26	0.47	0.07	NO
26-Jan-24	306.05	305.44	0.61	0.07	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	Frozen	304.54	NO
8-Jan-24	304.79	304.54	NO
17-Jan-24	Frozen	304.54	NO
26-Jan-24	Frozen	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	305.66	Frozen	-	0.57	NO
8-Jan-24	305.63	304.79	0.84	0.57	NO
17-Jan-24	Frozen	Frozen	-	0.57	NO
26-Jan-24	305.95	Frozen	-	0.57	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	Frozen	303.65	NO
8-Jan-24	303.82	303.65	NO
17-Jan-24	Frozen	303.65	NO
26-Jan-24	303.81	303.65	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	304.63	Frozen	-	0.43	NO
8-Jan-24	304.69	303.82	0.87	0.43	NO
17-Jan-24	304.71	Frozen	-	0.43	NO
26-Jan-24	305.05	303.81	1.24	0.43	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	Frozen	303.88	NO
17-Jan-24	Frozen	303.88	NO
26-Jan-24	Frozen	303.88	NO
26-Jan-24	Frozen	303.88	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	304.86	Frozen	-	0.29	NO
17-Jan-24	304.85	Frozen	-	0.29	NO
26-Jan-24	304.92	Frozen	-	0.29	NO
26-Jan-24	304.95	Frozen	-	0.29	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
5-Jan-24	Frozen	302.88	NO
17-Jan-24	303.24	302.88	NO
26-Jan-24	Frozen	302.88	NO
26-Jan-24	303.46	302.88	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Jan-24	303.70	Frozen	-	0.20	NO
17-Jan-24	303.64	303.24	0.40	0.20	NO
26-Jan-24	303.70	Frozen	-	0.20	NO
26-Jan-24	303.73	303.46	0.27	0.20	NO

Note: No exceedances to report for the month of January.

Monthly Reporting
Mill Creek Aggregates Pit
January 2024

			Max. Allowable as per PTTW- Main Pond			*Max. Allowable as per PTTW- Silt Pond*		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	82.4	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	65.2	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
2-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
3-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
4-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
5-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
6-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
7-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
8-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
9-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
10-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
11-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
12-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
13-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
14-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
15-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
16-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
17-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
18-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
19-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
20-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
21-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
22-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
23-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
24-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
25-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
26-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
27-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
28-Jan-24	-	-	-	-	-	-	-	-	-	-	-	-
29-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
30-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
31-Jan-24	0	0	0	0	-	-	-	-	-	-	-	-
Total	0	0	0	0	-	-	-	-	-	-	-	-

Note: No exceedances to report for the month of January. All ponds are frozen.

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

March 12, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – February 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of February 2024 for those monitoring wells that could be measured. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
February 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	306.04	305.66	NO
9-Feb-24	306.00	305.66	NO
14-Feb-24	305.85	305.66	NO
22-Feb-24	305.82	305.66	NO
27-Feb-24	305.84	305.66	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	306.27	306.04	0.23	0.11	NO
9-Feb-24	306.25	306.00	0.25	0.11	NO
14-Feb-24	306.21	305.85	0.36	0.11	NO
22-Feb-24	306.19	305.82	0.37	0.11	NO
27-Feb-24	306.21	305.84	0.37	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	305.39	305.17	NO
9-Feb-24	305.34	305.17	NO
14-Feb-24	305.31	305.17	NO
22-Feb-24	305.30	305.17	NO
27-Feb-24	305.32	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	306.05	305.39	0.67	0.07	NO
9-Feb-24	305.96	305.34	0.63	0.07	NO
14-Feb-24	305.66	305.31	0.35	0.07	NO
22-Feb-24	305.66	305.30	0.36	0.07	NO
27-Feb-24	305.68	305.32	0.36	0.07	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	305.26	304.54	NO
9-Feb-24	304.85	304.54	NO
14-Feb-24	Frozen	304.54	NO
22-Feb-24	304.82	304.54	NO
27-Feb-24	304.80	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	305.85	304.76	1.09	0.57	NO
9-Feb-24	305.80	304.85	0.94	0.57	NO
14-Feb-24	305.77	Frozen	-	0.57	NO
22-Feb-24	305.93	304.82	1.11	0.57	NO
27-Feb-24	305.73	304.80	0.93	0.57	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	303.83	303.65	NO
9-Feb-24	304.02	303.65	NO
14-Feb-24	Frozen	303.65	NO
22-Feb-24	303.94	303.65	NO
27-Feb-24	303.90	303.65	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	304.89	303.83	1.06	0.43	NO
9-Feb-24	304.75	304.02	0.73	0.43	NO
14-Feb-24	304.75	Frozen	-	0.43	NO
22-Feb-24	304.67	303.94	0.73	0.43	NO
27-Feb-24	304.74	303.90	0.84	0.43	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	304.39	303.88	NO
9-Feb-24	304.33	303.88	NO
14-Feb-24	Frozen	303.88	NO
22-Feb-24	304.31	303.88	NO
27-Feb-24	304.44	303.88	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	304.96	304.39	0.56	0.29	NO
9-Feb-24	304.87	304.33	0.54	0.29	NO
14-Feb-24	304.90	Frozen	-	0.29	NO
22-Feb-24	304.88	304.31	0.57	0.29	NO
27-Feb-24	304.89	304.44	0.45	0.29	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
2-Feb-24	303.41	302.88	NO
9-Feb-24	303.34	302.88	NO
14-Feb-24	Frozen	302.88	NO
22-Feb-24	303.29	302.88	NO
27-Feb-24	303.34	302.88	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Feb-24	303.79	303.41	0.38	0.20	NO
9-Feb-24	303.73	303.34	0.39	0.20	NO
14-Feb-24	303.66	Frozen	-	0.20	NO
22-Feb-24	303.67	303.29	0.38	0.20	NO
27-Feb-24	303.72	303.34	0.38	0.20	NO

Note: No exceedances to report for the month of February.

Monthly Reporting
Mill Creek Aggregates Pit
February 2024

			Max. Allowable as per PTTW- Main Pond				*Max. Allowable as per PTTW- Silt Pond*		
			(Imperial Gallons)		(Litres)		(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	5.9	Kitchener/Waterloo (Actual)	2,500	per minute	11,365		2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	54.9	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000		3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
2-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
3-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
4-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
5-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
6-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
7-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
8-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
9-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
10-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
11-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
12-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
13-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
14-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
15-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
16-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
17-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
18-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
19-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
20-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
21-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
22-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
23-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
24-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
25-Feb-24	-	-	-	-	-	-	-	-	-	-	-	-
26-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
27-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
28-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
29-Feb-24	0	0	0	0	-	-	-	-	-	-	-	-
Total	0	0	0	0	-	-	-	-	-	-	-	-

Note: No exceedances to report for the month of February.

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

April 10, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – March 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of March 2024 for those monitoring wells that could be measured. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
March 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	306.00	305.66	NO
12-Mar-24	305.88	305.66	NO
22-Mar-24	Frozen	305.66	NO
28-Mar-24	305.87	305.66	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	306.20	306.00	0.20	0.11	NO
12-Mar-24	306.25	305.88	0.37	0.11	NO
22-Mar-24	306.23	Frozen	-	0.11	NO
28-Mar-24	306.22	305.87	0.35	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	305.31	305.17	NO
12-Mar-24	305.35	305.17	NO
22-Mar-24	Frozen	305.17	NO
28-Mar-24	305.30	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	305.66	305.31	0.35	0.07	NO
12-Mar-24	305.74	305.35	0.39	0.07	NO
22-Mar-24	305.71	Frozen	-	0.07	NO
28-Mar-24	305.70	305.30	0.40	0.07	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	304.78	304.54	NO
12-Mar-24	304.87	304.54	NO
22-Mar-24	Frozen	304.54	NO
28-Mar-24	304.88	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	305.76	304.78	0.98	0.57	NO
12-Mar-24	305.81	304.87	0.94	0.57	NO
22-Mar-24	305.81	Frozen	-	0.57	NO
28-Mar-24	305.79	304.88	0.91	0.57	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	304.03	303.65	NO
12-Mar-24	304.00	303.65	NO
22-Mar-24	Frozen	303.65	NO
28-Mar-24	304.02	303.65	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	304.70	304.03	0.67	0.43	NO
12-Mar-24	304.79	304.00	0.79	0.43	NO
22-Mar-24	304.72	Frozen	-	0.43	NO
28-Mar-24	304.72	304.02	0.70	0.43	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	304.31	303.88	NO
12-Mar-24	304.36	303.88	NO
22-Mar-24	Frozen	303.88	NO
28-Mar-24	304.31	303.88	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	304.89	304.31	0.58	0.29	NO
12-Mar-24	304.91	304.36	0.55	0.29	NO
22-Mar-24	304.90	Frozen	-	0.29	NO
28-Mar-24	304.90	304.31	0.59	0.29	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
8-Mar-24	303.32	302.88	NO
12-Mar-24	303.42	302.88	NO
22-Mar-24	Frozen	302.88	NO
28-Mar-24	303.21	302.88	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
8-Mar-24	303.68	303.32	0.36	0.20	NO
12-Mar-24	303.70	303.42	0.28	0.20	NO
22-Mar-24	303.69	Frozen	-	0.20	NO
28-Mar-24	303.71	303.21	0.50	0.20	NO

No exceedances to report for the month of March.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
March 2024

					Max. Allowable as per PTTW- Main Pond				Max. Allowable as per PTTW- Silt Pond			
					(Imperial Gallons)		(Litres)		(Imperial Gallons)		(Litres)	
Total Monthly Precipitation (mm):		66.0	Kitchener/Waterloo (Actual)		2,500	per minute	11,365		2,597	per minute	11,806	
Total Monthly Normal Precipitation (mm):		61.0	Waterloo-Wellington A (30-year Normal)		1,800,000	per day	8,183,000		3,739,477	per day	17,000,000	

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
2-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
3-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
4-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
5-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
6-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
7-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
8-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
9-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
10-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
11-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
12-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
13-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
14-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
15-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
16-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
17-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
18-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
19-Mar-24	-	-	1,555,183	-	306.43	N	305.95	N	305.02	N	306.17	N
20-Mar-24	-	-	1,280,441	-	306.43	N	305.95	N	305.02	N	306.16	N
21-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
22-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
23-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
24-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
25-Mar-24	-	-	1,253,165	-	306.43	N	305.95	N	305.00	N	306.17	N
26-Mar-24	-	-	1,618,534	-	306.43	N	305.95	N	305.00	N	306.17	N
27-Mar-24	-	-	1,745,676	-	306.43	N	305.95	N	305.00	N	306.17	N
28-Mar-24	-	-	1,605,776	-	306.43	N	305.95	N	305.00	N	306.17	N
29-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
30-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
31-Mar-24	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	9,058,774	0								

Note: No exceedances to report for the month of March

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

May 8, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – April 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of April 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
April 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	305.96	305.60	NO
9-Apr-24	305.95	305.60	NO
18-Apr-24	305.90	305.60	NO
26-Apr-24	305.88	305.60	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	306.31	305.96	0.35	0.11	NO
9-Apr-24	306.29	305.95	0.34	0.11	NO
18-Apr-24	306.28	305.90	0.38	0.11	NO
26-Apr-24	306.25	305.88	0.37	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	305.38	305.17	NO
9-Apr-24	305.38	305.17	NO
18-Apr-24	305.32	305.17	NO
26-Apr-24	305.31	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	305.80	305.38	0.42	0.14	NO
9-Apr-24	305.71	305.38	0.33	0.14	NO
18-Apr-24	305.78	305.32	0.46	0.14	NO
26-Apr-24	305.76	305.31	0.45	0.14	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	304.98	304.54	NO
9-Apr-24	304.88	304.54	NO
18-Apr-24	304.89	304.54	NO
26-Apr-24	304.91	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	305.88	304.98	0.90	0.73	NO
9-Apr-24	305.87	304.88	0.99	0.73	NO
18-Apr-24	305.88	304.89	0.99	0.73	NO
26-Apr-24	305.91	304.91	1.00	0.73	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	304.01	303.69	NO
9-Apr-24	303.96	303.69	NO
18-Apr-24	303.99	303.69	NO
26-Apr-24	304.01	303.69	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	304.79	304.01	0.78	0.34	NO
9-Apr-24	304.70	303.96	0.74	0.34	NO
18-Apr-24	304.82	303.99	0.83	0.34	NO
26-Apr-24	304.84	304.01	0.83	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	304.31	303.97	NO
9-Apr-24	304.31	303.97	NO
18-Apr-24	304.32	303.97	NO
26-Apr-24	304.35	303.97	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	304.93	304.31	0.62	0.17	NO
9-Apr-24	304.92	304.31	0.61	0.17	NO
18-Apr-24	304.87	304.32	0.55	0.17	NO
26-Apr-24	304.84	304.35	0.49	0.17	NO

Date	DPSCR (mASL)	Threshold Value (mASL)	Exceedance
5-Apr-24	303.40	302.86	NO
9-Apr-24	303.31	302.86	NO
18-Apr-24	303.19	302.86	NO
26-Apr-24	303.21	302.86	NO

Date	OW5-84 (mASL)	DPSCR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
5-Apr-24	303.76	303.40	0.36	0.18	NO
9-Apr-24	303.72	303.31	0.41	0.18	NO
18-Apr-24	303.70	303.19	0.51	0.18	NO
26-Apr-24	303.72	303.21	0.51	0.18	NO

No exceedances to report for the month of April.

Note: A beaver dam has been observed on private property upstream of DPSCR, which is likely to impact the water levels at DPSCR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
April 2024

Total Monthly Precipitation (mm):	108.0	Kitchener/Waterloo (Actual)
Total Monthly Normal Precipitation (mm):	74.5	Waterloo-Wellington A (30-year Normal)

Max. Allowable as per PTTW- Main Pond		
(Imperial Gallons)		(Litres)
2,500	per minute	11,365
1,800,000	per day	8,183,000

Max. Allowable as per PTTW- Silt Pond		
(Imperial Gallons)		(Litres)
2,597	per minute	11,806
3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Apr-24			1,209,611		306.43	N	305.95	N	305.00	N	306.17	N
2-Apr-24			1,740,177		306.43	N	305.95	N	304.98	N	306.15	N
3-Apr-24			1,503,490		306.43	N	305.96	N	304.99	N	306.16	N
4-Apr-24			1,451,357		306.46	N	305.98	N	304.98	N	306.17	N
5-Apr-24			1,757,554		306.45	N	305.98	N	304.98	N	306.17	N
6-Apr-24												
7-Apr-24												
8-Apr-24			1,765,033		306.44	N	305.96	N	305.01	N	306.17	N
9-Apr-24			1,754,255		306.44	N	305.96	N	304.98	N	306.17	N
10-Apr-24			1,727,638		306.44	N	305.97	N	304.98	N	306.17	N
11-Apr-24			1,744,576		306.45	N	305.99	N	304.99	N	306.17	N
12-Apr-24			1,695,963		306.47	N	306.02	N	305.02	N	306.21	N
13-Apr-24												
14-Apr-24												
15-Apr-24			1,776,912		306.48	N	306.02	N	305.02	N	306.21	N
16-Apr-24			1,755,795		306.48	N	306.02	N	305.02	N	306.21	N
17-Apr-24			1,769,873		306.46	N	306.01	N	305.03	N	306.21	N
18-Apr-24			1,146,480		306.49	N	306.04	N	305.03	N	306.22	N
19-Apr-24			1,236,227		306.49	N	306.04	N	305.03	N	306.23	N
20-Apr-24												
21-Apr-24												
22-Apr-24			1,699,922		306.49	N	306.04	N	305.02	N	306.23	N
23-Apr-24			1,712,681		306.48	N	306.04	N	305.01	N	306.22	N
24-Apr-24			1,693,763		306.49	N	306.03	N	305.02	N	306.21	N
25-Apr-24			1,751,395		306.48	N	306.04	N	305.00	N	306.22	N
26-Apr-24			1,791,869		306.48	N	306.03	N	305.00	N	306.22	N
27-Apr-24												
28-Apr-24												
29-Apr-24			1,768,553		306.48	N	306.05	N	305.00	N	306.22	N
30-Apr-24			1,761,734		**306.51**	N	306.05	N	305.02	N	306.25	N
Total	0	0	36,214,857	0								

Note: No exceedances to report for the month of April

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

June 12, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – May 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of May 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
May 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	305.87	305.60	NO
6-May-24	305.84	305.60	NO
13-May-24	305.82	305.60	NO
23-May-24	305.79	305.60	NO
29-May-24	305.87	305.60	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	306.27	305.87	0.40	0.11	NO
6-May-24	306.19	305.84	0.35	0.11	NO
13-May-24	306.26	305.82	0.44	0.11	NO
23-May-24	306.24	305.79	0.45	0.11	NO
29-May-24	306.28	305.87	0.41	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	305.38	305.17	NO
6-May-24	305.36	305.17	NO
13-May-24	305.32	305.17	NO
23-May-24	305.22	305.17	NO
29-May-24	305.37	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	305.79	305.38	0.41	0.14	NO
6-May-24	305.74	305.36	0.38	0.14	NO
13-May-24	305.73	305.32	0.41	0.14	NO
23-May-24	305.67	305.22	0.45	0.14	NO
29-May-24	305.77	305.37	0.40	0.14	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	304.90	304.54	NO
6-May-24	304.85	304.54	NO
13-May-24	304.80	304.54	NO
23-May-24	304.72	304.54	NO
29-May-24	304.78	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	305.92	304.90	1.02	0.73	NO
6-May-24	305.87	304.85	1.02	0.73	NO
13-May-24	305.82	304.80	1.02	0.73	NO
23-May-24	305.78	304.72	1.06	0.73	NO
29-May-24	305.84	304.78	1.06	0.73	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	304.02	303.69	NO
6-May-24	303.99	303.69	NO
13-May-24	304.00	303.69	NO
23-May-24	303.98	303.69	NO
29-May-24	304.02	303.69	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	304.83	304.02	0.81	0.34	NO
6-May-24	304.80	303.99	0.81	0.34	NO
13-May-24	304.73	304.00	0.73	0.34	NO
23-May-24	304.73	303.98	0.75	0.34	NO
29-May-24	304.81	304.02	0.79	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	304.36	303.97	NO
6-May-24	304.34	303.97	NO
13-May-24	304.35	303.97	NO
23-May-24	304.29	303.97	NO
29-May-24	304.34	303.97	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	304.88	304.36	0.52	0.17	NO
6-May-24	304.91	304.34	0.57	0.17	NO
13-May-24	304.96	304.35	0.61	0.17	NO
23-May-24	304.79	304.29	0.50	0.17	NO
29-May-24	304.98	304.34	0.64	0.17	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
1-May-24	303.27	302.86	NO
6-May-24	303.29	302.86	NO
13-May-24	303.40	302.86	NO
23-May-24	303.25	302.86	NO
29-May-24	303.39	302.86	NO

Date	OWS-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
1-May-24	303.73	303.27	0.46	0.18	NO
6-May-24	303.70	303.29	0.41	0.18	NO
13-May-24	303.68	303.40	0.28	0.18	NO
23-May-24	303.69	303.25	0.44	0.18	NO
29-May-24	303.71	303.39	0.32	0.18	NO

No exceedances to report for the month of May.
Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Monthly Reporting
Mill Creek Aggregates Pit
May 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	102.1	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	80.2	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-May-24	-	-	1,619,634	-	306.52	N	306.08	N	305.03	N	306.25	N
2-May-24	-	-	1,778,231	-	306.52	N	306.07	N	305.02	N	306.24	N
3-May-24	-	-	1,789,890	-	306.52	N	306.06	N	305.03	N	306.25	N
4-May-24	-	-	-	-	-	-	-	-	-	-	-	-
5-May-24	-	-	-	-	-	-	-	-	-	-	-	-
6-May-24	-	-	1,757,774	-	306.53	N	306.08	N	305.01	N	306.26	N
7-May-24	-	-	1,795,169	-	306.52	N	306.08	N	305.02	N	306.25	N
8-May-24	-	-	1,739,737	-	306.53	N	306.09	N	305.07	N	306.23	N
9-May-24	-	-	1,738,197	-	306.53	N	306.07	N	305.05	N	306.20	N
10-May-24	-	-	1,756,454	-	306.52	N	306.08	N	305.09	N	306.17	N
11-May-24	-	-	-	-	-	-	-	-	-	-	-	-
12-May-24	-	-	-	-	-	-	-	-	-	-	-	-
13-May-24	-	-	1,753,155	-	306.52	N	306.09	N	305.09	N	306.17	N
14-May-24	-	-	1,762,174	-	306.52	N	306.09	N	305.06	N	306.17	N
15-May-24	-	-	1,769,653	-	306.51	N	306.09	N	305.05	N	306.16	N
16-May-24	-	-	1,785,930	-	306.51	N	306.09	N	305.05	N	306.16	N
17-May-24	-	-	1,132,622	-	306.51	N	306.07	N	305.05	N	306.15	N
18-May-24	-	-	-	-	-	-	-	-	-	-	-	-
19-May-24	-	-	-	-	-	-	-	-	-	-	-	-
20-May-24	-	-	-	-	-	-	-	-	-	-	-	-
21-May-24	-	-	1,740,837	-	306.50	N	306.08	N	305.04	N	306.16	N
22-May-24	-	-	1,744,356	-	306.50	N	306.09	N	305.07	N	306.17	N
23-May-24	-	-	1,768,773	-	306.50	N	306.09	N	305.05	N	306.17	N
24-May-24	-	-	1,694,863	-	306.49	N	306.08	N	305.02	N	306.16	N
25-May-24	-	-	-	-	-	-	-	-	-	-	-	-
26-May-24	-	-	-	-	-	-	-	-	-	-	-	-
27-May-24	-	-	1,753,155	-	306.50	N	306.10	N	305.02	N	306.17	N
28-May-24	-	-	1,757,774	-	306.52	N	306.11	N	305.02	N	306.17	N
29-May-24	-	-	1,771,412	-	306.52	N	306.12	N	305.03	N	306.20	N
30-May-24	-	-	1,781,091	-	306.51	N	306.11	N	305.02	N	306.20	N
31-May-24	-	-	1,781,751	-	306.50	N	306.10	N	305.02	N	306.19	N
Total	0	0	37,972,631	0								

Note: No exceedances to report for the month of May

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

July 10, 2024

Seana Richardson
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Ms. Richardson

Re: Monthly Monitoring Report – June 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of June 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
June 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	305.86	305.60	NO
10-Jun-24	305.78	305.60	NO
18-Jun-24	305.87	305.60	NO
26-Jun-24	305.84	305.60	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	306.27	305.86	0.41	0.11	NO
10-Jun-24	306.29	305.78	0.51	0.11	NO
18-Jun-24	306.25	305.87	0.38	0.11	NO
26-Jun-24	306.24	305.84	0.40	0.11	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	305.32	305.17	NO
10-Jun-24	305.30	305.17	NO
18-Jun-24	305.29	305.17	NO
26-Jun-24	305.24	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	305.74	305.32	0.42	0.14	NO
10-Jun-24	305.73	305.30	0.43	0.14	NO
18-Jun-24	305.76	305.29	0.47	0.14	NO
26-Jun-24	305.74	305.24	0.50	0.14	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	304.79	304.54	NO
10-Jun-24	304.80	304.54	NO
18-Jun-24	304.77	304.54	NO
26-Jun-24	304.74	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	305.80	304.79	1.01	0.73	NO
10-Jun-24	305.83	304.80	1.03	0.73	NO
18-Jun-24	305.85	304.77	1.08	0.73	NO
26-Jun-24	305.81	304.74	1.07	0.73	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	304.06	303.69	NO
10-Jun-24	304.04	303.69	NO
18-Jun-24	304.01	303.69	NO
26-Jun-24	303.98	303.69	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	304.78	304.06	0.72	0.34	NO
10-Jun-24	304.81	304.04	0.77	0.34	NO
18-Jun-24	304.77	304.01	0.76	0.34	NO
26-Jun-24	304.74	303.98	0.76	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	304.33	303.97	NO
10-Jun-24	304.31	303.97	NO
18-Jun-24	304.33	303.97	NO
26-Jun-24	304.32	303.97	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	304.95	304.33	0.62	0.17	NO
10-Jun-24	304.91	304.31	0.60	0.17	NO
18-Jun-24	304.98	304.33	0.65	0.17	NO
26-Jun-24	304.97	304.32	0.65	0.17	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
4-Jun-24	303.38	302.86	NO
10-Jun-24	303.40	302.86	NO
18-Jun-24	303.39	302.86	NO
26-Jun-24	303.34	302.86	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Jun-24	303.66	303.38	0.28	0.18	NO
10-Jun-24	303.70	303.40	0.30	0.18	NO
18-Jun-24	303.72	303.39	0.33	0.18	NO
26-Jun-24	303.67	303.34	0.33	0.18	NO

No exceedances to report for the month of June.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
June 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	81.5	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	80.2	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
2-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
3-Jun-24	-	-	1,766,573	-	306.51	N	306.10	N	305.02	N	306.20	N
4-Jun-24	-	-	1,749,415	-	306.51	N	306.11	N	305.02	N	306.19	N
5-Jun-24	-	-	1,752,055	-	306.50	N	306.10	N	305.04	N	306.17	N
6-Jun-24	-	-	1,782,411	-	306.51	N	306.12	N	305.06	N	306.17	N
7-Jun-24	-	-	1,749,415	-	306.49	N	306.11	N	305.06	N	306.15	N
8-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
9-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
10-Jun-24	-	-	1,752,495	-	306.50	N	306.11	N	305.08	N	306.07	N
11-Jun-24	-	-	1,762,614	-	306.49	N	306.10	N	305.08	N	306.06	N
12-Jun-24	-	-	1,773,612	-	306.49	N	306.10	N	305.07	N	306.05	N
13-Jun-24	-	-	1,755,575	-	306.48	N	306.10	N	305.07	N	306.04	N
14-Jun-24	-	-	1,763,933	-	306.47	N	306.09	N	305.07	N	306.04	N
15-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
16-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
17-Jun-24	-	-	1,446,078	-	306.49	N	306.11	N	305.06	N	306.03	N
18-Jun-24	-	-	1,714,220	-	306.46	N	306.08	N	305.07	N	306.03	N
19-Jun-24	-	-	1,772,512	-	306.47	N	306.08	N	305.06	N	306.04	N
20-Jun-24	-	-	1,665,387	-	306.47	N	306.10	N	305.08	N	306.04	N
21-Jun-24	-	-	1,712,021	-	306.51	N	306.13	N	305.11	N	306.10	N
22-Jun-24	-	-	584,678	-	306.50	N	306.13	N	305.10	N	306.09	N
23-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
24-Jun-24	-	-	1,758,654	-	306.51	N	306.12	N	305.10	N	306.10	N
25-Jun-24	-	-	1,734,238	-	306.52	N	306.11	N	305.10	N	306.09	N
26-Jun-24	-	-	1,725,219	-	306.51	N	306.11	N	305.09	N	306.09	N
27-Jun-24	-	-	1,772,072	-	306.51	N	306.12	N	305.09	N	306.10	N
28-Jun-24	-	-	1,766,793	-	306.49	N	306.09	N	305.08	N	306.09	N
29-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
30-Jun-24	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	35,259,970	0								

Note: No exceedances to report for the month of June

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

August 8, 2024

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – July 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of July 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
July 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	305.81	305.49	NO
9-Jul-24	305.80	305.49	NO
18-Jul-24	305.85	305.49	NO
25-Jul-24	305.86	305.49	NO
31-Jul-24	305.90	305.49	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	306.27	305.81	0.46	0.10	NO
9-Jul-24	306.23	305.80	0.43	0.10	NO
18-Jul-24	306.29	305.85	0.44	0.10	NO
25-Jul-24	306.27	305.86	0.41	0.10	NO
31-Jul-24	306.29	305.90	0.39	0.10	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	305.25	305.17	NO
9-Jul-24	305.27	305.17	NO
18-Jul-24	305.30	305.17	NO
25-Jul-24	305.29	305.17	NO
31-Jul-24	305.31	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	305.73	305.25	0.48	0.06	NO
9-Jul-24	305.70	305.27	0.43	0.06	NO
18-Jul-24	305.77	305.30	0.47	0.06	NO
25-Jul-24	305.72	305.29	0.43	0.06	NO
31-Jul-24	305.72	305.31	0.41	0.06	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	304.78	304.54	NO
9-Jul-24	304.72	304.54	NO
18-Jul-24	304.77	304.54	NO
25-Jul-24	304.79	304.54	NO
31-Jul-24	304.80	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	305.77	304.78	0.99	0.58	NO
9-Jul-24	305.72	304.72	1.00	0.58	NO
18-Jul-24	305.79	304.77	1.02	0.58	NO
25-Jul-24	305.81	304.79	1.02	0.58	NO
31-Jul-24	305.84	304.80	1.04	0.58	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	304.05	303.50	NO
9-Jul-24	304.08	303.50	NO
18-Jul-24	304.11	303.50	NO
25-Jul-24	304.09	303.50	NO
31-Jul-24	304.07	303.50	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	304.82	304.05	0.77	0.32	NO
9-Jul-24	304.79	304.08	0.71	0.32	NO
18-Jul-24	304.85	304.11	0.74	0.32	NO
25-Jul-24	304.83	304.09	0.74	0.32	NO
31-Jul-24	304.82	304.07	0.75	0.32	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	304.32	303.91	NO
9-Jul-24	304.33	303.91	NO
18-Jul-24	304.35	303.91	NO
25-Jul-24	304.36	303.91	NO
31-Jul-24	304.34	303.91	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	305.00	304.32	0.68	0.23	NO
9-Jul-24	305.02	304.33	0.69	0.23	NO
18-Jul-24	305.05	304.35	0.70	0.23	NO
25-Jul-24	305.04	304.36	0.68	0.23	NO
31-Jul-24	305.00	304.34	0.66	0.23	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
2-Jul-24	303.31	302.79	NO
9-Jul-24	303.29	302.79	NO
18-Jul-24	303.32	302.79	NO
25-Jul-24	303.35	302.79	NO
31-Jul-24	303.33	302.79	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Jul-24	303.61	303.31	0.30	0.15	NO
9-Jul-24	303.55	303.29	0.26	0.15	NO
18-Jul-24	303.63	303.32	0.31	0.15	NO
25-Jul-24	303.64	303.35	0.29	0.15	NO
31-Jul-24	303.69	303.33	0.36	0.15	NO

No exceedances to report for the month of July.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
July 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	149.0	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	80.5	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
2-Jul-24	-	-	1,757,774	-	306.50	N	306.11	N	305.12	N	306.07	N
3-Jul-24	-	-	1,745,676	-	306.50	N	306.10	N	305.11	N	306.07	N
4-Jul-24	-	-	1,761,294	-	306.50	N	306.08	N	305.10	N	306.06	N
5-Jul-24	-	-	1,503,930	-	306.49	N	306.10	N	305.11	N	306.06	N
6-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
7-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
8-Jul-24	-	-	1,722,139	-	306.49	N	306.09	N	305.10	N	306.05	N
9-Jul-24	-	-	1,741,277	-	306.49	N	306.09	N	305.10	N	306.05	N
10-Jul-24	-	-	1,750,515	-	306.52	N	306.11	N	305.12	N	306.09	N
11-Jul-24	-	-	1,762,614	-	306.53	N	306.14	N	305.14	N	306.12	N
12-Jul-24	-	-	1,643,170	-	306.53	N	306.15	N	305.17	N	306.13	N
13-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
14-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
15-Jul-24	-	-	1,157,258	-	306.58	N	306.17	N	305.21	N	306.18	N
16-Jul-24	-	-	1,616,774	-	306.62	N	306.18	N	305.22	N	306.20	N
17-Jul-24	-	-	1,277,581	-	306.68	N	306.22	N	305.27	N	306.26	N
18-Jul-24	-	-	1,776,912	-	306.69	N	306.24	N	305.31	N	306.27	N
19-Jul-24	-	-	1,779,551	-	306.69	N	306.23	N	305.29	N	306.27	N
20-Jul-24	-	-	775,172	-	306.68	N	306.22	N	305.28	N	306.28	N
21-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
22-Jul-24	-	-	1,762,834	-	306.69	N	306.20	N	305.31	N	306.29	N
23-Jul-24	-	-	1,773,172	-	306.67	N	306.19	N	305.32	N	306.29	N
24-Jul-24	-	-	1,771,632	-	306.68	N	306.21	N	305.31	N	306.30	N
25-Jul-24	-	-	1,773,832	-	306.68	N	306.18	N	305.30	N	306.31	N
26-Jul-24	-	-	1,747,216	-	306.67	N	306.16	N	305.29	N	306.30	N
27-Jul-24	-	-	772,092	-	306.66	N	306.16	N	305.30	N	306.29	N
28-Jul-24	-	-	-	-	-	-	-	-	-	-	-	-
29-Jul-24	-	-	1,754,035	-	306.67	N	306.15	N	305.29	N	306.32	N
30-Jul-24	-	-	1,743,696	-	306.68	N	306.13	N	305.30	N	306.31	N
31-Jul-24	-	-	1,747,216	-	306.66	N	306.11	N	305.31	N	306.31	N
Total	0	0	38,617,362	0								

Note: No exceedances to report for the month of July

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

September 12, 2024

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – August 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of August 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
August 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	305.87	305.49	NO
13-Aug-24	305.88	305.49	NO
21-Aug-24	305.87	305.49	NO
30-Aug-24	305.84	305.49	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	306.28	305.87	0.41	0.10	NO
13-Aug-24	306.32	305.88	0.44	0.10	NO
21-Aug-24	306.33	305.87	0.46	0.10	NO
30-Aug-24	306.30	305.84	0.46	0.10	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	305.32	305.17	NO
13-Aug-24	305.31	305.17	NO
21-Aug-24	305.33	305.17	NO
30-Aug-24	305.28	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	305.76	305.32	0.44	0.06	NO
13-Aug-24	305.78	305.31	0.47	0.06	NO
21-Aug-24	305.80	305.33	0.47	0.06	NO
30-Aug-24	305.74	305.28	0.46	0.06	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	304.75	304.54	NO
13-Aug-24	304.79	304.54	NO
21-Aug-24	304.82	304.54	NO
30-Aug-24	304.81	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	305.80	304.75	1.05	0.58	NO
13-Aug-24	305.82	304.79	1.03	0.58	NO
21-Aug-24	305.85	304.82	1.03	0.58	NO
30-Aug-24	305.79	304.81	0.98	0.58	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	304.03	303.50	NO
13-Aug-24	304.04	303.50	NO
21-Aug-24	304.10	303.50	NO
30-Aug-24	304.11	303.50	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	304.80	304.03	0.77	0.32	NO
13-Aug-24	304.79	304.04	0.75	0.32	NO
21-Aug-24	304.84	304.10	0.74	0.32	NO
30-Aug-24	304.82	304.11	0.71	0.32	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	304.37	303.91	NO
13-Aug-24	304.32	303.91	NO
21-Aug-24	304.38	303.91	NO
30-Aug-24	304.33	303.91	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	304.97	304.37	0.60	0.23	NO
13-Aug-24	304.98	304.32	0.66	0.23	NO
21-Aug-24	305.03	304.38	0.65	0.23	NO
30-Aug-24	305.02	304.33	0.69	0.23	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
7-Aug-24	303.37	302.79	NO
13-Aug-24	303.35	302.79	NO
21-Aug-24	303.39	302.79	NO
30-Aug-24	303.32	302.79	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
7-Aug-24	303.67	303.37	0.30	0.15	NO
13-Aug-24	303.60	303.35	0.25	0.15	NO
21-Aug-24	303.65	303.39	0.26	0.15	NO
30-Aug-24	303.61	303.32	0.29	0.15	NO

No exceedances to report for the month of August.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Monthly Reporting
Mill Creek Aggregates Pit
August 2024

			Max. Allowable as per PTTW- Main Pond			*Max. Allowable as per PTTW- Silt Pond*			
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)	
Total Monthly Precipitation (mm):	103.5	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806	
Total Monthly Normal Precipitation (mm):	67.2	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000	

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Aug-24	-	-	1,196,633	-	306.66	N	306.11	N	305.31	N	306.31	N
2-Aug-24	-	-	1,723,899	-	306.67	N	306.10	N	305.30	N	306.31	N
3-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
4-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
5-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
6-Aug-24	-	-	1,717,300	-	306.62	N	306.13	N	305.27	N	306.30	N
7-Aug-24	-	-	761,094	-	306.63	N	306.15	N	305.24	N	306.29	N
8-Aug-24	-	-	1,744,136	-	306.63	N	306.19	N	305.23	N	306.29	N
9-Aug-24	-	-	1,737,317	-	306.64	N	306.20	N	305.20	N	306.30	N
10-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
11-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
12-Aug-24	-	-	1,762,834	-	306.62	N	306.19	N	305.18	N	306.30	N
13-Aug-24	-	-	1,754,915	-	306.61	N	306.19	N	305.16	N	306.31	N
14-Aug-24	-	-	1,759,094	-	306.60	N	306.18	N	305.15	N	306.32	N
15-Aug-24	-	-	1,766,573	-	306.60	N	306.19	N	305.18	N	306.27	N
16-Aug-24	-	-	1,541,984	-	306.61	N	306.20	N	305.18	N	306.25	N
17-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
18-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
19-Aug-24	-	-	1,768,333	-	306.63	N	306.19	N	305.19	N	306.27	N
20-Aug-24	-	-	1,366,009	-	306.60	N	306.21	N	305.18	N	306.26	N
21-Aug-24	-	-	1,779,551	-	306.63	N	306.19	N	305.26	N	306.26	N
22-Aug-24	-	-	1,609,295	-	306.64	N	306.19	N	305.28	N	306.25	N
23-Aug-24	-	-	1,653,069	-	306.63	N	306.20	N	305.25	N	306.25	N
24-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
25-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
26-Aug-24	-	-	1,391,305	-	306.62	N	306.19	N	305.30	N	306.24	N
27-Aug-24	-	-	1,749,415	-	306.61	N	306.18	N	305.31	N	306.22	N
28-Aug-24	-	-	1,355,890	-	306.62	N	306.17	N	305.30	N	306.23	N
29-Aug-24	-	-	1,734,238	-	306.61	N	306.18	N	305.32	N	306.21	N
30-Aug-24	-	-	1,721,259	-	306.60	N	306.19	N	305.32	N	306.16	N
31-Aug-24	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	33,594,143	0								

Note: No exceedances to report for the month of August

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

October 11, 2024

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – September 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of September 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Monthly Reporting
Mill Creek Aggregates Pit
September 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	305.79	305.49	NO
10-Sep-24	305.83	305.49	NO
20-Sep-24	305.82	305.49	NO
27-Sep-24	305.85	305.49	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	306.26	305.79	0.47	0.10	NO
10-Sep-24	306.27	305.83	0.44	0.10	NO
20-Sep-24	306.25	305.82	0.43	0.10	NO
27-Sep-24	306.30	305.85	0.45	0.10	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	305.34	305.17	NO
10-Sep-24	305.30	305.17	NO
20-Sep-24	305.28	305.17	NO
27-Sep-24	305.31	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	305.71	305.34	0.37	0.06	NO
10-Sep-24	305.67	305.3	0.37	0.06	NO
20-Sep-24	305.66	305.28	0.38	0.06	NO
27-Sep-24	305.70	305.31	0.39	0.06	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	304.78	304.54	NO
10-Sep-24	304.78	304.54	NO
20-Sep-24	304.72	304.54	NO
27-Sep-24	304.77	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	305.72	304.78	0.94	0.58	NO
10-Sep-24	305.68	304.78	0.91	0.58	NO
20-Sep-24	305.65	304.72	0.93	0.58	NO
27-Sep-24	305.68	304.77	0.91	0.58	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	304.09	303.50	NO
10-Sep-24	304.03	303.50	NO
20-Sep-24	304.04	303.50	NO
27-Sep-24	304.02	303.50	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	304.87	304.09	0.78	0.32	NO
10-Sep-24	304.89	304.03	0.86	0.32	NO
20-Sep-24	304.80	304.04	0.76	0.32	NO
27-Sep-24	304.86	304.02	0.84	0.32	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	304.36	303.91	NO
10-Sep-24	304.39	303.91	NO
20-Sep-24	304.35	303.91	NO
27-Sep-24	304.34	303.91	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	305.02	304.36	0.66	0.23	NO
10-Sep-24	305.14	304.39	0.75	0.23	NO
20-Sep-24	305.01	304.35	0.66	0.23	NO
27-Sep-24	304.95	304.34	0.61	0.23	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
6-Sep-24	303.33	302.79	NO
10-Sep-24	303.34	302.79	NO
20-Sep-24	303.28	302.79	NO
27-Sep-24	303.32	302.79	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
6-Sep-24	303.59	303.33	0.26	0.15	NO
10-Sep-24	303.61	303.34	0.27	0.15	NO
20-Sep-24	303.55	303.28	0.27	0.15	NO
27-Sep-24	303.61	303.32	0.29	0.15	NO

No exceedances to report for the month of September.
Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
September 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	23.4	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	75.2	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
2-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
3-Sep-24	-	-	92,607	-	306.59	N	306.18	N	305.33	N	306.08	N
4-Sep-24	-	-	159,918	-	306.60	N	306.17	N	305.35	N	306.01	N
5-Sep-24	-	-	166,077	-	306.58	N	306.15	N	305.35	N	305.96	N
6-Sep-24	-	-	163,217	-	306.58	N	306.14	N	305.36	N	305.96	N
7-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
8-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
9-Sep-24	-	-	212,490	-	306.56	N	306.12	N	305.36	N	305.94	N
10-Sep-24	-	-	-	-	306.55	N	306.12	N	305.37	N	305.93	N
11-Sep-24	-	-	-	-	306.53	N	306.13	N	305.35	N	305.93	N
12-Sep-24	-	-	-	-	306.53	N	306.14	N	305.35	N	305.94	N
13-Sep-24	-	-	-	-	306.54	N	306.13	N	305.36	N	305.93	N
14-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
15-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
16-Sep-24	-	-	-	-	306.52	N	306.12	N	305.34	N	305.96	N
17-Sep-24	-	-	-	-	306.50	N	306.11	N	305.33	N	305.95	N
18-Sep-24	-	-	-	-	306.51	N	306.13	N	305.31	N	305.96	N
19-Sep-24	-	-	-	-	306.50	N	306.12	N	305.29	N	305.98	N
20-Sep-24	-	-	-	-	306.50	N	306.11	N	305.28	N	305.97	N
21-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
22-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
23-Sep-24	-	-	-	-	306.52	N	306.12	N	305.29	N	305.99	N
24-Sep-24	-	-	-	-	306.50	N	306.12	N	305.28	N	305.99	N
25-Sep-24	-	-	-	-	306.49	N	306.10	N	305.29	N	306.01	N
26-Sep-24	-	-	-	-	306.51	N	306.08	N	305.26	N	306.02	N
27-Sep-24	-	-	-	-	306.50	N	306.09	N	305.23	N	306.01	N
28-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
29-Sep-24	-	-	-	-	-	-	-	-	-	-	-	-
30-Sep-24	-	-	-	-	306.47	N	306.07	N	305.24	N	306.05	N
Total	0	0	794,309	0								

Note: No exceedances to report for the month of September

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

November 13, 2024

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – October 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of October 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

[redacted]

Jonathan Clark
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
October 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	305.82	305.58	NO
11-Oct-24	305.79	305.58	NO
18-Oct-24	305.77	305.58	NO
23-Oct-24	305.76	305.58	NO
31-Oct-24	305.81	305.58	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	306.24	305.82	0.42	0.09	NO
11-Oct-24	306.22	305.79	0.43	0.09	NO
18-Oct-24	306.19	305.77	0.42	0.09	NO
23-Oct-24	306.14	305.76	0.38	0.09	NO
31-Oct-24	306.17	305.81	0.36	0.09	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	305.30	305.17	NO
11-Oct-24	305.28	305.17	NO
18-Oct-24	305.28	305.17	NO
23-Oct-24	305.27	305.17	NO
31-Oct-24	305.31	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	305.66	305.30	0.36	0.04	NO
11-Oct-24	305.62	305.28	0.34	0.04	NO
18-Oct-24	305.61	305.28	0.33	0.04	NO
23-Oct-24	305.58	305.27	0.31	0.04	NO
31-Oct-24	305.62	305.31	0.31	0.04	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	304.78	304.54	NO
11-Oct-24	304.77	304.54	NO
18-Oct-24	304.76	304.54	NO
23-Oct-24	304.74	304.54	NO
31-Oct-24	304.80	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	305.71	304.78	0.93	0.55	NO
11-Oct-24	305.67	304.77	0.90	0.55	NO
18-Oct-24	305.62	304.76	0.86	0.55	NO
23-Oct-24	305.57	304.74	0.83	0.55	NO
31-Oct-24	305.62	304.80	0.82	0.55	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	304.20	303.55	NO
11-Oct-24	304.04	303.55	NO
18-Oct-24	304.03	303.55	NO
23-Oct-24	304.02	303.55	NO
31-Oct-24	304.05	303.55	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	304.81	304.20	0.61	0.34	NO
11-Oct-24	304.79	304.04	0.75	0.34	NO
18-Oct-24	304.78	304.03	0.75	0.34	NO
23-Oct-24	304.77	304.02	0.75	0.34	NO
31-Oct-24	304.81	304.05	0.76	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	304.34	303.96	NO
11-Oct-24	304.34	303.96	NO
18-Oct-24	304.33	303.96	NO
23-Oct-24	304.33	303.96	NO
31-Oct-24	304.35	303.96	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	305.03	304.34	0.69	0.19	NO
11-Oct-24	304.99	304.34	0.65	0.19	NO
18-Oct-24	304.95	304.33	0.62	0.19	NO
23-Oct-24	304.80	304.33	0.47	0.19	NO
31-Oct-24	304.90	304.35	0.55	0.19	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
2-Oct-24	303.35	302.84	NO
11-Oct-24	303.33	302.84	NO
18-Oct-24	303.31	302.84	NO
23-Oct-24	303.29	302.84	NO
31-Oct-24	303.36	302.84	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Oct-24	303.61	303.35	0.27	0.15	NO
11-Oct-24	303.60	303.33	0.27	0.15	NO
18-Oct-24	303.59	303.31	0.28	0.15	NO
23-Oct-24	303.57	303.29	0.28	0.15	NO
31-Oct-24	303.68	303.36	0.32	0.15	NO

No exceedances to report for the month of October.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
October 2024

				Max. Allowable as per PTTW- Main Pond				*Max. Allowable as per PTTW- Silt Pond*			
				(Imperial Gallons)		(Litres)		(Imperial Gallons)		(Litres)	
Total Monthly Precipitation (mm):	32.0	Kitchener/Waterloo (Actual)		2,500	per minute	11,365		2,597	per minute	11,806	
Total Monthly Normal Precipitation (mm):	71.0	Waterloo-Wellington A (30-year Normal)		1,800,000	per day	8,183,000		3,739,477	per day	17,000,000	

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Oct-24	-	-	-	-	306.48	N	306.06	N	305.25	N	306.03	N
2-Oct-24	-	-	-	-	306.47	N	306.05	N	305.24	N	306.06	N
3-Oct-24	-	-	-	-	306.47	N	306.07	N	305.24	N	306.05	N
4-Oct-24	-	-	-	-	306.49	N	306.08	N	305.21	N	306.06	N
5-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
6-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
7-Oct-24	-	-	-	-	306.51	N	306.04	N	305.26	N	306.01	N
8-Oct-24	-	-	-	-	306.49	N	306.03	N	305.25	N	305.95	N
9-Oct-24	-	-	-	-	306.46	N	306.02	N	305.26	N	305.93	N
10-Oct-24	-	-	-	-	306.43	N	306.02	N	305.27	N	305.93	N
11-Oct-24	-	-	-	-	306.44	N	306.03	N	305.26	N	305.95	N
12-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
13-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
14-Oct-24	-	-	-	-	306.45	N	306.05	N	305.27	N	305.94	N
15-Oct-24	-	-	-	-	306.43	N	306.01	N	305.25	N	305.91	N
16-Oct-24	-	-	-	-	306.44	N	306.02	N	305.24	N	305.93	N
17-Oct-24	-	-	-	-	306.45	N	306.00	N	305.26	N	305.90	N
18-Oct-24	-	-	-	-	306.46	N	305.99	N	305.25	N	305.91	N
19-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
20-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
21-Oct-24	-	-	-	-	306.43	N	305.96	N	305.24	N	305.88	N
22-Oct-24	-	-	-	-	306.44	N	305.97	N	305.22	N	305.89	N
23-Oct-24	-	-	-	-	306.42	N	305.95	N	305.23	N	305.87	N
24-Oct-24	-	-	-	-	306.41	N	305.94	N	305.25	N	305.89	N
25-Oct-24	-	-	-	-	306.42	N	305.95	N	305.24	N	305.86	N
26-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
27-Oct-24	-	-	-	-	-	-	-	-	-	-	-	-
28-Oct-24	-	-	-	-	306.40	N	305.93	N	305.27	N	305.85	N
29-Oct-24	-	-	-	-	306.39	N	305.91	N	305.23	N	305.86	N
30-Oct-24	-	-	-	-	306.39	N	305.92	N	305.25	N	305.86	N
31-Oct-24	-	-	-	-	306.40	N	305.93	N	305.26	N	305.86	N
Total	0	0	0	0								

Note: No exceedances to report for the month of October

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

December 10, 2024

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – November 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of November 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

Matthew Erdmann
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
November 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	305.81	305.58	NO
13-Nov-24	305.83	305.58	NO
21-Nov-24	305.80	305.58	NO
29-Nov-24	305.82	305.58	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	306.15	305.81	0.34	0.09	NO
13-Nov-24	306.18	305.83	0.35	0.09	NO
21-Nov-24	306.16	305.80	0.36	0.09	NO
29-Nov-24	306.13	305.82	0.31	0.09	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	305.30	305.17	NO
13-Nov-24	305.32	305.17	NO
21-Nov-24	305.33	305.17	NO
29-Nov-24	305.31	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	305.59	305.30	0.29	0.04	NO
13-Nov-24	305.58	305.32	0.26	0.04	NO
21-Nov-24	305.60	305.33	0.27	0.04	NO
29-Nov-24	305.62	305.31	0.31	0.04	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	304.78	304.54	NO
13-Nov-24	304.76	304.54	NO
21-Nov-24	304.79	304.54	NO
29-Nov-24	304.81	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	305.55	304.78	0.77	0.55	NO
13-Nov-24	305.61	304.76	0.85	0.55	NO
21-Nov-24	305.62	304.79	0.83	0.55	NO
29-Nov-24	305.60	304.81	0.79	0.55	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	304.18	303.55	NO
13-Nov-24	304.16	303.55	NO
21-Nov-24	304.13	303.55	NO
29-Nov-24	304.17	303.55	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	304.79	304.18	0.61	0.34	NO
13-Nov-24	304.77	304.16	0.61	0.34	NO
21-Nov-24	304.80	304.13	0.67	0.34	NO
29-Nov-24	304.78	304.17	0.61	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	304.34	303.96	NO
13-Nov-24	304.31	303.96	NO
21-Nov-24	304.35	303.96	NO
29-Nov-24	304.33	303.96	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	305.00	304.34	0.66	0.19	NO
13-Nov-24	304.99	304.31	0.68	0.19	NO
21-Nov-24	304.96	304.35	0.61	0.19	NO
29-Nov-24	304.91	304.33	0.58	0.19	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
4-Nov-24	303.35	302.84	NO
13-Nov-24	303.32	302.84	NO
21-Nov-24	303.33	302.84	NO
29-Nov-24	303.37	302.84	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
4-Nov-24	303.61	303.35	0.26	0.15	NO
13-Nov-24	303.64	303.32	0.31	0.15	NO
21-Nov-24	303.60	303.33	0.27	0.15	NO
29-Nov-24	303.59	303.37	0.22	0.15	NO

No exceedances to report for the month of November.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
November 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	43.6	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	74.9	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Nov-24	-	-	-	-	306.38	N	305.91	N	305.25	N	305.87	N
2-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
3-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
4-Nov-24	-	-	-	-	306.41	N	305.92	N	305.24	N	305.87	N
5-Nov-24	-	-	-	-	306.39	N	305.90	N	305.23	N	305.86	N
6-Nov-24	-	-	-	-	306.38	N	305.91	N	305.23	N	305.85	N
7-Nov-24	-	-	-	-	306.36	N	305.89	N	305.25	N	305.86	N
8-Nov-24	-	-	-	-	306.36	N	305.90	N	305.24	N	305.84	N
9-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
10-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
11-Nov-24	-	-	-	-	306.34	N	305.90	N	305.24	N	305.84	N
12-Nov-24	-	-	-	-	306.33	N	305.88	N	305.24	N	305.85	N
13-Nov-24	-	-	-	-	306.34	N	305.89	N	305.22	N	305.86	N
14-Nov-24	-	-	-	-	306.33	N	305.91	N	305.20	N	305.85	N
15-Nov-24	-	-	-	-	306.35	N	305.90	N	305.22	N	305.87	N
16-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
17-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
18-Nov-24	-	-	-	-	306.33	N	305.88	N	305.21	N	305.87	N
19-Nov-24	-	-	-	-	306.32	N	305.87	N	305.19	N	305.90	N
20-Nov-24	-	-	-	-	306.34	N	305.87	N	305.20	N	305.89	N
21-Nov-24	-	-	-	-	306.35	N	305.86	N	305.21	N	305.91	N
22-Nov-24	-	-	-	-	306.33	N	305.88	N	305.18	N	305.90	N
23-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
24-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
25-Nov-24	-	-	-	-	306.34	N	305.87	N	305.19	N	305.91	N
26-Nov-24	-	-	-	-	306.33	N	305.86	N	305.16	N	305.93	N
27-Nov-24	-	-	-	-	306.32	N	305.84	N	305.14	N	305.92	N
28-Nov-24	-	-	-	-	306.30	N	305.83	N	305.13	N	305.94	N
29-Nov-24	-	-	-	-	306.31	N	305.85	N	305.15	N	305.93	N
30-Nov-24	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0								

Note: No exceedances to report for the month of November

Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

January 9, 2025

Luke Rapus
Aggregates Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Attention: Mr. Rapus

Re: Monthly Monitoring Report – December 2024
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County

Please find enclosed the required monitoring data for the month of December 2024. There were no exceedances to report.

If you have any questions, please do not hesitate to call.

Sincerely,

Matthew Erdmann
Site Superintendent

CC: Township of Puslinch
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
December 2024

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	305.81	305.58	NO
10-Dec-24	305.80	305.58	NO
18-Dec-24	305.78	305.58	NO
23-Dec-24	Frozen	305.58	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	306.14	305.81	0.33	0.09	NO
10-Dec-24	306.15	305.80	0.35	0.09	NO
18-Dec-24	306.12	305.78	0.34	0.09	NO
23-Dec-24	306.16	Frozen	N/A	0.09	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	305.29	305.17	NO
10-Dec-24	305.31	305.17	NO
18-Dec-24	305.28	305.17	NO
23-Dec-24	305.34	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	305.61	305.29	0.32	0.04	NO
10-Dec-24	305.59	305.31	0.28	0.04	NO
18-Dec-24	305.63	305.28	0.35	0.04	NO
23-Dec-24	305.64	305.34	0.30	0.04	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	304.77	304.54	NO
10-Dec-24	304.78	304.54	NO
18-Dec-24	304.79	304.54	NO
23-Dec-24	Frozen	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	305.64	304.77	0.87	0.55	NO
10-Dec-24	305.61	304.78	0.83	0.55	NO
18-Dec-24	305.59	304.79	0.80	0.55	NO
23-Dec-24	305.63	Frozen	N/A	0.55	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	Frozen	303.55	NO
10-Dec-24	304.18	303.55	NO
18-Dec-24	304.17	303.55	NO
23-Dec-24	304.12	303.55	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	304.76	Frozen	N/A	0.34	NO
10-Dec-24	304.82	304.18	0.64	0.34	NO
18-Dec-24	304.79	304.17	0.62	0.34	NO
23-Dec-24	304.84	304.12	0.72	0.34	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	304.32	303.96	NO
10-Dec-24	304.36	303.96	NO
18-Dec-24	304.38	303.96	NO
23-Dec-24	Frozen	303.96	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	304.92	304.32	0.60	0.19	NO
10-Dec-24	304.95	304.36	0.59	0.19	NO
18-Dec-24	304.93	304.38	0.55	0.19	NO
23-Dec-24	304.88	Frozen	N/A	0.19	NO

Date	DP5CR (mASL)	Threshold Value (mASL)	Exceedance
2-Dec-24	Frozen	302.84	NO
10-Dec-24	303.37	302.84	NO
18-Dec-24	303.33	302.84	NO
23-Dec-24	Frozen	302.84	NO

Date	OW5-84 (mASL)	DP5CR (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
2-Dec-24	303.63	Frozen	N/A	0.15	NO
10-Dec-24	303.65	303.37	0.28	0.15	NO
18-Dec-24	303.62	303.33	0.29	0.15	NO
23-Dec-24	303.66	Frozen	N/A	0.15	NO

No exceedances to report for the month of December.

Note: A beaver dam has been observed on private property upstream of DP5CR, which is likely to impact the water levels at DP5CR. Similar to what has occurred in the recent past at this location, the beaver dam may potentially cause action threshold exceedances. It is recommended that the appropriate authority arrange to have the beaver dam removed.

Dufferin
Aggregates

Monthly Reporting
Mill Creek Aggregates Pit
December 2024

			Max. Allowable as per PTTW- Main Pond			Max. Allowable as per PTTW- Silt Pond		
			(Imperial Gallons)		(Litres)	(Imperial Gallons)		(Litres)
Total Monthly Precipitation (mm):	67.4	Kitchener/Waterloo (Actual)	2,500	per minute	11,365	2,597	per minute	11,806
Total Monthly Normal Precipitation (mm):	54.9	Waterloo-Wellington A (30-year Normal)	1,800,000	per day	8,183,000	3,739,477	per day	17,000,000

Date	Below Water Table Extraction Phase 5	Below Water Table Extraction Phase 2	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
2-Dec-24	-	-	-	-	306.29	N	305.86	N	305.14	N	305.94	N
3-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
4-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
5-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
6-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
7-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
8-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
9-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
10-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
11-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
12-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
13-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
14-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
15-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
16-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
17-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
18-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
19-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
20-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
21-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
22-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
23-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
24-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
25-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
26-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
27-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
28-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
29-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
30-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
31-Dec-24	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0								

Notes:
No exceedances to report for the month of December.
No water taken from the site for the month of December.
Staff gauges removed December 2nd due to freezing temperatures.

CONTENT COPY OF ORIGINAL

Ontario

Ministry of the Environment, Conservation and Parks
Ministère de l'Environnement, de la Protection de la nature et des Parcs

PERMIT TO TAKE WATER
Ground Water

NUMBER 5557-B93NZ5

Reference Number 0850-B7EKR6

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

CRH Canada Group Inc.
Floor 4 - 2300 Steeles Ave W
Concord, Ontario, L4K 5X6
Canada

For the water taking from: Phase 1 Pond, Pond 4 Pond or Silt Pond SP4

Located at: Lot 22-24, Concession 2, Geographic Township of Puslinch
Puslinch, County of Wellington

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, Conservation and Parks.

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

(e) "Permit" means this Permit to Take Water No. 5557-B93NZ5 including its Schedules, if any, issued in accordance with Section 34.1 of the OWRA.

(f) "Permit Holder" means CRH Canada Group Inc..

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

CONTENT COPY OF ORIGINAL

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 December 4, 2018 and signed by Maria Topalovic, 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 **February 6, 2029**. 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.

CONTENT COPY OF ORIGINAL

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	Phase 1 Pond	Pond Dugout	Aggregate Washing	Industrial	11,366	12	8,183,000	275	17 567290 4810630
2	Phase 4 Pond or Silt Pond SP4	Pond Dugout	Other - Industrial	Industrial	11,806	24	17,000,000	364	17 566820 4810150
						Total Taking:	17,000,000		

3.3 Notwithstanding Table A, the purpose of the water taking from Phase 4 Pond or Silt Pond SP4 is to maintain the water level elevation of Phase 4 Pond or Silt Pond SP4 to an elevation between that of Phase 1 and Phase 3 Ponds. The water taking from the Phase 4 Pond or Silt Pond SP4 shall be discharged to the Phase 1 Pond. The Permit Holder shall maintain the average monthly pumping rate from the Phase 4 Pond or Silt Pond SP4 at 8,183,000 Litres per day or less.

3.4 The Permit Holder shall ensure that aggregate washing occurs annually between March and December from date of issue to December 31, 2028, but the maximum number of days taken per year shall not exceed 275 as outlined in Table A.

3.5 This Permit is issued for the sole purpose of washing gravel in a closed system where the majority of the water is recirculated.

4. Monitoring

4.1 Under section 9 of O. Reg. 387/04, and as authorized by subsection 34(6) of the *Ontario Water Resources Act*, 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 or calculated in accordance with the method described in the application for this Permit, or as otherwise accepted by the Director. A separate record shall be maintained for each source. 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, unless otherwise required by the Director, shall submit, on or before March 31st in every year, the records required by this condition to the ministry's Water Taking Reporting System.

CONTENT COPY OF ORIGINAL

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 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, the Environmental Review Tribunal and the Environmental Commissioner,

CONTENT COPY OF ORIGINAL

***Environmental Bill of Rights**, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a 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:

a. The name of the appellant;
b. The address of the appellant;
c. The Permit to Take Water number;
d. The date of the Permit to Take Water;
e. The name of the Director;
f. 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
ERTTribunalsecretary@ontario.ca

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34.1,
Ministry of the Environment, Conservation and Parks
12th Floor
119 King St W
Hamilton ON L8P 4Y7
Fax: (905) 521-7820

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

by Telephone at
(416) 212-6349
Toll Free 1(866) 448-2248

by Fax at
(416) 326-5370
Toll Free 1(844) 213-3474

by e-mail at
www.ert.gov.on.ca

*This instrument is subject to Section 38 of the **Environmental Bill of Rights** that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 8520-A48LDY, issued on 2015/11/16.

CONTENT COPY OF ORIGINAL

Dated at Hamilton this 7th day of February, 2019.

[redacted]

Cynthia Doughty
Director, Section 34.1
Ontario Water Resources Act, R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 5557-B93NZ5, dated February 7, 2019.

APPENDIX G

Threshold Compliance Results

Technical Appendix B – 2024 Hydrogeology Report

Table G-1
Threshold Summary - BH13 to DP21
Mill Creek Aggregates Pit

			BH13 to DP21					DP21	
Date	Water Elevation BH 13 (m ASL)	Water Elevation DP21 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
6-Jan-23	306.10	305.87	0.23	0.13	no	0.11	no	305.66	no
12-Jan-23	306.00	305.75	0.25	0.13	no	0.11	no	305.66	no
18-Jan-23	306.03	305.76	0.27	0.13	no	0.11	no	305.66	no
25-Jan-23	306.005	305.74	0.26	0.13	no	0.11	no	305.66	no
2-Feb-23	306.00			0.13		0.11		305.66	
10-Feb-23	306.23	305.97	0.26	0.13	no	0.11	no	305.66	no
14-Feb-23	306.07	305.83	0.25	0.13	no	0.11	no	305.66	no
24-Feb-23	306.04			0.13		0.11		305.66	
2-Mar-23	306.00	305.75	0.25	0.13	no	0.11	no	305.66	no
9-Mar-23	306.02	305.78	0.25	0.13	no	0.11	no	305.66	no
17-Mar-23	306.192	305.85	0.34	0.13	no	0.11	no	305.66	no
24-Mar-23	306.20	305.94	0.27	0.13	no	0.11	no	305.66	no
3-Apr-23	306.26	305.99	0.28	0.13	no	0.11	no	305.60	no
14-Apr-23	306.16	305.83	0.33	0.13	no	0.11	no	305.60	no
20-Apr-23	306.145	305.82	0.33	0.13	no	0.11	no	305.60	no
27-Apr-23	306.17	305.86	0.31	0.13	no	0.11	no	305.60	no
5-May-23	306.23	305.90	0.33	0.13	no	0.11	no	305.60	no
12-May-23	306.13	305.76	0.37	0.13	no	0.11	no	305.60	no
17-May-23	306.135	305.78	0.36	0.13	no	0.11	no	305.60	no
26-May-23	306.17	305.81	0.36	0.13	no	0.11	no	305.60	no
2-Jun-23	306.11	305.73	0.39	0.13	no	0.11	no	305.60	no
9-Jun-23	306.09	305.70	0.39	0.13	no	0.11	no	305.60	no
15-Jun-23	306.15	305.82	0.33	0.13	no	0.11	no	305.60	no
22-Jun-23	306.08	305.71	0.37	0.13	no	0.11	no	305.60	no
30-Jun-23	306.11	305.79	0.33	0.13	no	0.11	no	305.60	no
5-Jul-23	306.10	305.78	0.32	0.12	no	0.10	no	305.49	no
12-Jul-23	306.18	305.82	0.35	0.12	no	0.10	no	305.49	no
21-Jul-23	306.188	305.83	0.36	0.12	no	0.10	no	305.49	no
25-Jul-23	306.33	306.18	0.15	0.12	no	0.10	no	305.49	no
3-Aug-23	306.23	305.83	0.40	0.12	no	0.10	no	305.49	no
8-Aug-23	306.21	305.86	0.36	0.12	no	0.10	no	305.49	no
14-Aug-23	306.27	305.95	0.32	0.12	no	0.10	no	305.49	no
31-Aug-23	306.22	305.84	0.38	0.12	no	0.10	no	305.49	no
7-Sep-23	306.18	305.82	0.36	0.12	no	0.10	no	305.49	no
15-Sep-23	306.20	305.83	0.37	0.12	no	0.10	no	305.49	no
20-Sep-23	306.16	305.80	0.36	0.12	no	0.10	no	305.49	no
25-Sep-23	306.13	305.78	0.35	0.12	no	0.10	no	305.49	no
4-Oct-23	306.11	305.76	0.35	0.11	no	0.09	no	305.58	no
12-Oct-23	306.12	305.78	0.34	0.11	no	0.09	no	305.58	no
20-Oct-23	306.11	305.79	0.32	0.11	no	0.09	no	305.58	no
26-Oct-23	306.12	305.82	0.30	0.11	no	0.09	no	305.58	no
3-Nov-23	306.14	305.85	0.29	0.11	no	0.09	no	305.58	no
16-Nov-23	306.07	305.78	0.29	0.11	no	0.09	no	305.58	no
20-Nov-23	306.06	305.74	0.32	0.11	no	0.09	no	305.58	no
1-Dec-23	306.12	305.78	0.34	0.11	no	0.09	no	305.58	no
7-Dec-23	306.10	305.80	0.30	0.11	no	0.09	no	305.58	no
14-Dec-23	306.14	305.78	0.36	0.11	no	0.09	no	305.58	no
18-Dec-23	306.11	305.81	0.29	0.11	no	0.09	no	305.58	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-1
Threshold Summary - BH13 to DP21
Mill Creek Aggregates Pit

			BH13 to DP21					DP21	
Date	Water Elevation BH 13 (m ASL)	Water Elevation DP21 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
5-Jan-24	306.15			0.13		0.11		305.66	
8-Jan-24	306.11	305.80	0.31	0.13	no	0.11	no	305.66	no
17-Jan-24	306.14			0.13		0.11		305.66	
26-Jan-24	306.35	306.04	0.31	0.13	no	0.11	no	305.66	no
2-Feb-24	306.27	306.04	0.23	0.13	no	0.11	no	305.66	no
9-Feb-24	306.25	306.00	0.25	0.13	no	0.11	no	305.66	no
14-Feb-24	306.21	305.85	0.36	0.13	no	0.11	no	305.66	no
22-Feb-24	306.19	305.82	0.37	0.13	no	0.11	no	305.66	no
27-Feb-24	306.21	305.84	0.37	0.13	no	0.11	no	305.66	no
8-Mar-24	306.20	306.00	0.20	0.13	no	0.11	no	305.66	no
12-Mar-24	306.25	305.88	0.37	0.13	no	0.11	no	305.66	no
22-Mar-24	306.23			0.13		0.11		305.66	
28-Mar-24	306.22	305.87	0.35	0.13	no	0.11	no	305.60	no
5-Apr-24	306.31	305.96	0.35	0.13	no	0.11	no	305.60	no
9-Apr-24	306.29	305.95	0.34	0.13	no	0.11	no	305.60	no
18-Apr-24	306.28	305.90	0.38	0.13	no	0.11	no	305.60	no
26-Apr-24	306.25	305.88	0.37	0.13	no	0.11	no	305.60	no
1-May-24	306.27	305.87	0.40	0.13	no	0.11	no	305.60	no
6-May-24	306.19	305.84	0.35	0.13	no	0.11	no	305.60	no
13-May-24	306.26	305.82	0.44	0.13	no	0.11	no	305.60	no
23-May-24	306.24	305.79	0.45	0.13	no	0.11	no	305.60	no
29-May-24	306.28	305.87	0.41	0.13	no	0.11	no	305.60	no
4-Jun-24	306.27	305.86	0.41	0.13	no	0.11	no	305.60	no
10-Jun-24	306.29	305.78	0.51	0.13	no	0.11	no	305.60	no
18-Jun-24	306.25	305.87	0.38	0.13	no	0.11	no	305.60	no
26-Jun-24	306.24	305.84	0.40	0.13	no	0.11	no	305.49	no
2-Jul-24	306.27	305.81	0.46	0.12	no	0.10	no	305.49	no
9-Jul-24	306.23	305.80	0.43	0.12	no	0.10	no	305.49	no
18-Jul-24	306.29	305.85	0.44	0.12	no	0.10	no	305.49	no
25-Jul-24	306.27	305.86	0.41	0.12	no	0.10	no	305.49	no
31-Jul-24	306.29	305.90	0.39	0.12	no	0.10	no	305.49	no
7-Aug-24	306.28	305.87	0.41	0.12	no	0.10	no	305.49	no
13-Aug-24	306.32	305.88	0.44	0.12	no	0.10	no	305.49	no
21-Aug-24	306.33	305.87	0.46	0.12	no	0.10	no	305.49	no
30-Aug-24	306.30	305.84	0.46	0.12	no	0.10	no	305.49	no
6-Sep-24	306.26	305.79	0.47	0.12	no	0.10	no	305.49	no
10-Sep-24	306.27	305.83	0.44	0.12	no	0.10	no	305.49	no
20-Sep-24	306.25	305.82	0.43	0.12	no	0.10	no	305.58	no
27-Sep-24	306.30	305.85	0.45	0.12	no	0.10	no	305.58	no
2-Oct-24	306.24	305.82	0.42	0.11	no	0.09	no	305.58	no
11-Oct-24	306.22	305.79	0.43	0.11	no	0.09	no	305.58	no
18-Oct-24	306.19	305.77	0.42	0.11	no	0.09	no	305.58	no
23-Oct-24	306.14	305.76	0.38	0.11	no	0.09	no	305.58	no
31-Oct-24	306.17	305.81	0.36	0.11	no	0.09	no	305.58	no
4-Nov-24	306.15	305.81	0.34	0.11	no	0.09	no	305.58	no
13-Nov-24	306.18	305.83	0.35	0.11	no	0.09	no	305.58	no
21-Nov-24	306.16	305.80	0.36	0.11	no	0.09	no	305.58	no
29-Nov-24	306.13	305.82	0.31	0.11	no	0.09	no	305.58	no
2-Dec-24	306.14	305.81	0.33	0.11	no	0.09	no	305.58	no
10-Dec-24	306.15	305.80	0.35	0.11	no	0.09	no	305.58	no
18-Dec-24	306.12	305.78	0.34	0.11	no	0.09	no	305.58	no
23-Dec-24	306.16			0.11		0.09		305.58	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-2
Threshold Summary - BH92-12A to DP17R
Mill Creek Aggregates Pit

			BH92-12A to DP17R					DP17R	
Date	Water Elevation BH92-12 (m ASL)	Water Elevation DP17R (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
6-Jan-23	305.66	305.37	0.29	0.13	no	0.07	no	305.17	no
12-Jan-23	305.53	305.28	0.25	0.13	no	0.07	no	305.17	no
18-Jan-23	305.54	305.29	0.26	0.13	no	0.07	no	305.17	no
25-Jan-23	305.53	305.28	0.25	0.13	no	0.07	no	305.17	no
2-Feb-23	305.51			0.13		0.07		305.17	
10-Feb-23	305.81	305.45	0.37	0.13	no	0.07	no	305.17	no
14-Feb-23	305.62	305.33	0.30	0.13	no	0.07	no	305.17	no
24-Feb-23	305.55			0.13		0.07		305.17	
2-Mar-23	305.54	305.28	0.26	0.13	no	0.07	no	305.17	no
9-Mar-23	305.55	305.32	0.24	0.13	no	0.07	no	305.17	no
17-Mar-23	305.63	305.33	0.30	0.13	no	0.07	no	305.17	no
24-Mar-23	305.77	305.42	0.35	0.13	no	0.07	no	305.17	no
3-Apr-23	305.83	305.46	0.37	0.19	no	0.14	no	305.17	no
14-Apr-23	305.66	305.31	0.35	0.19	no	0.14	no	305.17	no
20-Apr-23	305.64	305.31	0.33	0.19	no	0.14	no	305.17	no
27-Apr-23	305.67	305.32	0.35	0.19	no	0.14	no	305.17	no
5-May-23	305.73	305.36	0.36	0.19	no	0.14	no	305.17	no
12-May-23	305.70	305.29	0.41	0.19	no	0.14	no	305.17	no
17-May-23	305.63	305.29	0.34	0.19	no	0.14	no	305.17	no
26-May-23	305.66	305.30	0.36	0.19	no	0.14	no	305.17	no
2-Jun-23	305.61	305.25	0.36	0.19	no	0.14	no	305.17	no
9-Jun-23	305.59	305.25	0.34	0.19	no	0.14	no	305.17	no
15-Jun-23	305.66	305.30	0.36	0.19	no	0.14	no	305.17	no
22-Jun-23	305.60	305.24	0.36	0.19	no	0.14	no	305.17	no
30-Jun-23	305.66	305.28	0.38	0.19	no	0.14	no	305.17	no
5-Jul-23	305.63	305.26	0.37	0.12	no	0.06	no	305.17	no
12-Jul-23	305.67	305.30	0.38	0.12	no	0.06	no	305.17	no
21-Jul-23	305.64	305.29	0.35	0.12	no	0.06	no	305.17	no
25-Jul-23	305.84	305.80	0.04	0.12	yes	0.06	yes	305.17	no
26-Jul-23	305.81	305.45	0.36	0.12	no	0.06	no	305.17	no
3-Aug-23	305.72	305.34	0.38	0.12	no	0.06	no	305.17	no
8-Aug-23	305.70	305.33	0.37	0.12	no	0.06	no	305.17	no
14-Aug-23	305.75	305.38	0.37	0.12	no	0.06	no	305.17	no
31-Aug-23	305.71	305.30	0.41	0.12	no	0.06	no	305.17	no
7-Sep-23	305.66	305.29	0.37	0.12	no	0.06	no	305.17	no
15-Sep-23	305.68	305.30	0.38	0.12	no	0.06	no	305.17	no
20-Sep-23	305.65	305.28	0.36	0.12	no	0.06	no	305.17	no
25-Sep-23	305.60	305.26	0.34	0.12	no	0.06	no	305.17	no
4-Oct-23	305.59	305.23	0.36	0.09	no	0.04	no	305.17	no
12-Oct-23	305.61	305.27	0.34	0.09	no	0.04	no	305.17	no
20-Oct-23	305.60	305.28	0.33	0.09	no	0.04	no	305.17	no
26-Oct-23	305.63	305.30	0.33	0.09	no	0.04	no	305.17	no
3-Nov-23	305.53	305.33	0.20	0.09	no	0.04	no	305.17	no
16-Nov-23	305.58	305.29	0.29	0.09	no	0.04	no	305.17	no
20-Nov-23	305.55			0.09		0.04		305.17	
1-Dec-23	305.56	305.36	0.20	0.09	no	0.04	no	305.17	no
7-Dec-23	305.59	305.39	0.20	0.09	no	0.04	no	305.17	no
14-Dec-23	305.57	305.35	0.23	0.09	no	0.04	no	305.17	no
18-Dec-23	305.60	305.41	0.19	0.09	no	0.04	no	305.17	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-2
Threshold Summary - BH92-12A to DP17R
Mill Creek Aggregates Pit

			BH92-12A to DP17R					DP17R	
Date	Water Elevation BH92-12 (m ASL)	Water Elevation DP17R (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
5-Jan-24	305.65	305.31	0.34	0.13	no	0.07	no	305.17	no
8-Jan-24	305.60	305.29	0.31	0.13	no	0.07	no	305.17	no
17-Jan-24	305.73	305.26	0.47	0.13	no	0.07	no	305.17	no
26-Jan-24	306.05	305.44	0.61	0.13	no	0.07	no	305.17	no
2-Feb-24	306.05	305.39	0.67	0.13	no	0.07	no	305.17	no
9-Feb-24	305.96	305.34	0.63	0.13	no	0.07	no	305.17	no
14-Feb-24	305.66	305.31	0.35	0.13	no	0.07	no	305.17	no
22-Feb-24	305.66	305.30	0.36	0.13	no	0.07	no	305.17	no
27-Feb-24	305.68	305.32	0.36	0.13	no	0.07	no	305.17	no
8-Mar-24	305.66	305.31	0.35	0.13	no	0.07	no	305.17	no
12-Mar-24	305.74	305.35	0.39	0.13	no	0.07	no	305.17	no
22-Mar-24	305.71			0.13		0.07		305.17	
28-Mar-24	305.70	305.30	0.40	0.13	no	0.07	no	305.17	no
5-Apr-24	305.80	305.38	0.42	0.19	no	0.14	no	305.17	no
9-Apr-24	305.71	305.38	0.33	0.19	no	0.14	no	305.17	no
18-Apr-24	305.78	305.32	0.46	0.19	no	0.14	no	305.17	no
26-Apr-24	305.76	305.31	0.45	0.19	no	0.14	no	305.17	no
1-May-24	305.79	305.38	0.41	0.19	no	0.14	no	305.17	no
6-May-24	305.74	305.36	0.38	0.19	no	0.14	no	305.17	no
13-May-24	305.73	305.32	0.41	0.19	no	0.14	no	305.17	no
23-May-24	305.67	305.22	0.45	0.19	no	0.14	no	305.17	no
29-May-24	305.77	305.37	0.40	0.19	no	0.14	no	305.17	no
4-Jun-24	305.74	305.32	0.42	0.19	no	0.14	no	305.17	no
10-Jun-24	305.73	305.30	0.43	0.19	no	0.14	no	305.17	no
18-Jun-24	305.76	305.29	0.47	0.19	no	0.14	no	305.17	no
26-Jun-24	305.74	305.24	0.50	0.19	no	0.14	no	305.17	no
2-Jul-24	305.73	305.25	0.48	0.12	no	0.06	no	305.17	no
9-Jul-24	305.70	305.27	0.43	0.12	no	0.06	no	305.17	no
18-Jul-24	305.77	305.30	0.47	0.12	no	0.06	no	305.17	no
25-Jul-24	305.72	305.29	0.43	0.12	no	0.06	no	305.17	no
31-Jul-24	305.72	305.31	0.41	0.12	no	0.06	no	305.17	no
7-Aug-24	305.76	305.32	0.44	0.12	no	0.06	no	305.17	no
13-Aug-24	305.78	305.31	0.47	0.12	no	0.06	no	305.17	no
21-Aug-24	305.80	305.33	0.47	0.12	no	0.06	no	305.17	no
30-Aug-24	305.74	305.28	0.46	0.12	no	0.06	no	305.17	no
6-Sep-24	305.71	305.34	0.37	0.12	no	0.06	no	305.17	no
10-Sep-24	305.67	305.30	0.37	0.12	no	0.06	no	305.17	no
20-Sep-24	305.66	305.28	0.38	0.12	no	0.06	no	305.17	no
27-Sep-24	305.70	305.31	0.39	0.12	no	0.06	no	305.17	no
2-Oct-24	305.66	305.30	0.36	0.09	no	0.04	no	305.17	no
11-Oct-24	305.62	305.28	0.34	0.09	no	0.04	no	305.17	no
18-Oct-24	305.61	305.28	0.33	0.09	no	0.04	no	305.17	no
23-Oct-24	305.58	305.27	0.31	0.09	no	0.04	no	305.17	no
31-Oct-24	305.62	305.31	0.31	0.09	no	0.04	no	305.17	no
4-Nov-24	305.59	305.30	0.29	0.09	no	0.04	no	305.17	no
13-Nov-24	305.58	305.32	0.26	0.09	no	0.04	no	305.17	no
21-Nov-24	305.60	305.33	0.27	0.09	no	0.04	no	305.17	no
29-Nov-24	305.62	305.31	0.31	0.09	no	0.04	no	305.17	no
2-Dec-24	305.61	305.29	0.32	0.09	no	0.04	no	305.17	no
10-Dec-24	305.59	305.31	0.28	0.09	no	0.04	no	305.17	no
18-Dec-24	305.63	305.28	0.35	0.09	no	0.04	no	305.17	no
23-Dec-24	305.64	305.34	0.30	0.09	no	0.04	no	305.17	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-3
Threshold Summary - DP6 to DP3
Mill Creek Aggregates Pit

			DP6 to DP3					DP3	
Date	Water Elevation DP6 (m ASL)	Water Elevation DP3 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
6-Jan-23	305.70	304.92	0.78	0.69	no	0.57	no	304.54	no
12-Jan-23	305.55	304.75	0.80	0.69	no	0.57	no	304.54	no
18-Jan-23	305.55	304.77	0.78	0.69	no	0.57	no	304.54	no
25-Jan-23	305.54	304.74	0.80	0.69	no	0.57	no	304.54	no
2-Feb-23	305.52			0.69		0.57		304.54	
10-Feb-23	305.71	305.09	0.62	0.69	yes	0.57	no	304.54	no
14-Feb-23	305.62	304.84	0.79	0.69	no	0.57	no	304.54	no
24-Feb-23	305.48			0.69		0.57		304.54	
2-Mar-23	305.45	304.75	0.70	0.69	no	0.57	no	304.54	no
9-Mar-23	305.48	304.77	0.71	0.69	no	0.57	no	304.54	no
17-Mar-23	305.72	304.83	0.89	0.69	no	0.57	no	304.54	no
24-Mar-23	305.73	305.03	0.70	0.69	no	0.57	no	304.54	no
3-Apr-23	305.80	305.02	0.78	0.84	yes	0.73	no	304.54	no
14-Apr-23	305.65	304.80	0.85	0.84	no	0.73	no	304.54	no
20-Apr-23	305.71	304.81	0.90	0.84	no	0.73	no	304.54	no
27-Apr-23	305.71	304.83	0.88	0.84	no	0.73	no	304.54	no
5-May-23	305.77	304.92	0.85	0.84	no	0.73	no	304.54	no
12-May-23	305.64	304.76	0.88	0.84	no	0.73	no	304.54	no
17-May-23	305.67	304.75	0.92	0.84	no	0.73	no	304.54	no
26-May-23	305.70	304.75	0.95	0.84	no	0.73	no	304.54	no
2-Jun-23	305.59	304.69	0.90	0.84	no	0.73	no	304.54	no
9-Jun-23	305.59	304.69	0.90	0.84	no	0.73	no	304.54	no
15-Jun-23	305.69	304.71	0.98	0.84	no	0.73	no	304.54	no
22-Jun-23	305.64	304.69	0.95	0.84	no	0.73	no	304.54	no
30-Jun-23	305.70	304.74	0.95	0.84	no	0.73	no	304.54	no
5-Jul-23	305.67	304.75	0.92	0.76	no	0.58	no	304.54	no
12-Jul-23	305.60	304.78	0.82	0.76	no	0.58	no	304.54	no
21-Jul-23	305.79	304.78	1.01	0.76	no	0.58	no	304.54	no
25-Jul-23	305.77	305.45	0.32	0.76	yes	0.58	yes	304.54	no
26-Jul-23	305.74	305.12	0.62	0.76	yes	0.58	no	304.54	no
3-Aug-23	305.74	304.89	0.85	0.76	no	0.58	no	304.54	no
8-Aug-23	305.74	304.87	0.87	0.76	no	0.58	no	304.54	no
14-Aug-23	305.81	304.95	0.86	0.76	no	0.58	no	304.54	no
31-Aug-23	305.77	304.77	1.00	0.76	no	0.58	no	304.54	no
7-Sep-23	305.69	304.79	0.90	0.76	no	0.58	no	304.54	no
15-Sep-23	305.73	304.77	0.95	0.76	no	0.58	no	304.54	no
20-Sep-23	305.64	304.76	0.88	0.76	no	0.58	no	304.54	no
25-Sep-23	305.63	304.74	0.88	0.76	no	0.58	no	304.54	no
4-Oct-23	305.64	304.72	0.92	0.73	no	0.55	no	304.54	no
12-Oct-23	305.69	304.75	0.94	0.73	no	0.55	no	304.54	no
20-Oct-23	305.66	304.77	0.89	0.73	no	0.55	no	304.54	no
26-Oct-23	305.61	304.80	0.81	0.73	no	0.55	no	304.54	no
3-Nov-23	305.60	304.81	0.79	0.73	no	0.55	no	304.54	no
16-Nov-23	305.59	304.78	0.81	0.73	no	0.55	no	304.54	no
20-Nov-23	305.57	304.81	0.75	0.73	no	0.55	no	304.54	no
1-Dec-23	305.60	304.80	0.80	0.73	no	0.55	no	304.54	no
7-Dec-23	305.65	304.84	0.81	0.73	no	0.55	no	304.54	no
14-Dec-23	305.62	304.81	0.81	0.73	no	0.55	no	304.54	no
18-Dec-23	305.60	304.84	0.76	0.73	no	0.55	no	304.54	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-3
Threshold Summary - DP6 to DP3
Mill Creek Aggregates Pit

			DP6 to DP3					DP3	
Date	Water Elevation DP6 (m ASL)	Water Elevation DP3 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
5-Jan-24	305.66			0.69		0.57		304.54	
8-Jan-24	305.63	304.79	0.84	0.69	no	0.57	no	304.54	no
17-Jan-24				0.69		0.57		304.54	
26-Jan-24	305.95			0.69		0.57		304.54	
2-Feb-24	305.85	304.76	1.09	0.69	no	0.57	no	304.54	no
9-Feb-24	305.80	304.85	0.94	0.69	no	0.57	no	304.54	no
14-Feb-24	305.77			0.69		0.57		304.54	
22-Feb-24	305.93	304.82	1.11	0.69	no	0.57	no	304.54	no
27-Feb-24	305.73	304.80	0.93	0.69	no	0.57	no	304.54	no
8-Mar-24	305.76	304.78	0.98	0.69	no	0.57	no	304.54	no
12-Mar-24	305.81	304.87	0.94	0.69	no	0.57	no	304.54	no
22-Mar-24	305.81			0.69		0.57		304.54	
28-Mar-24	305.79	304.88	0.91	0.69	no	0.57	no	304.54	no
5-Apr-24	305.88	304.98	0.90	0.84	no	0.73	no	304.54	no
9-Apr-24	305.87	304.88	0.99	0.84	no	0.73	no	304.54	no
18-Apr-24	305.88	304.89	0.99	0.84	no	0.73	no	304.54	no
26-Apr-24	305.91	304.91	1.00	0.84	no	0.73	no	304.54	no
1-May-24	305.92	304.90	1.02	0.84	no	0.73	no	304.54	no
6-May-24	305.87	304.85	1.02	0.84	no	0.73	no	304.54	no
13-May-24	305.82	304.80	1.02	0.84	no	0.73	no	304.54	no
23-May-24	305.78	304.72	1.06	0.84	no	0.73	no	304.54	no
29-May-24	305.84	304.78	1.06	0.84	no	0.73	no	304.54	no
4-Jun-24	305.80	304.79	1.01	0.84	no	0.73	no	304.54	no
10-Jun-24	305.83	304.80	1.03	0.84	no	0.73	no	304.54	no
18-Jun-24	305.85	304.77	1.08	0.84	no	0.73	no	304.54	no
26-Jun-24	305.81	304.74	1.07	0.84	no	0.73	no	304.54	no
2-Jul-24	305.77	304.78	0.99	0.76	no	0.58	no	304.54	no
9-Jul-24	305.72	304.72	1.00	0.76	no	0.58	no	304.54	no
18-Jul-24	305.79	304.77	1.02	0.76	no	0.58	no	304.54	no
25-Jul-24	305.81	304.79	1.02	0.76	no	0.58	no	304.54	no
31-Jul-24	305.84	304.80	1.04	0.76	no	0.58	no	304.54	no
7-Aug-24	305.80	304.75	1.05	0.76	no	0.58	no	304.54	no
13-Aug-24	305.82	304.79	1.03	0.76	no	0.58	no	304.54	no
21-Aug-24	305.85	304.82	1.03	0.76	no	0.58	no	304.54	no
30-Aug-24	305.79	304.81	0.98	0.76	no	0.58	no	304.54	no
6-Sep-24	305.72	304.78	0.94	0.76	no	0.58	no	304.54	no
10-Sep-24	305.68	304.78	0.90	0.76	no	0.58	no	304.54	no
20-Sep-24	305.65	304.72	0.93	0.76	no	0.58	no	304.54	no
27-Sep-24	305.68	304.77	0.91	0.76	no	0.58	no	304.54	no
2-Oct-24	305.71	304.78	0.93	0.73	no	0.55	no	304.54	no
11-Oct-24	305.67	304.77	0.90	0.73	no	0.55	no	304.54	no
18-Oct-24	305.62	304.76	0.86	0.73	no	0.55	no	304.54	no
23-Oct-24	305.57	304.74	0.83	0.73	no	0.55	no	304.54	no
31-Oct-24	305.62	304.80	0.82	0.73	no	0.55	no	304.54	no
4-Nov-24	305.55	304.78	0.77	0.73	no	0.55	no	304.54	no
13-Nov-24	305.61	304.76	0.85	0.73	no	0.55	no	304.54	no
21-Nov-24	305.62	304.79	0.83	0.73	no	0.55	no	304.54	no
29-Nov-24	305.60	304.81	0.79	0.73	no	0.55	no	304.54	no
2-Dec-24	305.64	304.77	0.87	0.73	no	0.55	no	304.54	no
10-Dec-24	305.61	304.78	0.83	0.73	no	0.55	no	304.54	no
18-Dec-24	305.59	304.79	0.80	0.73	no	0.55	no	304.54	no
23-Dec-24	305.63			0.73		0.55		304.54	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-4
Threshold Summary - BH92-29 to DP1
Mill Creek Aggregates Pit

			BH92-29 to DP1					DP1	
Date	Water Elevation BH92-29 (m ASL)	Water Elevation DP1 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
6-Jan-23	304.65			0.34		0.29		303.88	
12-Jan-23	304.57			0.34		0.29		303.88	
18-Jan-23	304.59	304.23	0.36	0.34	no	0.29	no	303.88	no
25-Jan-23	304.61			0.34		0.29		303.88	
2-Feb-23	304.63			0.34		0.29		303.88	
10-Feb-23	304.72	304.42	0.29	0.34	yes	0.29	no	303.88	no
14-Feb-23	304.70	304.29	0.41	0.34	no	0.29	no	303.88	no
24-Feb-23	304.74			0.34		0.29		303.88	
2-Mar-23	304.75	304.29	0.46	0.34	no	0.29	no	303.88	no
9-Mar-23	304.77	304.30	0.47	0.34	no	0.29	no	303.88	no
17-Mar-23	304.85	304.38	0.46	0.34	no	0.29	no	303.88	no
24-Mar-23	304.87	304.43	0.44	0.34	no	0.29	no	303.88	no
3-Apr-23	304.98	304.48	0.49	0.22	no	0.17	no	303.97	no
14-Apr-23	305.07	304.40	0.67	0.22	no	0.17	no	303.97	no
20-Apr-23	305.04	304.40	0.63	0.22	no	0.17	no	303.97	no
27-Apr-23	305.07	304.42	0.65	0.22	no	0.17	no	303.97	no
5-May-23	305.11	304.46	0.65	0.22	no	0.17	no	303.97	no
12-May-23	304.98	304.37	0.61	0.22	no	0.17	no	303.97	no
17-May-23	305.02	304.38	0.64	0.22	no	0.17	no	303.97	no
26-May-23	305.00	304.37	0.63	0.22	no	0.17	no	303.97	no
2-Jun-23	304.95	304.31	0.63	0.22	no	0.17	no	303.97	no
9-Jun-23	304.92	304.29	0.63	0.22	no	0.17	no	303.97	no
15-Jun-23	304.89	304.32	0.57	0.22	no	0.17	no	303.97	no
22-Jun-23	304.88	304.29	0.59	0.22	no	0.17	no	303.97	no
30-Jun-23	304.86	304.30	0.56	0.22	no	0.17	no	303.97	no
5-Jul-23	304.87	304.29	0.58	0.28	no	0.23	no	303.91	no
12-Jul-23	304.89	304.34	0.55	0.28	no	0.23	no	303.91	no
21-Jul-23	305.00	304.37	0.63	0.28	no	0.23	no	303.91	no
25-Jul-23	305.00	304.47	0.53	0.28	no	0.23	no	303.91	no
3-Aug-23	304.84	304.34	0.50	0.28	no	0.23	no	303.91	no
8-Aug-23	304.91	304.35	0.56	0.28	no	0.23	no	303.91	no
14-Aug-23	304.89	304.37	0.52	0.28	no	0.23	no	303.91	no
31-Aug-23	304.91	304.33	0.58	0.28	no	0.23	no	303.91	no
7-Sep-23	304.89	304.31	0.58	0.28	no	0.23	no	303.91	no
15-Sep-23	304.90	304.33	0.57	0.28	no	0.23	no	303.91	no
20-Sep-23	304.86	304.30	0.56	0.28	no	0.23	no	303.91	no
25-Sep-23	304.79	304.26	0.53	0.28	no	0.23	no	303.91	no
4-Oct-23	304.74	304.24	0.49	0.24	no	0.19	no	303.96	no
12-Oct-23	304.76	304.26	0.50	0.24	no	0.19	no	303.96	no
20-Oct-23	304.71	304.25	0.46	0.24	no	0.19	no	303.96	no
26-Oct-23	304.77	304.29	0.47	0.24	no	0.19	no	303.96	no
3-Nov-23	304.75	304.27	0.49	0.24	no	0.19	no	303.96	no
16-Nov-23	304.74	304.26	0.48	0.24	no	0.19	no	303.96	no
20-Nov-23	304.71			0.24		0.19		303.96	
1-Dec-23	304.75	304.30	0.45	0.24	no	0.19	no	303.96	no
7-Dec-23	304.78	304.32	0.46	0.24	no	0.19	no	303.96	no
14-Dec-23	304.81	304.34	0.47	0.24	no	0.19	no	303.96	no
18-Dec-23	304.87	304.35	0.51	0.24	no	0.19	no	303.96	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-4
Threshold Summary - BH92-29 to DP1
Mill Creek Aggregates Pit

			BH92-29 to DP1					DP1	
Date	Water Elevation BH92-29 (m ASL)	Water Elevation DP1 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
5-Jan-24	304.86			0.34		0.29		303.88	
8-Jan-24	304.85			0.34		0.29		303.88	
17-Jan-24	304.92			0.34		0.29		303.88	
26-Jan-24	304.95			0.34		0.29		303.88	
2-Feb-24	304.96	304.39	0.56	0.34	no	0.29	no	303.88	no
9-Feb-24	304.87	304.33	0.54	0.34	no	0.29	no	303.88	no
14-Feb-24	304.90			0.34		0.29		303.88	
22-Feb-24	304.88	304.31	0.57	0.34	no	0.29	no	303.88	no
27-Feb-24	304.89	304.44	0.45	0.34	no	0.29	no	303.88	no
8-Mar-24	304.89	304.31	0.58	0.34	no	0.29	no	303.88	no
12-Mar-24	304.91	304.36	0.55	0.34	no	0.29	no	303.88	no
22-Mar-24	304.90			0.34		0.29		303.88	
28-Mar-24	304.90	304.31	0.59	0.34	no	0.29	no	303.97	no
5-Apr-24	304.93	304.31	0.62	0.22	no	0.17	no	303.97	no
9-Apr-24	304.92	304.31	0.61	0.22	no	0.17	no	303.97	no
18-Apr-24	304.87	304.32	0.55	0.22	no	0.17	no	303.97	no
26-Apr-24	304.84	304.35	0.49	0.22	no	0.17	no	303.97	no
1-May-24	304.88	304.36	0.52	0.22	no	0.17	no	303.97	no
6-May-24	304.91	304.34	0.57	0.22	no	0.17	no	303.97	no
13-May-24	304.96	304.35	0.61	0.22	no	0.17	no	303.97	no
23-May-24	304.79	304.29	0.50	0.22	no	0.17	no	303.97	no
29-May-24	304.98	304.34	0.64	0.22	no	0.17	no	303.97	no
4-Jun-24	304.95	304.33	0.62	0.22	no	0.17	no	303.97	no
10-Jun-24	304.91	304.31	0.60	0.22	no	0.17	no	303.97	no
18-Jun-24	304.98	304.33	0.65	0.22	no	0.17	no	303.97	no
26-Jun-24	304.97	304.32	0.65	0.22	no	0.17	no	303.91	no
2-Jul-24	305.00	304.32	0.68	0.28	no	0.23	no	303.91	no
9-Jul-24	305.02	304.33	0.69	0.28	no	0.23	no	303.91	no
18-Jul-24	305.05	304.35	0.70	0.28	no	0.23	no	303.91	no
25-Jul-24	305.04	304.36	0.68	0.28	no	0.23	no	303.91	no
31-Jul-24	305.00	304.34	0.66	0.28	no	0.23	no	303.91	no
7-Aug-24	304.97	304.37	0.60	0.28	no	0.23	no	303.91	no
13-Aug-24	304.98	304.32	0.66	0.28	no	0.23	no	303.91	no
21-Aug-24	305.03	304.38	0.65	0.28	no	0.23	no	303.91	no
30-Aug-24	305.02	304.33	0.69	0.28	no	0.23	no	303.91	no
6-Sep-24	305.02	304.36	0.66	0.28	no	0.23	no	303.91	no
10-Sep-24	305.14	304.39	0.75	0.28	no	0.23	no	303.91	no
20-Sep-24	305.01	304.35	0.66	0.28	no	0.23	no	303.96	no
27-Sep-24	304.95	304.34	0.61	0.28	no	0.23	no	303.96	no
2-Oct-24	305.03	304.34	0.69	0.24	no	0.19	no	303.96	no
11-Oct-24	304.99	304.34	0.65	0.24	no	0.19	no	303.96	no
18-Oct-24	304.95	304.33	0.62	0.24	no	0.19	no	303.96	no
23-Oct-24	304.80	304.33	0.47	0.24	no	0.19	no	303.96	no
31-Oct-24	304.90	304.35	0.55	0.24	no	0.19	no	303.96	no
4-Nov-24	305.00	304.34	0.66	0.24	no	0.19	no	303.96	no
13-Nov-24	304.99	304.31	0.68	0.24	no	0.19	no	303.96	no
21-Nov-24	304.96	304.35	0.61	0.24	no	0.19	no	303.96	no
29-Nov-24	304.91	304.33	0.58	0.24	no	0.19	no	303.96	no
2-Dec-24	304.92	304.32	0.60	0.24	no	0.19	no	303.96	no
10-Dec-24	304.95	304.36	0.59	0.24	no	0.19	no	303.96	no
18-Dec-24	304.93	304.38	0.55	0.24	no	0.19	no	303.96	no
23-Dec-24	304.88			0.24		0.19		303.96	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-5
Threshold Summary - BH92-27 to DP2
Mill Creek Aggregates Pit

			BH92-27 to DP2					DP2	
Date	Water Elevation BH92-27 (m ASL)	Water Elevation DP2 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
6-Jan-23	304.58	303.95	0.63	0.48	no	0.43	no	303.65	no
12-Jan-23	304.54	304.06	0.48	0.48	no	0.43	no	303.65	no
18-Jan-23	304.53	303.95	0.57	0.48	no	0.43	no	303.65	no
25-Jan-23	304.54			0.48		0.43		303.65	
2-Feb-23	304.55			0.48		0.43		303.65	
10-Feb-23	304.74	304.08	0.66	0.48	no	0.43	no	303.65	no
14-Feb-23	304.65	304.05	0.60	0.48	no	0.43	no	303.65	no
24-Feb-23	304.66			0.48		0.43		303.65	
2-Mar-23	304.66	304.02	0.64	0.48	no	0.43	no	303.65	no
9-Mar-23	304.70	304.03	0.67	0.48	no	0.43	no	303.65	no
17-Mar-23	304.75	303.94	0.81	0.48	no	0.43	no	303.65	no
24-Mar-23	304.85	304.11	0.74	0.48	no	0.43	no	303.65	no
3-Apr-23	304.95	304.14	0.81	0.39	no	0.34	no	303.69	no
14-Apr-23	305.00	304.09	0.92	0.39	no	0.34	no	303.69	no
20-Apr-23	304.99	304.07	0.91	0.39	no	0.34	no	303.69	no
27-Apr-23	304.89	304.13	0.76	0.39	no	0.34	no	303.69	no
5-May-23	305.12	304.12	1.00	0.39	no	0.34	no	303.69	no
12-May-23	304.99	304.08	0.91	0.39	no	0.34	no	303.69	no
17-May-23	304.97	304.07	0.90	0.39	no	0.34	no	303.69	no
26-May-23	304.83	304.04	0.79	0.39	no	0.34	no	303.69	no
2-Jun-23	304.88	304.02	0.86	0.39	no	0.34	no	303.69	no
9-Jun-23	304.85	304.00	0.84	0.39	no	0.34	no	303.69	no
15-Jun-23	304.74	304.03	0.71	0.39	no	0.34	no	303.69	no
22-Jun-23	304.80	304.02	0.79	0.39	no	0.34	no	303.69	no
30-Jun-23	304.75	304.05	0.70	0.39	no	0.34	no	303.69	no
5-Jul-23	304.77	304.03	0.74	0.39	no	0.32	no	303.5	no
12-Jul-23	304.76	304.12	0.64	0.39	no	0.32	no	303.5	no
21-Jul-23	304.91	304.19	0.72	0.39	no	0.32	no	303.5	no
25-Jul-23	304.85	304.11	0.74	0.39	no	0.32	no	303.5	no
3-Aug-23	304.75	304.00	0.76	0.39	no	0.32	no	303.5	no
8-Aug-23	304.78	304.01	0.77	0.39	no	0.32	no	303.5	no
14-Aug-23	304.78	304.05	0.73	0.39	no	0.32	no	303.5	no
31-Aug-23	304.76	304.01	0.75	0.39	no	0.32	no	303.5	no
7-Sep-23	304.73	304.23	0.50	0.39	no	0.32	no	303.5	no
15-Sep-23	304.71	304.00	0.71	0.39	no	0.32	no	303.5	no
20-Sep-23	304.67	303.96	0.70	0.39	no	0.32	no	303.5	no
25-Sep-23	304.63	303.93	0.71	0.39	no	0.32	no	303.5	no
4-Oct-23	304.59	303.93	0.66	0.39	no	0.34	no	303.55	no
12-Oct-23	304.62	303.94	0.67	0.39	no	0.34	no	303.55	no
20-Oct-23	304.58	303.97	0.62	0.39	no	0.34	no	303.55	no
26-Oct-23	304.69	304.02	0.67	0.39	no	0.34	no	303.55	no
3-Nov-23	304.70	304.03	0.66	0.39	no	0.34	no	303.55	no
16-Nov-23	304.64	303.97	0.67	0.39	no	0.34	no	303.55	no
20-Nov-23	304.63	303.94	0.69	0.39	no	0.34	no	303.55	no
1-Dec-23	304.65	303.97	0.68	0.39	no	0.34	no	303.55	no
7-Dec-23	304.68	304.02	0.66	0.39	no	0.34	no	303.55	no
14-Dec-23	304.71	304.02	0.69	0.39	no	0.34	no	303.55	no
18-Dec-23	304.73	304.01	0.72	0.39	no	0.34	no	303.55	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-5
Threshold Summary - BH92-27 to DP2
Mill Creek Aggregates Pit

			BH92-27 to DP2					DP2	
Date	Water Elevation BH92-27 (m ASL)	Water Elevation DP2 (m ASL)	Head Difference (m)	Early Warning Value (m)	Exceedance of Early Warning Value	Threshold Value (m)	Exceedance of Threshold Value	Threshold Value (m ASL)	Exceedance of Threshold Value
5-Jan-24	304.63			0.48		0.43		303.65	
8-Jan-24	304.69	303.82	0.87	0.48	no	0.43	no	303.65	no
17-Jan-24	304.71			0.48		0.43		303.65	
26-Jan-24	305.05	303.81	1.24	0.48	no	0.43	no	303.65	no
2-Feb-24	304.89	303.83	1.06	0.48	no	0.43	no	303.65	no
9-Feb-24	304.75	304.02	0.73	0.48	no	0.43	no	303.65	no
14-Feb-24	304.75			0.48		0.43		303.65	
22-Feb-24	304.67	303.94	0.73	0.48	no	0.43	no	303.65	no
27-Feb-24	304.74	303.90	0.84	0.48	no	0.43	no	303.65	no
8-Mar-24	304.70	304.03	0.67	0.48	no	0.43	no	303.65	no
12-Mar-24	304.79	304.00	0.79	0.48	no	0.43	no	303.65	no
22-Mar-24	304.72			0.48		0.43		303.65	
28-Mar-24	304.72	304.02	0.70	0.48	no	0.43	no	303.69	no
5-Apr-24	304.79	304.01	0.77	0.39	no	0.34	no	303.69	no
9-Apr-24	304.70	303.96	0.74	0.39	no	0.34	no	303.69	no
18-Apr-24	304.82	303.99	0.83	0.39	no	0.34	no	303.69	no
26-Apr-24	304.84	304.01	0.83	0.39	no	0.34	no	303.69	no
1-May-24	304.83	304.02	0.81	0.39	no	0.34	no	303.69	no
6-May-24	304.80	303.99	0.81	0.39	no	0.34	no	303.69	no
13-May-24	304.73	304.00	0.73	0.39	no	0.34	no	303.69	no
23-May-24	304.73	303.98	0.75	0.39	no	0.34	no	303.69	no
29-May-24	304.81	304.02	0.79	0.39	no	0.34	no	303.69	no
4-Jun-24	304.78	304.06	0.72	0.39	no	0.34	no	303.69	no
10-Jun-24	304.81	304.04	0.77	0.39	no	0.34	no	303.69	no
18-Jun-24	304.77	304.01	0.76	0.39	no	0.34	no	303.69	no
26-Jun-24	304.74	303.98	0.76	0.39	no	0.34	no	303.5	no
2-Jul-24	304.82	304.05	0.77	0.37	no	0.32	no	303.5	no
9-Jul-24	304.79	304.08	0.71	0.37	no	0.32	no	303.5	no
18-Jul-24	304.85	304.11	0.74	0.37	no	0.32	no	303.5	no
25-Jul-24	304.83	304.09	0.74	0.37	no	0.32	no	303.5	no
31-Jul-24	304.82	304.07	0.75	0.37	no	0.32	no	303.5	no
7-Aug-24	304.80	304.03	0.77	0.37	no	0.32	no	303.5	no
13-Aug-24	304.79	304.04	0.75	0.37	no	0.32	no	303.5	no
21-Aug-24	304.84	304.10	0.74	0.37	no	0.32	no	303.5	no
30-Aug-24	304.82	304.11	0.71	0.37	no	0.32	no	303.5	no
6-Sep-24	304.87	304.09	0.78	0.37	no	0.32	no	303.5	no
10-Sep-24	304.89	304.03	0.86	0.37	no	0.32	no	303.5	no
20-Sep-24	304.80	304.04	0.76	0.37	no	0.32	no	303.55	no
27-Sep-24	304.86	304.02	0.84	0.37	no	0.32	no	303.55	no
2-Oct-24	304.81	304.20	0.61	0.39	no	0.34	no	303.55	no
11-Oct-24	304.79	304.04	0.75	0.39	no	0.34	no	303.55	no
18-Oct-24	304.78	304.03	0.75	0.39	no	0.34	no	303.55	no
23-Oct-24	304.77	304.02	0.75	0.39	no	0.34	no	303.55	no
31-Oct-24	304.81	304.05	0.76	0.39	no	0.34	no	303.55	no
4-Nov-24	304.79	304.18	0.61	0.39	no	0.34	no	303.55	no
13-Nov-24	304.77	304.16	0.61	0.39	no	0.34	no	303.55	no
21-Nov-24	304.80	304.13	0.67	0.39	no	0.34	no	303.55	no
29-Nov-24	304.78	304.17	0.61	0.39	no	0.34	no	303.55	no
2-Dec-24	304.76			0.39		0.34		303.55	
10-Dec-24	304.82	304.18	0.64	0.39	no	0.34	no	303.55	no
18-Dec-24	304.79	304.17	0.62	0.39	no	0.34	no	303.55	no
23-Dec-24	304.84	304.12	0.72	0.39	no	0.34	no	303.55	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-6
Threshold Summary - OW5-84 to DP5CR
Mill Creek Aggregates Pit

			OW5-84 to DP5CR					DP5CR	
Date	Water Elevation OW5-84 (m ASL)	Water Elevation DP5CR (m ASL)	Head Difference (m)	Early Warning Value (Min) (m)	Exceedance of Early Warning Value	Threshold Value (Min) (m)	Exceedance of Threshold Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
6-Jan-23	303.72	303.45	0.27	0.23	no	0.20	no	302.88	no
12-Jan-23	303.62	303.36	0.27	0.23	no	0.20	no	302.88	no
18-Jan-23	303.67	303.41	0.26	0.23	no	0.20	no	302.88	no
25-Jan-23	303.61			0.23		0.20		302.88	
2-Feb-23	303.61			0.23		0.20		302.88	
10-Feb-23	303.82	303.56	0.26	0.23	no	0.20	no	302.88	no
14-Feb-23		303.44		0.23		0.20		302.88	no
24-Feb-23				0.23		0.20		302.88	
2-Mar-23		303.36		0.23		0.20		302.88	no
9-Mar-23		303.38		0.23		0.20		302.88	no
17-Mar-23	303.82	303.56	0.26	0.23	no	0.20	no	302.88	no
24-Mar-23	303.80	303.53	0.27	0.23	no	0.20	no	302.88	no
3-Apr-23	303.80	303.53	0.27	0.21	no	0.18	no	302.86	no
14-Apr-23	303.71	303.41	0.30	0.21	no	0.18	no	302.86	no
20-Apr-23	303.70	303.41	0.29	0.21	no	0.18	no	302.86	no
27-Apr-23	303.73	303.41	0.32	0.21	no	0.18	no	302.86	no
5-May-23	303.76	303.48	0.28	0.21	no	0.18	no	302.86	no
12-May-23	303.63	303.35	0.28	0.21	no	0.18	no	302.86	no
17-May-23	303.64	303.36	0.28	0.21	no	0.18	no	302.86	no
26-May-23	303.67	303.39	0.28	0.21	no	0.18	no	302.86	no
2-Jun-23	303.59	303.26	0.33	0.21	no	0.18	no	302.86	no
9-Jun-23	303.58	303.25	0.33	0.21	no	0.18	no	302.86	no
15-Jun-23	303.65	303.33	0.32	0.21	no	0.18	no	302.86	no
22-Jun-23	303.61	303.30	0.31	0.21	no	0.18	no	302.86	no
30-Jun-23	303.65	303.29	0.36	0.21	no	0.18	no	302.86	no
5-Jul-23	303.63	303.28	0.35	0.18	no	0.15	no	302.79	no
12-Jul-23	303.69	303.41	0.28	0.18	no	0.15	no	302.79	no
21-Jul-23	303.66	303.39	0.27	0.18	no	0.15	no	302.79	no
25-Jul-23	303.74	303.55	0.19	0.18	no	0.15	no	302.79	no
3-Aug-23	303.68	303.37	0.31	0.18	no	0.15	no	302.79	no
8-Aug-23	303.67	303.40	0.27	0.18	no	0.15	no	302.79	no
14-Aug-23	303.72	303.43	0.29	0.18	no	0.15	no	302.79	no
31-Aug-23	303.63	303.36	0.27	0.18	no	0.15	no	302.79	no
7-Sep-23	303.58	303.32	0.25	0.18	no	0.15	no	302.79	no
15-Sep-23	303.61	303.34	0.28	0.18	no	0.15	no	302.79	no
20-Sep-23	303.54	303.31	0.23	0.18	no	0.15	no	302.79	no
25-Sep-23	303.52	303.27	0.25	0.18	no	0.15	no	302.79	no
4-Oct-23	303.49	303.26	0.23	0.18	no	0.15	no	302.84	no
12-Oct-23	303.55	303.31	0.24	0.18	no	0.15	no	302.84	no
20-Oct-23	303.59	303.33	0.26	0.18	no	0.15	no	302.84	no
26-Oct-23	303.62	303.35	0.27	0.18	no	0.15	no	302.84	no
3-Nov-23	303.62	303.34	0.28	0.18	no	0.15	no	302.84	no
16-Nov-23	303.61	303.36	0.25	0.18	no	0.15	no	302.84	no
20-Nov-23	303.59	303.34	0.25	0.18	no	0.15	no	302.84	no
1-Dec-23	303.66	303.38	0.28	0.18	no	0.15	no	302.84	no
7-Dec-23	303.66	303.39	0.27	0.18	no	0.15	no	302.84	no
14-Dec-23	303.67	303.39	0.28	0.18	no	0.15	no	302.84	no
18-Dec-23	303.69	303.43	0.25	0.18	no	0.15	no	302.84	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-6
Threshold Summary - OW5-84 to DP5CR
Mill Creek Aggregates Pit

			OW5-84 to DP5CR					DP5CR	
Date	Water Elevation OW5-84 (m ASL)	Water Elevation DP5CR (m ASL)	Head Difference (m)	Early Warning Value (Min) (m)	Exceedance of Early Warning Value	Threshold Value (Min) (m)	Exceedance of Threshold Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
5-Jan-24	303.70			0.23		0.20		302.88	
8-Jan-24	303.64	303.24	0.40	0.23	no	0.20	no	302.88	no
17-Jan-24	303.70			0.23		0.20		302.88	
26-Jan-24	303.73	303.46	0.27	0.23	no	0.20	no	302.88	no
2-Feb-24	303.79	303.41	0.38	0.23	no	0.20	no	302.88	no
9-Feb-24	303.73	303.34	0.39	0.23	no	0.20	no	302.88	no
14-Feb-24	303.66			0.23		0.20		302.88	
22-Feb-24	303.67	303.29	0.38	0.23	no	0.20	no	302.88	no
27-Feb-24	303.72	303.34	0.38	0.23	no	0.20	no	302.88	no
8-Mar-24	303.68	303.32	0.36	0.23	no	0.20	no	302.88	no
12-Mar-24	303.70	303.42	0.28	0.23	no	0.20	no	302.88	no
22-Mar-24	303.69			0.23		0.20		302.88	
28-Mar-24	303.71	303.21	0.50	0.23	no	0.20	no	302.86	no
5-Apr-24	303.76	303.40	0.36	0.21	no	0.18	no	302.86	no
9-Apr-24	303.72	303.31	0.41	0.21	no	0.18	no	302.86	no
18-Apr-24	303.70	303.19	0.50	0.21	no	0.18	no	302.86	no
26-Apr-24	303.72	303.21	0.51	0.21	no	0.18	no	302.86	no
1-May-24	303.73	303.27	0.46	0.21	no	0.18	no	302.86	no
6-May-24	303.70	303.29	0.41	0.21	no	0.18	no	302.86	no
13-May-24	303.68	303.40	0.28	0.21	no	0.18	no	302.86	no
23-May-24	303.69	303.25	0.44	0.21	no	0.18	no	302.86	no
29-May-24	303.71	303.39	0.31	0.21	no	0.18	no	302.86	no
4-Jun-24	303.66	303.38	0.28	0.21	no	0.18	no	302.86	no
10-Jun-24	303.70	303.40	0.30	0.21	no	0.18	no	302.86	no
18-Jun-24	303.72	303.39	0.33	0.21	no	0.18	no	302.86	no
26-Jun-24	303.67	303.34	0.33	0.21	no	0.18	no	302.79	no
2-Jul-24	303.61	303.31	0.30	0.18	no	0.15	no	302.79	no
9-Jul-24	303.55	303.29	0.26	0.18	no	0.15	no	302.79	no
18-Jul-24	303.63	303.32	0.31	0.18	no	0.15	no	302.79	no
25-Jul-24	303.64	303.35	0.29	0.18	no	0.15	no	302.79	no
31-Jul-24	303.69	303.33	0.36	0.18	no	0.15	no	302.79	no
7-Aug-24	303.67	303.37	0.30	0.18	no	0.15	no	302.79	no
13-Aug-24	303.60	303.35	0.25	0.18	no	0.15	no	302.79	no
21-Aug-24	303.65	303.39	0.26	0.18	no	0.15	no	302.79	no
30-Aug-24	303.61	303.32	0.29	0.18	no	0.15	no	302.79	no
6-Sep-24	303.59	303.33	0.26	0.18	no	0.15	no	302.79	no
10-Sep-24	303.61	303.34	0.27	0.18	no	0.15	no	302.79	no
20-Sep-24	303.55	303.28	0.27	0.18	no	0.15	no	302.84	no
27-Sep-24	303.61	303.32	0.29	0.18	no	0.15	no	302.84	no
2-Oct-24	303.61	303.35	0.27	0.18	no	0.15	no	302.84	no
11-Oct-24	303.60	303.33	0.27	0.18	no	0.15	no	302.84	no
18-Oct-24	303.59	303.31	0.28	0.18	no	0.15	no	302.84	no
23-Oct-24	303.57	303.29	0.28	0.18	no	0.15	no	302.84	no
31-Oct-24	303.68	303.36	0.32	0.18	no	0.15	no	302.84	no
4-Nov-24	303.61	303.35	0.26	0.18	no	0.15	no	302.84	no
13-Nov-24	303.64	303.32	0.31	0.18	no	0.15	no	302.84	no
21-Nov-24	303.60	303.33	0.27	0.18	no	0.15	no	302.84	no
29-Nov-24	303.59	303.37	0.22	0.18	no	0.15	no	302.84	no
2-Dec-24	303.63			0.18		0.15		302.84	
10-Dec-24	303.65	303.37	0.28	0.18	no	0.15	no	302.84	no
18-Dec-24	303.62	303.33	0.29	0.18	no	0.15	no	302.84	no
23-Dec-24	303.66			0.18		0.15		302.84	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jan-23			305.75		305.50	
2-Jan-23			305.75		305.50	
3-Jan-23			305.75		305.50	
4-Jan-23			305.75		305.50	
5-Jan-23			305.75		305.50	
6-Jan-23			305.75		305.50	
7-Jan-23			305.75		305.50	
8-Jan-23			305.75		305.50	
9-Jan-23			305.75		305.50	
10-Jan-23			305.75		305.50	
11-Jan-23			305.75		305.50	
12-Jan-23			305.75		305.50	
13-Jan-23			305.75		305.50	
14-Jan-23			305.75		305.50	
15-Jan-23			305.75		305.50	
16-Jan-23			305.75		305.50	
17-Jan-23			305.75		305.50	
18-Jan-23			305.75		305.50	
19-Jan-23			305.75		305.50	
20-Jan-23			305.75		305.50	
21-Jan-23			305.75		305.50	
22-Jan-23			305.75		305.50	
23-Jan-23			305.75		305.50	
24-Jan-23			305.75		305.50	
25-Jan-23			305.75		305.50	
26-Jan-23			305.75		305.50	
27-Jan-23			305.75		305.50	
28-Jan-23			305.75		305.50	
29-Jan-23			305.75		305.50	
30-Jan-23			305.75		305.50	
31-Jan-23			305.75		305.50	
1-Feb-23			305.75		305.50	
2-Feb-23			305.75		305.50	
3-Feb-23			305.75		305.50	
4-Feb-23			305.75		305.50	
5-Feb-23			305.75		305.50	
6-Feb-23			305.75		305.50	
7-Feb-23			305.75		305.50	
8-Feb-23			305.75		305.50	
9-Feb-23			305.75		305.50	
10-Feb-23			305.75		305.50	
11-Feb-23			305.75		305.50	
12-Feb-23			305.75		305.50	
13-Feb-23			305.75		305.50	
14-Feb-23			305.75		305.50	
15-Feb-23			305.75		305.50	
16-Feb-23			305.75		305.50	
17-Feb-23			305.75		305.50	
18-Feb-23			305.75		305.50	
19-Feb-23			305.75		305.50	
20-Feb-23			305.75		305.50	
21-Feb-23			305.75		305.50	
22-Feb-23			305.75		305.50	
23-Feb-23			305.75		305.50	
24-Feb-23			305.75		305.50	
25-Feb-23			305.75		305.50	
26-Feb-23			305.75		305.50	
27-Feb-23			305.75		305.50	
28-Feb-23			305.75		305.50	
1-Mar-23			305.75		305.50	
2-Mar-23			305.75		305.50	
3-Mar-23			305.75		305.50	
4-Mar-23			305.75		305.50	
5-Mar-23			305.75		305.50	
6-Mar-23			305.75		305.50	
7-Mar-23			305.75		305.50	
8-Mar-23			305.75		305.50	
9-Mar-23			305.75		305.50	
10-Mar-23			305.75		305.50	
11-Mar-23			305.75		305.50	
12-Mar-23			305.75		305.50	
13-Mar-23			305.75		305.50	
14-Mar-23			305.75		305.50	
15-Mar-23			305.75		305.50	
16-Mar-23			305.75		305.50	
17-Mar-23			305.75		305.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
18-Mar-23			305.75		305.50	
19-Mar-23			305.75		305.50	
20-Mar-23			305.75		305.50	
21-Mar-23			305.75		305.50	
22-Mar-23			305.75		305.50	
23-Mar-23			305.75		305.50	
24-Mar-23			305.75		305.50	
25-Mar-23			305.75		305.50	
26-Mar-23			305.75		305.50	
27-Mar-23			305.75		305.50	
28-Mar-23			305.75		305.50	
29-Mar-23			305.75		305.50	
30-Mar-23			305.75		305.50	
31-Mar-23			305.75		305.50	
1-Apr-23			305.75		305.50	
2-Apr-23			305.75		305.50	
3-Apr-23	0.65	306.28	305.75	no	305.50	no
4-Apr-23	0.66	306.29	305.75	no	305.50	no
5-Apr-23	0.67	306.30	305.75	no	305.50	no
6-Apr-23	0.68	306.31	305.75	no	305.50	no
7-Apr-23			305.75		305.50	
8-Apr-23			305.75		305.50	
9-Apr-23			305.75		305.50	
10-Apr-23	0.67	306.30	305.75	no	305.50	no
11-Apr-23	0.67	306.30	305.75	no	305.50	no
12-Apr-23	0.67	306.30	305.75	no	305.50	no
13-Apr-23	0.67	306.30	305.75	no	305.50	no
14-Apr-23	0.67	306.30	305.75	no	305.50	no
15-Apr-23			305.75		305.50	
16-Apr-23			305.75		305.50	
17-Apr-23	0.66	306.29	305.75	no	305.50	no
18-Apr-23	0.66	306.29	305.75	no	305.50	no
19-Apr-23	0.66	306.29	305.75	no	305.50	no
20-Apr-23	0.65	306.28	305.75	no	305.50	no
21-Apr-23	0.65	306.28	305.75	no	305.50	no
22-Apr-23			305.75		305.50	
23-Apr-23			305.75		305.50	
24-Apr-23	0.68	306.31	305.75	no	305.50	no
25-Apr-23	0.68	306.31	305.75	no	305.50	no
26-Apr-23	0.67	306.30	305.75	no	305.50	no
27-Apr-23	0.68	306.31	305.75	no	305.50	no
28-Apr-23	0.68	306.31	305.75	no	305.50	no
29-Apr-23			305.75		305.50	
30-Apr-23			305.75		305.50	
1-May-23	0.70	306.33	305.75	no	305.50	no
2-May-23	0.70	306.33	305.75	no	305.50	no
3-May-23	0.70	306.33	305.75	no	305.50	no
4-May-23	0.71	306.34	305.75	no	305.50	no
5-May-23	0.71	306.34	305.75	no	305.50	no
6-May-23			305.75		305.50	
7-May-23			305.75		305.50	
8-May-23	0.70	306.33	305.75	no	305.50	no
9-May-23	0.72	306.35	305.75	no	305.50	no
10-May-23	0.70	306.33	305.75	no	305.50	no
11-May-23	0.72	306.35	305.75	no	305.50	no
12-May-23	0.71	306.34	305.75	no	305.50	no
13-May-23			305.75		305.50	
14-May-23			305.75		305.50	
15-May-23	0.71	306.34	305.75	no	305.50	no
16-May-23	0.71	306.34	305.75	no	305.50	no
17-May-23	0.71	306.34	305.75	no	305.50	no
18-May-23	0.70	306.33	305.75	no	305.50	no
19-May-23	0.70	306.33	305.75	no	305.50	no
20-May-23			305.75		305.50	
21-May-23			305.75		305.50	
22-May-23			305.75		305.50	
23-May-23	0.74	306.37	305.75	no	305.50	no
24-May-23	0.74	306.37	305.75	no	305.50	no
25-May-23	0.73	306.36	305.75	no	305.50	no
26-May-23	0.73	306.36	305.75	no	305.50	no
27-May-23			305.75		305.50	
28-May-23			305.75		305.50	
29-May-23	0.72	306.35	305.75	no	305.50	no
30-May-23	0.72	306.35	305.75	no	305.50	no
31-May-23	0.71	306.34	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-23	0.71	306.34	305.75	no	305.50	no
2-Jun-23	0.71	306.34	305.75	no	305.50	no
3-Jun-23			305.75		305.50	
4-Jun-23			305.75		305.50	
5-Jun-23	0.69	306.32	305.75	no	305.50	no
6-Jun-23	0.69	306.32	305.75	no	305.50	no
7-Jun-23	0.68	306.31	305.75	no	305.50	no
8-Jun-23	0.68	306.31	305.75	no	305.50	no
9-Jun-23	0.68	306.31	305.75	no	305.50	no
10-Jun-23			305.75		305.50	
11-Jun-23			305.75		305.50	
12-Jun-23	0.69	306.32	305.75	no	305.50	no
13-Jun-23	0.69	306.32	305.75	no	305.50	no
14-Jun-23	0.69	306.32	305.75	no	305.50	no
15-Jun-23	0.69	306.32	305.75	no	305.50	no
16-Jun-23	0.70	306.33	305.75	no	305.50	no
17-Jun-23			305.75		305.50	
18-Jun-23			305.75		305.50	
19-Jun-23	0.69	306.32	305.75	no	305.50	no
20-Jun-23	0.69	306.32	305.75	no	305.50	no
21-Jun-23	0.68	306.31	305.75	no	305.50	no
22-Jun-23	0.68	306.31	305.75	no	305.50	no
23-Jun-23	0.67	306.30	305.75	no	305.50	no
24-Jun-23			305.75		305.50	
25-Jun-23			305.75		305.50	
26-Jun-23	0.69	306.32	305.75	no	305.50	no
27-Jun-23	0.69	306.32	305.75	no	305.50	no
28-Jun-23	0.70	306.33	305.75	no	305.50	no
29-Jun-23	0.70	306.33	305.75	no	305.50	no
30-Jun-23	0.69	306.32	305.75	no	305.50	no
1-Jul-23			305.75		305.50	
2-Jul-23			305.75		305.50	
3-Jul-23			305.75		305.50	
4-Jul-23	0.71	306.34	305.75	no	305.50	no
5-Jul-23	0.71	306.34	305.75	no	305.50	no
6-Jul-23	0.70	306.33	305.75	no	305.50	no
7-Jul-23	0.73	306.36	305.75	no	305.50	no
8-Jul-23			305.75		305.50	
9-Jul-23			305.75		305.50	
10-Jul-23	0.72	306.35	305.75	no	305.50	no
11-Jul-23	0.71	306.34	305.75	no	305.50	no
12-Jul-23	0.71	306.34	305.75	no	305.50	no
13-Jul-23	0.76	306.39	305.75	no	305.50	no
14-Jul-23	0.75	306.38	305.75	no	305.50	no
15-Jul-23			305.75		305.50	
16-Jul-23			305.75		305.50	
17-Jul-23	0.76	306.39	305.75	no	305.50	no
18-Jul-23	0.76	306.39	305.75	no	305.50	no
19-Jul-23	0.76	306.39	305.75	no	305.50	no
20-Jul-23	0.78	306.41	305.75	no	305.50	no
21-Jul-23	0.75	306.38	305.75	no	305.50	no
22-Jul-23			305.75		305.50	
23-Jul-23			305.75		305.50	
24-Jul-23	0.74	306.37	305.75	no	305.50	no
25-Jul-23	0.75	306.38	305.75	no	305.50	no
26-Jul-23	0.74	306.37	305.75	no	305.50	no
27-Jul-23	0.75	306.38	305.75	no	305.50	no
28-Jul-23	0.76	306.39	305.75	no	305.50	no
29-Jul-23	0.76	306.39	305.75	no	305.50	no
30-Jul-23			305.75		305.50	
31-Jul-23	0.79	306.42	305.75	no	305.50	no
1-Aug-23	0.77	306.40	305.75	no	305.50	no
2-Aug-23	0.76	306.39	305.75	no	305.50	no
3-Aug-23	0.76	306.39	305.75	no	305.50	no
4-Aug-23	0.76	306.39	305.75	no	305.50	no
5-Aug-23			305.75		305.50	
6-Aug-23			305.75		305.50	
7-Aug-23			305.75		305.50	
8-Aug-23	0.78	306.41	305.75	no	305.50	no
9-Aug-23	0.75	306.38	305.75	no	305.50	no
10-Aug-23	0.75	306.38	305.75	no	305.50	no
11-Aug-23	0.76	306.39	305.75	no	305.50	no
12-Aug-23			305.75		305.50	
13-Aug-23			305.75		305.50	
14-Aug-23	0.75	306.38	305.75	no	305.50	no
15-Aug-23	0.75	306.38	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-23	0.76	306.39	305.75	no	305.50	no
17-Aug-23	0.76	306.39	305.75	no	305.50	no
18-Aug-23	0.78	306.41	305.75	no	305.50	no
19-Aug-23	0.78	306.41	305.75	no	305.50	no
20-Aug-23			305.75		305.50	
21-Aug-23	0.77	306.40	305.75	no	305.50	no
22-Aug-23	0.77	306.40	305.75	no	305.50	no
23-Aug-23	0.76	306.39	305.75	no	305.50	no
24-Aug-23	0.77	306.40	305.75	no	305.50	no
25-Aug-23	0.79	306.42	305.75	no	305.50	no
26-Aug-23	0.78	306.41	305.75	no	305.50	no
27-Aug-23			305.75		305.50	
28-Aug-23	0.78	306.41	305.75	no	305.50	no
29-Aug-23	0.79	306.42	305.75	no	305.50	no
30-Aug-23	0.78	306.41	305.75	no	305.50	no
31-Aug-23	0.77	306.40	305.75	no	305.50	no
1-Sep-23	0.76	306.39	305.75	no	305.50	no
2-Sep-23	0.76	306.39	305.75	no	305.50	no
3-Sep-23			305.75		305.50	
4-Sep-23			305.75		305.50	
5-Sep-23	0.76	306.39	305.75	no	305.50	no
6-Sep-23	0.76	306.39	305.75	no	305.50	no
7-Sep-23	0.77	306.40	305.75	no	305.50	no
8-Sep-23	0.77	306.40	305.75	no	305.50	no
9-Sep-23	0.77	306.40	305.75	no	305.50	no
10-Sep-23			305.75		305.50	
11-Sep-23	0.74	306.37	305.75	no	305.50	no
12-Sep-23	0.74	306.37	305.75	no	305.50	no
13-Sep-23	0.75	306.38	305.75	no	305.50	no
14-Sep-23	0.75	306.38	305.75	no	305.50	no
15-Sep-23	0.74	306.37	305.75	no	305.50	no
16-Sep-23	0.74	306.37	305.75	no	305.50	no
17-Sep-23			305.75		305.50	
18-Sep-23	0.73	306.36	305.75	no	305.50	no
19-Sep-23	0.72	306.35	305.75	no	305.50	no
20-Sep-23	0.72	306.35	305.75	no	305.50	no
21-Sep-23	0.73	306.36	305.75	no	305.50	no
22-Sep-23	0.74	306.37	305.75	no	305.50	no
23-Sep-23	0.74	306.37	305.75	no	305.50	no
24-Sep-23			305.75		305.50	
25-Sep-23	0.70	306.33	305.75	no	305.50	no
26-Sep-23	0.73	306.36	305.75	no	305.50	no
27-Sep-23	0.72	306.35	305.75	no	305.50	no
28-Sep-23	0.70	306.33	305.75	no	305.50	no
29-Sep-23	0.70	306.33	305.75	no	305.50	no
30-Sep-23			305.75		305.50	
1-Oct-23			305.75		305.50	
2-Oct-23	0.70	306.33	305.75	no	305.50	no
3-Oct-23	0.68	306.31	305.75	no	305.50	no
4-Oct-23	0.68	306.31	305.75	no	305.50	no
5-Oct-23	0.69	306.32	305.75	no	305.50	no
6-Oct-23	0.69	306.32	305.75	no	305.50	no
7-Oct-23			305.75		305.50	
8-Oct-23			305.75		305.50	
9-Oct-23			305.75		305.50	
10-Oct-23	0.70	306.33	305.75	no	305.50	no
11-Oct-23	0.69	306.32	305.75	no	305.50	no
12-Oct-23	0.66	306.29	305.75	no	305.50	no
13-Oct-23	0.65	306.28	305.75	no	305.50	no
14-Oct-23	0.65	306.28	305.75	no	305.50	no
15-Oct-23			305.75		305.50	
16-Oct-23	0.65	306.28	305.75	no	305.50	no
17-Oct-23	0.65	306.28	305.75	no	305.50	no
18-Oct-23	0.64	306.27	305.75	no	305.50	no
19-Oct-23	0.64	306.27	305.75	no	305.50	no
20-Oct-23	0.64	306.27	305.75	no	305.50	no
21-Oct-23	0.64	306.27	305.75	no	305.50	no
22-Oct-23			305.75		305.50	
23-Oct-23	0.62	306.25	305.75	no	305.50	no
24-Oct-23	0.60	306.23	305.75	no	305.50	no
25-Oct-23	0.61	306.24	305.75	no	305.50	no
26-Oct-23	0.62	306.25	305.75	no	305.50	no
27-Oct-23	0.63	306.26	305.75	no	305.50	no
28-Oct-23	0.63	306.26	305.75	no	305.50	no
29-Oct-23			305.75		305.50	
30-Oct-23	0.63	306.26	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-23	0.62	306.25	305.75	no	305.50	no
1-Nov-23	0.60	306.23	305.75	no	305.50	no
2-Nov-23	0.60	306.23	305.75	no	305.50	no
3-Nov-23	0.60	306.23	305.75	no	305.50	no
4-Nov-23			305.75		305.50	
5-Nov-23			305.75		305.50	
6-Nov-23	0.58	306.21	305.75	no	305.50	no
7-Nov-23	0.58	306.21	305.75	no	305.50	no
8-Nov-23	0.58	306.21	305.75	no	305.50	no
9-Nov-23	0.58	306.21	305.75	no	305.50	no
10-Nov-23	0.58	306.21	305.75	no	305.50	no
11-Nov-23	0.59	306.22	305.75	no	305.50	no
12-Nov-23			305.75		305.50	
13-Nov-23	0.59	306.22	305.75	no	305.50	no
14-Nov-23	0.60	306.23	305.75	no	305.50	no
15-Nov-23	0.59	306.22	305.75	no	305.50	no
16-Nov-23	0.59	306.22	305.75	no	305.50	no
17-Nov-23	0.59	306.22	305.75	no	305.50	no
18-Nov-23	0.59	306.22	305.75	no	305.50	no
19-Nov-23			305.75		305.50	
20-Nov-23	0.58	306.21	305.75	no	305.50	no
21-Nov-23	0.58	306.21	305.75	no	305.50	no
22-Nov-23	0.58	306.21	305.75	no	305.50	no
23-Nov-23	0.58	306.21	305.75	no	305.50	no
24-Nov-23	0.58	306.21	305.75	no	305.50	no
25-Nov-23			305.75		305.50	
26-Nov-23			305.75		305.50	
27-Nov-23	0.60	306.23	305.75	no	305.50	no
28-Nov-23	0.59	306.22	305.75	no	305.50	no
29-Nov-23	0.59	306.22	305.75	no	305.50	no
30-Nov-23	0.59	306.22	305.75	no	305.50	no
1-Dec-23	0.58	306.21	305.75	no	305.50	no
2-Dec-23			305.75		305.50	
3-Dec-23			305.75		305.50	
4-Dec-23	0.59	306.22	305.75	no	305.50	no
5-Dec-23	0.60	306.23	305.75	no	305.50	no
6-Dec-23	0.60	306.23	305.75	no	305.50	no
7-Dec-23	0.60	306.23	305.75	no	305.50	no
8-Dec-23	0.60	306.23	305.75	no	305.50	no
9-Dec-23			305.75		305.50	
10-Dec-23			305.75		305.50	
11-Dec-23			305.75		305.50	
12-Dec-23			305.75		305.50	
13-Dec-23			305.75		305.50	
14-Dec-23			305.75		305.50	
15-Dec-23			305.75		305.50	
16-Dec-23			305.75		305.50	
17-Dec-23			305.75		305.50	
18-Dec-23			305.75		305.50	
19-Dec-23			305.75		305.50	
20-Dec-23			305.75		305.50	
21-Dec-23			305.75		305.50	
22-Dec-23			305.75		305.50	
23-Dec-23			305.75		305.50	
24-Dec-23			305.75		305.50	
25-Dec-23			305.75		305.50	
26-Dec-23			305.75		305.50	
27-Dec-23			305.75		305.50	
28-Dec-23			305.75		305.50	
29-Dec-23			305.75		305.50	
30-Dec-23			305.75		305.50	
31-Dec-23			305.75		305.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
01-Jan-24			305.75		305.50	
02-Jan-24			305.75		305.50	
03-Jan-24			305.75		305.50	
04-Jan-24			305.75		305.50	
05-Jan-24			305.75		305.50	
06-Jan-24			305.75		305.50	
07-Jan-24			305.75		305.50	
08-Jan-24			305.75		305.50	
09-Jan-24			305.75		305.50	
10-Jan-24			305.75		305.50	
11-Jan-24			305.75		305.50	
12-Jan-24			305.75		305.50	
13-Jan-24			305.75		305.50	
14-Jan-24			305.75		305.50	
15-Jan-24			305.75		305.50	
16-Jan-24			305.75		305.50	
17-Jan-24			305.75		305.50	
18-Jan-24			305.75		305.50	
19-Jan-24			305.75		305.50	
20-Jan-24			305.75		305.50	
21-Jan-24			305.75		305.50	
22-Jan-24			305.75		305.50	
23-Jan-24			305.75		305.50	
24-Jan-24			305.75		305.50	
25-Jan-24			305.75		305.50	
26-Jan-24			305.75		305.50	
27-Jan-24			305.75		305.50	
28-Jan-24			305.75		305.50	
29-Jan-24			305.75		305.50	
30-Jan-24			305.75		305.50	
31-Jan-24			305.75		305.50	
1-Feb-24			305.75		305.50	
2-Feb-24			305.75		305.50	
3-Feb-24			305.75		305.50	
4-Feb-24			305.75		305.50	
5-Feb-24			305.75		305.50	
6-Feb-24			305.75		305.50	
7-Feb-24			305.75		305.50	
8-Feb-24			305.75		305.50	
9-Feb-24			305.75		305.50	
10-Feb-24			305.75		305.50	
11-Feb-24			305.75		305.50	
12-Feb-24			305.75		305.50	
13-Feb-24			305.75		305.50	
14-Feb-24			305.75		305.50	
15-Feb-24			305.75		305.50	
16-Feb-24			305.75		305.50	
17-Feb-24			305.75		305.50	
18-Feb-24			305.75		305.50	
19-Feb-24			305.75		305.50	
20-Feb-24			305.75		305.50	
21-Feb-24			305.75		305.50	
22-Feb-24			305.75		305.50	
23-Feb-24			305.75		305.50	
24-Feb-24			305.75		305.50	
25-Feb-24			305.75		305.50	
26-Feb-24			305.75		305.50	
27-Feb-24			305.75		305.50	
28-Feb-24			305.75		305.50	
29-Feb-24			305.75		305.50	
1-Mar-24			305.75		305.50	
2-Mar-24			305.75		305.50	
3-Mar-24			305.75		305.50	
4-Mar-24			305.75		305.50	
5-Mar-24			305.75		305.50	
6-Mar-24			305.75		305.50	
7-Mar-24			305.75		305.50	
8-Mar-24			305.75		305.50	
9-Mar-24			305.75		305.50	
10-Mar-24			305.75		305.50	
11-Mar-24			305.75		305.50	
12-Mar-24			305.75		305.50	
13-Mar-24			305.75		305.50	
14-Mar-24			305.75		305.50	
15-Mar-24			305.75		305.50	
16-Mar-24			305.75		305.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
17-Mar-24			305.75		305.50	
18-Mar-24			305.75		305.50	
19-Mar-24	0.70	306.43	305.75	no	305.50	no
20-Mar-24	0.70	306.43	305.75	no	305.50	no
21-Mar-24			305.75		305.50	
22-Mar-24			305.75		305.50	
23-Mar-24			305.75		305.50	
24-Mar-24			305.75		305.50	
25-Mar-24	0.70	306.43	305.75	no	305.50	no
26-Mar-24	0.70	306.43	305.75	no	305.50	no
27-Mar-24	0.70	306.43	305.75	no	305.50	no
28-Mar-24	0.70	306.43	305.75	no	305.50	no
29-Mar-24			305.75		305.50	
30-Mar-24			305.75		305.50	
31-Mar-24			305.75		305.50	
1-Apr-24	0.70	306.43	305.75	no	305.50	no
2-Apr-24	0.70	306.43	305.75	no	305.50	no
3-Apr-24	0.70	306.43	305.75	no	305.50	no
4-Apr-24	0.73	306.46	305.75	no	305.50	no
5-Apr-24	0.72	306.45	305.75	no	305.50	no
6-Apr-24			305.75		305.50	
7-Apr-24			305.75		305.50	
8-Apr-24	0.71	306.44	305.75	no	305.50	no
9-Apr-24	0.71	306.44	305.75	no	305.50	no
10-Apr-24	0.71	306.44	305.75	no	305.50	no
11-Apr-24	0.72	306.45	305.75	no	305.50	no
12-Apr-24	0.74	306.47	305.75	no	305.50	no
13-Apr-24			305.75		305.50	
14-Apr-24			305.75		305.50	
15-Apr-24	0.75	306.48	305.75	no	305.50	no
16-Apr-24	0.75	306.48	305.75	no	305.50	no
17-Apr-24	0.73	306.46	305.75	no	305.50	no
18-Apr-24	0.76	306.49	305.75	no	305.50	no
19-Apr-24	0.76	306.49	305.75	no	305.50	no
20-Apr-24			305.75		305.50	
21-Apr-24			305.75		305.50	
22-Apr-24	0.76	306.49	305.75	no	305.50	no
23-Apr-24	0.75	306.48	305.75	no	305.50	no
24-Apr-24	0.76	306.49	305.75	no	305.50	no
25-Apr-24	0.75	306.48	305.75	no	305.50	no
26-Apr-24	0.75	306.48	305.75	no	305.50	no
27-Apr-24			305.75		305.50	
28-Apr-24			305.75		305.50	
29-Apr-24	0.75	306.48	305.75	no	305.50	no
30-Apr-24	0.78	306.51	305.75	no	305.50	no
1-May-24	0.79	306.52	305.75	no	305.50	no
2-May-24	0.79	306.52	305.75	no	305.50	no
3-May-24	0.79	306.52	305.75	no	305.50	no
4-May-24			305.75		305.50	
5-May-24			305.75		305.50	
6-May-24	0.80	306.53	305.75	no	305.50	no
7-May-24	0.79	306.52	305.75	no	305.50	no
8-May-24	0.80	306.53	305.75	no	305.50	no
9-May-24	0.80	306.53	305.75	no	305.50	no
10-May-24	0.79	306.52	305.75	no	305.50	no
11-May-24			305.75		305.50	
12-May-24			305.75		305.50	
13-May-24	0.79	306.52	305.75	no	305.50	no
14-May-24	0.79	306.52	305.75	no	305.50	no
15-May-24	0.78	306.51	305.75	no	305.50	no
16-May-24	0.78	306.51	305.75	no	305.50	no
17-May-24	0.78	306.51	305.75	no	305.50	no
18-May-24			305.75		305.50	
19-May-24			305.75		305.50	
20-May-24			305.75		305.50	
21-May-24	0.77	306.50	305.75	no	305.50	no
22-May-24	0.77	306.50	305.75	no	305.50	no
23-May-24	0.77	306.50	305.75	no	305.50	no
24-May-24	0.76	306.49	305.75	no	305.50	no
25-May-24			305.75		305.50	
26-May-24			305.75		305.50	
27-May-24	0.77	306.50	305.75	no	305.50	no
28-May-24	0.79	306.52	305.75	no	305.50	no
29-May-24	0.79	306.52	305.75	no	305.50	no
30-May-24	0.78	306.51	305.75	no	305.50	no
31-May-24	0.77	306.50	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-24			305.75		305.50	
2-Jun-24			305.75		305.50	
3-Jun-24	0.78	306.51	305.75	no	305.50	no
4-Jun-24	0.78	306.51	305.75	no	305.50	no
5-Jun-24	0.77	306.50	305.75	no	305.50	no
6-Jun-24	0.78	306.51	305.75	no	305.50	no
7-Jun-24	0.76	306.49	305.75	no	305.50	no
8-Jun-24			305.75		305.50	
9-Jun-24			305.75		305.50	
10-Jun-24	0.77	306.50	305.75	no	305.50	no
11-Jun-24	0.76	306.49	305.75	no	305.50	no
12-Jun-24	0.76	306.49	305.75	no	305.50	no
13-Jun-24	0.75	306.48	305.75	no	305.50	no
14-Jun-24	0.74	306.47	305.75	no	305.50	no
15-Jun-24			305.75		305.50	
16-Jun-24			305.75		305.50	
17-Jun-24	0.76	306.49	305.75	no	305.50	no
18-Jun-24	0.73	306.46	305.75	no	305.50	no
19-Jun-24	0.74	306.47	305.75	no	305.50	no
20-Jun-24	0.74	306.47	305.75	no	305.50	no
21-Jun-24	0.78	306.51	305.75	no	305.50	no
22-Jun-24	0.77	306.50	305.75	no	305.50	no
23-Jun-24			305.75		305.50	
24-Jun-24	0.78	306.51	305.75	no	305.50	no
25-Jun-24	0.79	306.52	305.75	no	305.50	no
26-Jun-24	0.78	306.51	305.75	no	305.50	no
27-Jun-24	0.78	306.51	305.75	no	305.50	no
28-Jun-24	0.76	306.49	305.75	no	305.50	no
29-Jun-24			305.75		305.50	
30-Jun-24			305.75		305.50	
1-Jul-24			305.75		305.50	
2-Jul-24	0.77	306.50	305.75	no	305.50	no
3-Jul-24	0.77	306.50	305.75	no	305.50	no
4-Jul-24	0.77	306.50	305.75	no	305.50	no
5-Jul-24	0.76	306.49	305.75	no	305.50	no
6-Jul-24			305.75		305.50	
7-Jul-24			305.75		305.50	
8-Jul-24	0.76	306.49	305.75	no	305.50	no
9-Jul-24	0.76	306.49	305.75	no	305.50	no
10-Jul-24	0.79	306.52	305.75	no	305.50	no
11-Jul-24	0.80	306.53	305.75	no	305.50	no
12-Jul-24	0.80	306.53	305.75	no	305.50	no
13-Jul-24			305.75		305.50	
14-Jul-24			305.75		305.50	
15-Jul-24	0.85	306.58	305.75	no	305.50	no
16-Jul-24	0.89	306.62	305.75	no	305.50	no
17-Jul-24	0.95	306.68	305.75	no	305.50	no
18-Jul-24	0.96	306.69	305.75	no	305.50	no
19-Jul-24	0.96	306.69	305.75	no	305.50	no
20-Jul-24	0.95	306.68	305.75	no	305.50	no
21-Jul-24			305.75		305.50	
22-Jul-24	0.96	306.69	305.75	no	305.50	no
23-Jul-24	0.94	306.67	305.75	no	305.50	no
24-Jul-24	0.95	306.68	305.75	no	305.50	no
25-Jul-24	0.95	306.68	305.75	no	305.50	no
26-Jul-24	0.94	306.67	305.75	no	305.50	no
27-Jul-24	0.93	306.66	305.75	no	305.50	no
28-Jul-24			305.75		305.50	
29-Jul-24	0.94	306.67	305.75	no	305.50	no
30-Jul-24	0.95	306.68	305.75	no	305.50	no
31-Jul-24	0.93	306.66	305.75	no	305.50	no
1-Aug-24	0.93	306.66	305.75	no	305.50	no
2-Aug-24	0.94	306.67	305.75	no	305.50	no
3-Aug-24			305.75		305.50	
4-Aug-24			305.75		305.50	
5-Aug-24			305.75		305.50	
6-Aug-24	0.89	306.62	305.75	no	305.50	no
7-Aug-24	0.90	306.63	305.75	no	305.50	no
8-Aug-24	0.90	306.63	305.75	no	305.50	no
9-Aug-24	0.91	306.64	305.75	no	305.50	no
10-Aug-24			305.75		305.50	
11-Aug-24			305.75		305.50	
12-Aug-24	0.89	306.62	305.75	no	305.50	no
13-Aug-24	0.88	306.61	305.75	no	305.50	no
14-Aug-24	0.87	306.60	305.75	no	305.50	no
15-Aug-24	0.87	306.60	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-24	0.88	306.61	305.75	no	305.50	no
17-Aug-24			305.75		305.50	
18-Aug-24			305.75		305.50	
19-Aug-24	0.90	306.63	305.75	no	305.50	no
20-Aug-24	0.87	306.60	305.75	no	305.50	no
21-Aug-24	0.90	306.63	305.75	no	305.50	no
22-Aug-24	0.91	306.64	305.75	no	305.50	no
23-Aug-24	0.90	306.63	305.75	no	305.50	no
24-Aug-24			305.75		305.50	
25-Aug-24			305.75		305.50	
26-Aug-24	0.89	306.62	305.75	no	305.50	no
27-Aug-24	0.88	306.61	305.75	no	305.50	no
28-Aug-24	0.89	306.62	305.75	no	305.50	no
29-Aug-24	0.88	306.61	305.75	no	305.50	no
30-Aug-24	0.87	306.60	305.75	no	305.50	no
31-Aug-24			305.75		305.50	
1-Sep-24			305.75		305.50	
2-Sep-24			305.75		305.50	
3-Sep-24	0.86	306.59	305.75	no	305.50	no
4-Sep-24	0.87	306.60	305.75	no	305.50	no
5-Sep-24	0.85	306.58	305.75	no	305.50	no
6-Sep-24	0.85	306.58	305.75	no	305.50	no
7-Sep-24			305.75		305.50	
8-Sep-24			305.75		305.50	
9-Sep-24	0.83	306.56	305.75	no	305.50	no
10-Sep-24	0.82	306.55	305.75	no	305.50	no
11-Sep-24	0.80	306.53	305.75	no	305.50	no
12-Sep-24	0.80	306.53	305.75	no	305.50	no
13-Sep-24	0.81	306.54	305.75	no	305.50	no
14-Sep-24			305.75		305.50	
15-Sep-24			305.75		305.50	
16-Sep-24	0.79	306.52	305.75	no	305.50	no
17-Sep-24	0.77	306.50	305.75	no	305.50	no
18-Sep-24	0.78	306.51	305.75	no	305.50	no
19-Sep-24	0.77	306.50	305.75	no	305.50	no
20-Sep-24	0.77	306.50	305.75	no	305.50	no
21-Sep-24			305.75		305.50	
22-Sep-24			305.75		305.50	
23-Sep-24	0.79	306.52	305.75	no	305.50	no
24-Sep-24	0.77	306.50	305.75	no	305.50	no
25-Sep-24	0.76	306.49	305.75	no	305.50	no
26-Sep-24	0.78	306.51	305.75	no	305.50	no
27-Sep-24	0.77	306.50	305.75	no	305.50	no
28-Sep-24			305.75		305.50	
29-Sep-24			305.75		305.50	
30-Sep-24	0.74	306.47	305.75	no	305.50	no
1-Oct-24	0.75	306.48	305.75	no	305.50	no
2-Oct-24	0.74	306.47	305.75	no	305.50	no
3-Oct-24	0.74	306.47	305.75	no	305.50	no
4-Oct-24	0.76	306.49	305.75	no	305.50	no
5-Oct-24			305.75		305.50	
6-Oct-24			305.75		305.50	
7-Oct-24	0.78	306.51	305.75	no	305.50	no
8-Oct-24	0.76	306.49	305.75	no	305.50	no
9-Oct-24	0.73	306.46	305.75	no	305.50	no
10-Oct-24	0.70	306.43	305.75	no	305.50	no
11-Oct-24	0.71	306.44	305.75	no	305.50	no
12-Oct-24			305.75		305.50	
13-Oct-24			305.75		305.50	
14-Oct-24	0.72	306.45	305.75	no	305.50	no
15-Oct-24	0.70	306.43	305.75	no	305.50	no
16-Oct-24	0.71	306.44	305.75	no	305.50	no
17-Oct-24	0.72	306.45	305.75	no	305.50	no
18-Oct-24	0.73	306.46	305.75	no	305.50	no
19-Oct-24			305.75		305.50	
20-Oct-24			305.75		305.50	
21-Oct-24	0.70	306.43	305.75	no	305.50	no
22-Oct-24	0.71	306.44	305.75	no	305.50	no
23-Oct-24	0.69	306.42	305.75	no	305.50	no
24-Oct-24	0.68	306.41	305.75	no	305.50	no
25-Oct-24	0.69	306.42	305.75	no	305.50	no
26-Oct-24			305.75		305.50	
27-Oct-24			305.75		305.50	
28-Oct-24	0.67	306.40	305.75	no	305.50	no
29-Oct-24	0.66	306.39	305.75	no	305.50	no
30-Oct-24	0.76	306.39	305.75	no	305.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-7
Threshold Summary - Phase 1 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 1 Pond (m)	Water Elevation Phase 1 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-24	0.67	306.40	305.75	no	305.50	no
1-Nov-24	0.65	306.38	305.75	no	305.50	no
2-Nov-24			305.75		305.50	
3-Nov-24			305.75		305.50	
4-Nov-24	0.68	306.41	305.75	no	305.50	no
5-Nov-24	0.66	306.39	305.75	no	305.50	no
6-Nov-24	0.65	306.38	305.75	no	305.50	no
7-Nov-24	0.63	306.36	305.75	no	305.50	no
8-Nov-24	0.63	306.36	305.75	no	305.50	no
9-Nov-24			305.75		305.50	
10-Nov-24			305.75		305.50	
11-Nov-24	0.61	306.34	305.75	no	305.50	no
12-Nov-24	0.60	306.33	305.75	no	305.50	no
13-Nov-24	0.61	306.34	305.75	no	305.50	no
14-Nov-24	0.60	306.33	305.75	no	305.50	no
15-Nov-24	0.62	306.35	305.75	no	305.50	no
16-Nov-24			305.75		305.50	
17-Nov-24			305.75		305.50	
18-Nov-24	0.60	306.33	305.75	no	305.50	no
19-Nov-24	0.59	306.32	305.75	no	305.50	no
20-Nov-24	0.61	306.34	305.75	no	305.50	no
21-Nov-24	0.62	306.35	305.75	no	305.50	no
22-Nov-24	0.60	306.33	305.75	no	305.50	no
23-Nov-24			305.75		305.50	
24-Nov-24			305.75		305.50	
25-Nov-24	0.61	306.34	305.75	no	305.50	no
26-Nov-24	0.60	306.33	305.75	no	305.50	no
27-Nov-24	0.59	306.32	305.75	no	305.50	no
28-Nov-24	0.57	306.30	305.75	no	305.50	no
29-Nov-24	0.58	306.31	305.75	no	305.50	no
30-Nov-24			305.75		305.50	
1-Dec-24			305.75		305.50	
2-Dec-24	0.56	306.29	305.75	no	305.50	no
3-Dec-24			305.75		305.50	
4-Dec-24			305.75		305.50	
5-Dec-24			305.75		305.50	
6-Dec-24			305.75		305.50	
7-Dec-24			305.75		305.50	
8-Dec-24			305.75		305.50	
9-Dec-24			305.75		305.50	
10-Dec-24			305.75		305.50	
11-Dec-24			305.75		305.50	
12-Dec-24			305.75		305.50	
13-Dec-24			305.75		305.50	
14-Dec-24			305.75		305.50	
15-Dec-24			305.75		305.50	
16-Dec-24			305.75		305.50	
17-Dec-24			305.75		305.50	
18-Dec-24			305.75		305.50	
19-Dec-24			305.75		305.50	
20-Dec-24			305.75		305.50	
21-Dec-24			305.75		305.50	
22-Dec-24			305.75		305.50	
23-Dec-24			305.75		305.50	
24-Dec-24			305.75		305.50	
25-Dec-24			305.75		305.50	
26-Dec-24			305.75		305.50	
27-Dec-24			305.75		305.50	
28-Dec-24			305.75		305.50	
29-Dec-24			305.75		305.50	
30-Dec-24			305.75		305.50	
31-Dec-24			305.75		305.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jan-23			305.30		305.00	
2-Jan-23			305.30		305.00	
3-Jan-23			305.30		305.00	
4-Jan-23			305.30		305.00	
5-Jan-23			305.30		305.00	
6-Jan-23			305.30		305.00	
7-Jan-23			305.30		305.00	
8-Jan-23			305.30		305.00	
9-Jan-23			305.30		305.00	
10-Jan-23			305.30		305.00	
11-Jan-23			305.30		305.00	
12-Jan-23			305.30		305.00	
13-Jan-23			305.30		305.00	
14-Jan-23			305.30		305.00	
15-Jan-23			305.30		305.00	
16-Jan-23			305.30		305.00	
17-Jan-23			305.30		305.00	
18-Jan-23			305.30		305.00	
19-Jan-23			305.30		305.00	
20-Jan-23			305.30		305.00	
21-Jan-23			305.30		305.00	
22-Jan-23			305.30		305.00	
23-Jan-23			305.30		305.00	
24-Jan-23			305.30		305.00	
25-Jan-23			305.30		305.00	
26-Jan-23			305.30		305.00	
27-Jan-23			305.30		305.00	
28-Jan-23			305.30		305.00	
29-Jan-23			305.30		305.00	
30-Jan-23			305.30		305.00	
31-Jan-23			305.30		305.00	
1-Feb-23			305.30		305.00	
2-Feb-23			305.30		305.00	
3-Feb-23			305.30		305.00	
4-Feb-23			305.30		305.00	
5-Feb-23			305.30		305.00	
6-Feb-23			305.30		305.00	
7-Feb-23			305.30		305.00	
8-Feb-23			305.30		305.00	
9-Feb-23			305.30		305.00	
10-Feb-23			305.30		305.00	
11-Feb-23			305.30		305.00	
12-Feb-23			305.30		305.00	
13-Feb-23			305.30		305.00	
14-Feb-23			305.30		305.00	
15-Feb-23			305.30		305.00	
16-Feb-23			305.30		305.00	
17-Feb-23			305.30		305.00	
18-Feb-23			305.30		305.00	
19-Feb-23			305.30		305.00	
20-Feb-23			305.30		305.00	
21-Feb-23			305.30		305.00	
22-Feb-23			305.30		305.00	
23-Feb-23			305.30		305.00	
24-Feb-23			305.30		305.00	
25-Feb-23			305.30		305.00	
26-Feb-23			305.30		305.00	
27-Feb-23			305.30		305.00	
28-Feb-23			305.30		305.00	
1-Mar-23			305.30		305.00	
2-Mar-23			305.30		305.00	
3-Mar-23			305.30		305.00	
4-Mar-23			305.30		305.00	
5-Mar-23			305.30		305.00	
6-Mar-23			305.30		305.00	
7-Mar-23			305.30		305.00	
8-Mar-23			305.30		305.00	
9-Mar-23			305.30		305.00	
10-Mar-23			305.30		305.00	
11-Mar-23			305.30		305.00	
12-Mar-23			305.30		305.00	
13-Mar-23			305.30		305.00	
14-Mar-23			305.30		305.00	
15-Mar-23			305.30		305.00	
16-Mar-23			305.30		305.00	
17-Mar-23			305.30		305.00	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
18-Mar-23			305.30		305.00	
19-Mar-23			305.30		305.00	
20-Mar-23			305.30		305.00	
21-Mar-23			305.30		305.00	
22-Mar-23			305.30		305.00	
23-Mar-23			305.30		305.00	
24-Mar-23			305.30		305.00	
25-Mar-23			305.30		305.00	
26-Mar-23			305.30		305.00	
27-Mar-23			305.30		305.00	
28-Mar-23			305.30		305.00	
29-Mar-23			305.30		305.00	
30-Mar-23			305.30		305.00	
31-Mar-23			305.30		305.00	
1-Apr-23			305.30		305.00	
2-Apr-23			305.30		305.00	
3-Apr-23	0.69	305.70	305.30	no	305.00	no
4-Apr-23	0.69	305.70	305.30	no	305.00	no
5-Apr-23	0.69	305.71	305.30	no	305.00	no
6-Apr-23	0.69	305.71	305.30	no	305.00	no
7-Apr-23			305.30		305.00	
8-Apr-23			305.30		305.00	
9-Apr-23			305.30		305.00	
10-Apr-23	0.69	305.71	305.30	no	305.00	no
11-Apr-23	0.70	305.72	305.30	no	305.00	no
12-Apr-23	0.70	305.72	305.30	no	305.00	no
13-Apr-23	0.70	305.72	305.30	no	305.00	no
14-Apr-23	0.70	305.72	305.30	no	305.00	no
15-Apr-23			305.30		305.00	
16-Apr-23			305.30		305.00	
17-Apr-23	0.70	305.72	305.30	no	305.00	no
18-Apr-23	0.70	305.72	305.30	no	305.00	no
19-Apr-23	0.70	305.72	305.30	no	305.00	no
20-Apr-23	0.71	305.73	305.30	no	305.00	no
21-Apr-23	0.71	305.73	305.30	no	305.00	no
22-Apr-23			305.30		305.00	
23-Apr-23			305.30		305.00	
24-Apr-23	0.74	305.76	305.30	no	305.00	no
25-Apr-23	0.73	305.75	305.30	no	305.00	no
26-Apr-23	0.75	305.77	305.30	no	305.00	no
27-Apr-23	0.74	305.76	305.30	no	305.00	no
28-Apr-23	0.74	305.76	305.30	no	305.00	no
29-Apr-23			305.30		305.00	
30-Apr-23			305.30		305.00	
1-May-23	0.76	305.78	305.30	no	305.00	no
2-May-23	0.75	305.77	305.30	no	305.00	no
3-May-23	0.73	305.75	305.30	no	305.00	no
4-May-23	0.73	305.75	305.30	no	305.00	no
5-May-23	0.73	305.75	305.30	no	305.00	no
6-May-23			305.30		305.00	
7-May-23			305.30		305.00	
8-May-23			305.30		305.00	
9-May-23	0.78	305.80	305.30	no	305.00	no
10-May-23	0.77	305.79	305.30	no	305.00	no
11-May-23	0.78	305.80	305.30	no	305.00	no
12-May-23	0.78	305.80	305.30	no	305.00	no
13-May-23			305.30		305.00	
14-May-23			305.30		305.00	
15-May-23	0.78	305.80	305.30	no	305.00	no
16-May-23	0.78	305.80	305.30	no	305.00	no
17-May-23	0.78	305.80	305.30	no	305.00	no
18-May-23	0.78	305.80	305.30	no	305.00	no
19-May-23	0.78	305.80	305.30	no	305.00	no
20-May-23			305.30		305.00	
21-May-23			305.30		305.00	
22-May-23			305.30		305.00	
23-May-23			305.30		305.00	
24-May-23	0.82	305.84	305.30	no	305.00	no
25-May-23	0.83	305.85	305.30	no	305.00	no
26-May-23	0.82	305.84	305.30	no	305.00	no
27-May-23			305.30		305.00	
28-May-23			305.30		305.00	
29-May-23	0.82	305.84	305.30	no	305.00	no
30-May-23	0.82	305.84	305.30	no	305.00	no
31-May-23	0.80	305.82	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-23	0.80	305.82	305.30	no	305.00	no
2-Jun-23	0.80	305.82	305.30	no	305.00	no
3-Jun-23			305.30		305.00	
4-Jun-23			305.30		305.00	
5-Jun-23	0.80	305.82	305.30	no	305.00	no
6-Jun-23	0.80	305.82	305.30	no	305.00	no
7-Jun-23	0.80	305.82	305.30	no	305.00	no
8-Jun-23	0.80	305.82	305.30	no	305.00	no
9-Jun-23	0.80	305.82	305.30	no	305.00	no
10-Jun-23			305.30		305.00	
11-Jun-23			305.30		305.00	
12-Jun-23	0.78	305.80	305.30	no	305.00	no
13-Jun-23	0.81	305.83	305.30	no	305.00	no
14-Jun-23	0.81	305.83	305.30	no	305.00	no
15-Jun-23	0.80	305.82	305.30	no	305.00	no
16-Jun-23	0.82	305.84	305.30	no	305.00	no
17-Jun-23			305.30		305.00	
18-Jun-23			305.30		305.00	
19-Jun-23	0.80	305.82	305.30	no	305.00	no
20-Jun-23	0.80	305.82	305.30	no	305.00	no
21-Jun-23	0.79	305.81	305.30	no	305.00	no
22-Jun-23	0.80	305.82	305.30	no	305.00	no
23-Jun-23	0.80	305.82	305.30	no	305.00	no
24-Jun-23			305.30		305.00	
25-Jun-23			305.30		305.00	
26-Jun-23	0.80	305.82	305.30	no	305.00	no
27-Jun-23	0.83	305.85	305.30	no	305.00	no
28-Jun-23	0.84	305.86	305.30	no	305.00	no
29-Jun-23	0.84	305.86	305.30	no	305.00	no
30-Jun-23	0.83	305.85	305.30	no	305.00	no
1-Jul-23			305.30		305.00	
2-Jul-23			305.30		305.00	
3-Jul-23			305.30		305.00	
4-Jul-23	0.85	305.87	305.30	no	305.00	no
5-Jul-23	0.85	305.87	305.30	no	305.00	no
6-Jul-23	0.85	305.87	305.30	no	305.00	no
7-Jul-23	0.87	305.89	305.30	no	305.00	no
8-Jul-23			305.30		305.00	
9-Jul-23			305.30		305.00	
10-Jul-23	0.85	305.87	305.30	no	305.00	no
11-Jul-23	0.83	305.85	305.30	no	305.00	no
12-Jul-23	0.85	305.87	305.30	no	305.00	no
13-Jul-23	0.86	305.88	305.30	no	305.00	no
14-Jul-23	0.89	305.91	305.30	no	305.00	no
15-Jul-23			305.30		305.00	
16-Jul-23			305.30		305.00	
17-Jul-23	0.89	305.91	305.30	no	305.00	no
18-Jul-23	0.88	305.90	305.30	no	305.00	no
19-Jul-23	0.88	305.90	305.30	no	305.00	no
20-Jul-23	0.88	305.90	305.30	no	305.00	no
21-Jul-23	0.88	305.90	305.30	no	305.00	no
22-Jul-23			305.30		305.00	
23-Jul-23			305.30		305.00	
24-Jul-23	0.88	305.90	305.30	no	305.00	no
25-Jul-23	0.87	305.89	305.30	no	305.00	no
26-Jul-23	0.86	305.88	305.30	no	305.00	no
27-Jul-23	0.88	305.90	305.30	no	305.00	no
28-Jul-23	0.88	305.90	305.30	no	305.00	no
29-Jul-23	0.88	305.90	305.30	no	305.00	no
30-Jul-23			305.30		305.00	
31-Jul-23	0.89	305.91	305.30	no	305.00	no
1-Aug-23	0.89	305.91	305.30	no	305.00	no
2-Aug-23	0.88	305.90	305.30	no	305.00	no
3-Aug-23	0.88	305.90	305.30	no	305.00	no
4-Aug-23	0.88	305.90	305.30	no	305.00	no
5-Aug-23			305.30		305.00	
6-Aug-23			305.30		305.00	
7-Aug-23			305.30		305.00	
8-Aug-23	0.88	305.90	305.30	no	305.00	no
9-Aug-23	0.87	305.89	305.30	no	305.00	no
10-Aug-23	0.87	305.89	305.30	no	305.00	no
11-Aug-23	0.87	305.89	305.30	no	305.00	no
12-Aug-23			305.30		305.00	
13-Aug-23			305.30		305.00	
14-Aug-23	0.87	305.89	305.30	no	305.00	no
15-Aug-23	0.88	305.90	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-23	0.88	305.90	305.30	no	305.00	no
17-Aug-23	0.88	305.90	305.30	no	305.00	no
18-Aug-23	0.90	305.92	305.30	no	305.00	no
19-Aug-23	0.90	305.92	305.30	no	305.00	no
20-Aug-23			305.30		305.00	
21-Aug-23	0.88	305.90	305.30	no	305.00	no
22-Aug-23	0.88	305.90	305.30	no	305.00	no
23-Aug-23	0.88	305.90	305.30	no	305.00	no
24-Aug-23	0.88	305.90	305.30	no	305.00	no
25-Aug-23	0.90	305.92	305.30	no	305.00	no
26-Aug-23	0.90	305.92	305.30	no	305.00	no
27-Aug-23			305.30		305.00	
28-Aug-23	0.89	305.91	305.30	no	305.00	no
29-Aug-23	0.90	305.92	305.30	no	305.00	no
30-Aug-23	0.90	305.92	305.30	no	305.00	no
31-Aug-23	0.89	305.91	305.30	no	305.00	no
1-Sep-23	0.87	305.89	305.30	no	305.00	no
2-Sep-23	0.87	305.89	305.30	no	305.00	no
3-Sep-23			305.30		305.00	
4-Sep-23			305.30		305.00	
5-Sep-23	0.88	305.90	305.30	no	305.00	no
6-Sep-23	0.89	305.91	305.30	no	305.00	no
7-Sep-23	0.89	305.91	305.30	no	305.00	no
8-Sep-23	0.88	305.90	305.30	no	305.00	no
9-Sep-23	0.88	305.90	305.30	no	305.00	no
10-Sep-23			305.30		305.00	
11-Sep-23	0.87	305.89	305.30	no	305.00	no
12-Sep-23	0.87	305.89	305.30	no	305.00	no
13-Sep-23	0.87	305.89	305.30	no	305.00	no
14-Sep-23	0.87	305.89	305.30	no	305.00	no
15-Sep-23	0.87	305.89	305.30	no	305.00	no
16-Sep-23	0.87	305.89	305.30	no	305.00	no
17-Sep-23			305.30		305.00	
18-Sep-23	0.88	305.90	305.30	no	305.00	no
19-Sep-23	0.87	305.89	305.30	no	305.00	no
20-Sep-23	0.86	305.88	305.30	no	305.00	no
21-Sep-23	0.86	305.88	305.30	no	305.00	no
22-Sep-23	0.86	305.88	305.30	no	305.00	no
23-Sep-23	0.86	305.88	305.30	no	305.00	no
24-Sep-23			305.30		305.00	
25-Sep-23	0.85	305.87	305.30	no	305.00	no
26-Sep-23	0.85	305.87	305.30	no	305.00	no
27-Sep-23	0.85	305.87	305.30	no	305.00	no
28-Sep-23	0.83	305.85	305.30	no	305.00	no
29-Sep-23	0.83	305.85	305.30	no	305.00	no
30-Sep-23			305.30		305.00	
1-Oct-23			305.30		305.00	
2-Oct-23	0.82	305.84	305.30	no	305.00	no
3-Oct-23	0.81	305.83	305.30	no	305.00	no
4-Oct-23	0.80	305.82	305.30	no	305.00	no
5-Oct-23	0.81	305.83	305.30	no	305.00	no
6-Oct-23	0.83	305.85	305.30	no	305.00	no
7-Oct-23			305.30		305.00	
8-Oct-23			305.30		305.00	
9-Oct-23			305.30		305.00	
10-Oct-23	0.84	305.86	305.30	no	305.00	no
11-Oct-23	0.80	305.82	305.30	no	305.00	no
12-Oct-23	0.80	305.82	305.30	no	305.00	no
13-Oct-23	0.80	305.82	305.30	no	305.00	no
14-Oct-23	0.80	305.82	305.30	no	305.00	no
15-Oct-23			305.30		305.00	
16-Oct-23	0.79	305.81	305.30	no	305.00	no
17-Oct-23	0.79	305.81	305.30	no	305.00	no
18-Oct-23	0.79	305.81	305.30	no	305.00	no
19-Oct-23	0.78	305.80	305.30	no	305.00	no
20-Oct-23	0.78	305.80	305.30	no	305.00	no
21-Oct-23	0.78	305.80	305.30	no	305.00	no
22-Oct-23			305.30		305.00	
23-Oct-23	0.78	305.80	305.30	no	305.00	no
24-Oct-23	0.78	305.80	305.30	no	305.00	no
25-Oct-23	0.77	305.79	305.30	no	305.00	no
26-Oct-23	0.77	305.79	305.30	no	305.00	no
27-Oct-23	0.78	305.80	305.30	no	305.00	no
28-Oct-23	0.78	305.80	305.30	no	305.00	no
29-Oct-23			305.30		305.00	
30-Oct-23	0.77	305.79	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-23	0.77	305.79	305.30	no	305.00	no
1-Nov-23	0.75	305.77	305.30	no	305.00	no
2-Nov-23	0.75	305.77	305.30	no	305.00	no
3-Nov-23	0.77	305.79	305.30	no	305.00	no
4-Nov-23			305.30		305.00	
5-Nov-23			305.30		305.00	
6-Nov-23	0.77	305.79	305.30	no	305.00	no
7-Nov-23	0.77	305.79	305.30	no	305.00	no
8-Nov-23	0.77	305.79	305.30	no	305.00	no
9-Nov-23	0.77	305.79	305.30	no	305.00	no
10-Nov-23	0.75	305.77	305.30	no	305.00	no
11-Nov-23	0.75	305.77	305.30	no	305.00	no
12-Nov-23			305.30		305.00	
13-Nov-23	0.75	305.77	305.30	no	305.00	no
14-Nov-23	0.74	305.76	305.30	no	305.00	no
15-Nov-23	0.74	305.76	305.30	no	305.00	no
16-Nov-23	0.74	305.76	305.30	no	305.00	no
17-Nov-23	0.74	305.76	305.30	no	305.00	no
18-Nov-23	0.73	305.75	305.30	no	305.00	no
19-Nov-23			305.30		305.00	
20-Nov-23	0.74	305.76	305.30	no	305.00	no
21-Nov-23	0.74	305.76	305.30	no	305.00	no
22-Nov-23	0.73	305.75	305.30	no	305.00	no
23-Nov-23	0.72	305.74	305.30	no	305.00	no
24-Nov-23	0.72	305.74	305.30	no	305.00	no
25-Nov-23			305.30		305.00	
26-Nov-23			305.30		305.00	
27-Nov-23	0.71	305.73	305.30	no	305.00	no
28-Nov-23	0.71	305.73	305.30	no	305.00	no
29-Nov-23	0.71	305.73	305.30	no	305.00	no
30-Nov-23	0.71	305.73	305.30	no	305.00	no
1-Dec-23	0.71	305.73	305.30	no	305.00	no
2-Dec-23			305.30		305.00	
3-Dec-23			305.30		305.00	
4-Dec-23	0.71	305.73	305.30	no	305.00	no
5-Dec-23	0.71	305.73	305.30	no	305.00	no
6-Dec-23	0.71	305.73	305.30	no	305.00	no
7-Dec-23	0.71	305.73	305.30	no	305.00	no
8-Dec-23	0.71	305.73	305.30	no	305.00	no
9-Dec-23			305.30		305.00	
10-Dec-23			305.30		305.00	
11-Dec-23			305.30		305.00	
12-Dec-23			305.30		305.00	
13-Dec-23			305.30		305.00	
14-Dec-23			305.30		305.00	
15-Dec-23			305.30		305.00	
16-Dec-23			305.30		305.00	
17-Dec-23			305.30		305.00	
18-Dec-23			305.30		305.00	
19-Dec-23			305.30		305.00	
20-Dec-23			305.30		305.00	
21-Dec-23			305.30		305.00	
22-Dec-23			305.30		305.00	
23-Dec-23			305.30		305.00	
24-Dec-23			305.30		305.00	
25-Dec-23			305.30		305.00	
26-Dec-23			305.30		305.00	
27-Dec-23			305.30		305.00	
28-Dec-23			305.30		305.00	
29-Dec-23			305.30		305.00	
30-Dec-23			305.30		305.00	
31-Dec-23			305.30		305.00	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
01-Jan-24			305.30		305.00	
02-Jan-24			305.30		305.00	
03-Jan-24			305.30		305.00	
04-Jan-24			305.30		305.00	
05-Jan-24			305.30		305.00	
06-Jan-24			305.30		305.00	
07-Jan-24			305.30		305.00	
08-Jan-24			305.30		305.00	
09-Jan-24			305.30		305.00	
10-Jan-24			305.30		305.00	
11-Jan-24			305.30		305.00	
12-Jan-24			305.30		305.00	
13-Jan-24			305.30		305.00	
14-Jan-24			305.30		305.00	
15-Jan-24			305.30		305.00	
16-Jan-24			305.30		305.00	
17-Jan-24			305.30		305.00	
18-Jan-24			305.30		305.00	
19-Jan-24			305.30		305.00	
20-Jan-24			305.30		305.00	
21-Jan-24			305.30		305.00	
22-Jan-24			305.30		305.00	
23-Jan-24			305.30		305.00	
24-Jan-24			305.30		305.00	
25-Jan-24			305.30		305.00	
26-Jan-24			305.30		305.00	
27-Jan-24			305.30		305.00	
28-Jan-24			305.30		305.00	
29-Jan-24			305.30		305.00	
30-Jan-24			305.30		305.00	
31-Jan-24			305.30		305.00	
1-Feb-24			305.30		305.00	
2-Feb-24			305.30		305.00	
3-Feb-24			305.30		305.00	
4-Feb-24			305.30		305.00	
5-Feb-24			305.30		305.00	
6-Feb-24			305.30		305.00	
7-Feb-24			305.30		305.00	
8-Feb-24			305.30		305.00	
9-Feb-24			305.30		305.00	
10-Feb-24			305.30		305.00	
11-Feb-24			305.30		305.00	
12-Feb-24			305.30		305.00	
13-Feb-24			305.30		305.00	
14-Feb-24			305.30		305.00	
15-Feb-24			305.30		305.00	
16-Feb-24			305.30		305.00	
17-Feb-24			305.30		305.00	
18-Feb-24			305.30		305.00	
19-Feb-24			305.30		305.00	
20-Feb-24			305.30		305.00	
21-Feb-24			305.30		305.00	
22-Feb-24			305.30		305.00	
23-Feb-24			305.30		305.00	
24-Feb-24			305.30		305.00	
25-Feb-24			305.30		305.00	
26-Feb-24			305.30		305.00	
27-Feb-24			305.30		305.00	
28-Feb-24			305.30		305.00	
29-Feb-24			305.30		305.00	
1-Mar-24			305.30		305.00	
2-Mar-24			305.30		305.00	
3-Mar-24			305.30		305.00	
4-Mar-24			305.30		305.00	
5-Mar-24			305.30		305.00	
6-Mar-24			305.30		305.00	
7-Mar-24			305.30		305.00	
8-Mar-24			305.30		305.00	
9-Mar-24			305.30		305.00	
10-Mar-24			305.30		305.00	
11-Mar-24			305.30		305.00	
12-Mar-24			305.30		305.00	
13-Mar-24			305.30		305.00	
14-Mar-24			305.30		305.00	
15-Mar-24			305.30		305.00	
16-Mar-24			305.30		305.00	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
17-Mar-24			305.30		305.00	
18-Mar-24			305.30		305.00	
19-Mar-24	0.48	305.95	305.30	no	305.00	no
20-Mar-24	0.48	305.95	305.30	no	305.00	no
21-Mar-24			305.30		305.00	
22-Mar-24			305.30		305.00	
23-Mar-24			305.30		305.00	
24-Mar-24			305.30		305.00	
25-Mar-24	0.48	305.95	305.30	no	305.00	no
26-Mar-24	0.48	305.95	305.30	no	305.00	no
27-Mar-24	0.48	305.95	305.30	no	305.00	no
28-Mar-24	0.48	305.95	305.30	no	305.00	no
29-Mar-24			305.30		305.00	
30-Mar-24			305.30		305.00	
31-Mar-24			305.30		305.00	
1-Apr-24	0.48	305.95	305.30	no	305.00	no
2-Apr-24	0.48	305.95	305.30	no	305.00	no
3-Apr-24	0.49	305.96	305.30	no	305.00	no
4-Apr-24	0.51	305.98	305.30	no	305.00	no
5-Apr-24	0.51	305.98	305.30	no	305.00	no
6-Apr-24			305.30		305.00	
7-Apr-24			305.30		305.00	
8-Apr-24	0.49	305.96	305.30	no	305.00	no
9-Apr-24	0.49	305.96	305.30	no	305.00	no
10-Apr-24	0.50	305.97	305.30	no	305.00	no
11-Apr-24	0.52	305.99	305.30	no	305.00	no
12-Apr-24	0.55	306.02	305.30	no	305.00	no
13-Apr-24			305.30		305.00	
14-Apr-24			305.30		305.00	
15-Apr-24	0.55	306.02	305.30	no	305.00	no
16-Apr-24	0.55	306.02	305.30	no	305.00	no
17-Apr-24	0.54	306.01	305.30	no	305.00	no
18-Apr-24	0.57	306.04	305.30	no	305.00	no
19-Apr-24	0.57	306.04	305.30	no	305.00	no
20-Apr-24			305.30		305.00	
21-Apr-24			305.30		305.00	
22-Apr-24	0.57	306.04	305.30	no	305.00	no
23-Apr-24	0.57	306.04	305.30	no	305.00	no
24-Apr-24	0.56	306.03	305.30	no	305.00	no
25-Apr-24	0.57	306.04	305.30	no	305.00	no
26-Apr-24	0.56	306.03	305.30	no	305.00	no
27-Apr-24			305.30		305.00	
28-Apr-24			305.30		305.00	
29-Apr-24	0.58	306.05	305.30	no	305.00	no
30-Apr-24	0.58	306.05	305.30	no	305.00	no
1-May-24	0.61	306.08	305.30	no	305.00	no
2-May-24	0.60	306.07	305.30	no	305.00	no
3-May-24	0.59	306.06	305.30	no	305.00	no
4-May-24			305.30		305.00	
5-May-24			305.30		305.00	
6-May-24	0.61	306.08	305.30	no	305.00	no
7-May-24	0.61	306.08	305.30	no	305.00	no
8-May-24	0.62	306.09	305.30	no	305.00	no
9-May-24	0.60	306.07	305.30	no	305.00	no
10-May-24	0.61	306.08	305.30	no	305.00	no
11-May-24			305.30		305.00	
12-May-24			305.30		305.00	
13-May-24	0.62	306.09	305.30	no	305.00	no
14-May-24	0.62	306.09	305.30	no	305.00	no
15-May-24	0.62	306.09	305.30	no	305.00	no
16-May-24	0.62	306.09	305.30	no	305.00	no
17-May-24	0.60	306.07	305.30	no	305.00	no
18-May-24			305.30		305.00	
19-May-24			305.30		305.00	
20-May-24			305.30		305.00	
21-May-24	0.61	306.08	305.30	no	305.00	no
22-May-24	0.62	306.09	305.30	no	305.00	no
23-May-24	0.62	306.09	305.30	no	305.00	no
24-May-24	0.61	306.08	305.30	no	305.00	no
25-May-24			305.30		305.00	
26-May-24			305.30		305.00	
27-May-24	0.63	306.10	305.30	no	305.00	no
28-May-24	0.64	306.11	305.30	no	305.00	no
29-May-24	0.65	306.12	305.30	no	305.00	no
30-May-24	0.64	306.11	305.30	no	305.00	no
31-May-24	0.63	306.10	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-24			305.30		305.00	
2-Jun-24			305.30		305.00	
3-Jun-24	0.63	306.10	305.30	no	305.00	no
4-Jun-24	0.64	306.11	305.30	no	305.00	no
5-Jun-24	0.63	306.10	305.30	no	305.00	no
6-Jun-24	0.65	306.12	305.30	no	305.00	no
7-Jun-24	0.64	306.11	305.30	no	305.00	no
8-Jun-24			305.30		305.00	
9-Jun-24			305.30		305.00	
10-Jun-24	0.64	306.11	305.30	no	305.00	no
11-Jun-24	0.63	306.10	305.30	no	305.00	no
12-Jun-24	0.63	306.10	305.30	no	305.00	no
13-Jun-24	0.63	306.10	305.30	no	305.00	no
14-Jun-24	0.62	306.09	305.30	no	305.00	no
15-Jun-24			305.30		305.00	
16-Jun-24			305.30		305.00	
17-Jun-24	0.64	306.11	305.30	no	305.00	no
18-Jun-24	0.61	306.08	305.30	no	305.00	no
19-Jun-24	0.61	306.08	305.30	no	305.00	no
20-Jun-24	0.63	306.10	305.30	no	305.00	no
21-Jun-24	0.66	306.13	305.30	no	305.00	no
22-Jun-24	0.66	306.13	305.30	no	305.00	no
23-Jun-24			305.30		305.00	
24-Jun-24	0.65	306.12	305.30	no	305.00	no
25-Jun-24	0.64	306.11	305.30	no	305.00	no
26-Jun-24	0.64	306.11	305.30	no	305.00	no
27-Jun-24	0.65	306.12	305.30	no	305.00	no
28-Jun-24	0.62	306.09	305.30	no	305.00	no
29-Jun-24			305.30		305.00	
30-Jun-24			305.30		305.00	
1-Jul-24			305.30		305.00	
2-Jul-24	0.64	306.11	305.30	no	305.00	no
3-Jul-24	0.63	306.10	305.30	no	305.00	no
4-Jul-24	0.61	306.08	305.30	no	305.00	no
5-Jul-24	0.63	306.10	305.30	no	305.00	no
6-Jul-24			305.30		305.00	
7-Jul-24			305.30		305.00	
8-Jul-24	0.62	306.09	305.30	no	305.00	no
9-Jul-24	0.62	306.09	305.30	no	305.00	no
10-Jul-24	0.64	306.11	305.30	no	305.00	no
11-Jul-24	0.67	306.14	305.30	no	305.00	no
12-Jul-24	0.68	306.15	305.30	no	305.00	no
13-Jul-24			305.30		305.00	
14-Jul-24			305.30		305.00	
15-Jul-24	0.70	306.17	305.30	no	305.00	no
16-Jul-24	0.71	306.18	305.30	no	305.00	no
17-Jul-24	0.75	306.22	305.30	no	305.00	no
18-Jul-24	0.77	306.24	305.30	no	305.00	no
19-Jul-24	0.76	306.23	305.30	no	305.00	no
20-Jul-24	0.75	306.22	305.30	no	305.00	no
21-Jul-24			305.30		305.00	
22-Jul-24	0.73	306.20	305.30	no	305.00	no
23-Jul-24	0.72	306.19	305.30	no	305.00	no
24-Jul-24	0.74	306.21	305.30	no	305.00	no
25-Jul-24	0.71	306.18	305.30	no	305.00	no
26-Jul-24	0.69	306.16	305.30	no	305.00	no
27-Jul-24	0.69	306.16	305.30	no	305.00	no
28-Jul-24			305.30		305.00	
29-Jul-24	0.68	306.15	305.30	no	305.00	no
30-Jul-24	0.66	306.13	305.30	no	305.00	no
31-Jul-24	0.64	306.11	305.30	no	305.00	no
1-Aug-24	0.64	306.11	305.30	no	305.00	no
2-Aug-24	0.63	306.10	305.30	no	305.00	no
3-Aug-24			305.30		305.00	
4-Aug-24			305.30		305.00	
5-Aug-24			305.30		305.00	
6-Aug-24	0.66	306.13	305.30	no	305.00	no
7-Aug-24	0.68	306.15	305.30	no	305.00	no
8-Aug-24	0.72	306.19	305.30	no	305.00	no
9-Aug-24	0.73	306.20	305.30	no	305.00	no
10-Aug-24			305.30		305.00	
11-Aug-24			305.30		305.00	
12-Aug-24	0.72	306.19	305.30	no	305.00	no
13-Aug-24	0.72	306.19	305.30	no	305.00	no
14-Aug-24	0.71	306.18	305.30	no	305.00	no
15-Aug-24	0.72	306.19	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-24	0.73	306.20	305.30	no	305.00	no
17-Aug-24			305.30		305.00	
18-Aug-24			305.30		305.00	
19-Aug-24	0.72	306.19	305.30	no	305.00	no
20-Aug-24	0.74	306.21	305.30	no	305.00	no
21-Aug-24	0.72	306.19	305.30	no	305.00	no
22-Aug-24	0.72	306.19	305.30	no	305.00	no
23-Aug-24	0.73	306.20	305.30	no	305.00	no
24-Aug-24			305.30		305.00	
25-Aug-24			305.30		305.00	
26-Aug-24	0.72	306.19	305.30	no	305.00	no
27-Aug-24	0.71	306.18	305.30	no	305.00	no
28-Aug-24	0.70	306.17	305.30	no	305.00	no
29-Aug-24	0.71	306.18	305.30	no	305.00	no
30-Aug-24	0.72	306.19	305.30	no	305.00	no
31-Aug-24			305.30		305.00	
1-Sep-24			305.30		305.00	
2-Sep-24			305.30		305.00	
3-Sep-24	0.71	306.18	305.30	no	305.00	no
4-Sep-24	0.70	306.17	305.30	no	305.00	no
5-Sep-24	0.68	306.15	305.30	no	305.00	no
6-Sep-24	0.67	306.14	305.30	no	305.00	no
7-Sep-24			305.30		305.00	
8-Sep-24			305.30		305.00	
9-Sep-24	0.65	306.12	305.30	no	305.00	no
10-Sep-24	0.65	306.12	305.30	no	305.00	no
11-Sep-24	0.66	306.13	305.30	no	305.00	no
12-Sep-24	0.67	306.14	305.30	no	305.00	no
13-Sep-24	0.66	306.13	305.30	no	305.00	no
14-Sep-24			305.30		305.00	
15-Sep-24			305.30		305.00	
16-Sep-24	0.65	306.12	305.30	no	305.00	no
17-Sep-24	0.64	306.11	305.30	no	305.00	no
18-Sep-24	0.66	306.13	305.30	no	305.00	no
19-Sep-24	0.65	306.12	305.30	no	305.00	no
20-Sep-24	0.64	306.11	305.30	no	305.00	no
21-Sep-24			305.30		305.00	
22-Sep-24			305.30		305.00	
23-Sep-24	0.65	306.12	305.30	no	305.00	no
24-Sep-24	0.65	306.12	305.30	no	305.00	no
25-Sep-24	0.63	306.10	305.30	no	305.00	no
26-Sep-24	0.61	306.08	305.30	no	305.00	no
27-Sep-24	0.62	306.09	305.30	no	305.00	no
28-Sep-24			305.30		305.00	
29-Sep-24			305.30		305.00	
30-Sep-24	0.60	306.07	305.30	no	305.00	no
1-Oct-24	0.59	306.06	305.30	no	305.00	no
2-Oct-24	0.58	306.05	305.30	no	305.00	no
3-Oct-24	0.60	306.07	305.30	no	305.00	no
4-Oct-24	0.61	306.08	305.30	no	305.00	no
5-Oct-24			305.30		305.00	
6-Oct-24			305.30		305.00	
7-Oct-24	0.57	306.04	305.30	no	305.00	no
8-Oct-24	0.56	306.03	305.30	no	305.00	no
9-Oct-24	0.55	306.02	305.30	no	305.00	no
10-Oct-24	0.55	306.02	305.30	no	305.00	no
11-Oct-24	0.56	306.03	305.30	no	305.00	no
12-Oct-24			305.30		305.00	
13-Oct-24			305.30		305.00	
14-Oct-24	0.58	306.05	305.30	no	305.00	no
15-Oct-24	0.54	306.01	305.30	no	305.00	no
16-Oct-24	0.55	306.02	305.30	no	305.00	no
17-Oct-24	0.53	306.00	305.30	no	305.00	no
18-Oct-24	0.52	305.99	305.30	no	305.00	no
19-Oct-24			305.30		305.00	
20-Oct-24			305.30		305.00	
21-Oct-24	0.49	305.96	305.30	no	305.00	no
22-Oct-24	0.50	305.97	305.30	no	305.00	no
23-Oct-24	0.48	305.95	305.30	no	305.00	no
24-Oct-24	0.47	305.94	305.30	no	305.00	no
25-Oct-24	0.48	305.95	305.30	no	305.00	no
26-Oct-24			305.30		305.00	
27-Oct-24			305.30		305.00	
28-Oct-24	0.46	305.93	305.30	no	305.00	no
29-Oct-24	0.44	305.91	305.30	no	305.00	no
30-Oct-24	0.45	305.92	305.30	no	305.00	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-8
Threshold Summary - Phase 2 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 2 Pond (m)	Water Elevation Phase 2 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-24	0.46	305.93	305.30	no	305.00	no
1-Nov-24	0.44	305.91	305.30	no	305.00	no
2-Nov-24			305.30		305.00	
3-Nov-24			305.30		305.00	
4-Nov-24	0.45	305.92	305.30	no	305.00	no
5-Nov-24	0.43	305.90	305.30	no	305.00	no
6-Nov-24	0.44	305.91	305.30	no	305.00	no
7-Nov-24	0.42	305.89	305.30	no	305.00	no
8-Nov-24	0.43	305.90	305.30	no	305.00	no
9-Nov-24			305.30		305.00	
10-Nov-24			305.30		305.00	
11-Nov-24	0.43	305.90	305.30	no	305.00	no
12-Nov-24	0.41	305.88	305.30	no	305.00	no
13-Nov-24	0.42	305.89	305.30	no	305.00	no
14-Nov-24	0.44	305.91	305.30	no	305.00	no
15-Nov-24	0.43	305.90	305.30	no	305.00	no
16-Nov-24			305.30		305.00	
17-Nov-24			305.30		305.00	
18-Nov-24	0.41	305.88	305.30	no	305.00	no
19-Nov-24	0.40	305.87	305.30	no	305.00	no
20-Nov-24	0.40	305.87	305.30	no	305.00	no
21-Nov-24	0.39	305.86	305.30	no	305.00	no
22-Nov-24	0.41	305.88	305.30	no	305.00	no
23-Nov-24			305.30		305.00	
24-Nov-24			305.30		305.00	
25-Nov-24	0.40	305.87	305.30	no	305.00	no
26-Nov-24	0.39	305.86	305.30	no	305.00	no
27-Nov-24	0.37	305.84	305.30	no	305.00	no
28-Nov-24	0.36	305.83	305.30	no	305.00	no
29-Nov-24	0.38	305.85	305.30	no	305.00	no
30-Nov-24			305.30		305.00	
1-Dec-24			305.30		305.00	
2-Dec-24	0.39	305.86	305.30	no	305.00	no
3-Dec-24			305.30		305.00	
4-Dec-24			305.30		305.00	
5-Dec-24			305.30		305.00	
6-Dec-24			305.30		305.00	
7-Dec-24			305.30		305.00	
8-Dec-24			305.30		305.00	
9-Dec-24			305.30		305.00	
10-Dec-24			305.30		305.00	
11-Dec-24			305.30		305.00	
12-Dec-24			305.30		305.00	
13-Dec-24			305.30		305.00	
14-Dec-24			305.30		305.00	
15-Dec-24			305.30		305.00	
16-Dec-24			305.30		305.00	
17-Dec-24			305.30		305.00	
18-Dec-24			305.30		305.00	
19-Dec-24			305.30		305.00	
20-Dec-24			305.30		305.00	
21-Dec-24			305.30		305.00	
22-Dec-24			305.30		305.00	
23-Dec-24			305.30		305.00	
24-Dec-24			305.30		305.00	
25-Dec-24			305.30		305.00	
26-Dec-24			305.30		305.00	
27-Dec-24			305.30		305.00	
28-Dec-24			305.30		305.00	
29-Dec-24			305.30		305.00	
30-Dec-24			305.30		305.00	
31-Dec-24			305.30		305.00	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jan-23			304.10		303.85	
2-Jan-23			304.10		303.85	
3-Jan-23			304.10		303.85	
4-Jan-23			304.10		303.85	
5-Jan-23			304.10		303.85	
6-Jan-23			304.10		303.85	
7-Jan-23			304.10		303.85	
8-Jan-23			304.10		303.85	
9-Jan-23			304.10		303.85	
10-Jan-23			304.10		303.85	
11-Jan-23			304.10		303.85	
12-Jan-23			304.10		303.85	
13-Jan-23			304.10		303.85	
14-Jan-23			304.10		303.85	
15-Jan-23			304.10		303.85	
16-Jan-23			304.10		303.85	
17-Jan-23			304.10		303.85	
18-Jan-23			304.10		303.85	
19-Jan-23			304.10		303.85	
20-Jan-23			304.10		303.85	
21-Jan-23			304.10		303.85	
22-Jan-23			304.10		303.85	
23-Jan-23			304.10		303.85	
24-Jan-23			304.10		303.85	
25-Jan-23			304.10		303.85	
26-Jan-23			304.10		303.85	
27-Jan-23			304.10		303.85	
28-Jan-23			304.10		303.85	
29-Jan-23			304.10		303.85	
30-Jan-23			304.10		303.85	
31-Jan-23			304.10		303.85	
1-Feb-23			304.10		303.85	
2-Feb-23			304.10		303.85	
3-Feb-23			304.10		303.85	
4-Feb-23			304.10		303.85	
5-Feb-23			304.10		303.85	
6-Feb-23			304.10		303.85	
7-Feb-23			304.10		303.85	
8-Feb-23			304.10		303.85	
9-Feb-23			304.10		303.85	
10-Feb-23			304.10		303.85	
11-Feb-23			304.10		303.85	
12-Feb-23			304.10		303.85	
13-Feb-23			304.10		303.85	
14-Feb-23			304.10		303.85	
15-Feb-23			304.10		303.85	
16-Feb-23			304.10		303.85	
17-Feb-23			304.10		303.85	
18-Feb-23			304.10		303.85	
19-Feb-23			304.10		303.85	
20-Feb-23			304.10		303.85	
21-Feb-23			304.10		303.85	
22-Feb-23			304.10		303.85	
23-Feb-23			304.10		303.85	
24-Feb-23			304.10		303.85	
25-Feb-23			304.10		303.85	
26-Feb-23			304.10		303.85	
27-Feb-23			304.10		303.85	
28-Feb-23			304.10		303.85	
1-Mar-23			304.10		303.85	
2-Mar-23			304.10		303.85	
3-Mar-23			304.10		303.85	
4-Mar-23			304.10		303.85	
5-Mar-23			304.10		303.85	
6-Mar-23			304.10		303.85	
7-Mar-23			304.10		303.85	
8-Mar-23			304.10		303.85	
9-Mar-23			304.10		303.85	
10-Mar-23			304.10		303.85	
11-Mar-23			304.10		303.85	
12-Mar-23			304.10		303.85	
13-Mar-23			304.10		303.85	
14-Mar-23			304.10		303.85	
15-Mar-23			304.10		303.85	
16-Mar-23			304.10		303.85	
17-Mar-23			304.10		303.85	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
18-Mar-23			304.10		303.85	
19-Mar-23			304.10		303.85	
20-Mar-23			304.10		303.85	
21-Mar-23			304.10		303.85	
22-Mar-23			304.10		303.85	
23-Mar-23			304.10		303.85	
24-Mar-23			304.10		303.85	
25-Mar-23			304.10		303.85	
26-Mar-23			304.10		303.85	
27-Mar-23			304.10		303.85	
28-Mar-23			304.10		303.85	
29-Mar-23			304.10		303.85	
30-Mar-23			304.10		303.85	
31-Mar-23			304.10		303.85	
1-Apr-23			304.10		303.85	
2-Apr-23			304.10		303.85	
3-Apr-23	0.82	305.03	304.10	no	303.85	no
4-Apr-23	0.84	305.05	304.10	no	303.85	no
5-Apr-23	0.84	305.05	304.10	no	303.85	no
6-Apr-23	0.87	305.08	304.10	no	303.85	no
7-Apr-23			304.10		303.85	
8-Apr-23			304.10		303.85	
9-Apr-23			304.10		303.85	
10-Apr-23	0.90	305.11	304.10	no	303.85	no
11-Apr-23	0.90	305.11	304.10	no	303.85	no
12-Apr-23	0.90	305.11	304.10	no	303.85	no
13-Apr-23	0.90	305.11	304.10	no	303.85	no
14-Apr-23	0.90	305.11	304.10	no	303.85	no
15-Apr-23			304.10		303.85	
16-Apr-23			304.10		303.85	
17-Apr-23	0.91	305.12	304.10	no	303.85	no
18-Apr-23	0.91	305.12	304.10	no	303.85	no
19-Apr-23	0.91	305.12	304.10	no	303.85	no
20-Apr-23	0.91	305.12	304.10	no	303.85	no
21-Apr-23	0.91	305.12	304.10	no	303.85	no
22-Apr-23			304.10		303.85	
23-Apr-23			304.10		303.85	
24-Apr-23	0.90	305.11	304.10	no	303.85	no
25-Apr-23	0.90	305.11	304.10	no	303.85	no
26-Apr-23	0.92	305.13	304.10	no	303.85	no
27-Apr-23	0.92	305.13	304.10	no	303.85	no
28-Apr-23	0.90	305.11	304.10	no	303.85	no
29-Apr-23			304.10		303.85	
30-Apr-23			304.10		303.85	
1-May-23	0.90	305.11	304.10	no	303.85	no
2-May-23	0.90	305.11	304.10	no	303.85	no
3-May-23	0.90	305.11	304.10	no	303.85	no
4-May-23	0.95	305.16	304.10	no	303.85	no
5-May-23	0.95	305.16	304.10	no	303.85	no
6-May-23			304.10		303.85	
7-May-23			304.10		303.85	
8-May-23	0.95	305.16	304.10	no	303.85	no
9-May-23	0.97	305.18	304.10	no	303.85	no
10-May-23	0.97	305.18	304.10	no	303.85	no
11-May-23	0.97	305.18	304.10	no	303.85	no
12-May-23	0.94	305.15	304.10	no	303.85	no
13-May-23			304.10		303.85	
14-May-23			304.10		303.85	
15-May-23	0.92	305.13	304.10	no	303.85	no
16-May-23	0.92	305.13	304.10	no	303.85	no
17-May-23	0.91	305.12	304.10	no	303.85	no
18-May-23	0.89	305.10	304.10	no	303.85	no
19-May-23	0.88	305.09	304.10	no	303.85	no
20-May-23			304.10		303.85	
21-May-23			304.10		303.85	
22-May-23			304.10		303.85	
23-May-23	0.89	305.10	304.10	no	303.85	no
24-May-23	0.89	305.10	304.10	no	303.85	no
25-May-23	0.89	305.10	304.10	no	303.85	no
26-May-23	0.85	305.06	304.10	no	303.85	no
27-May-23			304.10		303.85	
28-May-23			304.10		303.85	
29-May-23	0.83	305.04	304.10	no	303.85	no
30-May-23	0.83	305.04	304.10	no	303.85	no
31-May-23	0.83	305.04	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-23	0.80	305.01	304.10	no	303.85	no
2-Jun-23	0.82	305.03	304.10	no	303.85	no
3-Jun-23			304.10		303.85	
4-Jun-23			304.10		303.85	
5-Jun-23	0.79	305.00	304.10	no	303.85	no
6-Jun-23	0.79	305.00	304.10	no	303.85	no
7-Jun-23	0.78	304.99	304.10	no	303.85	no
8-Jun-23	0.76	304.97	304.10	no	303.85	no
9-Jun-23	0.78	304.99	304.10	no	303.85	no
10-Jun-23			304.10		303.85	
11-Jun-23			304.10		303.85	
12-Jun-23	0.76	304.97	304.10	no	303.85	no
13-Jun-23	0.77	304.98	304.10	no	303.85	no
14-Jun-23	0.77	304.98	304.10	no	303.85	no
15-Jun-23	0.77	304.98	304.10	no	303.85	no
16-Jun-23	0.77	304.98	304.10	no	303.85	no
17-Jun-23			304.10		303.85	
18-Jun-23			304.10		303.85	
19-Jun-23	0.75	304.96	304.10	no	303.85	no
20-Jun-23	0.75	304.96	304.10	no	303.85	no
21-Jun-23	0.72	304.93	304.10	no	303.85	no
22-Jun-23	0.72	304.93	304.10	no	303.85	no
23-Jun-23	0.70	304.91	304.10	no	303.85	no
24-Jun-23			304.10		303.85	
25-Jun-23			304.10		303.85	
26-Jun-23	0.70	304.91	304.10	no	303.85	no
27-Jun-23	0.78	304.99	304.10	no	303.85	no
28-Jun-23	0.74	304.95	304.10	no	303.85	no
29-Jun-23	0.74	304.95	304.10	no	303.85	no
30-Jun-23	0.76	304.97	304.10	no	303.85	no
1-Jul-23			304.10		303.85	
2-Jul-23			304.10		303.85	
3-Jul-23			304.10		303.85	
4-Jul-23	0.73	304.94	304.10	no	303.85	no
5-Jul-23	0.72	304.93	304.10	no	303.85	no
6-Jul-23	0.71	304.92	304.10	no	303.85	no
7-Jul-23	0.74	304.95	304.10	no	303.85	no
8-Jul-23			304.10		303.85	
9-Jul-23			304.10		303.85	
10-Jul-23	0.70	304.91	304.10	no	303.85	no
11-Jul-23	0.74	304.95	304.10	no	303.85	no
12-Jul-23	0.74	304.95	304.10	no	303.85	no
13-Jul-23	0.77	304.98	304.10	no	303.85	no
14-Jul-23	0.80	305.01	304.10	no	303.85	no
15-Jul-23			304.10		303.85	
16-Jul-23			304.10		303.85	
17-Jul-23	0.86	305.07	304.10	no	303.85	no
18-Jul-23	0.89	305.10	304.10	no	303.85	no
19-Jul-23	0.87	305.08	304.10	no	303.85	no
20-Jul-23	0.87	305.08	304.10	no	303.85	no
21-Jul-23	0.87	305.08	304.10	no	303.85	no
22-Jul-23			304.10		303.85	
23-Jul-23			304.10		303.85	
24-Jul-23	0.86	305.07	304.10	no	303.85	no
25-Jul-23	0.87	305.08	304.10	no	303.85	no
26-Jul-23	0.83	305.04	304.10	no	303.85	no
27-Jul-23	0.88	305.09	304.10	no	303.85	no
28-Jul-23	0.88	305.09	304.10	no	303.85	no
29-Jul-23	0.88	305.09	304.10	no	303.85	no
30-Jul-23			304.10		303.85	
31-Jul-23	0.87	305.08	304.10	no	303.85	no
1-Aug-23	0.86	305.07	304.10	no	303.85	no
2-Aug-23	0.87	305.08	304.10	no	303.85	no
3-Aug-23	0.87	305.08	304.10	no	303.85	no
4-Aug-23	0.85	305.06	304.10	no	303.85	no
5-Aug-23			304.10		303.85	
6-Aug-23			304.10		303.85	
7-Aug-23			304.10		303.85	
8-Aug-23	0.80	305.01	304.10	no	303.85	no
9-Aug-23	0.80	305.01	304.10	no	303.85	no
10-Aug-23	0.80	305.01	304.10	no	303.85	no
11-Aug-23	0.80	305.01	304.10	no	303.85	no
12-Aug-23			304.10		303.85	
13-Aug-23			304.10		303.85	
14-Aug-23	0.80	305.01	304.10	no	303.85	no
15-Aug-23	0.80	305.01	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-23	0.80	305.01	304.10	no	303.85	no
17-Aug-23	0.80	305.01	304.10	no	303.85	no
18-Aug-23	0.82	305.03	304.10	no	303.85	no
19-Aug-23	0.82	305.03	304.10	no	303.85	no
20-Aug-23			304.10		303.85	
21-Aug-23	0.81	305.02	304.10	no	303.85	no
22-Aug-23	0.81	305.02	304.10	no	303.85	no
23-Aug-23	0.79	305.00	304.10	no	303.85	no
24-Aug-23	0.81	305.02	304.10	no	303.85	no
25-Aug-23	0.82	305.03	304.10	no	303.85	no
26-Aug-23	0.81	305.02	304.10	no	303.85	no
27-Aug-23			304.10		303.85	
28-Aug-23	0.80	305.01	304.10	no	303.85	no
29-Aug-23	0.80	305.01	304.10	no	303.85	no
30-Aug-23	0.80	305.01	304.10	no	303.85	no
31-Aug-23	0.80	305.01	304.10	no	303.85	no
1-Sep-23	0.79	305.00	304.10	no	303.85	no
2-Sep-23	0.79	305.00	304.10	no	303.85	no
3-Sep-23			304.10		303.85	
4-Sep-23			304.10		303.85	
5-Sep-23	0.78	304.99	304.10	no	303.85	no
6-Sep-23	0.78	304.99	304.10	no	303.85	no
7-Sep-23	0.79	305.00	304.10	no	303.85	no
8-Sep-23	0.78	304.99	304.10	no	303.85	no
9-Sep-23	0.78	304.99	304.10	no	303.85	no
10-Sep-23			304.10		303.85	
11-Sep-23	0.74	304.95	304.10	no	303.85	no
12-Sep-23	0.77	304.98	304.10	no	303.85	no
13-Sep-23	0.74	304.95	304.10	no	303.85	no
14-Sep-23	0.75	304.96	304.10	no	303.85	no
15-Sep-23	0.72	304.93	304.10	no	303.85	no
16-Sep-23	0.72	304.93	304.10	no	303.85	no
17-Sep-23			304.10		303.85	
18-Sep-23	0.73	304.94	304.10	no	303.85	no
19-Sep-23	0.73	304.94	304.10	no	303.85	no
20-Sep-23	0.72	304.93	304.10	no	303.85	no
21-Sep-23	0.74	304.95	304.10	no	303.85	no
22-Sep-23	0.74	304.95	304.10	no	303.85	no
23-Sep-23	0.74	304.95	304.10	no	303.85	no
24-Sep-23			304.10		303.85	
25-Sep-23	0.69	304.90	304.10	no	303.85	no
26-Sep-23	0.68	304.89	304.10	no	303.85	no
27-Sep-23	0.67	304.88	304.10	no	303.85	no
28-Sep-23	0.68	304.89	304.10	no	303.85	no
29-Sep-23	0.66	304.87	304.10	no	303.85	no
30-Sep-23			304.10		303.85	
1-Oct-23			304.10		303.85	
2-Oct-23	0.67	304.88	304.10	no	303.85	no
3-Oct-23	0.65	304.86	304.10	no	303.85	no
4-Oct-23	0.65	304.86	304.10	no	303.85	no
5-Oct-23	0.64	304.85	304.10	no	303.85	no
6-Oct-23	0.67	304.88	304.10	no	303.85	no
7-Oct-23			304.10		303.85	
8-Oct-23			304.10		303.85	
9-Oct-23			304.10		303.85	
10-Oct-23	0.61	304.82	304.10	no	303.85	no
11-Oct-23	0.63	304.84	304.10	no	303.85	no
12-Oct-23	0.62	304.83	304.10	no	303.85	no
13-Oct-23	0.61	304.82	304.10	no	303.85	no
14-Oct-23	0.61	304.82	304.10	no	303.85	no
15-Oct-23			304.10		303.85	
16-Oct-23	0.62	304.83	304.10	no	303.85	no
17-Oct-23	0.62	304.83	304.10	no	303.85	no
18-Oct-23	0.61	304.82	304.10	no	303.85	no
19-Oct-23	0.60	304.81	304.10	no	303.85	no
20-Oct-23	0.60	304.81	304.10	no	303.85	no
21-Oct-23	0.60	304.81	304.10	no	303.85	no
22-Oct-23			304.10		303.85	
23-Oct-23	0.58	304.79	304.10	no	303.85	no
24-Oct-23	0.59	304.80	304.10	no	303.85	no
25-Oct-23	0.60	304.81	304.10	no	303.85	no
26-Oct-23	0.61	304.82	304.10	no	303.85	no
27-Oct-23	0.63	304.84	304.10	no	303.85	no
28-Oct-23	0.63	304.84	304.10	no	303.85	no
29-Oct-23			304.10		303.85	
30-Oct-23	0.66	304.87	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-23	0.65	304.86	304.10	no	303.85	no
1-Nov-23	0.66	304.87	304.10	no	303.85	no
2-Nov-23	0.66	304.87	304.10	no	303.85	no
3-Nov-23	0.65	304.86	304.10	no	303.85	no
4-Nov-23			304.10		303.85	
5-Nov-23			304.10		303.85	
6-Nov-23	0.64	304.85	304.10	no	303.85	no
7-Nov-23	0.64	304.85	304.10	no	303.85	no
8-Nov-23	0.64	304.85	304.10	no	303.85	no
9-Nov-23	0.64	304.85	304.10	no	303.85	no
10-Nov-23	0.65	304.86	304.10	no	303.85	no
11-Nov-23	0.65	304.86	304.10	no	303.85	no
12-Nov-23			304.10		303.85	
13-Nov-23	0.65	304.86	304.10	no	303.85	no
14-Nov-23	0.65	304.86	304.10	no	303.85	no
15-Nov-23	0.65	304.86	304.10	no	303.85	no
16-Nov-23	0.66	304.87	304.10	no	303.85	no
17-Nov-23	0.66	304.87	304.10	no	303.85	no
18-Nov-23	0.65	304.86	304.10	no	303.85	no
19-Nov-23			304.10		303.85	
20-Nov-23	0.65	304.86	304.10	no	303.85	no
21-Nov-23	0.64	304.85	304.10	no	303.85	no
22-Nov-23	0.66	304.87	304.10	no	303.85	no
23-Nov-23	0.66	304.87	304.10	no	303.85	no
24-Nov-23	0.66	304.87	304.10	no	303.85	no
25-Nov-23			304.10		303.85	
26-Nov-23			304.10		303.85	
27-Nov-23	0.68	304.89	304.10	no	303.85	no
28-Nov-23	0.68	304.89	304.10	no	303.85	no
29-Nov-23	0.68	304.89	304.10	no	303.85	no
30-Nov-23	0.69	304.90	304.10	no	303.85	no
1-Dec-23	0.69	304.90	304.10	no	303.85	no
2-Dec-23			304.10		303.85	
3-Dec-23			304.10		303.85	
4-Dec-23	0.73	304.94	304.10	no	303.85	no
5-Dec-23	0.70	304.91	304.10	no	303.85	no
6-Dec-23	0.73	304.94	304.10	no	303.85	no
7-Dec-23	0.73	304.94	304.10	no	303.85	no
8-Dec-23	0.73	304.94	304.10	no	303.85	no
9-Dec-23			304.10		303.85	
10-Dec-23			304.10		303.85	
11-Dec-23			304.10		303.85	
12-Dec-23			304.10		303.85	
13-Dec-23			304.10		303.85	
14-Dec-23			304.10		303.85	
15-Dec-23			304.10		303.85	
16-Dec-23			304.10		303.85	
17-Dec-23			304.10		303.85	
18-Dec-23			304.10		303.85	
19-Dec-23			304.10		303.85	
20-Dec-23			304.10		303.85	
21-Dec-23			304.10		303.85	
22-Dec-23			304.10		303.85	
23-Dec-23			304.10		303.85	
24-Dec-23			304.10		303.85	
25-Dec-23			304.10		303.85	
26-Dec-23			304.10		303.85	
27-Dec-23			304.10		303.85	
28-Dec-23			304.10		303.85	
29-Dec-23			304.10		303.85	
30-Dec-23			304.10		303.85	
31-Dec-23			304.10		303.85	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
01-Jan-24			304.10		303.85	
02-Jan-24			304.10		303.85	
03-Jan-24			304.10		303.85	
04-Jan-24			304.10		303.85	
05-Jan-24			304.10		303.85	
06-Jan-24			304.10		303.85	
07-Jan-24			304.10		303.85	
08-Jan-24			304.10		303.85	
09-Jan-24			304.10		303.85	
10-Jan-24			304.10		303.85	
11-Jan-24			304.10		303.85	
12-Jan-24			304.10		303.85	
13-Jan-24			304.10		303.85	
14-Jan-24			304.10		303.85	
15-Jan-24			304.10		303.85	
16-Jan-24			304.10		303.85	
17-Jan-24			304.10		303.85	
18-Jan-24			304.10		303.85	
19-Jan-24			304.10		303.85	
20-Jan-24			304.10		303.85	
21-Jan-24			304.10		303.85	
22-Jan-24			304.10		303.85	
23-Jan-24			304.10		303.85	
24-Jan-24			304.10		303.85	
25-Jan-24			304.10		303.85	
26-Jan-24			304.10		303.85	
27-Jan-24			304.10		303.85	
28-Jan-24			304.10		303.85	
29-Jan-24			304.10		303.85	
30-Jan-24			304.10		303.85	
31-Jan-24			304.10		303.85	
1-Feb-24			304.10		303.85	
2-Feb-24			304.10		303.85	
3-Feb-24			304.10		303.85	
4-Feb-24			304.10		303.85	
5-Feb-24			304.10		303.85	
6-Feb-24			304.10		303.85	
7-Feb-24			304.10		303.85	
8-Feb-24			304.10		303.85	
9-Feb-24			304.10		303.85	
10-Feb-24			304.10		303.85	
11-Feb-24			304.10		303.85	
12-Feb-24			304.10		303.85	
13-Feb-24			304.10		303.85	
14-Feb-24			304.10		303.85	
15-Feb-24			304.10		303.85	
16-Feb-24			304.10		303.85	
17-Feb-24			304.10		303.85	
18-Feb-24			304.10		303.85	
19-Feb-24			304.10		303.85	
20-Feb-24			304.10		303.85	
21-Feb-24			304.10		303.85	
22-Feb-24			304.10		303.85	
23-Feb-24			304.10		303.85	
24-Feb-24			304.10		303.85	
25-Feb-24			304.10		303.85	
26-Feb-24			304.10		303.85	
27-Feb-24			304.10		303.85	
28-Feb-24			304.10		303.85	
29-Feb-24			304.10		303.85	
1-Mar-24			304.10		303.85	
2-Mar-24			304.10		303.85	
3-Mar-24			304.10		303.85	
4-Mar-24			304.10		303.85	
5-Mar-24			304.10		303.85	
6-Mar-24			304.10		303.85	
7-Mar-24			304.10		303.85	
8-Mar-24			304.10		303.85	
9-Mar-24			304.10		303.85	
10-Mar-24			304.10		303.85	
11-Mar-24			304.10		303.85	
12-Mar-24			304.10		303.85	
13-Mar-24			304.10		303.85	
14-Mar-24			304.10		303.85	
15-Mar-24			304.10		303.85	
16-Mar-24			304.10		303.85	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
17-Mar-24			304.10		303.85	
18-Mar-24			304.10		303.85	
19-Mar-24	0.70	305.02	304.10	no	303.85	no
20-Mar-24	0.70	305.02	304.10	no	303.85	no
21-Mar-24			304.10		303.85	
22-Mar-24			304.10		303.85	
23-Mar-24			304.10		303.85	
24-Mar-24			304.10		303.85	
25-Mar-24	0.68	305.00	304.10	no	303.85	no
26-Mar-24	0.68	305.00	304.10	no	303.85	no
27-Mar-24	0.68	305.00	304.10	no	303.85	no
28-Mar-24	0.68	305.00	304.10	no	303.85	no
29-Mar-24			304.10		303.85	
30-Mar-24			304.10		303.85	
31-Mar-24			304.10		303.85	
1-Apr-24	0.68	305.00	304.10	no	303.85	no
2-Apr-24	0.66	304.98	304.10	no	303.85	no
3-Apr-24	0.67	304.99	304.10	no	303.85	no
4-Apr-24	0.66	304.98	304.10	no	303.85	no
5-Apr-24	0.66	304.98	304.10	no	303.85	no
6-Apr-24			304.10		303.85	
7-Apr-24			304.10		303.85	
8-Apr-24	0.69	305.01	304.10	no	303.85	no
9-Apr-24	0.66	304.98	304.10	no	303.85	no
10-Apr-24	0.66	304.98	304.10	no	303.85	no
11-Apr-24	0.67	304.99	304.10	no	303.85	no
12-Apr-24	0.70	305.02	304.10	no	303.85	no
13-Apr-24			304.10		303.85	
14-Apr-24			304.10		303.85	
15-Apr-24	0.70	305.02	304.10	no	303.85	no
16-Apr-24	0.70	305.02	304.10	no	303.85	no
17-Apr-24	0.71	305.03	304.10	no	303.85	no
18-Apr-24	0.71	305.03	304.10	no	303.85	no
19-Apr-24	0.71	305.03	304.10	no	303.85	no
20-Apr-24			304.10		303.85	
21-Apr-24			304.10		303.85	
22-Apr-24	0.70	305.02	304.10	no	303.85	no
23-Apr-24	0.69	305.01	304.10	no	303.85	no
24-Apr-24	0.70	305.02	304.10	no	303.85	no
25-Apr-24	0.68	305.00	304.10	no	303.85	no
26-Apr-24	0.68	305.00	304.10	no	303.85	no
27-Apr-24			304.10		303.85	
28-Apr-24			304.10		303.85	
29-Apr-24	0.68	305.00	304.10	no	303.85	no
30-Apr-24	0.70	305.02	304.10	no	303.85	no
1-May-24	0.71	305.03	304.10	no	303.85	no
2-May-24	0.70	305.02	304.10	no	303.85	no
3-May-24	0.71	305.03	304.10	no	303.85	no
4-May-24			304.10		303.85	
5-May-24			304.10		303.85	
6-May-24	0.69	305.01	304.10	no	303.85	no
7-May-24	0.70	305.02	304.10	no	303.85	no
8-May-24	0.75	305.07	304.10	no	303.85	no
9-May-24	0.73	305.05	304.10	no	303.85	no
10-May-24	0.77	305.09	304.10	no	303.85	no
11-May-24			304.10		303.85	
12-May-24			304.10		303.85	
13-May-24	0.77	305.09	304.10	no	303.85	no
14-May-24	0.74	305.06	304.10	no	303.85	no
15-May-24	0.73	305.05	304.10	no	303.85	no
16-May-24	0.73	305.05	304.10	no	303.85	no
17-May-24	0.73	305.05	304.10	no	303.85	no
18-May-24			304.10		303.85	
19-May-24			304.10		303.85	
20-May-24			304.10		303.85	
21-May-24	0.72	305.04	304.10	no	303.85	no
22-May-24	0.75	305.07	304.10	no	303.85	no
23-May-24	0.73	305.05	304.10	no	303.85	no
24-May-24	0.70	305.02	304.10	no	303.85	no
25-May-24			304.10		303.85	
26-May-24			304.10		303.85	
27-May-24	0.70	305.02	304.10	no	303.85	no
28-May-24	0.70	305.02	304.10	no	303.85	no
29-May-24	0.71	305.03	304.10	no	303.85	no
30-May-24	0.70	305.02	304.10	no	303.85	no
31-May-24	0.70	305.02	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-24			304.10		303.85	
2-Jun-24			304.10		303.85	
3-Jun-24	0.70	305.02	304.10	no	303.85	no
4-Jun-24	0.70	305.02	304.10	no	303.85	no
5-Jun-24	0.72	305.04	304.10	no	303.85	no
6-Jun-24	0.74	305.06	304.10	no	303.85	no
7-Jun-24	0.74	305.06	304.10	no	303.85	no
8-Jun-24			304.10		303.85	
9-Jun-24			304.10		303.85	
10-Jun-24	0.76	305.08	304.10	no	303.85	no
11-Jun-24	0.76	305.08	304.10	no	303.85	no
12-Jun-24	0.75	305.07	304.10	no	303.85	no
13-Jun-24	0.75	305.07	304.10	no	303.85	no
14-Jun-24	0.75	305.07	304.10	no	303.85	no
15-Jun-24			304.10		303.85	
16-Jun-24			304.10		303.85	
17-Jun-24	0.74	305.06	304.10	no	303.85	no
18-Jun-24	0.75	305.07	304.10	no	303.85	no
19-Jun-24	0.74	305.06	304.10	no	303.85	no
20-Jun-24	0.76	305.08	304.10	no	303.85	no
21-Jun-24	0.79	305.11	304.10	no	303.85	no
22-Jun-24	0.78	305.10	304.10	no	303.85	no
23-Jun-24			304.10		303.85	
24-Jun-24	0.78	305.10	304.10	no	303.85	no
25-Jun-24	0.78	305.10	304.10	no	303.85	no
26-Jun-24	0.77	305.09	304.10	no	303.85	no
27-Jun-24	0.77	305.09	304.10	no	303.85	no
28-Jun-24	0.76	305.08	304.10	no	303.85	no
29-Jun-24			304.10		303.85	
30-Jun-24			304.10		303.85	
1-Jul-24			304.10		303.85	
2-Jul-24	0.80	305.12	304.10	no	303.85	no
3-Jul-24	0.79	305.11	304.10	no	303.85	no
4-Jul-24	0.78	305.10	304.10	no	303.85	no
5-Jul-24	0.79	305.11	304.10	no	303.85	no
6-Jul-24			304.10		303.85	
7-Jul-24			304.10		303.85	
8-Jul-24	0.78	305.10	304.10	no	303.85	no
9-Jul-24	0.78	305.10	304.10	no	303.85	no
10-Jul-24	0.80	305.12	304.10	no	303.85	no
11-Jul-24	0.82	305.14	304.10	no	303.85	no
12-Jul-24	0.85	305.17	304.10	no	303.85	no
13-Jul-24			304.10		303.85	
14-Jul-24			304.10		303.85	
15-Jul-24			304.10		303.85	
16-Jul-24	0.90	305.22	304.10	no	303.85	no
17-Jul-24	0.95	305.27	304.10	no	303.85	no
18-Jul-24	0.99	305.31	304.10	no	303.85	no
19-Jul-24	0.97	305.29	304.10	no	303.85	no
20-Jul-24	0.96	305.28	304.10	no	303.85	no
21-Jul-24			304.10		303.85	
22-Jul-24	0.99	305.31	304.10	no	303.85	no
23-Jul-24	1.00	305.32	304.10	no	303.85	no
24-Jul-24	0.99	305.31	304.10	no	303.85	no
25-Jul-24	0.98	305.30	304.10	no	303.85	no
26-Jul-24	0.97	305.29	304.10	no	303.85	no
27-Jul-24	0.98	305.30	304.10	no	303.85	no
28-Jul-24			304.10		303.85	
29-Jul-24	0.97	305.29	304.10	no	303.85	no
30-Jul-24	0.98	305.30	304.10	no	303.85	no
31-Jul-24	0.99	305.31	304.10	no	303.85	no
1-Aug-24	0.99	305.31	304.10	no	303.85	no
2-Aug-24	0.98	305.30	304.10	no	303.85	no
3-Aug-24			304.10		303.85	
4-Aug-24			304.10		303.85	
5-Aug-24			304.10		303.85	
6-Aug-24	0.95	305.27	304.10	no	303.85	no
7-Aug-24	0.92	305.24	304.10	no	303.85	no
8-Aug-24	0.91	305.23	304.10	no	303.85	no
9-Aug-24	0.88	305.20	304.10	no	303.85	no
10-Aug-24			304.10		303.85	
11-Aug-24			304.10		303.85	
12-Aug-24	0.86	305.18	304.10	no	303.85	no
13-Aug-24	0.84	305.16	304.10	no	303.85	no
14-Aug-24	0.83	305.15	304.10	no	303.85	no
15-Aug-24	1.08	305.18	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-24	1.08	305.18	304.10	no	303.85	no
17-Aug-24			304.10		303.85	
18-Aug-24			304.10		303.85	
19-Aug-24	1.09	305.19	304.10	no	303.85	no
20-Aug-24	1.08	305.18	304.10	no	303.85	no
21-Aug-24	1.16	305.26	304.10	no	303.85	no
22-Aug-24	1.18	305.28	304.10	no	303.85	no
23-Aug-24	1.15	305.25	304.10	no	303.85	no
24-Aug-24			304.10		303.85	
25-Aug-24			304.10		303.85	
26-Aug-24	1.20	305.30	304.10	no	303.85	no
27-Aug-24	1.21	305.31	304.10	no	303.85	no
28-Aug-24	1.20	305.30	304.10	no	303.85	no
29-Aug-24	1.22	305.32	304.10	no	303.85	no
30-Aug-24	1.22	305.32	304.10	no	303.85	no
31-Aug-24			304.10		303.85	
1-Sep-24			304.10		303.85	
2-Sep-24			304.10		303.85	
3-Sep-24	1.23	305.33	304.10	no	303.85	no
4-Sep-24	1.25	305.35	304.10	no	303.85	no
5-Sep-24	1.25	305.35	304.10	no	303.85	no
6-Sep-24	1.26	305.36	304.10	no	303.85	no
7-Sep-24			304.10		303.85	
8-Sep-24			304.10		303.85	
9-Sep-24	1.26	305.36	304.10	no	303.85	no
10-Sep-24	1.27	305.37	304.10	no	303.85	no
11-Sep-24	1.25	305.35	304.10	no	303.85	no
12-Sep-24	1.25	305.35	304.10	no	303.85	no
13-Sep-24	1.26	305.36	304.10	no	303.85	no
14-Sep-24			304.10		303.85	
15-Sep-24			304.10		303.85	
16-Sep-24	1.24	305.34	304.10	no	303.85	no
17-Sep-24	1.23	305.33	304.10	no	303.85	no
18-Sep-24	1.21	305.31	304.10	no	303.85	no
19-Sep-24	1.19	305.29	304.10	no	303.85	no
20-Sep-24	1.18	305.28	304.10	no	303.85	no
21-Sep-24			304.10		303.85	
22-Sep-24			304.10		303.85	
23-Sep-24	1.19	305.29	304.10	no	303.85	no
24-Sep-24	1.18	305.28	304.10	no	303.85	no
25-Sep-24	1.19	305.29	304.10	no	303.85	no
26-Sep-24	1.16	305.26	304.10	no	303.85	no
27-Sep-24	1.13	305.23	304.10	no	303.85	no
28-Sep-24			304.10		303.85	
29-Sep-24			304.10		303.85	
30-Sep-24	1.14	305.24	304.10	no	303.85	no
1-Oct-24	1.15	305.25	304.10	no	303.85	no
2-Oct-24	1.14	305.24	304.10	no	303.85	no
3-Oct-24	1.14	305.24	304.10	no	303.85	no
4-Oct-24	1.11	305.21	304.10	no	303.85	no
5-Oct-24			304.10		303.85	
6-Oct-24			304.10		303.85	
7-Oct-24	1.16	305.26	304.10	no	303.85	no
8-Oct-24	1.15	305.25	304.10	no	303.85	no
9-Oct-24	1.16	305.26	304.10	no	303.85	no
10-Oct-24	1.17	305.27	304.10	no	303.85	no
11-Oct-24	1.16	305.26	304.10	no	303.85	no
12-Oct-24			304.10		303.85	
13-Oct-24			304.10		303.85	
14-Oct-24	1.17	305.27	304.10	no	303.85	no
15-Oct-24	1.15	305.25	304.10	no	303.85	no
16-Oct-24	1.14	305.24	304.10	no	303.85	no
17-Oct-24	1.16	305.26	304.10	no	303.85	no
18-Oct-24	1.15	305.25	304.10	no	303.85	no
19-Oct-24			304.10		303.85	
20-Oct-24			304.10		303.85	
21-Oct-24	1.14	305.24	304.10	no	303.85	no
22-Oct-24	1.12	305.22	304.10	no	303.85	no
23-Oct-24	1.13	305.23	304.10	no	303.85	no
24-Oct-24	1.15	305.25	304.10	no	303.85	no
25-Oct-24	1.14	305.24	304.10	no	303.85	no
26-Oct-24			304.10		303.85	
27-Oct-24			304.10		303.85	
28-Oct-24	1.17	305.27	304.10	no	303.85	no
29-Oct-24	1.13	305.23	304.10	no	303.85	no
30-Oct-24	1.15	305.25	304.10	no	303.85	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-9
Threshold Summary - Phase 3 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 3 Pond (m)	Water Elevation Phase 3 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-24	1.16	305.26	304.10	no	303.85	no
1-Nov-24	1.15	305.25	304.10	no	303.85	no
2-Nov-24			304.10		303.85	
3-Nov-24			304.10		303.85	
4-Nov-24	1.14	305.24	304.10	no	303.85	no
5-Nov-24	1.13	305.23	304.10	no	303.85	no
6-Nov-24	1.13	305.23	304.10	no	303.85	no
7-Nov-24	1.15	305.25	304.10	no	303.85	no
8-Nov-24	1.14	305.24	304.10	no	303.85	no
9-Nov-24			304.10		303.85	
10-Nov-24			304.10		303.85	
11-Nov-24	1.14	305.24	304.10	no	303.85	no
12-Nov-24	1.14	305.24	304.10	no	303.85	no
13-Nov-24	1.12	305.22	304.10	no	303.85	no
14-Nov-24	1.10	305.20	304.10	no	303.85	no
15-Nov-24	1.12	305.22	304.10	no	303.85	no
16-Nov-24			304.10		303.85	
17-Nov-24			304.10		303.85	
18-Nov-24	1.11	305.21	304.10	no	303.85	no
19-Nov-24	1.09	305.19	304.10	no	303.85	no
20-Nov-24	1.10	305.20	304.10	no	303.85	no
21-Nov-24	1.11	305.21	304.10	no	303.85	no
22-Nov-24	1.08	305.18	304.10	no	303.85	no
23-Nov-24			304.10		303.85	
24-Nov-24			304.10		303.85	
25-Nov-24	1.09	305.19	304.10	no	303.85	no
26-Nov-24	1.06	305.16	304.10	no	303.85	no
27-Nov-24	1.04	305.14	304.10	no	303.85	no
28-Nov-24	1.03	305.13	304.10	no	303.85	no
29-Nov-24	1.05	305.15	304.10	no	303.85	no
30-Nov-24			304.10		303.85	
1-Dec-24			304.10		303.85	
2-Dec-24	1.04	305.14	304.10	no	303.85	no
3-Dec-24			304.10		303.85	
4-Dec-24			304.10		303.85	
5-Dec-24			304.10		303.85	
6-Dec-24			304.10		303.85	
7-Dec-24			304.10		303.85	
8-Dec-24			304.10		303.85	
9-Dec-24			304.10		303.85	
10-Dec-24			304.10		303.85	
11-Dec-24			304.10		303.85	
12-Dec-24			304.10		303.85	
13-Dec-24			304.10		303.85	
14-Dec-24			304.10		303.85	
15-Dec-24			304.10		303.85	
16-Dec-24			304.10		303.85	
17-Dec-24			304.10		303.85	
18-Dec-24			304.10		303.85	
19-Dec-24			304.10		303.85	
20-Dec-24			304.10		303.85	
21-Dec-24			304.10		303.85	
22-Dec-24			304.10		303.85	
23-Dec-24			304.10		303.85	
24-Dec-24			304.10		303.85	
25-Dec-24			304.10		303.85	
26-Dec-24			304.10		303.85	
27-Dec-24			304.10		303.85	
28-Dec-24			304.10		303.85	
29-Dec-24			304.10		303.85	
30-Dec-24			304.10		303.85	
31-Dec-24			304.10		303.85	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jan-23			305.10		304.50	
2-Jan-23			305.10		304.50	
3-Jan-23			305.10		304.50	
4-Jan-23			305.10		304.50	
5-Jan-23			305.10		304.50	
6-Jan-23			305.10		304.50	
7-Jan-23			305.10		304.50	
8-Jan-23			305.10		304.50	
9-Jan-23			305.10		304.50	
10-Jan-23			305.10		304.50	
11-Jan-23			305.10		304.50	
12-Jan-23			305.10		304.50	
13-Jan-23			305.10		304.50	
14-Jan-23			305.10		304.50	
15-Jan-23			305.10		304.50	
16-Jan-23			305.10		304.50	
17-Jan-23			305.10		304.50	
18-Jan-23			305.10		304.50	
19-Jan-23			305.10		304.50	
20-Jan-23			305.10		304.50	
21-Jan-23			305.10		304.50	
22-Jan-23			305.10		304.50	
23-Jan-23			305.10		304.50	
24-Jan-23			305.10		304.50	
25-Jan-23			305.10		304.50	
26-Jan-23			305.10		304.50	
27-Jan-23			305.10		304.50	
28-Jan-23			305.10		304.50	
29-Jan-23			305.10		304.50	
30-Jan-23			305.10		304.50	
31-Jan-23			305.10		304.50	
1-Feb-23			305.10		304.50	
2-Feb-23			305.10		304.50	
3-Feb-23			305.10		304.50	
4-Feb-23			305.10		304.50	
5-Feb-23			305.10		304.50	
6-Feb-23			305.10		304.50	
7-Feb-23			305.10		304.50	
8-Feb-23			305.10		304.50	
9-Feb-23			305.10		304.50	
10-Feb-23			305.10		304.50	
11-Feb-23			305.10		304.50	
12-Feb-23			305.10		304.50	
13-Feb-23			305.10		304.50	
14-Feb-23			305.10		304.50	
15-Feb-23			305.10		304.50	
16-Feb-23			305.10		304.50	
17-Feb-23			305.10		304.50	
18-Feb-23			305.10		304.50	
19-Feb-23			305.10		304.50	
20-Feb-23			305.10		304.50	
21-Feb-23			305.10		304.50	
22-Feb-23			305.10		304.50	
23-Feb-23			305.10		304.50	
24-Feb-23			305.10		304.50	
25-Feb-23			305.10		304.50	
26-Feb-23			305.10		304.50	
27-Feb-23			305.10		304.50	
28-Feb-23			305.10		304.50	
1-Mar-23			305.10		304.50	
2-Mar-23			305.10		304.50	
3-Mar-23			305.10		304.50	
4-Mar-23			305.10		304.50	
5-Mar-23			305.10		304.50	
6-Mar-23			305.10		304.50	
7-Mar-23			305.10		304.50	
8-Mar-23			305.10		304.50	
9-Mar-23			305.10		304.50	
10-Mar-23			305.10		304.50	
11-Mar-23			305.10		304.50	
12-Mar-23			305.10		304.50	
13-Mar-23			305.10		304.50	
14-Mar-23			305.10		304.50	
15-Mar-23			305.10		304.50	
16-Mar-23			305.10		304.50	
17-Mar-23			305.10		304.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
18-Mar-23			305.10		304.50	
19-Mar-23			305.10		304.50	
20-Mar-23			305.10		304.50	
21-Mar-23			305.10		304.50	
22-Mar-23			305.10		304.50	
23-Mar-23			305.10		304.50	
24-Mar-23			305.10		304.50	
25-Mar-23			305.10		304.50	
26-Mar-23			305.10		304.50	
27-Mar-23			305.10		304.50	
28-Mar-23			305.10		304.50	
29-Mar-23			305.10		304.50	
30-Mar-23			305.10		304.50	
31-Mar-23			305.10		304.50	
1-Apr-23			305.10		304.50	
2-Apr-23			305.10		304.50	
3-Apr-23	0.78	305.86	305.10	no	304.50	no
4-Apr-23	0.68	305.76	305.10	no	304.50	no
5-Apr-23	0.69	305.77	305.10	no	304.50	no
6-Apr-23	0.69	305.77	305.10	no	304.50	no
7-Apr-23			305.10		304.50	
8-Apr-23			305.10		304.50	
9-Apr-23			305.10		304.50	
10-Apr-23	0.70	305.78	305.10	no	304.50	no
11-Apr-23	0.70	305.79	305.10	no	304.50	no
12-Apr-23	0.70	305.79	305.10	no	304.50	no
13-Apr-23	0.70	305.79	305.10	no	304.50	no
14-Apr-23	0.70	305.79	305.10	no	304.50	no
15-Apr-23			305.10		304.50	
16-Apr-23			305.10		304.50	
17-Apr-23	0.70	305.79	305.10	no	304.50	no
18-Apr-23	0.70	305.79	305.10	no	304.50	no
19-Apr-23	0.70	305.79	305.10	no	304.50	no
20-Apr-23	0.70	305.79	305.10	no	304.50	no
21-Apr-23	0.70	305.79	305.10	no	304.50	no
22-Apr-23			305.10		304.50	
23-Apr-23			305.10		304.50	
24-Apr-23	0.70	305.79	305.10	no	304.50	no
25-Apr-23	0.70	305.79	305.10	no	304.50	no
26-Apr-23	0.70	305.79	305.10	no	304.50	no
27-Apr-23	0.70	305.79	305.10	no	304.50	no
28-Apr-23	0.70	305.79	305.10	no	304.50	no
29-Apr-23			305.10		304.50	
30-Apr-23			305.10		304.50	
1-May-23	0.72	305.81	305.10	no	304.50	no
2-May-23	0.72	305.81	305.10	no	304.50	no
3-May-23	0.76	305.85	305.10	no	304.50	no
4-May-23	0.73	305.82	305.10	no	304.50	no
5-May-23	0.75	305.84	305.10	no	304.50	no
6-May-23			305.10		304.50	
7-May-23			305.10		304.50	
8-May-23	0.76	305.85	305.10	no	304.50	no
9-May-23	0.78	305.87	305.10	no	304.50	no
10-May-23	0.79	305.88	305.10	no	304.50	no
11-May-23	0.80	305.89	305.10	no	304.50	no
12-May-23	0.81	305.90	305.10	no	304.50	no
13-May-23			305.10		304.50	
14-May-23			305.10		304.50	
15-May-23	0.84	305.93	305.10	no	304.50	no
16-May-23	0.83	305.92	305.10	no	304.50	no
17-May-23	0.83	305.92	305.10	no	304.50	no
18-May-23	0.83	305.92	305.10	no	304.50	no
19-May-23	0.83	305.92	305.10	no	304.50	no
20-May-23			305.10		304.50	
21-May-23			305.10		304.50	
22-May-23			305.10		304.50	
23-May-23	0.89	305.98	305.10	no	304.50	no
24-May-23	0.90	305.99	305.10	no	304.50	no
25-May-23	0.90	305.99	305.10	no	304.50	no
26-May-23	0.89	305.98	305.10	no	304.50	no
27-May-23			305.10		304.50	
28-May-23			305.10		304.50	
29-May-23	0.89	305.98	305.10	no	304.50	no
30-May-23	0.89	305.98	305.10	no	304.50	no
31-May-23	0.89	305.98	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-23	0.90	305.99	305.10	no	304.50	no
2-Jun-23	0.89	305.98	305.10	no	304.50	no
3-Jun-23			305.10		304.50	
4-Jun-23			305.10		304.50	
5-Jun-23	0.89	305.98	305.10	no	304.50	no
6-Jun-23	0.89	305.98	305.10	no	304.50	no
7-Jun-23	0.89	305.98	305.10	no	304.50	no
8-Jun-23	0.89	305.98	305.10	no	304.50	no
9-Jun-23	0.89	305.98	305.10	no	304.50	no
10-Jun-23			305.10		304.50	
11-Jun-23			305.10		304.50	
12-Jun-23	0.90	305.99	305.10	no	304.50	no
13-Jun-23	0.91	306.00	305.10	no	304.50	no
14-Jun-23	0.92	306.01	305.10	no	304.50	no
15-Jun-23	0.92	306.01	305.10	no	304.50	no
16-Jun-23	0.93	306.02	305.10	no	304.50	no
17-Jun-23			305.10		304.50	
18-Jun-23			305.10		304.50	
19-Jun-23	0.91	306.00	305.10	no	304.50	no
20-Jun-23	0.92	306.01	305.10	no	304.50	no
21-Jun-23	0.93	306.02	305.10	no	304.50	no
22-Jun-23	0.93	306.02	305.10	no	304.50	no
23-Jun-23	0.90	305.99	305.10	no	304.50	no
24-Jun-23			305.10		304.50	
25-Jun-23			305.10		304.50	
26-Jun-23	0.90	305.99	305.10	no	304.50	no
27-Jun-23	0.93	306.02	305.10	no	304.50	no
28-Jun-23	0.94	306.03	305.10	no	304.50	no
29-Jun-23	0.94	306.03	305.10	no	304.50	no
30-Jun-23	0.93	306.02	305.10	no	304.50	no
1-Jul-23			305.10		304.50	
2-Jul-23			305.10		304.50	
3-Jul-23			305.10		304.50	
4-Jul-23	0.95	306.04	305.10	no	304.50	no
5-Jul-23	0.94	306.03	305.10	no	304.50	no
6-Jul-23	0.93	306.02	305.10	no	304.50	no
7-Jul-23	0.96	306.05	305.10	no	304.50	no
8-Jul-23			305.10		304.50	
9-Jul-23			305.10		304.50	
10-Jul-23	0.95	306.04	305.10	no	304.50	no
11-Jul-23	0.90	305.99	305.10	no	304.50	no
12-Jul-23	0.88	305.97	305.10	no	304.50	no
13-Jul-23	0.90	305.99	305.10	no	304.50	no
14-Jul-23	0.87	305.96	305.10	no	304.50	no
15-Jul-23			305.10		304.50	
16-Jul-23			305.10		304.50	
17-Jul-23	0.81	305.90	305.10	no	304.50	no
18-Jul-23	0.81	305.90	305.10	no	304.50	no
19-Jul-23	0.79	305.88	305.10	no	304.50	no
20-Jul-23	0.78	305.87	305.10	no	304.50	no
21-Jul-23	0.78	305.87	305.10	no	304.50	no
22-Jul-23			305.10		304.50	
23-Jul-23			305.10		304.50	
24-Jul-23	0.76	305.85	305.10	no	304.50	no
25-Jul-23	0.82	305.91	305.10	no	304.50	no
26-Jul-23	0.81	305.90	305.10	no	304.50	no
27-Jul-23	0.81	305.90	305.10	no	304.50	no
28-Jul-23	0.81	305.90	305.10	no	304.50	no
29-Jul-23	0.81	305.90	305.10	no	304.50	no
30-Jul-23			305.10		304.50	
31-Jul-23	0.87	305.96	305.10	no	304.50	no
1-Aug-23	0.87	305.96	305.10	no	304.50	no
2-Aug-23	0.87	305.96	305.10	no	304.50	no
3-Aug-23	0.88	305.97	305.10	no	304.50	no
4-Aug-23	0.89	305.98	305.10	no	304.50	no
5-Aug-23			305.10		304.50	
6-Aug-23			305.10		304.50	
7-Aug-23			305.10		304.50	
8-Aug-23	0.90	305.99	305.10	no	304.50	no
9-Aug-23	0.90	305.99	305.10	no	304.50	no
10-Aug-23	0.90	305.99	305.10	no	304.50	no
11-Aug-23	0.90	305.99	305.10	no	304.50	no
12-Aug-23			305.10		304.50	
13-Aug-23			305.10		304.50	
14-Aug-23	1.00	306.09	305.10	no	304.50	no
15-Aug-23	0.91	306.00	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-23	0.93	306.02	305.10	no	304.50	no
17-Aug-23	0.93	306.02	305.10	no	304.50	no
18-Aug-23	0.94	306.03	305.10	no	304.50	no
19-Aug-23	0.94	306.03	305.10	no	304.50	no
20-Aug-23			305.10		304.50	
21-Aug-23	0.94	306.03	305.10	no	304.50	no
22-Aug-23	0.94	306.03	305.10	no	304.50	no
23-Aug-23	0.93	306.02	305.10	no	304.50	no
24-Aug-23	0.93	306.02	305.10	no	304.50	no
25-Aug-23	0.96	306.05	305.10	no	304.50	no
26-Aug-23	0.94	306.02	305.10	no	304.50	no
27-Aug-23			305.10		304.50	
28-Aug-23	0.96	306.05	305.10	no	304.50	no
29-Aug-23	0.95	306.04	305.10	no	304.50	no
30-Aug-23	0.99	306.08	305.10	no	304.50	no
31-Aug-23	0.94	306.03	305.10	no	304.50	no
1-Sep-23	0.93	306.02	305.10	no	304.50	no
2-Sep-23	0.94	306.03	305.10	no	304.50	no
3-Sep-23			305.10		304.50	
4-Sep-23			305.10		304.50	
5-Sep-23	0.93	306.02	305.10	no	304.50	no
6-Sep-23	0.92	306.01	305.10	no	304.50	no
7-Sep-23	0.93	306.02	305.10	no	304.50	no
8-Sep-23	0.91	306.00	305.10	no	304.50	no
9-Sep-23	0.91	306.00	305.10	no	304.50	no
10-Sep-23			305.10		304.50	
11-Sep-23	1.00	306.09	305.10	no	304.50	no
12-Sep-23	0.93	306.02	305.10	no	304.50	no
13-Sep-23	0.90	305.99	305.10	no	304.50	no
14-Sep-23	0.90	305.99	305.10	no	304.50	no
15-Sep-23	0.90	305.99	305.10	no	304.50	no
16-Sep-23	0.90	305.99	305.10	no	304.50	no
17-Sep-23			305.10		304.50	
18-Sep-23	0.90	305.99	305.10	no	304.50	no
19-Sep-23	0.90	305.99	305.10	no	304.50	no
20-Sep-23	0.90	305.99	305.10	no	304.50	no
21-Sep-23	0.90	305.99	305.10	no	304.50	no
22-Sep-23	0.90	305.99	305.10	no	304.50	no
23-Sep-23	0.90	305.99	305.10	no	304.50	no
24-Sep-23			305.10		304.50	
25-Sep-23	0.86	305.95	305.10	no	304.50	no
26-Sep-23	0.86	305.95	305.10	no	304.50	no
27-Sep-23	0.87	305.96	305.10	no	304.50	no
28-Sep-23	0.86	305.95	305.10	no	304.50	no
29-Sep-23	0.85	305.94	305.10	no	304.50	no
30-Sep-23			305.10		304.50	
1-Oct-23			305.10		304.50	
2-Oct-23	0.85	305.94	305.10	no	304.50	no
3-Oct-23	0.85	305.94	305.10	no	304.50	no
4-Oct-23	0.85	305.94	305.10	no	304.50	no
5-Oct-23	0.84	305.93	305.10	no	304.50	no
6-Oct-23	0.85	305.94	305.10	no	304.50	no
7-Oct-23			305.10		304.50	
8-Oct-23			305.10		304.50	
9-Oct-23			305.10		304.50	
10-Oct-23	0.81	305.90	305.10	no	304.50	no
11-Oct-23	0.83	305.92	305.10	no	304.50	no
12-Oct-23	0.82	305.91	305.10	no	304.50	no
13-Oct-23	0.82	305.91	305.10	no	304.50	no
14-Oct-23	0.82	305.91	305.10	no	304.50	no
15-Oct-23			305.10		304.50	
16-Oct-23	0.83	305.92	305.10	no	304.50	no
17-Oct-23	0.84	305.93	305.10	no	304.50	no
18-Oct-23	0.83	305.92	305.10	no	304.50	no
19-Oct-23	0.82	305.91	305.10	no	304.50	no
20-Oct-23	0.83	305.92	305.10	no	304.50	no
21-Oct-23	0.83	305.92	305.10	no	304.50	no
22-Oct-23			305.10		304.50	
23-Oct-23	0.81	305.90	305.10	no	304.50	no
24-Oct-23	0.80	305.89	305.10	no	304.50	no
25-Oct-23	0.77	305.86	305.10	no	304.50	no
26-Oct-23	0.76	305.85	305.10	no	304.50	no
27-Oct-23	0.75	305.84	305.10	no	304.50	no
28-Oct-23	0.78	305.87	305.10	no	304.50	no
29-Oct-23			305.10		304.50	
30-Oct-23	0.73	305.82	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-23	0.71	305.80	305.10	no	304.50	no
1-Nov-23	0.70	305.79	305.10	no	304.50	no
2-Nov-23	0.70	305.79	305.10	no	304.50	no
3-Nov-23	0.70	305.79	305.10	no	304.50	no
4-Nov-23			305.10		304.50	
5-Nov-23			305.10		304.50	
6-Nov-23	0.71	305.80	305.10	no	304.50	no
7-Nov-23	0.71	305.80	305.10	no	304.50	no
8-Nov-23	0.70	305.79	305.10	no	304.50	no
9-Nov-23	0.70	305.79	305.10	no	304.50	no
10-Nov-23	0.73	305.82	305.10	no	304.50	no
11-Nov-23	0.73	305.82	305.10	no	304.50	no
12-Nov-23			305.10		304.50	
13-Nov-23	0.76	305.85	305.10	no	304.50	no
14-Nov-23	0.76	305.85	305.10	no	304.50	no
15-Nov-23	0.77	305.86	305.10	no	304.50	no
16-Nov-23	0.75	305.84	305.10	no	304.50	no
17-Nov-23	0.74	305.83	305.10	no	304.50	no
18-Nov-23	0.74	305.83	305.10	no	304.50	no
19-Nov-23			305.10		304.50	
20-Nov-23	0.72	305.81	305.10	no	304.50	no
21-Nov-23	0.71	305.80	305.10	no	304.50	no
22-Nov-23	0.71	305.80	305.10	no	304.50	no
23-Nov-23	0.70	305.79	305.10	no	304.50	no
24-Nov-23	0.70	305.79	305.10	no	304.50	no
25-Nov-23			305.10		304.50	
26-Nov-23			305.10		304.50	
27-Nov-23	0.70	305.79	305.10	no	304.50	no
28-Nov-23	0.70	305.79	305.10	no	304.50	no
29-Nov-23	0.69	305.78	305.10	no	304.50	no
30-Nov-23	0.70	305.79	305.10	no	304.50	no
1-Dec-23	0.70	305.79	305.10	no	304.50	no
2-Dec-23			305.10		304.50	
3-Dec-23			305.10		304.50	
4-Dec-23	0.70	305.79	305.10	no	304.50	no
5-Dec-23	0.70	305.79	305.10	no	304.50	no
6-Dec-23	0.70	305.79	305.10	no	304.50	no
7-Dec-23	0.70	305.79	305.10	no	304.50	no
8-Dec-23	0.70	305.79	305.10	no	304.50	no
9-Dec-23			305.10		304.50	
10-Dec-23			305.10		304.50	
11-Dec-23			305.10		304.50	
12-Dec-23			305.10		304.50	
13-Dec-23			305.10		304.50	
14-Dec-23			305.10		304.50	
15-Dec-23			305.10		304.50	
16-Dec-23			305.10		304.50	
17-Dec-23			305.10		304.50	
18-Dec-23			305.10		304.50	
19-Dec-23			305.10		304.50	
20-Dec-23			305.10		304.50	
21-Dec-23			305.10		304.50	
22-Dec-23			305.10		304.50	
23-Dec-23			305.10		304.50	
24-Dec-23			305.10		304.50	
25-Dec-23			305.10		304.50	
26-Dec-23			305.10		304.50	
27-Dec-23			305.10		304.50	
28-Dec-23			305.10		304.50	
29-Dec-23			305.10		304.50	
30-Dec-23			305.10		304.50	
31-Dec-23			305.10		304.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
01-Jan-24			305.10		304.50	
02-Jan-24			305.10		304.50	
03-Jan-24			305.10		304.50	
04-Jan-24			305.10		304.50	
05-Jan-24			305.10		304.50	
06-Jan-24			305.10		304.50	
07-Jan-24			305.10		304.50	
08-Jan-24			305.10		304.50	
09-Jan-24			305.10		304.50	
10-Jan-24			305.10		304.50	
11-Jan-24			305.10		304.50	
12-Jan-24			305.10		304.50	
13-Jan-24			305.10		304.50	
14-Jan-24			305.10		304.50	
15-Jan-24			305.10		304.50	
16-Jan-24			305.10		304.50	
17-Jan-24			305.10		304.50	
18-Jan-24			305.10		304.50	
19-Jan-24			305.10		304.50	
20-Jan-24			305.10		304.50	
21-Jan-24			305.10		304.50	
22-Jan-24			305.10		304.50	
23-Jan-24			305.10		304.50	
24-Jan-24			305.10		304.50	
25-Jan-24			305.10		304.50	
26-Jan-24			305.10		304.50	
27-Jan-24			305.10		304.50	
28-Jan-24			305.10		304.50	
29-Jan-24			305.10		304.50	
30-Jan-24			305.10		304.50	
31-Jan-24			305.10		304.50	
1-Feb-24			305.10		304.50	
2-Feb-24			305.10		304.50	
3-Feb-24			305.10		304.50	
4-Feb-24			305.10		304.50	
5-Feb-24			305.10		304.50	
6-Feb-24			305.10		304.50	
7-Feb-24			305.10		304.50	
8-Feb-24			305.10		304.50	
9-Feb-24			305.10		304.50	
10-Feb-24			305.10		304.50	
11-Feb-24			305.10		304.50	
12-Feb-24			305.10		304.50	
13-Feb-24			305.10		304.50	
14-Feb-24			305.10		304.50	
15-Feb-24			305.10		304.50	
16-Feb-24			305.10		304.50	
17-Feb-24			305.10		304.50	
18-Feb-24			305.10		304.50	
19-Feb-24			305.10		304.50	
20-Feb-24			305.10		304.50	
21-Feb-24			305.10		304.50	
22-Feb-24			305.10		304.50	
23-Feb-24			305.10		304.50	
24-Feb-24			305.10		304.50	
25-Feb-24			305.10		304.50	
26-Feb-24			305.10		304.50	
27-Feb-24			305.10		304.50	
28-Feb-24			305.10		304.50	
29-Feb-24			305.10		304.50	
1-Mar-24			305.10		304.50	
2-Mar-24			305.10		304.50	
3-Mar-24			305.10		304.50	
4-Mar-24			305.10		304.50	
5-Mar-24			305.10		304.50	
6-Mar-24			305.10		304.50	
7-Mar-24			305.10		304.50	
8-Mar-24			305.10		304.50	
9-Mar-24			305.10		304.50	
10-Mar-24			305.10		304.50	
11-Mar-24			305.10		304.50	
12-Mar-24			305.10		304.50	
13-Mar-24			305.10		304.50	
14-Mar-24			305.10		304.50	
15-Mar-24			305.10		304.50	
16-Mar-24			305.10		304.50	

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
17-Mar-24			305.10		304.50	
18-Mar-24			305.10		304.50	
19-Mar-24	0.92	306.17	305.10	no	304.50	no
20-Mar-24	0.91	306.16	305.10	no	304.50	no
21-Mar-24			305.10		304.50	
22-Mar-24			305.10		304.50	
23-Mar-24			305.10		304.50	
24-Mar-24			305.10		304.50	
25-Mar-24	0.92	306.17	305.10	no	304.50	no
26-Mar-24	0.92	306.17	305.10	no	304.50	no
27-Mar-24	0.92	306.17	305.10	no	304.50	no
28-Mar-24	0.92	306.17	305.10	no	304.50	no
29-Mar-24			305.10		304.50	
30-Mar-24			305.10		304.50	
31-Mar-24			305.10		304.50	
1-Apr-24	0.92	306.17	305.10	no	304.50	no
2-Apr-24	0.90	306.15	305.10	no	304.50	no
3-Apr-24	0.91	306.16	305.10	no	304.50	no
4-Apr-24	0.92	306.17	305.10	no	304.50	no
5-Apr-24	0.92	306.17	305.10	no	304.50	no
6-Apr-24			305.10		304.50	
7-Apr-24			305.10		304.50	
8-Apr-24	0.92	306.17	305.10	no	304.50	no
9-Apr-24	0.92	306.17	305.10	no	304.50	no
10-Apr-24	0.92	306.17	305.10	no	304.50	no
11-Apr-24	0.92	306.17	305.10	no	304.50	no
12-Apr-24	0.96	306.21	305.10	no	304.50	no
13-Apr-24			305.10		304.50	
14-Apr-24			305.10		304.50	
15-Apr-24	0.96	306.21	305.10	no	304.50	no
16-Apr-24	0.96	306.21	305.10	no	304.50	no
17-Apr-24	0.96	306.21	305.10	no	304.50	no
18-Apr-24	0.97	306.22	305.10	no	304.50	no
19-Apr-24	0.98	306.23	305.10	no	304.50	no
20-Apr-24			305.10		304.50	
21-Apr-24			305.10		304.50	
22-Apr-24	0.98	306.23	305.10	no	304.50	no
23-Apr-24	0.97	306.22	305.10	no	304.50	no
24-Apr-24	0.96	306.21	305.10	no	304.50	no
25-Apr-24	0.97	306.22	305.10	no	304.50	no
26-Apr-24	0.97	306.22	305.10	no	304.50	no
27-Apr-24			305.10		304.50	
28-Apr-24			305.10		304.50	
29-Apr-24	0.97	306.22	305.10	no	304.50	no
30-Apr-24	1.00	306.25	305.10	no	304.50	no
1-May-24	1.00	306.25	305.10	no	304.50	no
2-May-24	0.99	306.24	305.10	no	304.50	no
3-May-24	1.00	306.25	305.10	no	304.50	no
4-May-24			305.10		304.50	
5-May-24			305.10		304.50	
6-May-24	1.01	306.26	305.10	no	304.50	no
7-May-24	1.00	306.25	305.10	no	304.50	no
8-May-24	0.98	306.23	305.10	no	304.50	no
9-May-24	0.95	306.20	305.10	no	304.50	no
10-May-24	0.92	306.17	305.10	no	304.50	no
11-May-24			305.10		304.50	
12-May-24			305.10		304.50	
13-May-24	0.92	306.17	305.10	no	304.50	no
14-May-24	0.92	306.17	305.10	no	304.50	no
15-May-24	0.91	306.16	305.10	no	304.50	no
16-May-24	0.91	306.16	305.10	no	304.50	no
17-May-24	0.90	306.15	305.10	no	304.50	no
18-May-24			305.10		304.50	
19-May-24			305.10		304.50	
20-May-24			305.10		304.50	
21-May-24	0.91	306.16	305.10	no	304.50	no
22-May-24	0.92	306.17	305.10	no	304.50	no
23-May-24	0.92	306.17	305.10	no	304.50	no
24-May-24	0.91	306.16	305.10	no	304.50	no
25-May-24			305.10		304.50	
26-May-24			305.10		304.50	
27-May-24	0.92	306.17	305.10	no	304.50	no
28-May-24	0.92	306.17	305.10	no	304.50	no
29-May-24	0.95	306.20	305.10	no	304.50	no
30-May-24	0.95	306.20	305.10	no	304.50	no
31-May-24	0.94	306.19	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
1-Jun-24			305.10		304.50	
2-Jun-24			305.10		304.50	
3-Jun-24	0.95	306.20	305.10	no	304.50	no
4-Jun-24	0.94	306.19	305.10	no	304.50	no
5-Jun-24	0.92	306.17	305.10	no	304.50	no
6-Jun-24	0.92	306.17	305.10	no	304.50	no
7-Jun-24	0.90	306.15	305.10	no	304.50	no
8-Jun-24			305.10		304.50	
9-Jun-24			305.10		304.50	
10-Jun-24	0.82	306.07	305.10	no	304.50	no
11-Jun-24	0.81	306.06	305.10	no	304.50	no
12-Jun-24	0.80	306.05	305.10	no	304.50	no
13-Jun-24	0.79	306.04	305.10	no	304.50	no
14-Jun-24	0.79	306.04	305.10	no	304.50	no
15-Jun-24			305.10		304.50	
16-Jun-24			305.10		304.50	
17-Jun-24	0.78	306.03	305.10	no	304.50	no
18-Jun-24	0.78	306.03	305.10	no	304.50	no
19-Jun-24	0.79	306.04	305.10	no	304.50	no
20-Jun-24	0.79	306.04	305.10	no	304.50	no
21-Jun-24	0.85	306.10	305.10	no	304.50	no
22-Jun-24	0.84	306.09	305.10	no	304.50	no
23-Jun-24			305.10		304.50	
24-Jun-24	0.85	306.10	305.10	no	304.50	no
25-Jun-24	0.84	306.09	305.10	no	304.50	no
26-Jun-24	0.84	306.09	305.10	no	304.50	no
27-Jun-24	0.85	306.10	305.10	no	304.50	no
28-Jun-24	0.84	306.09	305.10	no	304.50	no
29-Jun-24			305.10		304.50	
30-Jun-24			305.10		304.50	
1-Jul-24			305.10		304.50	
2-Jul-24	0.82	306.07	305.10	no	304.50	no
3-Jul-24	0.82	306.07	305.10	no	304.50	no
4-Jul-24	0.81	306.06	305.10	no	304.50	no
5-Jul-24	0.81	306.06	305.10	no	304.50	no
6-Jul-24			305.10		304.50	
7-Jul-24			305.10		304.50	
8-Jul-24	0.80	306.05	305.10	no	304.50	no
9-Jul-24	0.80	306.05	305.10	no	304.50	no
10-Jul-24	0.84	306.09	305.10	no	304.50	no
11-Jul-24	0.87	306.12	305.10	no	304.50	no
12-Jul-24	0.88	306.13	305.10	no	304.50	no
13-Jul-24			305.10		304.50	
14-Jul-24			305.10		304.50	
15-Jul-24	0.93	306.18	305.10	no	304.50	no
16-Jul-24	0.95	306.20	305.10	no	304.50	no
17-Jul-24	1.01	306.26	305.10	no	304.50	no
18-Jul-24	1.02	306.27	305.10	no	304.50	no
19-Jul-24	1.02	306.27	305.10	no	304.50	no
20-Jul-24	1.03	306.28	305.10	no	304.50	no
21-Jul-24			305.10		304.50	
22-Jul-24	1.04	306.29	305.10	no	304.50	no
23-Jul-24	1.04	306.29	305.10	no	304.50	no
24-Jul-24	1.05	306.30	305.10	no	304.50	no
25-Jul-24	1.06	306.31	305.10	no	304.50	no
26-Jul-24	1.05	306.30	305.10	no	304.50	no
27-Jul-24	1.04	306.29	305.10	no	304.50	no
28-Jul-24			305.10		304.50	
29-Jul-24	1.07	306.32	305.10	no	304.50	no
30-Jul-24	1.06	306.31	305.10	no	304.50	no
31-Jul-24	1.06	306.31	305.10	no	304.50	no
1-Aug-24	1.06	306.31	305.10	no	304.50	no
2-Aug-24	1.06	306.31	305.10	no	304.50	no
3-Aug-24			305.10		304.50	
4-Aug-24			305.10		304.50	
5-Aug-24			305.10		304.50	
6-Aug-24	1.05	306.30	305.10	no	304.50	no
7-Aug-24	1.04	306.29	305.10	no	304.50	no
8-Aug-24	1.04	306.29	305.10	no	304.50	no
9-Aug-24	1.05	306.30	305.10	no	304.50	no
10-Aug-24			305.10		304.50	
11-Aug-24			305.10		304.50	
12-Aug-24	1.05	306.30	305.10	no	304.50	no
13-Aug-24	1.06	306.31	305.10	no	304.50	no
14-Aug-24	1.07	306.32	305.10	no	304.50	no
15-Aug-24	1.02	306.27	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
16-Aug-24	1.00	306.25	305.10	no	304.50	no
17-Aug-24			305.10		304.50	
18-Aug-24			305.10		304.50	
19-Aug-24	1.02	306.27	305.10	no	304.50	no
20-Aug-24	1.01	306.26	305.10	no	304.50	no
21-Aug-24	1.01	306.26	305.10	no	304.50	no
22-Aug-24	1.00	306.25	305.10	no	304.50	no
23-Aug-24	1.00	306.25	305.10	no	304.50	no
24-Aug-24			305.10		304.50	
25-Aug-24			305.10		304.50	
26-Aug-24	0.99	306.24	305.10	no	304.50	no
27-Aug-24	0.97	306.22	305.10	no	304.50	no
28-Aug-24	0.98	306.23	305.10	no	304.50	no
29-Aug-24	0.96	306.21	305.10	no	304.50	no
30-Aug-24	0.91	306.16	305.10	no	304.50	no
31-Aug-24			305.10		304.50	
1-Sep-24			305.10		304.50	
2-Sep-24			305.10		304.50	
3-Sep-24	0.83	306.08	305.10	no	304.50	no
4-Sep-24	0.76	306.01	305.10	no	304.50	no
5-Sep-24	0.71	305.96	305.10	no	304.50	no
6-Sep-24	0.71	305.96	305.10	no	304.50	no
7-Sep-24			305.10		304.50	
8-Sep-24			305.10		304.50	
9-Sep-24	0.69	305.94	305.10	no	304.50	no
10-Sep-24	0.68	305.93	305.10	no	304.50	no
11-Sep-24	0.68	305.93	305.10	no	304.50	no
12-Sep-24	0.69	305.94	305.10	no	304.50	no
13-Sep-24	0.68	305.93	305.10	no	304.50	no
14-Sep-24			305.10		304.50	
15-Sep-24			305.10		304.50	
16-Sep-24	0.71	305.96	305.10	no	304.50	no
17-Sep-24	0.70	305.95	305.10	no	304.50	no
18-Sep-24	0.71	305.96	305.10	no	304.50	no
19-Sep-24	0.73	305.98	305.10	no	304.50	no
20-Sep-24	0.72	305.97	305.10	no	304.50	no
21-Sep-24			305.10		304.50	
22-Sep-24			305.10		304.50	
23-Sep-24	0.74	305.99	305.10	no	304.50	no
24-Sep-24	0.74	305.99	305.10	no	304.50	no
25-Sep-24	0.76	306.01	305.10	no	304.50	no
26-Sep-24	0.77	306.02	305.10	no	304.50	no
27-Sep-24	0.76	306.01	305.10	no	304.50	no
28-Sep-24			305.10		304.50	
29-Sep-24			305.10		304.50	
30-Sep-24	0.80	306.05	305.10	no	304.50	no
1-Oct-24	0.78	306.03	305.10	no	304.50	no
2-Oct-24	0.81	306.06	305.10	no	304.50	no
3-Oct-24	0.80	306.05	305.10	no	304.50	no
4-Oct-24	0.81	306.06	305.10	no	304.50	no
5-Oct-24			305.10		304.50	
6-Oct-24			305.10		304.50	
7-Oct-24	0.76	306.01	305.10	no	304.50	no
8-Oct-24	0.70	305.95	305.10	no	304.50	no
9-Oct-24	0.68	305.93	305.10	no	304.50	no
10-Oct-24	0.68	305.93	305.10	no	304.50	no
11-Oct-24	0.70	305.95	305.10	no	304.50	no
12-Oct-24			305.10		304.50	
13-Oct-24			305.10		304.50	
14-Oct-24	0.69	305.94	305.10	no	304.50	no
15-Oct-24	0.66	305.91	305.10	no	304.50	no
16-Oct-24	0.68	305.93	305.10	no	304.50	no
17-Oct-24	0.65	305.90	305.10	no	304.50	no
18-Oct-24	0.66	305.91	305.10	no	304.50	no
19-Oct-24			305.10		304.50	
20-Oct-24			305.10		304.50	
21-Oct-24	0.63	305.88	305.10	no	304.50	no
22-Oct-24	0.64	305.89	305.10	no	304.50	no
23-Oct-24	0.62	305.87	305.10	no	304.50	no
24-Oct-24	0.64	305.89	305.10	no	304.50	no
25-Oct-24	0.61	305.86	305.10	no	304.50	no
26-Oct-24			305.10		304.50	
27-Oct-24			305.10		304.50	
28-Oct-24	0.60	305.85	305.10	no	304.50	no
29-Oct-24	0.61	305.86	305.10	no	304.50	no
30-Oct-24	0.61	305.86	305.10	no	304.50	no

Note: Water elevations are left blank when frozen conditions are encountered.

Table G-10
Threshold Summary - Phase 4 Pond
Mill Creek Aggregates Pit

Date	Gauge Reading Phase 4 Pond (m)	Water Elevation Phase 4 Pond (m ASL)	Early Warning Value (Min) (m ASL)	Exceedance of Early Warning Value	Threshold Value (Min) (m ASL)	Exceedance of Threshold Value
31-Oct-24	0.61	305.86	305.10	no	304.50	no
1-Nov-24	0.62	305.87	305.10	no	304.50	no
2-Nov-24			305.10		304.50	
3-Nov-24			305.10		304.50	
4-Nov-24	0.62	305.87	305.10	no	304.50	no
5-Nov-24	0.61	305.86	305.10	no	304.50	no
6-Nov-24	0.60	305.85	305.10	no	304.50	no
7-Nov-24	0.61	305.86	305.10	no	304.50	no
8-Nov-24	0.59	305.84	305.10	no	304.50	no
9-Nov-24			305.10		304.50	
10-Nov-24			305.10		304.50	
11-Nov-24	0.59	305.84	305.10	no	304.50	no
12-Nov-24	0.60	305.85	305.10	no	304.50	no
13-Nov-24	0.61	305.86	305.10	no	304.50	no
14-Nov-24	0.60	305.85	305.10	no	304.50	no
15-Nov-24	0.62	305.87	305.10	no	304.50	no
16-Nov-24			305.10		304.50	
17-Nov-24			305.10		304.50	
18-Nov-24	0.62	305.87	305.10	no	304.50	no
19-Nov-24	0.65	305.90	305.10	no	304.50	no
20-Nov-24	0.64	305.89	305.10	no	304.50	no
21-Nov-24	0.66	305.91	305.10	no	304.50	no
22-Nov-24	0.65	305.90	305.10	no	304.50	no
23-Nov-24			305.10		304.50	
24-Nov-24			305.10		304.50	
25-Nov-24	0.66	305.91	305.10	no	304.50	no
26-Nov-24	0.68	305.93	305.10	no	304.50	no
27-Nov-24	0.67	305.92	305.10	no	304.50	no
28-Nov-24	0.69	305.94	305.10	no	304.50	no
29-Nov-24	0.68	305.93	305.10	no	304.50	no
30-Nov-24			305.10		304.50	
1-Dec-24			305.10		304.50	
2-Dec-24	0.69	305.94	305.10	no	304.50	no
3-Dec-24			305.10		304.50	
4-Dec-24			305.10		304.50	
5-Dec-24			305.10		304.50	
6-Dec-24			305.10		304.50	
7-Dec-24			305.10		304.50	
8-Dec-24			305.10		304.50	
9-Dec-24			305.10		304.50	
10-Dec-24			305.10		304.50	
11-Dec-24			305.10		304.50	
12-Dec-24			305.10		304.50	
13-Dec-24			305.10		304.50	
14-Dec-24			305.10		304.50	
15-Dec-24			305.10		304.50	
16-Dec-24			305.10		304.50	
17-Dec-24			305.10		304.50	
18-Dec-24			305.10		304.50	
19-Dec-24			305.10		304.50	
20-Dec-24			305.10		304.50	
21-Dec-24			305.10		304.50	
22-Dec-24			305.10		304.50	
23-Dec-24			305.10		304.50	
24-Dec-24			305.10		304.50	
25-Dec-24			305.10		304.50	
26-Dec-24			305.10		304.50	
27-Dec-24			305.10		304.50	
28-Dec-24			305.10		304.50	
29-Dec-24			305.10		304.50	
30-Dec-24			305.10		304.50	
31-Dec-24			305.10		304.50	

Note: Water elevations are left blank when frozen conditions are encountered.

MILL CREEK AGGREGATES

TABLE G-11: SUMMARY OF THRESHOLDS AND ACTION RESPONSE PROTOCOL GROUNDWATER AND SURFACE WATER

Monitor Pair/Location	Seasonal Threshold Values	Seasonal Early Warning Values	Action Response Protocol
(1) BH13to DP21$_{in}$ east of Hanlon Interchange to Mill Creek	Spring: 0.11 m head difference (305.60) Summer: 0.10 m head difference (305.49) Fall: 0.09 m head difference (305.58) Winter: 0.11 m head difference (305.66)	0.13 m head difference 0.12 m head difference 0.11 m head difference 0.13 m head difference	***Typical Response Protocol*** **A: Early Warning Value Exceedance** (1) In the event that an early warning level is breached, verify water level(s) at monitor pair(s) within two days. (2) Inform Dufferin by phone and in writing. Increase monitoring frequency to twice per week in vicinity of monitoring pair. (3) Review extraction and processing operations with Dufferin staff. Rectify any obvious cause of low water levels. Continue assessment and monitoring at high frequency to establish trend in water levels, cause of low water levels, and degree of impact likely to ensue from an exceedance of a threshold. Groundwater discharge conditions at the creek will be included in the assessment. (4) If water levels continue to decline and approach the threshold value, mitigation measures, such as a recharge trench, will be prepared and implemented if necessary. MNR will be informed in writing that this process is underway. Relocation of the extraction operation to another phase is also considered an acceptable form of mitigation. Other mitigation measures may be appropriate for specific conditions, and these would be discussed and agreed with MNR prior to implementation. (5) MNR will be informed in writing, and shall be in agreement with the proposed mitigation measures, prior to the implementation of mitigation measures. Initial results of the mitigation shall be submitted to MNR within one month of implementation. **B. Threshold Exceedance** If mitigation is unsuccessful while extraction is occurring, extraction in that phase will cease. Operations will relocate to another phase, if one is available. If the exceedance continues for a period of one month, then another more rigorous, and possibly permanent, method of mitigation will be implemented in consultation with MNR. If any working threshold is continually being exceeded for more than seven consecutive days, then below water table extraction will cease at that Phase and not begin again until the groundwater/pond level elevation is above the threshold value for seven consecutive days.
(2) BH92-12 to DP17R$_{in}$ East of Hanlon interchange to Mill Creek	Spring: 0.14 m head difference (305.17) Summer: 0.06 m head difference (305.17) Fall: 0.04 m head difference (305.17) Winter: 0.07 m head difference (305.17)	0.19 m head difference 0.12 m head difference 0.09 m head difference 0.13 m head difference	
(3) DP6 $_{in}$ to DP3$_{in}$ South of Hanlon Interchange to Mill Creek	Spring: 0.73 m head difference (304.54) Summer: 0.58 m head difference (304.54) Fall: 0.55 m head difference (304.54) Winter: 0.57 m head difference (304.54)	0.84 m head difference 0.76 m head difference 0.73 m head difference 0.69 m head difference	
(4) BH92-29 to DP1$_{in}$ Northwest corner of site; west of approved Phase 3 extraction area	Spring: 0.17 m head difference (303.97) Summer: 0.23 m head difference (303.91) Fall: 0.19 m head difference (303.96) Winter: 0.29 m head difference (303.88)	0.22 m head difference 0.28 m head difference 0.24 m head difference 0.34 m head difference	
(5) BH92-27 to DP2$_{in}$ West of approved Phase 3 extraction area	Spring: 0.34 m head difference (303.69) Summer: 0.32 m head difference (303.50) Fall: 0.34 m head difference (303.55) Winter: 0.43 m head difference (303.65)	0.39 m head difference 0.37 m head difference 0.39 m head difference 0.48 m head difference	
(6) OW5-84 to DP5CR$_{in}$ Southwest corner of site downgradient from silt pond SP1 to Mill Creek	Spring: 0.30 m head difference (302.86) *Revised: 0.18 m head difference (302.86)** Summer: 0.25 m head difference (302.79) *Revised: 0.15 m head difference (302.79)** Fall: 0.25 m head difference (302.84) *Revised: 0.15 m head difference (302.84)** Winter: 0.30 m head difference (302.88) *Revised: 0.20 m head difference (302.88)**	0.34 m head difference *0.21 m head difference** 0.28 m head difference *0.18 m head difference** 0.28 m head difference *0.18 m head difference** 0.34 m head difference *0.23 m head difference**	
(7) Phase 1 Pond	305.5 mASL	305.75 mASL	
(8) Phase 2 Pond	305.0 mASL	305.30 mASL	
(9) Phase 3 Pond	303.85 mASL	304.10 mASL	
(10) Phase 4 Pond	304.50 mASL	305.10 mASL	
(11) Silt Pond SP3	Maximum: 307.1 mASL Minimum: 304.85 mASL	Maximum: 306.85 mASL Minimum: 305.10 mASL	

Notes:

(1) Thresholds and action response plan came into effect on June 30, 2001. New thresholds added July 31, 2002, October 2004, December 2005, April 2011, December 2011, May 2012, and October 2012.

(2) Values in brackets refer to minimum water level elevations (metres above sea level) at monitors DP21$_{in}$, DP17R$_{in}$, DP3$_{in}$, DP1$_{in}$, DP2$_{in}$ and DP5CR$_{in}$, respectively.

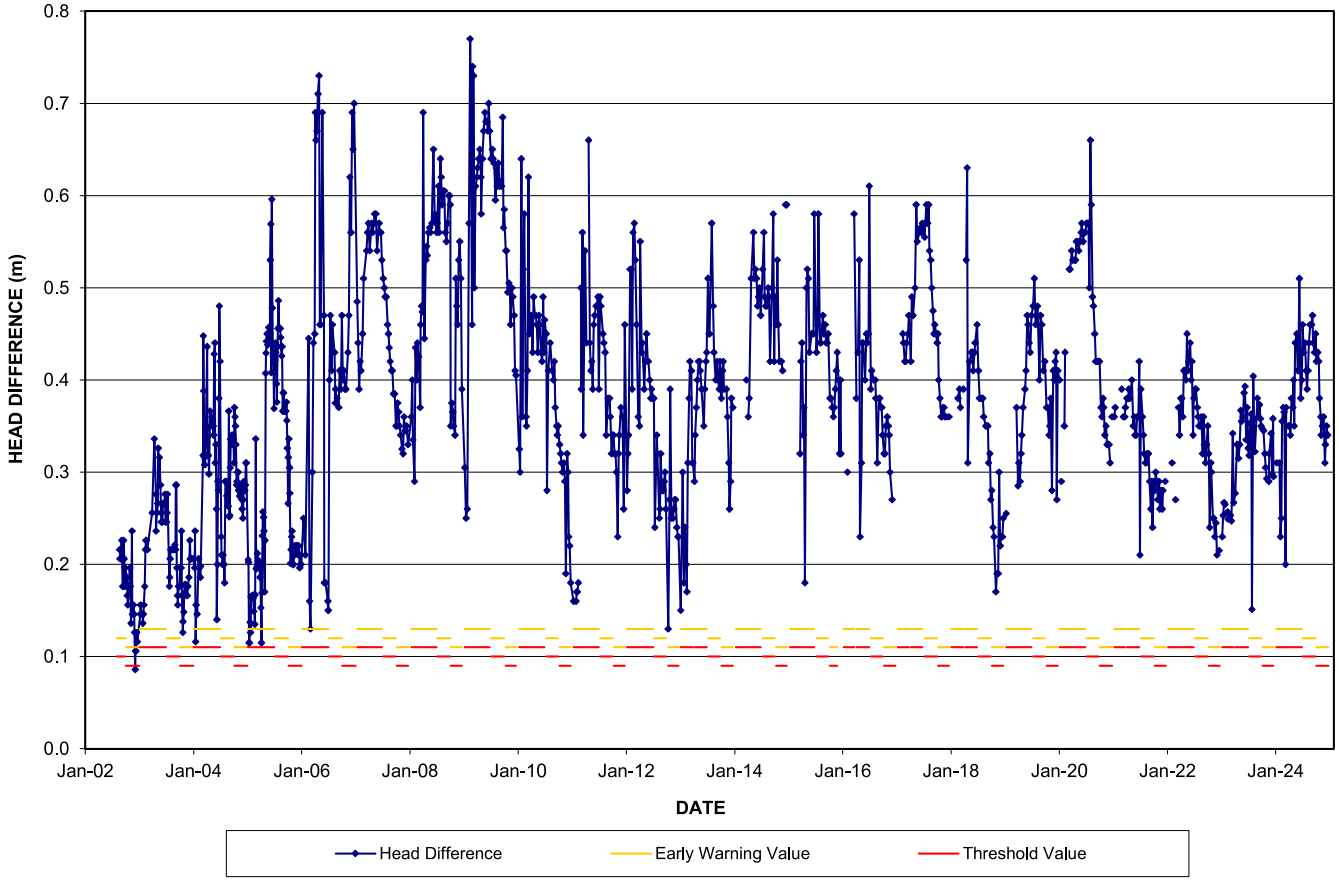
(3) Seasons are defined as follows:
Winter = January to March inclusive
Spring = April to June inclusive
Summer = July to September inclusive
Fall = October to December inclusive

(4) (in) indicates that the water levels are measured inside the drive point.

*(5) * indicates revised thresholds approved on June 30, 2022*

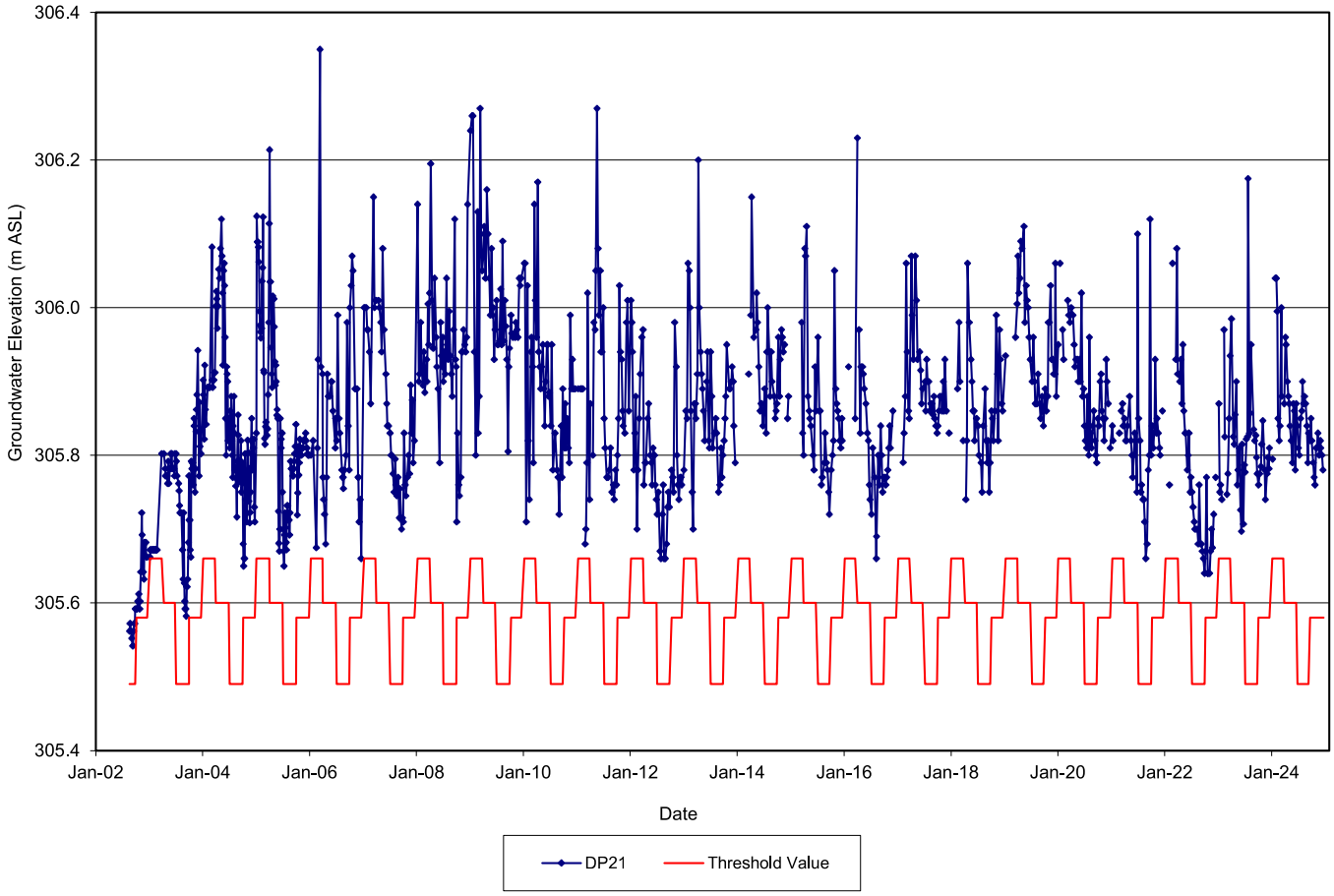
BH13 to DP21
HEAD DIFFERENCE

FIGURE G-1



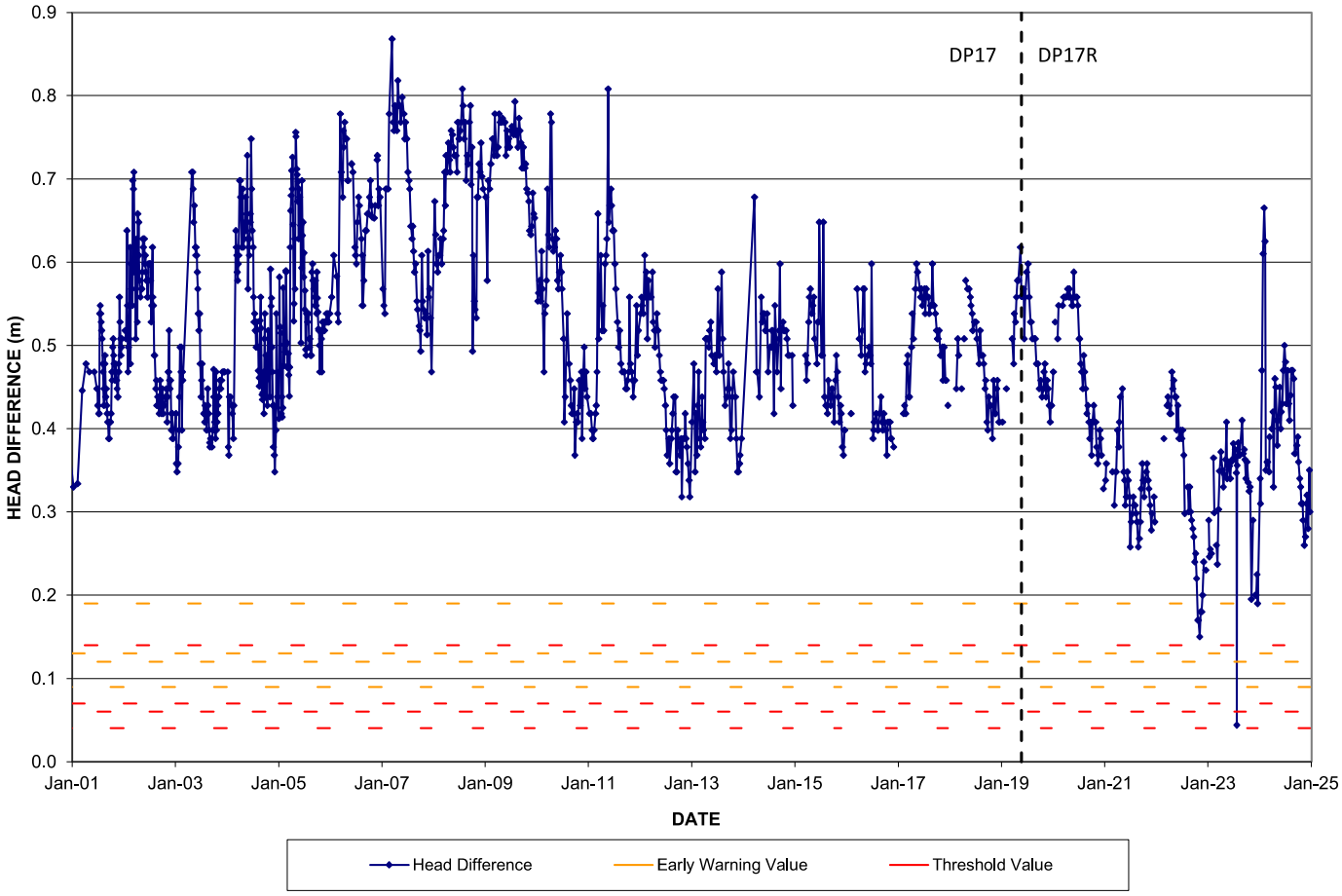
DP21 Thresholds

FIGURE G-2



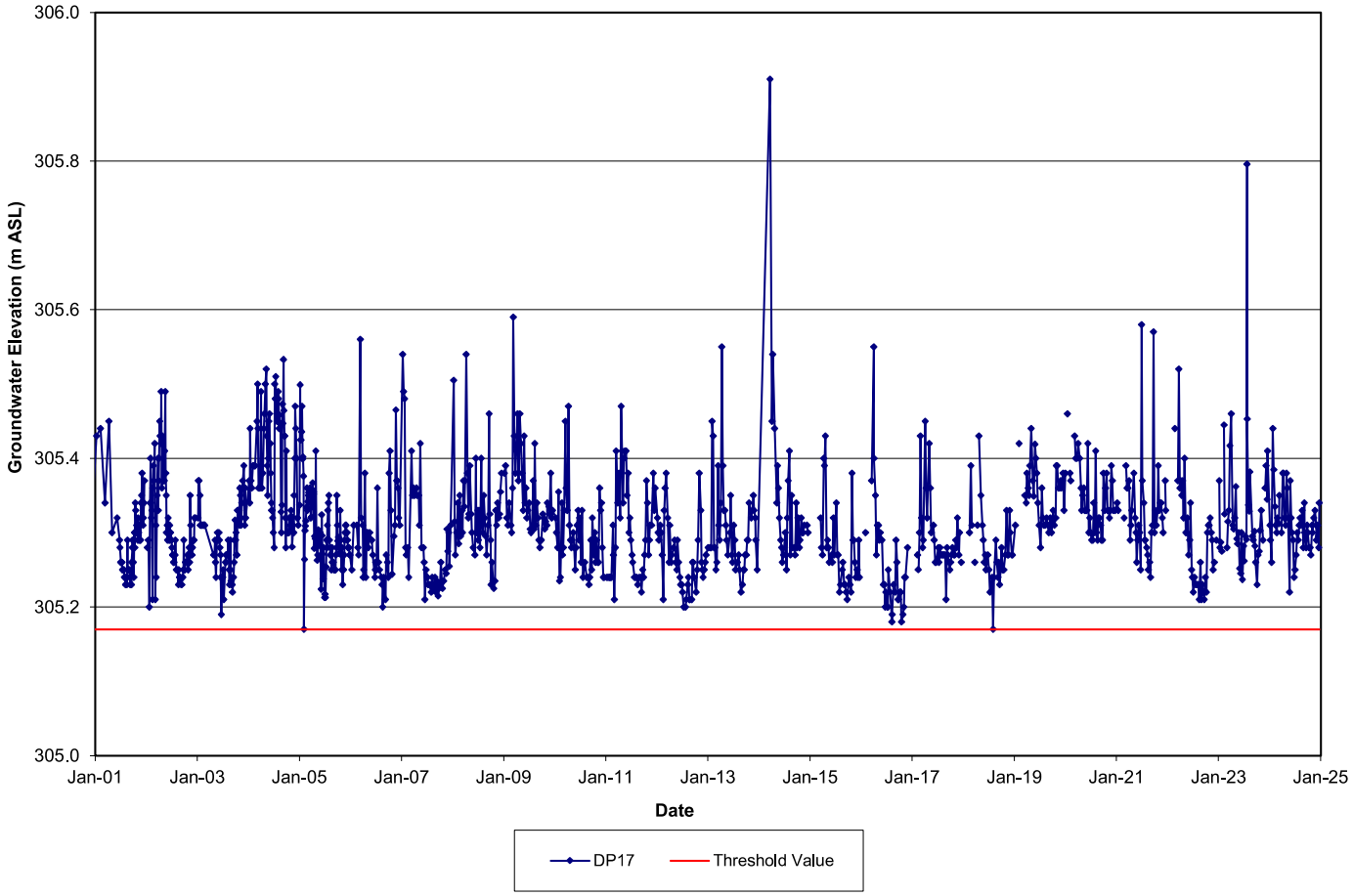
BH92-12 TO DP17/R
HEAD DIFFERENCE

FIGURE G-3



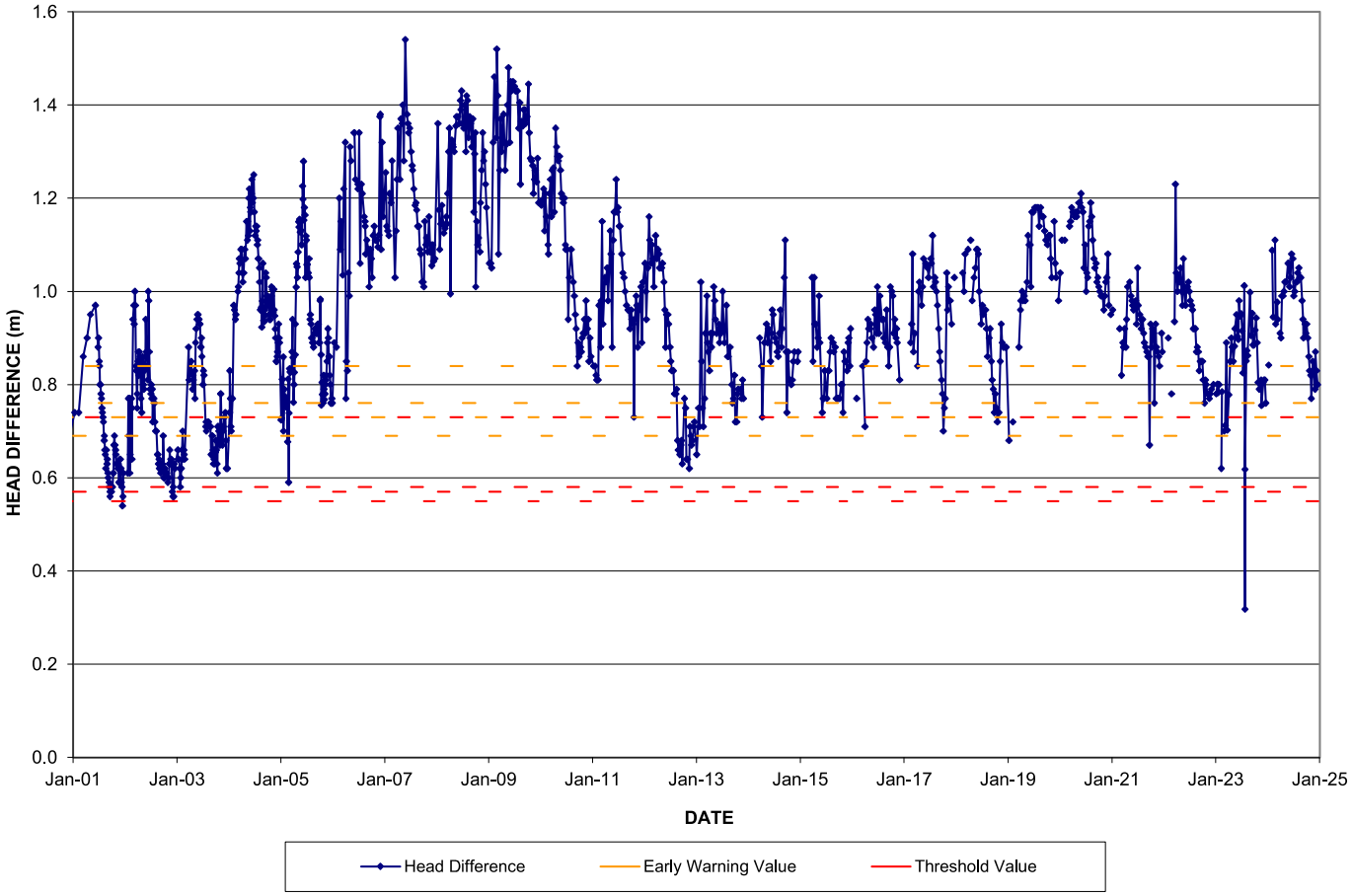
DP17/R Threshold

FIGURE G-4



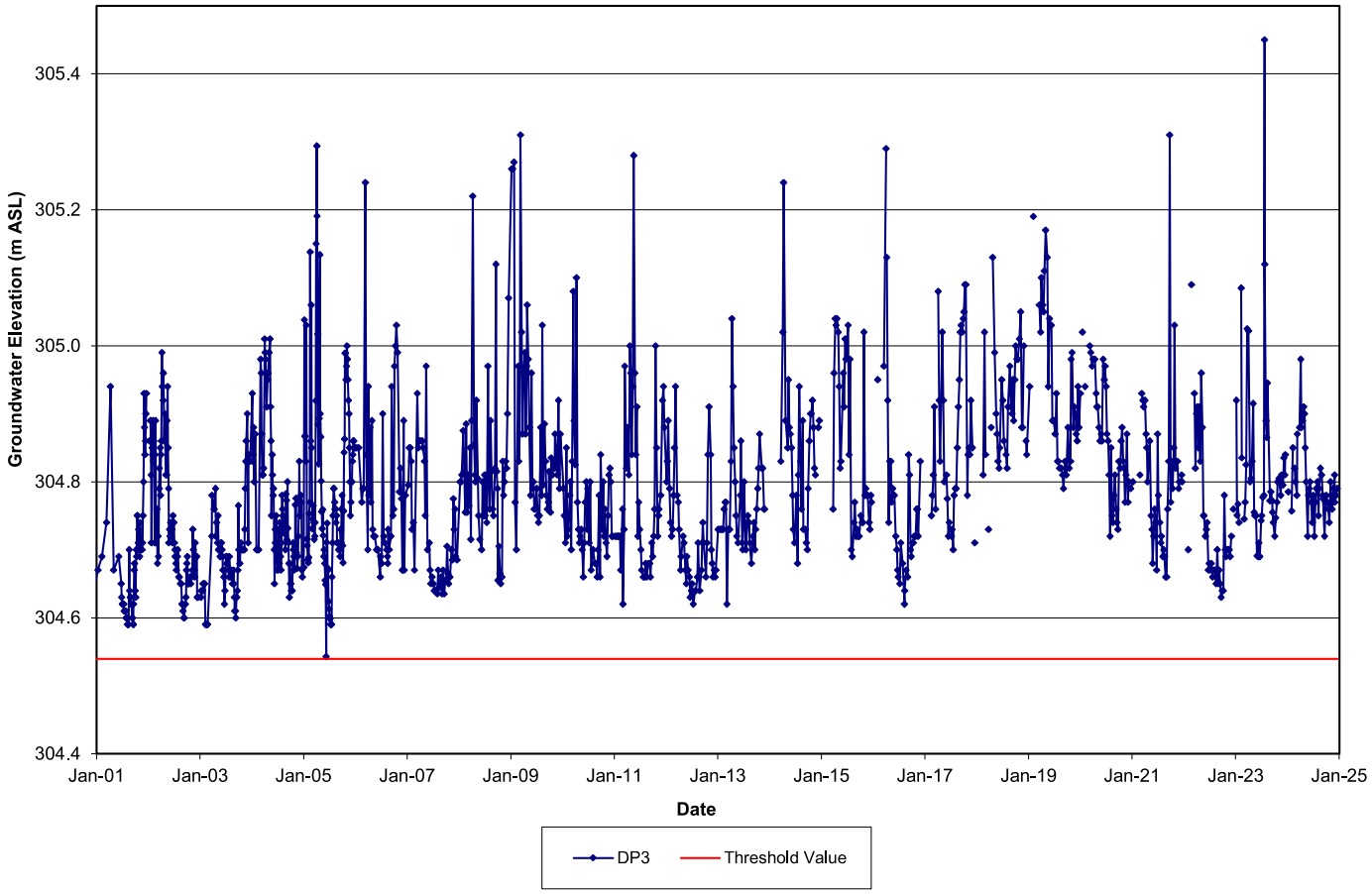
DP6 TO DP3
HEAD DIFFERENCE

FIGURE G-5



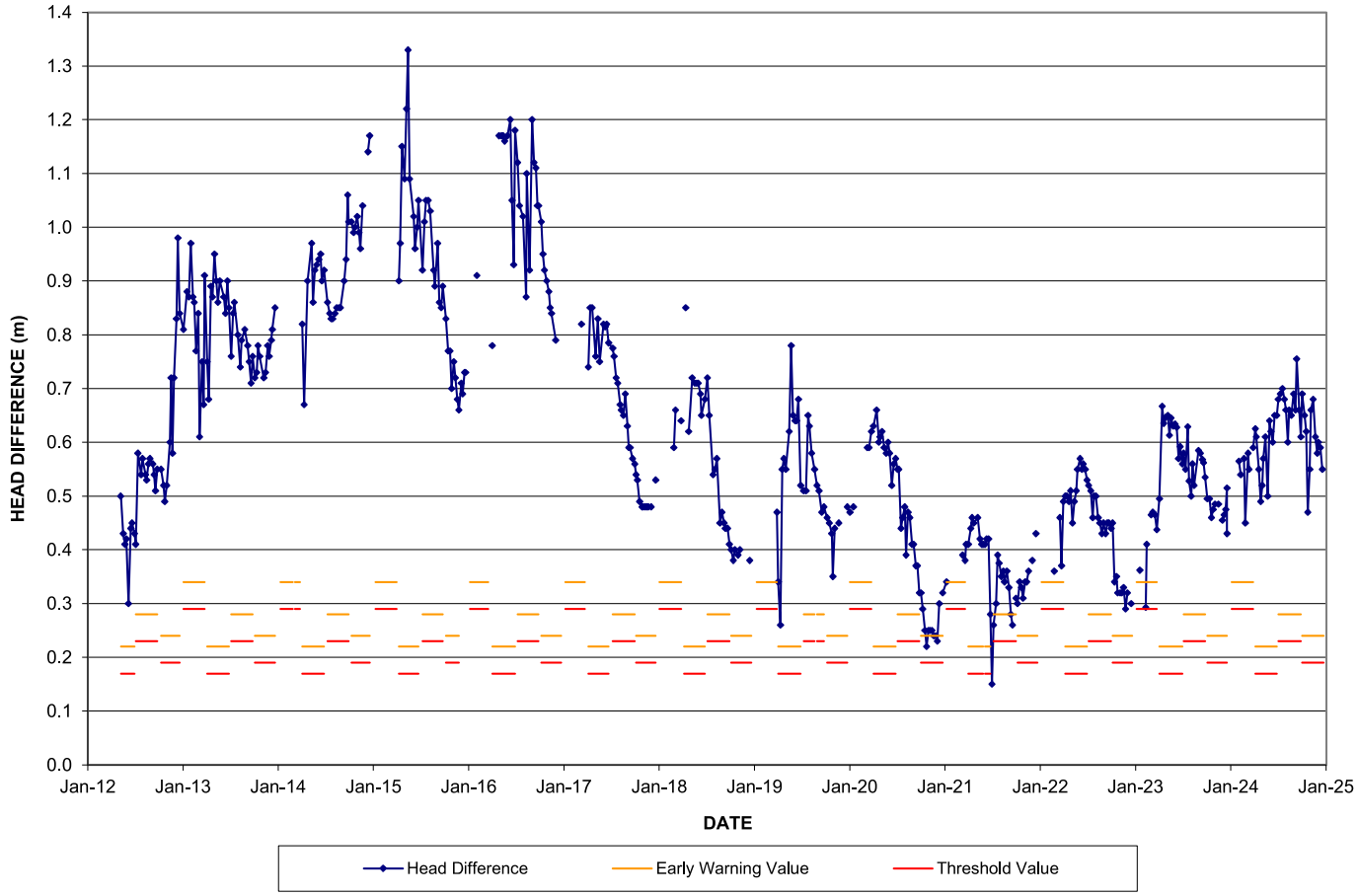
DP3 Threshold

FIGURE G-6



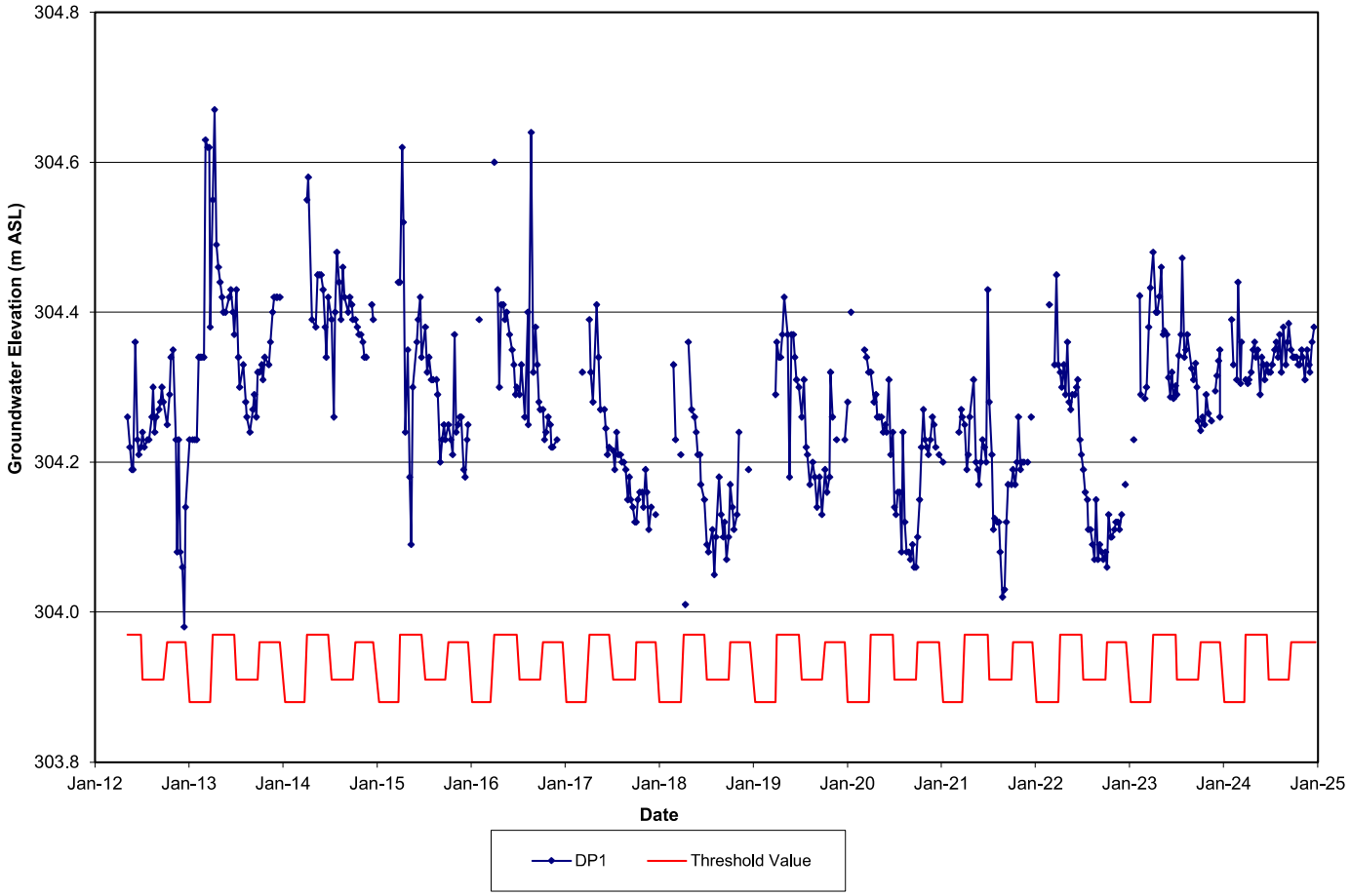
BH92-29 TO DP1
HEAD DIFFERENCE

FIGURE G-7



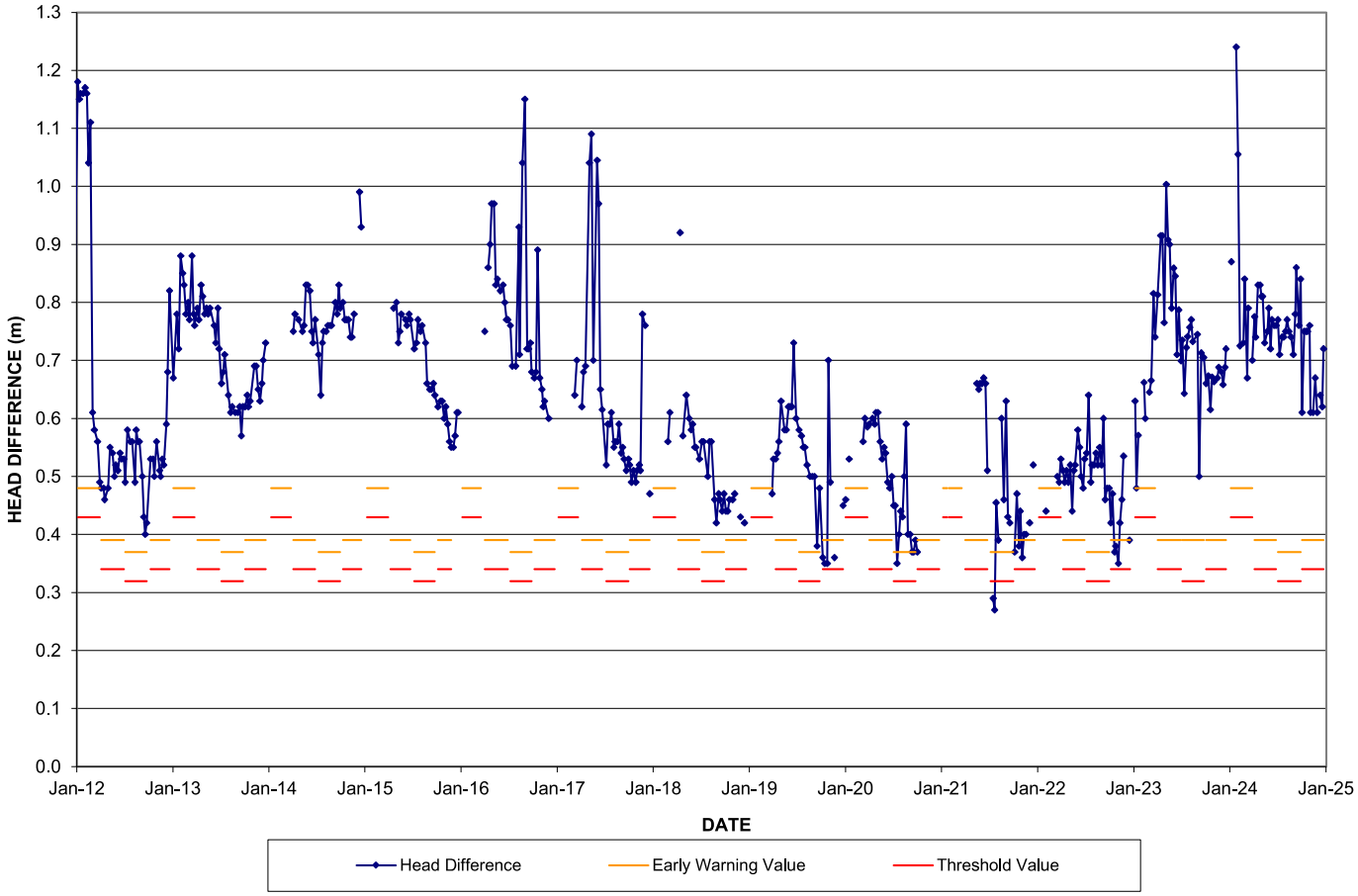
DP1 Thresholds

FIGURE G-8



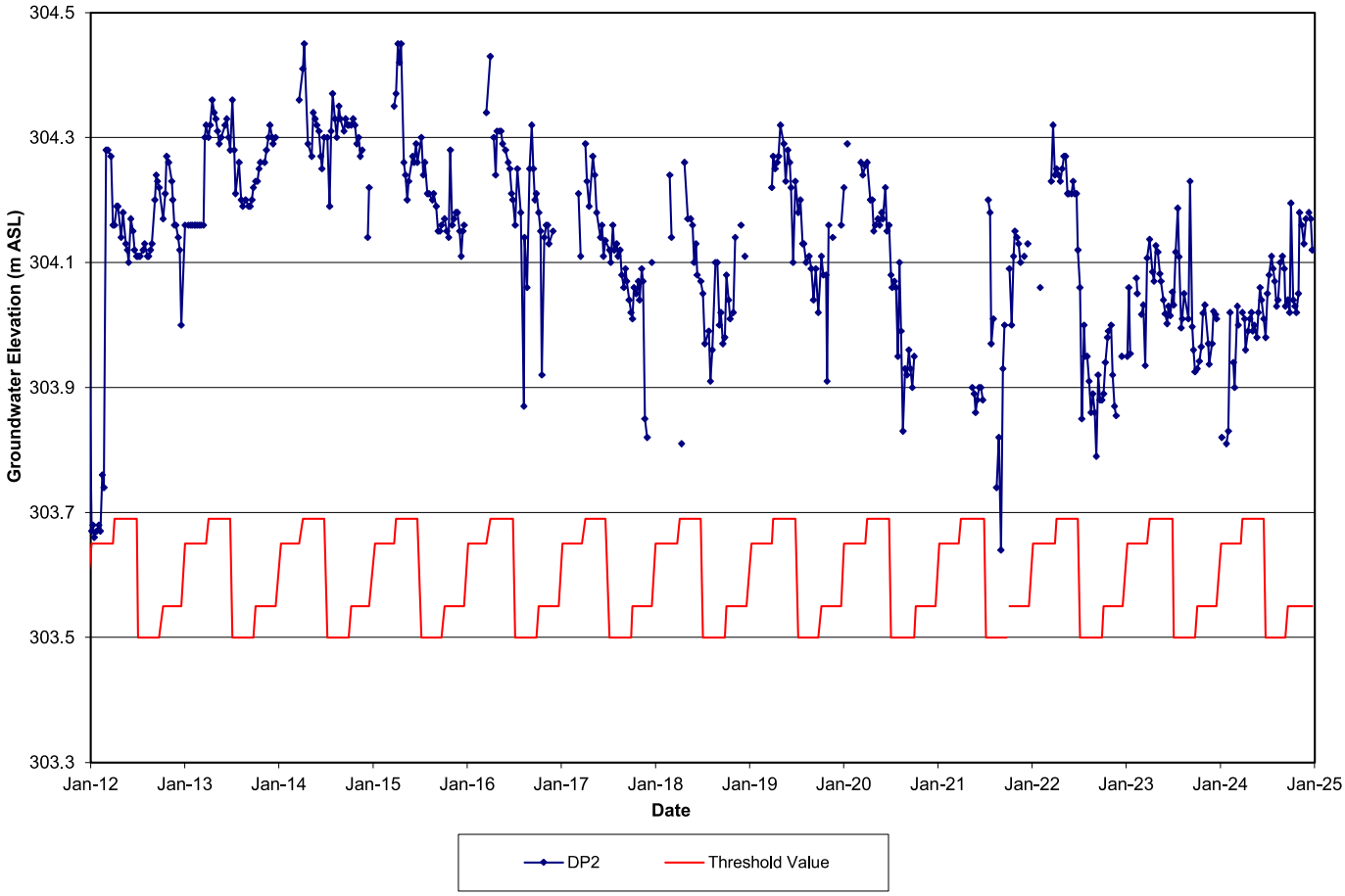
BH92-27 TO DP2
HEAD DIFFERENCE

FIGURE G-9



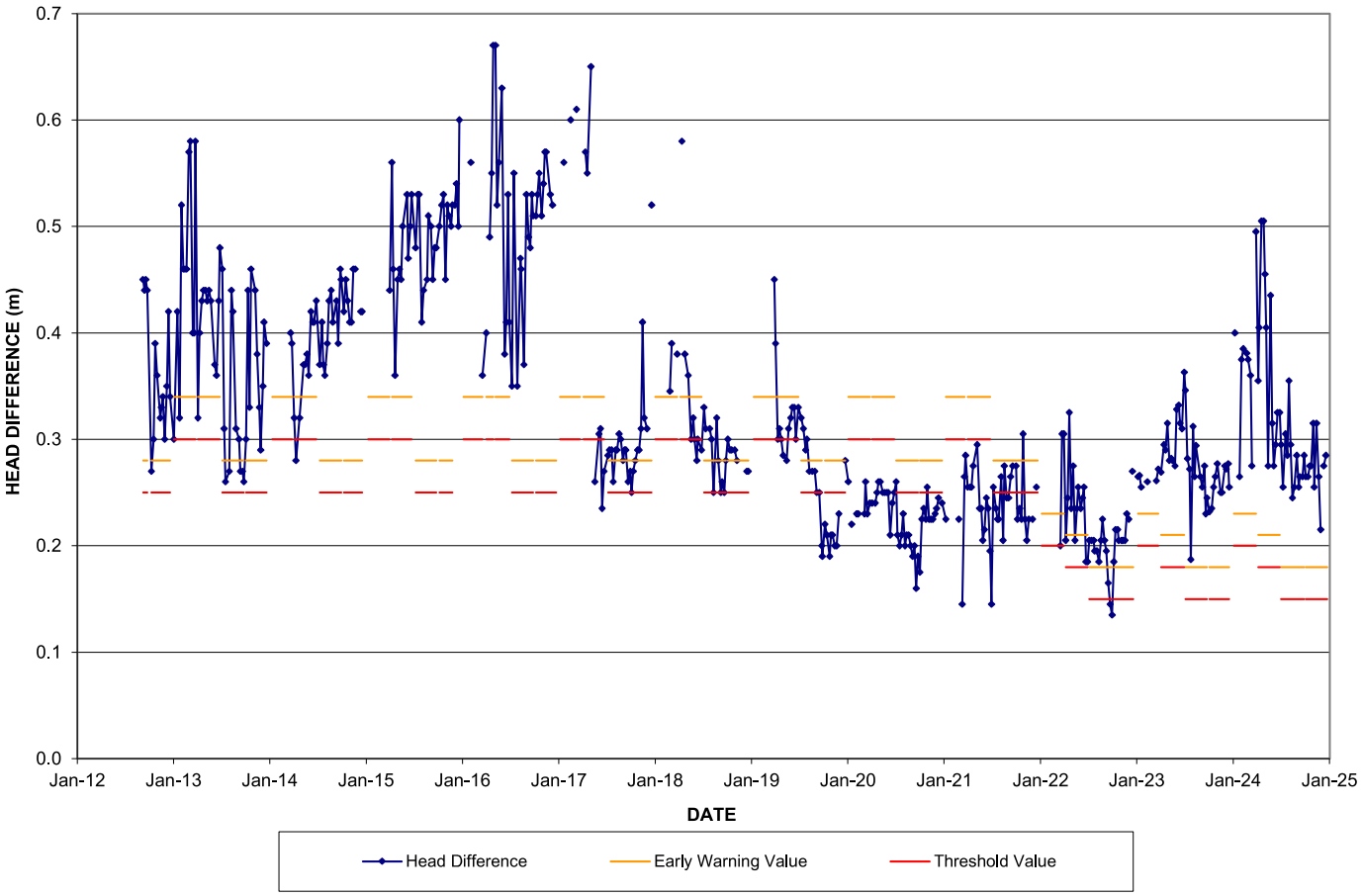
DP2 Thresholds

FIGURE G-10



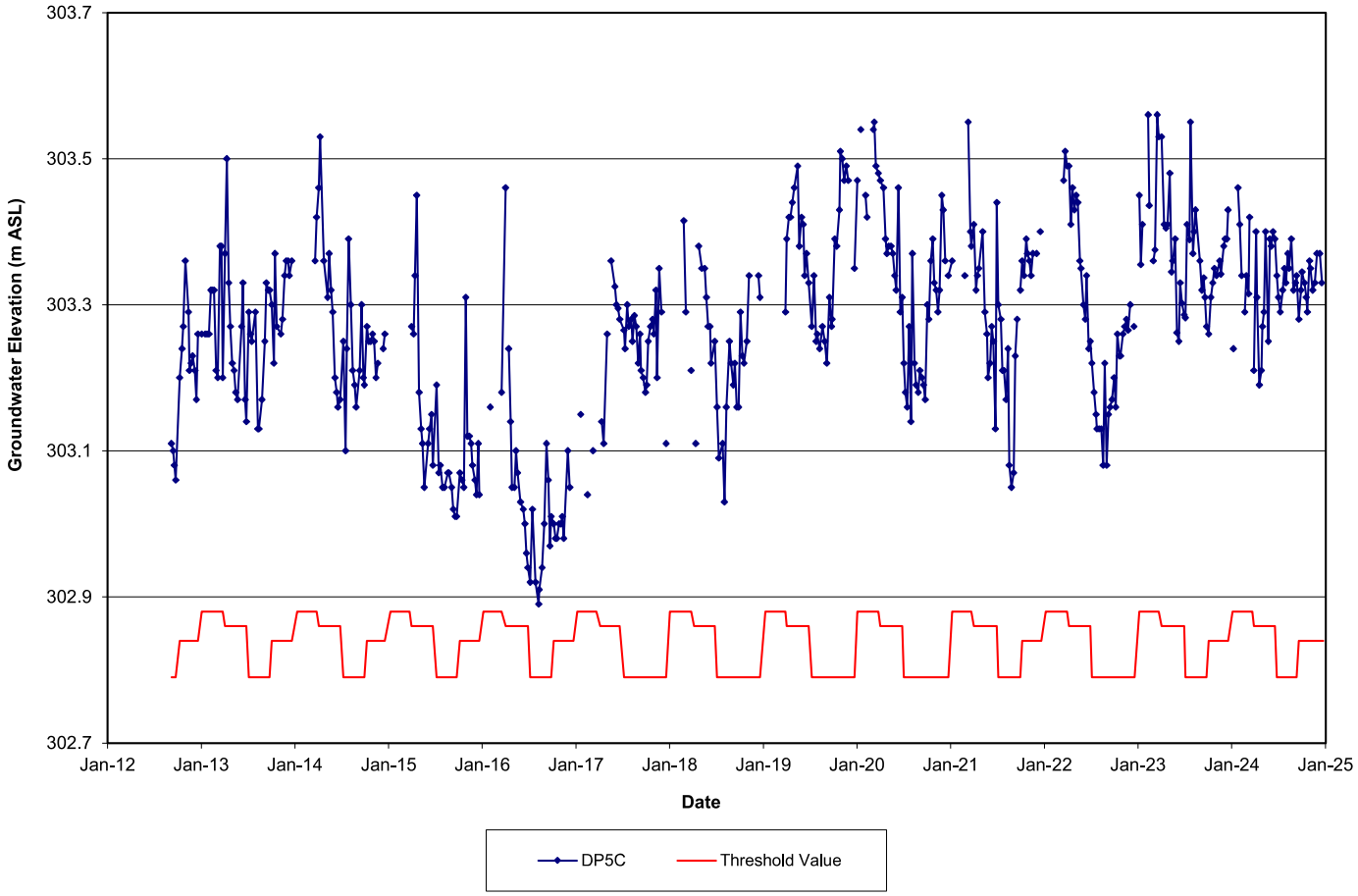
OW5-84 TO DP5C/CR
HEAD DIFFERENCE

FIGURE G-11



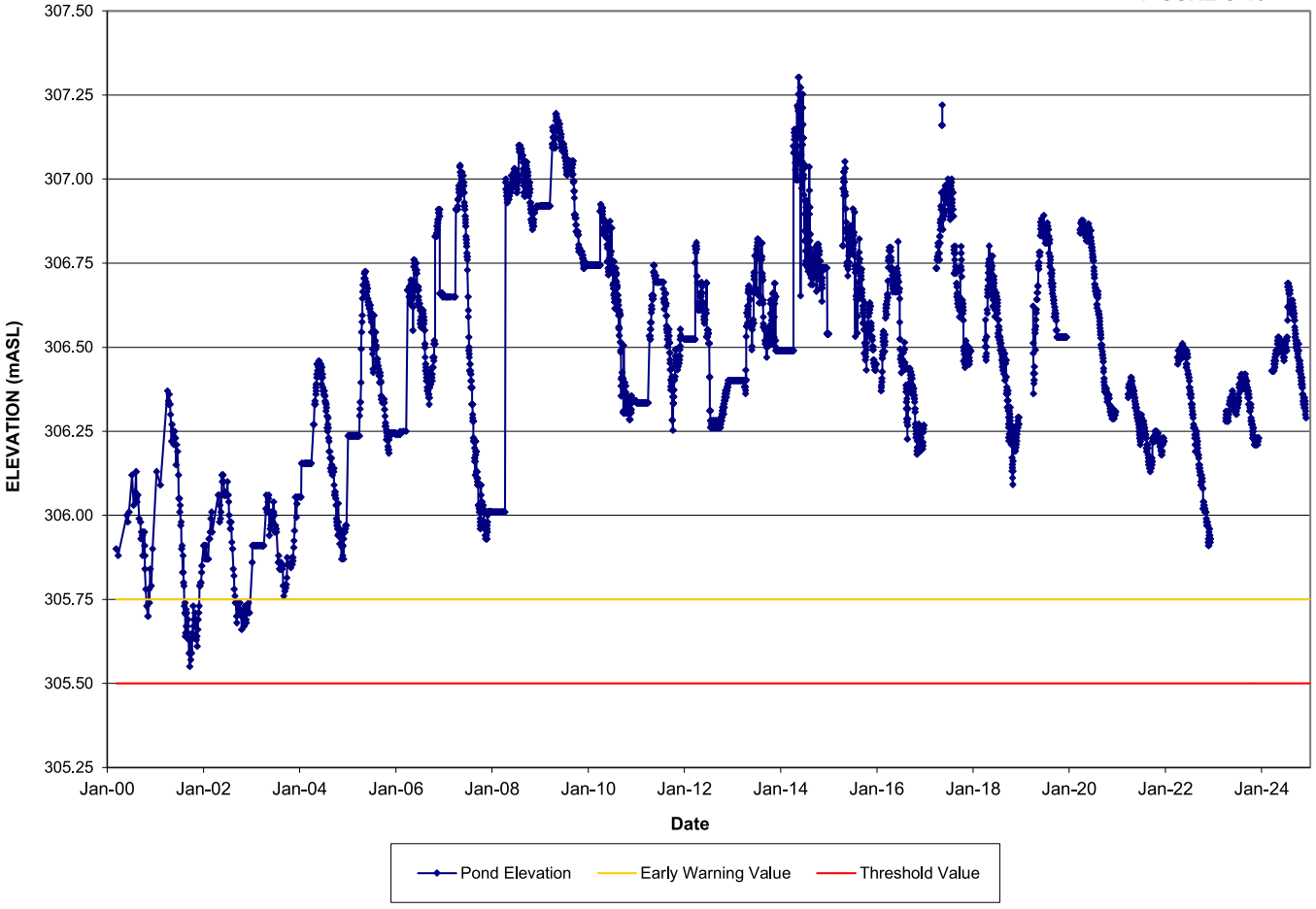
DP5C/CR Thresholds

FIGURE G-12



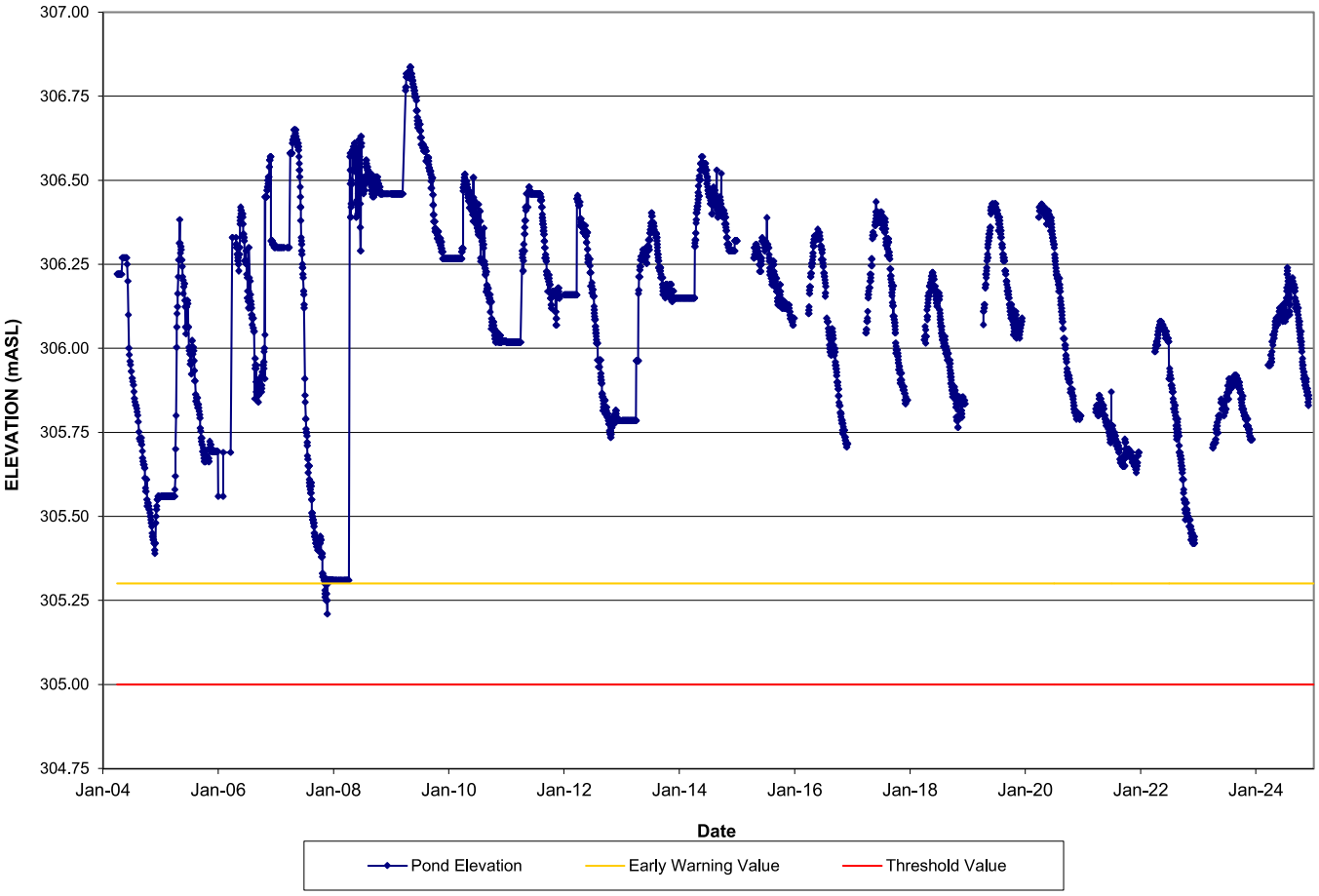
Phase 1 Pond Elevation

FIGURE G-13



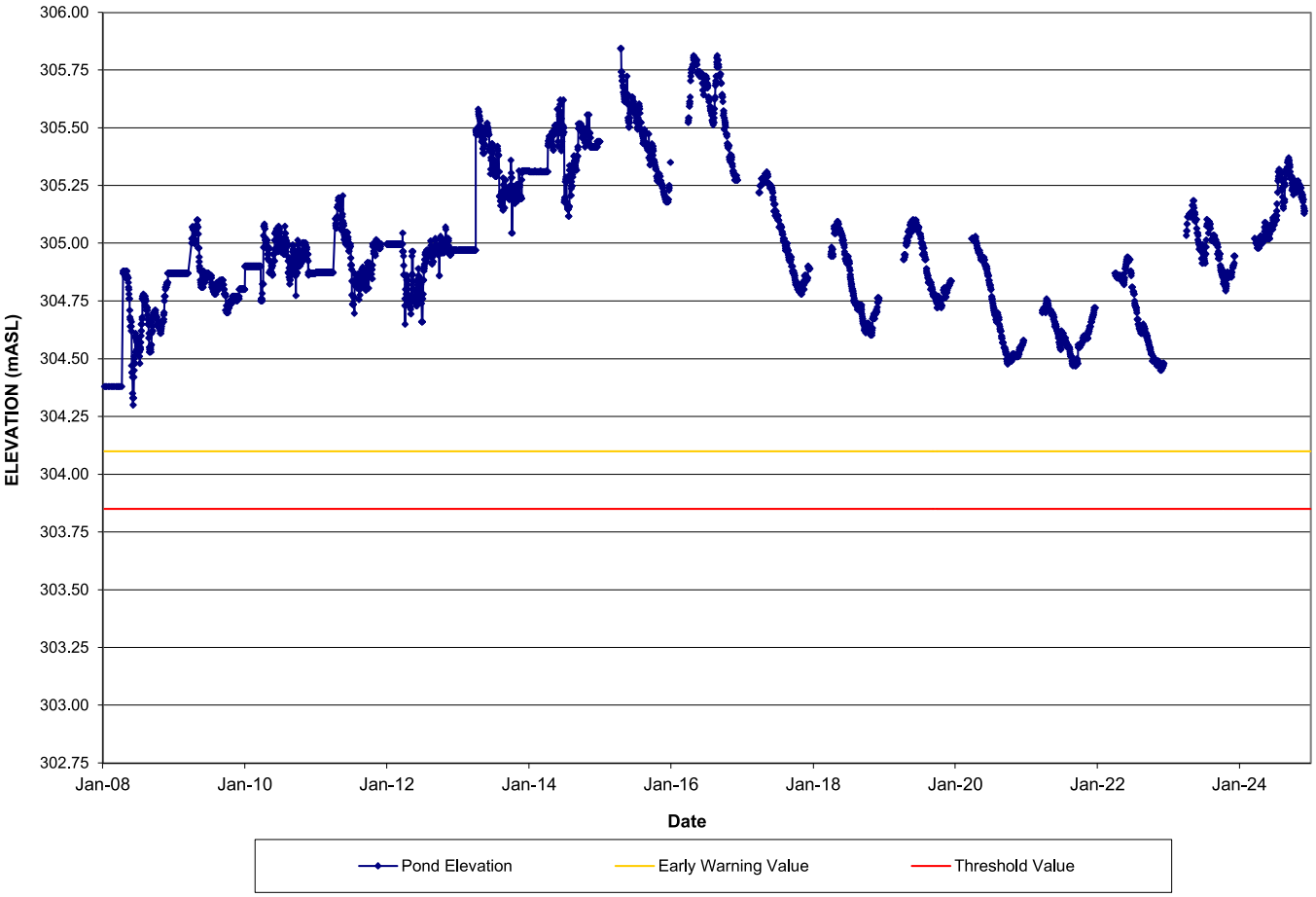
Phase 2 Pond Elevation

FIGURE G-14



Phase 3 Pond Elevation

FIGURE G-15



Phase 4 Pond Elevation

FIGURE G-16

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