DE BEERS
GROUP OF COMPANIES

Angela Love
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor, 4922 48th St.
PO Box 2130, Yellowknife, NT
Canada | X1A 2P6

June 14, 2018

Dear Ms. Love:

Re: Information Requests and Commitments – Responses for the March 2018 Water License (MV2005L2-0015) and Land Use Permit (MV2005C0032) Amendment Applications – Gahcho Kué Project

De Beers Canada Inc. (De Beers) is pleased to provide responses to additional information requests and commitments following the May 30 and 31, 2018 Technical Session for the Gahcho Kué Mine March 2018 amendment applications for Water Licence MV2005L2-0015 and Land Use Permit MV2005C0032.

The full responses are presented in the attached documents. Below is a summary of the responses:

- **IR1:** To evaluate and propose effluent quality criteria (EQC) for discharge from Area 7 to Area 8 two updated water quality models scenarios with four levels of sensitivities were developed and effluent quality criteria were calculated for each scenario. From this analysis two sets of EQC were projected to be reasonable and consistently achievable for the life of Mine (specifically for Scenario A, Sensitivity 3, and Scenario B, Sensitivity 4).

  As a result of this work, De Beers is requesting that the Water Licence amendment allow for a contingency option whereby up to 1.3 Mm^3 of water from the Water Management Pond (WMP) could be transferred from the WMP to Area 7 and then discharged to Area 8. The evaluation of contingency options was done on the basis of potential need, but the actual year of transfer and volumes would be selected specifically so that the EQCs are achieved and the downstream environment remains protected. Ongoing monitoring data collection from the WMP, Area 7 and Area 8 through the SNP and AEMP will be evaluated and used to inform water management decisions.

- **IR2:** The rate of attenuation for copper was confirmed to be consistent with other ions in the receiving environment by using data from De Beers Snap Lake Mine.

- **IR3:** The EQC proposed for discharge to Lake N11 in Year 5 (2021) are achievable in the later part of the year for fluoride, sulphate, total ammonia, total aluminum, total copper, and total iron. Concentrations of chloride, nitrate, total phosphorus and total chromium in the WMP are

projected to remain below the proposed maximum grab concentrations but are projected to exceed the maximum average concentration.

Based on model simulations if EQC in the WMP are met in 2021 to 2028, annual discharges under Water Licence discharge conditions to Lake N11 will result in whole lake average chloride, fluoride, sulphate, nitrate, and total ammonia concentrations projected to remain below site specific water quality objectives. Whole lake average total phosphorus, total aluminum, chromium, copper, and iron concentrations are projected to slightly exceed the site specific water quality objectives SSWQO for short periods of time during ice covered conditions each year. The risk of adverse effects from these brief periods of SSWQO exceedances for the listed parameters is considered low, so De Beers proposes to maintain the proposed MAC EQC and MGC EQC for the life of Mine.

- **IR4:** Four scenarios were evaluated to look at operational discharge of the water management pond to Lake N11 under a calendar date versus an anniversary date. Based on the evaluation, De Beers is proposing to keep the anniversary for discharge, but keep flexibility to discharge between September 2020 and September 2021 (Year 5 scenario) if water quality in the WMP meets the EQC. Further, it is proposed that discharge over the anniversary date not require additional sampling on the anniversary date that would require the cessation of pumping, but rather permit discharge to continue while as per SNP requirements is maintained.

- **Commitment 1:** Data tables have been provided in relation to GNWT-ENRs Review Comment 7.

- **Commitment 2:** The chronic benchmark for copper was referenced in Section 8.9 of the 2010 EIS.

Should you have any questions, comments, or require further clarification, please contact me by email Sarah.McLean@debeersgroup.com or by phone at 867-688-9227.

Sincerely,

Sarah McLean

Sarah McLean,
Environment and Permitting Manager
De Beers Canada Inc.

ID	Reviewer	Comment	Proponent Response
1	Technical Session Information Request	De Beers will endeavor to evaluate and propose Effluent Quality Criteria for the water licence amendment, for the discharge of Area 7 to Area 8 when a certain percentage (to be described in the evaluation) of Water Management Pond water is stored in Area 7 as a water storage contingency.	Model Updates and Model Scenarios: The Gahcho Kué Mine site water quality model developed to support the Water Licence amendment application (Golder 2018) was updated for this Information Request (IR) to include model scenarios for discharge from Area 7 to Area 8 that included water transfers from the water management pond (WMP) to Area 7. Updated water balances including pumping from the WMP to Area 7 were provided by Tetra Tech for two scenarios based on potential constraints in WMP storage capacity where the contingency for Area 7 storage may be required (Xia 2018): n Scenario A – 1.3 million cubic metres (Mm3) of water transferred from the WMP to Area 7 over two months in July and August 2019 and 0.65 Mm3 of water transferred from the WMP to Area 7 in July 2026. n Scenario B – 1.3 Mm3 of water transferred from the WMP to Area 7 over two months in September and October 2022 and 0.65 Mm3 of water transferred from the WMP to Area 7 in July 2026. Area 7 water quality projections were developed for each of the above scenarios. In the event effluent quality criteria (EQC) would not be achievable for the pumping rates provided in the above two scenarios, four sensitivities were run for each water balance scenario to evaluate if EQC would be achievable if pumping from the WMP to Area 7 for the transfers (depending on the scenario; that is, July and August 2019 and July in 2026 [Scenario A] and September and October 2022 and July in 2026 [Scenario B]) was reduced: •Sensitivity 1 – WMP to Area 7 pumped volume reduced by 20 percent (%) •Sensitivity 2 – WMP to Area 7 pumped volume reduced by 40% •Sensitivity 3 – WMP to Area 7 pumped volume reduced by 60% • Sensitivity 4 – WMP to Area 7 pumped volume reduced by 80% Small changes to disturbed and natural runoff surface areas that may occur from varying water levels associated with different pumping scenarios were not included in the modelling; however, the modelling approach provides a reasonable approximation of the Area 7 water quality for the purpose of this evaluation. Effluent Quality Criteria Methods The EQC for the discharge of water from Area 7 to Area 8 were calculated for Scenarios A and B using the methods described in the EQC Report (De Beers 2018) included as Attachment 3 to the Water Licence amendment application. The steps involved in the process were: 1. Identify a list of parameters of interest (POI) (i.e., parameters that are typically associated with mining activities and should be given consideration when developing EQC for a mine) 2. Select site-specific water quality objectives (SSWQO) for each parameter 3. Select a mixing zone and dilution factor 4. Develop a list of POPC based on a multi-step screening process 5. Calculate EQC for POPC 6. Compare EQC to projected discharge concentrations to determine whether the EQC are reasonably and consistently achievable and 7. Propose EQC for POPC The list of POI was the same list identified in the EQC Report for Area 8 (and Lake N11) (De Beers 2018). The list of SSWQO for Area 8 was also the same as those identified in the EQC Report (De Beers 2018), with the exception of the SSWQO for nitrate and total cadmium (Table 1-1). For nitrate, the EQC calculated using the Canadian Council of Ministers of the Environment (CCME) water quality guideline (WQG) of 2.93 mg N/L (CCME 1999) are not projected to be reasonably and consistently achievable for the discharge of water from Area 7 to Area 8. Similar to the derivation of EQC for Lake N11 as described in the EQC Report (De Beers 2018), De Beers proposes: n to maintain the CCME WQG for the protection of aquatic life for nitrate of 2.93 mg N/L, when hardness concentrations are less than 27 mg/L as CaCO3 in Area 8; and

			n to adopt the hardness-dependent equation developed for the Ekati Diamond Mine as the SSWQO for nitrate in Area 8 (Table 1-1; Rescan 2012) when hardness concentrations are greater than or equal to 27 mg/L as CaCO3 in Area 8. Because of a typographical error in the Reasons for Decision for the Land Use Permit (MV2005C0032) and Water Licence (MV2005L2-0015) applications for the Mine (MVLWB 2014), the SSWQO for total cadmium was changed from the maximum acceptable concentration in drinking water of 0.005 mg/L from Health Canada (2017) to the hardness-dependent WQG for the protection of aquatic life from the CCME (CCME 1999). Table 1-1: Chronic Site-specific Water Quality Objective for Nitrate in Area 8, Scenarios A and B The mixing zone dimensions in Area 8 remain consistent with Version 2 of the EQC Report (De Beers 2014) and as carried through to the EQC Report (De Beers 2018), but the dilution factor for Area 8 was updated to account for projected characteristics of the discharge from Area 7 to Area 8. The screening process to identify POPC for this IR was the same screening process described in the EQC Report (De Beers 2018). To identify POPC, projected parameter concentrations from the WMP and from Area 8 for Scenarios A and B were used in the screening process. The POPC identified for Area 8 for Scenarios A and B were: chloride, fluoride, nitrate, total phosphorus, total cadmium, total chromium, and total copper and chloride, fluoride, nitrate, total phosphorus, total aluminum, total cadmium, total chromium, and total copper, respectively. (Tables 1-2 to 1-6). Table 1-2: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario A Table 1-3: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario B Table 1-4: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario A Table 1-5: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario B Table 1-6: Area 8: Comparison of Projected Maximum Whole-lake Average Concentrations to Baseline Concentrations, Scenario A Table 1-7: Area 8: Comparison of Projected Maximum Whole-lake Average Concentrations to Baseline Concentrations, Scenario B Proposed Effluent Quality Criteria for Scenarios A and B: Tables 1-8 and 1-9 present the proposed EQC for the discharge of water from Area 7 to Area 8 for Scenarios A and B, respectively. Figures 1-1 to 1-8 present the proposed EQC for the discharge from Area 7 to Area 8 compared to projected parameter concentrations in Area 7 for each of the POPC. The proposed EQC are projected to be reasonably and consistently achievable for the life of the mine for Scenario A Sensitivity 3 (i.e., WMP to Area 7 pumped volume reduced by 60%) and for Scenario B Sensitivity 4 (i.e., WMP to Area 7 pumped volume reduced by 80%). Table 1-8: Proposed Effluent Quality Criteria for the Discharge of Water from Area 7 to Area 8 with Water from the Water Management Pond Stored in Area 7 as a Contingency Measure, Scenario A Table 1-9: Proposed Effluent Quality Criteria for the Discharge of Water from Area 7 to Area 8 with Water from the Water Management Pond Stored in Area 7 as a Contingency Measure, Scenario B Conclusion: De Beers recommends that the Water Licence amendment allow for a contingency option whereby up to 1.3 Mm3 of WMP water could be transferred from the WMP to Area 7 and then discharged to Area 8 for downstream flow mitigation. The proposed EQC outlined in either Table 1-8 or Table 1-9 would be applicable depending on the contingency option required to manage water storage and discharge onsite during the life of mine. The proposed EQC are projected to be reasonably and consistently achievable for the life of mine for Scenario A Sensitivity 3 (i.e., the WMP to Area 7 pumped volume would be reduced by 60% from 1.3 Mm3 to 0.52 M m3 in July and August 2019, and from 0.65 Mm3 to 0.26 Mm3 in July 2026) and for Scenario B Sensitivity 4 (i.e., the WMP to Area 7 pumped volume

			would be reduced by 80% from 1.3 Mm3 to 0.26 Mm3 in September and October 2022, and from 0.65 Mm3 to 0.13 Mm3 in July 2026). Under these scenario options, the transfer volumes from the WMP are estimated to account for approximately 21% (2019) to 43% (2026) of the volume stored in Area 7 for Option A Sensitivity 3 and 12% (2022) to 26% (2026) of the total Area 7 volume for Option B Sensitivity 4. De Beers has evaluated the contingency options on the basis of potential need, but would select the actual years of transfer and volumes to be pumped to make sure that EQC were achievable and the downstream environment remained protected. Monitoring data collected from the WMP, Area 7, and Area 8 through the Surveillance Network Program (SNP) and Aquatic Effects Monitoring Program (AEMP) will be evaluated and used to inform water management decisions. **References**: CCME. 1999 (with updates to 2015). Canadian Environmental Quality Guidelines, 1999. Canadian Environmental Quality Guidelines Summary Table, with updates to 2015. Winnipeg, MB, Canada; [accessed January 2018] http://st-ts.ccme.ca/en/index.html. De Beers (De Beers Group of Companies.). 2018. Attachment 3: Gahcho Kué Mine: Effluent Quality Criteria Report. Water License (MV2005L2-0015) and Land Use Permit (MV2005C0032) Amendment Application. Prepared for the Mackenzie Valley Land and Water Board, Yellowknife, NT, Canada. March 2018. De Beers. 2014. Effluent Quality Criteria Report. Prepared for the Mackenzie Valley Land and Water Board. Yellowknife, NT, Canada. April 2014. Golder (Golder Associates Ltd.). 2018. Gahcho Kué Mine – Water Quality Model Updates. Prepared for De Beers Canada Inc. March 2018. Health Canada. 2017. Guidelines for Canadian Drinking Water Quality - Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, ON, Canada; [accessed January 2018] https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/sum_guide-res_recom-eng.pdf MVLWB (Mackenzie Valley Land and Water Board). 2014. Reasons for Decision. Land Use Permit & Water Licence Applications. De Beers Canada Inc. Gahcho Kué Project - Kennady Lake, NT. File: MV2005L2-0015/MV2005C0032. August 11, 2014. Rescan. 2012. Ekati Diamond Mine: Site-Specific Water Quality Objective for Nitrate. Prepared for BHP Billiton Canada Inc. by Rescan Environmental Services Ltd. Yellowknife, NWT, Canada. Xia, H. 2018. Personal Communication. Email to Michael Herrell (SRK) and John Faithful (Golder) Re: Water Transfer Plan from WMP to Area 7. June 8, 2018 11:24AM.
2	Technical Session Information Request	With respect to the GNWT-ENR's Review Comment ID8, De Beers will confirm if the rate of attenuation for Copper is consistent with other ions in the receiving environment.	De Beers can confirm that the rate of attenuation for copper is consistent with other ions in the receiving environment. To respond to this request, data from the De Beers Snap Lake Mine was utilized because of the long-term nature and quality of the dataset. Although there are some subtle differences in the receiving environment between the Gahcho Kué Mine and Snap Lake Mine (e.g., Lake N11 is slightly smaller than Snap Lake, and discharge to Lake N11 is of a much shorter duration than the Snap Lake discharge), comparable detailed water quality models in GoldSim were developed that possessed similar source terms associated with a diamond mine, providing confidence that the Snap Lake model and its long-term empirical dataset could be used as an analogue for the Gahcho Kué Mine for evaluating the attenuation of copper in the mixing zone. Figures 2-1, 2-2, and 2-3 present whole-lake average calcium, magnesium, and total copper concentrations in Snap Lake compared to monitoring data from 2011 to 2016 (Golder 2016). The monitoring data represent a location at the mixing zone boundary in Snap Lake (i.e., SNP 02-20e), and represents discharge conditions from the water treatment plant to Snap Lake at discharge rates and parameter concentrations observed from monitoring data between 2011 and 2016. Similar to the model for Lake N11, the Snap Lake model assumed:

			n When ice forms on Snap Lake, 100 percent (%) of the parameter mass that is associated with the volume of water that forms ice is rejected from the ice layer and transfers into the underlying water volume. n Calcium, magnesium, and total copper concentrations in Snap Lake were modelled conservatively, which means that concentrations were assumed to remain unchanged in the water column; no biological, physical, or chemical decay was assumed and potential attenuation of parameter concentrations, due to adsorption, partitioning, or absorption to soil particles, was not considered in the model. Figures 2-1, 2-2, and 2-3 demonstrate that the Snap Lake model was able to match calcium, magnesium, and total copper concentrations in Snap Lake between the point of discharge from the diffusers and the mixing zone boundary (i.e., SNP 02-20e). Therefore, between 2011 and 2016 at Snap Lake, the rate of attenuation of total copper concentrations in the mixing zone was consistent with the rate of attenuation of calcium and magnesium concentrations. If the rate of attenuation of total copper concentrations was faster than the rate of attenuation of calcium and magnesium concentrations, then the modelled results would be greater than the monitoring data. If the rate of attenuation of total copper concentrations was slower than the rate of attenuation of calcium and magnesium concentrations, then the modelled results would be lower than the monitoring data. On this basis, De Beers is confident that the modelled hardness during discharge from the WMP to Lake N11, and the evaluation of the corresponding modelled copper accounting for the toxicity modifying influence of that hardness, is appropriate. Figure 2-1: Simulated and Observed Calcium Concentrations in Snap Lake, 2011 to 2016 **References**: Golder 2016. Predictions of Total Dissolved Solids, Major Ions, Nutrients, Metals and Metalloids in Snap Lake, 2016-2020. Prepared for De Beers Canada Inc., Yellowknife, NWT, Canada. April 2016.
3	Technical Session Information Request	De Beers will endeavor to confirm that (1) the Effluent Quality Criteria proposed for discharge to Lake N11 will be achievable in Year 5, and (2) that under the Year 5 discharge conditions, the modeled predictions in Lake N11 will be within the Site- Specific Water Quality Objectives.	Part 1. The water management plan and EQC evaluation (De Beers 2018) considered discharge to October 2020 (the beginning of Year 5). The effluent quality criteria (EQC) proposed for discharge to Lake N11 in the EQC Report (De Beers 2018) included as Attachment 3 to the Water Licence amendment application are projected to be achievable in the later part of Year 5 (2021) for all parameters other than chloride, nitrate, total phosphorus, and total chromium. In the later part of Year 5 (2021), water management pond (WMP) concentrations are projected to remain below the proposed maximum grab concentrations (MGB) for all parameters, but are projected to exceed the maximum average concentration (MAC) for chloride, nitrate, total phosphorus, and total chromium (Table 3-1). The EQC proposed for discharge to Lake N11 are projected to be achievable for fluoride, sulphate, total ammonia, and total aluminum, copper, and iron. Table 3-1: Comparison of Effluent Quality Criteria Proposed for Lake N11 to Projected Water Management Pond Discharge Concentrations in September and October of Year 2021 Part 2. Figures 3-1 to 3-10 present projected whole-lake average parameter concentrations in Lake N11 assuming: n The Gahcho Kué Mine (Mine) discharged water from the WMP to Lake N11 with concentrations of parameters of potential concern (POPC) equal to Maximum Average Concentration (MAC) EQC (Table 3-1). n The Mine discharges water from the WMP to Lake N11 at a rate of 1.94 million cubic metres per month (Mm3/month) and 1.51 Mm3/month during September and October, respectively, from Years 3 (i.e., 2019) to 12 (i.e., 2028) of operations. n During ice-covered conditions, the ice thickness on Lake N11 is 1.3 metres from Years 3 to 12 of operations. n When ice forms on Lake N11, 100 percent (%) of the parameter mass that is associated with the volume of water that forms ice is rejected from the ice layer and transfers into the underlying water volume. n Parameter concentrations in Lake N11 were modelled conservatively, which means that concentrations were assumed to remain unchanged in the water column; no biological, physical, or chemical decay was assumed and

			potential attenuation of parameter concentrations, due to adsorption, partitioning, or absorption to soil particles, was not considered in the model. Based on the model simulation described above, whole-lake average chloride (Figure 3-1), fluoride (Figure 3-2), sulphate (Figure 3-3), nitrate (Figure 3-4), and total ammonia (Figure 3-5) concentrations are projected to remain below site-specific water quality objectives (SSWQO) from 2019 to 2028. However, whole-lake average total phosphorus (Figure 3-6) and total aluminum (Figure 3-7), chromium (Figure 3-8), copper (Figure 3-9), and iron (Figure 3-10) concentrations are projected to slightly exceed SSWQO for short periods of time during ice-covered conditions each year. It is important to note, that the assumptions in the modelling are conservative so that the more likely scenario is that values will be lower than predicted. On the basis that whole-lake average chloride, fluoride, sulphate, nitrate, and total ammonia concentrations are projected to remain below SSWQO from 2019 to 2028, EQC for the subsequent year(s) of discharge remain appropriate for consideration. Despite the short period of projected exceedances for total phosphorus, and total aluminum, chromium, copper, and iron above SSWQO, De Beers proposes the MAC EQC and Maximum Grab Concentration (MGC) EQC be maintained for these five parameters for the reasons described below. Total Phosphorus Maximum whole-lake average total phosphorus concentrations in Lake N11 are projected to be 0.014 mg P/L and are projected to exceed the SSWQO of 0.0109 mg P/L for one to four months (i.e., the model produces results on a monthly timestep) each year during the ice-covered season. The potential for adverse effects from total phosphorus is expected to be low, as the SSWQO is not toxicity-based. The value of 0.0109 mg P/L is the upper end of the range for oligotrophic status (CCME 2004). Enhanced productivity due to increases in total phosphorus concentrations would be unlikely to occur during the ice-covered season because of light and temperature limitations under winter conditions with ice cover present. During the open-water season, when ambient light and temperatures are more favorable for algal growth, total phosphorus concentrations are projected to return to concentrations below the SSWQO. Furthermore, on an annual average basis, the total phosphorus concentrations would remain below the SSWQO. Therefore, De Beers proposes to maintain the total phosphorus MAC EQC and MGC EQC that are presented in Table 3-1 for the life of the Mine. Total Copper Maximum whole-lake average total copper concentrations in Lake N11 are projected to be 0.0023 mg/L and are projected to slightly exceed the SSWQO of 0.002 mg/L for two to three months (i.e., the model produces results on a monthly timestep) each year during the ice-covered season. Despite the projected exceedance of the SSWQO, the potential for total copper to cause adverse effects to aquatic life in Lake N11 is considered low. The SSWQO for total copper is based on the CCME guideline, which is intended to be conservative and protective of the most sensitive species. The CCME guideline is based on toxicity tests with naive organisms, whereas organisms inhabiting Lake N11 are expected to have some degree of acclimation or adaptation to total copper, given that baseline water quality and sediment concentrations in the Kennady Lake watershed exceed the CCME water quality and interim sediment quality guidelines for total copper. Given the small magnitude by which projected whole-lake average concentrations exceed the SSWQO, and the potential for ameliorating factors, such as other water quality characteristics (e.g., dissolved organic carbon) to reduce bioavailability and ameliorate copper toxicity, the potential for adverse effects from total copper is considered to be low. Therefore, De Beers proposes to maintain the total copper MAC EQC and MGC EQC that are presented in Table 3-1 for the life of the Mine. Total Aluminum, Chromium, and Iron Maximum whole-lake average total aluminum, chromium, and iron concentrations in Lake N11 are projected to be 0.104 mg/L, 0.00104 mg/L, and 0.31 mg/L, respectively, and are projected to slightly exceed the SSWQO of 0.1 mg/L, 0.001 mg/L, and 0.3 mg/L for one month (i.e., the model produces results on a monthly timestep) each year during the

			late ice-covered season. However, it is not expected that exceedances of the SSWQO for total aluminum, chromium, and iron will occur in Lake N11 because: n Projected concentrations in the WMP for dissolved aluminum, chromium, and iron are greater than the concentrations of these metals measured at Surveillance Network Program (SNP) Station 02. If some of the conservatism was removed from the model so that projected concentrations in the WMP more closely matched 2017 monitoring data at SNP-02, then projected concentrations in Lake N11 would likely remain below the SSWQO. n Projected concentrations in Lake N11 for total aluminum, chromium, and iron are greater than the concentrations of these metals measured at Aquatics Effects Monitoring Program (AEMP) stations in Lake N11. If some of the conservatism was removed from the model so that projected concentrations in Lake N11 more closely matched 2017 monitoring data at AEMP stations, then projected concentrations in Lake N11 would likely remain below the SSWQO. Therefore, De Beers proposes to maintain the total aluminum, chromium, and iron MAC EQC and MGC EQC that are presented in Table 3-1 for the life of the Mine. Conclusion The EQC proposed for discharge to Lake N11 in the EQC Report (De Beers 2018) included as Attachment 3 to the Water Licence amendment application are projected to be achievable in the later part of Year 5 (2021) for all parameters other than chloride, nitrate, total phosphorus, and total chromium. However, if EQC are met in 2021, and for each of the operations years to the end of Mine life, SSWQO will be met in Lake N11 for all EQC parameters, with the exception of brief periods during under ice conditions for total phosphorus, and total aluminum, chromium, copper, and iron. As the risk of adverse effects from these brief periods of SSWQO exceedances for the listed parameters is considered low, De Beers proposes to maintain the MAC EQC and MGC EQC as listed in Table 3-1.
4	Technical Session Information Request	De Beers will endeavor to present a multi-year scenario that demonstrates that reporting and operating, under a calendar year versus an anniversary date (September 24), would better suit the operational discharge of the Water Management Pond to Lake N11.	De Beers studied four scenarios to demonstrate discharging water from WMP to Lake N11 under an anniversary year (September 24) versus a calendar year. De Beers is planning to carry out four years of discharge with annual discharge of 3.45 Mm3/year during mine operation (a total of 13.8 Mm3). • Scenario1: Discharging water for four anniversary years (See Table 1). • Scenario2: Discharging water for four anniversary years, assuming that the WMP water cannot be discharged from September 1, 2018 until September 1, 2019 (See Table 2). • Scenario3: Discharging water for four calendar years (See Table 3). • Scenario4: Discharging water for four calendar years, assuming that the WMP water cannot be discharged from September 1, 2018 until September 1, 2019 (See Table 4). The actual discharge volumes for Year 1 and Year 2 (September-November 2017) were included in the tables. The fall 2017 Year 2 allocation was not completed due to operational constraints (low water at process plant intake). A total of 13.8 Mm3 can be discharged from the WMP to Lake N11 under both Scenario1 and Scenario3, therefore, switching to calendar year from Year 2019 is not expected to bring significant advantages for operational discharge. It was assumed in Scenario 3 that the maximum 3.45 Mm3 could be discharged over in the “switch over” period from Sept 2017 to Dec 2018; this effectively loses some discharge for this period. The lost discharge volume is made up in September and October 2020. Scenarios 2 and 4 examine the situation if the water quality in the WMP is insufficient for discharge during 2018 until freshet inflows and ice melt improves the water quality in 2019. It is assumed that there will be no discharge in 2018, with discharge beginning again in September 1, 2019. It is assumed that there will be discharge September to October 2020. This is the basis for the current water management plan. If the discharge is based on anniversary date (as presented in Table 2—Scenario2), the discharge between September 24, 2020 to end of October 2020 will be considered a “Year 5” discharge. If the discharge is based on the calendar year (as presented in Table 4—Scenario4), the discharge between September 24, 2020 to end of October 2020 will be considered a “Year 4” discharge.

			Under both scenarios, De Beers will be able to discharge 12.02 Mm3. The only difference is the "Accounting Year" – "Year 4" versus "Year 5". In both cases the discharge would extend to October 2020. In summary, De Beers proposes the followings for Water Licence Amendment: 1. Keep using anniversary date for discharge, but allow for discharge between September 24, 2020 to end of October 2020 (which will be in "Year 5" discharge), as long as the water quality in the WMP meet the discharge criteria; 2. Discharge spanning over the anniversary date will not require additional sampling on the anniversary date. The discharge will be sampled as per SNP requirements, where the "beginning of discharge" is the physical start of the discharge, and the "final day of the discharge" is the physical end of the discharge. Discharge will sampled throughout the period as per SNP requirements.
1	Technical Session Commitment	In relation to GNWT-ENR's Review Comment 7, De Beers to supply the raw data in a tabular form that was used to develop the graphs.	Tables C1-1, C1-2, C1-3, and C1-4 present the data that were used to create Figures GNWT-ENR-7.1a (Table C1-1), GNWT-ENR-7.1b (Table C1-2), GNWT-ENR-7.1c (Table C1-3), and GNWT-ENR-7.2 (Table C1-4).
2	Technical Session Commitment	De Beers to provide the section of the EIS referenced, as it relates to chronic effects benchmarks related to Copper.	As per the response from John Faithful (Golder Associates) on Day 2 of the Technical Sessions, the section of the Gahcho Kué Project Environmental Impact Statement (EIS) that discusses the chronic effects benchmark for copper is Section 8.9 (Effects to Aquatic Health) of the 2011 Gahcho Kué Project EIS Conformity Response, Item 1 (De Beers 2011). **Reference**: De Beers (De Beers Canada Inc.). 2011. Gahcho Kué Project Environmental Impact Statement Conformity Response, Item 1. Volumes 3a Revision 2, 3b Revision 2, 4 Revision 2, and 5 Revision 2. Submitted to the Mackenzie Valley Environmental Impact Review Board in Response to the Environmental Impact Statement Conformity Review. July 2011.

INFORMATION REQUEST 1

Table 1-1: Chronic Site-specific Water Quality Objective for Nitrate in Area 8, Scenarios A and B

Parameter	Chronic SSWQO	Description	Source
Nitrate[(a)]	2.93	Generic WQG for the protection of aquatic life	CCME 1999
	if hardness >27, $e^{(0.9518*\ln(hardness)+2.032}$	Hardness-dependent SSWQO developed for the Ekati Diamond Mine	Rescan 2012
Total cadmium[(b)]	0.00004	Hardness-dependent generic WQG for the protection of aquatic life	CCME 1999

(a) The nitrate hardness-dependent guideline was calculated based on projected whole-lake average hardness concentrations in Area 8

(b) The total cadmium hardness-dependent guideline was calculated based on a baseline hardness concentration of 14 mg/L as $CaCO_3$ in Area 8.

mg/L = milligrams per litre; N = nitrogen; $CaCO_3$ = calcium carbonate; SSWQO = site-specific water quality objective; WQG = water quality guideline; CCME = Canadian Council of Ministers of the Environment; Rescan = Rescan Environmental Services Ltd.

Table 1-2: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario A

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[(a)]	Area 8 Baseline Concentrations		
			Mean Concentration + 2SD[(b)]	Mean Concentration + 2SD Minus 10%[(c)]	Are Projected Maximum Discharge Concentrations > Baseline Concentrations in Area 8 Minus 10% (Yes/No)?
Total dissolved solids	mg/L	312	71	64	**Yes**
Calcium	mg/L	55	-	-	No
Chloride	mg/L	149	2.3	2.1	**Yes**
Fluoride	mg/L	0.14	0.06	0.054	**Yes**
Magnesium	mg/L	8.8	-	-	No
Potassium	mg/L	3.8	1.0	0.9	**Yes**
Sodium	mg/L	36	-	-	No
Sulphate	mg/L	26	0.6	0.54	**Yes**
Nitrate	mg N/L	9.2	0.051	0.046	**Yes**
Total ammonia	mg N/L	0.87	0.14	0.12	**Yes**
Total phosphorus	mg P/L	0.011	0.008	0.0072	**Yes**
Total aluminum	mg/L	0.088	0.03	0.027	**Yes**
Total antimony	mg/L	0.00095	0.00055	0.0005	**Yes**
Total arsenic	mg/L	0.002	0.00031	0.00028	**Yes**
Total barium	mg/L	0.059	0.0068	0.0061	**Yes**
Total beryllium	mg/L	0.00014	0.000005	0.0000045	**Yes**
Total boron	mg/L	0.27	0.0025	0.0023	**Yes**
Total cadmium	mg/L	0.000041	0.000023	0.000021	**Yes**
Total chromium	mg/L	0.0011	0.00012	0.00011	**Yes**
Total cobalt	mg/L	0.0014	0.0028	0.0025	No
Total copper	mg/L	0.0021	0.0011	0.00099	**Yes**
Total iron	mg/L	0.21	2.5	2.2	No

Table 1-2: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario A

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Area 8 Baseline Concentrations		Are Projected Maximum Discharge Concentrations > Baseline Concentrations in Area 8 Minus 10% (Yes/No)?
			Mean Concentration + 2SD[b]	Mean Concentration + 2SD Minus 10%[c]	
Total lead	mg/L	0.00032	0.0014	0.0013	No
Total manganese	mg/L	0.047	0.37	0.33	No
Total mercury	mg/L	0.0000098	0.0000041	0.0000037	**Yes**
Total molybdenum	mg/L	0.0052	0.000027	0.000024	**Yes**
Total nickel	mg/L	0.0065	0.0006	0.00054	**Yes**
Total selenium	mg/L	0.00011	0.00006	0.000054	**Yes**
Total silver	mg/L	0.000052	0.0000025	0.0000023	**Yes**
Total strontium	mg/L	0.4	0.019	0.017	**Yes**
Total thallium	mg/L	0.000092	0.000003	0.0000027	**Yes**
Total uranium	mg/L	0.0021	0.000022	0.00002	**Yes**
Total vanadium	mg/L	0.003	0.0001	0.00009	**Yes**
Total zinc	mg/L	0.0082	0.0024	0.0022	**Yes**

Note: Bolded "Yes" indicates the parameter was carried forward in the screening process.

(a) Refers to projected maximum concentrations in the discharge from Area 7 from Option A.

(b) Refers to the baseline concentrations from Area 8, represented by the mean + two standard deviations (SD).

(c) Refers to baseline concentrations from Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; P = phosphorus; SD = standard deviation; > = greater than; % = percent.

Table 1-3: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario B

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Area 8 Baseline Concentrations		Are Projected Maximum Discharge Concentrations > Baseline Concentrations in Area 8 Minus 10% (Yes/No)?
			Mean Concentration + 2SD[b]	Mean Concentration + 2SD Minus 10%[c]	
Total dissolved solids	mg/L	449	71	64	**Yes**
Calcium	mg/L	78	-	-	No
Chloride	mg/L	213	2.3	2.1	**Yes**
Fluoride	mg/L	0.18	0.06	0.054	**Yes**
Magnesium	mg/L	13	-	-	No
Potassium	mg/L	5.0	1.0	0.9	**Yes**
Sodium	mg/L	51	-	-	No
Sulphate	mg/L	33	0.6	0.54	**Yes**
Nitrate	mg N/L	13	0.051	0.046	**Yes**
Total ammonia	mg N/L	1.2	0.14	0.12	**Yes**
Total phosphorus	mg P/L	0.014	0.008	0.0072	**Yes**
Total aluminum	mg/L	0.095	0.03	0.027	**Yes**
Total antimony	mg/L	0.0014	0.00055	0.0005	**Yes**
Total arsenic	mg/L	0.0027	0.00031	0.00028	**Yes**

Table 1-3: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Baseline Concentrations, Scenario B

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Area 8 Baseline Concentrations		
			Mean Concentration + 2SD[b]	Mean Concentration + 2SD Minus 10%[c]	Are Projected Maximum Discharge Concentrations > Baseline Concentrations in Area 8 Minus 10% (Yes/No)?
Total barium	mg/L	0.081	0.0068	0.0061	**Yes**
Total beryllium	mg/L	0.00016	0.000005	0.0000045	**Yes**
Total boron	mg/L	0.39	0.0025	0.0023	**Yes**
Total cadmium	mg/L	0.000043	0.000023	0.000021	**Yes**
Total chromium	mg/L	0.0014	0.00012	0.00011	**Yes**
Total cobalt	mg/L	0.0015	0.0028	0.0025	No
Total copper	mg/L	0.0024	0.0011	0.00099	**Yes**
Total iron	mg/L	0.26	2.5	2.2	No
Total lead	mg/L	0.00038	0.0014	0.0013	No
Total manganese	mg/L	0.055	0.37	0.33	No
Total mercury	mg/L	0.000011	0.0000041	0.0000037	**Yes**
Total molybdenum	mg/L	0.006	0.000027	0.000024	**Yes**
Total nickel	mg/L	0.0068	0.0006	0.00054	**Yes**
Total selenium	mg/L	0.00014	0.00006	0.000054	**Yes**
Total silver	mg/L	0.00006	0.0000025	0.0000023	**Yes**
Total strontium	mg/L	0.58	0.019	0.017	**Yes**
Total thallium	mg/L	0.000089	0.000003	0.0000027	**Yes**
Total uranium	mg/L	0.0025	0.000022	0.00002	**Yes**
Total vanadium	mg/L	0.0034	0.0001	0.00009	**Yes**
Total zinc	mg/L	0.01	0.0024	0.0022	**Yes**

Note: Bolded “Yes” indicates the parameter was carried forward in the screening process.

(a) Refers to projected maximum concentrations in the discharge from Area 7 from Option B.

(b) Refers to the baseline concentrations from Area 8, represented by the mean + two standard deviations (SD).

(c) Refers to baseline concentrations from Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; P = phosphorus; SD = standard deviation; > = greater than; % = percent.

Table 1-4: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario A

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Site-specific Water Quality Objectives in Area 8[b]	Site-specific Water Quality Objectives in Area 8 Minus 10%[c]	Are Projected Maximum Discharge Concentrations > SSWQO in Area 8 Minus 10%
Total dissolved solids	mg/L	312	500	450	No
Chloride	mg/L	149	120	108	**Yes**
Fluoride	mg/L	0.14	0.12	0.11	**Yes**
Potassium	mg/L	3.8	41	37	No
Sulphate	mg/L	26	62	56	No
Nitrate	mg N/L	9.2	2.9	2.6	**Yes**
Total ammonia	mg N/L	0.87	1.8	1.6	No
Total phosphorus	mg P/L	0.011	0.011	0.0098	**Yes**

Table 1-4: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario A

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Site-specific Water Quality Objectives in Area 8[b]	Site-specific Water Quality Objectives in Area 8 Minus 10%[c]	Are Projected Maximum Discharge Concentrations > SSWQO in Area 8 Minus 10%
Total aluminum	mg/L	0.088	0.1	0.09	No
Total antimony	mg/L	0.00095	0.006	0.0054	No
Total arsenic	mg/L	0.002	0.005	0.0045	No
Total barium	mg/L	0.059	1.0	0.9	No
Total beryllium	mg/L	0.00014	0.004	0.0036	No
Total boron	mg/L	0.27	1.5	1.4	No
Total cadmium	mg/L	0.000041	0.00004	0.000036	**Yes**
Total chromium	mg/L	0.0011	0.001	0.0009	**Yes**
Total copper	mg/L	0.0021	0.002	0.0018	**Yes**
Total mercury	mg/L	0.0000098	0.000026	0.000023	No
Total molybdenum	mg/L	0.0052	0.073	0.066	No
Total nickel	mg/L	0.0065	0.025	0.023	No
Total selenium	mg/L	0.00011	0.001	0.0009	No
Total silver	mg/L	0.000052	0.00025	0.00023	No
Total strontium	mg/L	0.4	11	9.6	No
Total thallium	mg/L	0.000092	0.0008	0.00072	No
Total uranium	mg/L	0.0021	0.015	0.014	No
Total vanadium	mg/L	0.003	0.006	0.0054	No
Total zinc	mg/L	0.0082	0.03	0.027	No

Note: Bolded "Yes" indicates the parameter was carried forward in the screening process.

(a) Refers to projected maximum concentrations in the discharge from Area 7 for Option A.

(b) Refers to the SSWQO for Area 8.

(c) Refers to the SSWQO for Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; P = phosphorus; SD = standard deviation; SSWQO = site-specific water quality objective; > = greater than; % = percent.

Table 1-5: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario B

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Site-specific Water Quality Objectives in Area 8[b]	Site-specific Water Quality Objectives in Area 8 Minus 10%[c]	Are Projected Maximum Discharge Concentrations > SSWQO in Area 8 Minus 10%
Total dissolved solids	mg/L	449	500	450	No
Chloride	mg/L	213	120	108	**Yes**
Fluoride	mg/L	0.18	0.12	0.11	**Yes**
Potassium	mg/L	5.0	41	37	No
Sulphate	mg/L	33	62	56	No
Nitrate	mg N/L	12.9	2.9	2.6	**Yes**
Total ammonia	mg N/L	1.22	1.8	1.6	No
Total phosphorus	mg P/L	0.014	0.011	0.0098	**Yes**
Total aluminum	mg/L	0.095	0.1	0.09	**Yes**

Table 1-5: Area 8: Comparison of Projected Area 7 Discharge Concentrations to Site-specific Water Quality Objectives, Scenario B

Parameters	Units	Projected Maximum Area 7 Discharge Concentrations[a]	Site-specific Water Quality Objectives in Area 8[b]	Site-specific Water Quality Objectives in Area 8 Minus 10%[c]	Are Projected Maximum Discharge Concentrations > SSWQO in Area 8 Minus 10%
Total antimony	mg/L	0.00139	0.006	0.0054	No
Total arsenic	mg/L	0.0027	0.005	0.0045	No
Total barium	mg/L	0.081	1.0	0.9	No
Total beryllium	mg/L	0.00016	0.004	0.0036	No
Total boron	mg/L	0.39	1.5	1.4	No
Total cadmium	mg/L	0.000043	0.00004	0.000036	**Yes**
Total chromium	mg/L	0.0014	0.001	0.0009	**Yes**
Total copper	mg/L	0.0024	0.002	0.0018	**Yes**
Total mercury	mg/L	0.0000111	0.000026	0.000023	No
Total molybdenum	mg/L	0.006	0.073	0.066	No
Total nickel	mg/L	0.0068	0.025	0.023	No
Total selenium	mg/L	0.00014	0.001	0.0009	No
Total silver	mg/L	0.00006	0.00025	0.00023	No
Total strontium	mg/L	0.58	11	9.6	No
Total thallium	mg/L	0.000089	0.0008	0.00072	No
Total uranium	mg/L	0.0025	0.015	0.014	No
Total vanadium	mg/L	0.0034	0.006	0.0054	No
Total zinc	mg/L	0.0082	0.03	0.027	No

Note: Bolded "Yes" indicates the parameter was carried forward in the screening process.

(a) Refers to projected maximum concentrations in the discharge from Area 7 for Option B.

(b) Refers to the SSWQO for Area 8.

(c) Refers to the SSWQO for Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; P = phosphorus; SD = standard deviation; SSWQO = site-specific water quality objective; > = greater than; % = percent.

Table 1-6: Area 8: Comparison of Projected Maximum Whole-lake Average Concentrations to Baseline Concentrations, Scenario A

Parameters	Units	Projected Maximum Whole-lake Average Concentration in A8[a]	Area 8 Baseline Concentrations		Are Maximum Whole-lake Average Concentrations in Area 8 > Baseline Concentrations in Area 8 Minus 10%
			Baseline Concentrations in Area 8[b]	Baseline Concentrations in Area 8 Minus 10%[c]	
Chloride	mg/L	82	2.3	2.1	**Yes**
Fluoride	mg/L	0.12	0.06	0.054	**Yes**
Nitrate	mg N/L	5.2	0.051	0.046	**Yes**
Total phosphorus	mg P/L	0.013	0.008	0.0072	**Yes**
Total cadmium	mg/L	0.000039	0.000023	0.000021	**Yes**
Total chromium	mg/L	0.001	0.00012	0.00011	**Yes**
Total copper	mg/L	0.0022	0.0011	0.00099	**Yes**

Note: Bolded “Yes” indicates the parameter is a POPC.

(a) Refers to projected maximum whole-lake average concentrations in Area 8 for Option A.

(b) Refers to the baseline concentrations from Area 8, represented by the mean + two standard deviations (SD).

(c) Refers to baseline concentrations from Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; POPC = parameter of potential concern; SD = standard deviation; > = greater than; % = percent.

Table 1-7: Area 8: Comparison of Projected Maximum Whole-lake Average Concentrations to Baseline Concentrations, Scenario B

Parameters	Units	Projected Maximum Whole-lake Average Concentration in A8[(a)]	Area 8 Baseline Concentrations		Are Maximum Whole-lake Average Concentrations in Area 8 > Baseline Concentrations in Area 8 Minus 10%
			Baseline Concentrations in Area 8[(b)]	Baseline Concentrations in Area 8 Minus 10%[(c)]	
Chloride	mg/L	133	2.3	2.1	**Yes**
Fluoride	mg/L	0.15	0.06	0.054	**Yes**
Nitrate	mg N/L	8.0	0.051	0.046	**Yes**
Total phosphorus	mg P/L	0.015	0.008	0.0072	**Yes**
Total aluminum	mg/L	0.083	0.03	0.027	**Yes**
Total cadmium	mg/L	0.00004	0.000023	0.000021	**Yes**
Total chromium	mg/L	0.0012	0.00012	0.00011	**Yes**
Total copper	mg/L	0.0024	0.0011	0.00099	**Yes**

Note: Bolded “Yes” indicates the parameter is a POPC.

(a) Refers to projected maximum whole-lake average concentrations in Area 8 for Option B.

(b) Refers to the baseline concentrations from Area 8, represented by the mean + two standard deviations (SD).

(c) Refers to baseline concentrations from Area 8 minus 10 percent (%).

mg/L = milligrams per litre; N = nitrogen; POPC = parameter of potential concern; SD = standard deviation; > = greater than; % = percent.

Table 1-8: Proposed Effluent Quality Criteria for the Discharge of Water from Area 7 to Area 8 with Water from the Water Management Pond Stored in Area 7 as a Contingency Measure, Scenario A

Parameters of Potential Concern	Effluent Quality Criteria	
	Maximum Average Concentration	Maximum Grab Concentration
Chloride, mg/L	100	200
Fluoride, mg/L	1	2
Nitrate, mg N/L	4	8
	6 (as of 1 January 2027)	12 (as of 1 January 2027)
Total phosphorus, mg P/L	0.009	0.018
Total cadmium, mg/L	0.00004	0.00008
Total chromium, mg/L	0.001	0.002
Total copper, mg/L	0.002	0.003

mg/L = milligrams per litre; N = nitrogen; P = phosphorus.

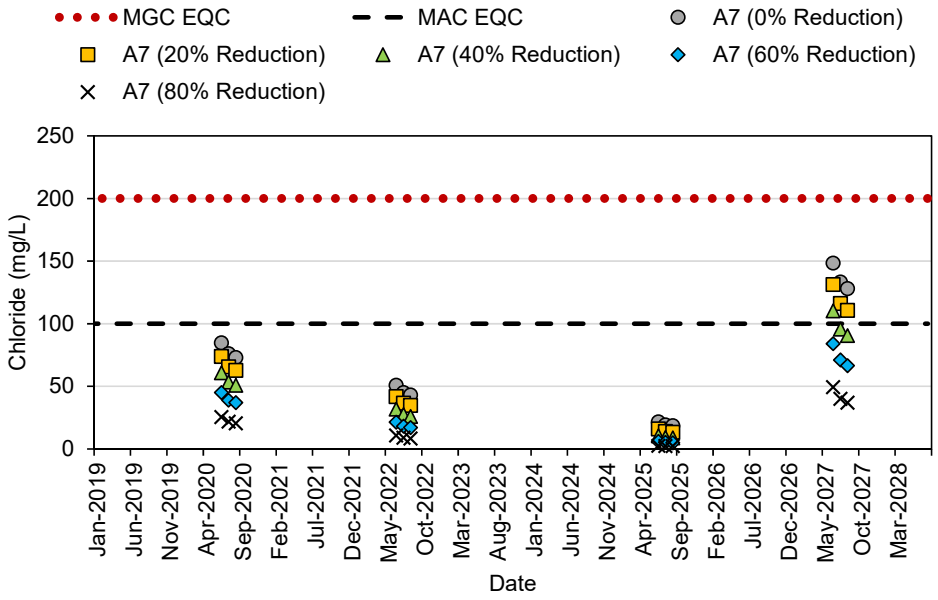
Table 1-9: Proposed Effluent Quality Criteria for the Discharge of Water from Area 7 to Area 8 with Water from the Water Management Pond Stored in Area 7 as a Contingency Measure, Scenario B

Parameters of Potential Concern	Effluent Quality Criteria	
	Maximum Average Concentration	Maximum Grab Concentration
Chloride, mg/L	100	200
Fluoride, mg/L	1	2
Nitrate, mg N/L	4	8
Total phosphorus, mg P/L	0.009	0.018
Total aluminum, mg/L	0.083	0.17
Total cadmium, mg/L	0.00004	0.00008
Total chromium, mg/L	0.001	0.002
Total copper, mg/L	0.002	0.003

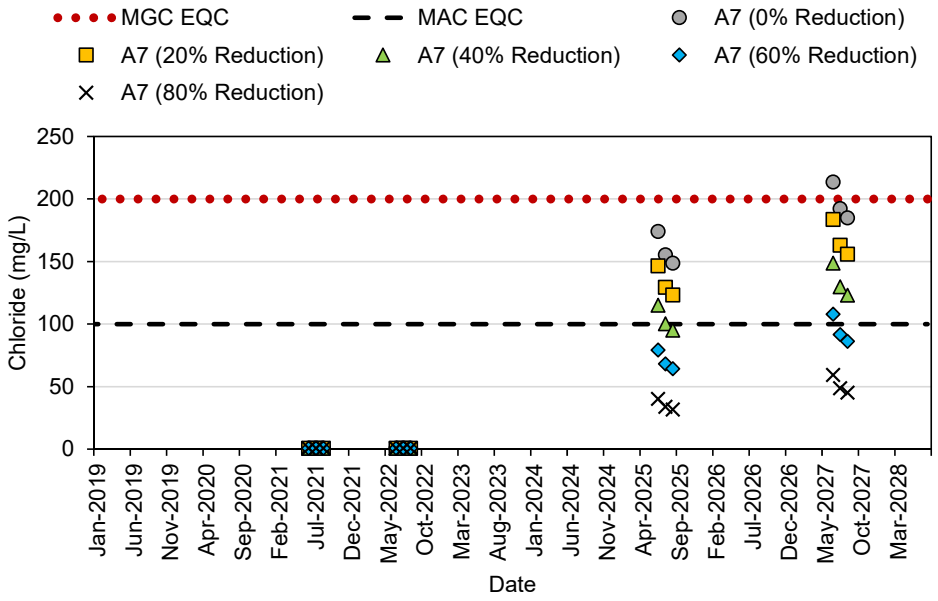
mg/L = milligrams per litre; N = nitrogen; P = phosphorus.

Figure 1-1: Comparison of Calculated Effluent Quality Criteria for Chloride to Projected Water Management Pond Discharge Concentrations

a) Scenario A



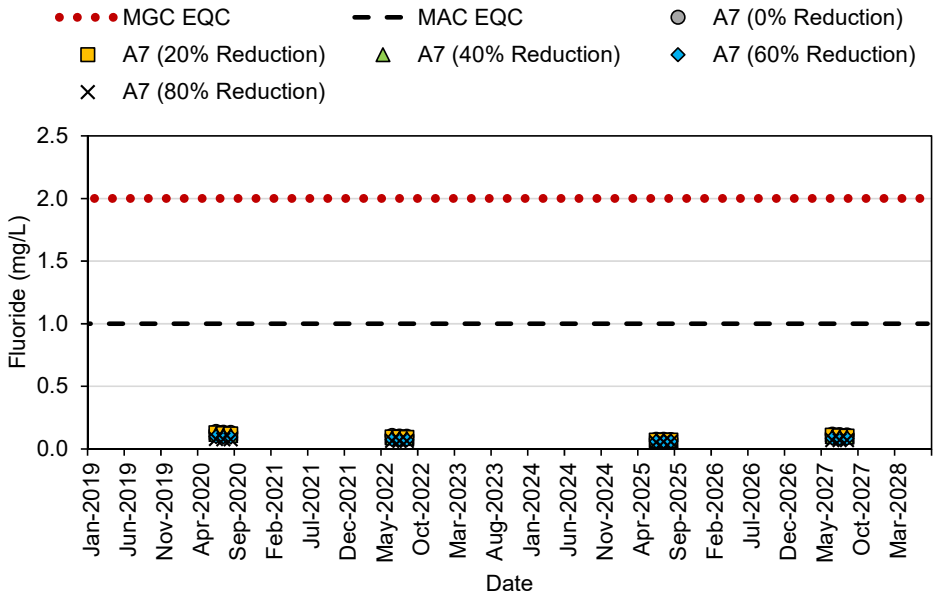
b) Scenario B



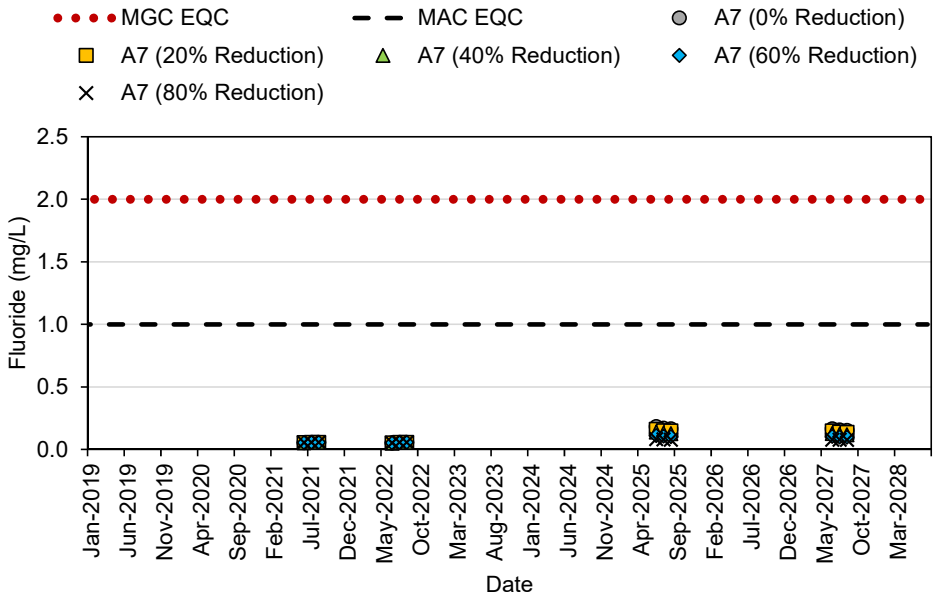
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

Figure 1-2: Comparison of Calculated Effluent Quality Criteria for Fluoride to Projected Water Management Pond Discharge Concentrations

a) Scenario A



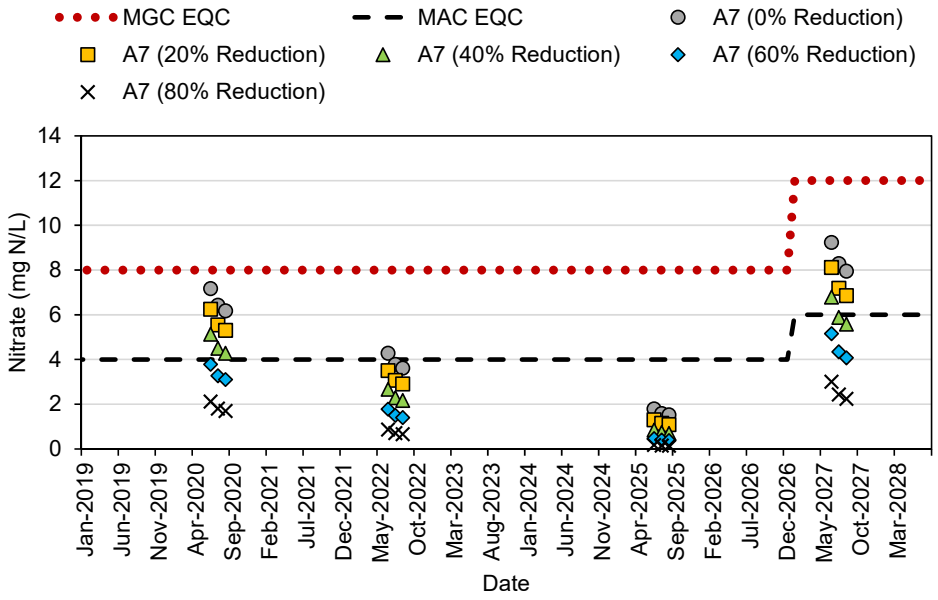
b) Scenario B



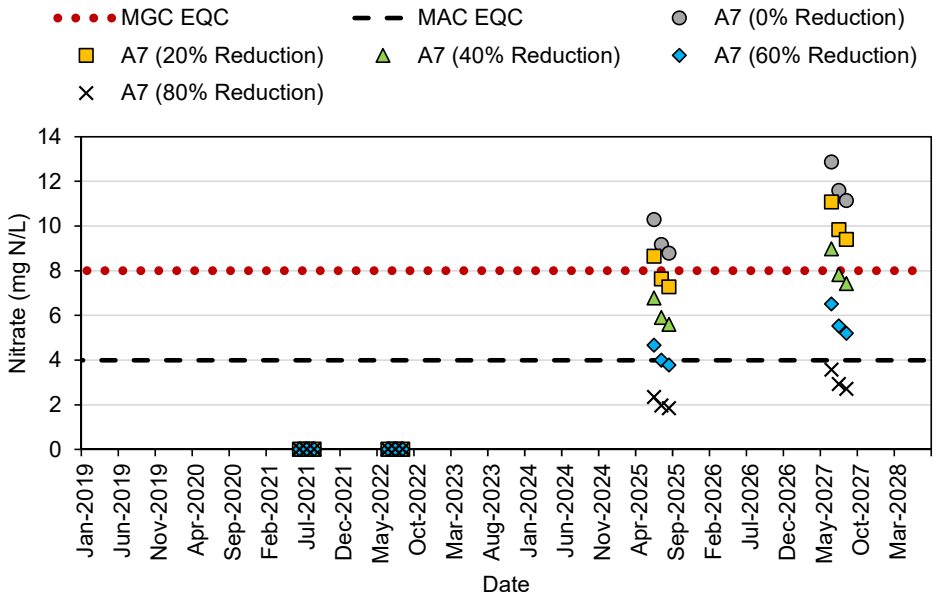
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

Figure 1-3: Comparison of Calculated Effluent Quality Criteria for Nitrate to Projected Water Management Pond Discharge Concentrations

a) Scenario A



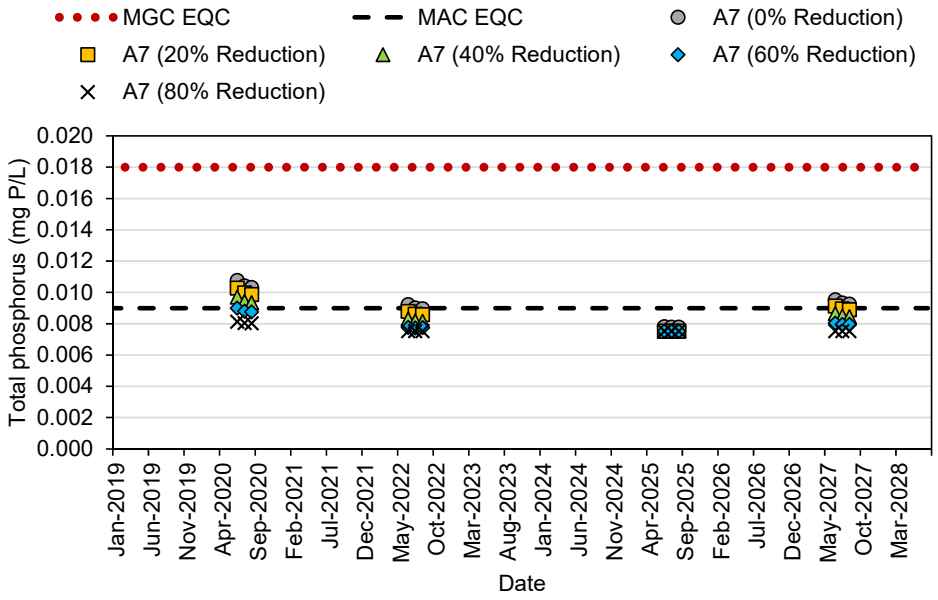
b) Scenario B



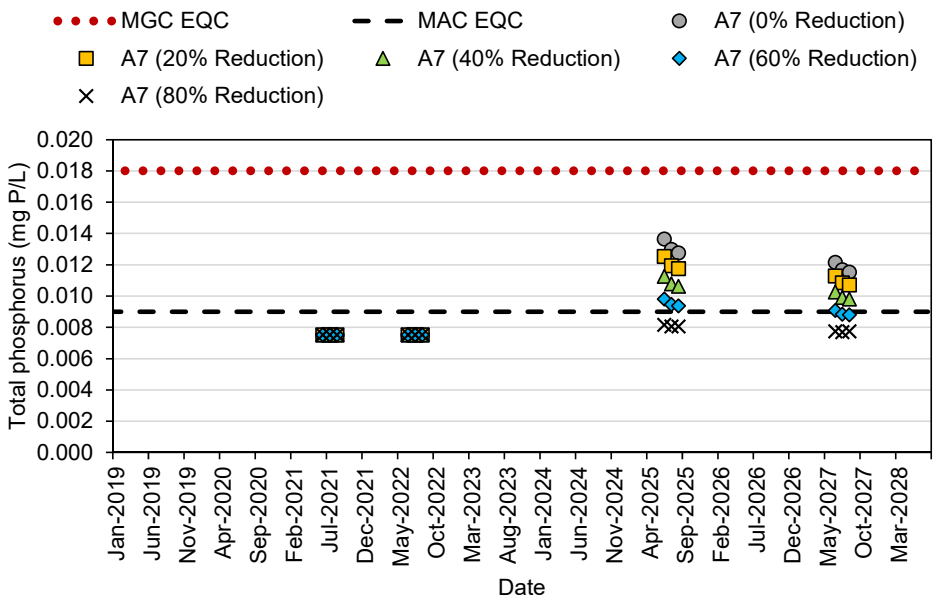
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration; N = nitrogen.

Figure 1-4: Comparison of Calculated Effluent Quality Criteria for Total Phosphorus to Projected Water Management Pond Discharge Concentrations

a) Scenario A



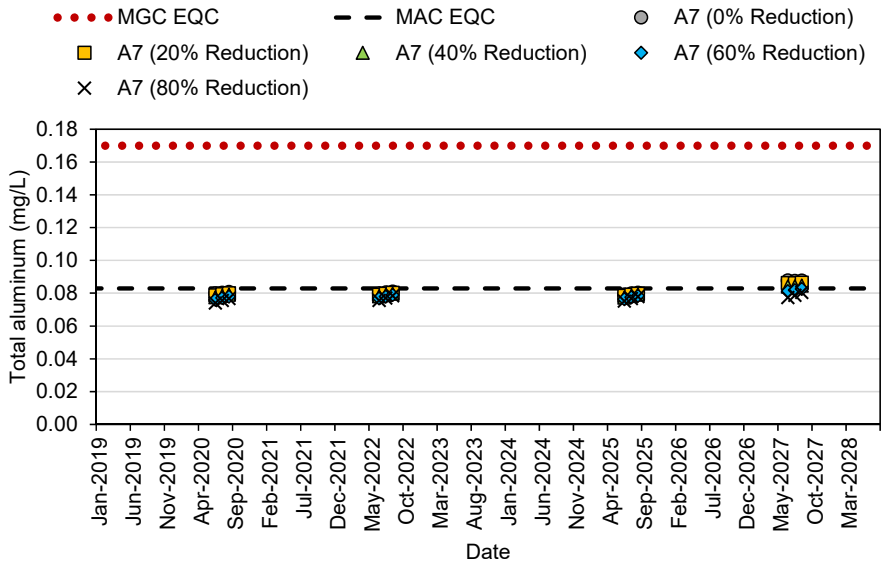
b) Scenario B



mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration; P = phosphorus.

Figure 1-5: Comparison of Calculated Effluent Quality Criteria for Total Aluminum to Projected Water Management Pond Discharge Concentrations

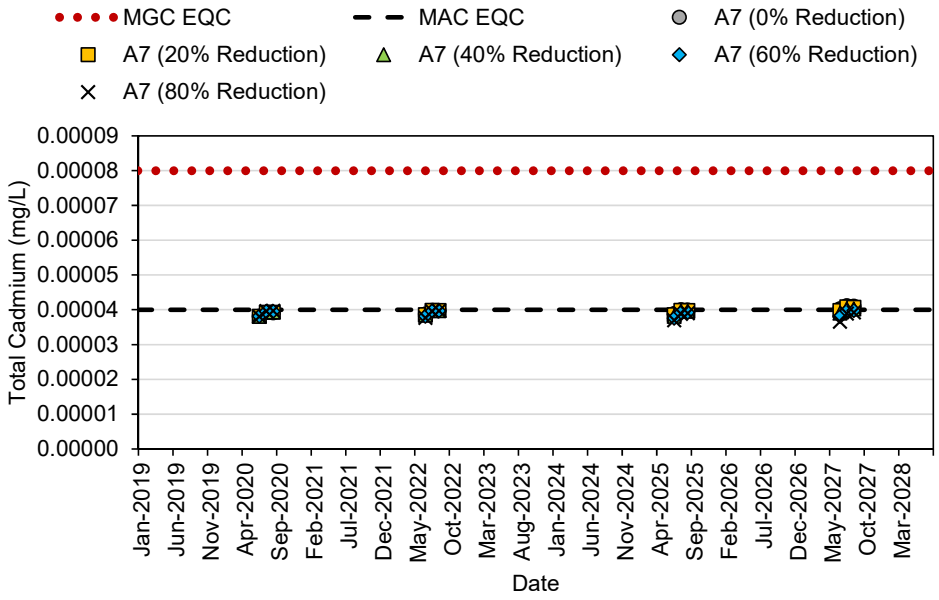
a) Scenario B



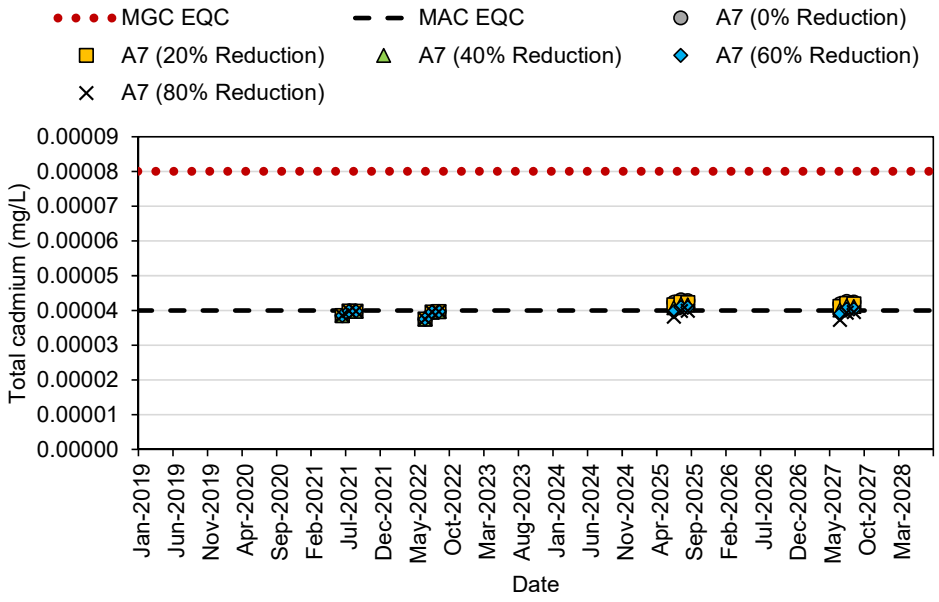
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

Figure 1-6: Comparison of Calculated Effluent Quality Criteria for Total Cadmium to Projected Water Management Pond Discharge Concentrations

a) Scenario A



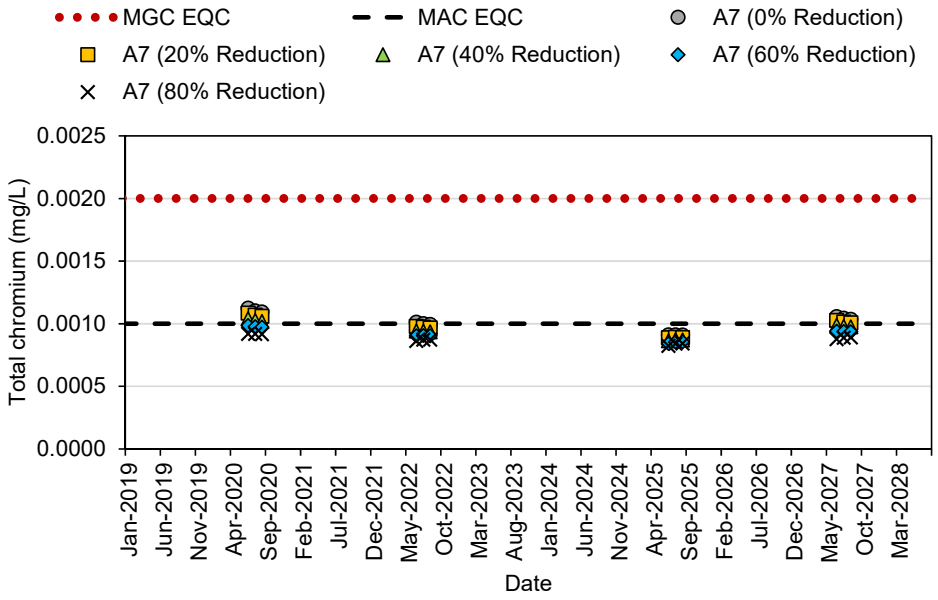
b) Scenario B



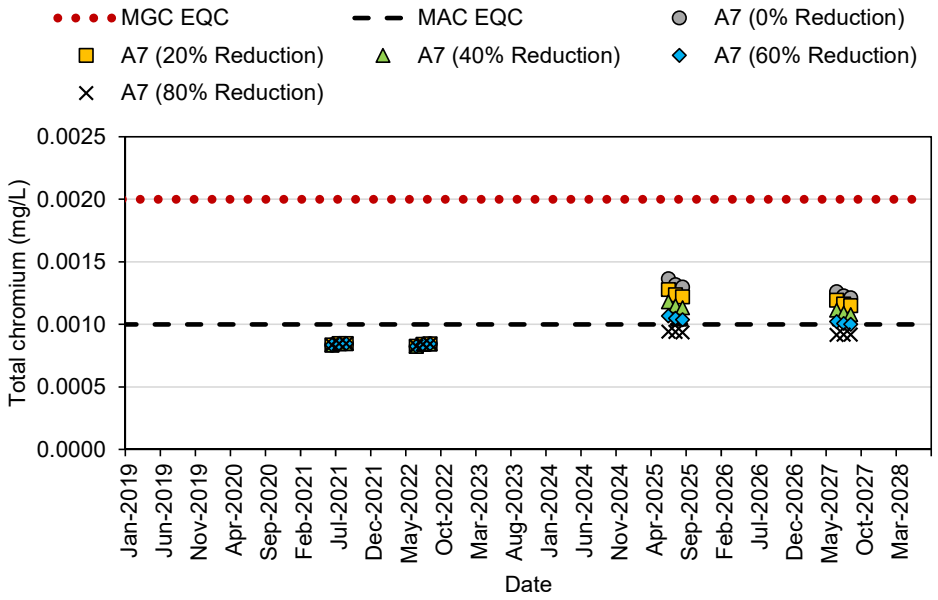
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

Figure 1-7: Comparison of Calculated Effluent Quality Criteria for Total Chromium to Projected Water Management Pond Discharge Concentrations

a) Scenario A



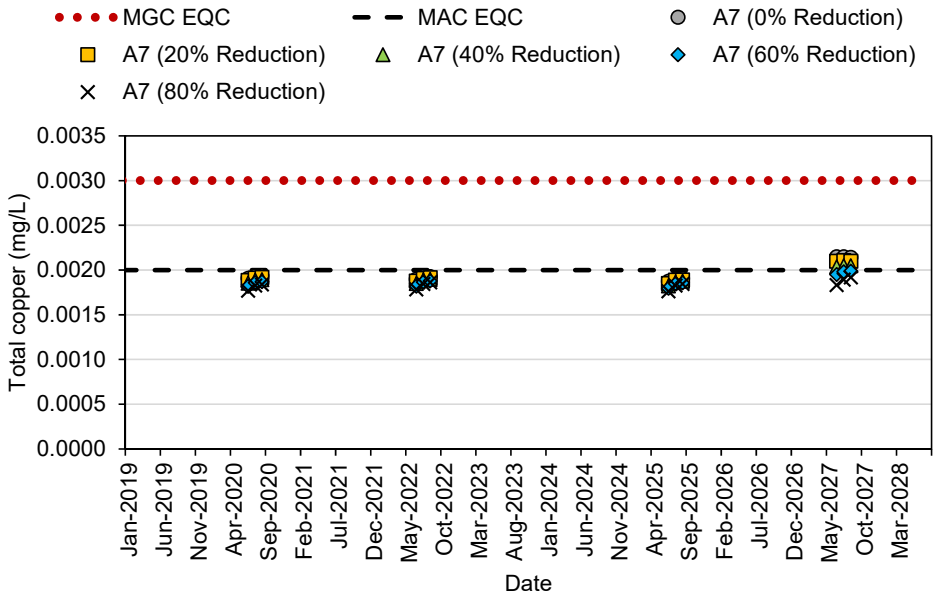
b) Scenario B



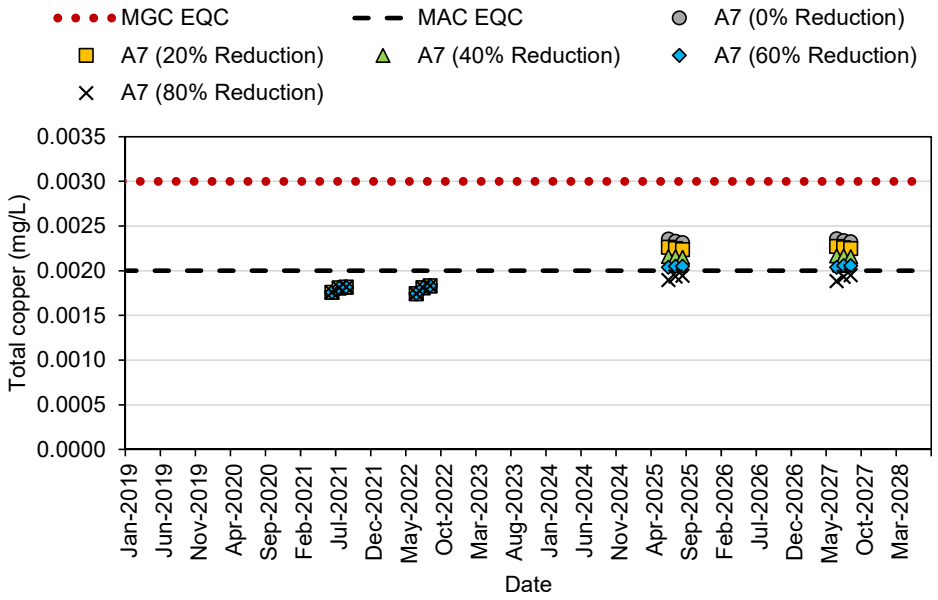
mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

Figure 1-8: Comparison of Calculated Effluent Quality Criteria for Total Copper to Projected Water Management Pond Discharge Concentrations

a) Scenario A



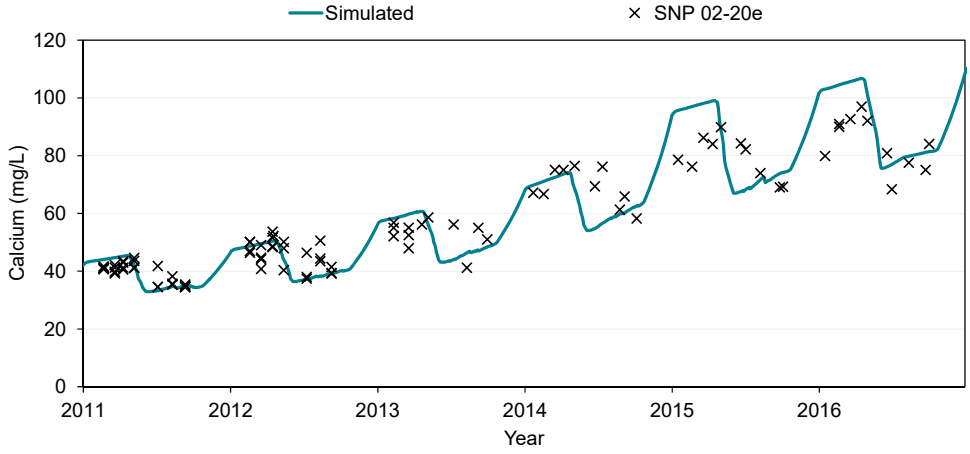
b) Scenario B



mg/L = milligrams per litre; EQC = effluent quality criteria; MGC = maximum grab concentration; MAC = maximum acceptable concentration.

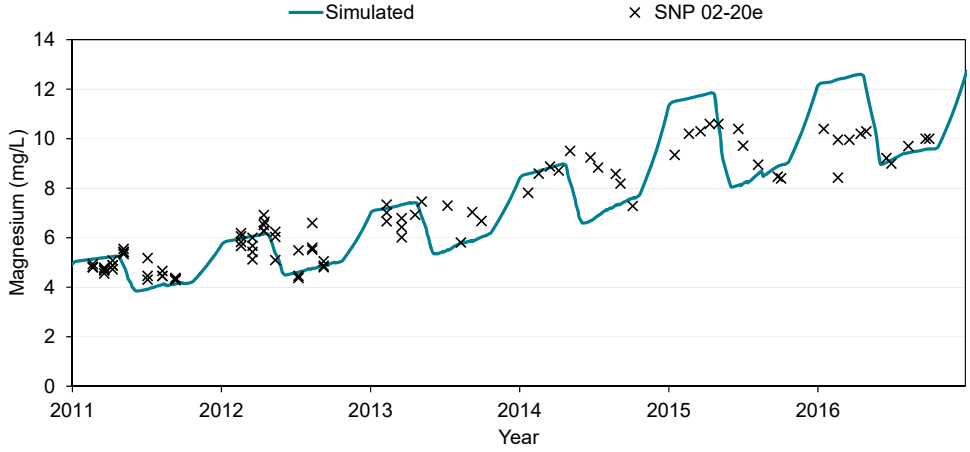
INFORMATION REQUEST 2

Figure 2-1: Simulated and Observed Calcium Concentrations in Snap Lake, 2011 to 2016



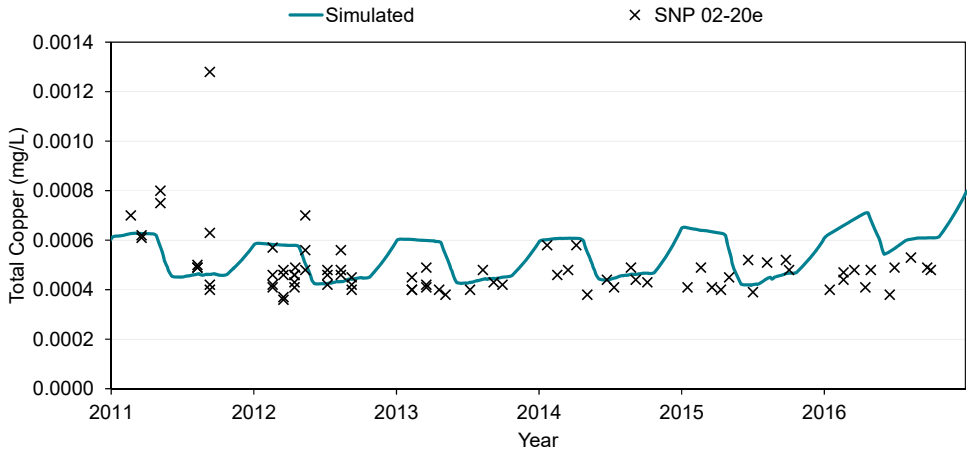
mg/L = milligrams per litre; SNP = surveillance network program.

Figure 2-2: Simulated and Observed Magnesium Concentrations in Snap Lake, 2011 to 2016



mg/L = milligrams per litre; SNP = surveillance network program.

Figure 2-3: Simulated and Observed Total Copper Concentrations in Snap Lake, 2011 to 2016



mg/L = milligrams per litre; SNP = surveillance network program.

INFORMATION REQUEST 3

Table 3-1: Comparison of Effluent Quality Criteria Proposed for Lake N11 to Projected Water Management Pond Discharge Concentrations in September and October of Year 2021

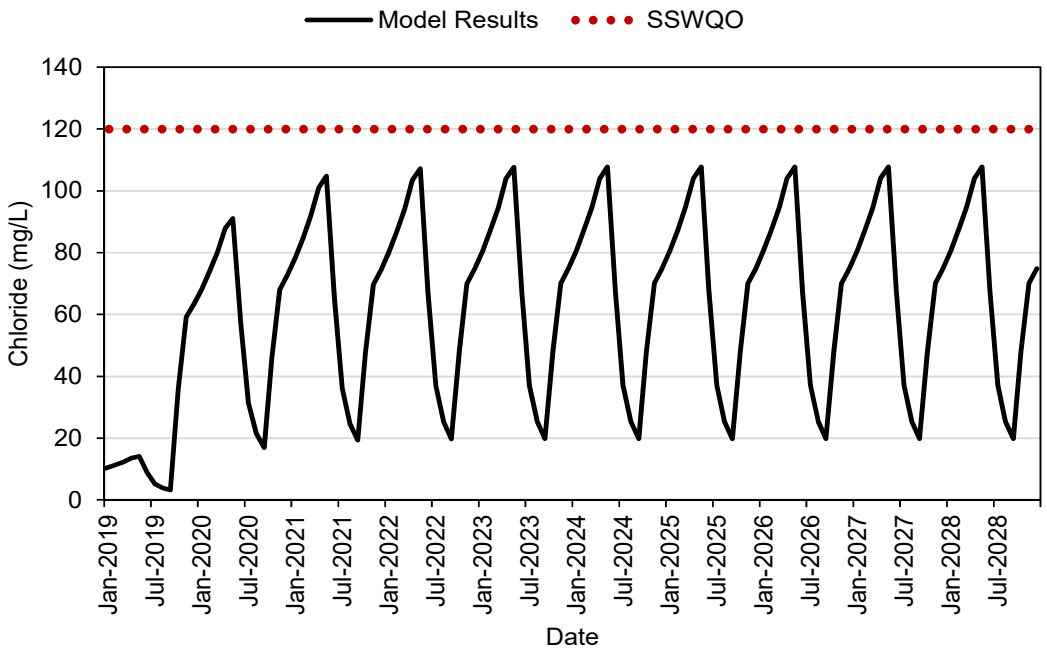
Parameter	Month	Projected Water Management Pond Concentrations in Year 2021[a]	Proposed Effluent Quality Criteria[b]	
			Maximum Average Concentration	Maximum Grab Concentration
Chloride, mg/L	September	408	300	515
	October	418		
Fluoride, mg/L	September	0.38	1.5	3
	October	0.39		
Sulphate, mg/L	September	55	100	155
	October	56		
Nitrate, mg N/L	September	25	20	30
	October	26		
Total ammonia, mg N/L	September	2.5	6	10
	October	2.6		
Total phosphorus, mg P/L	September	0.024	0.022	0.03
	October	0.024		
Total aluminum, mg/L	September	0.11	0.23	0.35
	October	0.12		
Total chromium, mg/L	September	0.0022	0.002	0.005
	October	0.0022		
Total copper, mg/L	September	0.003	0.004	0.007
	October	0.003		
Total iron, mg/L	September	0.47	0.6	1
	October	0.48		

a) Attachment 2, Appendix C of the 2018 Water Licence Amendment Application

b) Attachment 3 of the 2018 Water Licence Amendment Application

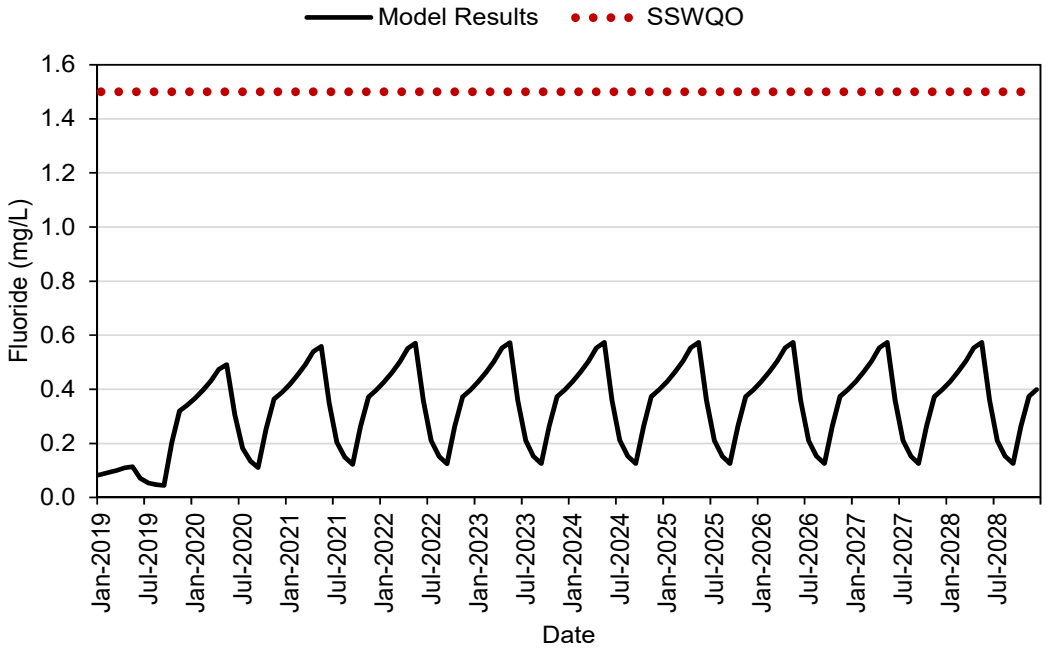
mg/L = milligrams per litre; N = nitrogen; P = phosphorus.

Figure 3-1: Projected Whole-lake Average Chloride Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



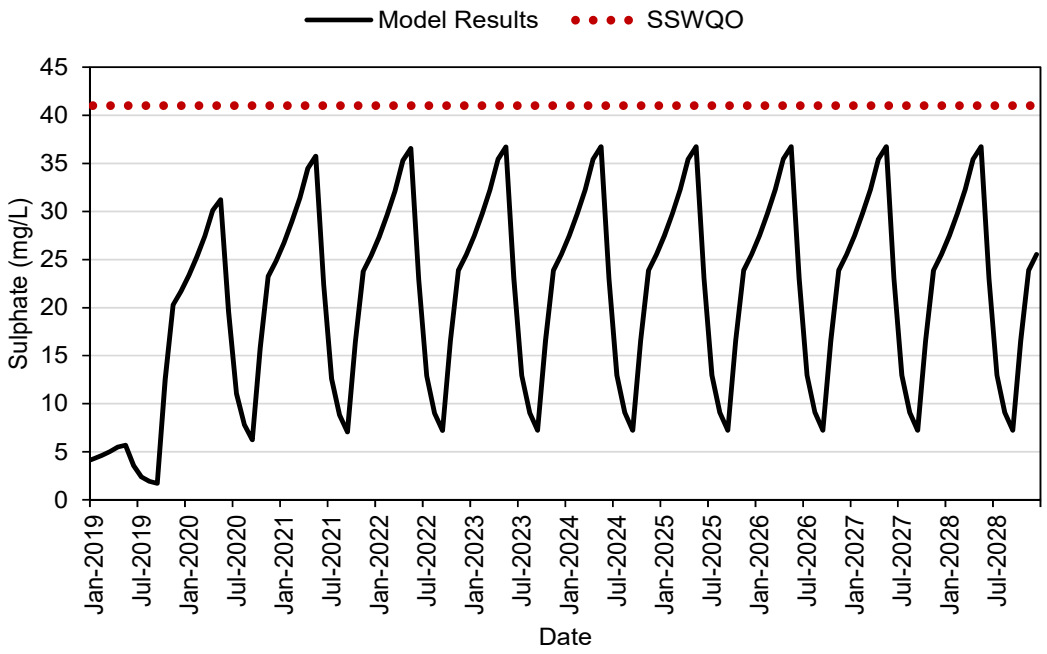
mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-2: Projected Whole-lake Average Fluoride Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



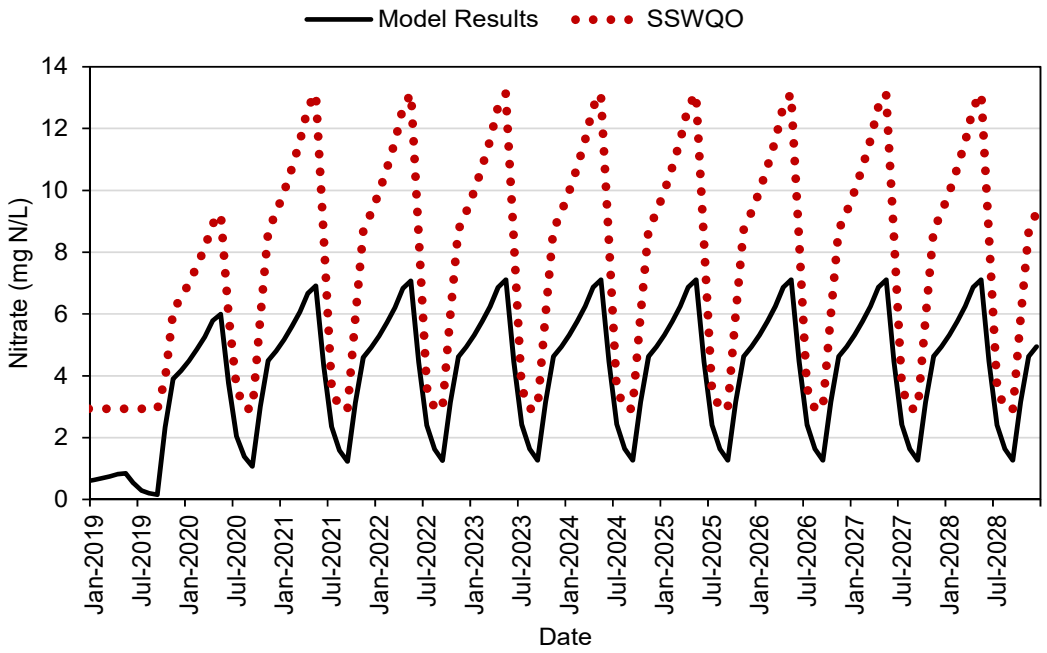
mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-3: Projected Whole-lake Average Sulphate Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



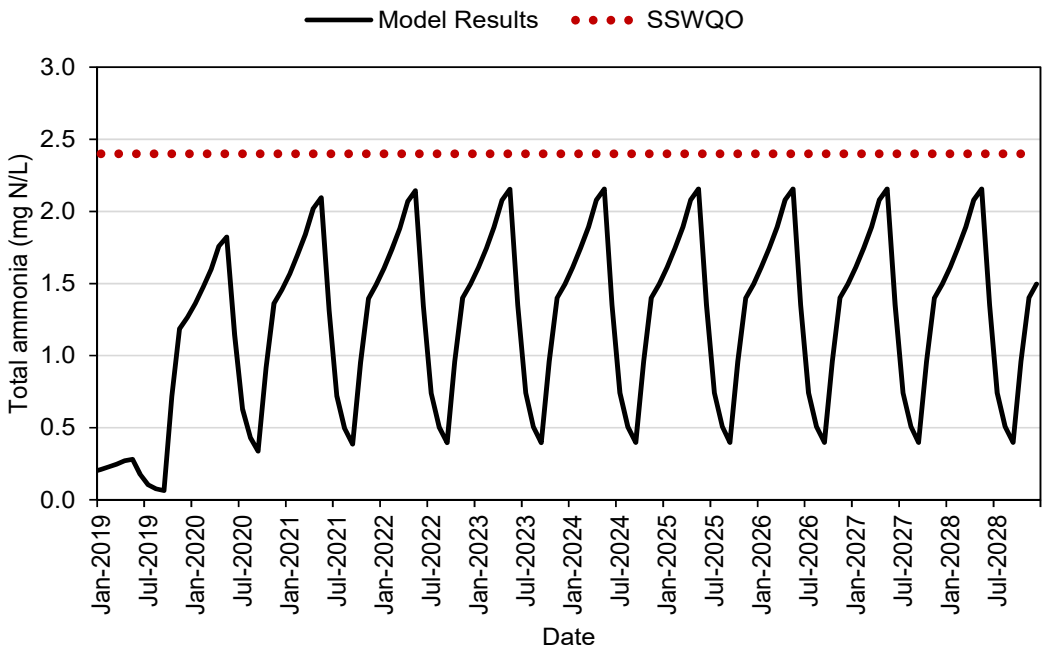
mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-4: Projected Whole-lake Average Nitrate Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



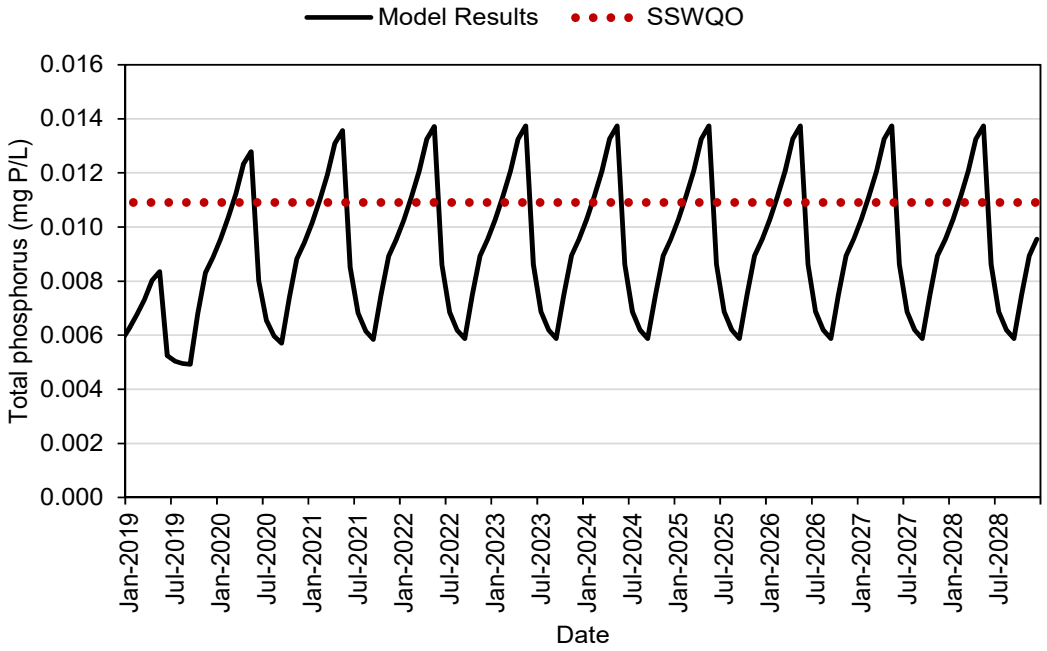
mg/L = milligrams per litre; N = nitrogen; SSWQO = site-specific water quality objective.

Figure 3-5: Projected Whole-lake Average Total Ammonia Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



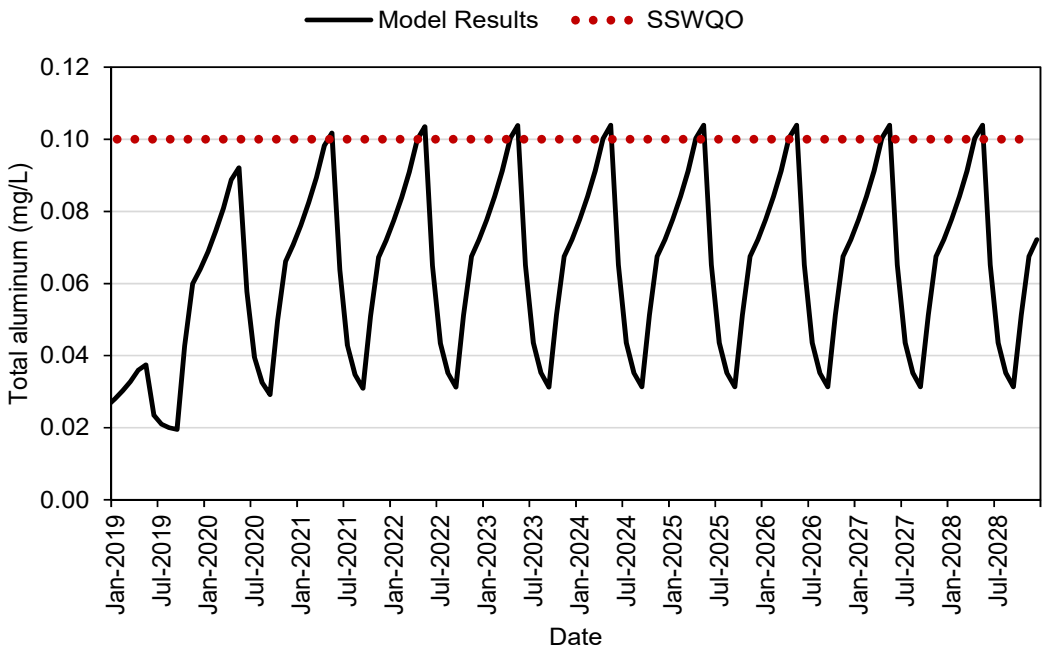
mg/L = milligrams per litre; N = nitrogen; SSWQO = site-specific water quality objective.

Figure 3-6: Projected Whole-lake Average Total Phosphorus Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



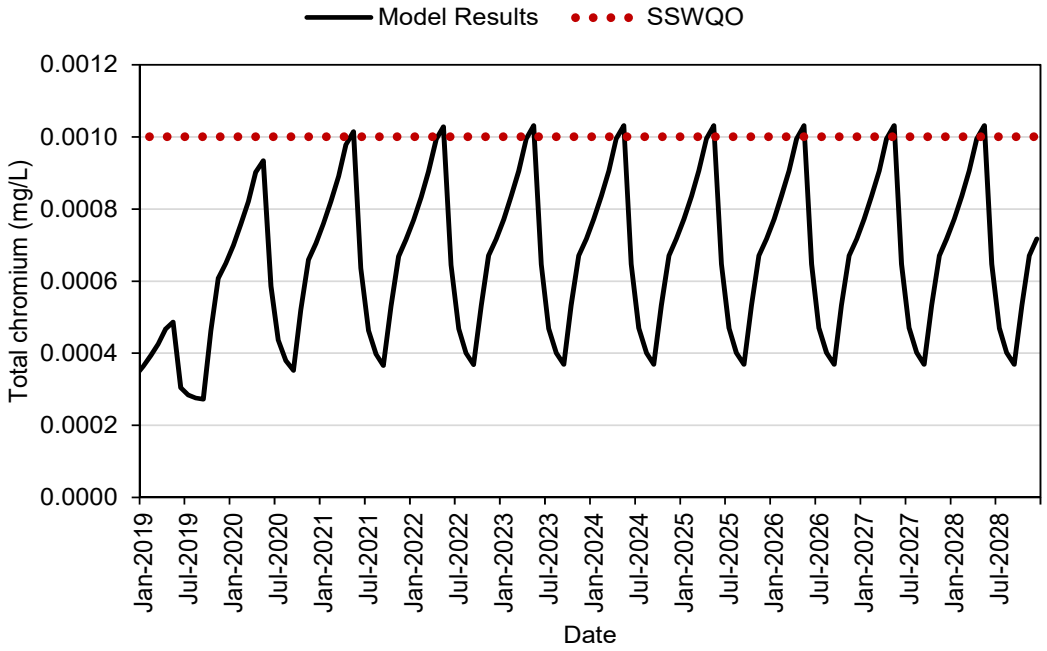
mg/L = milligrams per litre; P = phosphorus; SSWQO = site-specific water quality objective.

Figure 3-7: Projected Whole-lake Average Total Aluminum Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



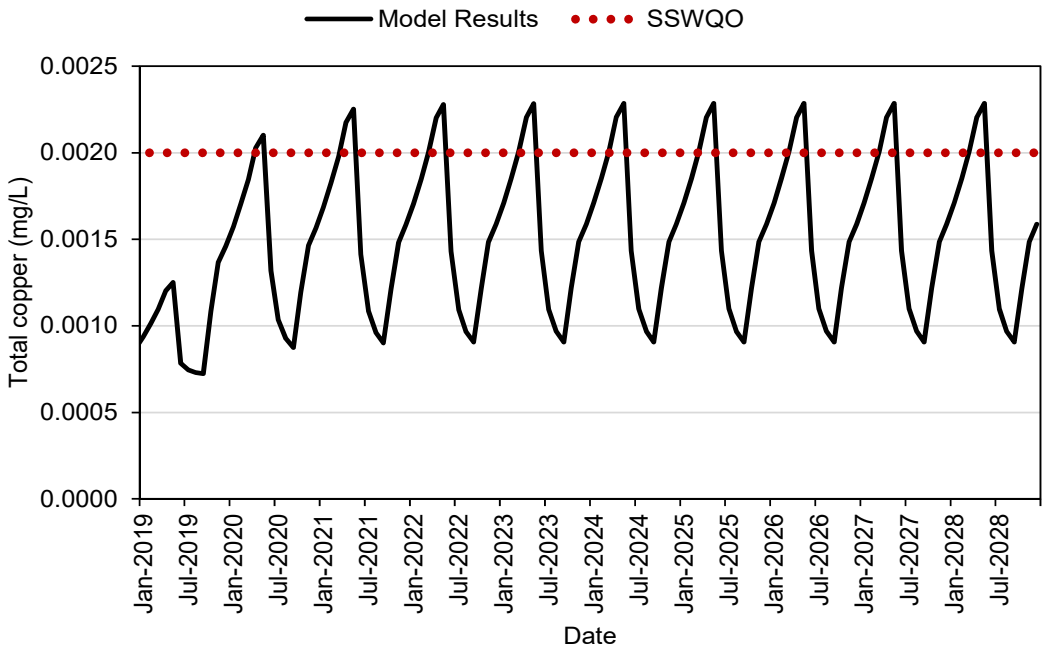
mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-8: Projected Whole-lake Average Total Chromium Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



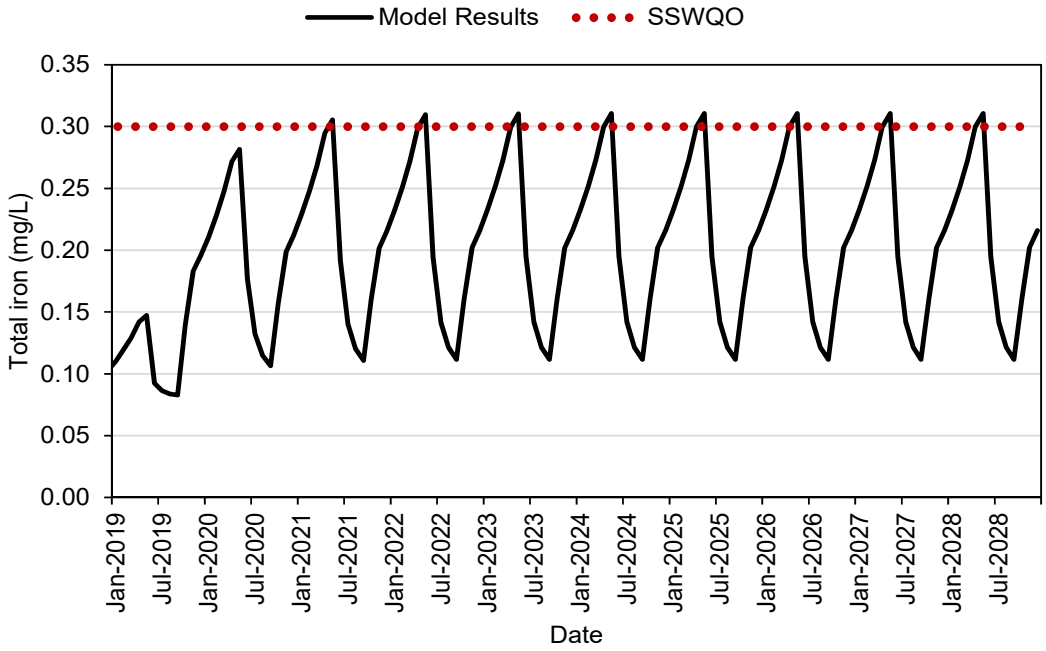
mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-9: Projected Whole-lake Average Total Copper Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

Figure 3-10: Projected Whole-lake Average Total Iron Concentrations in Lake N11 with Water Management Pond Discharge Concentrations Equal to the Maximum Average Concentration Effluent Quality Criteria



mg/L = milligrams per litre; SSWQO = site-specific water quality objective.

INFORMATION REQUEST 4

Table 1 - Scenario1: Anniversary Year Discharge, Discharge in 2018

Predicted Water Quality; Anniversary Year Limitation; Pumping Rate = 0.75m3/s	Anniversary Year Total, Mm3	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	September 1-23	September 24-30	Oct	Nov	Dec
		2016										0.00	0.06	1.03	1.11
Year 1 Discharge (Sept. 24, 2016 to Sept. 23 2017)	3.46	2017	0.59								0.67	0.21	1.08	0.37	
Year 2 Discharge (Sept. 24, 2017 to Sept. 23 2018)	3.45	2018									1.79	*0.45*	*1.51*		
Year 3 Discharge (Sept. 24, 2018 to Sept. 23 2019)	3.45	2019									*1.49*	*0.45*	*1.51*		
Year 4 Discharge (Sept. 24, 2019 to Sept. 23 2020)	3.45	2020									*1.49*				
Year 5 Discharge (Sept. 24, 2020 to Sept. 23 2021)	0.00	2021													
Total Discharged	13.81														
Reference Total = 3.45*4	13.80														

Table 2 - Scenario2: Anniversary Year Discharge, No Discharge in 2018 (Modelled Case)

Predicted Water Quality; Anniversary Year Limitation; Pumping Rate = 0.75m3/s	Anniversary Year Total, Mm3	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	September 1-23	September 24-30	Oct	Nov	Dec
		2016										0.00	0.06	1.03	1.11
Year 1 Discharge (Sept. 24, 2016 to Sept. 23 2017)	3.46	2017	0.59								0.67	0.21	1.08	0.37	
Year 2 Discharge (Sept. 24, 2017 to Sept. 23 2018)	1.66	2018													
Year 3 Discharge (Sept. 24, 2018 to Sept. 23 2019)	1.49	2019									*1.49*	*0.45*	*1.51*		
Year 4 Discharge (Sept. 24, 2019 to Sept. 23 2020)	3.45	2020									*1.49*	*0.45*	*1.51*		
Year 5 Discharge (Sept. 24, 2020 to Sept. 23 2021)	*1.96*	2021													
Total Discharged	12.02														
Reference Total = 3.45*4	13.80														

Table 3 – Scenario3: Calendar Year Discharge, Discharge in 2018

Predicted Water Quality; Calendar Year Limitation; pumping rate= 0.75m/s	Calendar Year Total, Mm3	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	September 1-23	September 24-30	Oct	Nov	Dec
		2016										0.00	0.06	1.03	1.11
Year 1 Discharge (Sept. 24, 2016 to Sept. 23, 2017)	3.46	2017	0.59								0.67	0.21	1.08	0.37	
Year 2 Discharge (Sept. 24, 2017 to Dec. 31, 2018)	3.44	2018									1.32	0.34	0.12		
Year 3 Discharge (January 1, 2019 to Dec. 31 2019)	*3.45*	2019									*1.49*	*0.45*	*1.51*		
Year 4 Discharge (January 1, 2020 to Dec. 31 2020)	*3.45*	2020									*1.49*	*0.45*	*1.51*		
Year 5 Discharge (January 1, 2021 to Dec. 31 2021)	*0.00*	2021													
Total Discharged	13.8														
Reference Total = 3.45*4	13.80														

Table 4 - Scenario4: Calendar Year Discharge, No Discharge in 2018 (Basis of Current WB Modelling)

Predicted Water Quality; Calendar Year Limitation; pumping rate= 0.75m/s	Calendar Year Total, Mm3	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	September 1-23	September 24-30	Oct	Nov	Dec
		2016										0.00	0.06	1.03	1.11
Year 1 Discharge (Sept. 24, 2016 to Sept. 23, 2017)	3.46	2017	0.59								0.67	0.21	1.08	0.37	
Year 2 Discharge (Sept. 24, 2017 to Dec. 31, 2018)	1.66	2018													
Year 3 Discharge (January 1, 2019 to Dec. 31 2019)	*3.45*	2019									*1.49*	*0.45*	*1.51*		
Year 4 Discharge (January 1, 2020 to Dec. 31 2020)	*3.45*	2020									*1.49*	*0.45*	*1.51*		
Year 5 Discharge (January 1, 2021 to Dec. 31 2021)	*0.00*	2021													
Total Discharged	12.02														
Reference Total = 3.45*4	13.80														

COMMITMENT 1

Table C-1: Comparison of Projected Whole-lake Average Chloride Concentrations in Lake N11 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Lake N11

Date	Acute Chloride SSWQO [mg/L] [(a)]	Whole-lake Average Chloride [mg/L] with Discharge from the WMP to Lake N11 at the MAC EQC	Whole-lake Average Chloride [mg/L] with Discharge from the WMP to Lake N11 at the MGC EQC
Jan-2019	468	11	17
Feb-2019	468	11	19
Mar-2019	468	12	20
Apr-2019	468	14	22
May-2019	468	14	23
Jun-2019	468	9	14
Jul-2019	468	5	8
Aug-2019	468	4	6
Sep-2019	468	3	5
Oct-2019	491	36	61
Nov-2019	564	59	101
Dec-2019	575	63	108
Jan-2020	588	68	116
Feb-2020	602	74	126
Mar-2020	616	80	136
Apr-2020	634	88	150
May-2020	641	91	155
Jun-2020	558	57	97
Jul-2020	478	31	53
Aug-2020	468	22	36
Sep-2020	468	17	28
Oct-2020	558	46	78
Nov-2020	629	68	116
Dec-2020	642	73	124

a) ERM (2016)

mg/L = milligrams per litre; EQC = effluent quality criteria; MAC = maximum average concentration; MGC = maximum grab concentration; SSWQO = site-specific water quality objective; WMP = water management pond

Table C-2: Comparison of Projected Whole-lake Average Sulphate Concentrations in Lake N11 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Lake N11

Date	Acute Sulphate SSWQO [mg/L] [a]	Whole-lake Average Sulphate [mg/L] with Discharge from the WMP to Lake N11 at the MAC EQC	Whole-lake Average Sulphate [mg/L] with Discharge from the WMP to Lake N11 at the MGC EQC
Jan-2019	356	4	6
Feb-2019	368	5	6
Mar-2019	380	5	7
Apr-2019	395	6	8
May-2019	401	6	8
Jun-2019	343	4	5
Jul-2019	343	2	3
Aug-2019	343	2	2
Sep-2019	343	2	2
Oct-2019	582	13	19
Nov-2019	706	20	31
Dec-2019	726	22	33
Jan-2020	749	23	36
Feb-2020	774	25	39
Mar-2020	800	27	42
Apr-2020	832	30	46
May-2020	845	31	48
Jun-2020	696	20	30
Jul-2020	560	11	17
Aug-2020	493	8	12
Sep-2020	457	6	9
Oct-2020	697	16	24
Nov-2020	824	23	36
Dec-2020	847	25	38

a) Rescan (2012)

mg/L = milligrams per litre; EQC = effluent quality criteria; MAC = maximum average concentration; MGC = maximum grab concentration; SSWQO = site-specific water quality objective; WMP = water management pond

Table C-3: Comparison of Projected Whole-lake Average Total Copper Concentrations in Lake N11 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Lake N11

Date	Acute Total Copper SSWQO [mg/L] [a]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Lake N11 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Lake N11 at the MGC EQC
Jan-2019	0.003028	0.000936	0.001029
Feb-2019	0.003113	0.001013	0.001115
Mar-2019	0.003203	0.001095	0.001205
Apr-2019	0.003322	0.001203	0.001323
May-2019	0.003374	0.001251	0.001376
Jun-2019	0.002862	0.000785	0.000863
Jul-2019	0.002734	0.000745	0.000788
Aug-2019	0.002685	0.000730	0.000759
Sep-2019	0.002662	0.000723	0.000745
Oct-2019	0.005359	0.001083	0.001433
Nov-2019	0.007341	0.001366	0.001950
Dec-2019	0.007708	0.001460	0.002084
Jan-2020	0.008145	0.001572	0.002243
Feb-2020	0.008655	0.001702	0.002429
Mar-2020	0.009214	0.001845	0.002634
Apr-2020	0.009926	0.002027	0.002894
May-2020	0.010214	0.002101	0.002999
Jun-2020	0.007152	0.001318	0.001881
Jul-2020	0.005062	0.001035	0.001340
Aug-2020	0.004256	0.000926	0.001132
Sep-2020	0.003876	0.000874	0.001033
Oct-2020	0.007169	0.001193	0.001643
Nov-2020	0.009729	0.001464	0.002137
Dec-2020	0.010261	0.001565	0.002284

a) BCMOE (2017)

mg/L = milligrams per litre; EQC = effluent quality criteria; MAC = maximum average concentration; MGC = maximum grab concentration; SSWQO = site-specific water quality objective; WMP = water management pond

Table C-4: Comparison of Projected Whole-lake Average Total Copper Concentrations in Area 8 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Area 8

Date	Acute Total Copper SSWQO [mg/L] [(a)]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MGC EQC
Jan-2019	0.002961	0.000867	0.000950
Feb-2019	0.003074	0.000970	0.001062
Mar-2019	0.003203	0.001086	0.001189
Apr-2019	0.003386	0.001251	0.001370
May-2019	0.003441	0.001301	0.001425
Jun-2019	0.002745	0.000676	0.000738
Jul-2019	0.002722	0.000673	0.000728
Aug-2019	0.002716	0.000685	0.000735
Sep-2019	0.002707	0.000685	0.000731
Oct-2019	0.002703	0.000683	0.000728
Nov-2019	0.002728	0.000707	0.000754
Dec-2019	0.002795	0.000772	0.000824
Jan-2020	0.002879	0.000854	0.000911
Feb-2020	0.002983	0.000955	0.001019
Mar-2020	0.003105	0.001073	0.001145
Apr-2020	0.003274	0.001238	0.001321
May-2020	0.003319	0.001281	0.001366
Jun-2020	0.002683	0.000665	0.000709
Jul-2020	0.002661	0.000656	0.000694
Aug-2020	0.002654	0.000653	0.000689
Sep-2020	0.002649	0.000651	0.000685
Oct-2020	0.002646	0.000649	0.000683
Nov-2020	0.002669	0.000672	0.000708
Dec-2020	0.002731	0.000735	0.000773
Jan-2021	0.002809	0.000812	0.000855
Feb-2021	0.002904	0.000908	0.000956
Mar-2021	0.003012	0.001017	0.001070

Table C-4: Comparison of Projected Whole-lake Average Total Copper Concentrations in Area 8 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Area 8

Date	Acute Total Copper SSWQO [mg/L] [(a)]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MGC EQC
Apr-2021	0.003167	0.001172	0.001233
May-2021	0.003213	0.001218	0.001282
Jun-2021	0.002629	0.000634	0.000666
Jul-2021	0.002660	0.000727	0.000824
Aug-2021	0.002805	0.000994	0.001281
Sep-2021	0.002833	0.001052	0.001380
Oct-2021	0.002827	0.001043	0.001365
Nov-2021	0.002857	0.001080	0.001413
Dec-2021	0.002936	0.001180	0.001544
Jan-2022	0.003035	0.001304	0.001707
Feb-2022	0.003157	0.001459	0.001908
Mar-2022	0.003295	0.001633	0.002136
Apr-2022	0.003493	0.001882	0.002462
May-2022	0.003552	0.001957	0.002560
Jun-2022	0.002801	0.001009	0.001315
Jul-2022	0.002793	0.001023	0.001336
Aug-2022	0.002903	0.001214	0.001661
Sep-2022	0.002921	0.001248	0.001719
Oct-2022	0.002913	0.001236	0.001698
Nov-2022	0.002945	0.001279	0.001758
Dec-2022	0.003032	0.001397	0.001920
Jan-2023	0.003142	0.001545	0.002123
Feb-2023	0.003276	0.001728	0.002374
Mar-2023	0.003429	0.001934	0.002658
Apr-2023	0.003647	0.002229	0.003063
May-2023	0.003712	0.002318	0.003185
Jun-2023	0.002883	0.001192	0.001632

Table C-4: Comparison of Projected Whole-lake Average Total Copper Concentrations in Area 8 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Area 8

Date	Acute Total Copper SSWQO [mg/L] [(a)]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MGC EQC
Jul-2023	0.002837	0.001077	0.001427
Aug-2023	0.002810	0.000979	0.001242
Sep-2023	0.002793	0.000946	0.001182
Oct-2023	0.002787	0.000939	0.001171
Nov-2023	0.002815	0.000972	0.001212
Dec-2023	0.002891	0.001062	0.001324
Jan-2024	0.002985	0.001174	0.001464
Feb-2024	0.003101	0.001313	0.001637
Mar-2024	0.003238	0.001476	0.001841
Apr-2024	0.003428	0.001702	0.002123
May-2024	0.003477	0.001761	0.002196
Jun-2024	0.002763	0.000910	0.001130
Jul-2024	0.002730	0.000866	0.001056
Aug-2024	0.002720	0.000854	0.001036
Sep-2024	0.002713	0.000845	0.001020
Oct-2024	0.002709	0.000840	0.001012
Nov-2024	0.002734	0.000870	0.001048
Dec-2024	0.002802	0.000950	0.001145
Jan-2025	0.002887	0.001050	0.001266
Feb-2025	0.002992	0.001174	0.001415
Mar-2025	0.003110	0.001315	0.001584
Apr-2025	0.003280	0.001515	0.001826
May-2025	0.003331	0.001575	0.001898
Jun-2025	0.002689	0.000815	0.000979
Jul-2025	0.002701	0.000870	0.001071
Aug-2025	0.002826	0.001100	0.001464
Sep-2025	0.002849	0.001147	0.001544

Table C-4: Comparison of Projected Whole-lake Average Total Copper Concentrations in Area 8 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Area 8

Date	Acute Total Copper SSWQO [mg/L] [(a)]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MGC EQC
Oct-2025	0.002842	0.001136	0.001526
Nov-2025	0.002872	0.001176	0.001579
Dec-2025	0.002953	0.001285	0.001725
Jan-2026	0.003054	0.001421	0.001908
Feb-2026	0.003178	0.001589	0.002133
Mar-2026	0.003319	0.001778	0.002388
Apr-2026	0.003520	0.002050	0.002752
May-2026	0.003580	0.002131	0.002861
Jun-2026	0.002816	0.001097	0.001468
Jul-2026	0.002759	0.000999	0.001292
Aug-2026	0.002711	0.000917	0.001134
Sep-2026	0.002695	0.000890	0.001084
Oct-2026	0.002691	0.000884	0.001074
Nov-2026	0.002716	0.000915	0.001112
Dec-2026	0.002782	0.001000	0.001215
Jan-2027	0.002865	0.001106	0.001344
Feb-2027	0.002967	0.001236	0.001502
Mar-2027	0.003083	0.001384	0.001682
Apr-2027	0.003248	0.001595	0.001938
May-2027	0.003297	0.001658	0.002015
Jun-2027	0.002672	0.000857	0.001038
Jul-2027	0.002684	0.000903	0.001118
Aug-2027	0.002808	0.001125	0.001499
Sep-2027	0.002832	0.001169	0.001575
Oct-2027	0.002826	0.001158	0.001556
Nov-2027	0.002855	0.001199	0.001611
Dec-2027	0.002934	0.001309	0.001760

Table C-4: Comparison of Projected Whole-lake Average Total Copper Concentrations in Area 8 to the Acute Hardness-dependent Site-specific Water Quality Objective Calculated Using Projected Whole-lake Average Hardness Concentrations in Area 8

Date	Acute Total Copper SSWQO [mg/L] [(a)]	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MAC EQC	Whole-lake Average Total Copper [mg/L] with Discharge from the WMP to Area 8 at the MGC EQC
Jan-2028	0.003033	0.001448	0.001946
Feb-2028	0.003155	0.001619	0.002175
Mar-2028	0.003293	0.001812	0.002435
Apr-2028	0.003490	0.002089	0.002807
May-2028	0.003549	0.002172	0.002918
Jun-2028	0.002800	0.001118	0.001497
Jul-2028	0.002761	0.001046	0.001372

a) BCMOE (2017)

mg/L = milligrams per litre; EQC = effluent quality criteria; MAC = maximum average concentration; MGC = maximum grab concentration; SSWQO = site-specific water quality objective; WMP = water management pond

References

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