

Appendix 14

Whale Tail Water Management Plan Version 14



AGNICO EAGLE

Meadowbank Division

WHALE TAIL MINE

Water Management Plan

MARCH 2025

VERSION 14

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited – Meadowbank Complex (Agnico Eagle) operates the Whale Tail Mine (Piquganiq) a satellite deposit located on the Amaruq property processing the ore at Meadowbank Mine. The Amaruq property is a 408 square kilometre (km²) site located on Inuit Owned Land (IOL) approximately 150 kilometres (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut. The deposit is currently being mined as two open pits (i.e., Whale Tail Pit and IVR Pit) and Underground operations, and ore is hauled to the approved infrastructure at Meadowbank Mine for milling.

In 2020 the Whale Tail Expansion Project (Expansion Project) was approved, permitting Agnico Eagle to expand and extend the Whale Tail Mine operations to include a larger Whale Tail open pit, development of the IVR open pit, and underground operations while continuing to operate and process ore at the Meadowbank Mine. In 2021 a positive conformity determination application was issued by the Nunavut Planning Commission for pushbacks on the IVR and Whale Tail pits (Pushback Project). In 2023, approvals were received to reflect the continuation of the Whale Tail Pushback, continuation of the IVR Pushback, and temporary storage of groundwater in IVR Pit (referred to as the 2023 Modification). In 2024, operations will continue to mid-2028.

The open pit mine, mined by drill and blast operations has been in operation since September 30, 2019. The mine will produce in total 31.8 million tonnes (Mt) of ore, 205.9 Mt of waste rock, and 5.4 Mt of overburden waste. The 2025 is within the approved mine production and includes the generation of 7.3 Mt of ore and produces 19.8 Mt of waste material (rock and overburden) which will be stored in the existing Waste Rock Storage Facilities (WRSF). Non-leachable material will also be stored in the pits.

The water management objectives are to minimize potential impacts to the quantity and quality of surface water at the mine site. Water management structures (water retention dikes/berms and diversion channels) have been and will be constructed, dependent on the potential presence and volume of water, to contain and manage the contact water from the areas affected by the mine or mining activities. The major water management infrastructure includes contact water collection ponds, diversion channels, water retention dikes, culverts, seepage collection systems, water treatment plants for effluent, a potable water treatment plant, a sewage treatment plant, and discharge diffusers.

This Water Management Plan describes the main objectives pertaining to water management, which are to limit the flow of surface water runoff in the pit and to limit the impact on the local environment. In developing the water management plan, the following principles were followed:

- keep the different water types separated as much as possible.
- control and minimize contact water through diversion and containment.

- minimize freshwater consumption by recycling and reusing the contact and process water wherever feasible; and
- meet discharge criteria before any site contact water is released to the downstream environment.

During mine construction and operations, contact water originating from affected areas on surface is intercepted, diverted, and collected within the various collection ponds. The collected water on the mine site is pumped and stored in the Whale Tail Attenuation Pond and IVR Attenuation Pond, where the contact water is treated by the Water Treatment Plant (WTP) (as required according to water quality) prior to discharge to the receiving environment or reused in the operations. The 2023 Modification included the temporary storage of groundwater in IVR Pit, per approved Adaptive Management Plan (Agnico Eagle 2021) and was approved by the NWB. This will continue throughout the mine life.

During operations, site contact water quality is predicted to exceed established effluent criteria (i.e., under the Whale Tail Water License 2AM-WTP1830) in the Whale Tail Waste Rock Storage Facility (WRSF) Pond and in the Whale Tail Pit sump. Therefore, this water is controlled by the Whale Tail WRSF Dike and the Whale Tail WRSF Pond. The Whale Tail WRSF Pond water will report with all other contact water and will be mixed in the Whale Tail and IVR Attenuation Ponds and treated during operations.

During operations when the mine is at its maximum footprint, the conservative predictions of future water quality indicate that most parameter concentrations in the downstream environment are below CEQG-AL. A site wide water balance is updated annually including projected water quality that is compared with previous predictions.

Water management during closure and reclamation will involve actively filling the underground facilities and IVR Pit and passively allowing the Whale Tail Attenuation Pond and the Whale Tail Pit to flood. The Groundwater Storage Ponds and IVR Attenuation Pond will be emptied at the start of closure and backfilled with Non-Potentially Acid Generating/ Non- Metal Leaching (NPAG/non-ML) waste rock. The groundwater temporarily stored in IVR Pit will be pumped to the underground void space prior to actively filling IVR Pit. The Whale Tail and IVR WRSFs will be progressively covered with NPAG/non-ML waste rock throughout operations and are expected to be completely covered at the beginning of closure. The pushback in IVR pit will be backfilled with NPAG-non-ML rock material and filled by natural flow. Contact water management systems will remain on site until monitoring results demonstrate that water quality is acceptable for discharge of all contact water to the environment without further treatment. Once water quality meets the discharge criteria, the water management systems will be decommissioned to allow the water to naturally flow to the receiving environment. Through best management practices and mitigation, the predicted water quality of Whale Tail Lake (North Basin) meets aquatic life guidelines post-closure. The projected water quality in Kangislulik

Lake is predicted to meet guidelines in post-closure for all constituents of potential concern (including chloride, fluoride, nitrate, and total metals, as identified in the 2018 FEIS).

The updated water quality forecast shows a stable trend in the water quality indicators. Flooded pit water quality is predicted to meet receiving water quality criteria at closure and through post-closure, allowing reconnection with the downstream receiving environment.

Dikes will not be breached until the water quality in the flooded area meets the approved water quality objectives. During mine closure, no mine discharges will occur to the downstream receiving environment since all contact waters are diverted to the open pit, underground and Whale Tail Lake (North Basin) for re-flooding.

DOCUMENT CONTROL

Version	Date	Section	Page	Revision	Author
1	January 2017			Water Management Plan for the Whale Tail Pit	Agnico Eagle Meadowbank Division and Golder Associates Ltd.
2	September 2018	All	All	Water Management Plan for the Whale Tail Pit	Agnico Eagle Meadowbank Division and SNC-Lavalin Inc.
3	October 2018	3.1.4.11 3.3.1	23 32	Updated to align with recommendations issued by CIRNAC, ECCC and KIA in October 2018	Agnico Eagle Meadowbank Division
4	March 2020	All	All	Updated to reflect current operations/water mgmt and to comply with commitments and requests	Agnico Eagle Meadowbank Division
5	July 2020	All	All	Water Management Plan for the Whale Tail Pit – including Expansion Project	Agnico Eagle Meadowbank Division
6	April 2021	All	All	Updated to reflect current operations/water mgmt and to comply with commitments and requests	Agnico Eagle Meadowbank Division
7_NWB	June 2021	Summary 3.7.12 3.10 5.0 Appendices	i-ii 33 42 49 N.A.	Updated to include Pushback Project Added new section Figure on pushback in IVR Adaptive Mgmt Updated WQ models	AEM – Permitting & Regulatory Affairs (all changes)
8	December 2021	3.4 3.8	17 37	Clarification on wording for source of water use for emulsion plant	Agnico Eagle Meadowbank Division
9	March 2022	All	All	Updated to reflect current operations/water mgmt and to comply with commitments and requests	Agnico Eagle Meadowbank Division
10	March 2023	3.1, 4	All	Section 3.1 water management targets, Section 4 water quality forecast update	Agnico Eagle Meadowbank Division
11_NWB	June 2023	All		Updated to include the 2023 Modification (Pushbacks and IVR Pit temporary storage)	Agnico Eagle Permitting & Regulatory Affairs
12	March 2024	Section 1 Table 3.1 Section 3.5.1 Section 3.10.1	All	Updated to reflect current operations/water mgmt and to comply with commitments and requests.	Agnico Eagle Meadowbank Division

Version	Date	Section	Page	Revision	Author
		Section 3.7.6, Section 3.7.13, Section 3.7.17, Section 3.8, Section 4		<p>Mammoth Lake called Kangislulik Lake</p> <p>Section 1: Removed mention of material in IVR pushback</p> <p>Table 3.1: Added target 2024 water objectives and removed 2021.</p> <p>3.5.1 Infrastructure Summary and 3.10.1 Flooding sequence: Changed inlet of SWTC to 154.25 masl</p> <p>Removed section 3.7.6 Water Management for overburden storage: All overburden was co-disposed.</p> <p>3.7.13 Water Management for Landfill: Updated information</p> <p>Section 3.7.17: Refined information.</p> <p>Section 3.8 Freshwater management and section 3.10.1 Flooding sequence: Updated duration for reflooding of Whale tail Pit</p> <p>Section 4: Water quality forecast: Updated information and add note for ongoing work</p>	
13_NWB	July 2024	Executive summary Section 1, Section 3.10, Section 3.10, Section 3.10.2, Section 4, Appendix A, Appendix C		<p>Updated to include the 2024 Modification and water quality forecast.</p> <p>Executive Summary:</p> <ul style="list-style-type: none"> - NWB approval - Change in all constituents of potential concern <p>Section 1</p> <ul style="list-style-type: none"> - Mention of the 2024 Modification - Updated the ore milling period to 2028 and post-closure to 2047 	Agnico Eagle Permitting & Regulatory Affairs

Version	Date	Section	Page	Revision	Author
				<p>Table 1.1: Updated the ore milling period to 2028 and post-closure to 2047</p> <p>Table 3.3: Updated the ore milling period to 2028</p> <p>Table 3.4: Updated the ore milling period to 2028</p> <p>3.10 Water Management During Closure: Updated information regarding active closure and post-closure period and activities</p> <p>Table 3.8: Updated information regarding active closure and post-closure period and activities</p> <p>3.10.2 Post Closure Modeling Results Summary: Updated information regarding active closure and post-closure period and activities</p> <p>Section 4: Updated information to fit with the new water quality model prepared by Lorax for the 2024 Modification Water</p> <p>Appendix A: Updated site layout plans, in accordance with the year changes for Operation, Closure and Post-Closure periods.</p> <p>Appendix C: Updated and edited to include the 2024 Modification and water quality forecast.</p>	
13.1	July 2024	Section 4		<p>Updated to include the 2024 Modification and water quality forecast.</p> <p>Section 4: Updated information to fit with the new water quality model prepared by Lorax for the 2024 Modification Water</p>	

Version	Date	Section	Page	Revision	Author
				Updated to include water License Part E Item 9 and 8 in section 4.0.	
14	March 2025	Acronyms Section 1, Section 2.1.2.2, Section 3.7.14, Section 3.7.16, Section 3.10, Section 3.10.2, Appendix A, Appendix C		<p>Updated to reflect current operations, closure and post-closure water mgmt plan.</p> <p>The mention “the Project” refers now to Whale Tail Mine</p> <p>Acronyms: ARD meaning</p> <p>Section 1 Introduction: Updated post closure year to 2045</p> <p>Table 1.1: Updated information regarding active closure and post-closure period</p> <p>2.1.2.2 Groundwater Flow Regime: Precision on expected connection of Whale Tail Pit/ IVR Pit with the underground</p> <p>Table 3.1: updated table with targeted Water Hourly Consumption Per Month – for Mill and Camp Usage</p> <p>Table 3.4 : 2022 to 2028- Precision on brine mixing process with GSP-1 water</p> <p>Section 3.7.14 Sludge and Brine Management from Water Treatment Plants: Added IVR Pit as a temporary storage pit for underground water</p> <p>Section 3.7.16 Non-Contact Water Management: removed mention on routine monitoring during operation, it was mentioned twice.</p> <p>3.10 Water Management During Closure:</p> <p>-Updated information regarding post-closure period</p>	Agnico Eagle Meadowbank Division

Version	Date	Section	Page	Revision	Author
				- Added information about A18 sill construction	
				Table 3.8 : Updated information regarding active closure and post-closure period	
				3.10.2 Post Closure Modeling Results Summary : Updated Figure 3.10-2 Projected phosphorus (P) and arsenic (As) concentrations for pit lakes and the Whale Tail Attenuation Pond during Active Closure and Post Closure	
				Appendix A Site Layout plans : Update to match the new Active Closure and Post-Closure Period	
				Appendix C: Updated to include the 2024 Water quality forecast.	

Approved by:

Eric Haley – Environment & Critical Infrastructure Superintendent

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- Appendix C Water Balance and Water Quality Report
- Appendix D 2025 Freshet Action Plan

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited – Meadowbank Complex
ARD	Acid Rock Drainage
CCME	Canadian Council of Ministers of the Environment
DFO	Department of Fisheries and Oceans Canada
Expansion Project	Whale Tail Pit – Expansion Project
FEIS	Final Environmental Impact Statement
IOL	Inuit Owned Land
LOM	Life of Mine
NIRB	Nunavut Impact Review Board
NWB	Nunavut Water Board
NE	North-East
OMS	Operation, Maintenance, and Surveillance
PGA	Peak Ground Acceleration
Plan	Water Management Plan
Project	Whale Tail Mine
Pushback Project	Whale Tail and IVR Pit – Pushback Expansion Project
STP	Sewage Treatment Plant
TSF	Tailings Storage Facility
TSS	Total Suspended Solids
WRSF	Waste Rock Storage Facility
WSER	Wastewater System Effluent Regulations
WTP	Water Treatment Plant
WT	Whale Tail
WTSC	Whale Tail South Channel

UNITS

±	plus or minus
<	less than
%	percent
°C	degrees Celsius
°C/m	degrees Celsius per metre
km	kilometre(s)
km ²	square kilometre(s)
L/day/person	litres per person per day
masl	metre(s) above sea level
mbgs	metre(s) below ground surface
mg/L	milligrams per litre
m	metre
mm	millimetre
m ³	cubic metre(s)
m ³ /day	cubic metres per day
m ³ /hour	cubic metres per hour
m ³ /year	cubic metres per year
Mm ³ /year	million cubic metre(s) per year
Mm ³	million cubic metre(s)
t	tonne
Mt	million tonne(s)

SECTION 1 • INTRODUCTION

Agnico Eagle Mines Limited – Meadowbank Complex (Agnico Eagle) is currently operating the Whale Tail Mine (Piquganiq) , a satellite deposit located on the Amaruq property, and continues to feed the mill at Meadowbank Mine. The Amaruq property is a 408 square kilometre (km²) site located on Inuit Owned Land approximately 150 kilometres (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut. The deposit is mined as two open pits (i.e., Whale Tail Pit and IVR Pit) and underground operations, and ore is hauled to the approved infrastructure at Meadowbank Mine for milling.

The Whale Tail Mine will continue operations to 2028 while continuing to operate and process ore at the Meadowbank Mine. The open pits and underground mine, mined by truck-and-shovel operation, includes four development phases: 1 year of construction (complete), 10 years of mine operations, 18 years of active closure, and the post closure period. The ore milling period for the Whale Tail project is planned over a 10-year period, from 2019 to 2028, an addition of two years from the previous mine plan.

The construction and preparation of material started in summer 2018 after all permits and authorizations were received, and construction of the dikes started in the third quarter of 2018. Focus on site preparation and construction of infrastructure, with the development of the open pit to produce construction material continued in 2018 and 2019. Commercial production then began on September 30, 2019.

Waste rock and overburden are stored in the Waste Rock Storage Facility (Whale Tail WRSF and IVR WRSF) and ore is stockpiled on the ore pads. The existing tailings facility at Meadowbank Mine will continue to be used for tailings disposal. All tailings treatment and disposal will remain consistent with the current Project Certificate (No. 004).

As per the Closure and Reclamation Plan (CRP), closure will occur from 2028 to 2045 after the completion of milling and will include removal of the non-essential site infrastructure and filling of the mined-out open pits and underground mine as well as reestablishment of the natural Lake A17 (Whale Tail Lake) level. Only essential infrastructure related to water treatment will remain on site during the closure and post-closure phases. Accordingly, in addition to the Water Treatment Plant (WTP), minimal infrastructure allowing camp autonomy and security, as well as site roads, will be maintained following the operational phase (see more information in the Whale Tail Pit Closure and Reclamation Plan). Post-closure is expected from 2045 onwards. The closure schedule is based on the preliminary closure methods and strategies discussed in the Whale Tail CRP. It is anticipated that the schedule will be refined throughout the life of mine as the designs are advanced, and the closure methods and strategies are further developed. Site and surrounding environment monitoring started from the beginning of the construction and will be completed during the post-closure phase when it is shown that the site and water quality meets the regulatory closure objectives.

Table 1.1 summarizes the overview of the timeline and general activities.

Table 1.1 Overview of Timeline and General Activities

Phase	Year	General Activities
Construction	2018	<ul style="list-style-type: none"> • Construct site infrastructure • Develop open pit mine • Stockpile ore
Operations	2019 - 2027	<ul style="list-style-type: none"> • Open pits operations • Underground operations • Transport ore to Meadowbank Mine • Stockpile ore • Discharge Tailings in Meadowbank TSF
	2028	<ul style="list-style-type: none"> • Complete transportation of ore to Meadowbank Mine • Complete discharge of tailings in Meadowbank TSF
Active Closure	2028 – 2045	<ul style="list-style-type: none"> • Remove non-essential site infrastructure • Flood mined-out open pits and underground operations • Re-establish natural Whale Tail Lake level
Post-Closure	2045 onwards	<ul style="list-style-type: none"> • Site and surrounding environment monitoring

TSF = Tailings Storage Facility

This document presents the Whale Tail Mine Water Management Plan (Plan) in accordance with Part E Item 5 of the Nunavut Water Board (NWB) Water License 2AM – WTP1830 including modifications stemming from the Pushback Project. It is a requirement of the License that an updated Water Management Plan be submitted on an annual basis following the commencement of Operation. The Plan must include an updated Water Balance and actions to be implemented if predicted re-flooded pits water quality indicate that water treatment is necessary.

SECTION 2 • BACKGROUND INFORMATION

2.1 Site Conditions

The general mine site location for the Project is presented in Figure 2.0-1.

2.1.1 Climate

Climate characteristics presented herein were extracted from the permitting level engineering report (SNC 2015).

The Project is in an arid arctic environment that experiences extreme winter conditions, with an annual mean temperature of -11.3 degrees Celsius (°C). The monthly mean temperature ranges from -31.3°C in January to 11.6°C in June, with above-freezing mean temperatures from June to September. The annual mean total precipitation at the Project is 249 millimetres (mm), with 59 percent (%) of precipitation falling as rain, and 41% falling as snow. Mean annual losses were estimated to be 248 mm for lake evaporation, 80 mm for evapotranspiration, and 72 mm for sublimation. Mean annual temperature, precipitation, and losses characteristics are presented in Table 2.1.

Short-duration rainfall, representative of Whale Tail Mine are presented in Table 2.2, based on intensity-duration-frequency curves available from the Baker Lake A meteorological station (Station ID 300500) operated by the Government of Canada (2015).

Figure 2.0-1 Location of the Project

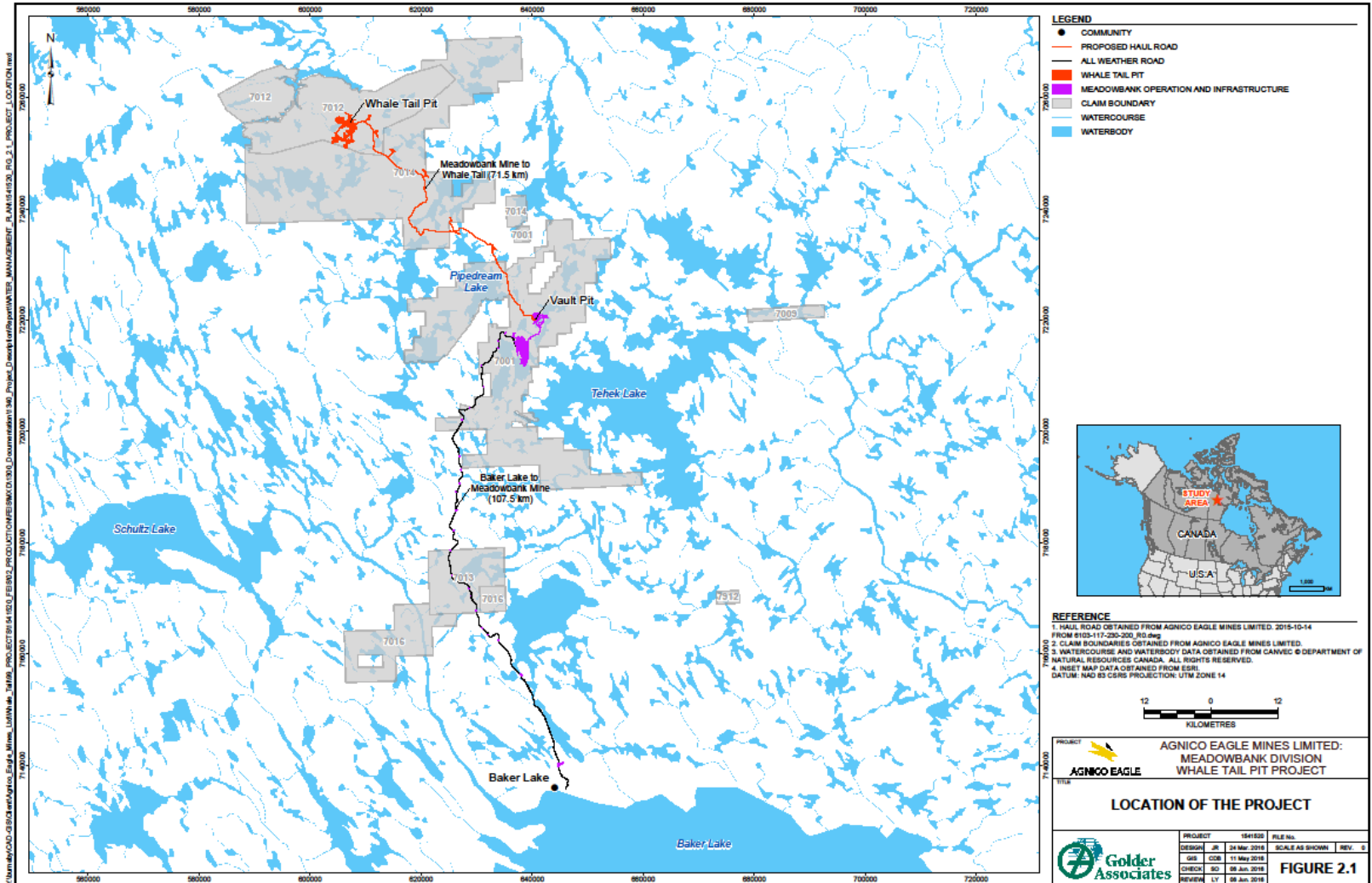


Table 2.1 Estimated Mine Site Monthly Mean Climate Characteristics

Month ^a	Mean Air Temp. (°C) ^a	Monthly Precipitation (mm) ^a			Losses ^a		
		Rainfall (mm)	Snowfall Water Equivalent (mm)	Total Precip. (mm)	Lake Evap. (mm)	Evapo-transpiration (mm)	Snow Sublimation (mm)
January	-31.3	0	7	7	0	0	9
February	-31.1	0	6	6	0	0	9
March	-26.3	0	9	9	0	0	9
April	-17.0	0	13	13	0	0	9
May	-6.4	5	8	13	0	0	9
June	4.9	18	3	21	9	3	0
July	11.6	39	0	39	99	32	0
August	9.8	42	1	43	100	32	0
September	3.1	35	7	42	40	13	0
October	-6.5	6	22	28	0	0	9
November	-19.3	0	17	17	0	0	9
December	-26.8	0	10	10	0	0	9
Annual	-11.3	146	103	249	248	80	72

^a SNC (2015).

°C = degrees Celsius; mm = millimetre.

Table 2.2 Estimated Mine Site Extreme 24-Hour Rainfall Events

Return Period (Years) ^a	24-hour Precipitation (mm) ^a
2	27
5	40
10	48
25	57
50	67
100	75
1000	101

^a SNC (2015).

mm = millimetre.

2.1.2 Permafrost and Hydrogeology

2.1.2.1 Permafrost Conditions and Assessment

Thermal assessments have been completed that contribute to the understanding of the permafrost conditions near the Whale Tail Pit, IVR Pit, and Underground Mine. An update of the Whale Tail Thermal Assessment was conducted in April 2019 (Golder 2019b). The thermal assessment evaluated existing permafrost characteristics in the Whale Tail Lake and Project area and existing talik conditions under the Whale Tail Lake adjacent to the Project. The thermal assessment was completed based on available thermistor data to date, as well as the results of a thermal 2D modelling exercise and 3D block model prepared to assess permafrost conditions and the extent of talik formations beneath the Whale Tail Lake.

The updated thermal assessment of the project also took into consideration the groundwater monitoring program (Westbay well sampling) that took place in November 2018 (Golder 2019b). The 2018 groundwater monitoring program indicates that water samples were collected from fixed ports along the Westbay system between 276 m and 499 m below the ground surface, which suggests that the Westbay system is installed in open talik, or water sampling would not have been possible at depth.

The mine site is located in an area of continuous permafrost, as shown on Figure 2.0-2. Based on measurements of ground temperatures (Knight Piésold 2015), the depth of permafrost at the mine site is estimated to be in the order of 425 metres (m) outside of the influence of waterbodies. The depth of the permafrost and active layer will vary based on proximity to the lakes, overburden thickness, vegetation, climate conditions, and slope direction. The typical depth of the active layer is 2 m in this region of Canada. The estimated depth of zero amplitude from the temperature profiles ranges from 18 m to 35 m. The temperatures at the depths of zero amplitude are in the range of -3.1 °C to -8.6 °C for on land thermistors and 2.7 °C for AMQ17-1265A. The geothermal gradient estimated based on the lowest 70 to 100 m of thermistor strings is in the range of 0.004 °C/m (AMQ15-294) to 0.052 °C/m. Late-winter ice thickness on freshwater lakes is approximately 2.0 m. Ice covers usually appear by the end of October and are completely formed in early November. The spring ice melt typically begins in mid-June and is complete by early July.

The information presented in the following section is based on the updated report *Hydrogeological Assessment and Modelling Whale Tail Pit - Expansion Project* (Golder 2019e). The following summarizes the updated understanding of permafrost conditions in the Expansion Project Area:

- The depth of permafrost outside of the influence of lakes is estimated to be between 452 m and 522 m based on thermal gradients and ground temperatures at the lowest portions of the thermistor strings. The depth of permafrost increases with increasing distance from lakes with talik.
- Considering the 2D thermal modelling and 3D block model, the assessment indicated that:

- Under the northern portion of the lake below Whale Tail Pit, there is likely a closed talik formation (Section C of the thermal modelling report).
- Open talik conditions are probable in the southern portion of the lake where the Whale Tail Lake becomes wider (Section G of the thermal modelling report).
- Permafrost depth is between 480 m and 550 m for ground away from the Whale Tail Lake, and between 350 m and 450 m below surface in portions beneath the Whale Tail Lake where a closed talik is present.
- The cryopeg thickness is likely between 20 m to 30 m.

2.1.2.2 Groundwater Flow Regime

Groundwater characteristics at the mine site are detailed in the Expansion Project Final Environmental Impact Statement (FEIS), Addendum Volume 6, Section 6.3. The hydrogeological model was updated in May 2019 with hydrogeological modelling completed for the Expansion Project since submission of the FEIS addendum in December 2018 (Golder 2019e). The model was updated based on results of monitoring at the Westbay system in November 2018, supplemental packer testing in December 2018, and additional 2D and 3D thermal analysis in 2019. The updated hydrogeological model was then used to provide revised predictions of groundwater inflow and total dissolved solids (TDS) concentrations during dewatering, mining, pit and underground flooding, and long-term post-closure (reflooded) conditions.

Two groundwater flow regimes occur at the Expansion Project: a deep groundwater flow regime beneath permafrost and a shallow groundwater flow system located in the active (seasonally thawed) layer near the ground surface. Except for areas of taliks beneath lakes, the two groundwater regimes are isolated from one another by thick permafrost.

Groundwater flow within the deep groundwater flow regime is limited to the sub-permafrost zone. This deep groundwater flow regime is connected to ground surface by open taliks underlying larger lakes. The elevations of these lakes are the primary control of groundwater flow directions in the deep groundwater flow regime, with density gradients providing a potential secondary control. The elevations of these lakes in the baseline study area indicate that Whale Tail Lake is likely a groundwater discharge zone at the south end of the Lake, with flow from Lake A60 to Whale Tail Lake, and a groundwater recharge zone at the north end of the Lake, with flow from Whale Tail Lake to Lake DS1 (Figure 2.0-3).

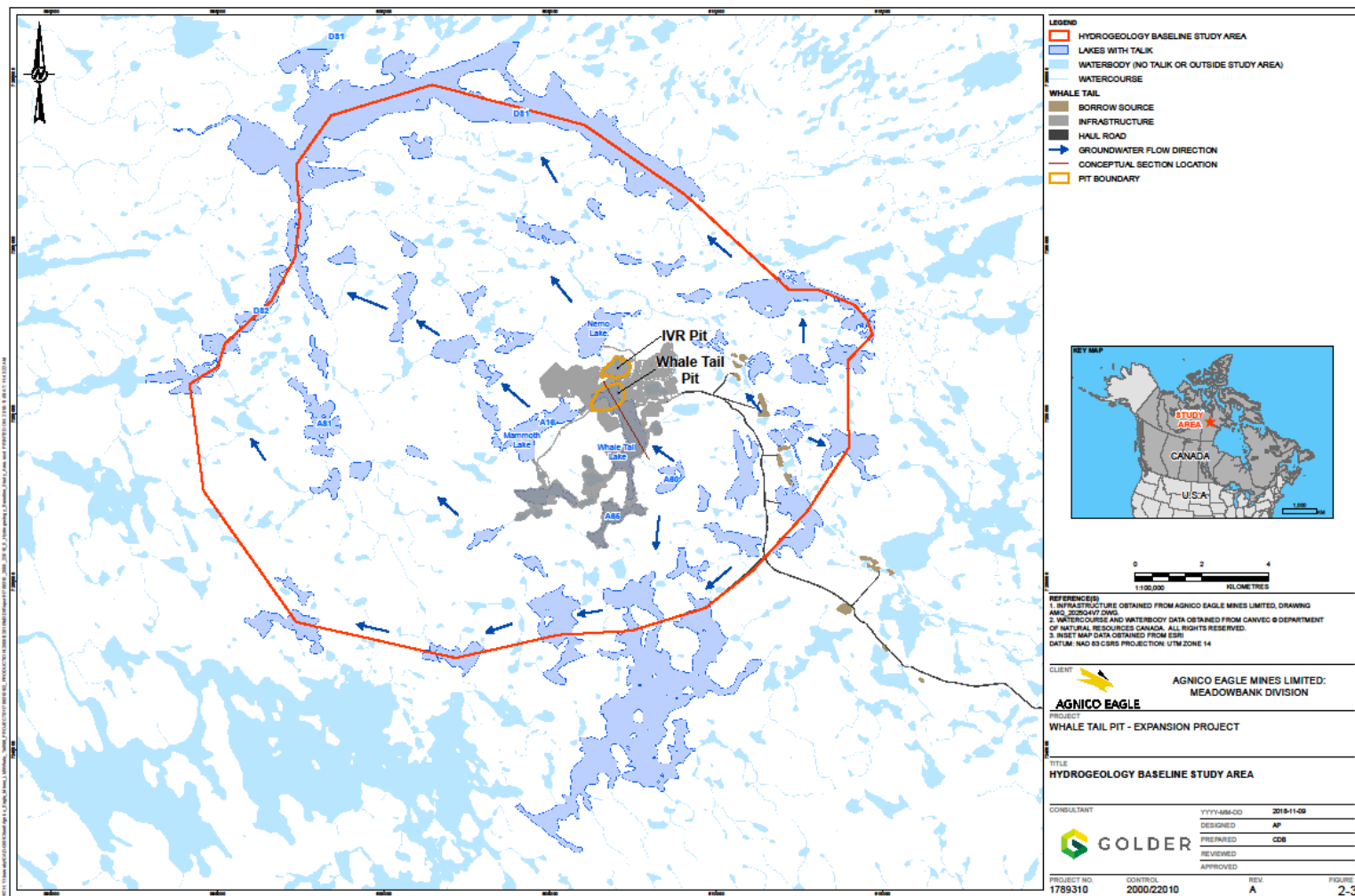
While portions of Whale Tail Pit are located within unfrozen rock, the IVR Pit and the Underground Project are fully contained within permafrost as per current planning. Groundwater inflow is therefore only expected during operations in the Whale Tail Pit.

Mining of the Whale Tail Pit occurs within the talik underlying Whale Tail Lake, whereas the latest version of the Underground Project is located in permafrost. The Underground is not directly

connected to either Whale Tail Pit or IVR Pit until 2027, when breakthrough of the crown pillar in Whale Tail Pit connects it to Whale Tail underground workings.

During mining, the Whale Tail Pit will act as a sink for groundwater flow, with seepage faces developing along portions of the pit walls. In response to the deepening of the mine workings, groundwater will be induced to flow through bedrock to the Whale Tail Pit. Mine inflow will originate primarily from Whale Tail Lake (South Basin), the Whale Tail Attenuation Pond, and deep bedrock underlying the permafrost.

Figure 2.0-3 Hydrogeology Baseline Study Area



2.1.3 Hydrology and Watershed

Hydrology characteristics were extracted from the surface water quantity impact assessment section (FEIS, Addendum Volume 6, Section 6.3; Volume 6, Appendix 6-C).

The mine site is located in the A watershed (i.e., where Lake A17 [Whale Tail Lake] and Lake A16 [Kangislulik Lake] are located), and water management activities are planned in the A watershed and the C watershed (i.e., where Lake C38 [Nemo Lake] is located); these two watersheds drain into Lake DS1, which drains north to the Meadowbank River. These watersheds comprise an extensive network of lakes, ponds, and interconnecting streams, and have lake water surface fractions (i.e., the ratio of lake area to watershed area) of 16% (A watershed) and 23% (C watershed).

Shorelines in the mine site area exhibit a consistent terrain type related to shorelines that have developed in morainal material. These morainal shorelines were observed at all lakes visited during the 2015 field survey. Limited areas of bedrock and shallowly sloped sandy shorelines were also observed. As a general characteristic for the surveyed shorelines, the predominant materials are boulder gardens mixed with cobble with very limited soils or organic materials on top. The outlet channels are relatively short with a low sinuosity (i.e., close to 1.0) and exhibit the same characteristics for streambed materials, which results in interstitial flow through large boulders or below the surface likely close to the bedrock, making flow difficult to observe and measure.

Discharges of watercourses in the mine site area typically peak in late-May to mid-June from snowmelt, rapidly decline in July, and low discharges prevail until frozen conditions in October to November, with a secondary peak in September from rainfall events. Watercourses in the Project area are frozen over the winter.

Derived long-term mean annual water yield for selected lakes in the mine site area vary between 86 mm at Lake C38 (Nemo Lake) to 230 mm at Lake A69. These water yields are similar to regional water yields reported at the Meadowbank Mine.

2.1.4 Surface Water Quality

Water quality characteristics were extracted from the water quality baseline report (FEIS, Volume 6, Appendix 6-G, Agnico Eagle, 2016) and the water quality impact assessment section (FEIS, Volume 6, Section 6.4, Agnico Eagle, 2016). Baseline water quality sampling was conducted at lakes and tributaries in various watersheds in the study area during open-water conditions in 2014 and 2015.

Surface water collected from lakes during the open water season was characteristic of low productivity headwater lakes in the Arctic; soft water, with low alkalinity, low turbidity (and corresponding high Secchi depth) and low total suspended solids (TSS). There was minor thermal stratification evident at some deeper lake stations. The water columns of lakes are well oxygenated, and pH was neutral to slightly acidic. The majority of water chemistry parameter concentrations were below the analytical detection limit and below the Canadian Council of Ministers of the Environment

water quality guidelines for the protection of aquatic life (CCME, 1999) and the Canadian drinking water guidelines (Health Canada, 2014).

Samples collected from the tributaries showed them to be well oxygenated, with low conductivity, and neutral to slightly alkaline pH. As with the lakes, most of the water chemistry parameter concentrations were below the aquatic life and drinking water quality guidelines.

2.1.5 Climate Change

Climate change information presented herein was extracted from the air quality impact assessment section (FEIS, Addendum Volume 4, Section 4.2).

The climate in the Arctic is changing faster than at mid-latitudes (IPCC, 2014). The most recent set of climate model projections (CMIP5) predict an Arctic-wide year 2100 multi-model mean temperature increase of +13°C in late fall and +5°C in late spring under the IPCC's "business as usual scenario" (RCP8.5). IPCC climate change mitigation scenario RCP4.5 results in a year 2100 multi-model Arctic wide prediction of +7°C in late fall and +3°C in late spring (Overland et al., 2013). The effects of changes of this magnitude to terrestrial, aquatic and marine ecosystems, and social and economic systems of the Arctic are active areas of research. However, the short duration of the proposed Whale Tail Mine means that climate change related effects are likely negligible.

2.1.6 Seismic Zone

The mine site is in an area of relatively low seismic risk. The peak ground acceleration (PGA) for the area was estimated using the seismic hazard calculator from the 2010 National Building Code of Canada website (http://www.earthquakescanada.nrcan.gc.ca/hazard-alea/interpolat/index_2010-eng.php). The estimated PGA is 0.019 g for a 5% in 50-year probability of exceedance (0.001 per annum or 1 in 1,000-year return) and 0.036 g for a 2% in 50-year probability of exceedance (0.000404 per annum or 1 in 2,475-year return) for the area.

2.2 Mine Operations Description

2.2.1 Mine Development Plan

Whale Tail Open Pit, IVR Open Pit, and Underground mining will be mined using the traditional open pit method and long hole mining (95%) with some mechanized cut and fill in flat areas. The mining is planned from 2019 to 2028.

Two mine waste streams will be produced at Whale Tail Pit: waste rock and overburden. Ore will be stockpiled in a series of stockpiles located adjacent to the pits. As ore is transported to the Meadowbank Mine for processing, a third mine waste stream, tailings, will be produced at Meadowbank Mine (refer to the Whale Tail Mine – Waste Rock Management Plan, Agnico Eagle, 2024a). The operation, management, and monitoring of the Meadowbank TSF is regulated under the Agnico Eagle Type A Water License 2AM-MEA1530.

The mine development includes the following infrastructure:

- industrial area (camp, power plant, heli-pad, landfarm, storage and garages)
- crusher
- ore stockpiles
- rock and overburden storage facilities
- landfill
- haul and access roads
- underground mine
- two open pits

In addition, the mine development will include construction of water management facilities, listed in Section 3.1.2.

2.2.2 Summary of Mine Waste Management

This section is a summary of the mine waste management plan. More detailed information on mine waste management is presented in the Whale Tail Mine – Waste Rock Management Plan, Agnico Eagle, 2024a. Water management associated with mine waste management is described in Section 3 of this document. Two areas of the site were identified as the Whale Tail WRSF and the IVR WRSF to store waste rock and overburden material, as shown in Appendix A. Table 2. presents a summary of the proposed usage or destination for the waste material.

Table 2.3 Summary of Mine Waste Destination

Mine Waste Stream	Waste Destination
Overburden	<ul style="list-style-type: none"> • Co-disposed with waste rock in Whale Tail WRSF
Waste Rock NPAG	<ul style="list-style-type: none"> • Construction material • Whale Tail WRSF and IVR WRSF • Underground backfill material • IVR Pit Pushback backfill material • Closure and site reclamation, fish habitat compensation
Tailings	<ul style="list-style-type: none"> • As slurry tailings placed in the approved Meadowbank Mine tailings storage facility

WRSF = Waste Rock Storage Facility

NPAG = Non- Potentially Acid Generating

SECTION 3 • WATER MANAGEMENT AND WATER BALANCE

3.1 Water Management Objectives and Targets

The main objectives pertaining to water management Whale Tail Mine are to limit and/or stop the flow of surface water runoff in the pit and to limit the impact on the local environment. The key objectives for water management are:

- Keep the different water types (i.e., contact, non-contact, and freshwater) separated to the extent practical
- Control and minimize contact water through diversion and containment
- Minimize freshwater usage by recycling and reusing the contact water to the extent practical
- Meet discharge criteria before any site contact water is released to the downstream environment
- No events of non-compliance with regards to:
 - Regulatory/Water License water quality criteria (effluent loading limits)
 - Regulatory/Water License freshwater withdrawal criteria

The water management targets are summarized in Table 3. These targets are aligned with the water objectives of the Whale Tail Project and go beyond the License limit. These targets strive to minimize risk, conserve freshwater, and minimize water usage. The 2024 targets assume continued improvements in the amount of contact water withdrawn from the Pit. Higher production rates in 2024 will require slightly more fresh water withdrawn from Nemo Lake and more contact water withdrawn from Underground as the works expand. It is expected the same volume will be discharged from site than in 2023.

Table 3.1 2025 Targeted Water Hourly Consumption Per Month – for Mill and Camp Usage

WATER OBJECTIVE	TARGET 2023	TARGET 2024	TARGET 2025
Fresh Water Withdrawn from Nemo Lake (Mining and Camp)	80,000m ³	88,000 m ³	120,000 m ³
Contact Water Withdrawn from Pit (pit inflow)	915,000 m ³	1,320,000 m ³	1,320,000 m ³
Contact Water Withdrawn from Underground (inflow)	16,000 m ³	19,600 m ³	19,600m ³
Water discharge from site (WTS / Kangislulik Lake)	2,500,000 m ³	2,500,000 m ³	2,500,000 m ³
Water in recirculation (water recycled / total water use)	0%	0%	0%

3.2 Water Management Strategy

To achieve the above water management objectives and targets, the following key strategies were implemented to develop the Water Management Plan:

- Two levels of catchment disturbance have been defined for the area, namely undisturbed and disturbed. Areas that have been disturbed as part of the mine development are considered disturbed catchments, while the areas left unaffected are considered undisturbed catchments.
- For the purpose of mine water management, runoff from undisturbed areas is considered non-contact water, while runoff from disturbed catchment areas is considered contact water. Surface water that is diverted around the mine facilities, or groundwater that does not emerge into a mine facility, is considered non-contact water. Any non-contact water that mixes with contact water becomes contact water.
- Conveyance and storage of contact water will be controlled by channels and containment structures (i.e., sumps and ponds). Sumps will be installed in the open pits and in low points surrounding the open pits. Contact water will be diverted and collected in various sumps and water collection ponds and conveyed to an Attenuation Pond. Two attenuation ponds are planned for surface water and include the Whale Tail Pit Attenuation Pond and the IVR Attenuation Pond.
- The IVR Attenuation Pond will contribute to reducing the operational water head in the Whale Tail Attenuation Pond.
- The collected water will be treated if the water quality does not meet the discharge criteria established in the Water License 2AM-WTP1830.
- The treated water will be reused as much as possible for mining and site operations to minimize the freshwater requirements. The excess treated water will be discharged into Lake A16 (Kangislulik Lake) through a submerged diffuser or through a diffuser in Whale Tail Lake (South Basin) or other alternatives.
- Non-contact water will be intercepted and directed away from disturbed areas by means of natural catchment boundaries and/or man-made diversion structures or pumping systems and will be allowed to flow or to be discharged to the neighbouring waterbodies.

Underground (UG) development groundwater and contact water will be pumped to distinct surface infrastructure for water management. The underground water management infrastructure was defined based on the following underground water management guideline principles:

- It is not currently planned to mine below the permafrost. It is an opportunity that will be further studied.
- Heating is required when mining below top of cryopeg.
- Brine needed until cryopeg elevation is reached.
- Contact and non-contact UG water not segregated – segregation is an opportunity.

- Grouting is a mitigation measure during development (not included in hydrogeological model).
- UG storage stope (used to recycle UG water) – will delay treatment, needed early.
- Recirculation of brine during mining operations.
- Limit addition of freshwater (used only for CRF [cemented rockfill], promote use of natural groundwater for operation).
- Treatment of UG saline water is not required if mining stays in the permafrost.

The key strategies detailed below are implemented to support underground water management:

- A Groundwater Storage Pond system (GSP) to store captured TDS (salt) affected waters. Up to three GSPs are planned to provide operational flexibility and adaptive management opportunity.
- Excess water volumes in the underground mine will be managed through the Underground Mine Stopes and GSP-1 and GSP-2 (if required).
- Excess water volumes may also be managed with GSP-3 (planned for contingency, operational flexibility, and adaptive management opportunity) or managed as temporary storage in IVR Pit, starting in August 2025. The discharge is only allowed for five months per year and will have to be returned underground afterwards.
- There is opportunity for water stored in the GSP to be reused for dust suppression on surface roads or to be re-circulated underground (i.e., for drilling or mixing in the cemented rockfill).
- The Whale Tail Mine has been planned with contingency water management storage to manage contact water during upset conditions. For example, GSP-3 could be used for temporary storage when not used for saline water management. This storage has sufficient capacity to manage the potential water quantity exceedances occurring during the freshet and can be used to hold excess contact water temporarily until it can be treated by the water treatment plant during the remaining open water season (July to September). During this time, at maximum capacity, the excess water can be treated and discharged within two weeks.
- At the end of underground mining, any remaining water in GSP ponds and IVR Pit from underground will be pumped underground for flooding of the underground workings.

3.3 Water Balance

As per the Type A Water License 2AM-WTP1830, Part E, Item 5, the Whale Tail Mine water balance will be updated and presented on an annual basis, integrated into the water management plan update. The developed water balance will assist in evaluating future water management infrastructure, including under closure conditions (as per the Whale Tail Interim Closure and Reclamation Plan).

The water balance was computed on a monthly time step based on mean annual climate conditions (Section 2.1.1). The water management flow sheets are presented in Appendix B, and the water balance results are presented in Appendix C of this plan.

3.4 Waterbody Inventory

The A and C watersheds will be impacted by mining activities, primarily by dewatering of Whale Tail Lake (North Basin) to Lake A16 (Kangislulik Lake), the Northeast Diversion to the C watershed, and the Whale Tail Lake (South Basin) Diversion to Lake A16 (Kangislulik Lake). Waterbodies directly impacted by mining activities are presented in Table 3. and shown in Appendix A. Discharge of treated effluent began in the second dewatering phase of the project in June 2019 and will continue throughout mine operations and into closure if required, based on water quality monitoring and results.

Table 3.2 Inventory of Waterbodies Directly Impacted by Mining Activities

Watershed	Primary Disturbance	Waterbody	Note
A	Dewatering	Lake A17	Dewatering of Lake A17 (Whale Tail Lake) to Whale Tail Lake (South Basin)
	IVR Pit	Lake A46	Part of the IVR Pit footprint
		Lake A47	Part of the IVR Pit footprint
		Lake A49	Part of the IVR Pit footprint
		Pond AP-67	Part of the IVR Pit footprint
		Pond AP-68	Part of the IVR Pit footprint
	IVR WRSF Placement	Lake A50	Covered by IVR WRSF
		Lake A51	Covered by IVR WRSF
		Lake A52	Covered by IVR WRSF
		Pond A-P21	Covered by IVR WRSF
	Whale Tail Lake (South Basin) Diversion	Lake A18	Flooded
		Lake A19	Flooded
		Lake A20	Flooded
		Lake A21	Flooded
		Lake A22	Flooded
		Lake A45	Part of diversion channel
		Lake A55	Flooded
		Lake A62	Flooded
		Lake A63	Flooded
		Lake A65	Flooded
		Pond A-P1	Flooded
	Pond A-P53	Flooded	
	Various Water Management Activities	Lake A17 (Whale Tail Lake)	Whale Tail Lake (North Basin) used as the Whale Tail Attenuation Pond Whale Tail Lake (South Basin) receives dewatering flows during dewatering activities, and discharge of treated effluent
		Lake A16 (Kangislulik Lake)	Receives discharge of treated effluent
		Lake A53	Used as the IVR Attenuation Pond
		Lake A50	Covered by a Groundwater Storage Pond
	C	Water Intake	Lake A16 (Kangislulik Lake)

Watershed	Primary Disturbance	Waterbody	Note
		Lake C38 (Nemo Lake)	Sourced during operations, including emulsion plant
		Lake A17 (Whale Tail Lake)	Whale Tail Lake (South Basin) sourced during closure

3.5 Water Management System

The water management system includes the following components (identified in Appendix A):

- Water collection ponds (Whale Tail Attenuation, IVR Attenuation, Whale Tail WRSF, plus the GSP Ponds and IVR Pit for temporary storage of groundwater)
- Staging sump for Pit contact water management
- Sump for WRSF contact water management.
- Discharge diffusers located in Kangislulik Lake and Whale Tail South Lake
- Two water diversion channels (South Whale Tail Channel and IVR diversion channel)
- Four water retention dikes (Whale Tail, Mammoth, Whale Tail WRSF, and the IVR dikes)
- Culverts
- Freshwater intake causeway and pump system
- WTP and associated intake causeway
- Sewage Treatment Plant (STP)
- Pipelines and associated pump systems
- Potable WTP
- Pumping system from Whale Tail South to Kangislulik Lake

Additional water management system components can be put in place if required to adapt effectively to the site conditions, to manage non-contact water adequately, and to meet the water management objectives and target.

During the mine construction, operational, and closure phases, a network of collection and interceptor channels and sumps will be constructed and maintained to facilitate mine site water management. A list of the water management control structures and facilities is presented in Table 3. together with the construction schedule. These structures were designed according to design criteria presented in the Appendix K: Project Design Considerations of the Water License 2AM-WTP1826 amendment, submitted to the NWB in May 2019. Final design details of these structures will be provided to the regulators for approval at least 60 days prior to construction.

Water management strategy updates were also communicated in August and September 2019 to the Nunavut Water Board regarding changes to the management of non-contact water for specific areas of the project. Those changes are reflected in Table 3.

Appendix A shows the location of the main structures at the different development stages of the mine life.

Table 3.3 Water Management Facilities

Mine Year	Water Management Facilities Constructed or Installed
2018 Construction	<ul style="list-style-type: none"> • Turbidity Curtains installation for dike construction • Start Whale Tail Dike • Construction of the low-permeability access road built of overburden and collection sump for Stage 1 WRSF • Freshwater intake causeway in Nemo Lake • Water Treatment Plant and Construction Water Treatment Plant • Pipelines and associated pump systems for water management and dewatering • Sewage Treatment Plant • Potable Water Treatment Plant • Discharge diffuser in Kangislulik Lake • Culverts 184, 186, and Mammoth Channel
2019-2020 Operations – Phase 1	<ul style="list-style-type: none"> • Completion of Whale Tail Dike • Construction of Mammoth Dike • Construction of the Whale Tail WRSF Dike • Construction of the Northeast Dike • Construction of the South Whale Tail Diversion Channel • Construction of the dewatering system (ramp, pipe, diffuser) for the Whale Tail North Basin to the Whale Tail South Basin, the dewatering system from North Basin to Kangislulik Lake (and Water Treatment Plant). • Construction of the Whale Tail contact water intake causeway and construction of the WT attenuation pond infrastructure (diffuser, pipeline) • Installation of pumping system from the North-East Pond to C Watershed • Installation of pumping system from Whale Tail South to Kangislulik Lake • Construction of the Whale Tail Dike seepage collection system • Installation of pumping system from A53 Lake to Whale Tail South • Installation of pumping system from Lake A49 to North-East Sector to maintain the water level. • Installation of pumping system for contact water from the open pit to the Whale Tail Attenuation Pond (to Quarry 1 until freshet 2020) • Installation of pumping system for contact water from the Whale Tail WRSF Pond to the Whale Tail Attenuation Pond (to Quarry 1 until freshet 2020) • Underground WRSF saline ditch system
2020-2028 Operations – Expansion Project	<ul style="list-style-type: none"> • Construction of the dewatering system (ramps, pipes) for Lake A46, A47, A49, A50, A51, A52, A53, AP-21. Used to dewater the footprint of IVR Pit, IVR WRSF, and IVR Attenuation Pond • Dismantling of North-East Dike for IVR Pit mining activity • Construction of the contact water intake causeway and construction of the IVR attenuation pond infrastructure (diffuser, pipeline) • Installation of the IVR Attenuation Pond Pump Station • Installation of pumping system for contact water from the open pit to the IVR Attenuation Pond • IVR WRSF Contact Water Collection System; Ore stockpile 3 Contact Water Collection System • IVR Diversion • IVR D-1 Dike

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Mine Year	Water Management Facilities Constructed or Installed
	<ul style="list-style-type: none"> • Underground Water Management System • Groundwater Storage Ponds

WRSF = Waste Rock Storage Facility.

3.5.1 Infrastructure Summary

The following sections briefly describe the various dikes and channels constructed for the Project. Information regarding the operation, surveillance, and maintenance of these structures is contained in the OMS Manual – Whale Tail Water Management Infrastructures (Agnico Eagle, 2024c). Additional information regarding construction of these infrastructures including design drawings and figures, can be found in the as-built reports submitted for each structure.

Agnico Eagle will continue to identify and assess the water infrastructure performance issues to ensure efficient water management. A lesson learned exercise on the 2019 freshet was performed in 2020 and was used to improve water management practices and plans for 2020 and beyond. In 2023 a lesson learned exercise on the winter water management was performed to improve winter water management practices for future winters.

Whale Tail Dike

Whale Tail Dike (WTD) isolates the Whale Tail Pit and Whale Tail Attenuation Pond from Whale Tail Lake South. The WTD construction raised the Whale Tail Lake (South Basin), Lake A18, Lake A19, Lake A20, Lake A21, Lake A22, Lake A55, Lake A62, Lake A63, Lake A65, Pond A-P1, and Pond A-P53, to an elevation of 156.0 metres above sea level (masl). The South Whale Tail Channel is a diversion structure associated with this dike and diverts runoff downstream to the Lake A16 (Kangislulik Lake).

WTD is approximately 835 m in length and was constructed within Whale Tail Lake on a shallow plateau of the lake floor. It consists of a wide rockfill shell, with downstream filters and a cement-bentonite cutoff wall built with secant piles that extend into the bedrock. The cutoff wall extends up to 12 m below lake level and is socketed an average 1.37 m in the bedrock. The dike has a 5 m grout blanket on the upstream side and a 10 m grout curtain on the downstream side from 0+180 to 0+516. The top of the secant piles is at El. 157 which is 1 m higher than the design IDF water level. A rockfill thermal cover 2.0 m thick was placed between the secant pile top elevation and the final crest elevation of the dike at 159 masl.

Whale Tail Dike was constructed in the fall of 2018 and its initial grout curtain was installed in the first quarter of 2019. During dewatering in 2019 it was observed that a high amount of seepage was coming from the structure. The amount was judged unsustainable to be managed by pumping (approximately 300 m³/h). A detailed investigation including additional instrumentation and geophysics was conducted for a better understanding of the seepage phenomenon at the Whale Tail Dike. In 2020, a pumping system was installed to collect and manage the seepage water prior to reaching the Whale Tail Attenuation Pond with the objective of returning water to the environment if water quality allows.

As a result, a remedial grouting campaign was performed between November 2019 and March 2020. The campaign was successful and met the objective of decreasing the seepage so it could be manageable by pumping. Following the dike grouting campaign, the seepage flow, measured using a v-notch weir, has significantly decreased to approximately 80 m³/h and it was concluded that the seepage reduction objective of the grouting campaign was successfully reached. Agnico Eagle continues to closely monitor the situation.

South Whale Tail Diversion Channel

The South Whale Tail Diversion Channel (SWTDC) is a blasted channel in the south-western part of the Whale Tail Lake watershed. It allows non-contact water to be discharged by gravity from Whale Tail Lake to Kangislulik Lake.

The construction of SWTDC occurred from January to April 2020 and it was commissioned during the 2020 freshet.

The previous inlet of the SWTDC was at El. 155.3 m. This value has been corrected to 154.25 m following observations of settlement post construction. It explains the increase in volume recorded for 2023. The channel has a trapezoidal shape with lateral slopes of 3H:1V, a base width of 5.0 m, and a bed-slope of 0.3%. The SWTDC was constructed using a protective riprap layer consisting of rockfill on the bottom and the sides of the channel to avoid erosion and limit TSS in the water. The riprap has a thickness of 0.5 m and consists of blasted rock with a diameter of 100 – 300 mm. Two transition materials consisting of fine and coarse filter with a 0.3 m thickness each were installed between the overburden and the riprap for particle retention between the foundation soil and the riprap. A layer of geotextile was placed between the coarse filter and the riprap to avoid migration of fine particles from the filters that could increase turbidity. The part of the access road crossing Lake A45 was modified to add a filtering element to prevent the A45 lakebed sediment to flow in the channel and create turbidity while ensuring that water from Lake A45 could reach the channel.

Mammoth Dike

Mammoth Dike is a water retaining infrastructure built to isolate the Whale Tail Pit from Kangislulik Lake. Kangislulik Lake receives water from Whale Tail South Lake through the SWTDC and treated water from WTP site discharge through the Kangislulik Lake diffuser. Water flows out of Kangislulik Lake through its natural outlet.

The construction of Mammoth Dike occurred from February 2019 to March 2019 to maintain the frozen condition of the foundation. Mammoth Dike has a length of about 330 m and a height of 2 m. This structure is a zoned rockfill dike with a filter system. The low permeability element of the dike consists of a bituminous geomembrane (BGM) installed on the upstream face anchored in a key trench with fine filter amended with bentonite (FFAB). The key trench is approximately 3 m deep and is founded on bedrock. Blasting was required during the construction of this infrastructure.

Whale Tail WRSF Dike

WRSF Dike is a water retention infrastructure designed to prevent contact water from the Whale Tail waste rock storage facility (WRSF) accumulating in the WRSF pond from reporting to Kangislulik Lake. The water collected in the WRSF pond located upstream of the dike is pumped to the Attenuation Pond and treated prior to being discharged. An area of approximately 109 ha drains towards the WRSF pond. The WRSF Dike is located south of the Whale Tail WRSF.

The WRSF Dike is about 360 m long and 5 m high. This structure is a zoned rockfill dike with a filter system. Foundation excavation in the key trench area was done in the fall of 2018 to avoid blasting and aggrade frost penetration. The construction of WRSF Dike mainly occurred from January to February 2019 to maintain the frozen condition of the foundation. The low permeability element of the dike consists of a bituminous geomembrane (BGM) installed on the upstream face anchored in a key trench with fine filter amended with bentonite (FFAB). The key trench is approximately 3 m deep and founded on frozen glacial till or bedrock.

On August 2019, the key trench of the structure thawed inducing tension cracks on the crest of the structure and seepage from WRSF Pond reported through the structure to Kangislulik Lake. Immediate actions taken were to build an access road to the downstream portion of the dike, in order to excavate a small sump and pump the seepage water back into the WRSF Pond. Furthermore, WRSF Pond was emptied and maintained dry. Downstream pumping stopped on September 30th, when the reporting flow and surrounding area had frozen. In October 2019, the KIA conducted a sample analysis of the lakebed sediments in Kangislulik Lake. The report concluded the seepage did not have a measurable impact on metal quantities of Kangislulik Lake sediments (McDougall et al. 2019).

A series of measures were implemented by Agnico to minimize the risk of future similar events occurring in this location:

- Operational water levels were reviewed to keep water as low as possible in the WRSF pond as recommended by the Meadowbank Dike Review Board (MDRB)
- Aggradation of permafrost into the dikes foundation by construction of a thermal berm in 2020 on the upstream portion of the dike
- Access road to the downstream area was constructed to facilitate inspection.
- A downstream water collection system was designed and constructed.

Additional details on this event can be found in the letter submitted on December 20, 2019, to Environment and Climate Change Canada. Agnico Eagle continues to closely monitor the situation. No seepage was observed since the 2019 event which confirmed the adequacy of the mitigation measures implemented to ensure adequate performance of the structure.

Northeast Dike (dismantled)

The North East (NE) Dike was a temporary structure designed to prevent runoff from the Northeast watershed reporting to the Whale Tail Pit and to divert them to Nemo Lake. The upstream slope of

the NE Dike was lined with bituminous geomembrane encapsulated at the toe in a layer of FFAB liner in turn constructed in a key trench to an ice-poor till foundation.

Following the fish out and dewatering of surrounding lakes (A46 & A47) in 2020, this structure was dismantled as part of the IVR pit development.

IVR Dike D-1

IVR Dike D-1 is a contact water retaining infrastructure built to contain the IVR Attenuation Pond. It is located East of the Whale Tail Pit. The structure includes an emergency spillway to release the water to the Whale Tail Attenuation Pond.

The construction of IVR Dike D-1 was part of the expansion project. It started in Q1 2021 and was completed in Q2 2021. The structure was constructed as a zoned rockfill dike with a filter system. The low permeability element of the dike consists of a linear low-density polyethylene geomembrane (LLDPE) installed on the upstream face anchored in a key trench located below the centerline of the structure with fine filter amended with bentonite (FFAB). The key trench is excavated in frozen glacial till or bedrock. To improve the thermal condition of the key trench a rockfill and esker thermal berm was placed on the upstream side.

IVR Diversion Channel

The IVR Diversion Channel (IVR DC) is an excavated channel in the north-east part of the Whale Tail Project site. It allows non-contact water to flow from the North-East watershed to Nemo Lake. Its objective is to reduce the amount of contact water reporting to IVR Pit.

The construction of IVR DC was part of the expansion project. It occurred from September to October 2020 and the channel was commissioned during freshet 2021. The channel has a trapezoidal shape with lateral slopes of 2H:1V to 3H:1V, a base width of 3.0 m, and a bed-slope of 0.3%, in combination with a previous rockfill perimeter berm that is delimiting the west boundary of the channel and also acts as an access road. The IVR DC was constructed with a layer of fine filter material placed on top of the excavated foundation followed by geotextile and overlain by riprap.

3.6 Dewatering

As per the Type A Water License 2AM-WTP1830, Agnico Eagle initiated the dewatering of Whale Tail Lake (North Basin) in 2019 following the construction of the Whale Tail and Mammoth dikes and the fish out.

The estimated total volume of Whale Tail Lake (Lake A17) is 8.5 million m³ (Mm³). The dewatering started early March 2019. A total of 2,148,542 m³ of water was discharged directly to Whale Tail Lake South Basin without requiring treatment. The second phase of dewatering started in mid June 2019 discharging to Lake A16 (Kangislulik Lake). For this phase of dewatering, water from the North Basin

was treated via the TSS removal unit of the WTP and discharged in Kangislulik Lake through the diffuser.

Once the dewatering phase was completed in Q2 2020, part of the North Basin located outside the Whale Tail Pit footprint became the Whale Tail Attenuation Pond. The Whale Tail Attenuation Pond is since used to receive contact water from different sumps and ponds around site.

Waterbodies and ponds within the footprint of the IVR Pit, IVR WRSF, and IVR Attenuation Pond required dewatering in 2020. To allow the mining of the IVR Pit, lakes A46, A47 and A49 were dewatered in 2020. Following fish out completion, lakes inside the IVR pit mining footprint were dewatered and transferred into the Whale Tail Attenuation Pond representing a total approximate volume of 215,000 m³.

A similar process to the one mentioned above was also used to dewater the waterbodies inside the IVR WRSF footprint (AP-21, A50, A51 and A52). The water was discharged into lake A53 once its fish out was completed for a total approximate volume of 38,000 m³.

Similar to the Whale Tail (North Basin) dewatering process, approximately 2/3 of the dewatered water from Lake A53 was pumped and directly discharged to Whale Tail Lake (South Basin). The remaining 1/3 of the water was processed through the WTP during open water conditions. The complete dewatering of A53 represents a total approximate volume of 213,000 m³. Once Lake A53 dewatering and fishout was completed it became the IVR Attenuation Pond. The IVR Attenuation Pond is intended to receive site contact water from different sumps and ponds around site.

3.7 Water Management Activity During Construction and Operations

An inventory of waterbodies impacted by mining activities is provided in Table 3. (Section 3.4) and the water management facilities required for the Plan are provided in Table 3. (Section 3.5). These tables should be read in conjunction with Table 3., which presents the yearly major water management activities during the construction and operational phases. Water management activities during the closure phase are described in Section 3.10.

Any water requiring treatment will be pumped to the water treatment plant(s) prior to discharge through the diffuser in Kangislulik Lake or through the diffuser in Whale Tail Lake (South Basin) or other alternatives. The latter are outlined in the Whale Tail Pit Expansion Project Adaptive Management Plan. The other alternatives for discharge are Lakes D1 and D5 in the case that Level 3 is reached (high risk situation in the receiver water quality). Discharging in Lakes D1 or D5 would require a complete assessment of potential discharge, with approval from the NWB as per NIRB Project Certificate Conditions.

Water collected in the Whale Tail Attenuation Pond and/or IVR Attenuation Pond will be reused to the extent practical in the open pit and dust control operations, and the excess water will be treated by the WTP prior to discharge to the receiving environment.

Non-contact water will be diverted away from the mine site infrastructure by reversing natural flows or by using diversion channels and culverts.

Freshwater usage on site will be supplied from Lake C38 (Nemo Lake) and Lake A16 (Kangislulik Lake) during operations, and from Whale Tail Lake (South Basin) during closure.

In the amended Water License the permitted freshwater sources are Nemo Lake (all purpose), Kangislulik Lake (explosive mixing and associated use), Lake D1 (Re-flooding of Whale Tail Pit, IVR Pit, Underground mine, and Whale Tail (North Basin) and associated use, or as otherwise approved by the Board in writing), and Whale Tail South (Re-flooding of Whale Tail Pit, IVR Pit, Underground mine, and Whale Tail (North Basin) and associated use, or as otherwise approved by the Board in writing).

Table 3.4 Water Management Activities During Construction and Operations

Mine Year	Water Management Activities and Sequence
2018	<ul style="list-style-type: none"> • Temporarily pump contact water from the Stage 1 WRSF sump to Quarry 1 • Temporarily pump contact water from the starter pit, construction, ore stockpiles, industrial sector, and main camp sector to Quarry 1 • Treat turbid water from construction using the construction WTP and discharge in Whale Tail North • Pump STP effluent to Whale Tail Lake (North Basin) • Freshwater intake initially located in Whale Tail Lake (South Basin); moved to Lake C38 (Nemo Lake)
2019	<ul style="list-style-type: none"> • Dewatering of Whale Tail Lake (North Basin) to Whale Tail South Basin and Kangislulik Lake (through the WTP) • Pump contact water from the open pit to Quarry 1 • Pump contact water from the Whale Tail WRSF Pond to Quarry 1 • Treat through WTP the Whale Tail North Water above discharge limit and discharge in Lake A16 (Kangislulik Lake) • Pump contact water from Quarry 1 to Kangislulik Lake (when water quality meets discharge criteria, treat as needed at WTP) (following authorization) • Pumping of non-contact water from: <ul style="list-style-type: none"> ○ North-East Pond to the C-watershed ○ North-East Pond to Whale Tail North ○ North-East Pond to AP5 (License B) ○ A53 Lake to Whale Tail North ○ Whale Tail South Basin to Kangislulik Lake ○ AP5 to the C-watershed (License B) ○ Whale Tail North to Whale Tail South in the summer months ○ Whale Tail North to Kangislulik Lake ○ Whale Tail North to AP5 (License B) • Operation of the Whale Tail Dike seepage collection system by pumping seepage water to Whale Tail South Basin • Pump STP effluent to Whale Tail North
2020-2021	<ul style="list-style-type: none"> • Completion of dewatering activity. WTN becomes an attenuation pond • Pump contact water from the open pit to the Whale Tail Attenuation Pond (to Quarry 1 until May 2020)

Mine Year	Water Management Activities and Sequence
	<ul style="list-style-type: none"> • Pump contact water from the Whale Tail WRSF Pond to the Whale Tail or IVR Attenuation Pond (to Quarry 1 until freshet 2020) • Treat through the WTP the Whale Tail and IVR Attenuation Ponds contact water and discharge in Lake A16 (Kangislulik Lake) or Whale Tail Lake (South Basin) • Pump contact water from Quarry 1 to Kangislulik Lake (if water quality meets discharge criteria) until May 2020 • Whale Tail Lake (South Basin) flows to Lake A16 (Kangislulik Lake) through the Whale Tail Lake (South Basin) Diversion Channel • Operation of the Whale Tail Dike seepage collection system by pumping seepage water to Whale Tail South when water quality meets discharge criteria • Pump STP effluent to the Whale Tail or IVR Attenuation Ponds • Maintain North-East Pond sector water level by pumping to Whale Tail North Basin (only for 2020) • Construct IVR Diversion and divert non-contact water from the Northeast Sector to Nemo Lake • Dewater waterbodies and ponds inside IVR pit footprint to Whale Tail Attenuation Pond • Dewater waterbodies and ponds inside IVR WRSF footprint to A53 • Dewater Lake A53 to Whale Tail Lake (South Basin) and remaining to Whale Tail Attenuation Pond • Pump GSP-1 contact water to Whale Tail or IVR Attenuation Ponds • Pump contact water from the IVR Pit to the IVR Attenuation Pond • Pump contact water from the IVR WRSF Contact Water Collection System to the IVR Attenuation Pond • Pump excess water from underground sump to GSP 1 when Underground Storage Stope is full • Pump contact water from the Whale Tail Pit to the IVR Attenuation Pond • Pump contact water from the Whale Tail Attenuation Pond to the IVR Attenuation Pond • Pumping of non-contact water from Whale Tail South Basin to Kangislulik Lake • Capture runoff from Whale Tail WRSF and NPAG WRSF; pump to the IVR Attenuation Pond • Treat the IVR Attenuation Pond contact water through the WTP and discharge in Whale Tail Lake (South Basin) and/or Lake A16 (Kangislulik Lake)
2022 to 2028	<ul style="list-style-type: none"> • Pump contact water from the Whale Tail WRSF Pond to the Whale Tail or IVR Attenuation Ponds • Pump contact water from the Pits to the IVR Attenuation Pond or Whale Tail Attenuation Pond • Pump contact water from the IVR WRSF Contact Water Collection System to the IVR Attenuation Pond • Pump STP effluent to the Whale Tail Attenuation Pond or IVR Attenuation Pond • Pump GSP-1 contact water to Whale Tail or IVR Attenuation Ponds. • Capture runoff from Whale Tail WRSF and NPAG WRSF; pump to WRSF Pond, Whale Tail Attenuation Pond or to the IVR Attenuation Pond • Pump contact water from the WRSF Pond to Whale Tail Attenuation Pond or IVR Attenuation Pond • Pump contact water from the Whale Tail Attenuation Pond to the IVR Attenuation Pond • Pump contact water from the IVR Attenuation Pond to the Whale Tail Attenuation Pond • Treat through the WTP the Whale Tail and IVR Attenuation Ponds contact water and discharge in Lake A16 (Kangislulik Lake) or Whale Tail Lake (South Basin) • Pump excess water from underground sump to GSP 1 when Underground Storage Stope is full • Re-use water from underground sump GSP 1 in the mixing process for the fabrication of brine. • Store excess groundwater in IVR Pit temporarily. • Construct GSP-2 and GSP-3 if additional capacity for contact water storage is required at surface. • Whale Tail Lake (South Basin) flows to Lake A16 (Kangislulik Lake) through the Whale Tail Lake (South Basin) Diversion Channel

Mine Year	Water Management Activities and Sequence
	<ul style="list-style-type: none"> • Operation of the Whale Tail Dike seepage collection system by pumping seepage water to Whale Tail South when water quality meets discharge criteria. • Divert non-contact water from the Northeast Sector to Nemo Lake using IVR Diversion • Pumping of non-contact water from Whale Tail South Basin to Kangislulik Lake

WRSF = Waste Rock Storage Facility; WTP = Water Treatment Plant.

Table 3. presented below summarizes the overall contact water management plan for the major mine infrastructure with the initial water collection location and final water destination. Detailed water management information for major mine infrastructure areas is described in the following sub-sections. Water management of the non-contact water on site is also presented in Section 3.7.16. Water management flowsheets for the construction and operations phase are provided in Appendix B.

Table 3.5 Overall Site Surface Contact Water Management Plan

Contact Water Source	Initial Contact Water Collection Location	Final Contact Water Collection Location
Industrial Sector	Whale Tail Attenuation Pond	IVR Attenuation Pond (primary) Whale Tail Attenuation Pond (secondary)
Whale Tail and IVR WRSFs Sector	Whale Tail WRSF Ponds IVR WRSF collection system	
Ore Stockpiles	Whale Tail Attenuation Pond	
Landfill	Whale Tail WRSF Pond	
Open Pits (Whale Tail and IVR)	Open pit sumps	

WRSFs = Waste Rock Storage Facilities.

3.7.1 Erosion and Sediment Control Plan

As described in the previous sections, Project site infrastructure, channels, sumps, and associated water management activities are designed with consideration of site wide erosion and sediment control. In addition to design controls, best management practices (BMPs) will furthermore ensure that activities, practices, devices, or a combination thereof will prevent or reduce the release of sediments and will control erosion. The selection of permanent or temporary BMPs will be specific to the site and timing and may require regulatory approval prior to installation or construction.

Temporary BMPs for Whale Tail and IVR Pits may include:

- Silt fences and fabric installation

- Turbidity curtains
- Sediment control basins to detain sediment-laden water
- Diversion of flows away from the construction area

Permanent BMPs at the Whale Tail and IVR Pits may include:

- Infiltration basins and trenches
- Sedimentation basins or ponds
- Construction of swales in ditches

Monitoring of erosion and sedimentation associated with construction and operations are detailed in the Water Quality and Flow Monitoring Plan (Agnico Eagle, 2019b), and dike construction sediment control and monitoring are presented in the Dike Construction and Dewatering Management Plan (Agnico Eagle, 2020).

For specific details on sediment control guidelines and license requirements, on erosion monitoring and mitigation during freshet, and the rise of the water level in the South Basin of Whale Tail Lake, refer to the Whale Tail Project - Erosion Management Plan (Agnico Eagle, 2018a).

3.7.2 Whale Tail Attenuation Pond

The Whale Tail Attenuation Pond is located in a deep part of Whale Tail Lake (North Basin), following the dewatering of the North Basin.

Starting at freshet 2020, the Whale Tail Attenuation Pond is one of the main contact water ponds for the project. Contact water from the Whale Tail WRSF Pond and runoff water in the open pits collected by sumps can be pumped to the Whale Tail Attenuation Pond.

Excess water is transferred to the IVR Attenuation Pond, to IVR Pit (to IVR 1; if required until August 2025, and then in IVR West, east lobe) or is treated by the WTP for TSS and arsenic if required prior to discharge to the receiving environment via the diffuser into Lake A16 (Kangislulik Lake) or Whale Tail South.

Monitoring of the effluent discharge to Kangislulik Lake or Whale Tail South is done as per the Water License requirement and MDMER regulation and is detailed in the Whale Tail Pit Water Quality and Flow Monitoring Plan (Agnico Eagle, 2019b).

3.7.3 IVR Attenuation Pond

The other main contact water pond of the Project (i.e., IVR Attenuation Pond) is located in the former Lake A53, following the A53 dewatering and IVR Dike construction. Contact water from the IVR WRSF collection system, the Whale Tail WRSF Pond, and runoff water in the open pits collected by sump can be pumped to the IVR Attenuation Pond.

Excess water will either be transferred to the Whale Tail Attenuation Pond, to IVR Pit (to IVR 1; if required until August 2025, and then in IVR West, east lobe) or be treated by the WTP for TSS and arsenic if required prior to discharge to the receiving environment via the diffuser into Lake A16 (Kangislulik Lake) or Whale Tail South.

3.7.4 Water Management in Whale Tail Waste Rock Storage Facility

The Whale Tail WRSF will be used to permanently store all waste rock and overburden from mining activities.

Seepage and runoff from the Whale Tail WRSF during the construction and operational phases is managed via the Whale Tail WRSF Pond, isolated by the Whale Tail WRSF Dike, where the contact water is pumped to the Whale Tail Attenuation Pond or to the IVR Attenuation Pond.

Runoff from the ultimate footprint of the Whale Tail WRSF will report to the Whale Tail WRSF Contact Water Collection System and the IVR Pit.

All overburdens have been co-disposed with waste rock within the WRSF. More details about management of the Whale Tail WRSF are presented in the Whale Tail Mine – Waste Rock Management Plan (Agnico Eagle, 2024a).

In April 2019, O’Kane Consultants developed a landform water balance model for the Whale Tail and IVR WRSFs (OKC, 2019). Information on the landform water balance model can be found in the report referenced in the waste management plan (OKC, 2019). The objective of the landform water balance was to estimate the runoff, interflow, and basal seepage rates for different slopes and aspects of the Whale Tail and IVR WRSFs.

3.7.5 Water Management in IVR Waste Rock Storage Facility

The IVR WRSF is in operation since the IVR Pit was initiated. Runoff from the IVR WRSF is sent to the IVR Attenuation Pond. The total catchment of the IVR WRSF increases proportionally with the increase in waste rock footprint.

3.7.7 Water Management for Ore Stockpile Areas

The ore stockpiles are located within the catchment of the Whale Tail Attenuation Pond or the IVR Attenuation Pond as shown in Appendix A. Based on the topographic information, contact water will naturally flow to the Whale Tail or IVR Attenuation Ponds for further treatment. If deemed required channels will be constructed and water management systems (i.e., pump, piping, etc.) will be installed to direct runoff to the pond.

The Ore Stockpiles are designed based on the following considerations. A cover of overburden and/or waste rock was placed over original ground to reduce any thaw-induced differential settlements. Waste rock was then placed to follow the natural topography, thereby reducing the likelihood of

water ponding on the surface of the pad requiring additional maintenance. Any surface run off from the ore stockpile or the pad will be directed to the Attenuation Pond containment area.

3.7.8 Water Management for Quarry 1

Until freshet 2020, Quarry 1 was used as the main contact water pond for the Whale Tail site. Prior to commissioning of the Whale Tail Attenuation Pond, contact water collected from the Stage 1 WRSF sump, from the starter pit, construction, and industrial sectors was pumped to Quarry 1. The contact water from Quarry 1 was pumped to Kangislulik Lake without treatment when the water quality met discharge criteria. The discharge was done via the permanent diffuser in Kangislulik Lake. If needed, water was treated via the Water Treatment Plant to meet discharge criteria.

As of 2021 Quarry 1 is part of Whale Tail Pit and is no longer available to be used as a storage area for water management.

3.7.9 Water Management for the Whale Tail Open Pit Sector

The Whale Tail open pit is planned to extend to approximately 270 m below the ground surface. The open pit will be mined mostly within permafrost except for the north-central portion of the pit which will be within the closed talik at the northern end of Lake A17 (Whale Tail Lake). The pit does not extend through the bottom of the closed talik; however, the open pit acts as a sink for groundwater flow during operations, with water induced to flow up through the open talik beneath the central portion of Lake A17 (Whale Tail Lake) and into the open pit. Accordingly, groundwater inflows into the open pit are expected; this water will be mixed with the open pit contact water and pumped to the IVR Attenuation Pond and/or the Whale Tail Attenuation Pond for further treatment.

The overall inflow to the pit is not expected to decrease significantly as the pit deepens because the flow of water is primarily through the permeable weathered bedrock and because the lower portion of the pit is in permafrost. It is important to note that most of the volume is expected to be due to seepage from Whale Tail South and the Whale Tail Attenuation Pond.

Groundwater inflow predictions during operations conservatively assume that no freeze back will occur in the pit walls during mining. This assumption was adopted for Whale Tail Pit to be conservative and because during the first few years of mining, the pit will be both widened and deepened, resulting in the continual exposure of unfrozen bedrock. During the later years of mining, however, the pit development will be entirely within the permafrost and significant freeze back in the pit walls is considered possible and has been observed at Meadowbank. Although not simulated, if freeze back does occur as is the case at Meadowbank, actual groundwater inflow to the pit could be significantly lower.

TDS concentration in the groundwater inflow to the pit was predicted to decrease during mining. The relatively low TDS concentration and decrease in TDS over time reflects the minimal upwelling of

higher salinity waters at depth due to the presence of the permafrost at the base of the pit and the high contribution of lake water and Whale Tail Attenuation Pond water.

3.7.10 Water Management for the IVR Open Pit Sector

The IVR Pit is located north of Whale Tail Lake, within the Northeast Sector in the permafrost environment, thus no groundwater inflows are predicted. Water management infrastructures are designed to only manage runoff water reporting to the pit during freshet. The IVR Pit runoff is conveyed to the active attenuation pond (i.e., IVR Attenuation Pond). Since 2023, water from Whale Tail Attenuation Pond and from IVR Attenuation Pond is transferred to IVR Pit for temporary storage, the aim being to minimize water load into both Attenuation Pond during winter and facilitate the operation of the Water treatment Plant.

3.7.11 Water Management for the IVR and WT Pit Pushbacks

During operations, the water is managed within the pits as detailed in Sections 3.7.9 and 3.7.10. No additional water management infrastructure is required for this activity. The IVR Pushback may be used as a staging sump prior to being backfilled.

3.7.12 Water Management for Haul Roads

A network of access and haul roads will connect the ore body to the Whale Tail and IVR WRSF Sector and the Industrial Sector. Most of the roadways servicing the mining area will drain directed towards the proposed contact water management infrastructures. Detailed information on roads is described in the Whale Tail Pit Haul Road Management Plan.

The approach to water management for these roads will involve the implementation of local best management practices during the construction, operational, and closure phases. The roads are constructed of non-potential for acid generating and non-leaching waste rock from mining operations. Other best management practices will strive to minimize the amount of runoff originating from the roadways and to prevent the migration of surfacing material from the roadways and crossings. Any areas identified as point sources of runoff originating from the roadways or crossings can be managed locally with silt fences, straw booms, turbidity curtains, interceptor channels, rock check dams, and/or small sedimentation ponds.

3.7.13 Water Management for Landfill

The landfill is developed within the Whale Tail Waste Rock Storage Facility (WRSF), which is located north of the Kangislulik Lake therefore, minimizing the disturbed area. This landfill consists of multiple sub landfills that are built and buried according to the evolution of the RSF. As the RSF evolves, the elevation and location of the sub landfills change. The landfill is located within the catchment of the Whale Tail WRSF Pond, as shown in Appendix A. Based on the topographical information, runoff and

any seepage from the landfill will naturally flow to the Whale Tail WRSF Pond and then be pumped to the Whale Tail Attenuation Pond for further treatment before discharge.

Further information on the management of this facility is described in the Whale Tail Pit Landfill and Waste Management Plan.

3.7.14 Sludge and Brine Management from Water Treatment Plants

This section summarizes water treatment requirements and is extracted from the Mean Annual Water Balance and the Mine Site and Downstream Receiving Water Quality Predictions, from Golder Associates, both dated May 2019. Any water requiring treatment will be pumped to the water treatment plant(s) prior to discharge through the diffuser in Kangislulik Lake or through a diffuser in Whale Tail Lake (South Basin) or other alternative discharges.

Sludge disposal will be done in the Whale Tail WRSF.

OPERATION WATER TREATMENT PLANT (OWTP)

The arsenic and TSS water treatment plant (OWTP: Operation Water Treatment Plant) was commissioned at the beginning of May 2019, to treat the final dewatering volumes from Whale Tail Lake (North Basin). This plant is used to treat surface water for TSS and arsenic before discharging to an approved diffuser.

Sludge water from the OWTP is dewatered with a centrifuge to produce a cake having a density with 20% of solid content. This cake will be stored in the Whale Tail WRSF. The maximum predicted annual volume of cake from the OWTP is approximately 5,760 cubic metres (m³).

TDS WATER TREATMENT PLANT (SWTP)

The S-WTP is not needed according to the latest water balance as the current underground mining plan is designed to minimize the inflows requiring TDS treatment by staying in the permafrost. The S-WTP would include a TDS Treatment plant if required.

The concept for the TDS Treatment plant would be to treat low salinity water that is stored in the GSP-2 until closure. The TDS Treatment plant would be active only from June through September. The permeate would be combined with the WTP effluent for discharge from site. The brine produced from the TDS Treatment plant would be stored in GSP-1. The S-WTP could also include two Desalination units, which would treat water stored in GSP-1. The salt solid produced from treatment would either be used at site and/or shipped off site, and the permeate would be combined with WTP effluent for discharge from site.

Agnico Eagle is currently developing an Underground Project limited into the permafrost only. This change results in no more treatment and discharge of saline water to Whale Tail Lake. The water

management strategy for underground water is only based on storing water in GSP-1 and GSP-2 (if needed) and IVR Pit (temporarily). High and low salinity water are not segregated anymore.

3.7.15 Underground Water Management

Underground development groundwater and contact water will be managed in dedicated surface infrastructures for contact water. For underground water management, the following key strategies were implemented to develop the underground water Management Plan:

- A Groundwater Storage Pond system (GSP) is designed to capture TDS (salt) affected waters. Up to three GSPs are planned to provide operational flexibility and adaptive management opportunity.
- Excess water volumes in the underground mine will be managed through the Underground Mine Stope and GSP-1 and IVR 1 Pit (if required after June 2028).
- Excess water volumes may also be managed with GSP-3 (planned for contingency, operational flexibility, and adaptive management opportunity) or managed as temporary storage in IVR Pit.
- Water stored in GSPs could be used as a source for dust suppression on surface roads, as input into the cemented rockfill, or used for drilling activity underground.
- At the end of underground mining, any remaining water in the GSP ponds and IVR Pit will be pumped underground for flooding of the underground workings.

3.7.16 Non-Contact Water Management

The non-contact water management systems are described below. These systems are required to meet the objective of avoiding mixing contact and non-contact water.

Whale Tail Dike Seepage Discharge to Whale Tail Attenuation Pond

The non-contact water seeping from Whale Tail Dike (WTD) is collected into the seepage collection system before reaching the Whale Tail Attenuation Pond. Water quality samples are taken from the seepage to monitor pH and turbidity. The seepage collection system consists of a longitudinal collection trench that runs along the downstream toe of the dike and redirects the water towards the WT Attenuation Pond. In addition to the trench, pumping wells can be used to minimize the volume of water reporting to Whale Tail Attenuation Pond. Note that to date, it hasn't been considered necessary to use this system and it will be decommissioned in the future.

Seepage water, collected from this system, can be discharged into the Whale Tail South Basin via a diffuser without treatment if the water quality meets the discharge criteria of the Water License 2AM-WTP1830. If discharge criteria are not met, in the Whale Tail Attenuation Pond water will be pumped through the WTP for discharge.

Since 2020, following the Whale Tail Dike grouting campaign, the seepage pH results indicated an increase above the acceptable limit indicated in the Water License 2AM-WTP1830. The seepage was therefore not collected from the pumping system and was flowing freely to reach the Whale Tail Attenuation Pond. Agnico Eagle will continue to closely monitor the situation.

IVR Diversion Channel

The IVR Diversion channel is intended to collect non-contact runoff water from the east side of the Nemo watershed and divert it by gravity to Nemo Lake. This infrastructure is 260 m long and allows minimizing the volume of non-contact runoff water reporting to the IVR Pit area. The IVR Diversion Channel construction has been completed in 2020.

South Whale Tail Channel (SWTC)

Construction of the South Whale Tail Channel (SWTC) was completed in 2020 prior to the freshet. The SWTC connects Whale Tail South basin to Kangislulik Lake. The 900 m long channel is approximately 5m wide at the base with lateral slopes of 3H:1V. Once excavated, the channel was covered with multiple layers of coarse and fine materials, rip rap, and a layer of geotextiles to ensure minimal TSS in the flow reporting to Kangislulik Lake and also preventing erosion. At the outlet of the channel, a turbidity barrier was installed and will remain in place as a supplementary protection to avoid TSS flowing into Kangislulik Lake. The channel allows Agnico Eagle to naturally control the Whale Tail South water level without any mechanical transfer intervention. Details of the channel construction can be found in the as-built report (SNC, 2020).

3.7.16.1 Adaptive Management for Non-Contact Water

In order to adequately manage non-contact water on site, some passive flows have been in the past substituted with a pumping alternative that complies with the original intent of the approved water balance and Water License 2AM-WTP1830 (same origin and destination of water). Those systems were proposed as adaptive management methods, in response to the encountered site conditions during open water season and the high volume of precipitation received, resulting in additional volume of water to manage.

North-East Pond to C-watershed

The non-contact water from the North-East (NE) Pond watershed was initially planned to overflow by gravity toward Nemo Lake once the North-East Dike was operational. During a routine inspection in July 2019, it was observed that the topography toward Nemo Lake would not allow water to overflow naturally before overtopping the dike liner. Following this observation, water was pumped from NE Pond toward the project site as per approval from NWB, adding pressure on dewatering activity. The water from the NE Pond was then pumped to the tundra within the Nemo watershed (Watershed C). This system for water level management was operational in 2019 and 2020 prior to the dewatering of

the IVR footprint and was used to manage the water level in the NE Pond when required, until NE Dike was dismantled in late 2020.

North-East Sector Pond Management

During the summer of 2019 and 2020, significant water inflows from Lake A49 towards the Whale Tail Pit area were noticed. Maintaining the water elevation in Lake A49 throughout freshet was required to avoid the transformation of non-contact water (Lake A49 overflow) to contact water (pit water). The objective of this water transfer was to minimize contact water creation. Water was sent into the North-East Pond. Lakes A47 and A49 were dewatered in 2020 as part of the IVR Pit development.

A53 Lake to Whale Tail South

The non-contact water from the A53 watershed was planned to be redirected to Whale Tail South through the East Channel.

Prior to the dewatering phase, the water level in Lake A53 was maintained to the natural level by pumping the exceeded volume to Whale Tail South as per previous approval from NWB. Regular water level monitoring was conducted at this time. The monitoring aligns with the Water License 2AM-WTP1830 requirements, Schedule I Table 2 for ST-WT-7 and as per Part F Item 7 for TSS limits.

Once the dewatering phase was completed, as explained in Section 3.6 of this report, A53 became the IVR Attenuation Pond.

Whale Tail South Discharge to Kangislulik Lake

The non-contact water from Whale Tail South Basin was pumped to Kangislulik Lake in 2019 as per approval from NWB. This pumping activity was required to manage and then maintain the water level in Whale Tail South Basin, in order to allow for the construction of the Whale Tail South Channel (SWTC) and preserve the integrity of Whale Tail Dike. This system temporarily substituted passive flow via the SWTC with a pumping alternative that complies with the original intent of the approved water balance and Water License 2AM-WTP1830 (same origin and destination of water). This pumping activity also provided flexibility and added robustness to the water management strategy. Discharge was completed via a diffuser to avoid erosion into Kangislulik Lake. Since 2020, no mechanical transfer from Whale Tail South to Kangislulik Lake occurred but Agnico might re-use this system in the future to appropriately manage water on site.

3.8 Freshwater Management

The permitted freshwater sources as per the Water License 2AM-WTP1830 are Nemo Lake (all purpose), Kangislulik Lake (explosive mixing and associated use), Lake D1 (Re-flooding of Whale Tail Pit, IVR Pit, Underground mine, and Whale Tail (North Basin) and associated use, or as otherwise approved by the Board in writing), and Whale Tail South (Re-flooding of Whale Tail Pit, IVR Pit,

Underground mine, and Whale Tail (North Basin) and associated use, or as otherwise approved by the Board in writing).

Freshwater usage includes potable use, fire suppression, dust suppression, drilling water (if contact water is not available), water for the emulsion plant (trucked from the Nemo Lake pumping station), and water for the truck shop. The freshwater source is Lake C38 (Nemo Lake), and Lake A17 (Whale Tail Lake) during closure. For explosives mixing and associated use, the water could also be pumped from Lake A16 (Kangislulik Lake), as per Part E, condition 1 of the Water License 2AM-WTP1830. Agnico Eagle will endeavour to minimize the amount of freshwater required for the Project, where possible. Table 3. summarizes the authorized water use for domestic and industrial purposes during construction and operation.

Table 3.6 Water Use Authorized for Domestic and Industrial Purposes During Construction and Operation

Source	Volume (m ³ /year)	Purpose
Nemo Lake	209,544	Domestic camp use, drilling dust suppression, Construction, and Operations and associated use or as otherwise approved by Board in writing
Kangislulik Lake	2,500	Explosive mixing and associated use
Whale Tail Lake (North Basin), Lakes A-P38, A-46, A47, A49, A50, A51, A52, A53, A-P21, A-P10, A-P67 and A-P68	153,735	Dewatering
Source Proximal to drilling sites	109,135	Drillings
Source proximal to the Whale Tail Haul Road	109,135	Dust Suppression
Annual Subtotal	584,049	Above-described sources
Annual Contingency (20 %)	116,810	Above-described sources
Annual Total	700,859	

Freshwater is primarily sourced through a freshwater intake and pump system. The intake consists of vertical filtration wells fitted with vertical turbine pumps that supply water on demand. The intake is connected to the pump house with piping buried under a rockfill causeway. The intake pipe exits at the bottom of the causeway and is fitted with a stainless-steel screen, as per Part E, condition 4 of the Water License 2AM-WTP1830. The rockfill causeway acts as a secondary screen to prevent fish from becoming entrained.

The stainless-steel screens design for the water intake is consistent with the Fisheries and Oceans Canada (DFO) “Freshwater Intake End-Of-Pipe Fish Screen Guideline” (DFO 1995). As per the DFO policy intake screens will be cleaned every 2 years. The freshwater intake will be moved to Whale Tail Lake (South Basin) at closure.

Freshwater is pumped to an insulated main storage tank located at the Whale Tail Camp. The freshwater pipeline is made of a high-density polyethylene pipe and insulated, and heat traced. The Whale Tail Camp has a Freshwater Treatment Plant (potable). In the Potable WTP, the freshwater first goes through sand filters and then is pumped through ultraviolet units and finally treated with chlorine. The treated water is stored within a potable water tank. Potable water is monitored according to the Nunavut health regulations for total and residual chlorine and microbiological parameters. Treated potable water is piped to other facilities requiring potable water. Detailed plant operation specifications were provided in FEIS Volume 1, Section 1. 2.4.1.

Freshwater and potable water use is required during operations and additional freshwater will be required from Whale Tail Lake at closure. The current Type A Water License Part E Item 1 and 2 provides for a maximum quantity of water use not to be exceeded at 700,859 m³ annually during construction and operation as well as 14,855,606 m³ annually during closure. The freshwater usage from Nemo Lake needs to respect the license limit of 209,544 m³ per year.

It is important to note that total annual withdrawals of water from Nemo Lake (209,554 m³/year) will remain well below the lake’s annual inflow volume of approximately 476,000 m³ (based on the mean annual water balance of the lake under baseline conditions), and DFO’s guideline of 10% of the under ice volume for the duration of operations (i.e., under-ice volume of 6,170,000 m³ derived from FEIS Addendum Appendix 6-M submitted with the Whale Tail Pit - Expansion Project). Residual effects to fish and fish habitat are therefore expected to be negligible.

Following the end of operations, site contact water including contact water in the underground mine watershed (GSP ponds) will be pumped into the underground mine; the remaining voids will be filled with Whale Tail Lake (South Basin) water. The dewatered Whale Tail Pit and IVR Pit area will be filled with a combination of natural runoff and contact water from the entire site (i.e., the Whale Tail and IVR WRSF Contact Water Collection Systems and the Whale Tail and IVR Attenuation ponds), and water pumped from Whale Tail Lake (South Basin). Contact water in the underground mine watershed (GSP ponds) will not be used for this purpose because of their anticipated higher salinity. This water will be used only to flood underground workings. It is anticipated that approximately 75,000,000 m³ over 16 years from Whale Tail Lake is required to fill the mined-out Whale Tail Pit (i.e., approximately 57,000,000 m³), IVR Pit (i.e., approximately 11,000,000 m³), underground mine (i.e., approximately 1,000,000 m³) and Whale Tail Lake (North Basin) (i.e., approximately 6,000,000 m³), including approximately 2,900,000 m³/year from Whale Tail Lake (South Basin).

As per part E, condition 2 of the Water License 2AM-WTP1830, the use of water from Whale Tail Lake shall not exceed a total of 10,655,000 m³/year commencing when notification of closure is received by the NWB through to the expiry of the License. The limit for Nemo Lake is 14,672 m³/year and the

limit for Lake D1 is 1,710,000 m³/year, both commencing when notification of closure is received by the NWB through to the expiry of the License.

3.9 Sewage Water Management

Sewage is collected from the camp and change-room facilities and pumped to a sewage treatment plant (STP). The objective of the STP is to treat sewage to an acceptable level for discharge to the Whale Tail or IVR Attenuation Ponds via a sewage water discharge pipeline. The STP is housed in a prefabricated (modular) structure located in the Whale Tail Camp. The sewage treatment system is designed based on the occupation maximum of the camp for 400 persons (240L per day and per person). The design average daily flow is 96 m³/day (4 cubic metres per hour [m³/hour]).

Previously, the sewage treatment plant at the Amaruq camp could accommodate 400 workers. With the addition of four wings to the Operations Camp for the project expansion, the total camp capacity was increased to 546 workers. An expansion of the sewage treatment systems was thus required. These systems are built with typical 40-foot containers.

No major change in operation or water quality happened as a result of this expansion. The upgraded sewage treatment system is designed based on a flow rate of 240 L per day per room for 546 people, for an average daily flow rate of 131 m³/day (5.42 cubic metres per hour [m³/hour]).

The sewage treatment plant receives two streams of sewage. The first source is domestic sewage, which is fed directly to the fine screening process to remove any fibers or debris that might damage the membranes. The second source is kitchen sewage which is pre-treated in the oil and grease tanks to remove oil and grease prior to being fed into the fine screen.

The STP for the camp facilities is designed to meet appropriate guidelines for wastewater discharge (for example, NWT Water Board 1992). Wastewater System Effluent Regulations (WSER) criteria are not currently applicable to systems located in Nunavut and is unlikely to apply to the Project effluent quality.

Table 3. provides the anticipated performance of the system compared to the WSER criteria. Further information on the management of this facility is described in the Whale Tail Sewage Treatment Plant Operation and Maintenance Manual (Agnico Eagle, 2019a). As stipulated in Part B, Item 17, Agnico Eagle will review the Plans as required by changes in operation and/or technology and modify the Plans accordingly in the form of an addendum to be included in the Annual Report.

Table 3.7 Effluent Quality and Wastewater Characteristics

Parameter	Units	Regulatory Limit	Design Value
Wastewater			

• Biochemical Oxygen Demand	mg/L	-	952
• Total Suspended Solids	mg/L	-	300
• Total Kjeldahl Nitrogen	mg/L	-	130
• Ammonia Nitrogen	mg/L	-	130
• Fat, Oil, and Grease	mg/L	-	30
• pH	-	-	6 to 9.5
• Water Temperature	°C	-	10 to 25
• Alkalinity	mg/L as CaCO ₃	-	471.1
• Prohibited Chemicals/Compounds	Not present		
• Grinder Pumps	Not present upstream of MBR		
Effluent			
• pH	-	6-9.5	6.5 to 8.5
• Carbonaceous Biochemical Oxygen Demand	mg/L	<25	<5
• Total Suspended Solids	mg/L	<25	<1
• Un-ionized Ammonia	mg/L	<1.25	<0.08
• NO ₃ -N	mg/L	<5	4
• TP	mg/L	<0.5	0.5
• Fat, Oil, and Grease	mg/L	<5	<1
• Fecal Coliform	CFU/100mL	<200	Non-Detect
• Total Residual Chlorine	mg/L	<0.02	0

1. Noted values are assumed blended between kitchen and dormitory wastewater after the grease trap.
2. A complete list of prohibited chemicals is included in the membrane maintenance manual.

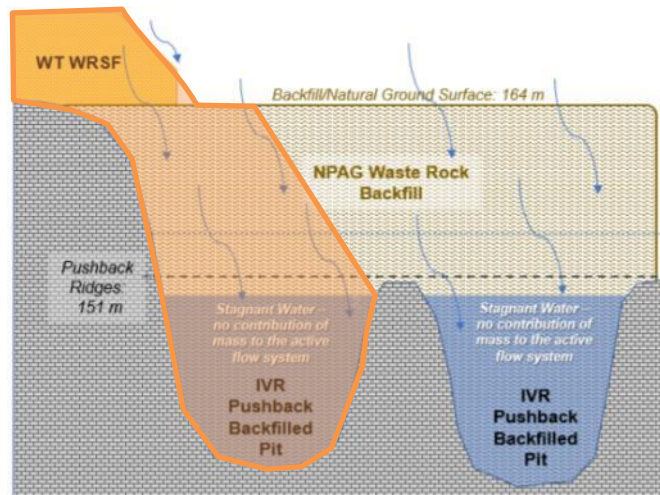
3.10 Water Management During Closure

Mine closure is integral to the mine design and will be modified during operations. Planning for permanent closure is an active and iterative process. The intent of the process is to develop a final closure plan including specific water management components using adaptive management. This begins during the mine design phase and continues through to closure implementation. Adaptive management enables the plan to evolve as new information becomes available through analysis, testing, monitoring, and progressive reclamation. The mine closure and reclamation activities are provided in the Whale Tail Pit Closure and Reclamation Plan (CRP) and will be detailed in the Final Closure and Reclamation Plan (FCRP).

Water management during closure and reclamation will involve actively filling the underground facilities, Whale Tail Pit, and IVR Pit, and passively allowing the Whale Tail Attenuation Pond and the Whale Tail Pit to flood. The Groundwater Storage Ponds and IVR Attenuation Pond will be emptied at the start of closure and backfilled with NPAG/NML waste rock. The Whale Tail and IVR WRSFs will be progressively covered with NPAG/NML waste rock throughout operations and are expected to be completely covered at the beginning of closure.

The pushback in the IVR pit will be filled with NPAG-NML waste rock and be naturally refilled by water inflows as described above. Figure 3.10-1 shows the conceptual approach to water flow in the upper portion of the pit which would eventually flow into Whale Tail Pit. Backfilling will be completed according to operational requirements.

Figure 3.10-1 Conceptual Representation of Water Flow in IVR Pushback During Closure



Water management during closure and reclamation will involve maintaining contact water management systems including water treatment plant on site until monitoring results demonstrate that water quality is acceptable for discharge of all contact water to the environment without further treatment. Once pit lake water quality meets the discharge criteria, the water management systems will be decommissioned to allow the water to naturally flow to the receiving environment. In 2018, a Whale Tail WRSF seepage analysis and hydrodynamic modelling of Kangislulik Lake were conducted to address NIRB project certificate Term and Condition no. 6a. The objectives were to assess Kangislulik Lake near-field water quality at the WRSF seepage outlet post-closure and to evaluate seasonal water circulation patterns in Kangislulik Lake resulting from effluent discharge. This analysis also aimed to predict and evaluate the water quality within Kangislulik Lake during operations and post-closure (Golder, 2019c). Results show that no modification to the water management strategy is needed concerning closure activities and sequence.

Runoff from the Whale Tail WRSF and discharge from Whale Tail Lake (North Basin) (IVR runoff flows to Whale Tail Lake (North Basin)) will enter and mix in Kangislulik Lake. Concentrations outside the mixing zone of the Whale Tail WRSF contact water plume are predicted to meet receiving water quality criteria. Results of the studies showed that baseline drainage patterns of the East Sector need to be re-established to direct runoff towards the Whale Tail Attenuation Pond, including runoff over the backfilled IVR Attenuation Pond. Runoff from the IVR WRSF and the backfilled Groundwater Storage Ponds need to be passively directed to the Whale Tail Pit. The IVR Pit walls are composed primarily of south komatiite and basalt with some north greywacke rock. Based on these predictions,

a control mechanism may be required for IVR Pit Walls including re-sloping and cover placement or adapted contact water management.

The dewatered Whale Tail Pit and IVR Pit area will be filled with a combination of natural runoff and contact water from the entire site (i.e., the Whale Tail and IVR WRSFs Contact Water Collection Systems and the Whale Tail and IVR Attenuation Ponds), and water pumped from Whale Tail Lake (South Basin). The runoff and seepage from the Whale Tail WRSF and IVR WRSF will continue to be collected in the designated collection ponds and pumped to Whale Tail Lake (North Basin) during active closure (re-filling). Water quality will be monitored during flooding and until results demonstrate that water quality conditions from the WRSFs are acceptable for direct discharge. Based on the cover thermal model results, the Whale Tail WRSF and IVR WRSF will be covered with a cover of 4.7 m thick to be constructed with NPAG/NML waste rock. The objective of the cover is the control of acid generating reactions and of migration of contaminants by freezing. Consistent with the Approved Project, the segregation of the PAG/NPAG and ML/NML waste rock will occur during the operation of the mine.

The key water management activities during mine closure are summarized below. Appendix B shows the water management flowsheets during mine closure phases.

- The Active Closure phase begins in July 2028, immediately following the cessation of mining operations. The Active Closure phase is defined by the period of time required to fill the Whale Tail North Basin to its final post-closure target water level of 153.5 m, which takes approximately 17 years.
- The Post-Closure phase begins in August 2045, and represents the long-term equilibrium condition once the A18 Lake complex, Whale Tail South Basin and Whale Tail North Basin have reached their target water levels.

Specific activities associated with the Active Closure phase include:

- Groundwater collected in GSP-1 and the IVR Pit is pumped into underground mine void.

The A47 and A49 Sumps report passively to the IVR Pit:

- Active water treatment continues in June to September each year for an additional six years (2028-2033);
 - Contact water is pumped from the IVR Attenuation Pond, treated and discharged into the IVR Pit as part of reflooding.
- Construction of a sill (A18 Sill) between Lake A18 and Whale Tail South Basin to raise the water level to 155.3m as part of the approved fish habitat offset plan. This is completed in 2029, once the water level in Whale Tail South Basin drops below 154 m due to active pumping to the mine voids.

- Discharge through the A18 Sill is governed by the spill notch inverted configuration.
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- A sill will be constructed in the Kangislulik Lake, upstream of the Mammoth Dike, to increase the water level by 1 m to 153.5 masl.
- Completion of reclamation activities for all disturbed areas (including completion of the NPAG/NML WRSF covers, and backfill of the IVR Pit Pushbacks, GSP-1 and IVR Attenuation Pond) by the end of the third year of Active Closure (2031).
- Active pumping from Whale Tail South Basin and Whale Tail WRSF Collection Pond to fill the mine voids, according to the following priority sequence:
 - Underground mine;
 - IVR Pit;
 - Whale Tail Pit and Whale Tail Pit pushback; and,
 - Whale Tail North Basin.

Water from the Whale Tail South Basin is pumped into the remaining mine voids, at a maximum rate of 2,800 m³/hour in the second half of 2028, and 1,600 m³/hour over the remaining 17 years. This pit flooding program will be active during the open water season only, assumed to span June 1 to September 30 of each year. Per the 2021 Water Management Plan, an additional 161,000 m³ (55 m³/hour) is pumped from Whale Tail South Basin during the same annual pumping window to the mine voids to meet the target of restoring the Whale Tail North Basin water level to 153.5 m by September 2049. This results in a total pumping volume of 4.6 Mm³ in 2028 and 2.1 to 4.1 Mm³/year for the remainder of the Active Closure phase (2028 to 2045). To promote pit flooding, all contact water from the mine site is directed, either actively (e.g., pumping from the Whale Tail WRSF Collection Pond) or passively, to the open pit voids. The underground mine, Whale Tail Pit and IVR Pit are not hydraulically connected below their respective spill point elevations and are assumed to form separate reservoirs within the model. Once the Whale Tail Pit and IVR Pit are full to the sill elevation, they conjoin into the Whale Tail /IVR Complex.

The west lobe of the IVR Pit spills into the east lobe at 150 m, and IVR Pit as a whole spills into the Whale Tail Pushback at 123 m, which in turn spills into the Whale Tail Pit at 117 m. The two lobes of the IVR Pushback will not join with the larger IVR Pit once full but will spill into the IVR Pit at 161.5 m.

Seepage through the Whale Tail Dike is expected to continue, according to the gradient between water levels in Whale Tail South Basin and the Whale Tail Attenuation Pond. Once full, the Whale Tail Attenuation Pond overflows to the Whale Tail Pit.

Once the Whale Tail North and South Basins have stabilized at their target elevations, and water quality within these reservoirs meets SSWQOs, the Whale Tail Dike will be breached to elevation 153.5 m and the Whale Tail WRSF Pond Dike will be breached to allow flows from the covered Whale

Tail WRSF to report passively to Whale Tail North Basin. The site is assumed to have achieved the Closure and Reclamation targets at this point (approximately 2047).

Table 3.8 Key Water Management Activities during Closure

Closure Period	Key Water Management Activities and Sequence
2028	<ul style="list-style-type: none"> • The Groundwater Storage Ponds and IVR Attenuation Pond will be emptied at the start of closure to underground and backfilled with NPAG/NML waste rock. • The Whale Tail and IVR WRSFs will be progressively covered with NPAG/NML waste rock throughout operations and are expected to be completely covered at the beginning of closure. • The pushback in the IVR pit will be filled with NPAG-NML waste rock and be naturally refilled by water. • Start of site water quality monitoring of flooding open pit reservoirs
2028 to 2033	<ul style="list-style-type: none"> • Active water treatment of IVR Pit runoff during open water season (June to September 2028 to 2033) • Construction of a sill between Lake A18 and Whale Tail South Basin to raise the level to 155.3 masl as part of the approved fish habitat offset plan (2029) • Complete NPAG/NML WRSF covers and backfill of the IVR Pit Pushback, GSP-1 and IVR Attenuation Pond (2031)
2028 to 2045	<ul style="list-style-type: none"> • Active filling of the pits/mine components will follow this sequence: <ul style="list-style-type: none"> • IVR Pit (2028 – 2031) • Whale Tail Pit (2031 to 2039) • Whale Tail + IVR Combined Pit (2039 to 2044) • Whale Tail North Basin (2044 to 2045)
2045	<ul style="list-style-type: none"> • Once Whale Tail Lake (North Basin) is flooded to 153.5 masl, pumping of the Whale Tail Lake (South Basin) to Whale Tail Lake (North Basin) during summer months will be ongoing to maintain the elevation of Whale Tail Lake (South Basin) to 153.5 masl until water quality allows to decommission the dikes and reconnect the North and South Basins of Whale Tail Lake • Once Whale Tail Lake (North Basin) is flooded to 153.5 masl, decommission the Whale Tail WRSF Dike and re-establish natural drainage patterns of the Whale Tail WRSF Sector to Lake A16 (Kangislulik Lake) • Once Whale Tail Lake (North Basin) is flooded to 153.5 masl, create spillway in Mammoth Dike to re-establish baseline flow patterns to Lake A16 (Kangislulik Lake) • Decommission the Whale Tail Dike, water quality permitting. • Remove site infrastructure
Post-Closure (2045+) (triggered when water quality in all three water bodies meets the appropriate water quality criteria)	<ul style="list-style-type: none"> • Monitoring

3.10.1 Contact Water Collection System

The contact water collection system will remain in place to collect surface runoff water and seepage from the mine site until the open pits are flooded. During this period, the Industrial Sector and the Whale Tail Camp will be reclaimed, and the non-essential site infrastructure will be removed. Thereafter, water in these sectors will no longer be collected and will contribute to the reestablishment of the natural elevation of Whale Tail Lake (North Basin). The Mammoth Dike and Whale Tail Dike will remain in place until pit lake water quality meets receiving environment water quality objectives. If this occurs after full flooding as is predicted at this time, the pit lake water elevation will be maintained at 153.5 masl by pumping from Whale Tail (South Basin) to the North Basin, and through controlled discharge from Whale Tail (North Basin) to Kangislulik Lake over the Kangislulik Lake sill.

In the Whale Tail WRSF Sector, the contact water collection system will remain in place. Dikes will not be reconnected until the water quality in the flooded area meets Closure water quality objectives.

In closure, water from the Whale Tail WRSF contact water collection system is used to actively flood IVR Pit, and the IVR WRSF water is directed to Whale Tail Pit. In post-closure, water from the Whale Tail WRSF contact water collection system is allowed to flow passively to Kangislulik Lake as baseline drainage patterns are re-established. Lower volumes and chemical loading of water originating from either of the WRSFs would improve water quality throughout closure in the Whale Tail and IVR Pits, and in Kangislulik Lake in post-closure.

Dike decommissioning will involve the removal (breach) of a portion of the dikes to original ground levels whenever possible. Consideration will be given to breach staging, with the above water portions of the dike/berm in the breach area removed during winter periods, when there will be little surface water flow, thereby minimizing the potential release of sediments to the neighbouring waterbodies. The remainder of the breach would be completed during the open water season following freshet to allow for the deployment of turbidity curtains to control potential releases of sediment. Design of the dike breach will be provided in the Final Closure and Reclamation Plan.

For water collection and management systems closure the infrastructure will be re-contoured and/or surface treated according to site-specific conditions to minimize wind-blown dust and erosion from surface runoff, if required.

3.10.2 Post-Closure Modeling Results Summary

Active flooding of the underground mine voids and pit lakes spans the period from July 2028 through June 2045 (Active Closure). The Whale Tail North Basin is filled to its final water level of 153.5 m by July 2045, which marks the onset of post-closure. Phosphorus and arsenic predictions in the flooding pit lake complexes and downstream lakes are presented in the following subsections.

Groundwater collected in IVR Pit at the end of mine life is pumped into the underground voids. A rapid improvement in water quality is predicted in the IVR Pit due to the removal of groundwater and initiation of active flooding in July 2028. In the first six years of Active Closure, site contact water is collected in the IVR Attenuation Pond, treated, and discharged into the IVR Pit. This includes 65% of pit wall runoff from the IVR Pit and Whale Tail Pit.

After IVR Pit flooding is completed in 2031, arsenic concentrations (Figure 3.10-2) start increasing again due to exposure to the remaining IVR Pit walls. This trend persists until the IVR Pit and Whale Tail Pit join above the 115 m sill elevation and form the Whale Tail IVR Complex in 2039. The Whale Tail-IVR Complex starts contributing to the Whale Tail North Basin in July 2044, when water levels reach 150.5 m and the pit lake complex conjoins with the Whale Tail Attenuation Pond. Phosphorus concentrations predicted in the Whale Tail North Basin remain below the upper limit of the oligotrophic range throughout the closure phases (Figure 3.10-2). Arsenic concentrations are expected to be less than the SSWQO by the end of Active Closure, with values continuing to decline during post-closure (modelled out to 2069).

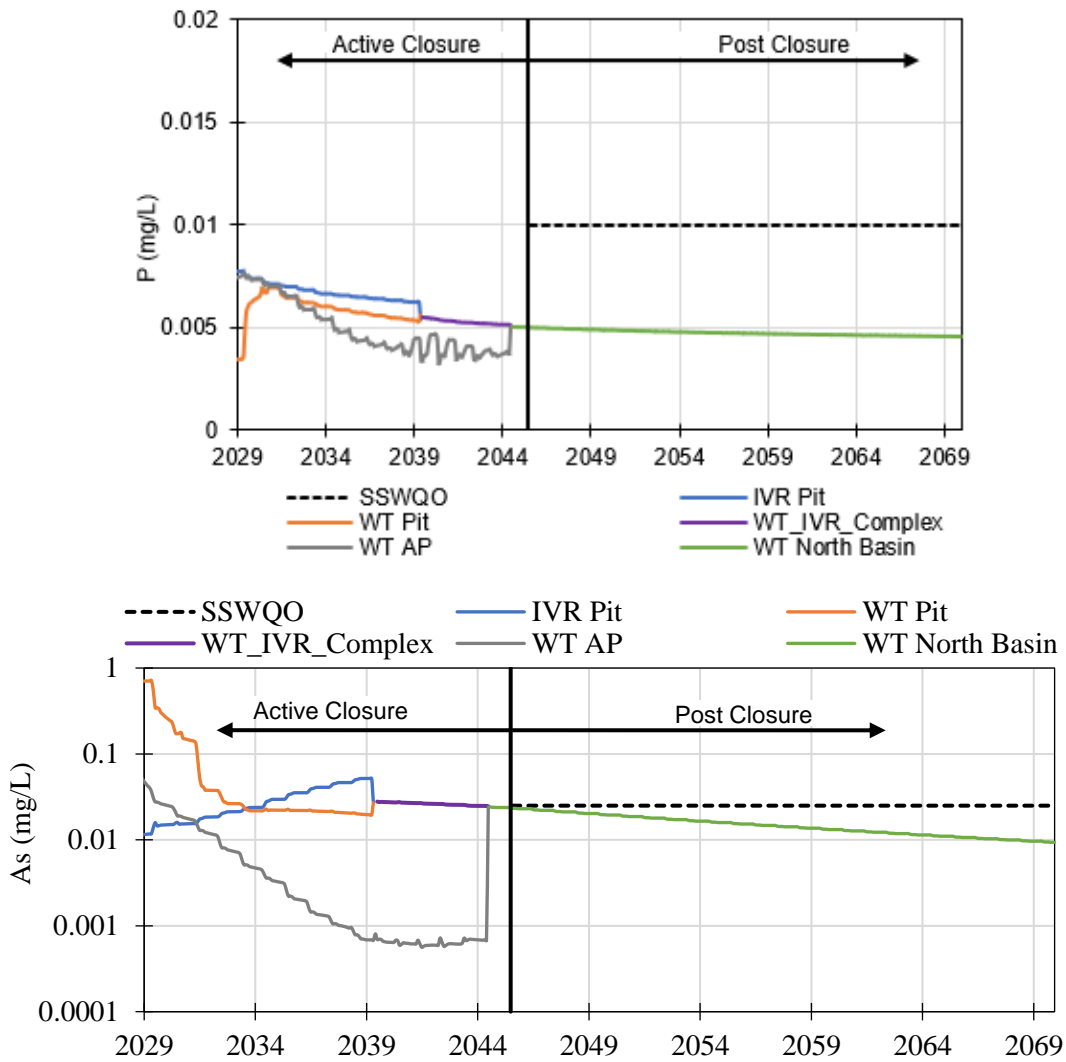


Figure 3.10-2 Projected phosphorus (P) and arsenic (As) concentrations for pit lakes and the Whale Tail Attenuation Pond during Active Closure and Post-Closure

Note: The Whale Tail North Basin is comprised of the Whale Tail Pit, IVR Pit, Whale Tail Attenuation Pond, and Kangislulik Lake from September 2044 onwards.

Water quality in the Whale Tail South Basin, Kangislulik Lake is expected to improve as mine discharges cease at the end of mine life. A declining trend is also predicted for phosphorus and arsenic concentrations in the closure lakes under the 2018 FEIS and the updated model scenarios during the active closure period.

An increase in arsenic concentrations is predicted at the beginning of Post-Closure in Kangislulik Lake and Lake A15 due to overflows from the flooded Whale Tail North Basin starting in July 2045. However, the impact of arsenic loadings from flooded pit lakes on the receiving environment is expected to be short-lived. For the remainder of the model horizon (up to 2069), arsenic concentrations are expected to decrease as non-contact flows from surrounding catchments report to the lakes. Overall, the model results show that all parameters are below their respective guidelines in the receiving lakes during post-closure.

SECTION 4 • WATER QUALITY FORECAST

Water quality forecast reports are revisited on an annual basis until mine closure, as per the Water License part E item 6. The purposes of the water quality forecast are to identify the contaminants of concern (COC) during the pit flooding process and WRSF contact water mixing into Mammoth Lake post-closure and determine if water treatment will be required on site for closure activities when comparing the final contaminant levels to the water quality guidelines and/or site-specific criteria for parameters that are not included in the water quality guidelines.

A water quality model was completed for the operations, closure, and post closure phases. The water quality model is included in Appendix C of this plan.

The water quality model results show that all parameters are predicted to remain below their respective water quality guidelines in receiving lakes during Operations. Once effluent discharge ceases in Active Closure, active treatment of water in IVR Pit will manage arsenic and phosphorus to allow for passive flooding of the pits. Once flooded, all parameters are expected to be below the respective guidelines post-closure.

As per the Type A Water License 2AM-WTP1830, Part E, Items 8 and 9 the water quantity and quality model will be updated and evaluated in closure.

SECTION 5 • ADAPTIVE MANAGEMENT

Adaptive management will be achieved through performance monitoring and management actions that will be implemented, should they be triggered. Action level responses taken during the year will be documented in Agnico Eagle’s annual report submitted to the NWB. The Whale Tail Pit Expansion Project – Adaptive Management Plan (Agnico Eagle, 2021) includes the specific adaptive management strategies related to water management. Three indicators relative to water management are tracked as part of the Adaptive Management Plan: water quality for Whale Tail Project waterbodies, water quantity for surface water management, and water quantity for underground water management.

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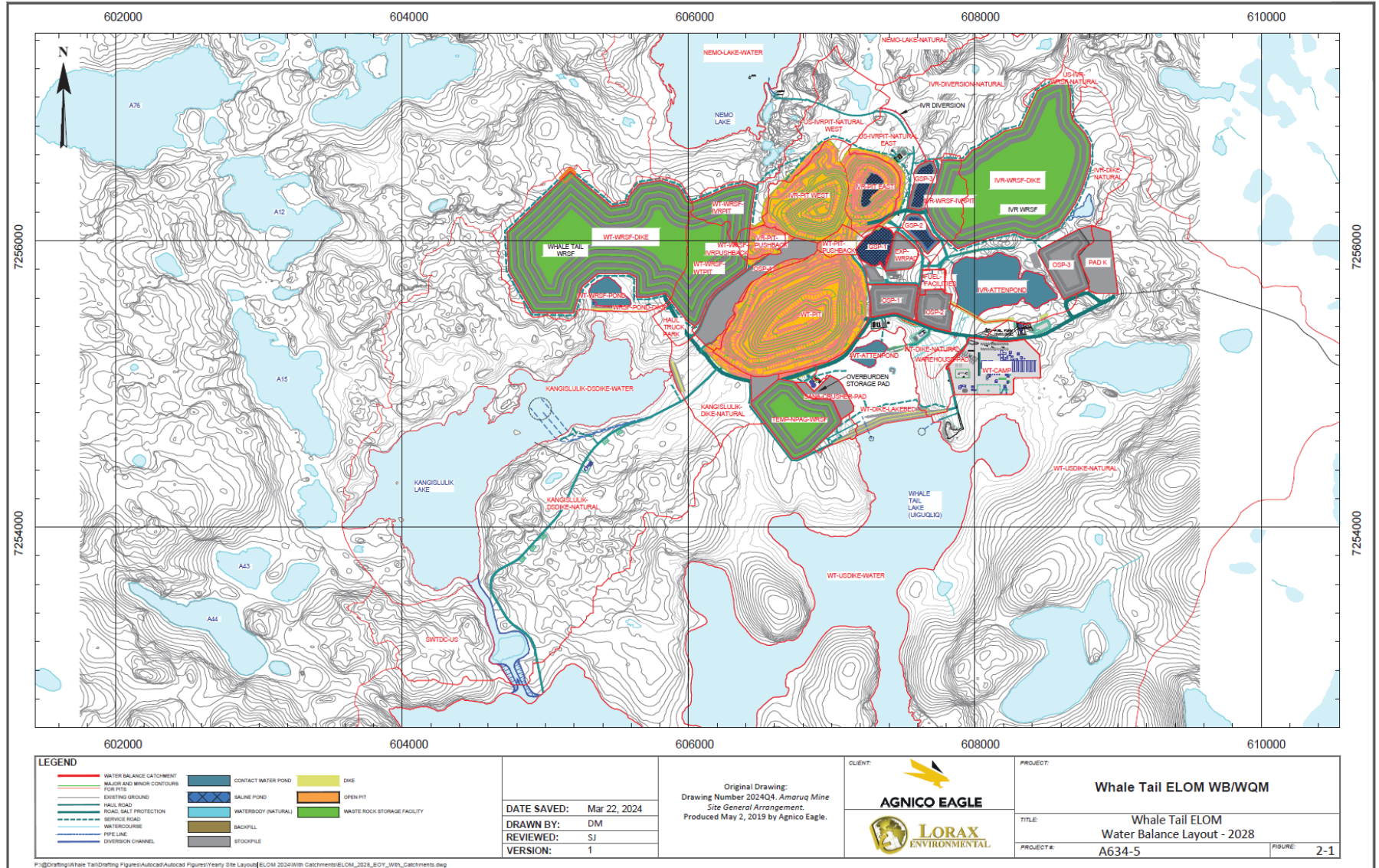
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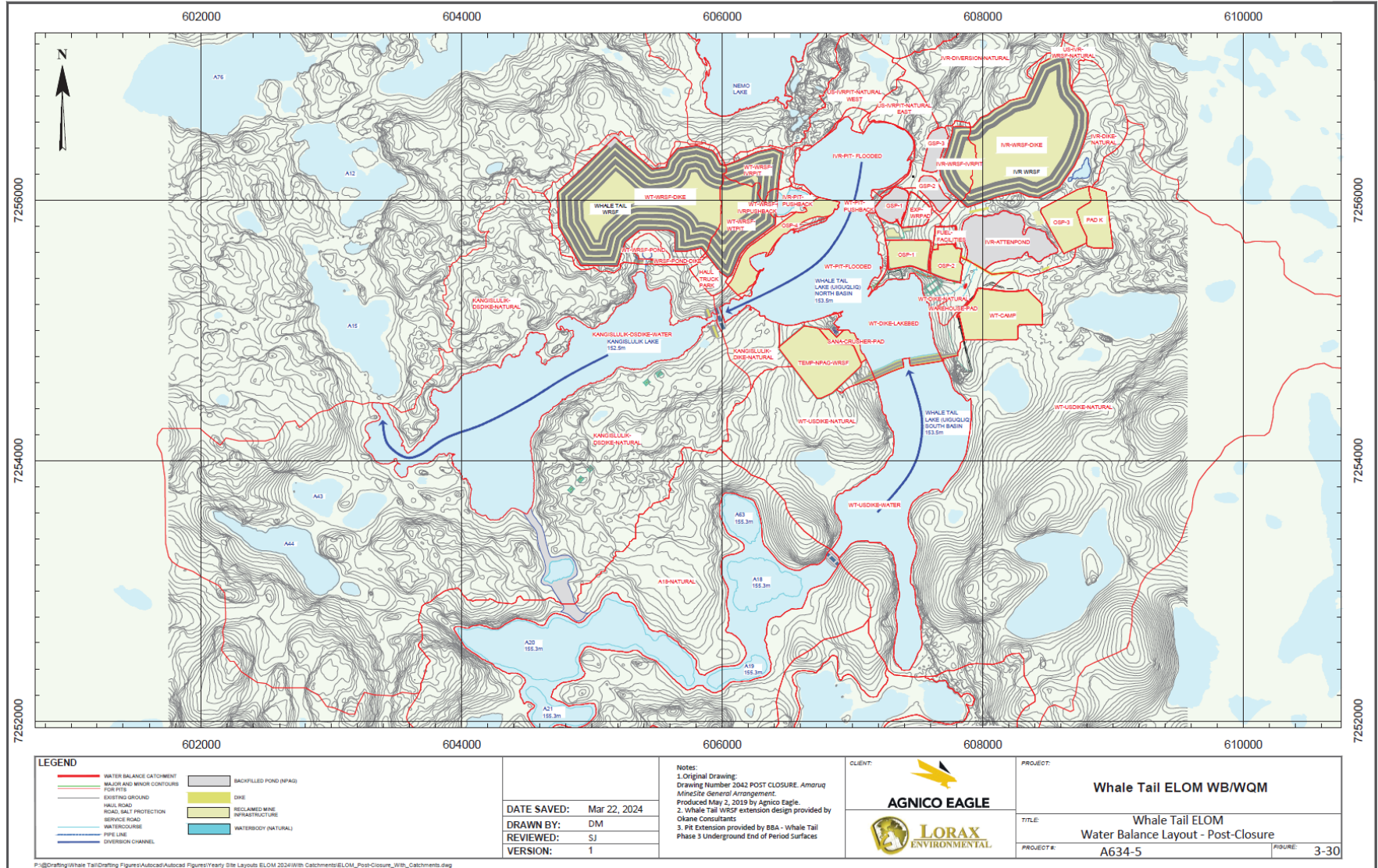
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APPENDIX A • SITE LAYOUT PLANS

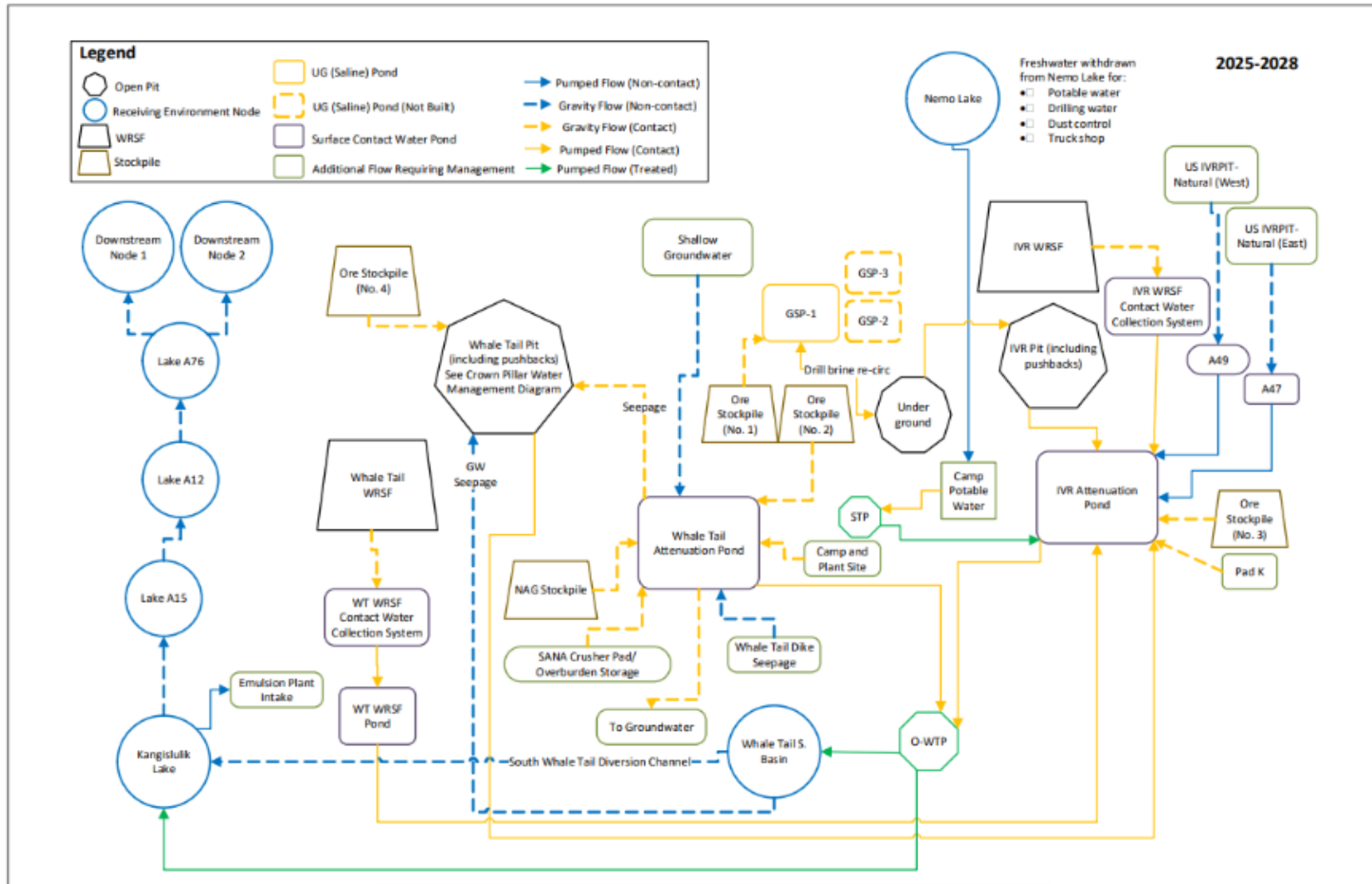
Figure A.1 Site Layout Plan (Closure Year 2028)

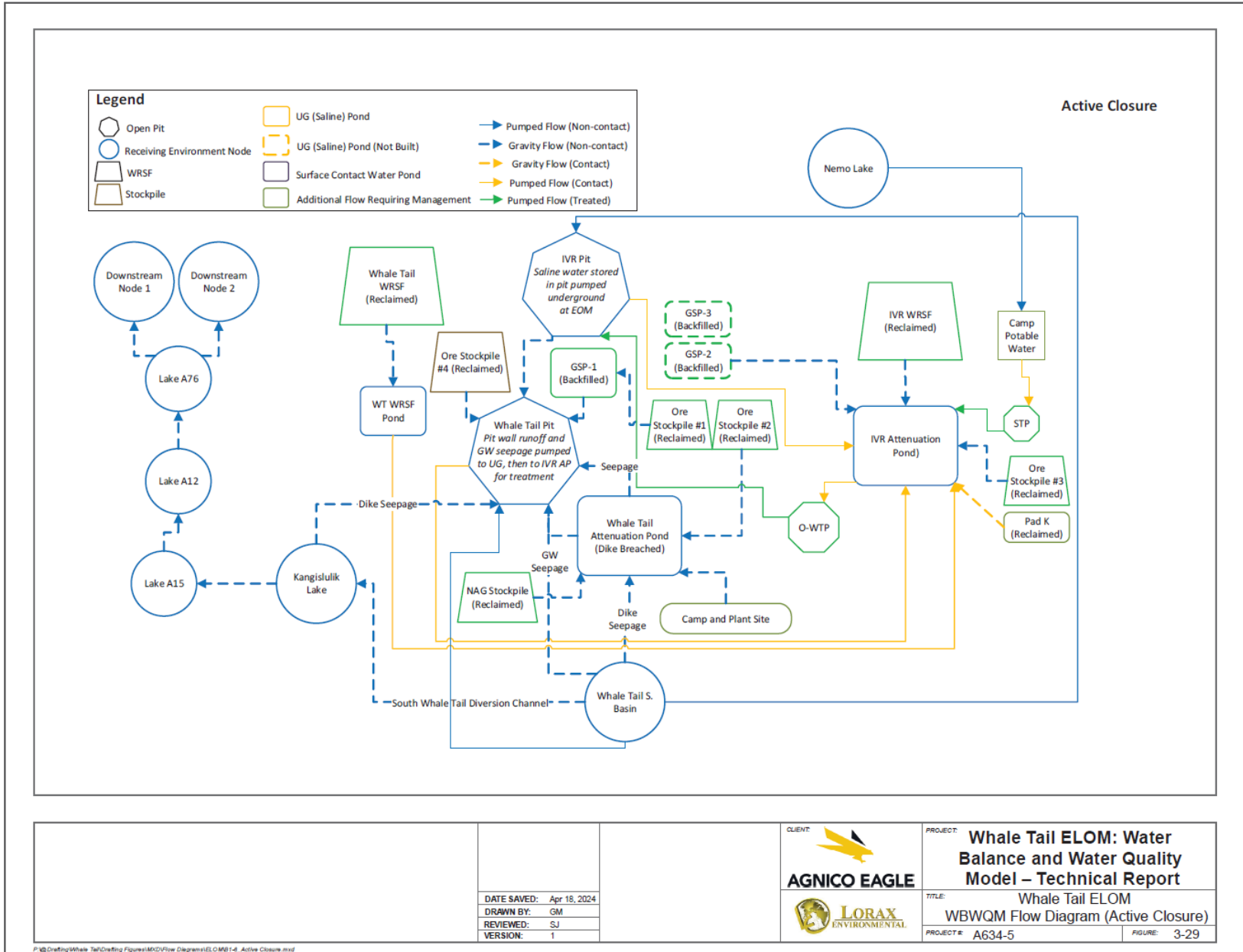
Figure A.2 Site Layout Plan (Post-Closure)





APPENDIX B • WATER MANAGEMENT SCHEMATIC FLOW SHEETS



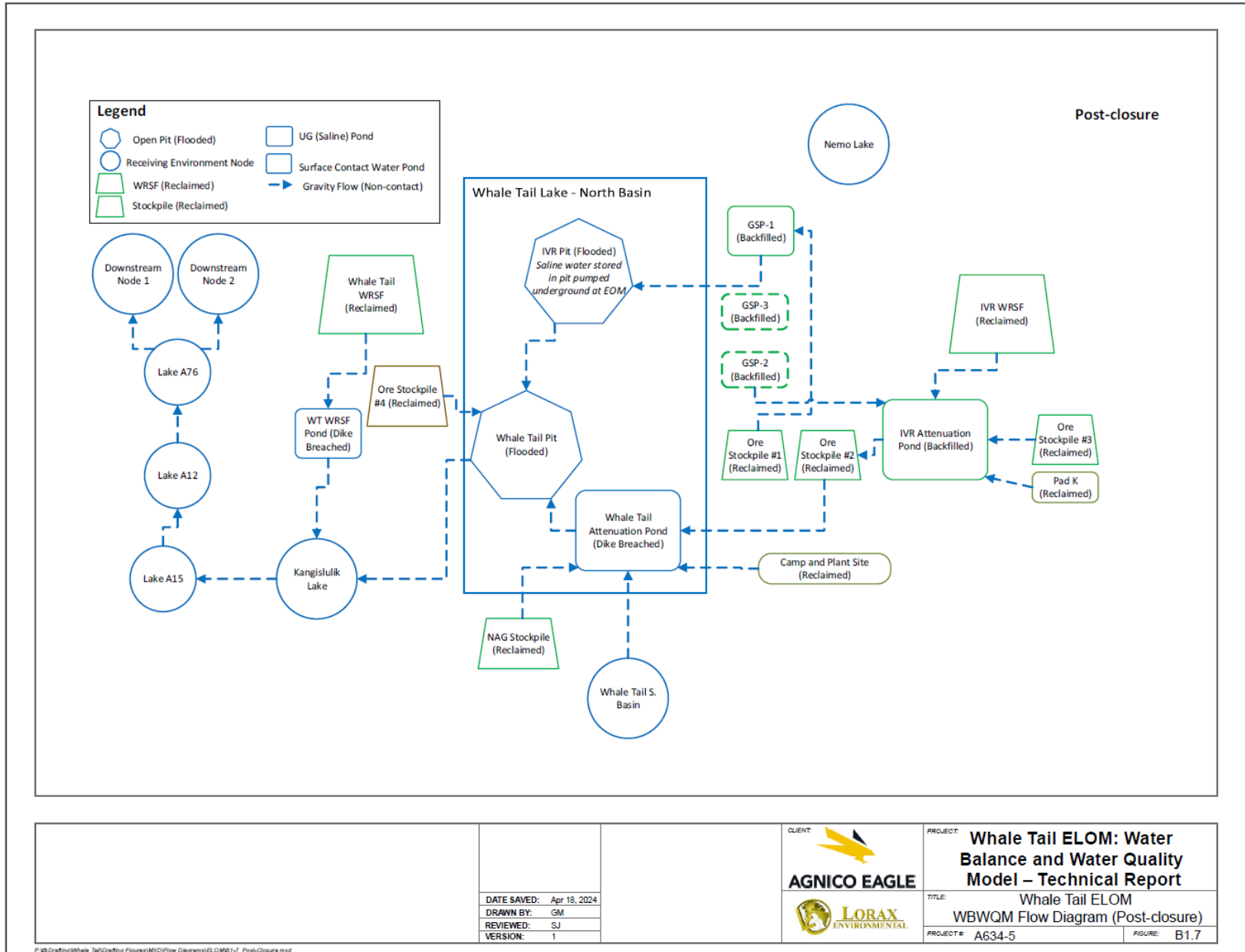


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PROJECT: **Whale Tail ELOM: Water Balance and Water Quality Model – Technical Report**
 TITLE: **Whale Tail ELOM WBWQM Flow Diagram (Active Closure)**
 PROJECT #: A634-5
 FIGURE: 3-29

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CLIENT: AGNICO EAGLE

PROJECT: **Whale Tail ELOM: Water Balance and Water Quality Model – Technical Report**

TITLE: Whale Tail ELOM
 WBWQM Flow Diagram (Post-closure)

PROJECT #: A634-5

FIGURE: B1.7

APPENDIX C • WHALE TAIL WATER BALANCE AND WATER QUALITY REPORT



AGNICO EAGLE

***Whale Tail Mine (Piquganiq):
Water Balance and Water Quality Model
Technical Report for the 2024 Annual
Report***

***Prepared for:
Agnico Eagle Mines Limited - Meadowbank Division
Suite 540, Baker Lake, NU
X0C 0A0***

***Prepared by:
Lorax Environmental Services
305-1770 W7th Avenue.
Vancouver, B.C.,
V6J 4Y6***

**Project No. A766-1
14 February 2025**



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Acronyms and Abbreviations



AGNICO EAGLE

Acronyms and Abbreviations

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

Agnico Eagle	Agnico Eagle Mines Ltd.
CCME	Canadian Environmental Guidelines for the Protection of Aquatic Life
DOC	Dissolved organic carbon
ELOM	Economic Life of Mine
EOM	End of mining/end of Operations
FEIS	Final Environmental Impact Statement
Lorax	Lorax Environmental Services Ltd.
masl	Meters above sea level
MAP	Mean annual precipitation
MDMER	Metal and Diamond Mining Effluent Regulations
ML	Metal leaching
NIRB	Nunavut Impact Review Board
NML	Non-metal leaching
NPAG	Non-potentially acid generating
NWB	Nunavut Water Board
PAG	Potentially acid generating
QA/QC	Quality assurance/quality control
RCP	Representative Concentration Pathway Scenario
GSP	Groundwater Storage Pond
SSWQO	Site-specific water quality objectives
STP	Sewage treatment plant

TDS	Total dissolved solids
TSS	Total suspended solids
WBM	Site-wide water balance model
WBWQM	Site-side water balance and water quality model
WQM	Site-wide water quality model
WRSF	Waste rock storage facility
WSC	Water Survey of Canada

1. Introduction



AGNICO EAGLE

1. Introduction

Agnico Eagle Mines Ltd. (Agnico Eagle) operates the Whale Tail Mine (the Mine) on the 408 km² Amaruq property, situated on Inuit-owned surface lands. The Amaruq property is located within the Kivalliq region of Nunavut approximately 150 km North of the Hamlet of Baker Lake (Figure 1-1) and 50 km north of the Meadowbank Mine. The Mine is subject to the terms and conditions of both the Project Certificate No. 008, issued in accordance with the Nunavut Land Claims Agreement Article 12.5.12 on December 30, 2006, and the Nunavut Water Board Water Licence 2AM-WTP1830 issued in May 2020.

The Whale Tail Mine (Piquganiq) began commercial ore production in September 2019, and is a satellite operation of the Meadowbank Mine, which began operations in 2010. All ore mined at the Whale Tail Mine is transported by truck to the Meadowbank mill for processing, with tailings deposited in the existing Meadowbank storage facilities.

In 2018, Agnico Eagle submitted a proposal to increase gold production from the original Whale Tail Pit Mine through expansion of the Whale Tail pit, development of a new open pit (IVR) and development of an underground beneath Whale Tail and IVR pits (2018 FEIS). This proposal constituted the Whale Tail Mine Expansion and received approval from the Nunavut Impact Review Board (NIRB) in October 2019. The mine received an amendment to Water Licence No. 2AM-WTP1830 in May 2020 from the Nunavut Water Board (NWB). In 2021, approvals were provided for pushbacks on the IVR and Whale Tail pits (Pushback Project). A pushback is a portion of an open pit that can be mined out continuously separately from the rest of the pit. In 2023, approvals were received to reflect the continuation of the Whale Tail Pushback, continuation of the IVR Pushback, and temporary storage of groundwater in IVR Pit (referred to as the 2023 Modification).

Lorax Environmental Services Ltd. (Lorax) was retained by Agnico Eagle to update the site-wide water balance and water quality model (WBWQM) in support of annual reporting requirements. The modelling effort described in this report builds on previous models completed for the Whale Tail Mine (Golder 2018a; Golder 2018b; Golder 2019a; Golder 2019b; Golder 2019e; Golder 2021; SNC 2023; Lorax 2023; and Lorax 2024a).

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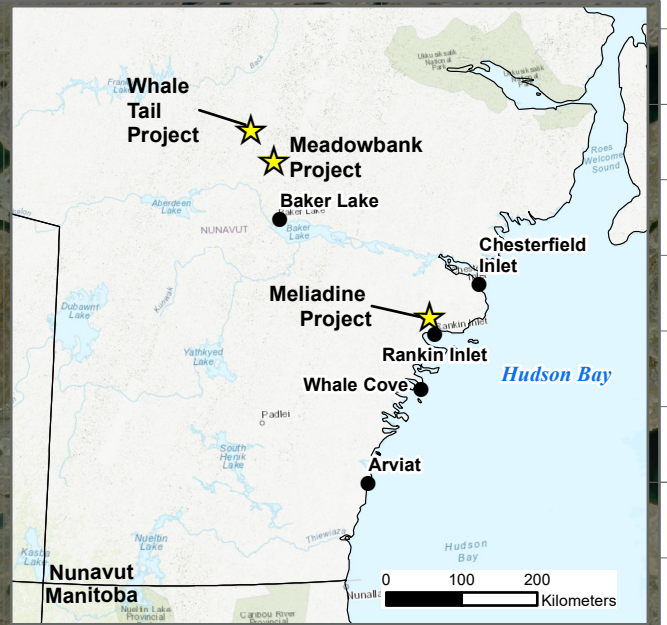
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Whale Tail Project

LEGEND

- ★ Project Location
- Municipality

DATE SAVED: Jul 08, 2022
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AGNICO EAGLE

PROJECT:

Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report

TITLE:

Whale Tail Mine Project Location Map

PROJECT #:

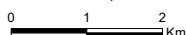
A766-1

FIGURE:

1-1

Coordinate System: NAD 1983 UTM Zone 14N
 Projection: Transverse Mercator
 Datum: North American 1983
 Units: Meter

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LORAX ENVIRONMENTAL

1.1 Model Objectives, Structure and Key Inputs

The site-wide water balance and water quality model (WBWQM) is built in the GoldSim v14 software platform and is set-up to run on a daily time-step, with all outputs provided on a monthly time-step. The primary modelling objective is the prediction of water volume and solute load transfers within the mine site, and to the receiving environment during all phases of the Whale Tail Mine. Water volumes and loads are tracked on a daily time-step throughout the model, with all ponds, sumps and open pits (and flooded pits) represented by ‘pool’ elements in GoldSim. The pool element allows the model to track multiple inflows and outflows simultaneously. All mixing is assumed to occur instantly, and all mass is conserved throughout the model (*i.e.*, no attenuation is applied to the parameters tracked within the model, with the exception of phosphorus and nitrogen, as described in Section 4.3).

Key model inputs are as follows:

- Whale Tail Mine plan and associated sub-catchment areas (Appendix A);
- Daily climate data for the RCP6.0 climate change scenario (Section 3.4);
- Watershed model sub-module generated runoff (described in Sections 3.3 and 3.8);
- Estimates of runoff and net percolation for the WRSFs (described in Section 3.6.2);
- Modelled base case groundwater inflows to underground mine workings and Whale Tail Pit (Lorax 2024b);
- Pump rates and treatment rates for water management infrastructure currently in place as of June 2023 (Section 2.2);
- Water treatment plant effluent water quality targets (described in Section 2.3);
- Non-contact water quality and geochemical source terms (described in Section 4.3 and Appendix C);
- Whale Tail Dike seepage rates (described in Section 2.2.1); and,
- Whale Tail Pit groundwater seepage rates (described in Section 3.6.5).

1.2 Report Structure

Following this introduction, the report is structured as follows:

- Section 2 describes the model input sources, including the mine plan, mine water management system, geochemical source terms, dike and groundwater seepage rates;

- Section 3 summarizes the key inputs and assumptions for the site-wide water balance model (WBM) and the modelling approach, including catchment delineation, the conceptual watershed model, evaporation algorithm, and mine component water balances (*e.g.*, pits, WRSFs, underground inflows), calibration exercise, and the Active Closure and Post-Closure assumptions;
- Section 4 describes the water quality model, including key assumptions, background water quality, geochemical source terms, and model validation;
- Section 5 summarizes the forward model projections for the water balance model;
- Section 6 summarizes the forward model projections for the water quality model; and,
- Section 7 provides a summary of key findings.

2. Model Input Sources



AGNICO EAGLE

2. Model Input Sources

2.1 Whale Tail Mine Plan

The Operations phase continues until June 2028, with all ore mined at the Whale Tail site milled at the Meadowbank site. The Active Closure phase is initiated in July 2028, spanning a 17-year period ending with the Whale Tail North Basin to the final target elevation of 153.5 m. Once this threshold is achieved, the Post-Closure phase begins (nominally in August 2045) to 2050. The end of model horizon extended to the year 2069 to capture the long-term trends in water quality during and after Post-Closure.

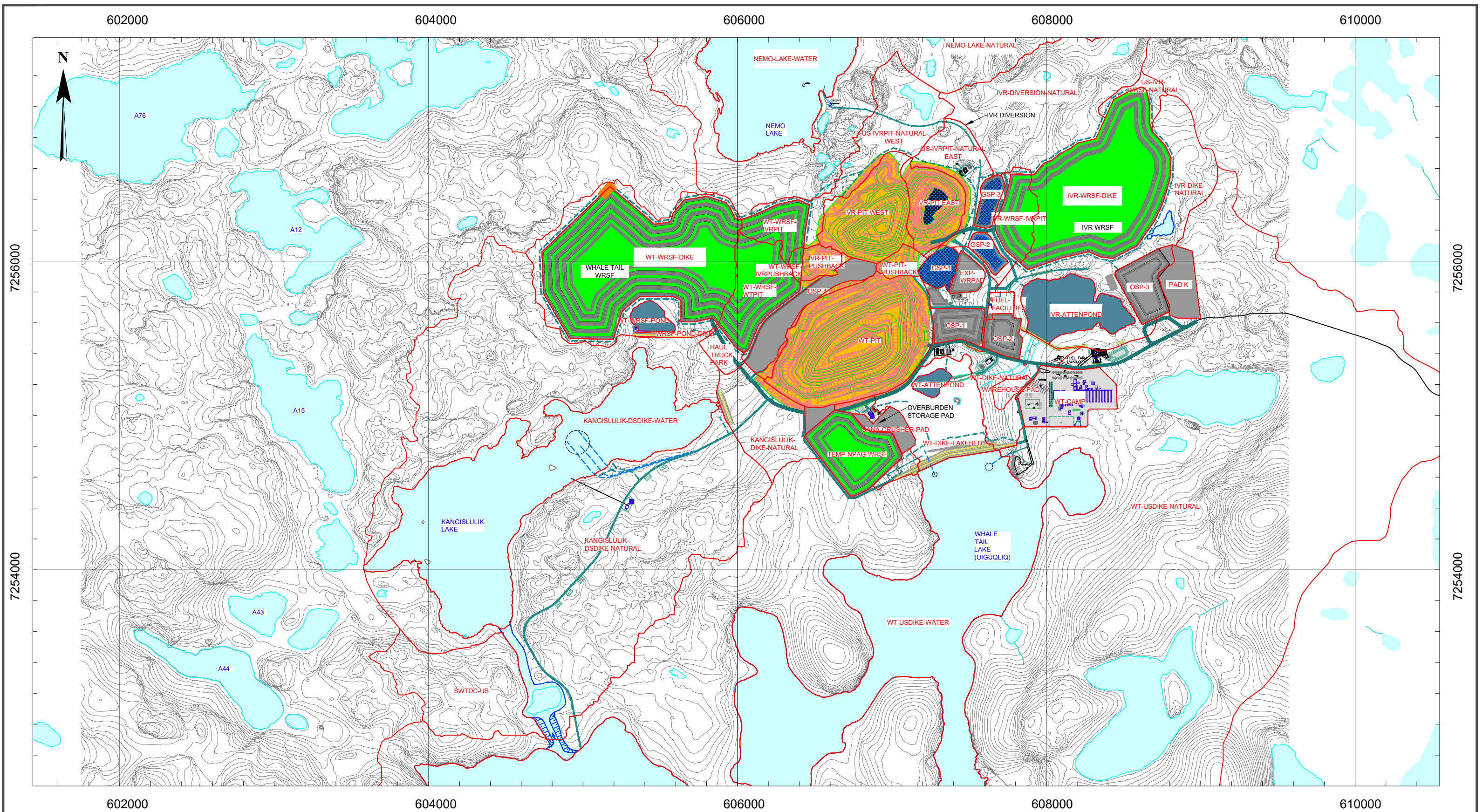
Forecast model results are presented for the following time periods based on the LOM mine plan. Historical site monitoring data are used to inform model calibration and validation.

- Remaining Operations: January 2025 to June 2028
- Active Closure: July 2028 to July 2045
- Post-Closure: August 2045 onwards (modelled out to December 2069)

Closure and post-closure periods could be modified based on water management strategies and water quality results.

The mine phases are unchanged from the currently approved mine plan, which includes four development phases: 1 year of construction (complete), 9 years of mine operations, 17 years of closure, and the post closure period. The end-of-mine layout (2028), including all delineated sub-catchments is presented in Figure 2-1. Annual layouts are provided in Appendix A-1.

Under the Whale Tail mine plan, the storage of underground mine water in IVR Pit will occur from late-2025 to 2028 and is anticipated to be contained in the IVR Pit East Lobe by 2028 (EOM). The storage of underground mine water in IVR Pit East Lobe was listed as an alternative action in the Adaptive Management Plan (Agnico Eagle, 2021).



LEGEND

- | | | | | | |
|--|-----------------------------------|--|---------------------|--|-----------------------------|
| | WATER BALANCE CATCHMENT | | CONTACT WATER POND | | DIKE |
| | MAJOR AND MINOR CONTOURS FOR PITS | | SALINE POND | | OPEN PIT |
| | EXISTING GROUND | | WATERBODY (NATURAL) | | WASTE ROCK STORAGE FACILITY |
| | HAUL ROAD | | BACKFILL | | |
| | ROAD, SALT PROTECTION | | STOCKPILE | | |
| | SERVICE ROAD | | | | |
| | WATERCOURSE | | | | |
| | PIPE LINE | | | | |
| | DIVERSION CHANNEL | | | | |

DATE SAVED: Mar 22, 2024
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VERSION: 1

Original Drawing:
 Drawing Number 2024Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.

CLIENT:



PROJECT:

**Whale Tail (Piquganiq) Water
 Balance and Water Quality Model
 Technical Report**

TITLE:

2028 Whale Tail Mine Layout

PROJECT #:

A766-1

FIGURE: 2-1

2.2 Water Management Assumptions and Inputs

The mine water management plan is based upon two guiding principles; diverting clean (non-contact) water away from mine infrastructure where possible and separating the two mine affected water types (*i.e.*, surface contact water and groundwater; Agnico Eagle, 2020; Figure 2-2). The current water management plan also includes the temporary storage of groundwater generated from the underground mining operations in the IVR Pit.

2.2.1 Attenuation Ponds and Pump Rates

All surface contact water generated from mine facilities is collected and routed through a series of sumps and attenuation ponds and treated by the O-WTP prior to discharge to the receiving lakes (see Section 2.3 and Appendix B). Key operational water levels and corresponding pond volumes have been coded into the model (Table 2-1), along with the pump rates presented in Table 2-2 and Table 2-3. Pumping is initiated in the model once water levels rise above a target elevation, generally 1 to 2 masl from the pond bottom to account for operational necessity of keeping the pump intakes above any accumulated sediment within the ponds.

**Table 2-1:
 Contact Water Pond and Lake Operating Levels and Volumes**

Feature	Min. Operating Level (m)	Max. Operating Level (masl)	Storage Volume at Max. Operating Level (m ³)	Critical Level (masl)	Operating Guidelines
Whale Tail WRSF Pond	153.5*	154.0	27,780	156.0	If Max. Operating Level exceeded, lower water level to operational level within 7 days
Whale Tail Attenuation Pond	135.0*	143.5	131,476	145.5	If Max. Operating Level exceeded, lower water level to operational level within 15 days
IVR Attenuation Pond	159.0*	163.2	389,819	164.2	If Max. Operating Level exceeded, lower water level to operational level within 15 days
GSP-1	142.3*	154.0	140,094	155.0	If Max. Operating Level exceeded, lower water level to operational level within 30 days
IVR Pit	-10.0**	122.0	12,843,518	123.0	Water level to remain 1 m below sill between Whale Tail Pit and IVR Pit at 123 m
Kangislulik Lake	152.2	153.0	6,448,373	153.3	If lake within Operating level range, resume or maintain standard operations. Water level must not exceed 152.5 masl prior to freshet. During freshet - rate of rise must be < 0.05 m/day.
Whale Tail South Basin	153.5	155.8	15,405,444	156.3	If Max. Operating Level exceeded, lower water level to operational level within 15 days

Notes:

*Minimum operating level corresponds to the bottom of the pond.

**Minimum operating level corresponds to the pit or lake bottom.

**Table 2-2:
 Contact Water Ponds, Routing, and Pump Rates**

Pond	Inputs	Pump Rate (m ³ /day)	Pumped To	Pump Rate (m ³ /day)	Notes
Whale Tail WRSF Collection Pond	Whale Tail WRSF Seepage	4,560	IVR Attenuation Pond	5,520	
	Whale Tail WRSF Dike D/S	720			
Whale Tail Attenuation Pond	Lake A53	N/A	IVR Attenuation Pond	18,430	Sept. 2020 only
	Whale Tail Pit	9,600			Up to December 2022
	Runoff Road 7 ¹	4,800			2020 only
	IVR Pit	N/A			2020 only
	Whale Tail South Basin Seepage ²	N/A			2020 only
	A49	N/A			
	A47	N/A			
	Mammoth D/S ¹	4,992			
IVR Attenuation Pond	Whale Tail WRSF Pond	5,520	O-WTP (routed to either Kangislulik Lake or Whale Tail South Basin)	31,200	Intermediate staging sump for IVR Pit dewatering Sole receiver of Whale Tail Pit dewatering after Dec. 2022
	Mammoth D/S ¹	4,992			
	Runoff Road 7 ¹	4,800			
	A47-NW Sump	10,800			
	A49	14,160			
	Whale Tail Pit	19,680			
	IVR WRSF Seepage	12,000			
	IVR Pit	3,000			
	Whale Tail Attenuation Pond	18,430			
	Sump06/Komatiite Sump	3,360			
GSP-1	Underground dewatering	N/A	Recirculation of brine to UG for drilling water	N/A	
IVR Pit	Underground dewatering		See Section 3.6.5		
	Pit Wall Runoff	N/A	N/A	N/A	

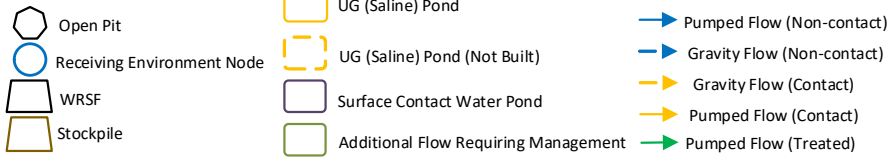
Notes:

Meteoric inputs (rain and snow melt) are included in all pond water balances, as are evaporative losses from the pond surface

¹May be routed to either the Whale Tail Attenuation Pond, or the IVR Attenuation Pond

²Seepage rate currently 200 m³/hour in May and June, and 150 m³/hour for the remainder of the year based on recent measured data

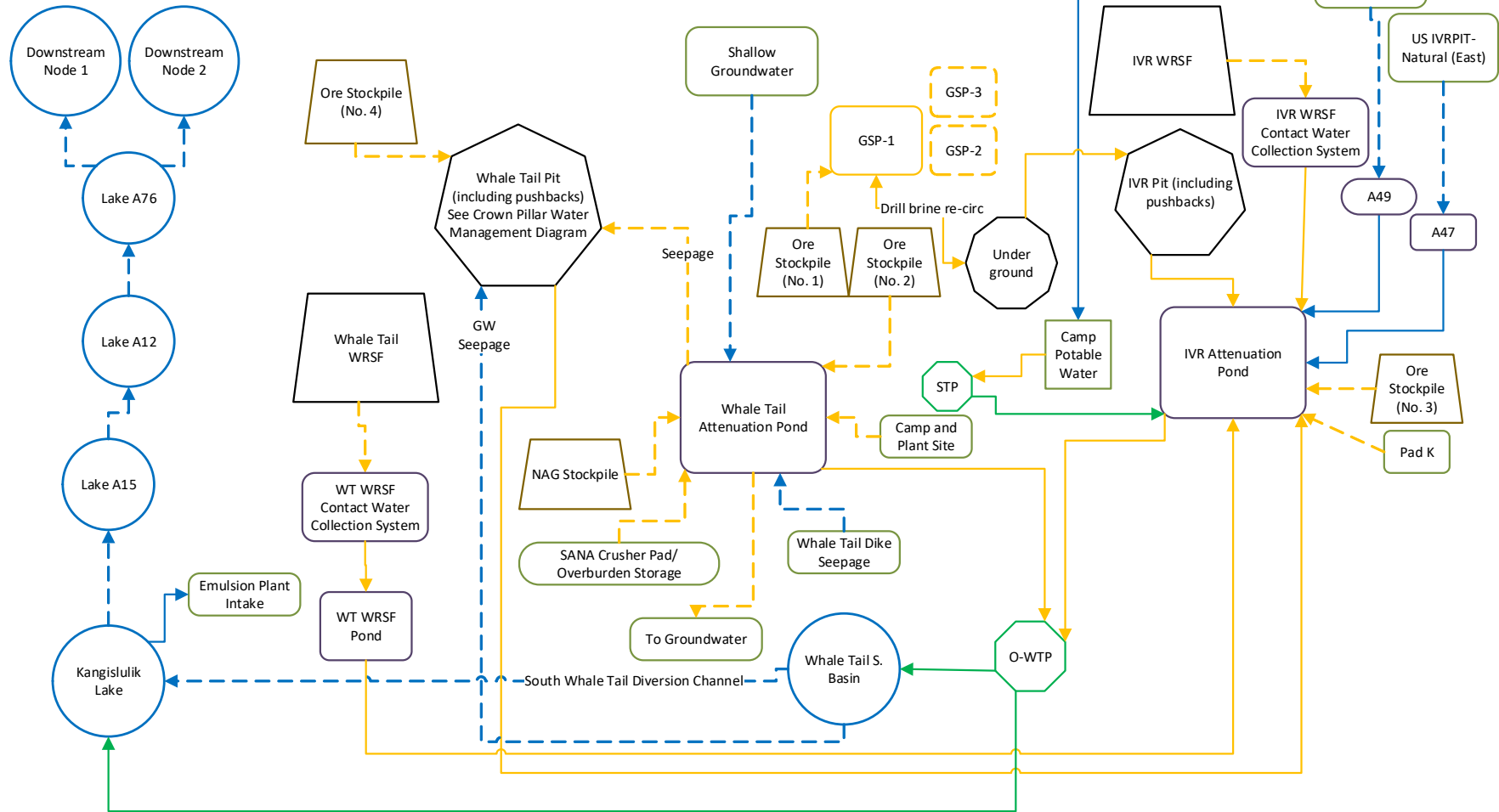
Legend



Freshwater withdrawn from Nemo Lake for:

- Potable water
- Drilling water
- Dust control
- Truck shop

2025-2028



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PROJECT: **Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report**

TITLE: **Conceptual End-of-Mine Site Water Management Flow Diagram**

PROJECT #: A766-1

FIGURE: 2-2

**Table 2-3:
 Collection Pond and Water Treatment Pump Rates**

Intake Point	Discharge Point	Estimated Rate (m³/hour)
Whale Tail WRSF Sumps	Whale Tail WRSF Collection Pond	78 – 113
WRSF Dike D/S	Whale Tail WRSF Collection Pond	30
Whale Tail WRSF Collection Pond	Whale Tail Attenuation Pond/IVR Attenuation Pond	230
IVR WRSF Sumps	IVR Attenuation Pond	200 – 300
Whale Tail Pit	Whale Tail Attenuation Pond/IVR Attenuation Pond	400/820
IVR Pit Main Sump	IVR Attenuation Pond	125
Whale Tail Attenuation Pond	IVR Attenuation Pond	768
Whale Tail Attenuation Pond	O-WTP	1,200
IVR Attenuation Pond	O-WTP	1,200
O-WTP	Whale Tail South Basin	1,300
O-WTP	Kangislulik Lake	1,300

2.2.1.1 Whale Tail Dike Seepage

Currently, measured seepage at the Whale Tail Dike is approximately 150 m³/hour for most of the year at an average annual water level of 155.5 masl in Whale Tail South Basin, and 142 masl in the Whale Tail Attenuation Pond (Table 2-4). During freshet (May and June) elevated water levels drive higher seepage rates approaching 200 m³/hour. Within the model, the seepage rate is scaled according to the linear relationships presented in Figure 2-3, which assumes the seepage rate is driven by the hydraulic gradient between the Whale Tail Attenuation Pond and the Whale Tail South Basin. This relationship allows the seepage rate through the dike to be modeled as a function of the hydraulic gradient, allowing a reduction in seepage through the dike to be represented during the Active Closure phase as the Whale Tail Attenuation Pond is flooded.

**Table 2-4:
 Seepage through Whale Tail Dike as a Function of Whale Tail Attenuation Pond Water Level**

Water Body	Water Level (m)	Gradient (m)	Gradient (%)	Seepage (m ³ /hr)	Seepage (m ³ /hr)
Whale Tail S. Basin	155.5			May-June	July-April
Whale Tail Attenuation Pond	142	13.5	100%	200	150
	143	12.5	93%	185	139
	144	11.5	85%	170	128
	145	10.5	78%	156	117
	146	9.5	70%	141	106
	147	8.5	63%	126	94
	148	7.5	56%	111	83
	149	6.5	48%	96	72
	150	5.5	41%	81	61
	151	4.5	33%	67	50
	152	3.5	26%	52	39
	153	2.5	19%	37	28
	154	1.5	11%	22	17
	155	0.5	4%	7	6
	155.5	0	0%	0	0

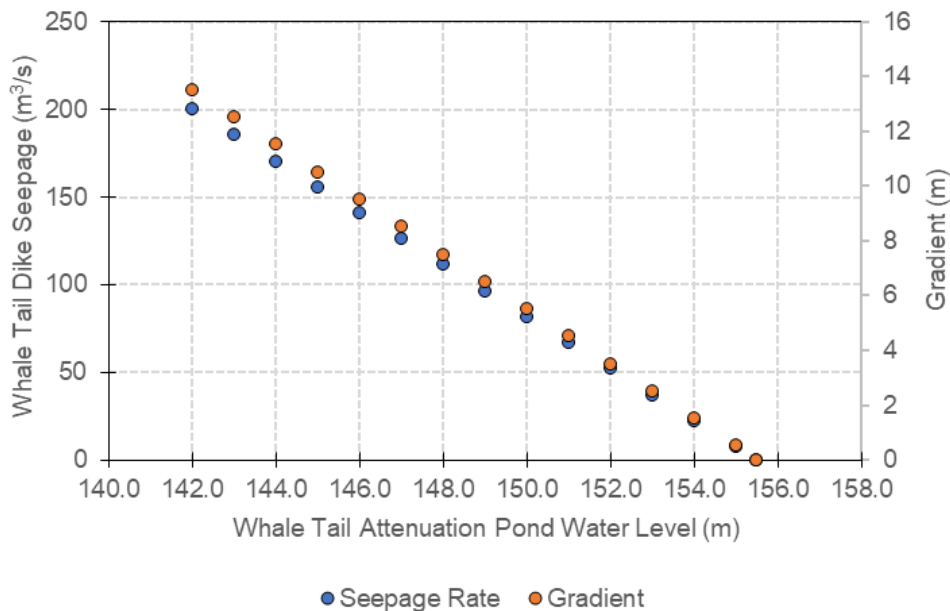


Figure 2-3: Relationship between Whale Tail South Basin and Whale Tail Attenuation Pond water level gradient and dike seepage flows.

2.2.2 Consumptive Freshwater Uses

Consumptive freshwater uses (*e.g.*, potable water, dust control, drilling water for open pits *etc.*) are supplied by withdrawal from Nemo Lake and are not included as direct inputs to the water balance model. The emulsion plant draws fresh water from Kangislulik Lake. This additional water is already incorporated in various components of the mine water balance, such as discharge from the sewage treatment plant, and pit sump discharges.

2.3 Water Treatment

2.3.1 Operations Water Treatment Plant (O-WTP)

All mine site effluent is treated by the operations water treatment plant (O-WTP) prior to discharge to either Whale Tail South Basin or Kangislulik Lake via diffusers. The O-WTP is comprised of two parallel treatment trains capable of a maximum treatment rate of 800 m³/hour each (1,600 m³/hour total).

Currently, treated water is pumped from the O-WTP to Kangislulik Lake via diffusers during the summer months (typically May to September), at an average rate of 550 m³/hour. During winter months (typically October to June), treated water is pumped a shorter distance to the Whale Tail South Basin diffuser at an average rate of 350 m³/hour. These rates are expected to increase as the Whale Tail LOM proceeds and volumes of contact water requiring treatment increase. As a conservative model assumption, a 1,300 m³/hour treatment rate through the O-WTP was applied in the WBM in all months. The plant has the capacity to operate at a rate of 1,450 m³/hour to handle high-intensity, short duration runoff events, however, this higher rate has not been applied in the model.

Active water treatment will continue in June to September at a maximum rate of 1,300 m³/hour for the first five years of Active Closure (2028-2033). During this period, contact water will be pulled from the IVR Attenuation Pond, treated by the O-WTP and then pumped to the IVR Pit. There will be no discharge to Kangislulik Lake during this period.

The O-WTP is designed to treat total arsenic to a concentration of 0.1 mg/L and total suspended solids (TSS) to a concentration of 15 mg/L. Based on operational experience, the O-WTP removes total arsenic concentrations to well below 0.1 mg/L and generally removes more than 85% of arsenic present in influent. During the early Operations period (2020-2022), achieved O-WTP treatment efficiencies in the form of monthly average monitored effluent concentrations were applied to the water quality model. In the forward-

looking model (2023 onwards), an arsenic removal rate of 85% was applied with a maximum treatment concentration of 0.1 mg/L.

2.3.2 Sewage Treatment Plant Effluent

Estimated potable water use per person is 240 L/day, and the camp capacity is currently 600 persons, which equates to a total inflow to (and thus treated discharge rate from) the sewage treatment plant (STP) of 130 m³/day, routed to the IVR Attenuation Pond during Active Closure, the STP is assumed to operate for 6 months of the year (May to October) at an average daily discharge of 12 m³/day.

The STP effluent consists of domestic wastewater that is expected to receive elevated nutrient concentrations (*i.e.*, phosphorus, nitrogen species) and is designed to treat total phosphorus and nitrate concentrations to 0.5 and 5 mg/L, respectively. The effluent water quality from the STP was modelled using median concentrations observed in STP effluent (ST-WT-11) between January 2021 to December 2021, with total phosphorus and nitrate concentrations capped at the treatment targets noted above.

3. Water Balance Model Methods



AGNICO EAGLE

3. Water Balance Model Methods

This section summarizes the approach, assumptions, conceptual model and inputs used to construct the site-wide water balance model.

3.1 Approach and Assumptions

The site-wide WBM is set-up to represent the interaction of the local climatic regime with the mine plan and water management plan, and based on these interactions, to predict the volumes of various water types (*i.e.*, non-contact, surface contact and underground) requiring management, treatment and discharge to the receiving environment. Given the potential for upset conditions to occur on sub-monthly time scales (*i.e.*, high magnitude rainfall events, rapid freshet), and the operational necessity of managing mine contact waters on a daily basis, the WBM is set-up to run on a daily time-step.

3.2 Sub-catchment Delineation

In order to generate water volume estimates from precipitation inputs, the delineation of both the natural and mine-altered watershed areas was necessary for modelling the water balance and water quality at locations of interest at the Whale Tail Mine. The annual mine layouts were provided by Agnico Eagle in .dxf file format, and the sub-catchment delineations for each mine component were completed in the AutoCAD2023 software package. The catchment areas by year are presented in Appendix A.2. Sub-catchment nomenclature was based on the water management feature that each mine component reports to via gravity drainage. For example, US-IVRPIT-Natural' refers to the upstream non-contact area drainage that reports to the IVR Pit.

3.3 Conceptual Watershed Model

The streamflow regime in the Mine area is strongly nival (snowmelt dominated), with freshet typically occurring between the end of May and mid-June. Additional peak flow events are common throughout the open water season (May through early October), driven by large rainfall events. Significant volumes of water may be delivered to the local watercourses in the span of 2 days yet may subsequently be followed by prolonged dry periods where surface flows diminish to the point where active layer discharge is the main determinant of streamflow (Golder, 2017).

As the open water season progresses, active layer melt can contribute increasing discharge volumes to local watersheds, expressed as an increasing baseflow signature throughout the

summer. Finally, average winter temperatures are well below zero, and surface flow in all local watersheds is reduced to zero as lake outlets and stream channels freeze during winter.

A customized site-wide water balance model was constructed in the GoldSim modeling environment to allow the seasonally variable baseline conditions in the Mine area to be accurately represented. Figure 3-1 shows the commonly accepted components of streamflow in natural catchments with surface volumes of water reporting with one of three signatures:

- *Quick flow* – generated by storm or snowmelt events and often resulting in peak flow events. For tributaries local to the Whale Tail Mine, water contributed via this mechanism may report to creeks in less than 2 days time;
- *Interflow* – this refers to the lateral movement of infiltrated meteoric water through the shallow overburden and active layer to the lakes and stream channels. Flow reporting to watercourses along this pathway is often referred to as vadose or unsaturated zone flow; and,
- *Baseflow* – the portion of surface flow derived from groundwater discharge. In the Mine area, this flow component is understood to be negligible and largely consists of water introduced via active layer melt.

The watershed model assembled to replicate the streamflow regime in the Mine area incorporates this understanding of streamflow composition and response directly into the model architecture. Accordingly, surface runoff, interflow, active layer melt and baseflow, are all represented in the site-wide WBM, which is a modified version of the Birkenes model. This model was developed as part of a research program to understand linkages between stream chemistry and flow in a small (< 1 km²) catchment in southern Norway (e.g., Christophersen and Seip, 1982; Seip *et al.*, 1985). The modelling approach is depicted as a conceptual diagram in Figure 3-2.

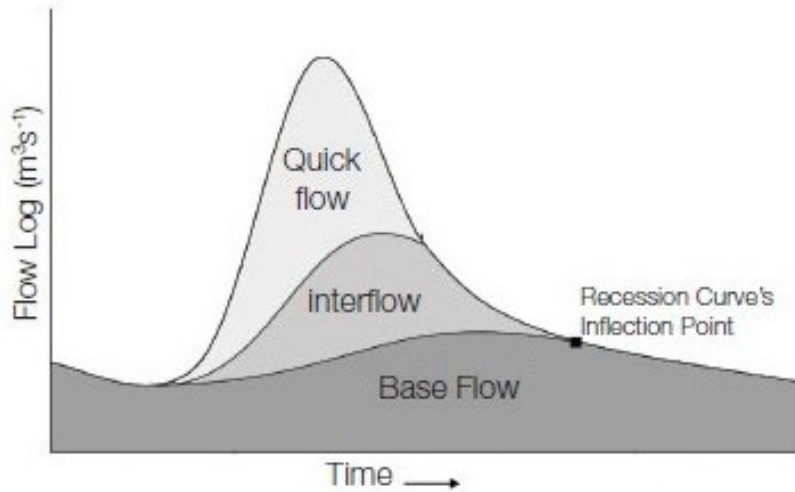


Figure 3-1: Conceptual hydrograph showing runoff partitioning.

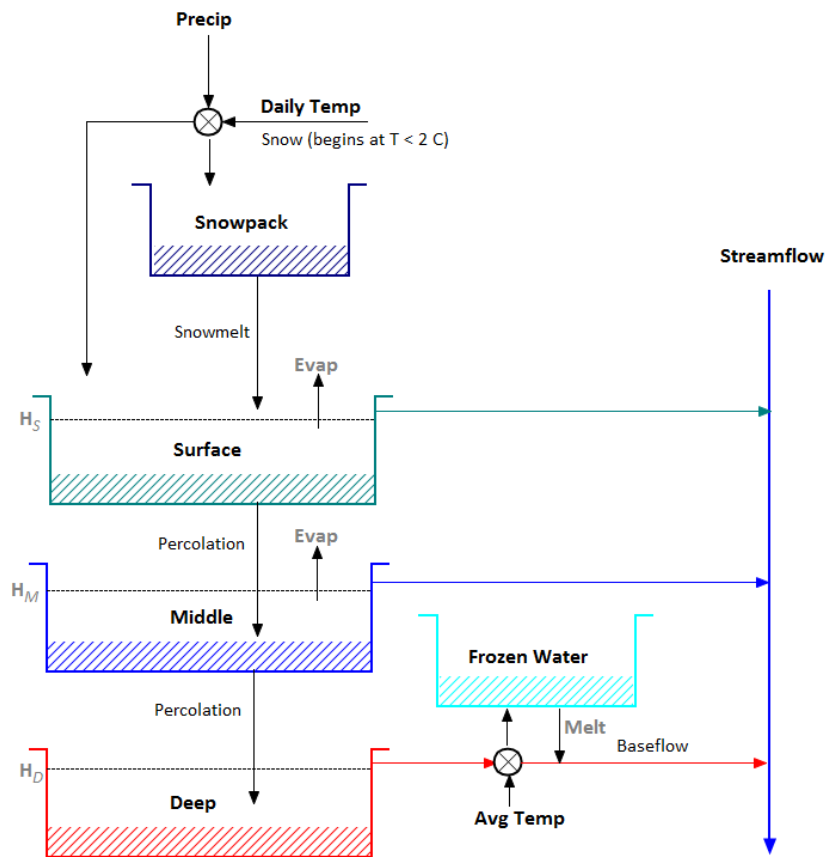


Figure 3-2: Schematic presenting an overview of the three-reservoir water balance model in conceptual format.

Conceptually, incoming precipitation is partitioned in the WBM watershed model between rain and snow based on air temperature thresholds. Incident precipitation is partitioned between snow and rainfall at the 0°C mean daily air temperature threshold. Sublimation losses are set at a constant of 0.3 mm/day, which equals approximately 73 mm over the course of a winter season, or 41% of average annual snowfall. Rainfall is then directed into the Surface reservoir, which represents the quickflow runoff response shown in Figure 3-1. The volume of water routed from this reservoir to streamflow at each time-step is governed by a constant draindown parameter. As the reservoir volume decreases, the rate of outflow decreases, and thus the draindown curve approximates a negative exponential function.

Excess water contained within the Surface reservoir percolates at a rate proportionate to the Surface volume into the Middle reservoir, representative of the interflow runoff component in Figure 3-1. The proportions of Middle reservoir water routed to streamflow and to the Deep reservoir are governed by the same functions as for the Surface reservoir but have different parameter values to reflect the slower unsaturated flow response to infiltrating meteoric inputs. Figure 3-2 shows that when the Deep reservoir fills, slow recession flow from the reservoir reports to baseflow (and fractionally to channel ice formation in winter). Where channel ice has been modelled (based on air temperature) to freeze completely to bed during the winter months, streamflow is zero. In the model, evaporation is withdrawn from both surface reservoirs (Surface and Middle). The Deep reservoir is protected from evaporation (described in Section 3.4) and provides a source for winter baseflow and ice formation. Finally, snowmelt and melting of channel ice are indexed to the daily mean air temperature. Channel ice is assumed to melt at 20% of the snowmelt rate, due to its higher density and location in the shaded valley bottoms.

Additional information pertaining to the three-reservoir watershed model, including specific parameter values and assumptions are detailed in Section 3.8.1.

3.4 Climate Inputs

The climate input series is based upon a repeating representative average precipitation year (359 mm; Okane, 2024), represented by daily climate data from the year 2015.

While typically snow falls in all months except July and August, the higher precipitation received during the summer months results in an average annual split of 58% snow to 42% rain. The annual average air temperature is -11.3°C, with minimum and maximum mean monthly temperatures of -36.4°C in February and 15.2°C in July, respectively (Table 3-1; Figure 3-3).

**Table 3-1:
 Average monthly climate conditions at the Whale Tail Mine**

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Min. Temp. (°C)	-35.6	-36.4	-30.5	-22.0	-10.3	1.1	6.5	6.5	1.0	-7.6	-24.8	-28.0	-36.4
Avg. Temp. (°C)	-32.2	-33.1	-26.9	-17.4	-6.2	4.7	10.9	11.2	4.2	-5.2	-21.0	-24.1	-11.3
Max. Temp. (°C)	-28.8	-29.7	-23.3	-12.8	-2.1	8.3	15.2	15.8	7.5	-2.8	-17.2	-20.2	15.8
Precipitation (mm)	15.2	10.8	13.9	37.2	9.4	34.1	31.9	18.9	85.7	17.2	31.2	53.0	358.6
Rain (mm)	0.0	0.0	0.0	0.0	5.0	33.8	31.9	17.2	30.9	1.2	0.0	0.0	150.6
% Rain	0%	0%	0%	0%	53%	99%	100%	91%	36%	7%	0%	0%	42%
Snow (mm)	15.2	10.8	13.9	37.2	4.4	0.3	0.0	1.7	54.9	16.0	31.2	53.0	208.0
% Snow	100%	100%	100%	100%	47%	1%	0%	9%	64%	93%	100%	100%	58%

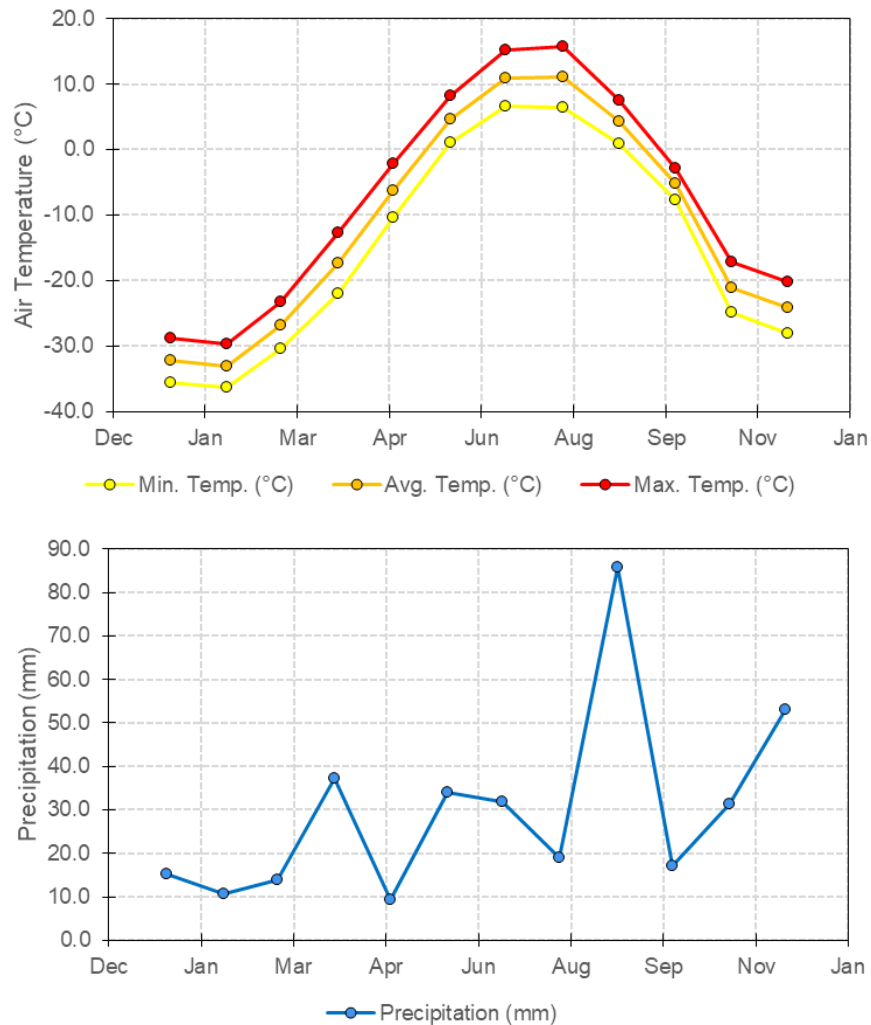


Figure 3-3: Mean monthly minimum, mean, and maximum air temperature (top panel) and precipitation (bottom panel) for the representative average year.

3.4.1 Dry- and Wet-Year Sensitivities

The influence of drier or wetter than average climate conditions on the WBWQM predictions was tested by inserting repeating dry-years (10th percentile historical precipitation; 277 mm) and repeating wet-years (90th percentile historical precipitation; 449 mm) into the model for the remainder of the Operations phase (2025-2028; Figure 3-4). These are equivalent to a 1:10-year recurrence intervals for the dry- and wet-year precipitation.

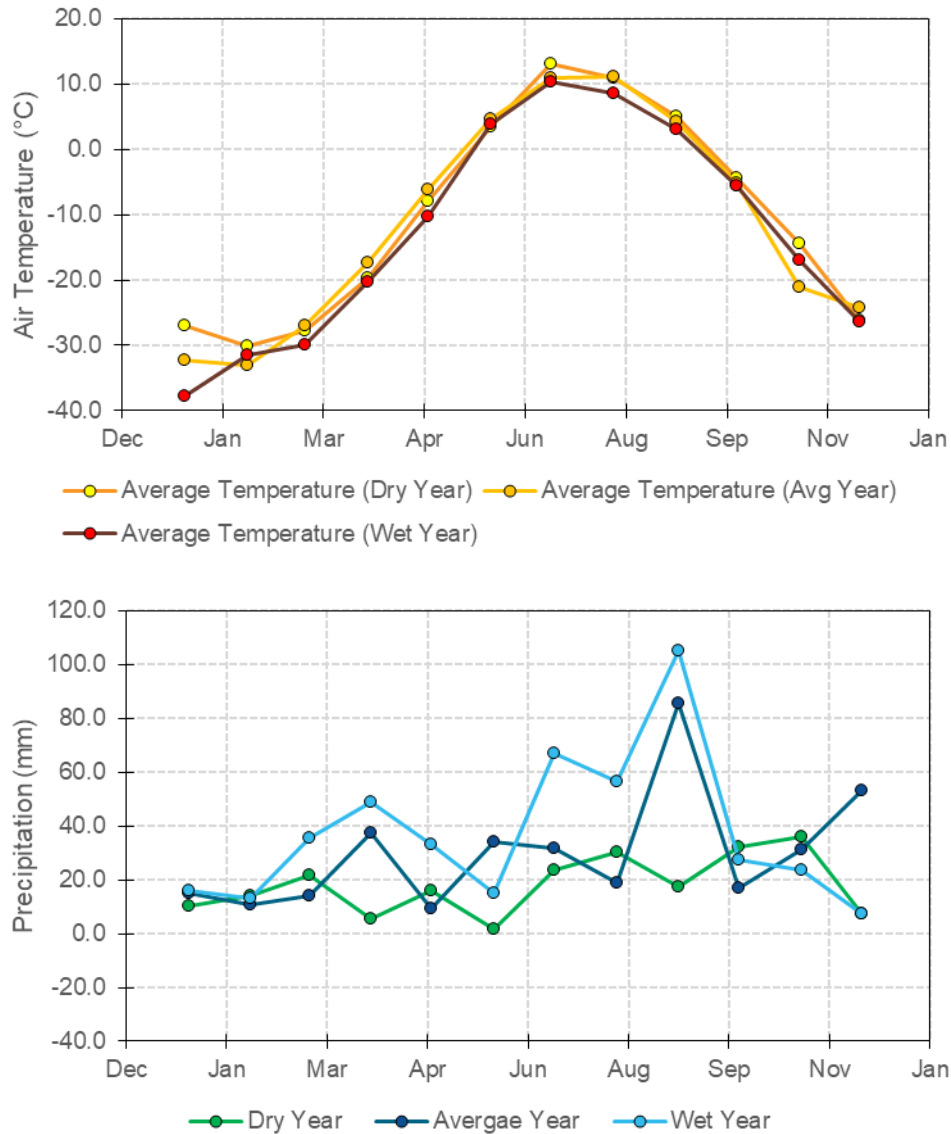


Figure 3-4: Mean monthly air temperature (top panel) and precipitation (bottom panel) for the representative dry, average, and wet year climate inputs.

3.5 Potential Evapotranspiration

Most physically based evaporation models (*e.g.*, Penman-Monteith model, Priestley-Taylor formulation) used to estimate evaporation based on the site climate record require solar radiation, relative humidity and wind speed as inputs – parameters that are difficult to generate synthetic estimates for due to topographical influences on wind speeds and data availability. To address this issue, the Hargreaves-Samani method (Hargreaves and Samani 1985) was used to develop estimates of potential evaporation (PE), using the long-term daily record of minimum, average and maximum daily temperatures, as well as factors related to potential solar insolation (*e.g.*, latitude [65.03°] and day of year).

On an average annual basis, PE is estimated to be 294 mm, varying from near zero in November through April, to an annual maximum of 89 mm in July (Figure 3-5). Dry-year PE is estimated to equal 291 mm, and wet-year PE is estimated to equal 289.

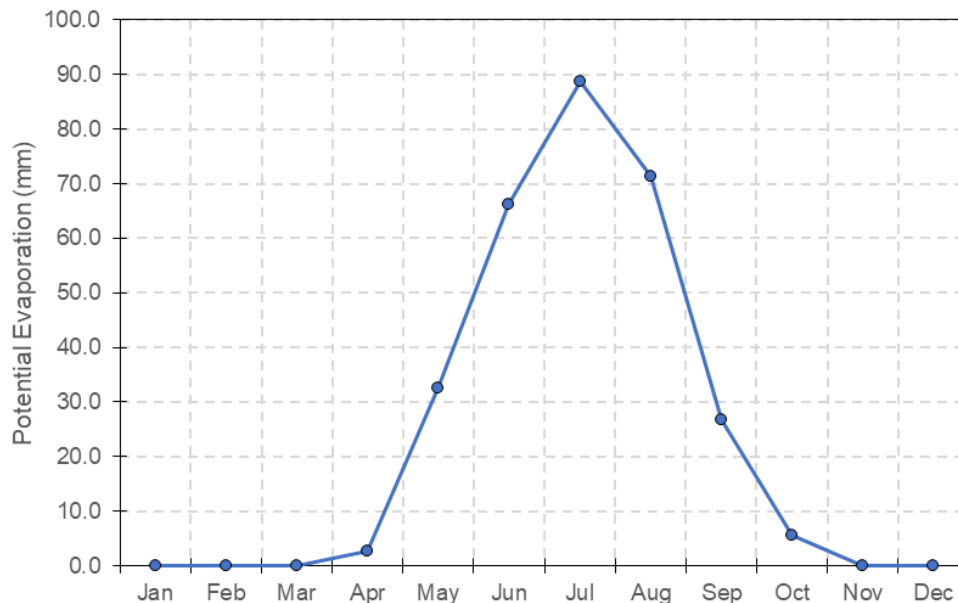


Figure 3-5: Monthly average potential evapotranspiration

3.6 Mine Component Water Balances

There are four categories of mine infrastructure responsible for the majority of geochemical loadings:

- Open pits (Section 3.6.1);
- Waste Rock Storage Facilities (WRSFs; Section 3.6.2);
- Underground WRSFs (Section 3.6.3) and ore stockpiles (Section 3.6.4); and,
- Underground dewatering (Section 3.6.5)

The model was calibrated based upon 3 years of pumping and water level data used to constrain estimates of surface contact water volume generated by the open pits, WRSFs, Attenuation Pond water balances and water quality as a proxy for the magnitude of source loadings from these landforms. These water level monitoring data were employed as calibration targets for the Attenuation Ponds and receiver lakes, and the measured monthly pump volumes were input directly into the calibration water balance model. The results of this calibration exercise (described in Section 3.7) were carried over to the predictive WBWQM to inform estimates of contact water generation from the open pits, and to confirm the estimates of waste rock contact water (interflow and runoff) provided by Okane (2022).

Future estimates of surface runoff, infiltration, interflow and basal seepage from the WRSFs were modelled by Okane (2022) for the RCP6.0 climate change scenario and provided at a daily time-step for direct input to the WBWQM. 2D thermal and water balance models were run in parallel for the WRSFs. A summary of the key 2D model water balance outputs used as direct inputs to the WBWQM is provided in the following sections, and the reader is referred to the referenced reports for further detail on the conceptual models, inputs and assumptions used to generate these landform water balances.

Predictions of future underground inflow rates were generated using a 3D groundwater model (Lorax 2024b; Section 3.6.5). In addition to the above listed mine infrastructure, ore pads and underground WRSFs are also expected to contribute additional geochemical loadings.

3.6.1 Open Pits

This section presents the data, analyses and assumptions used to generate modelled estimates of surface runoff and groundwater inflows reporting to the pit sumps in Whale Tail and IVR Pit.

3.6.1.1 Surface Runoff

Pit sump pumping records were used to constrain the volumes of water reporting to the pits on a monthly basis. These flows aggregate pit wall runoff, upgradient natural catchments reporting to the open pits (*i.e.*, undiverted), and in the case of the Whale Tail Pit, groundwater inflows. The IVR Pit is located entirely within permafrost, and as such, does not currently experience groundwater inflow. It is assumed that Sump A47 collects most of the non-contact water from the US IVRPIT-Natural catchment, but 10% is assumed to bypass and report to the IVR Pit, resulting in seasonal fluctuations in pit water chemistry.

The monthly pumped volumes were converted to runoff depths using the annual pit shell and contributing catchment areas for the 2020 to 2022 period, and annual runoff coefficients calculated based on the water year precipitation totals. For the Whale Tail Pit, winter pump volumes (*i.e.*, October to April) were averaged, and assumed to represent the groundwater inflows for the year in question. These volumes were subtracted from the total pumped volumes prior to calculating the annual runoff coefficients (Table 3-2). Based on this analysis, a constant runoff coefficient of 0.42 was assumed for the Whale Tail Pit, and 0.34 for the IVR Pit over the calibration period, and a weighted average pit wall runoff coefficient of 0.40 was applied for the forward-looking model. This analysis was updated with the 2023 and 2024 pumping data, which supported these assumptions, and indicates that they may be overly conservative, particularly for drier than average years. Note that the water year runoff derived from the Whale Tail pit pumping data is abnormally low relative to both the precipitation, and relative to the runoff derived for the IVR Pit in the same year, therefore the Whale Tail pit runoff coefficient assumed in the model was not updated.

**Table 3-2:
 Calculated Pit Catchment Runoff Coefficients**

Open Pit	Variable	2020	2021	2022	2023	2024	Average
Whale Tail Pit	Water Year Precipitation (mm)	363	344	235	265	235	288
	Water Year Runoff (mm)	119	138	124	15	103	79
	Runoff Coefficient	0.33	0.40	0.53	0.06	0.44	0.26
IVR Pit	Water Year Precipitation (mm)	--	344	235	265	235	270
	Water Year Runoff (mm)	--	137	67	46	28	74
	Runoff Coefficient	--	0.40	0.29	0.17	0.12	0.26

Within the WBWQM, it is assumed that 90% of the non-contact catchment area upgradient of the IVR Pit is captured by the A47 Sump, which is pumped to the IVR Attenuation Pond, while 10% of this catchment runoff reports to the IVR Pit. This is based on the road and accompanying ditch alignment around the north side of the IVR Pit (Figure 2-1).

3.6.1.2 Groundwater Inflows

No groundwater inflow to IVR Pit has been noted during mining operations, due to this pit being located entirely within permafrost. This condition is not anticipated to change over the duration of Operations, and therefore no groundwater inflows to the IVR Pit are considered within the WBWQM.

Whale Tail Pit receives groundwater inputs via seepage faces along the pit walls. The proportion of surface runoff from pit walls and the surrounding catchments to groundwater seepage has varied as the pit has been mined but averages 74% over the 2019-2024 monitoring period (Figure 3-6; Table 3-3). Over the 2025-2028 period, ~61% of predicted flow to the Whale Tail pit is derived from the Whale Tail South Basin; the remaining ~39% is derived from the Whale Tail Attenuation Pond. About 10% of the flow that originates from the Whale Tail South Basin first reports to the Attenuation Pond prior to reporting to the pit. This flow component is included in the portion of flow originating from the Whale Tail South Basin (Table 3-4; Lorax, 2024b).

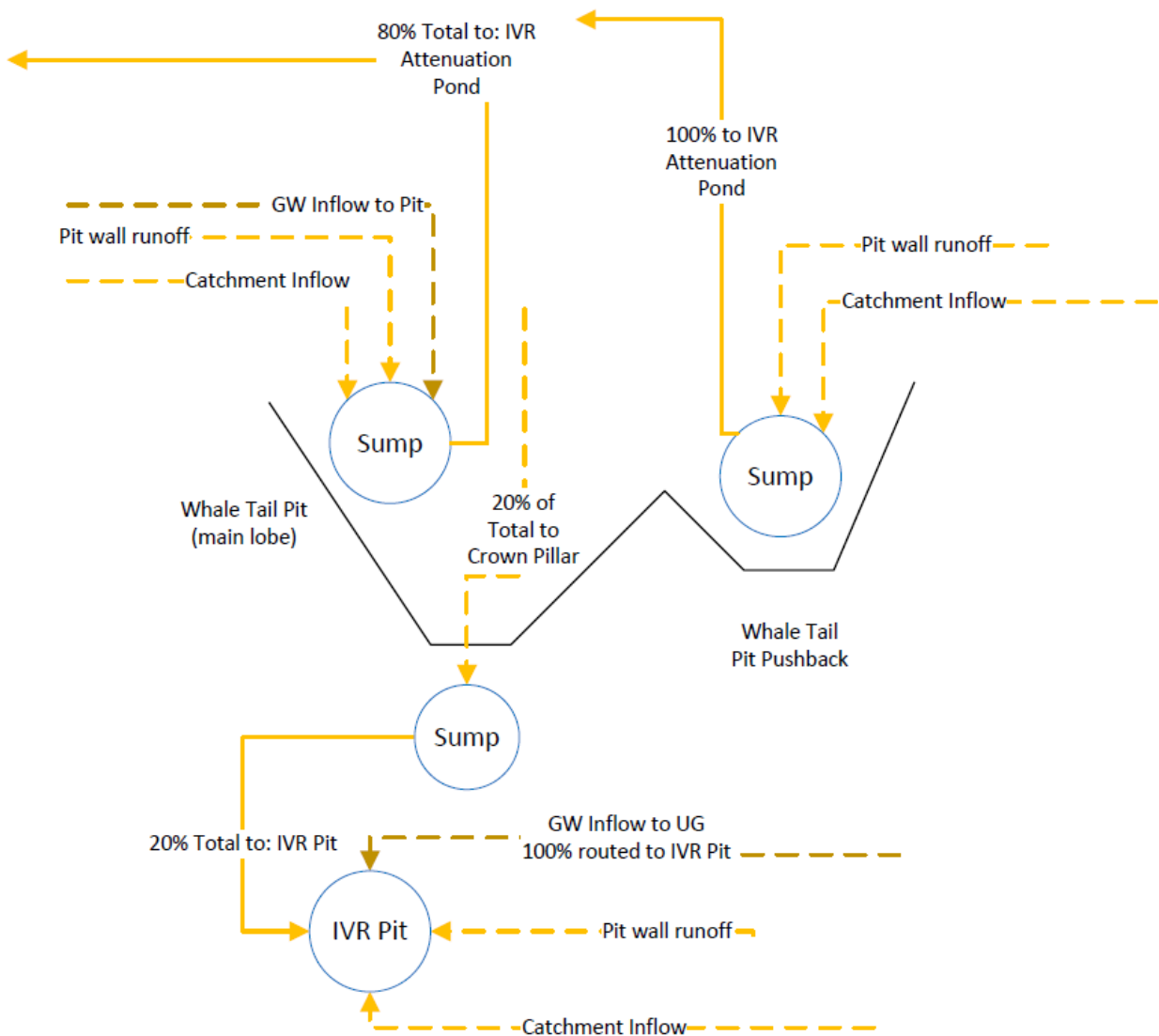


Figure 3-6: Whale Tail Pit and Crown Pillar Water Management Schematic

**Table 3-3:
 Monitored Whale Tail Pit surface runoff and groundwater seepage inputs**

Period	GW Inflows to Whale Tail Pit (m ³)	Runoff + Meteoric Inflows (m ³)	GW as % Inflow
2019	140,591	223,971	39%
2020	508,816	112,480	82%
2021	745,437	254,243	75%
2022	774,451	69,534	92%
2023	730,008	119,282	86%
2024	875,716	277,122	74%

The Whale Tail Pit at EOM is expected to develop two lobes: the eastern lobe (Whale Tail Pit Pushback), and the main western lobe (Whale Tail Pit). Pit inflows into these lobes will be managed separately. The inflows into the Whale Tail Pit Pushback, which consist of surrounding catchment inflows and pit wall runoff, will be captured in the Pushback pit sump and then pumped to the IVR Attenuation Pond (Figure 3-6). For the main Whale Tail Pit lobe, 80% of the surface runoff, pit wall runoff and GW inflows through the pit wall will be captured prior to reporting to the crown pillar (CP) and will be pumped to the IVR Attenuation Pond. The remaining 20% of total Whale Tail Pit inflows will report to the CP and captured by a separate UG sump immediately below the crown pillar and then pumped to the IVR Pit along with the groundwater inflows to the underground workings (Figure 3-6).

**Table 3-4:
 Predicted Whale Tail Pit groundwater inflows for Operations phase**

Year	Whale Tail Pit Inflows	Inflow from Whale Tail Attenuation Pond ¹		Inflow From Whale Tail South Basin ¹	
	m ³ /day	% of Total	m ³ /day	% of Total	m ³ /day
2025	3,310	39%	1,291	61%	2,019
2026	3,300	39%	1,287	61%	2,013
2027	3,430	39%	1,338	61%	2,092
2028	3,430	39%	1,338	61%	2,092

Notes:

1. Approximately 10% of the inflow to Whale Tail Pit travels from the Whale Tail South Basin to the Whale Tail Attenuation Pond and then on to the pit. This flow is included in the percentage/flow rate originating from the Whale Tail South Basin.

Source: Lorax (2024b)

During Active Closure, Golder (2019a) predicted that the seepage face on the South Wall would glaciare due to the northern exposure and negative average annual air temperatures, restricting additional seepage ingress to the Whale Tail Pit. As pit flooding progresses, the thermal regime is expected to change in response to the higher thermal mass of the flooded

pit, causing the glaciated seepage to melt and resume groundwater ingress to the pit, beginning once the flooded pit water level reaches the bottom of the talik at 40 m asl (Table 3-5). Groundwater inflows increase as the flooded pit water level increases up to 120 m asl and then begin to decrease again above this elevation as the hydraulic gradient lessens, reaching zero once the Whale Tail North Basin water level is in equilibrium with the Whale Tail South Basin.

**Table 3-5:
 Predicted Whale Tail Pit groundwater inflows for Active Closure phase**

Pit Lake Water Level (m asl)	WT-Pit GW inflow (m ³ /day)	Proportion Sourced from Whale Tail Attenuation Pond	Proportion Sourced from Whale Tail South Basin
150	140	35%	65%
145	1380	73%	27%
140	2280	94%	6%
130	3800	95%	5%
120	4310	94%	6%
110	4080	83%	17%
100	2550	56%	44%
90	1060	50%	50%
85	13	45%	55%
80	11	35%	65%
60	10	73%	27%
40	0	94%	6%

Source: Lorax (2024b)

The proportion of total groundwater inflows to the WT Pit sourced from the Whale Tail Attenuation Pond and Whale Tail South Basin also changes as the gradients shift in response to the rising pit lake water level.

3.6.2 Waste Rock Storage Facilities

The following water balance components are tracked through the 2D models developed to predict the thermal and water balances of the WRSFs (Okane, 2022; Figure 3-7 and Figure 3-8):

- Runoff – the proportion of precipitation (*i.e.*, rainfall and snowmelt) that runs off the surface of the WRSF, with limited water: rock contact times;
- Infiltration – the proportion of meteoric water (minus runoff) that enters the landform through the surface;
- Interflow – lateral flow within the landform active layer. Ice lenses are predicted to form at the base of the active layer, limiting further infiltration into the landform,

- and interflow is expected to move along these ice layers and report to the toe of the landform.
- Basal Seepage – the basal layer of the WRSFs is expected to be permanently frozen from the time of material placement, therefore basal seepage is predicted to be negligible under all modelled scenarios.

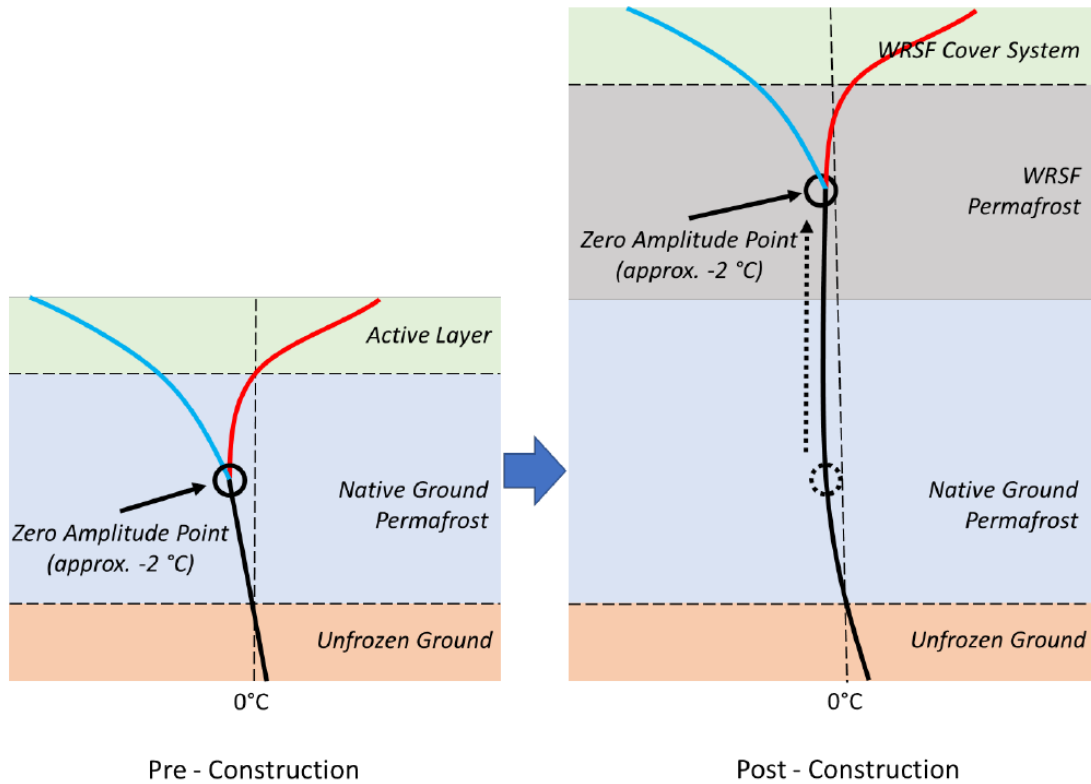


Figure 3-7: Conceptual cross-section showing typical annual permafrost soil profile where zero amplitude point moves upward into the overlying WRSF cover (source: Agnico Eagle, 2021)

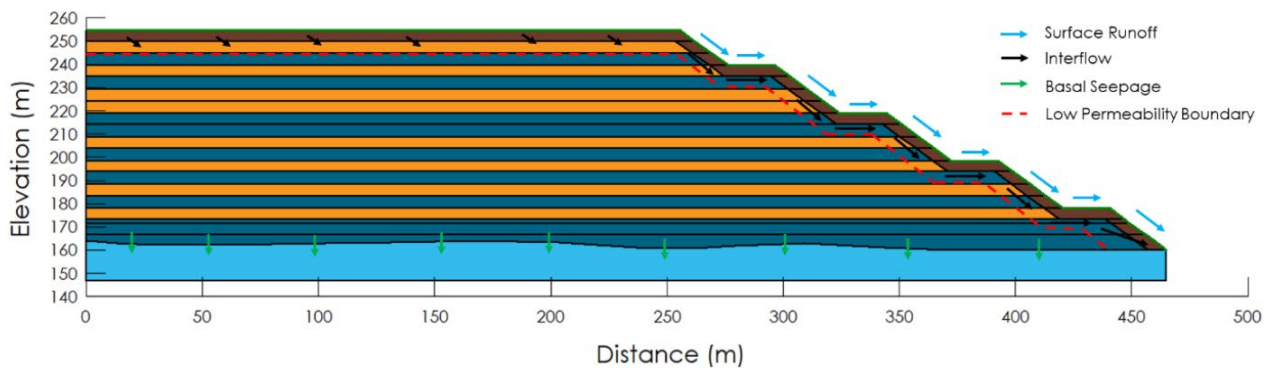


Figure 3-8: Conceptual cross-section showing water balance of Whale Tail WRSF (source: Okane, 2022)

Due to the coarse-textured nature of the WRSFs, these landforms are expected to have high surface infiltration capacity. High infiltration rates are expected to lead to formation of ground ice at the boundary of the active layer over time. Once this layer is established, infiltration will flow laterally along this interface within the active zone, resulting in interflow reporting to the toe of the WRSFs. The depth of this layer is influenced by the depth of the active zone, which in turn is influenced by the air temperature regime in the vicinity of the landform in question. To limit the potential for acid rock drainage from the WRSFs, a 4.7 m thick NPAG/NML waste rock cover will be placed during operations over the Whale Tail and IVR WRSFs as a closure mitigation measure to limit thaw of potentially acid generating and metal leaching materials. Long-term (2090-2120), the average active layer depth in the WRSFs is expected to be up to 5 m under the RCP6.0 scenario (Okane, 2022).

Predicted surface runoff and interflow values were provided on a daily time-step. By convention, fluxes into these landforms have a positive sign, and fluxes out of the landform are negative. On an average annual basis over the Operations phase (2019-2028), 5% of mean annual precipitation (MAP) reports as runoff from the WRSFs, and approximately 1% reports as interflow. During the Active Closure phase (Q3 2028-2045) approximately 8% of MAP reports as runoff, and 5% reports as interflow (Figure 3-9).

The detailed water balance model fluxes are input to the WBWQM on a daily time-step as depths, allowing these fluxes to be scaled by landform surface area as the WRSFs are built out.

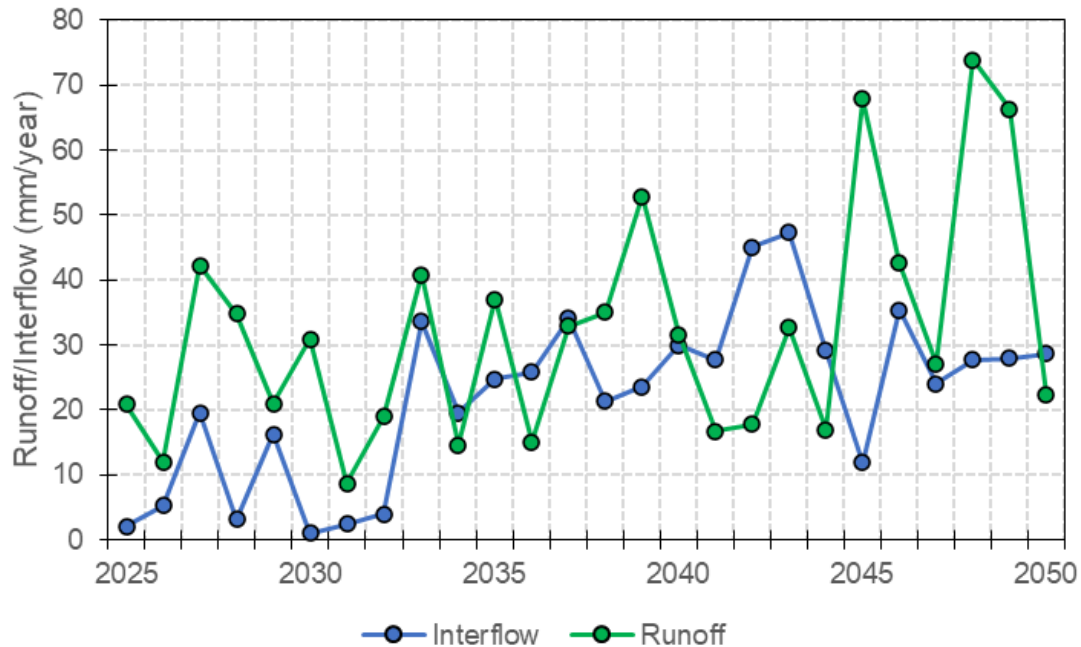


Figure 3-9: Whale Tail WRSF annual runoff and interflow fluxes for the RCP6.0 climate scenario.

3.6.3 Underground Waste Rock Storage Facilities

Underground WRSF water balances are generated using the WRSF time-series of runoff and interflow as provided by Okane (2022) and summarized in Section 3.6.1.

3.6.4 Ore Pads

Surface runoff from the ore pads is estimated using a runoff coefficient of 0.8 applied to the total rainfall plus snowmelt on a daily basis.

The IVR Diversion Channel routes all non-contact water from the drainage upgradient of the IVR Portal Pad, and the IVR WRSF away from the mine water collection system north toward the Nemo Lake catchment.

3.6.5 Underground Inflows

Dewatering of the underground is currently routed to GSP-1, with all water recycled underground for use as drilling brine. Therefore, for the purposes of model set-up and calibration, the underground dewatering system is assumed to be a closed system with no accumulating storage volume until 2025, when inflows are predicted to increase as the underground workings are advanced. This threshold is predicted to be reached in June 2026, after which time the additional water collected in this pond will be pumped to the IVR Pit for storage. Underground dewatering volumes associated with future mine

development were predicted using a 3D groundwater model (Table 3-6; Lorax 2024b). The modelled groundwater inflows to the underground mine workings were reduced by 75% based on the assumption that all mine workings are effectively grouted, thus substantially reducing groundwater fluxes requiring management. This assumption is based on the noted grouting performance at the Meliadine Mine (WSP Golder 2022; Sections 4.3 and 5.3). These adjusted values are presented in Table 3-6 and are brought into the WBWQM as a steady state flux for each year.

**Table 3-6:
 Predicted daily underground dewatering volumes for Whale Tail LOM**

Year	Underground Inflows (m ³ /d)
2025	26
2026	23
2027	21
2028	19

Source: Lorax (2024b)

3.7 Lake Water Balances

All lakes are represented within the WBWQM by GoldSim pool elements. Inputs and outputs are tracked and resolved on a daily timestep, with the former consisting of surface runoff, direct incident precipitation, and pumped flows (lake dewatering and discharge from the O-WTP), and the latter consisting of outflows via lake outlets (this section), seepage through dikes (Section 4.4), and evaporation. The South Whale Tail Diversion Channel routes outflows from Whale Tail South Basin to Kangislulik Lake, bypassing the mine site.

The water balances of the Whale Tail South Basin, Kangislulik Lake, and the A18 complex (in closure, once the A18 Sill is in place) are represented in GoldSim using pool elements, consistent with the model setup for the attenuation ponds and other downstream receiving lakes. Inflows (pumped from the O-WTP, surrounding natural catchment runoff and meteoric inputs to the lake surfaces) are tracked on a daily time-step to resolve the lake volumes. The volume-area-elevation curves for each of the three lake complexes are used as lookup functions to determine planar surface area of the water body (to calculate meteoric input and evaporation loss volumes) and lake water level elevation (Figure 3-10 to Figure 3-12).

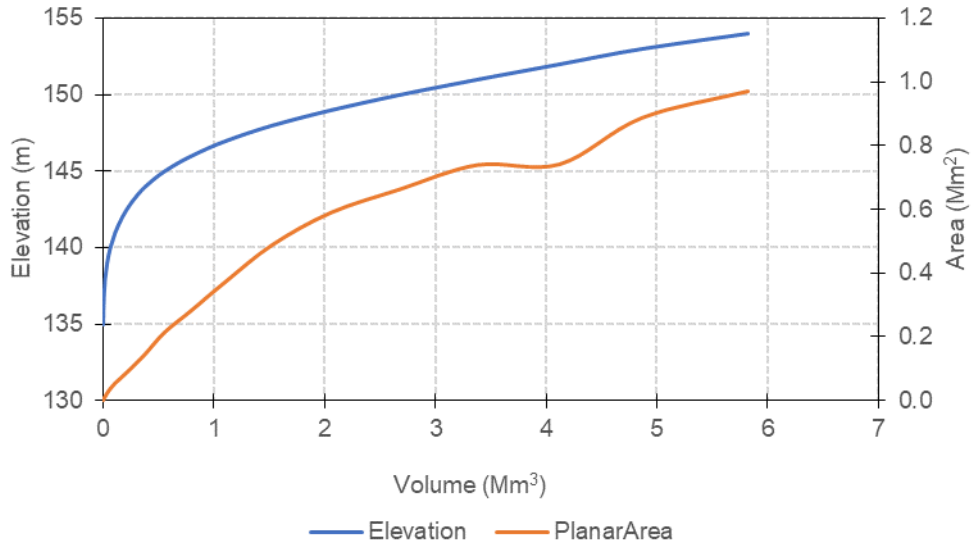


Figure 3-10: Whale Tail South Basin volume-elevation-area curves.

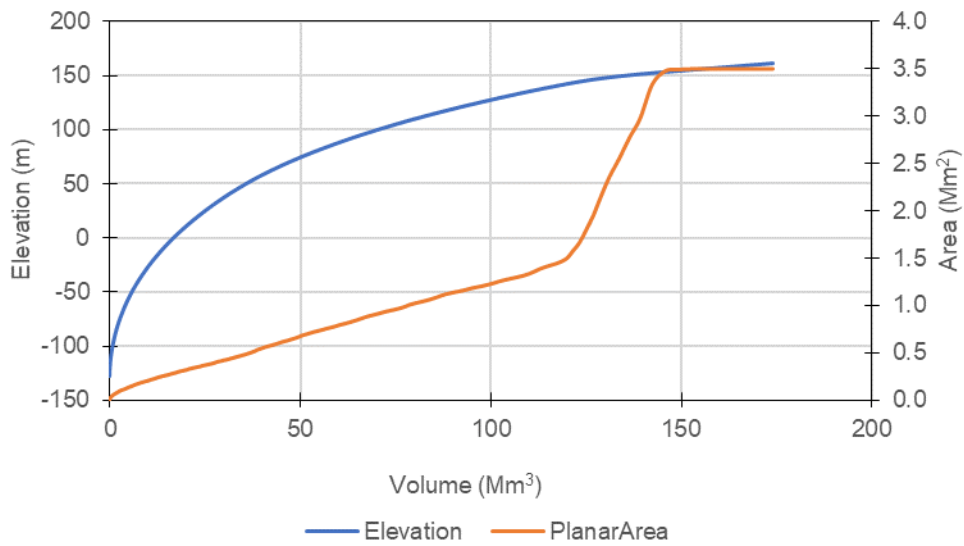


Figure 3-11: Kangislulik Lake volume-elevation-area curves.

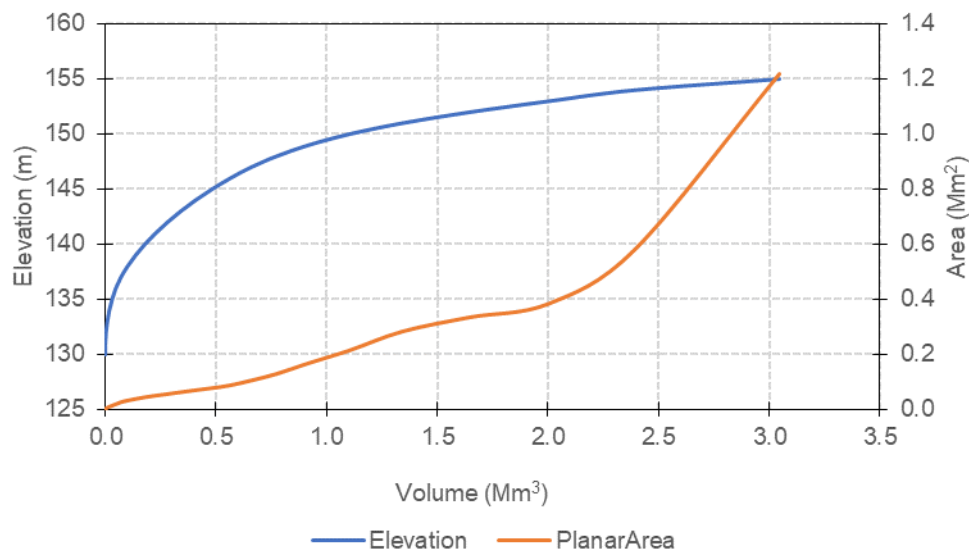


Figure 3-12: Lake A18 complex volume-elevation-area curves.

3.7.1 South Whale Tail Diversion Channel Rating Curve

All ponds and lake reservoirs associated with the Whale Tail Mine are represented within the GoldSim modelling platform by ‘Pool’ nodes. The water balance for each lake node is resolved on a daily basis, with the change in storage calculated as a function of inputs minus outputs. Calculated lake volumes are translated into water levels based on the volume-elevation-area curve (VEAC) for the water body in question, and in the absence of any further constraints, overflows are permitted above the ‘spill’ elevation. GoldSim will calculate these overflow volumes by assigning the total daily excess volume to outflows, resulting in high magnitude daily outflows during time-steps with a strongly positive water balance. In reality however, overflow from a natural lake basin is moderated by the channel configuration, and the efficiency of flow transfers out of the lake is governed by the channel cross-sectional area, slope and bed material roughness.

Therefore, if the default overflow function is employed, the modelled lake water levels will fluctuate much more rapidly, and the outflow hydrograph will be much more peaked than would be expected in reality. To address this issue, rating curves for the two key lake outflow points (*i.e.*, South Whale Tail Diversion Channel and the Lake A18 Sill) governed by built structures were developed based on the as built and feasibility level designs for each structure, respectively.

During Operations, outflows from the South Whale Tail Lake Basin are diverted from their pre-mining flow path by the South Whale Tail Diversion Channel, which reports to Kangislulik Lake (Figure 3-13 and Figure 2-2). This diversion channel was constructed

between January and April 2020 and commissioned for the 2020 freshet. The detailed design for this channel, and the inlet cross-section, slope and bed materials are provided in SNC-Lavalin (2020; Table 3-7). A Manning’s *n* roughness coefficient of 0.038 was estimated based on the diameter of rip rap (100-300 mm) used to line the Channel.

Lake outflows from the Whale Tail South Basin are routed through the Whale Tail South Diversion Channel until 2029, when it is decommissioned, once mining is complete to restore pre-mining flow routing through the Whale Tail South Basin into Kangislulik Lake.

Diversion channel flow rates are based on a hydraulic relationship between water level in Whale Tail South Basin, and the channel characteristics as presented in the design report (SNC-Lavalin, 2020; Table 3-7; Figure 3-13). The channel characteristics were input into the open channel flow equation for a trapezoidal channel cross-section to derive discharge estimates for lake water elevations in 0.1 m increments (Table 3-8). This rating curve was brought into the model to calculate lake outflows as a function of water level on a daily basis.

Table 3-7:
South Whale Tail Diversion Channel Design Hydraulic Characteristics

Parameter	Value	Units
Channel Slope	0.3	%
Invert Elevation	155.3	masl
Manning's <i>n</i>	0.038	Dimensionless
Width (base)	5	m
Slope	3H:1V	Dimensionless
Max water level	1.1	m

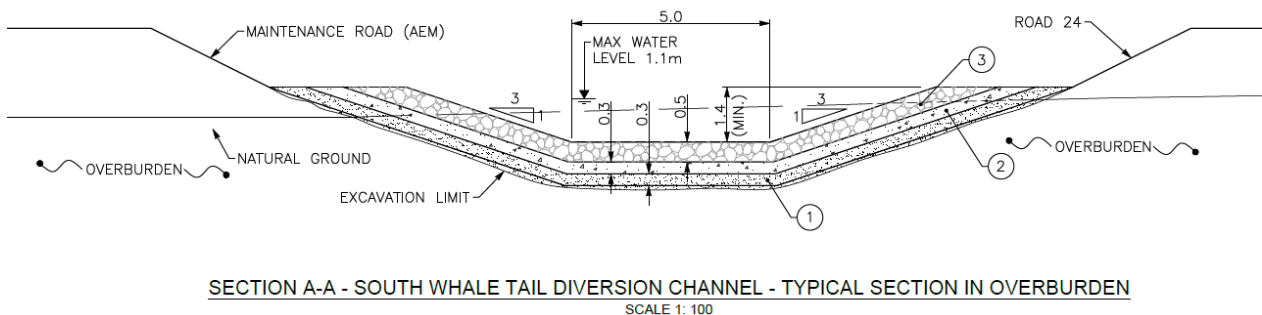


Figure 3-13: Conceptual South Whale Tail Diversion Channel cross-sections
 (Source: SNC-Lavalin, 2020)

The values in Table 3-7 were entered into the Manning’s equation to derive estimated flow rates over a range of water elevations corresponding to a 1.1 m range in inlet water depths. This allowed a rating curve for the SWTDC inlet invert to be derived and applied within the WBWQM to govern outflows from the South Whale Tail Basin to Kangislulik Lake during the Operations phase (Figure 3-14; Table 3-8).

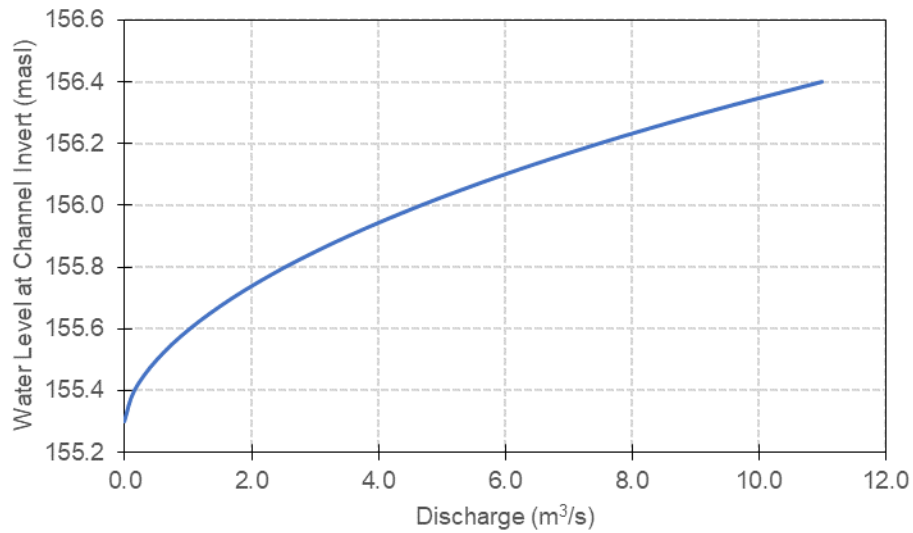


Figure 3-14: Derived rating curve for the South Whale Tail Diversion Channel inlet.

**Table 3-8:
 Relationship between South Whale Tail Basin Water Level and Flow through the
 South Whale Tail Diversion Channel Inlet**

Water Elevation (masl)	Discharge (m ³ /s)
155.3	0.000
155.4	0.158
155.5	0.512
155.6	1.030
155.7	1.705
155.8	2.535
155.9	3.524
156.0	4.675
156.1	5.992
156.2	7.481
156.3	9.146
156.4	10.994

3.7.2 A18 Sill Rating Curves

During the Post-Closure phase, fish habitat will be enhanced by installing a sill between Lake A18 and the Whale Tail South Basin to raise the water level, to an annual average of 155.3 m upstream of the sill. The Lake A18 Sill design is presented in Appendix G of Golder (2019c) of the *Whale Tail Expansion Fish Habitat Offsetting Plan* (ERM, 2020; Figure 3-15) and is also discussed in the *Whale Tail Pit Expansion Project Fish Habitat Offsetting Plan* (March 2020).

A range of predicted design flow values for the A18 Sill invert was calculated based on the water level in Lake A18 associated with a range of streamflow recurrence intervals (Golder, 2019c; Table 3-9). These values allow a rating curve for the Sill invert to be derived and applied within the WBWQM to govern outflows from the flooded Lake A18 complex during the Post-Closure phase (Figure 3-16; see Section 3.9 for more details).

The same rating curve is applied to the output of the Kangislulik Sill, in the absence of specific design criteria for this structure.

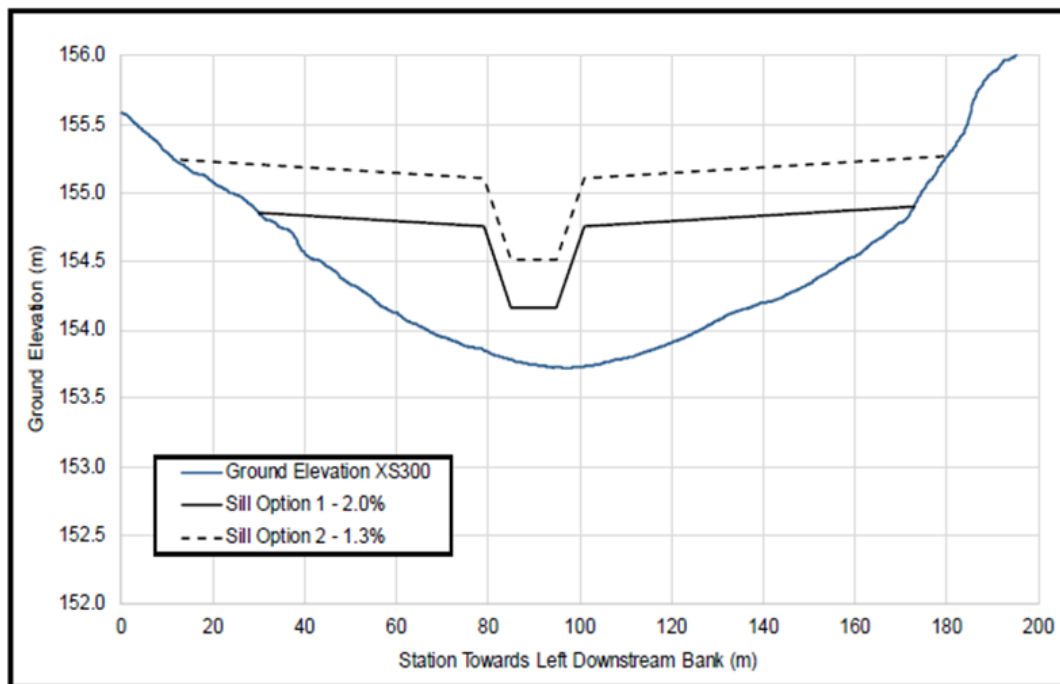


Figure 3-15: Conceptual A18 Sill cross-sections (Source: Golder, 2019c).

**Table 3-9:
 Relationship between Lake A18 Water Level and Flow through the A18 Sill
 (based on Sill Option #2)**

A18 Water Level Elevation (masl)	Stage (m)	Discharge (m ³ /s)
154.99	0.49	5.201
154.92	0.42	3.759
154.84	0.34	2.439
154.77	0.27	1.474
154.76	0.26	1.38
154.71	0.21	0.88
154.57	0.07	0.075
154.56	0.06	0.065
154.56	0.06	0.054
154.54	0.04	0.03
154.54	0.04	0.02
154.53	0.03	0.01
154.50	0.00	0.00

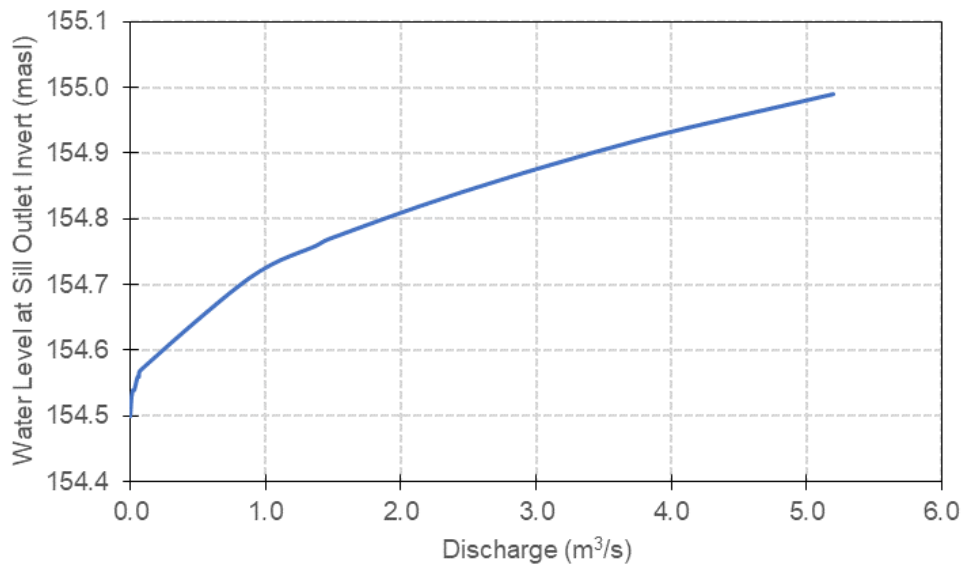


Figure 3-16: Derived rating curve for the A18 Sill outlet.

3.8 Watershed Model Calibration

Calibration of the watershed model was conducted in two stages:

- To regional streamflow records collected by the Water Survey of Canada in representative small catchments; and,
- To measured water balance data from site collection ponds (water levels and volumes) over the 2020-2022 early Operations period.

3.8.1 Regional Streamflow Calibration

The majority of flow data collected around the Mine site reflects pumped transfers between collection ponds, with the runoff response from undisturbed areas contributing relatively lower flow volumes to the mine water collection system. Given the paucity of open channel flow data in the Mine area, the watershed model described in Section 3.3 was calibrated to streamflow data collected in a small, lake dominated catchment located approximately 80 km north of the Mine site. The majority of hydrometric records for the region represent large basins (> 1,000 km²), which present a different streamflow response than would be expected of the small, lake dominated catchments of interest at the Mine site. However, three seasonal hydrometric stations located on small (< 1 km²) catchments were operated by the Water Survey of Canada (WSC) from 1978-1981 in the vicinity of Saqvaquac Inlet, located north of the entrance to Chesterfield Inlet (Table 3-10; Figure 3-17). The limited records available for these stations are reflective of the expected runoff response from undisturbed catchments in the Mine area. These streamflow records are complimented by the long-term climate record from the Chesterfield station (2300700) operated by Environment Canada.

**Table 3-10:
 Representative Regional Hydrometric Stations**

Station ID	Station Name	Latitude (°)	Longitude (°)	Area (km ²)	Record Period
06OA002	Meadow Creek above Saqvaquac Inlet	63°38'45"	90°42'10"	0.16	1978 – 1981
06OA003	Far Creek at Far Lake Outlet	63°41'40"	90°40'30"	0.21	1978 – 1981
06OA004	P/N Lake Outlet	63°39'55"	90°40'00"	0.36	1978 – 1981

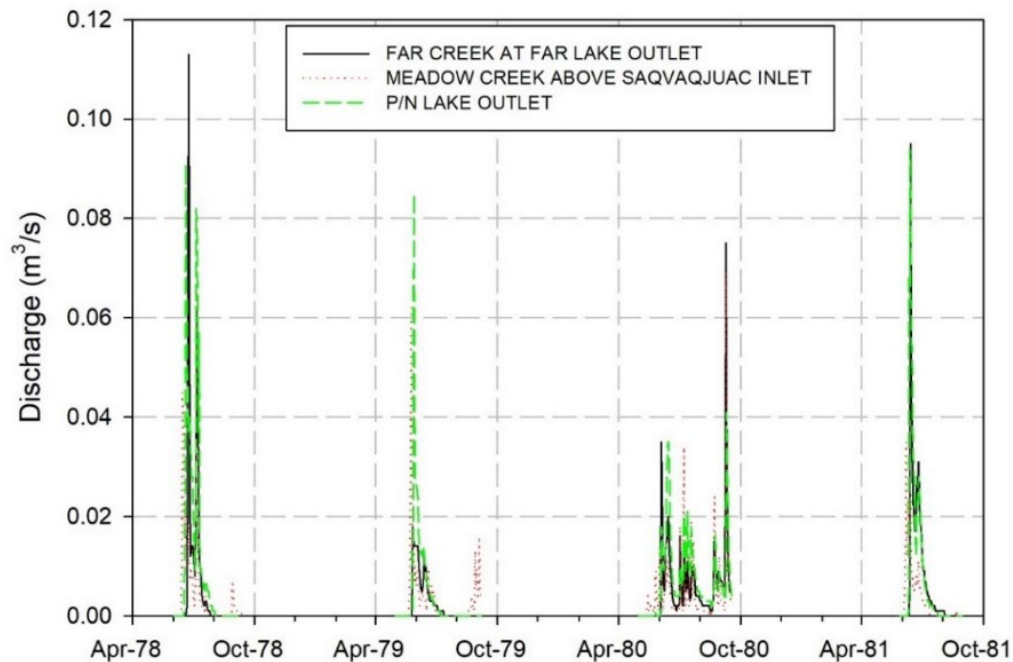


Figure 3-17: Regional streamflow data used to inform watershed model calibration.

The runoff response is consistent across all three catchments, with a strong and rapid freshet signature, followed by a rapid recession to low flows, punctuated by periodic rainfall driven runoff events. Zero-flow conditions persist from late-September through to mid-May. Given the strong consistency between stations, the Meadow Creek above Saqvaqujac Inlet station (06OA002; 0.16 km²) was selected as the calibration target for the watershed model.

Calibration of the watershed model focused on replicating the timing and magnitude of peak flows in response to snowmelt and rainfall, as well as the shape of the draindown curve following these events, and the transition to zero surface flow conditions during the winter months. Model skill was evaluated by visual means, including streamflow time-series matching (Figure 3-18) and flow duration curves showing the probability of exceedance for a given flow value (Figure 3-19). This process was complicated by uncertain basin areas provided by the Water Survey of Canada, so for this stage of the calibration, the focus was placed on replicating the general regional discharge pattern. The tuned parameter set (Table 3-11) is reflective of the limited storage available in the active layer, and the rapid runoff response to snowmelt and rainfall that results. On an annual water year basis, the effective runoff coefficient (runoff depth/precipitation) averages 0.50, however this value ranges between 0.30 to 0.75 in response to the meteoric forcing.

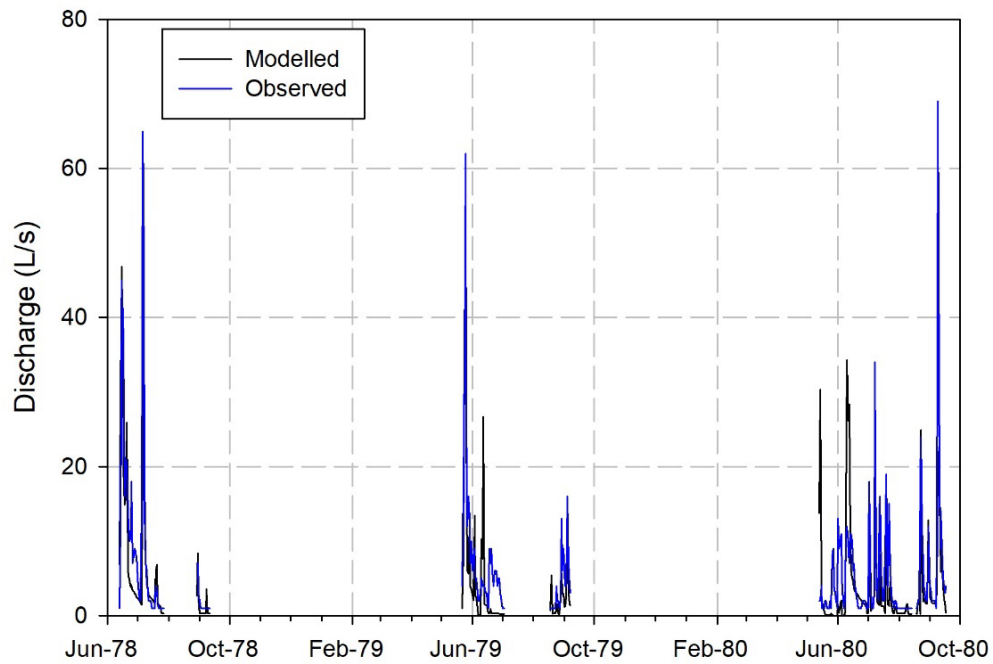


Figure 3-18: Modelled and measured streamflow at the Meadow Creek above Saqvaqujac Inlet station (06OA002).

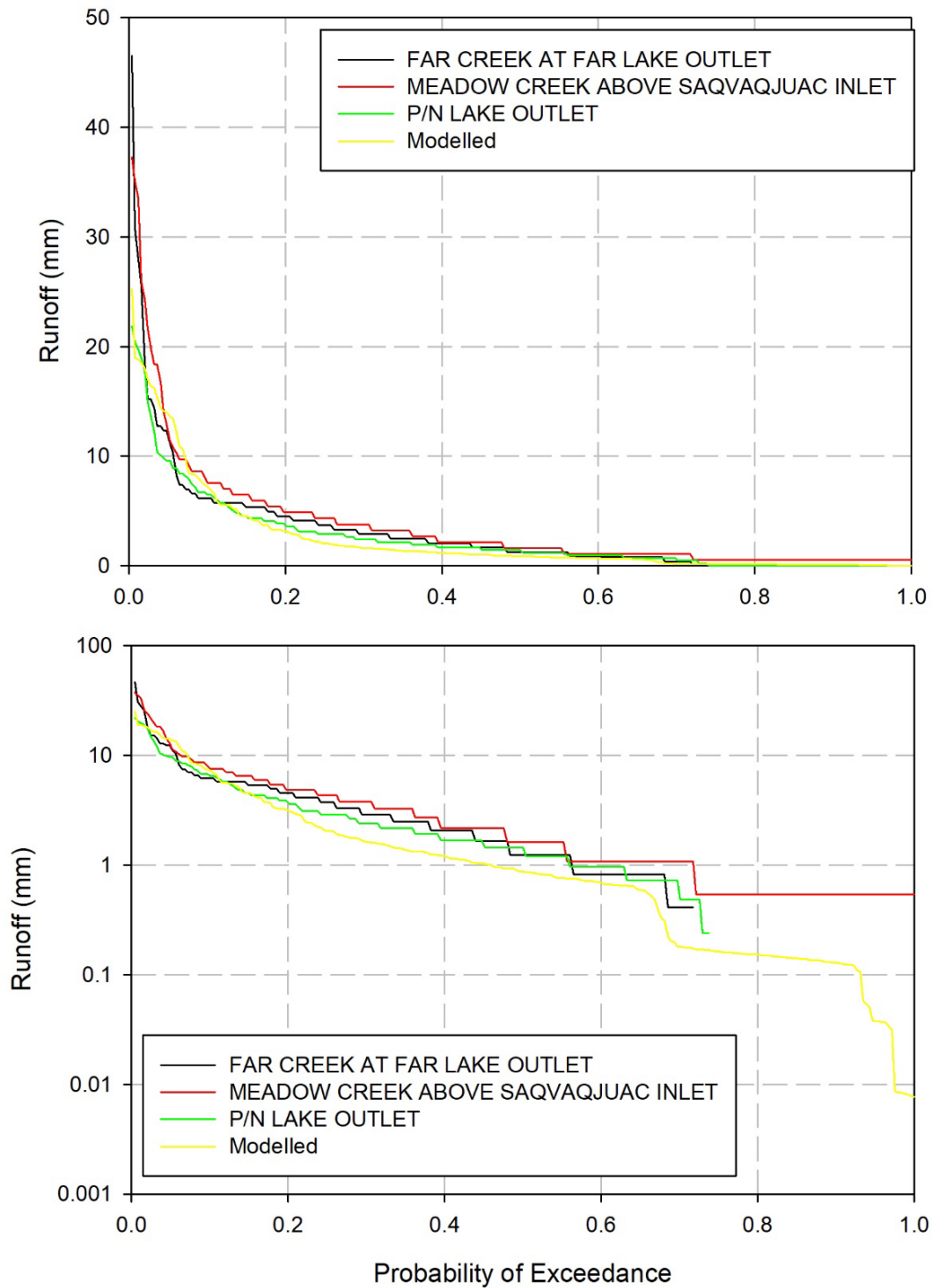


Figure 3-19: Modelled and measured regional runoff flow duration curves shown with linear (top) and logarithmic y-axis (bottom).

**Table 3-11:
 Watershed Model Calibrated Parameter Set**

Bucket	Depth (mm)	Discharge (day ⁻¹)	Percolation (to next deepest bucket) (day ⁻¹)
Surface	1	0.46	50%
Middle	5	0.10	20%
Deep	9	0.07	-

3.8.2 Calibration to Collection Pond and Lake Water Balances

The second stage of the water balance model calibration focused on replicating the measured Whale Tail WRSF Collection Pond, Whale Tail Attenuation Pond and IVR Attenuation Pond water balances over the early Operations period of 2020-2022. As noted in Section 3.4, the early operation was characterized by large variability in annual precipitation, allowing the model to be calibrated to a wide range of water balance conditions over a short period.

Inputs to the calibration model included:

- Daily climate (min, mean and max daily air temperature and precipitation) scaled from the Baker Lake climate station (Okane, 2022);
- Incorporation of operational contact water routing, including pump rates, into the WBM (Table 310);
- Catchment and/or landform specific target runoff coefficients (Table 3-12);
- Annual sub-catchment delineations (Figure 3-20 and Figure 3-21);
- Calibrated watershed model described in Section 3.8.1;
- Measured water quality for key parameters (described in Section 4.4); and,
- Measured monthly underground dewatering volumes (Table 3-6).

Of the two calibration years, 2020 water year precipitation (363 mm) was slightly higher than the long-term median (349 mm), while 2021 precipitation was slightly lower (344 mm).

Pond volume measurements were provided by Agnico Eagle and were calculated from surveyed water levels and the pond specific storage-elevation curves. Pump rates between ponds (and to treatment plants) were also provided by Agnico Eagle, providing a control on inflows and outflows for each pond.

**Table 3-12:
 Land Surface Types, Representative Runoff Type and Target Runoff Coefficients**

Land Cover Type	Surface Runoff	Interflow	Baseflow	Target Runoff Coefficient
Disturbed ¹	x	x	x	0.50
Hard Surface (Ore Pads, Laydowns) ¹	x			0.80
Natural ¹	x	x	x	0.50
Open Water	x			1.0, minus evaporation
Waste Rock Storage Facilities ²	x			0.10 – 0.20
Open Pit Walls ³	x			0.40

Notes:

¹Average runoff coefficient provided, effective annual coefficients vary according to climate forcings. Natural watershed model outputs are scaled to represent disturbed area runoff.

²Upper bound of predicted values (90th percentile), reflective of years where runoff or interflow predicted to occur (mode is zero). Volumes of contact water reporting from the WRSFs are predicted to increase over time in response to projected climate change.

³Constant runoff coefficient of 0.40 is assumed for both pits beginning in 2023.

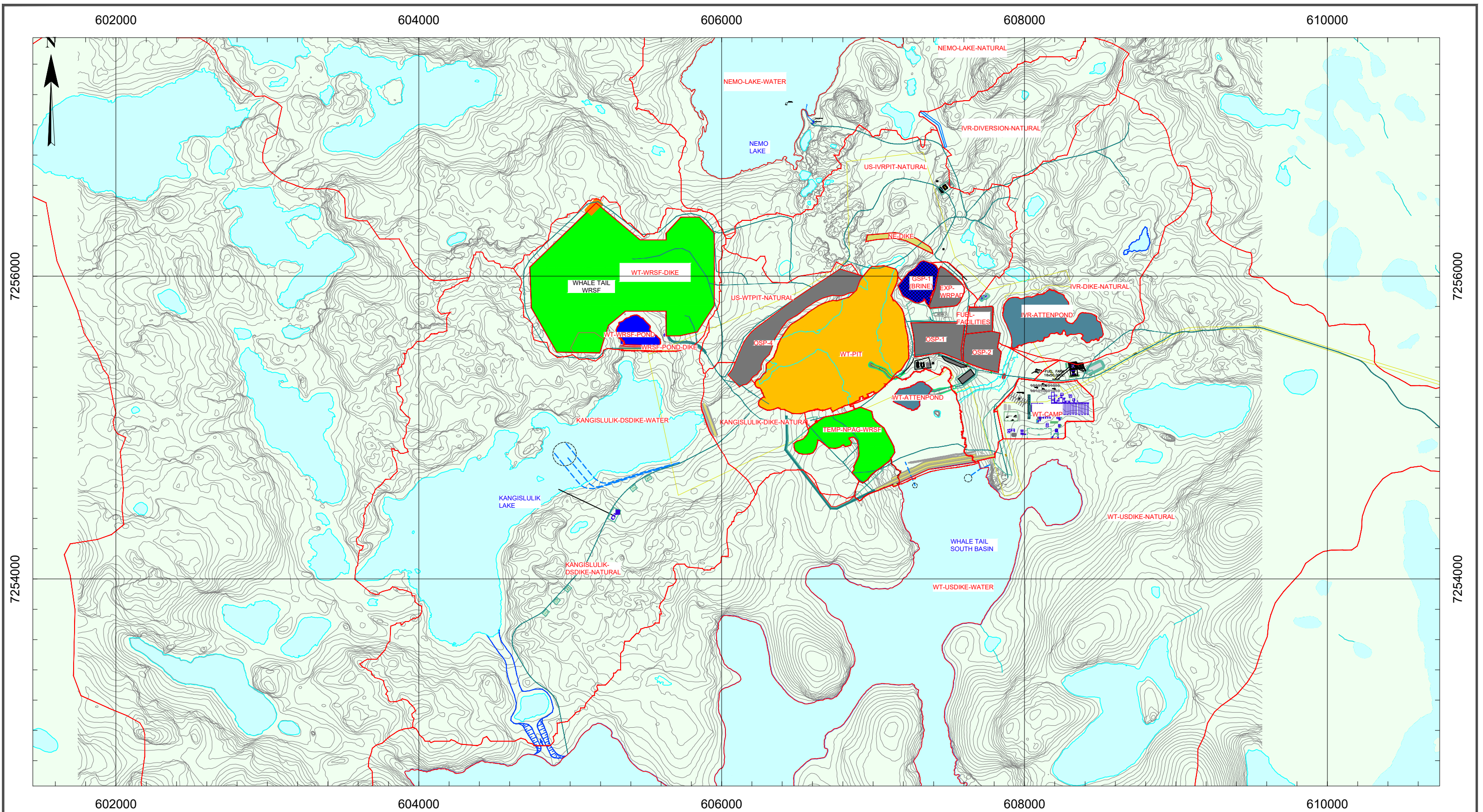
The Whale Tail Attenuation Pond was the primary surface contact water collection pond in 2020 and thus integrated all surface contact water managed at site, while the IVR Attenuation Pond was the primary surface contact water pond in 2021 and 2022 (Table 3-13). Accordingly, the calibration focused primarily on first replicating the pond water balances over the calibration period, and secondarily on reproducing water quality concentrations for each pond (see Section 4.4). An initial QA/QC analysis was conducted to assess the degree to which site monitoring data were internally consistent. Specifically, the pumped inflows and outflows for the two Attenuation Ponds were compared to the total effluent volumes discharged to Kangislulik Lake and the Whale Tail South Basin (Table 3-13). Overall, the discrepancies between the sum of Attenuation Pond inputs and treated effluent discharge volumes are reasonable, given the additional variability introduced by evaporative losses from, and precipitation/snowmelt inputs to pond surfaces, and measurement error.

**Table 3-13:
 Pumped Inflow and Outflow Reconciliation for Whale Tail and IVR Attenuation Ponds (all values in m³)**

Year	Whale Tail Attenuation Pond	IVR Attenuation Pond	Kangislulik Lake	Whale Tail South Basin	Sum Effluent Discharges	% Difference
	Inputs	Inputs*	Inputs	Inputs		
2020	3,286,138	0	1,739,094	2,179,117	3,918,212	-16%
2021	2,061,527	636,884	1,457,689	1,258,667	2,716,384	-1%
2022	1,735,703	615,238	1,282,941	705,135	1,988,076	18%
2023	1,966,659	322,629	1,144,316	944,496	2,088,812	17%
2024	2,114,214	1,321,184	1,185,832	1,704,010	2,889,842	21%

Note:

*632,000 m³ was pumped from Whale Tail Attenuation Pond to IVR Attenuation Pond in 2021, and all water in the Whale Tail Attenuation Pond was pumped to the IVR Attenuation Pond in 2022 (1,749,409 m³). In 2023, 84% (1,720,055 m³) of the IVR Attenuation Pond inflows were pumped from the Whale Tail Attenuation Pond. In 2024, 1,606,036 m³ was pumped from the Whale Tail Attenuation Pond to the IVR Attenuation Pond.



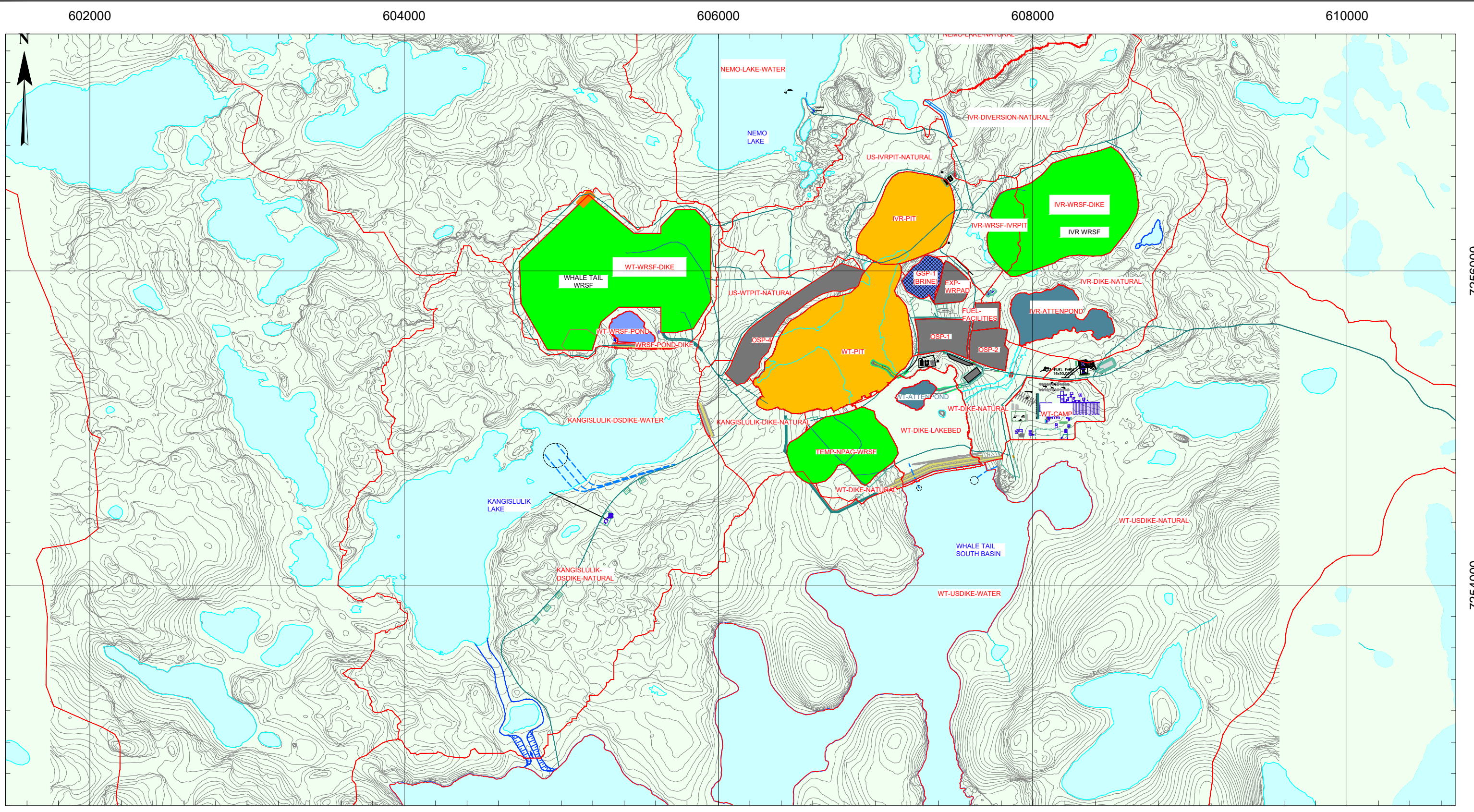
LEGEND			
	WATER BALANCE CATCHMENT		CONTACT WATER POND
	MAJOR AND MINOR CONTOURS FOR PITS		SALINE POND
	EXISTING GROUND		WATERBODY (NATURAL)
	HAUL ROAD		BACKFILL
	ROAD, SALT PROTECTION		STOCKPILE
	SERVICE ROAD		DIKE
	WATERCOURSE		OPEN PIT
	PIPE LINE		WASTE ROCK STORAGE FACILITY
	DIVERSION CHANNEL		

DATE SAVED: Apr 28, 2023
DRAWN BY: GM
REVIEWED: SJ
VERSION: 1

Original Drawing:
 Drawing Number 2022Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.



PROJECT: Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report
TITLE: Mine site layout and catchment delineation for 2020 based on aerial photo from October 2020
PROJECT #: A7666-1
FIGURE: 3-20



LEGEND					
	WATER BALANCE CATCHMENT		CONTACT WATER POND		DIKE
	MAJOR AND MINOR CONTOURS FOR PITS		SALINE POND		OPEN PIT
	EXISTING GROUND		WATERBODY (NATURAL)		WASTE ROCK STORAGE FACILITY
	HAUL ROAD		BACKFILL		
	ROAD, SALT PROTECTION		STOCKPILE		
	SERVICE ROAD				
	WATERCOURSE				
	PIPE LINE				
	DIVERSION CHANNEL				

DATE SAVED: Apr 28, 2023
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REVIEWED: SJ
VERSION: 1

Original Drawing:
 Drawing Number 2022Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.



CLIENT:	PROJECT:	Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report	
	TITLE:	Mine site layout and catchment delineation for 2021	
	PROJECT #:	A766-1	FIGURE: 3-21

In general, the calibrated water balance model replicates measured pond volumes well, accurately tracking the monthly inflows due to pumped inputs, freshet and rainfall generated runoff. Modelled inflows to the Whale Tail WRSF Collection Pond track the measured volumes quite closely in 2020, with the exception of June (underpredicted), and are notably higher during May and June of 2021 and 2022 (Figure 3-22). Inflows to the Whale Tail Attenuation Pond are replicated very well by the model, although June inflows are slightly overpredicted in 2020 and 2021, and in September of 2022 (Figure 3-23). A similar pattern is evident for the IVR Attenuation Pond, with June inflows (and the majority of 2022) slightly overpredicted by the model, relative to measured data (Figure 3-24).

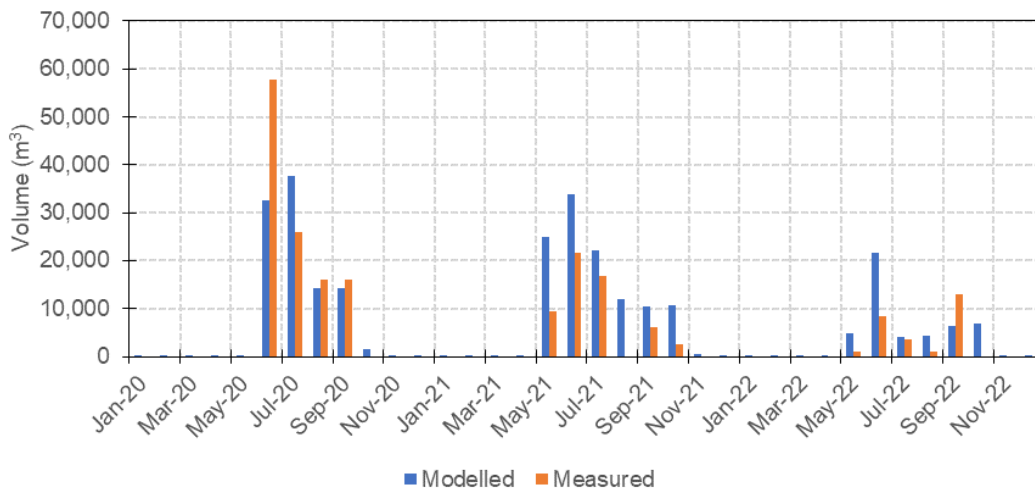


Figure 3-22: Measured (orange) and modelled (blue) monthly Whale Tail WRSF Pond inflows.

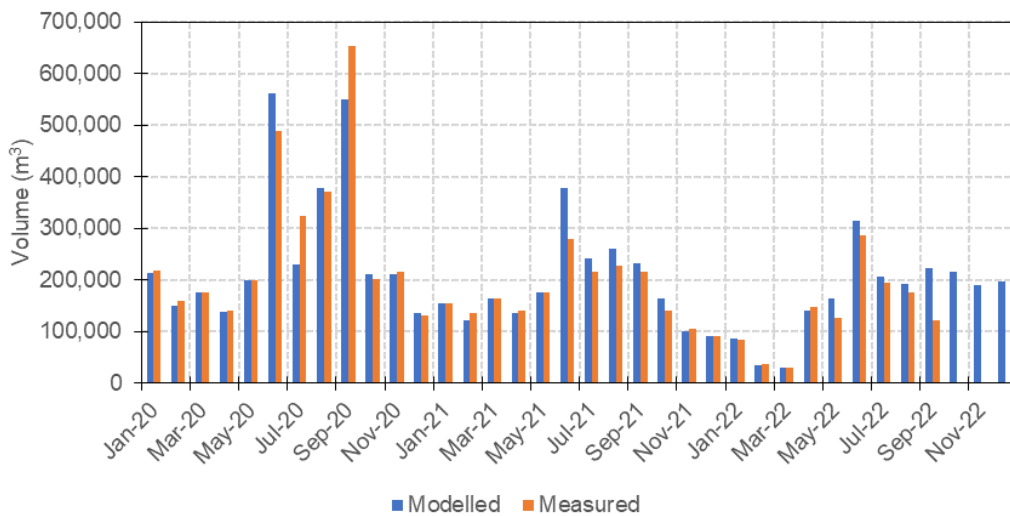


Figure 3-23: Measured (orange) and modelled (blue) monthly Whale Tail Attenuation Pond inflows.

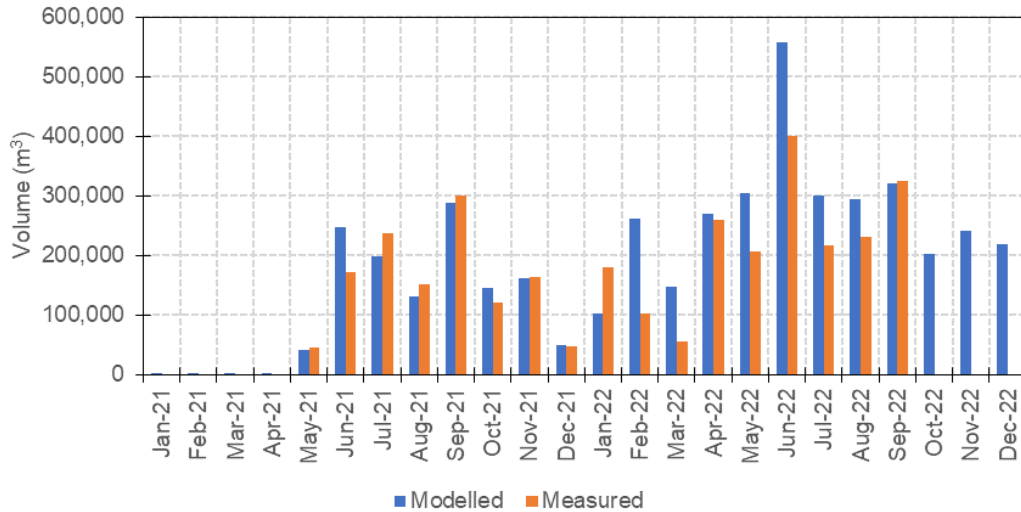


Figure 3-24: Measured (orange) and modelled (blue) IVR Attenuation Pond inflows.

Modelled water levels also track the measured data quite closely in the Whale Tail (Figure 3-25) and IVR (Figure 3-26) Attenuation Ponds, noting that the measured water levels display greater variability than the model predictions. Similarly, the measured Whale Tail South Basin (Figure 3-27) and Kangislulik Lake water levels are replicated well by the model, noting the upper water level limit of 152.5 m imposed within the model (Figure 3-28).

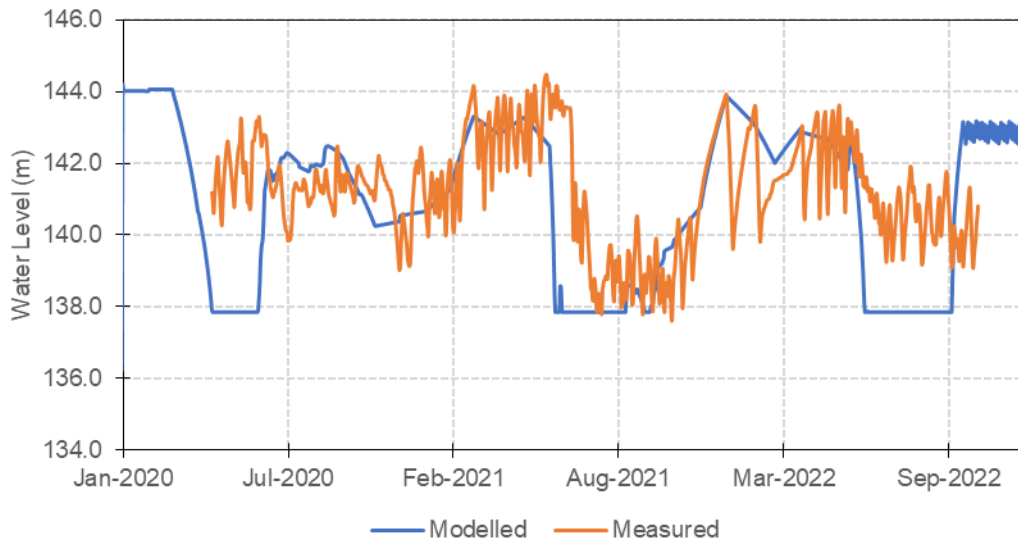


Figure 3-25: Measured (orange) and modelled (blue) Whale Tail Attenuation Pond water levels.



Figure 3-26: Measured (orange) and modelled (blue) IVR Attenuation Pond water levels.

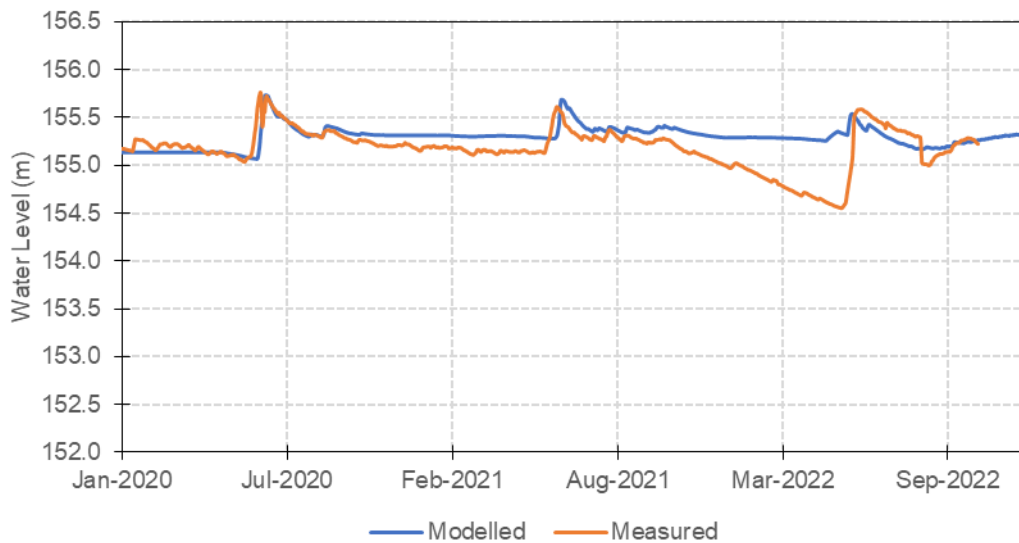


Figure 3-27: Measured (orange) and modelled (blue) Whale Tail South Basin water levels and outflows.

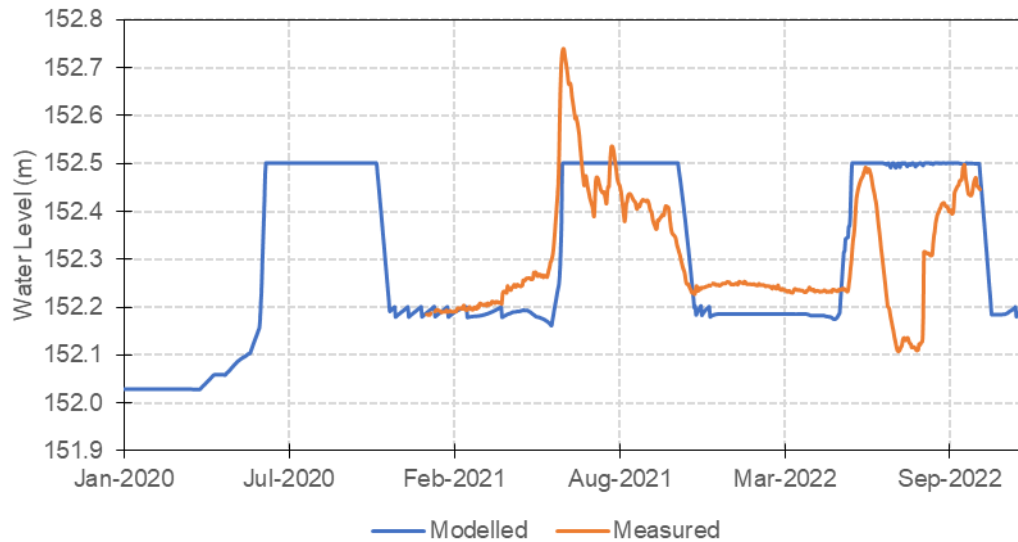


Figure 3-28: Measured (orange) and modelled (blue) Kangislulik Lake water levels and outflows.

3.9 Active Closure and Post-Closure Assumptions

The Active Closure phase begins in July 2028, immediately following the cessation of mining operations. The Active Closure phase is defined by the period of time required to fill the Whale Tail North Basin to its final Post-Closure target water level of 153.5 m (Figure 3-31), which takes approximately 17 years.

The Post-Closure phase begins in July 2046 and represents the long-term equilibrium condition once the A18 Lake complex, Whale Tail South Basin and Whale Tail North Basin have reached their target water levels.

Specific activities associated with the Active Closure phase include:

- Groundwater collected in GSP-1 and the IVR Pit is pumped into underground mine void, at a maximum rate of 500 and 2,000 m³/hour, respectively.
 The A47 and A49 Sumps are assumed to report passively to the IVR Pit;
- Active water treatment continues in June to September each year at a maximum rate of 1,300 m³/hour for an additional six years (2028-2033; Figure 3-30);
 - Contact water is pumped from the IVR Attenuation Pond, treated and discharged into the IVR Pit;
 - 65% of pit wall runoff from the IVR Pit (once groundwater is pumped underground) and Whale Tail Pit, plus 65% of the groundwater inflows to Whale Tail Pit is assumed to be captured by collection ditches along the pit benches, and pumped to the IVR Attenuation Pond;

- Overflows from the Whale Tail Attenuation Pond are assumed to bypass these pit wall collection ditches and are routed to the bottom of Whale Tail Pit.
- Construction of a sill (A18 Sill) between Lake A18 and Whale Tail South Basin to raise the water level to 155.3 m as part of the approved fish habitat offset plan (ERM, 2020; Agnico Eagle, 2020b). This is completed in 2029, once the water level in Whale Tail South Basin drops below 154 m due to active pumping to the mine voids.
 - Discharge through the A18 Sill is governed by the spill notch invert configuration, as described in Section 3.7.2.
- Completion of reclamation activities for all disturbed areas (including completion of the NPAG/NML WRSF covers, and backfill of the IVR Pit Pushbacks, GSP-1 and IVR Attenuation Pond) by the end of the third year of Active Closure (2031).
 - Backfilled voids are assumed to have a porosity of 30%.
- Active pumping from Whale Tail South Basin and Whale Tail WRSF Collection Pond to fill the mine voids, according to the following priority sequence:
 - Underground mine;
 - IVR Pit;
 - Whale Tail Pit and Whale Tail Pit pushback; and,
 - Whale Tail North Basin.

Water from the Whale Tail South Basin is pumped into the remaining mine voids, at a maximum rate of 2,800 m³/hour in the second half of 2028, and 1,600 m³/hour over the remaining 17 years. This pit flooding program will be active during the open water season only, assumed to span June 1 to September 30 of each year. Per the 2021 Water Management Plan, an additional 161,000 m³ (55 m³/hour) is pumped from Whale Tail South Basin during the same annual pumping window to the mine voids to meet the target of restoring the Whale Tail North Basin water level to 153.5 m by September 2045. This results in a total pumping volume of 4.6 Mm³ in 2028 and 2.1 to 4.1 Mm³/year for the remainder of the Active Closure phase (Q3 2028 to 2045), remaining within the withdrawal limits from the Whale Tail South Basin as prescribed in the water license. To promote pit flooding, all contact water from the mine site is directed, either actively (*e.g.*, pumping from the Whale Tail WRSF Collection Pond) or passively, to the open pit voids. The underground mine, Whale Tail Pit and IVR Pit are not hydraulically connected below their respective spill point elevations and are assumed to form separate reservoirs within the

model. Once the Whale Tail Pit and IVR Pit are full to the sill elevation, they conjoin into the Whale Tail /IVR Complex.

The west lobe of the IVR Pit spills into the east lobe at 102 m, and IVR Pit as a whole spills into the Whale Tail Pushback at 123 m, which in turn spills into the Whale Tail Pit at 117 m. The two lobes of the IVR Pushback will not join with the larger IVR Pit once full but will spill into the IVR Pit at 161.5 m (Figure 3-29).

Seepage through the Whale Tail Dike is expected to continue, according to the gradient between water levels in Whale Tail South Basin and the Whale Tail Attenuation Pond, presented in Figure 3-32. Once full, the Whale Tail Attenuation Pond overflows to the Whale Tail Pit.

Once the Whale Tail North and South Basins have stabilized at their target elevations, and water quality within these reservoirs meets SSWQOs, the Whale Tail Dike will be breached to elevation 153.5 m and the Whale Tail WRSF Pond Dike will be breached to allow flows from the covered Whale Tail WRSF to report passively to Whale Tail North Basin. The site is assumed to have achieved the Closure and Reclamation objectives at this point (approximately 2047). Further detail on reclamation activities and closure phase water management is provided in Agnico Eagle (2020b; 2022), respectively.

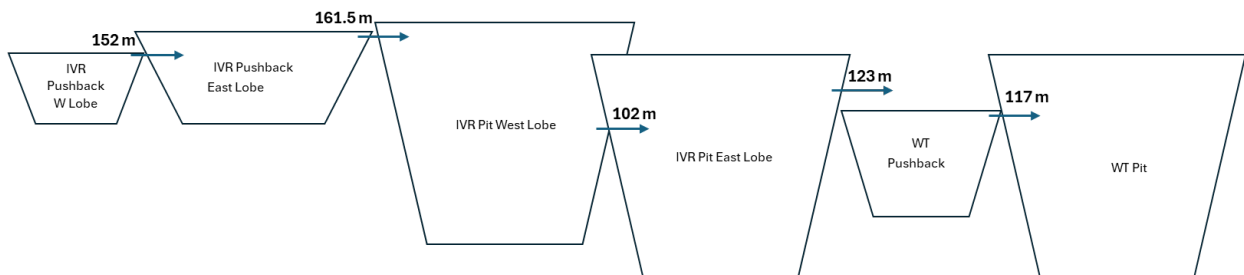
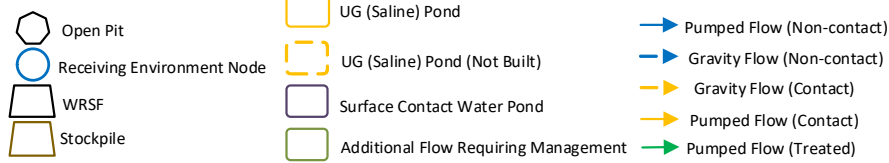
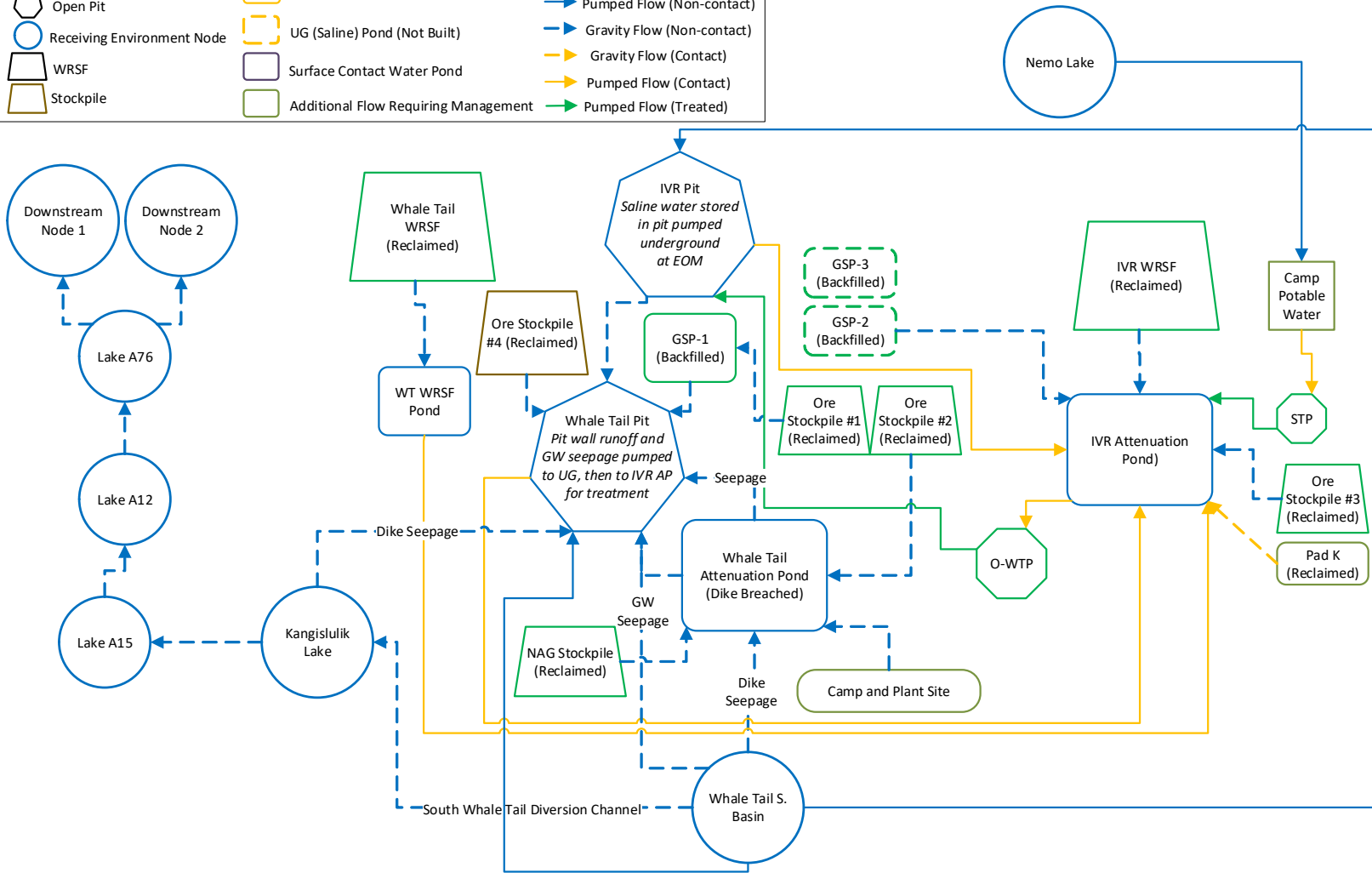


Figure 3-29: Open pit spill point elevations.

Legend



Active Closure



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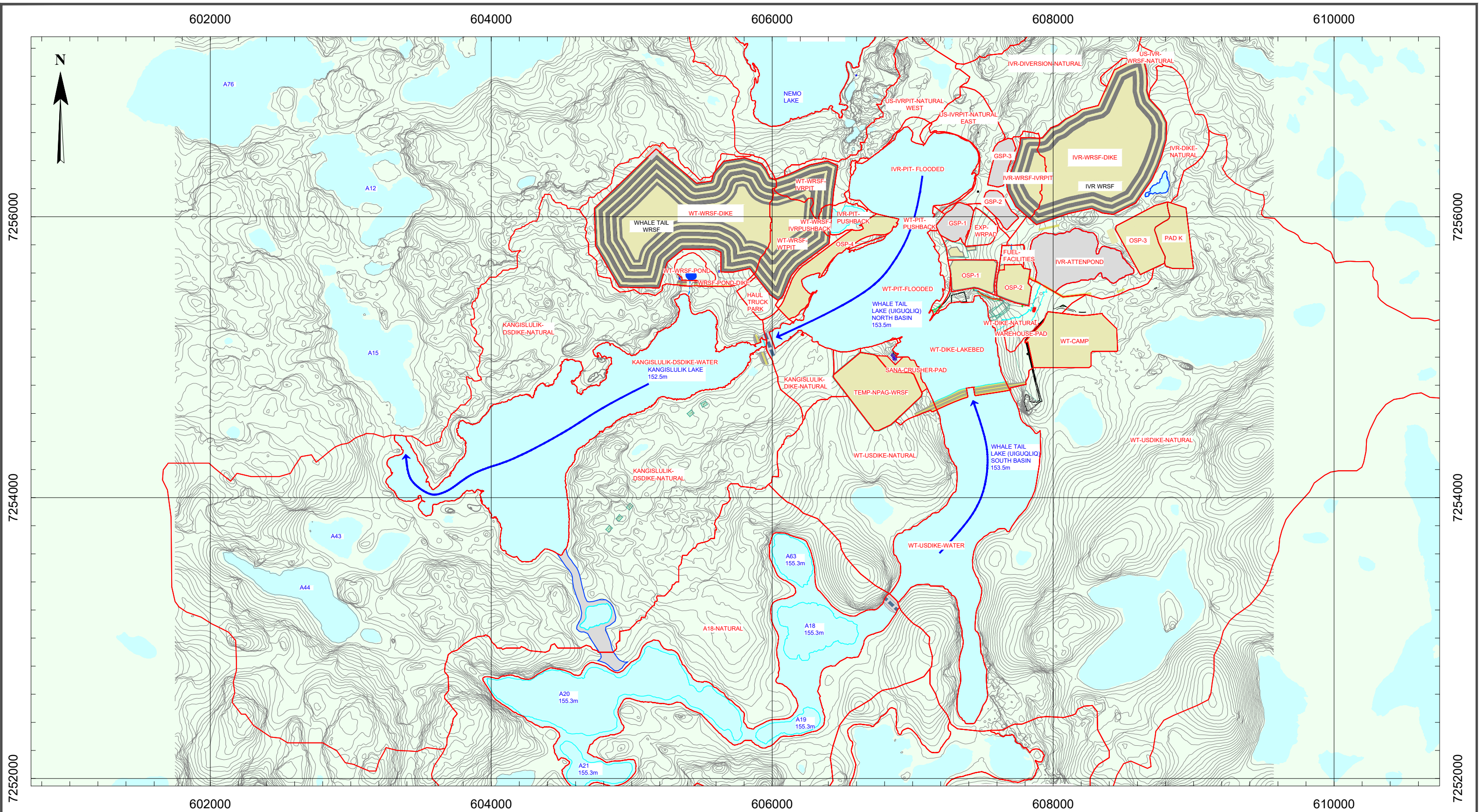


PROJECT: **Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report**

TITLE: **Active Closure Flow Paths – Wire Diagram**

PROJECT #: A766-1

FIGURE: 3-30



LEGEND

- WATER BALANCE CATCHMENT
- MAJOR AND MINOR CONTOURS FOR PITS
- EXISTING GROUND
- HAUL ROAD
- ROAD, SALT PROTECTION
- SERVICE ROAD
- WATERCOURSE
- PIPE LINE
- DIVERSION CHANNEL
- BACKFILLED POND (NPAG)
- DIKE
- RECLAIMED MINE INFRASTRUCTURE
- WATERBODY (NATURAL)

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VERSION: 1

Notes:
 1. Original Drawing: Drawing Number 2042 POST CLOSURE. *Amaruq Mine Site General Arrangement.* Produced May 2, 2019 by Agnico Eagle.
 2. Whale Tail WRSF extension design provided by Okane Consultants
 3. Pit Extension provided by BBA - Whale Tail Phase 3 Underground End of Period Surfaces

CLIENT:



PROJECT:

Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report

TITLE:

Post-Closure Flow Paths and Catchments

PROJECT #:








A766-1

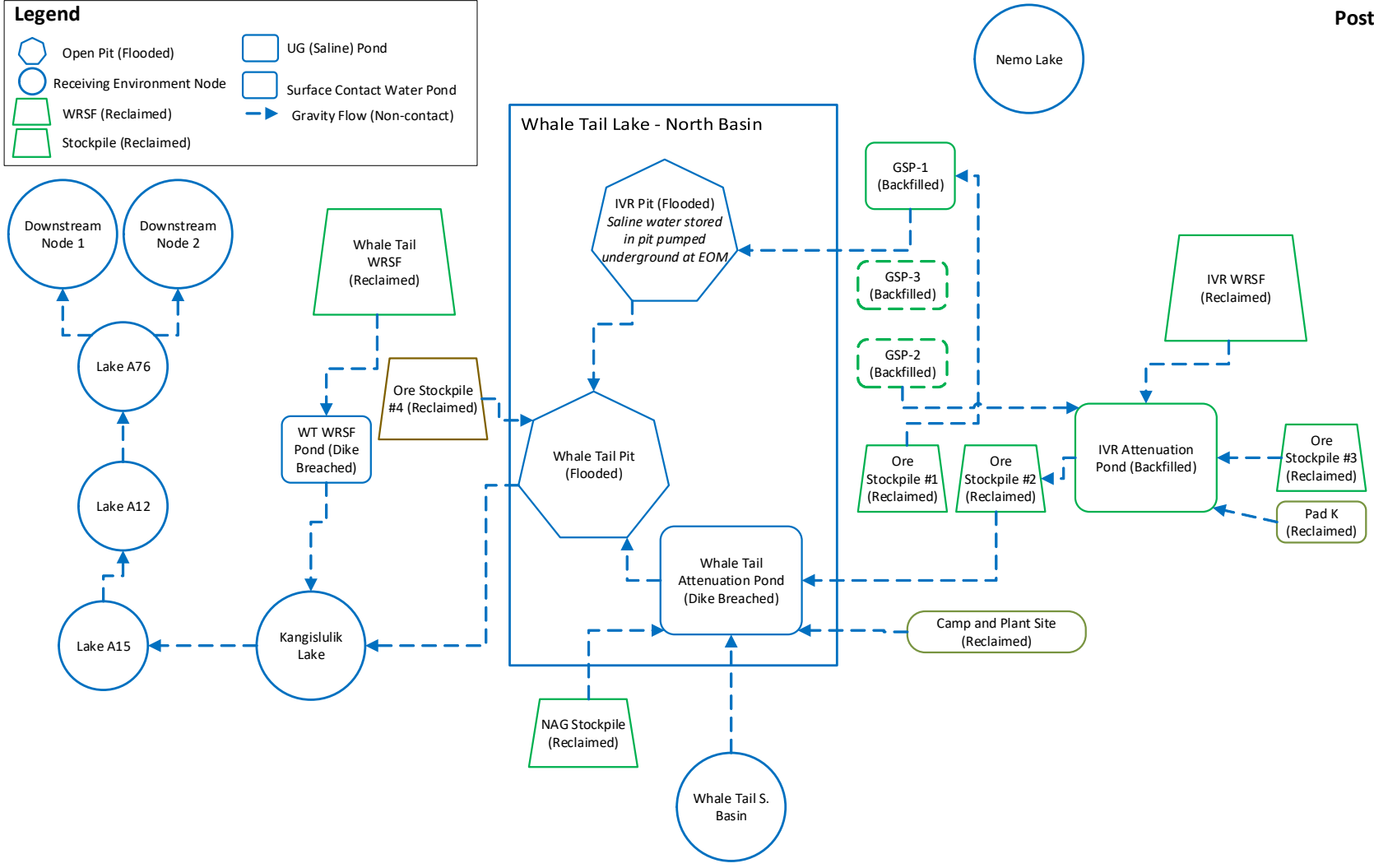
FIGURE:

3-31

Post-closure

Legend

-  Open Pit (Flooded)
-  Receiving Environment Node
-  WRSF (Reclaimed)
-  Stockpile (Reclaimed)
-  UG (Saline) Pond
-  Surface Contact Water Pond
-  Gravity Flow (Non-contact)



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PROJECT: **Whale Tail (Piquganiq) Water Balance and Water Quality Model Technical Report**

TITLE: **Post-Closure Flow Paths – Wire Diagram**

PROJECT #: **A766-1** FIGURE: **3-32**

3.10 Water Balance Model Validation

A water balance model validation exercise was conducted using the monitored lake and pond water level data for October 2022 to December 2024. The focus of this exercise was the pumped discharges from the Whale Tail and IVR Attenuation Ponds, as these flows represent the total volume of contact water requiring treatment and discharge from the Whale Tail Mine.

Overall, the modelled monthly volumes closely match the seasonal variability and magnitude evident in the pumping data, with a trend towards model overprediction relative to the monitoring data (Figure 3-33 and Figure 3-34). This conservative overprediction is evident during the validation period and is more pronounced for the IVR Attenuation Pond. The water balance of GSP-1 is not connected to either Attenuation Pond, as it is the repository of underground dewatering flows, Mudwizard clarifier outflows, and surface runoff from the exploration waste rock pad and Ore Storage Pad #1. However, the model's ability to accurately track volumes (and therefore water levels) in this pond is important to verify, as it impacts the timing of transition to use of the IVR Pit east lobe for underground mine water storage (Figure 3-35).

Lake water levels are well represented in the model, noting that the modelled values deviate from the measured values during the winter months, when ice cover affects the accuracy of the datalogger readings in the lakes. These periods are highlighted blue in Figure 3-36 and Figure 3-37.

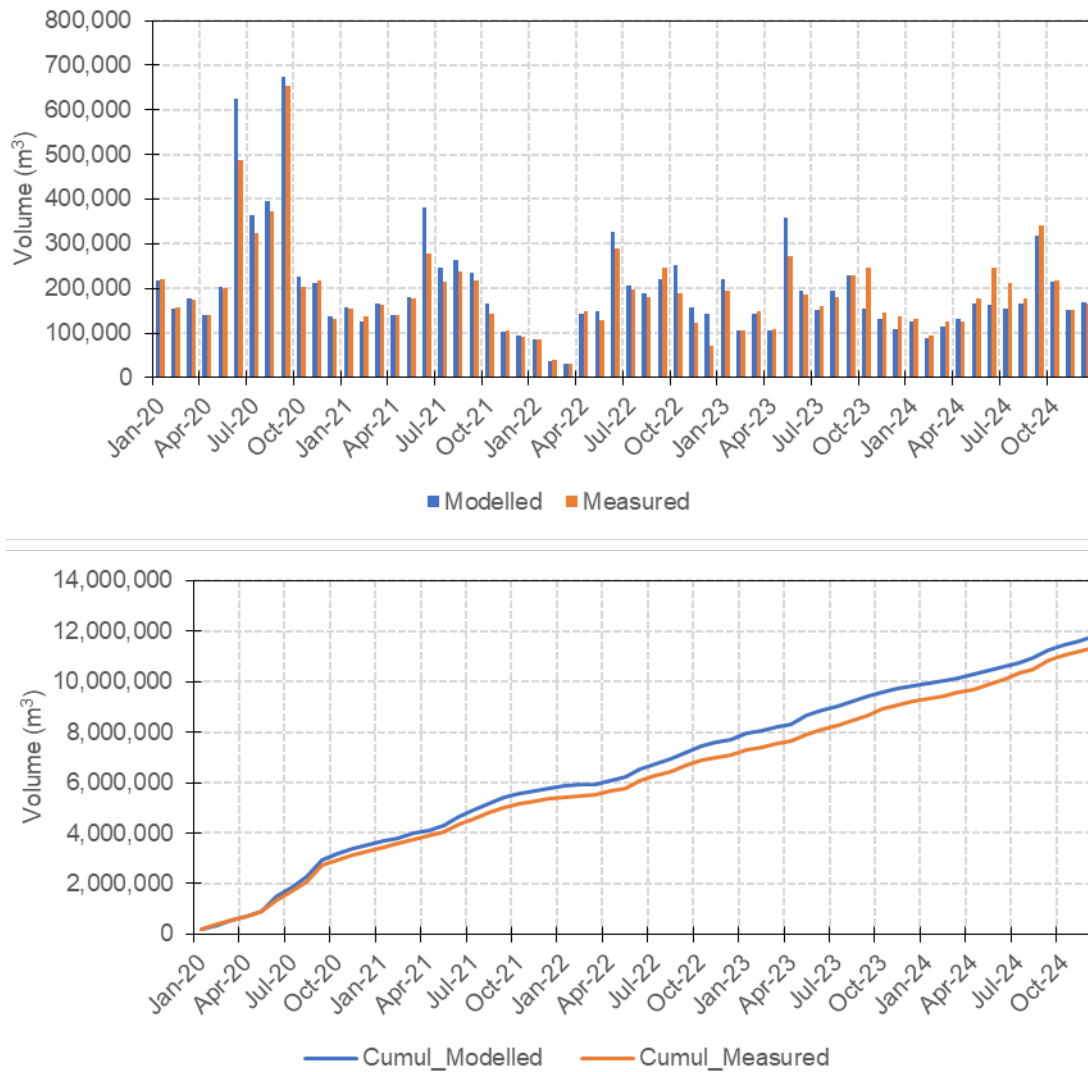


Figure 3-33: Modelled and measured monthly (top) and cumulative (bottom) pumped discharges from the Whale Tail Attenuation Pond.

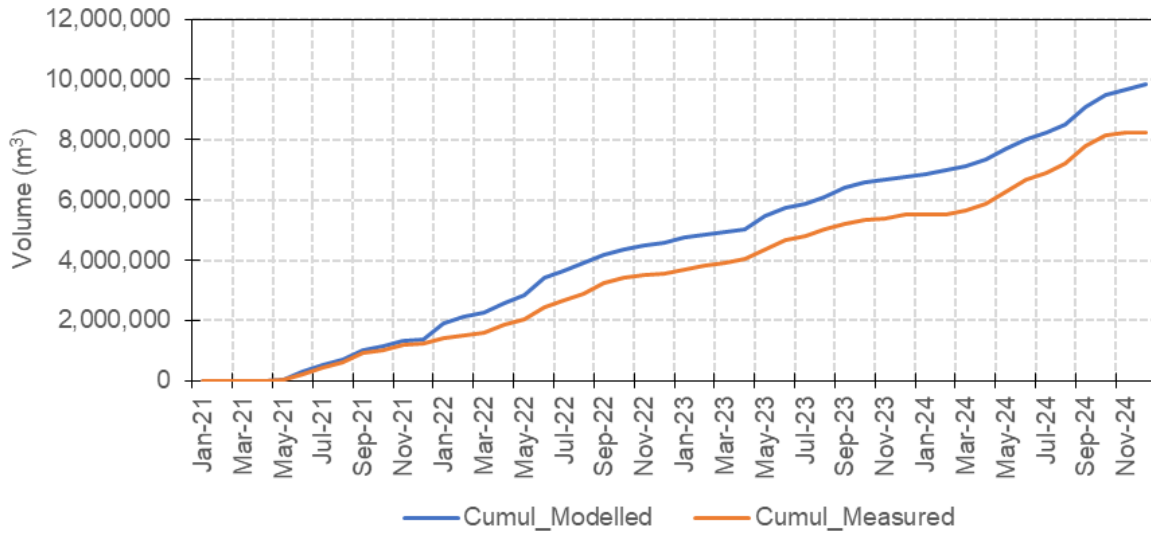
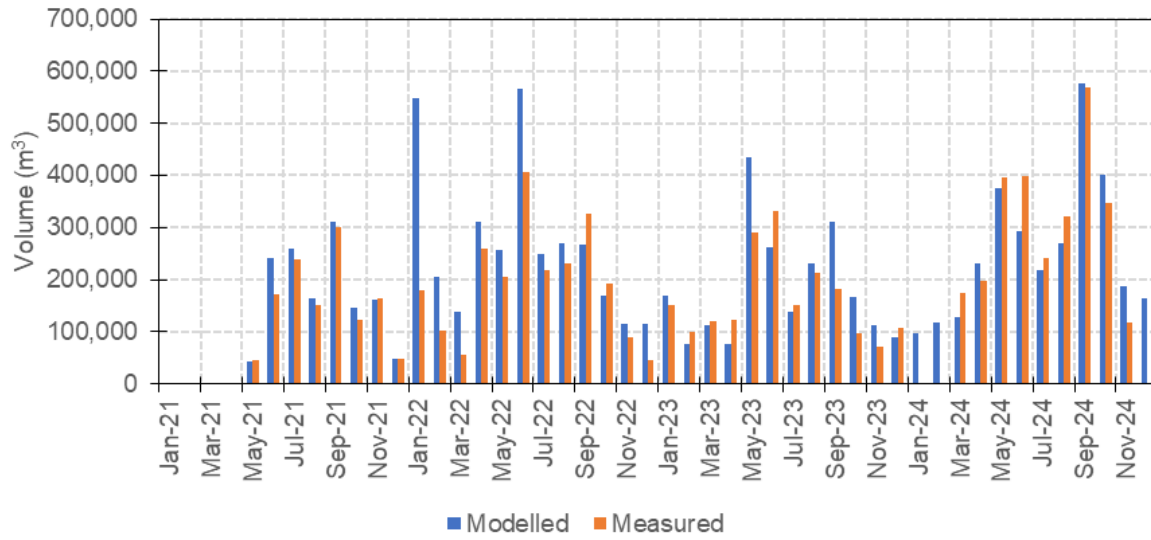


Figure 3-34: Modelled and measured monthly (top) and cumulative (bottom) pumped discharges from the IVR Attenuation Pond.

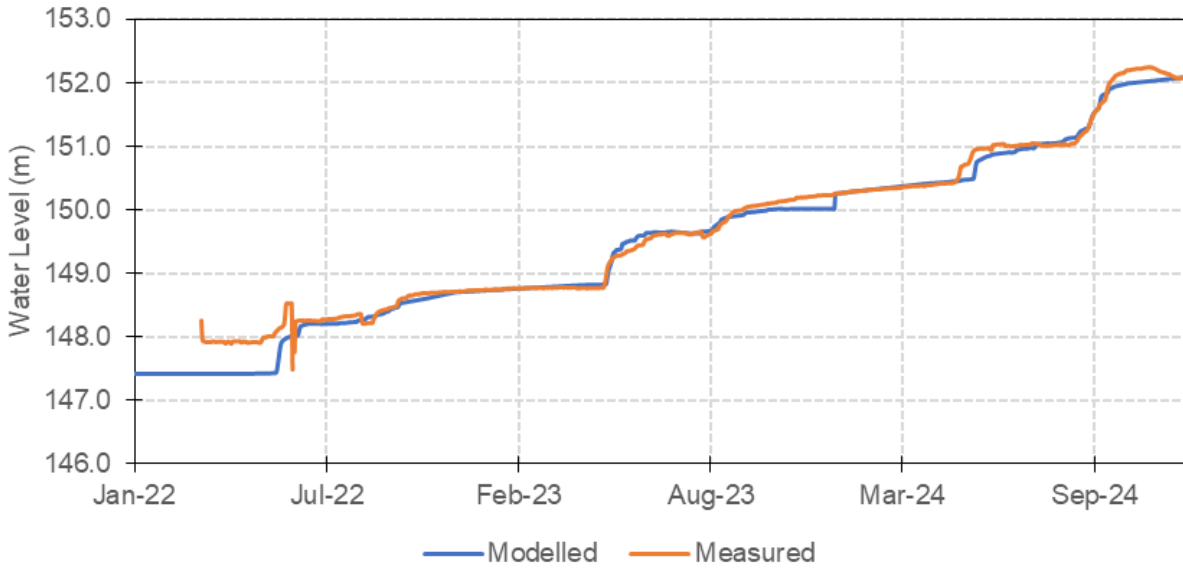


Figure 3-35: Modelled and measured daily water levels in the GSP-1 pond.

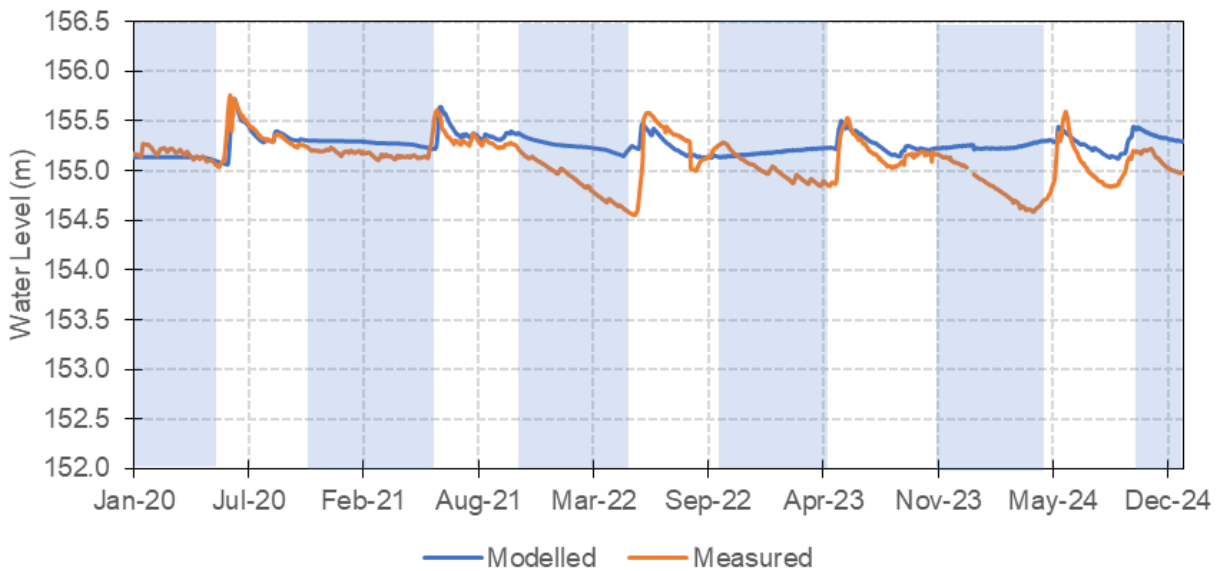


Figure 3-36: Modelled and measured daily water levels in Whale Tail South Basin. Winter period shown in highlighted blue areas.

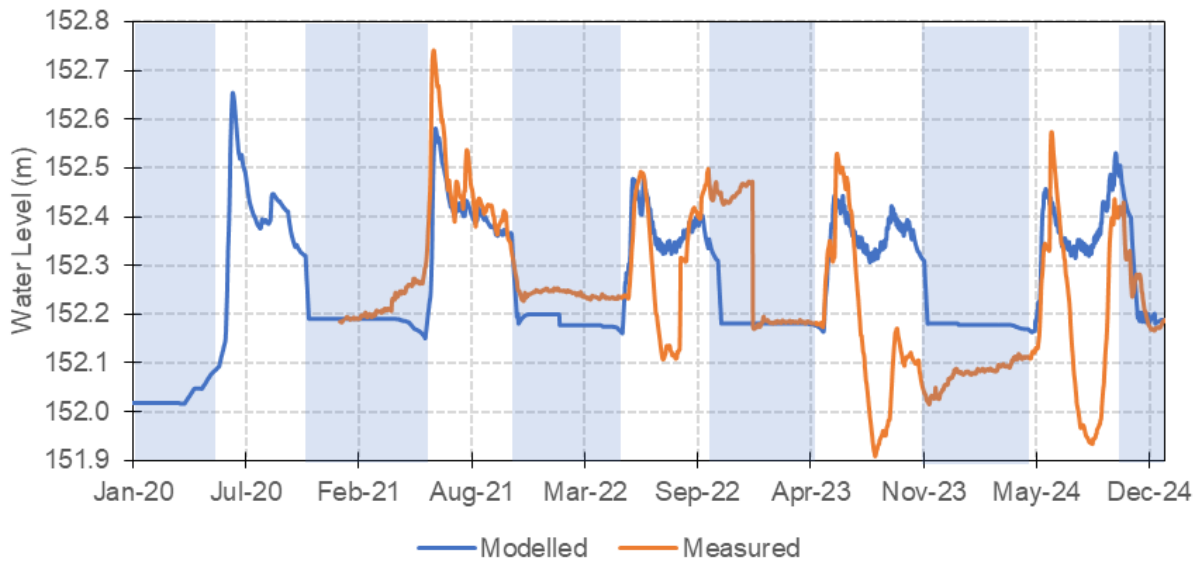


Figure 3-37: Modelled and measured daily water levels in Kangislulik Lake. Winter period shown in highlighted blue areas.

4. Water Quality Model Methods



AGNICO EAGLE

4. Water Quality Model Methods

4.1 Water Quality Parameters

Water quality parameters tracked in the current modelling are those listed in the Water License or presented in previous Annual Report water quality models. These parameters are listed in Table 4-1.

**Table 4-1:
Water Quality Parameters Tracked in Annual Report Model**

Parameter	
Al	Ni
As	Se
Cd	Zn
Cu	NH ₃ -N
Cr	NO ₃ -N
Fe	P
Pb	Cl
Mn	SO ₄
Hg	F

4.2 Baseline Water Quality Inputs

Water quality inputs for non-impacted catchment areas were developed using historic baseline water quality monitoring data. The baseline monitoring periods and locations for each lake are summarized in Table 4-2. The baseline monitoring period was selected based on the onset of baseline monitoring (2014-2016) to timing of perceived or known anthropogenic influence on the lake.

**Table 4-2:
Lake Baseline Water Quality Monitoring Summary**

Monitoring Location	Monitoring Station ID	Baseline Monitoring Period
Whale Tail Lake	WTS	2016-2017
Kangislulik Lake	MAM	2015-2017
Nemo Lake	NEM	2014-2019
A76	A76	2016-2018

Median baseline concentrations for key parameters were calculated for lakes A76, Whale Tail South, Kangislulik Lake and Nemo Lake. The median baseline water quality for lake A76 was also applied for lakes DS1, DS2, A18, A20 and A43, and is also applied as the natural runoff source term. Lake A76 was selected to represent non-contact water runoff because it is a relatively small lake located downstream of the mining area, monitored semi-monthly over the duration of the baseline monitoring period.

The lakes which directly receive mine effluent (Kangislulik Lake and Whale Tail South) were initialized within the model using observed monitoring data. That is, the average concentrations observed in January to February 2020 were applied to the lakes at the beginning of the modelling period (*i.e.*, January 2020).

4.3 Geochemical Source Terms

Geochemical source terms follow the same approach as previous model versions (Golder 2019b, 2021; Lorax, 2023; Lorax, 2024). The current model relies on the same approach to source term derivation as that described in Appendix C of Lorax (2024). A summary of source term development is provided below.

Underground Mine Water

- The underground mine water source terms represent the cumulative geochemical load of wall rock and rockfill contact water, and groundwater that is collected in sumps and eventually dewatered to the mine surface.
- Annual loads from underground wall rock and waste backfill were calculated using an upscaled kinetic test loading rates. Loading rates were scaled considering waste and ore production volumes, backfill schedule and composition of the underground waste rock and ore.
- The chemical load from groundwater infiltrating the underground is calculated based on predicted inflows to the underground and monitoring data from underground drillhole AMQ-WH-380.
- Salinity of groundwater infiltrating into the underground mine workings was predicted based on the TDS profile developed by Golder (2022), and the maximum depths that mine workings will penetrate below ground surface (Figure 4-1).
- Nitrogen source terms for the underground mine are based on nitrogen losses observed in the 2020-2021 monitoring data from the Tiriganiaq Underground at the Meliadine mine.

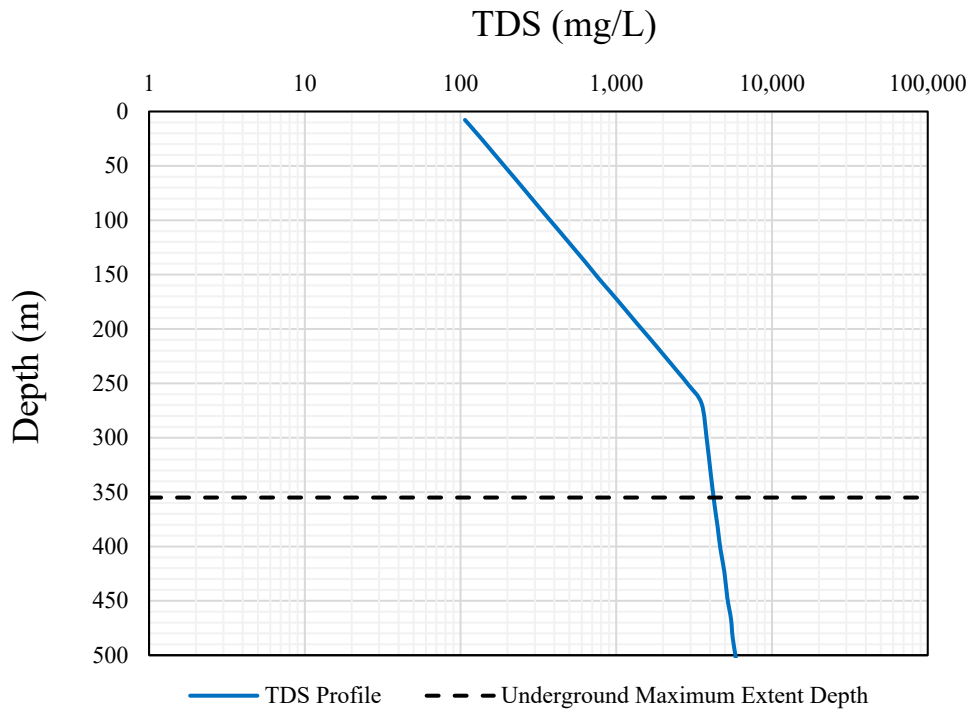


Figure 4-1: Underground subsurface total dissolved solids (TDS) depth profile modified from Golder (2022).

Waste Rock Storage Facilities

- Geochemical loading rates are based on upscaled kinetic tests following the same approach described in Golder (2019b). An additional scaling factor was introduced based on water quality monitoring data and pumping records. This ‘calibration factor’ was introduced to ensure model results validated against monitoring data from the early Operations period (2020-2024). The calibration factors were calculated on an annual basis, and the average value was applied in forward modeling (*i.e.*, 2025 onwards).
- The WRSF facilities will be progressively reclaimed using an NPAG/NML waste rock cover through Operations to mitigate potential acid-generation and metal leaching of PAG/ML waste rock. Loadings from the waste rock cover are based on the NPAG/NML waste rock loading rates and the progressive remediation schedule (Table 4-3).
- Nitrogen source terms for waste rock runoff are based on 2020-2022 monitoring data from the Whale Tail WRSF Collection Pond, corrected for runoff from the surrounding catchment area.

**Table 4-3:
 Assumed Whale Tail WRSF and IVR WRSF Cover Remediation Schedule**

Year	Whale Tail WRSF	IVR WRSF
	% Covered	% Covered
2017	0%	0%
2018	0%	0%
2019	0%	0%
2020	0%	50%
2021	18%	50%
2022	29%	25%
2023	29%	25%
2024	33%	25%
2025	37%	25%
2026	40%	25%
2027	40%	25%
2028	100%	100%

Note: progressive cover remediation schedule is modified from O’Kane (2019)

Open Mine Pits

- Geochemical loading rates for exposed pit walls were calculated by upscaling kinetic test loading rates, following the same approach as described in Golder (2019b). In addition, calibrated scaling factors were introduced, similar to WRSF source terms described above, to ensure model results validated against monitoring data from 2020-2022.
- Nitrogen source terms for pit wall runoff were calculated using average ammonia, nitrate, and nitrite concentrations from the IVR Pit sump monitoring data, corrected for runoff from the surrounding catchment area.
- The diffusive flux source term for arsenic was updated using saturated column kinetic test data. Diffusive flux source terms were developed to predict the initial release and gradual diffusive transport of As from stagnant pore water in the blast damaged walls and floors into the pit lake water column post-flooding.

Exposed Lake Beds

- The source terms for runoff over exposed dewatered Whale Tail Lake sediments were calculated from lake sediment kinetic tests.

NPAG/NML Stockpiles and Mine Facilities Area

- Geochemical loading rates for the NPAG/NML stockpile were calculated using the same assumptions and inputs as the WRSF source terms.
- The mine facilities runoff source term was calculated using the same approach as the NPAG/NML stockpile source term, with a shallower applied interaction depth of 2 m.
- Calibration factors developed for the Whale Tail WRSF source term were applied to the NPAG/NML stockpile and mine facilities areas source terms.

Solubility Controls

- Concentration limits for aluminum, iron and phosphorous were developed using the United States Geological Survey numerical modelling program PHREEQC (Parkhurst and Appello, 1999).
- Constant solubility caps were applied for aluminum (0.44 mg/L) and iron (0.072 mg/L) based on the mineral solubility of ferrihydrite [Fe(OH)₃] and aluminum hydroxide [Al(OH)₃].
- A variable solubility cap was developed for phosphorus based on hydroxyapatite [Ca₅(PO₄)₃OH] solubility at various calcium concentrations. The variable solubility cap was calculated based on predicted source term calcium concentrations and only applied when conservative upscaling concentrations exceeded the predicted phosphorous solubility limit.

Phosphorous Decay

- During Operations, the sewage treatment plant (STP) represents the primary source of phosphorus. Treated effluent from the STP is discharged to the Whale Tail Attenuation Pond (2020–2021) and IVR Attenuation Pond (2022–end of Operations).
- Phosphorous in the attenuation ponds is considerably lower than concentrations predicted from a conservative mixing model. The inferred mechanism for phosphorous loss in the attenuation ponds is the adsorption of phosphorus onto TSS and algal uptake. Therefore, a phosphorous removal rate of 90% is applied year-round for STP discharged to the Whale Tail Attenuation Pond and IVR Attenuation Pond.
- The O-WTP sludge will be disposed of within the Whale Tail WRSF, where it freezes back with the waste rock; mitigating any potential remobilization during the closure phases, as per the Whale Tail Mine Water Management Plan. Therefore, no consideration of P remobilization is considered in the WBWQM.

Nitrogen Decay

- Nitrogen species are subject to microbially-mediated transformation in aquatic systems, such as nitrification. Nitrification is a process in which ammonia (NH₃) is oxidized to nitrite (NO₂) and nitrate (NO₃) sequentially by nitrifying bacteria (Bernhard, 2010).
- Nitrification of NH₃ to NO₂ and ultimately NO₃ is applied to the Whale Tail South Basin, Kangislulik Lake, Whale Tail Attenuation Pond and IVR Attenuation Pond over the growing season (June-September) when water temperatures are warm and favorable for microbial growth.
- A nitrification rate of 0.001 mg/L/day is applied until NH₃ is reduced to the minimum concentration of 0.001 mg/L.

4.4 Whale Tail Pit and Dike Seepage

Shallow groundwater seepage through dike structures and into the Whale Tail Pit will occur throughout Operations and Active Closure. The shallow groundwater system is dominated by seepage originating from surrounding lakes (Whale Tail Lake South Basin and Kangislulik Lake West Basin) into dewatered areas of the mine site (e.g., Whale Tail North Basin and Whale Tail Pit). This is in contrast to the deep groundwater system beneath the permafrost which contains elevated TDS and interacts with the underground mine workings.

Shallow groundwater seepage through the existing Whale Tail Dike and into the Whale Tail Pit has been monitored since 2019. Source terms were calculated based on average observed concentrations at the groundwater seep monitoring location (ST-GW-ST-1) and Whale Tail Dike monitoring location (ST-GW-WT-17) from January 2019 to March 2023.

4.5 Water Quality Model Validation and Comparison to Previous Forecasts

In this section predicted concentrations are compared to actual monitoring data in attenuation ponds, mine pits and receiving lakes from 2021 to 2024 to validate water quality model forecasts. Model predictions include the 2024 Annual Report model (current), last years 2023 Annual Report Model, and the FEIS predictions.

Validation results for arsenic are shown in Figure 4-2 and Figure 4-3, while results for all other parameters are provided in Appendix C. Model projections are compared to both total and dissolved concentrations in these figures. Dissolved concentrations are more indicative of geochemical loading and metal leaching from mine facilities, whereas total concentrations are primarily influenced by TSS generated from sediment disturbance.

Overall, the 2024 Annual Report model predictions are similar to, or slightly overestimate, measured concentrations, particularly in the receiving environment of Whale Tail South Basin and Kangislulik Lake. The validation results suggest that the water quality model conservatively reproduces historical monitoring data from early operations, providing confidence in the reliability of future model predictions.

Previous years' forecasts overestimated arsenic concentrations in the receiving environment to a greater extent than the current model, likely due to assumptions regarding water treatment plant efficiency. Specifically, the O-WTP typically reduces arsenic concentrations to <0.05 mg/L, whereas previous model versions assumed treatment would lower arsenic levels only to the maximum discharge criterion of 0.1 mg/L.

Water quality in attenuation ponds and mine pits exhibits greater variability across model iterations, primarily due to differing assumptions about mine site water management and seasonal discharge volumes. For example, the 2023 Annual Report model assumed that mine contact water in 2024 would be routed primarily to IVR AP. However, this pond continued to receive mine contact water throughout 2024, resulting in concentrations exceeding last year's forecasted values.

The most notable discrepancy in model forecasts is for As concentrations in IVR Pit sump water between the FEIS and subsequent model iterations. The FEIS model overpredicted As concentrations in 2020, but underpredicted concentrations in 2021 and 2022. The 2024 Annual Report Model was calibrated to incorporate the monitoring data during this time period, and accurately capture the concentration range during this time period. The 2023 Annual Report Model did not include the mine pits as a model node, applying average monitoring concentrations instead. Mining activities ceased in IVR Pit in 2023, and in late 2023 and 2024 the pit was temporarily used to manage mine water before discharge through the IVR Attenuation Pond. This management was not envisioned in the FEIS or 2023 Annual Report Models.

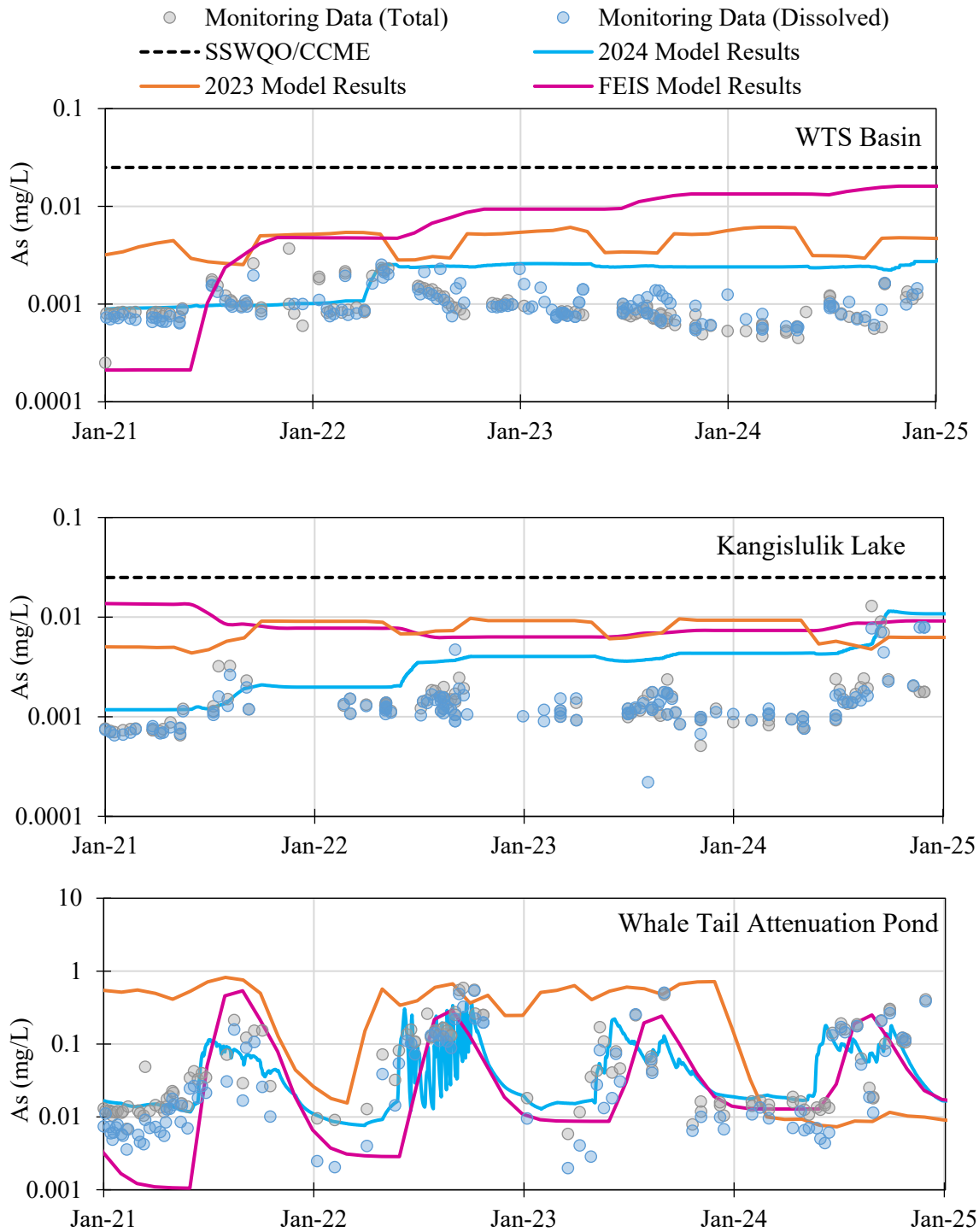


Figure 4-2: Water quality model results for arsenic in Whale Tail South Basin, Kangislulik Lake, and Whale Tail Attenuation Pond. Model forecasts show predictions from FEIS, 2023 Annual report, and the 2024 Annual Report. Receiving environment model nodes (Whale Tail South Basin and Kangislulik Lake) are compared against receiving environment water quality criteria (CCME/SSWQO).

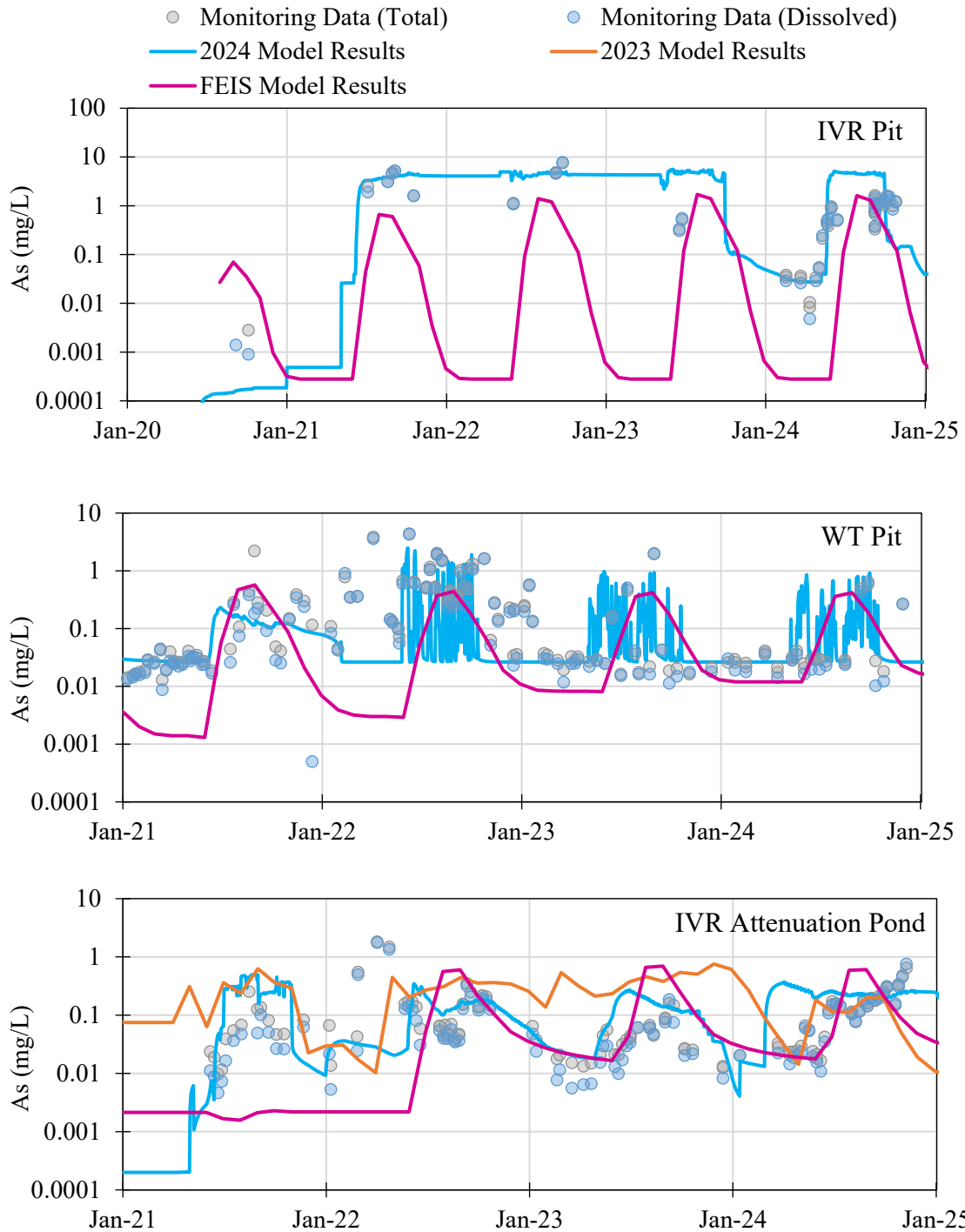


Figure 4-3: Water quality model results for arsenic at the WT Pit, IVR Pit and IVR Attenuation Pond. Model forecasts show predictions from FEIS, 2023 Annual Report, and the 2024 Annual Report.

5. Water Balance Model Results



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5. Water Balance Model Results

The water balance model predictions for key nodes and all mine phases are presented in this section. Results are provided for collection ponds, open mine pits, water treatment plant discharge volumes, and Active Closure pit lake flooding and water management.

5.1 Operations Phase

5.1.1 Collection Ponds

This section summarizes the water balance model results for the surface contact water collection ponds (Whale Tail WRSF Collection Pond, Whale Tail Attenuation Pond, IVR Attenuation Pond), and the underground mine contact water ponds (GSP-1 and IVR Pit).

5.1.1.1 Whale Tail Waste Rock Storage Facility Collection Pond

The Whale Tail WRSF Collection Pond is predicted to remain below the maximum operating level (154 m) for the duration of Operations and Active Closure (Figure 5-1). The effective water level fluctuates around elevation 153.5 masl once the Whale Tail WRSF Collection Pond Dike is breached and the pond is reconnected to Kangislulik Lake via gravity drainage. This pattern holds in all three precipitation scenarios considered for the remainder of the Operations phase (10th percentile, average and 90th percentile).

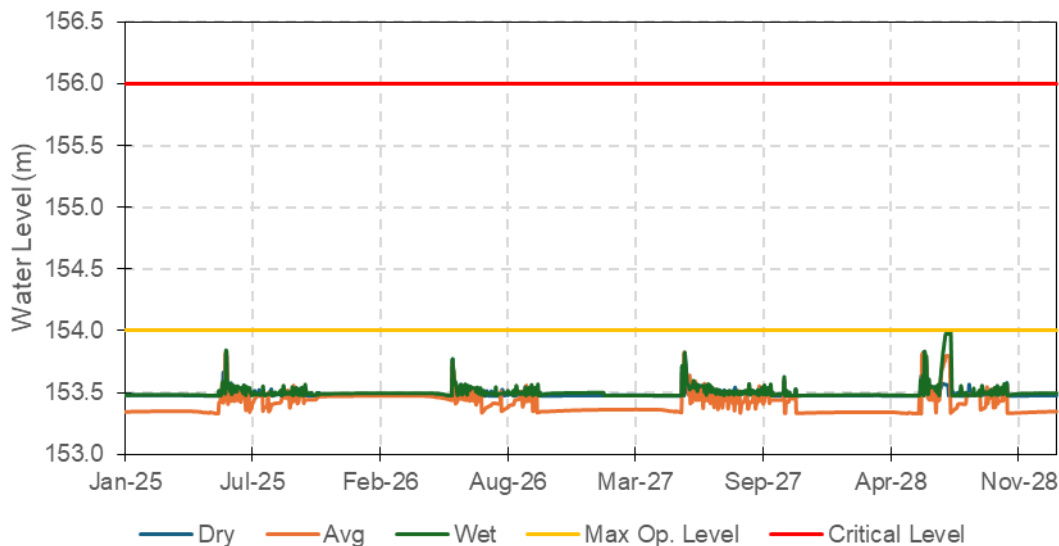


Figure 5-1: Predicted water levels and target operating levels in Whale Tail Waste Rock Storage Facility Collection Pond for the Operations phase under dry-, average and wet-year scenarios. Maximum operating level shown by orange line, and critical level shown by red line.

Early in mine Operations (2020) the contact water from the Whale Tail WRSF Collection Pond was pumped to the Whale Tail Attenuation Pond. A limited volume of the Whale Tail WRSF Collection Pond was pumped to the Whale Tail Attenuation Pond in 2021, with the majority routed to the IVR Attenuation Pond. From 2022 onwards, all Whale Tail WRSF Collection Pond contact water is routed to the IVR Attenuation Pond.

5.1.1.2 *Whale Tail Attenuation Pond*

The Whale Tail Attenuation Pond began operation in freshet of 2019 and operated as the primary Attenuation Pond until 2021. Due to this pond's location downgradient of the Whale Tail Dike and upgradient of Whale Tail Pit, it receives significant seepage volumes from the Whale Tail South Basin and is a source of groundwater seepage into Whale Tail Pit (see Section 2.2.1.1 for details). As such, to limit the overall volumes of diluted contact water that must be managed, the majority of site contact water that is actively managed (*i.e.*, pumped) was routed to the IVR Attenuation Pond in 2021, with all contact water sources except WT Pit pumped to the IVR Attenuation Pond thereafter. Thus, the water balance inputs to the Whale Tail Attenuation Pond from 2023 onwards consist of incident meteoric precipitation, WT Pit sump water, gravity drainage from the surrounding catchments, minimal pumped volumes from the WT WRSF Pond and ongoing seepage through the Whale Tail Dike. Over the Operations phase, seepage through the Whale Tail Dike is predicted to account for 50% of the inputs to the Whale Tail Attenuation Pond, and 42% are sourced from the WT Pit sump (Table 5-1 and Figure 5-3). The proportion of total pond inflows contributed by Whale Tail Dike Seepage increases to 53% under the dry-year scenario and reduces to 49% under the wet-year scenario.

The water levels in the Whale Tail Attenuation Pond are predicted to remain within the operational criteria for the duration of Operations (Figure 5-2) and begin to rise in July 2028 once Operational water management activities have ceased. This pattern holds in all three precipitation scenarios considered for the remainder of the Operations phase (10th percentile, average and 90th percentile).

**Table 5-1:
 Annual Inflows to the Whale Tail Attenuation Pond during the Operations phase
 under the average year precipitation scenario.**

Pumped From:	WT_WRCP	WT Pit	IVR Pit	Meteoric Inputs ¹	Gravity Drainage ²	WT Dike Seepage	Minor Sumps ³
Year	m ³						
2025	0	1,349,925	0	67,738	117,999	1,302,952	0
2026	0	1,226,317	0	73,521	129,676	1,303,626	0
2027	0	1,127,579	0	70,935	139,771	1,304,168	0
2028	0	579,703	0	66,389	127,937	1,066,041	0
Average	0	1,070,881	0	69,646	128,846	1,244,197	0

¹ Meteoric inputs include rainfall and snowmelt on the pond surface, and surrounding bank runoff

² Gravity drainage from surrounding catchments, including Camp, Warehouse Pad, Ore Stockpile #1 and #2, NPAG Stockpile and SANA Crusher Pad

³ Minor sumps are A47, A49, A53, Road 7, Mammoth DS, and Quarry 1

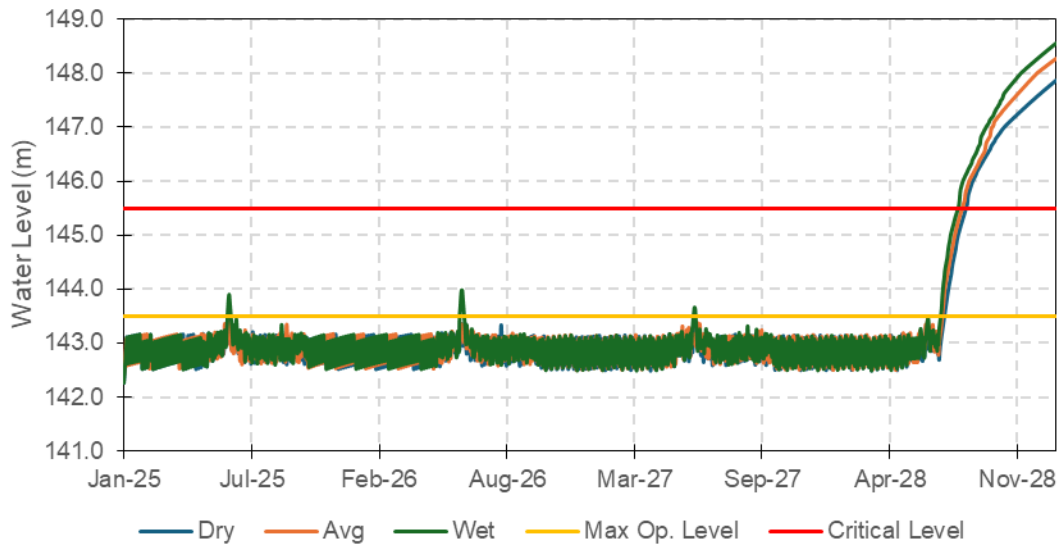


Figure 5-2: Predicted water levels and target operating levels in the Whale Tail Attenuation Pond for the Operations phase under dry-, average and wet-year scenarios. Maximum operating level shown by orange line, and critical level shown by red line.

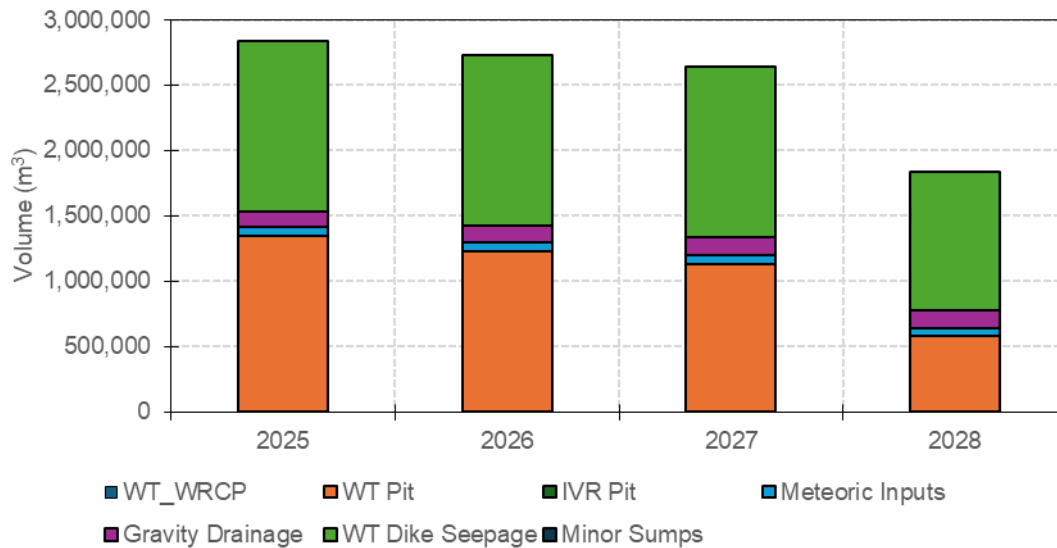


Figure 5-3: Annual inflow volumes to the Whale Tail Attenuation Pond during the Operations phase for the average year precipitation scenario.

5.1.1.3 *IVR Attenuation Pond*

The IVR Attenuation Pond began operating for freshet of 2021 and is currently the primary contact water Attenuation Pond at the Whale Tail Mine. It receives gravity drainage from the IVR WRSF, and pumped flows from the Whale Tail WRSF Collection Pond, Whale Tail Pit, IVR Pit, minor sumps and the Whale Tail Attenuation Pond. Water levels in the IVR Attenuation Pond are predicted to remain below the maximum operating water level in all remaining years of Operations (Figure 5-4). This pattern holds in all three precipitation scenarios considered for the remainder of the Operations phase (10th percentile, average and 90th percentile).

For the remaining years of Operations, the various mine contact water management sumps and the Whale Tail Attenuation Pond are the primary inputs to the IVR Attenuation Pond, comprising 18% and 66% of the total inflows, respectively (Table 5-2 and Figure 5-5).

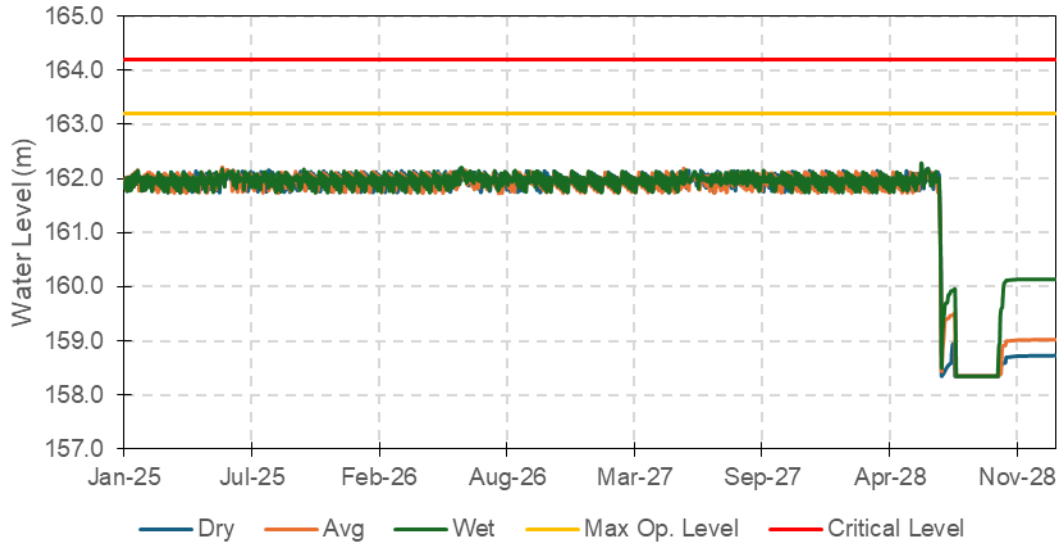


Figure 5-4: Predicted water levels and target operating levels in the IVR Attenuation Pond for the Operations phase under dry-, average and wet-year scenarios. Maximum operating level shown by orange line, and critical level shown by red line.

**Table 5-2:
 Annual Inflows to the IVR Attenuation Pond during the Operations Phase under the average year precipitation scenario.**

Pumped From:	WT_WRCP	IVR WRSF	WT Attenuation Pond	WT Pit	IVR Pit	STP	Meteoric Inputs ¹	Gravity Drainage ¹	Minor Sumps ²
Year	m³								
2025	138,000	17,909	2,193,408	14,593	165,228	47,450	133,979	29,983	577,536
2026	154,560	13,518	2,101,248	16,170	46,460	47,450	147,133	31,376	577,536
2027	215,280	48,474	2,009,088	16,170	46,185	47,450	140,739	35,048	577,536
2028	99,360	29,749	1,032,192	9,867	28,647	25,124	138,337	29,119	287,977
Average	151,800	27,413	1,833,984	14,200	71,630	41,869	140,047	31,382	505,147

Notes:

- ¹ Meteoric inputs include rainfall and snowmelt on the pond surface, and surrounding bank runoff
- ² Gravity drainage from surrounding catchments, including Ore Stockpile #3 and Pad K extension
- ³ Minor sumps are A47, A49, Road 7, and Mammoth DS

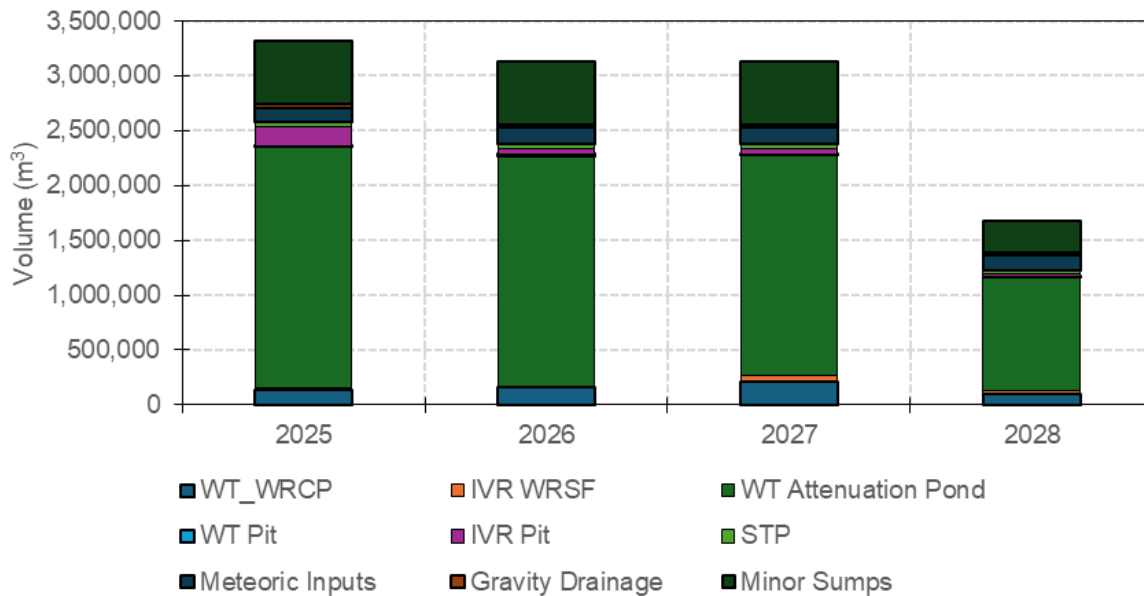


Figure 5-5: Annual inflow volumes to the IVR Attenuation Pond during the Operations phase under the average year precipitation scenario.

5.1.1.4 GSP-1 and IVR Pit East Lobe

GSP-1 is currently the primary groundwater storage pond at the Whale Tail Mine. The pond currently operates as a closed loop system with all collected water (including incident precipitation and snowmelt) directed back underground for use as drilling brine. A positive water balance is not predicted to occur for this pond until mid-June 2026, when groundwater inflows to the underground mine are predicted to significantly increase. This pattern holds in all three precipitation scenarios considered for the remainder of the Operations phase (10th percentile, average and 90th percentile). Following this, the additional water collected in this pond will be pumped to the IVR Pit East Lobe (see Section 3.6.5) for storage to maintain GSP-1 well below the maximum operating water level. A total of 96,757 m³ (average year) and 125,581 m³ beginning in October 2025 (wet-year) is predicted to be pumped from GSP-1 to the East Lobe of the IVR Pit over the remainder of the Operations phase (Table 5-3).

The IVR Pit is located entirely within permafrost and has a limited upgradient catchment beginning in June 2026 leading to a simple water balance. Surface runoff from the surrounding catchment areas dominated the pit water balance earlier in Operations, switching to pit wall runoff dominating as the open pit comprises more of the total pit catchment.

**Table 5-3:
 Annual Inflows to the IVR Pit during the Operations Phase**

Year	West Lobe Pit Wall Runoff	West Lobe Gravity Drainage ¹	Precipitation on West Lobe Pit Lake	GSP-1 to IVR Pit East Lobe	East Lobe Pit Wall Runoff	East Lobe Gravity Drainage ¹	Precipitation on East Lobe Pit Lake
	m ³						
2024	32,593	4,708	277	0	21,742	3,017	1,048
2025	37,266	6,441	274	0	21,207	4,128	1,618
2026	33,124	4,546	257	22,011	18,525	2,914	2,214
2027	52,954	8,871	431	51,071	26,421	5,686	10,337
2028	39,666	34,483	12,027	22,348	10,710	4,018	5,088
Average	39,121	11,810	2,653	19,086	19,721	3,953	4,061

Notes:

¹ Gravity drainage from all surrounding disturbed and non-contact catchments.

At the end of the Operations phase in June 2028, 115,300 m³ of underground mine water is stored in GSP-1, and 752,643 m³ in the IVR Pit lake, with approximately 89% of this stored water of underground provenance (via groundwater inflows to the underground mine [13%], and inflows through the Whale Tail Pit Crown Pillar [76%]). The East Lobe IVR Pit wall runoff and surrounding catchment runoff contributes 9% of the total (Table 5-3).

Under the dry- and wet-year scenarios, the volume of underground mine water stored in the East Lobe of IVR Pit is 637,671 m³ and 819,499 m³, respectively.

These volumes are pumped into the underground void in July 2028, at the onset of Active Closure. Once this has been completed, GSP-1 will be backfilled with NPAG/NML waste rock, and the remainder of the underground mine will be filled with water pumped from the IVR Attenuation Pond and Whale Tail South Basin.

5.1.2 Whale Tail Pit Water Balance

The Whale Tail Pit annual water balance for the Operations phase is presented in Table 5-4. During Operations, groundwater seepage inflows through the south wall from the Whale Tail South Basin (and the Whale Tail Attenuation Pond, to a lesser degree; Lorax 2024b) dominate the total pit inflows, ranging from approximately 80% to 90%, dropping to approximately 70% of total inflows in 2027 and 2028 (Table 5-4). Passive surface runoff from the surrounding catchments and incident precipitation/snowmelt on the pit walls and floor contribute the remainder of the inflows (Table 5-4). As this seepage inflow dominates the Whale Tail Pit water balance, these proportions show minimal variability between the three precipitation scenarios.

**Table 5-4:
 Annual Inflows to the Whale Tail Pit during the Operations phase for the average
 year precipitation scenario.**

Year	Pit Wall ¹	Gravity Drainage ²	Precipitation on Pit Lake	Groundwater Inflow	Whale Tail Pit to Crown Pillar	Groundwater Inflow
	m ³					% of Total Flows
2025	101,883	53,975	263	1,208,150	0	89%
2026	112,477	56,959	304	1,204,500	132,085	80%
2027	112,477	60,580	304	1,251,950	281,895	73%
2028	82,782	56,152	1,588	624,260	144,926	69%
Average	102,405	56,916	615	1,072,215	139,726	78%

Notes:

¹ Pit wall runoff and pit lake meteoric inputs are a combination of pit wall runoff and inputs for both the main lobe and Pushback

² Gravity drainage represents all catchments surrounding the pit that drain by gravity to the pit

5.1.3 Water Treatment and Effluent Discharge Volumes

This section summarizes the relative proportion of O-WTP influent derived from the two Attenuation Ponds, and the predicted treated effluent discharges to Kangislulik Lake and Whale Tail South Basin during the remainder of the Operations period, for the three precipitation scenarios considered.

The IVR Attenuation Pond is the source of 96% of total influent to the O-WTP for the remainder of the Operations phase under the average and wet-year scenarios, and 95% of total inflows under the dry-year scenario. More limited inputs from the Whale Tail Attenuation Pond are expected as the IVR Attenuation Pond will be the primary repository for pumped contact water flows, except for the WT Pit sump, which continues to be pumped to the Whale Tail Attenuation Pond (Table 5-5).

The relative proportion of total annual treated effluent discharge is weighted towards the open water season discharges to Kangislulik Lake (52% of the total discharges), with the remaining 48% of treated effluent discharged to the Whale Tail South Basin under the average year precipitation scenario (Table 5-5). Under the dry-year and wet-year scenarios, this split shifts to 53%/47%.

For the Operations period overlapping with the 2018 FEIS (2025 only), the predicted treated effluent discharges to Whale Tail South Basin are approximately 2% higher under the LOM mine plan relative to the 2018 FEIS predictions for all precipitation scenarios (Table 5-6).

**Table 5-5:
 Annual Effluent Discharge Volumes and Proportions of Total Discharge for the
 Operations Phase under the average year precipitation scenario.**

Year	O-WTP Influent Source (m ³)		Water Treatment Plant Discharge To: (m ³)	
	WT AP to WTP	IVR AP to WTP	To WT S. Basin	To Kangislulik Lake
2025	138,600	3,120,000	1,605,000	1,653,600
2026	131,040	2,964,000	1,472,640	1,622,400
2027	126,000	2,932,800	1,405,200	1,653,600
2028	80,640	1,591,200	860,640	811,200
Total	476,280	10,608,000	5,343,480	5,740,800
% Total	4%	96%	48%	52%

**Table 5-6:
 Annual Effluent Discharge Volumes for LOM (all scenarios) and 2018 FEIS
 Predictions (2025).**

Year	Current Model		2018 FEIS
	Water Treatment Plant Discharge (m ³) To:		
	Whale Tail South Basin	Kangislulik Lake	Whale Tail South Basin
2025	1,605,000	1,653,600	1,572,541

On an annual basis, the total volumes reporting to the O-WTP vary relatively more for the IVR Attenuation Pond than for the Whale Tail Attenuation Pond (Figure 5-6), which is in turn reflected in the total treated effluent discharged to Whale Tail South Basin and Kangislulik Lake (Figure 5-7).

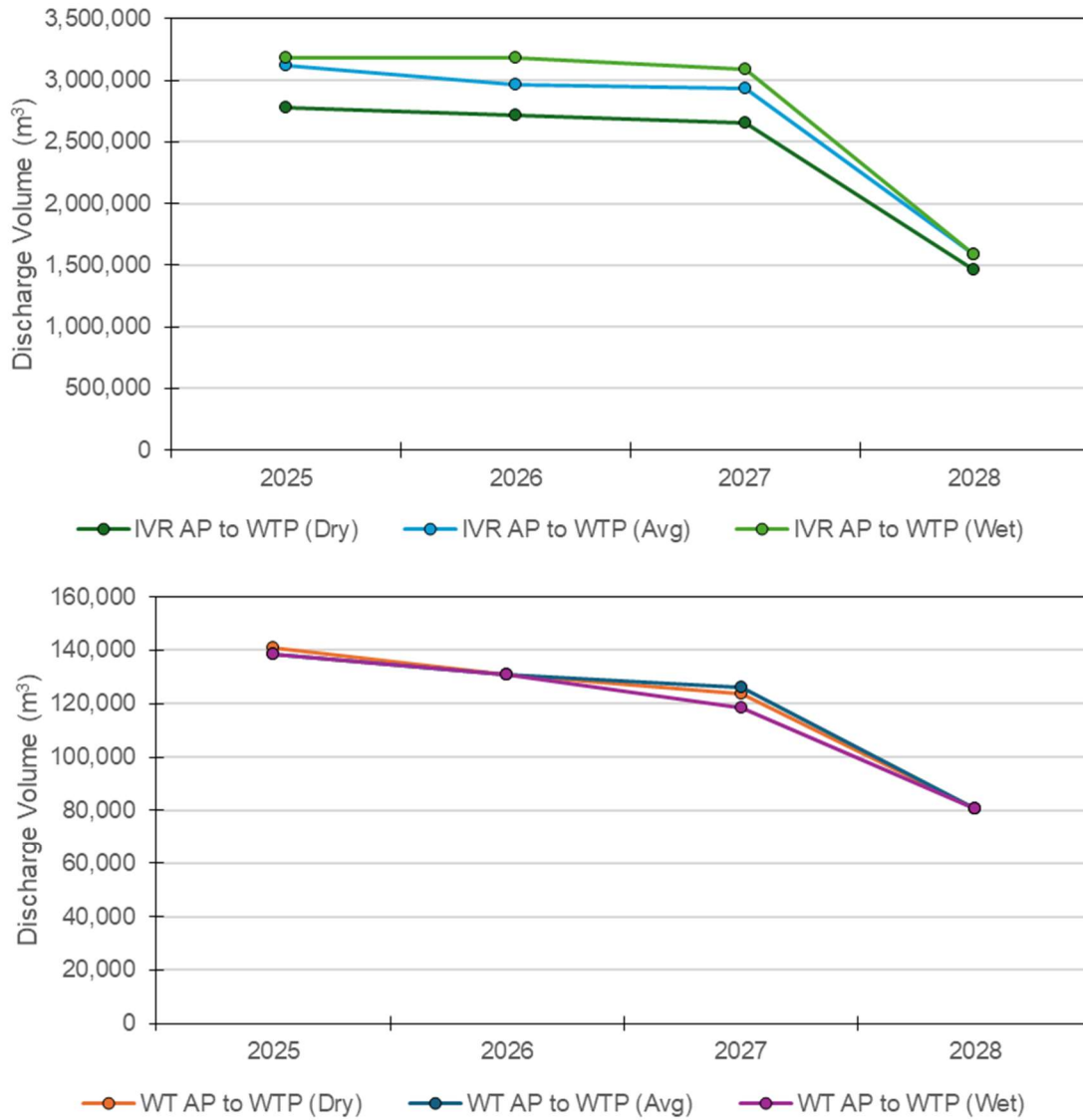


Figure 5-6: Annual inflow volumes to the Operational Water Treatment Plant from the IVR Attenuation Pond (top) and the Whale Tail Attenuation Pond (bottom) for the three precipitation scenarios.

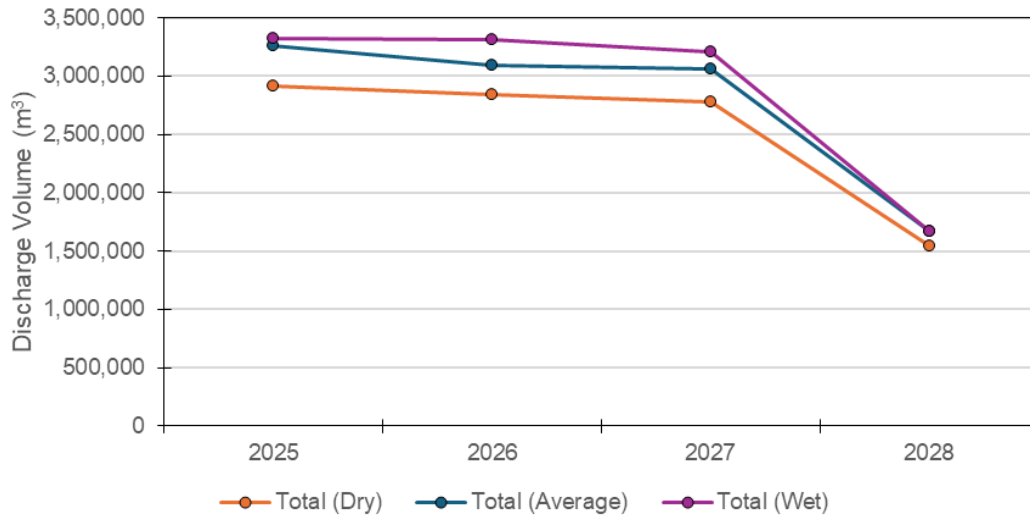


Figure 5-7: Total annual treated effluent discharge volumes for the three precipitation scenarios.

5.2 Active Closure Phase

During the first six years of Active Closure (including Q3 and Q4 2028) while the O-WTP is still active, the IVR Attenuation Pond remains in use as a collection pond for water routed to the O-WTP. During this period, the primary contact water inputs to this pond are the collected pit wall runoff from the Whale Tail and IVR Pits (see Section 3.9), water from the Whale Tail WRSF Collection Pond, treated effluent from the STP, and runoff/interflow from the IVR WRSF.

The underground mine voids (1.67 Mm³) are actively filled in July 2028 by pumping water from GSP-1, IVR Pit, and the IVR Attenuation Pond, with the range of underground and Whale Tail South Basin inputs shown in Table 5-7 for the three precipitation scenarios considered. The open pits are filled from July 2028 to July 2045 first by passive runoff and then by pumping from the Whale Tail South Basin, Whale Tail WRSF Collection Pond, and the O-WTP effluent in the first six years of Active Closure.

**Table 5-7:
 Total Volumes Pumped Underground at EOM (July 2028).**

Pumped To:	Underground	
	IVR Pit	WT S. Basin
Pumped From:	m ³	
Climate Scenario	m ³	
Dry Year	996,000	685,200
Average Year	1,080,000	616,680
Wet Year	1,176,000	548,160

The sequence of mine void flooding is as follows, and as summarized in Table 5-9, Figure 5-9, and Table 5-10 for the average year precipitation scenario:

- Underground mine active flooding occurs during July 2028.
 - The primary source of water is groundwater stored in IVR Pit (752,600 m³), water from the Whale Tail S. Basin (616,700 m³), remaining contact water in the IVR Attenuation Pond (207,400 m³), and finally the remaining volume stored in GSP-1 (120,000 m³).
- IVR Pit active flooding begins in July 2028 and is filled to the spill point elevation of 123 masl by October 2030 (Figure 5-8).
 - Water pumped from the Whale Tail South Basin is the primary source (11.7 Mm³), followed by treated effluent discharge from the O-WTP (1.46 Mm³), and lastly by water pumped from the Whale Tail WRSF Collection Pond (369,800 m³). Note that after 2032, the O-WTP discharge directed to the IVR Pit is combined with the other overflow from IVR Pit into the WT Pit. Surrounding catchment runoff (685,000 m³) and pit wall runoff (65,000 m³) contribute to the remainder of pit inflows over this period.
- Whale Tail Pit active flooding begins in June 2031, and is filled to the spill point elevation of 123 masl by July 2039;
 - Water pumped from the Whale Tail South Basin is the primary source (28.3 Mm³), followed by water pumped from the Whale Tail WRSF Collection Pond (1.89 Mm³), and lastly, groundwater inflows to the pit (3.04 Mm³). These groundwater inflows during Active Closure are based on Lorax (2024b) and assume that permafrost develops on the South Wall late in Operations, preventing groundwater ingress. This permafrost is predicted to melt as the pit fills, leading to increasing groundwater inflows until the Whale Tail pit is full to the spill elevation (Figure 5-8). The remainder of the pit inflows are contributed from the surrounding catchment runoff (1.55 Mm³), uncaptured pit wall runoff (383,600 m³), overflow from the IVR Pit Lake (2.85 Mm³) and the Whale Tail Attenuation Pond (3.71 Mm³).
- Once the Whale Tail Pit and IVR Pit lakes join above the 123 m sill elevation, the Whale Tail /IVR Complex is formed. This occurs in August 2039;
 - Water pumped from the Whale Tail South Basin is the primary source (17.5 Mm³), followed by water pumped from the Whale Tail WRSF Collection Pond (1.25 Mm³). Surrounding catchment runoff (1.34 Mm³), uncaptured pit

wall runoff (108,000 m³), and overflow from the IVR Pit Lake (1.18 Mm³) contribute to the remainder of pit inflows.

- Active flooding of the Whale Tail North Basin continues until July 2045 when the final water level of 153.5 masl is reached (Figure 5-9).
 - Water pumped from the Whale Tail South Basin is the primary source (2.92 Mm³), followed by water pumped from the Whale Tail WRSF Collection Pond (226,000 m³). Surrounding catchment runoff (1.24 Mm³), uncaptured pit wall runoff (25,000 m³), and overflow from the IVR Pit (416,000 m³) contribute the remainder of pit inflows.

The water level will drop in Whale Tail South Basin as a result of pumping during Active Closure (Figure 5-9). This will result in the Lake A18 complex becoming disconnected from Whale Tail South basin in September 2028 when water levels are predicted to drop below 154 masl. This will allow Lake A18 Sill to be built in early 2029 and commissioned for freshet 2029. The fully flooded Post-Closure mine pits are depicted in Figure 3-31.

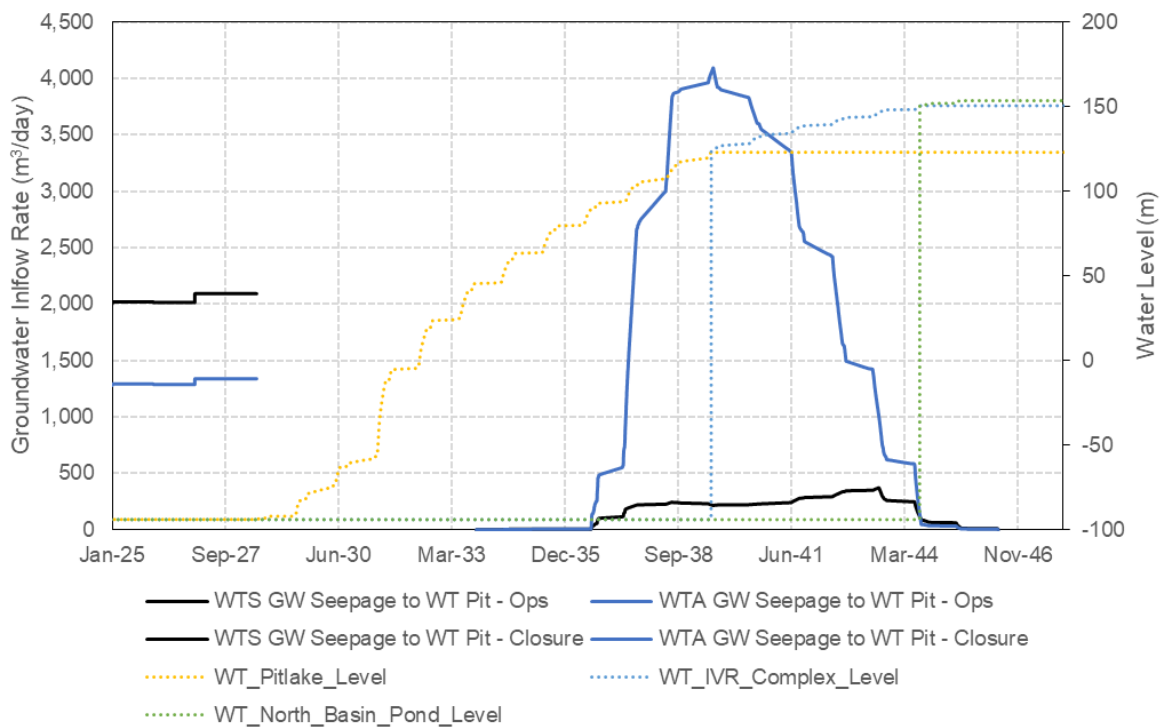


Figure 5-8: Seepage from Whale Tail Attenuation Pond and Whale Tail South Basin into Whale Tail Pit, as a function of Whale Tail Pit water level.

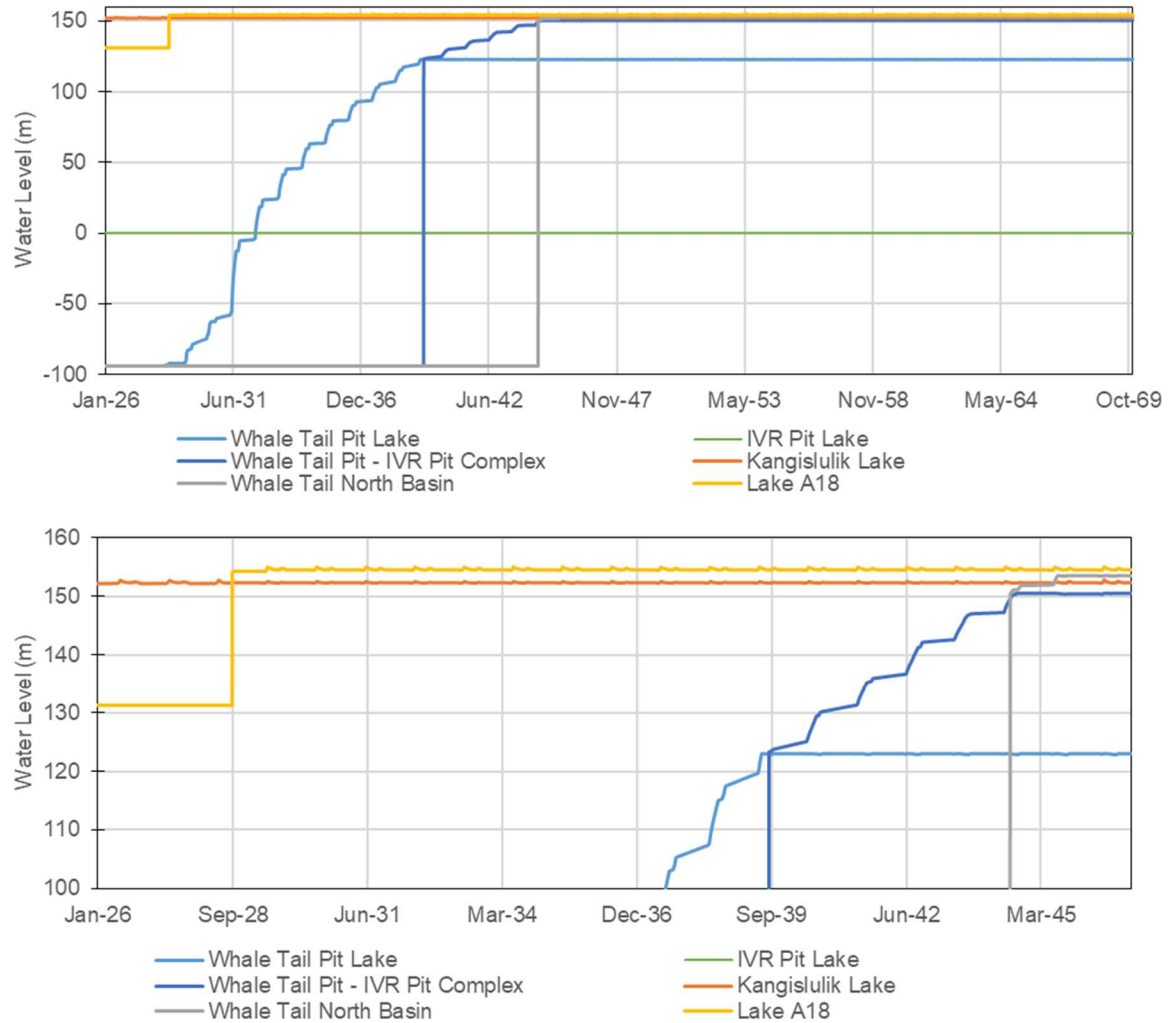


Figure 5-9: Closure lake water levels for the full range during the flooding period (top panel) and focused on the final lake elevations (bottom panel).

A total of 1.46 Mm³ of water will require treatment over a 6-year period (2028-2033) – discharged to IVR Pit and Whale Tail Pit. Captured runoff from the WT Pit and IVR Pit walls comprises 22% of the total volume treated during the early Active Closure phase (Table 5-8).

**Table 5-8:
 Sources of Water Routed to Active Treatment During Active Closure Phase**

Year	Total Catchment Runoff	IVR WRSF	Captured WT Pit Wall	Captured IVR Pit Wall	STP	IVRAP to WTP
2028	198,418	29,749	26,388	11,779	25,124	98,467
2029	175,278	29,232	66,941	24,426	2,208	272,913
2030	175,860	25,005	65,282	17,638	2,208	264,626
2031	198,471	8,688	59,082	14,793	2,208	235,974
2032	233,215	17,886	52,526	14,987	2,208	272,027
2033	256,181	58,291	47,275	14,992	2,208	313,736
Total	1,237,423	168,851	317,494	98,615	36,164	1,457,743

Note: Sum of inputs greater than volume routed to O-WTP due to evaporative losses from pond surface.

The total volume pumped over the 18-year closure period is 3.74 Mm³ from the Whale Tail WRSF Collection Pond, 1.46 Mm³ from the O-WTP (discharged to the IVR Pit), and 61.1 Mm³ from the Whale Tail South Basin (Table 5-9). A total of 15.1 Mm³ is required to fill the IVR Pit, including the additional surface runoff from surrounding catchments and meteoric inputs to the pit shell (Table 5-9). The Whale Tail Pit requires a total of 24.9 Mm³ to fill to the sill elevation with the IVR Pit (123 masl), which includes surface runoff from surrounding catchments, groundwater inflows, and meteoric inputs to the pit shell (Table 5-4). The Whale Tail North Basin requires an additional 31.3 Mm³ to fill from the 123 m sill elevation to the final closure elevation of 153.5 m. The fully flooded Post-Closure mine pits are depicted in (Figure 3-31).

In addition to the actively pumped volumes, water also reports to the open pits via surrounding catchment runoff, pit wall runoff, meteoric (rainfall and snowmelt) inputs to the flooded pit surfaces, and overflow from adjacent flooded reservoirs (e.g., Whale Tail Attenuation Pond; Table 5-10).

In total, during Active Closure 65.7 Mm³ is pumped into the open pits, 3.95 Mm³ enters Whale Tail pit via groundwater inflows, and 13.8 Mm³ flows into the open pits via passive drainage and meteoric inputs (Table 5-9). Therefore, the total volume required to fill the WT and IVR Pit complexes, including the Whale Tail North Basin to the closure elevation (153.5m), is 83.45 Mm³.

**Table 5-9:
 Active Closure Mine Void Flooding Sequence and Pumped Water Sources**

Pumped To:	Underground		IVR Pit			WT Pit		WT/IVR Pit Complex		WT N. Basin	
Pumped From:	IVR Pit ¹	WT S. Basin	WT WRCP	O-WTP ²	WT S. Basin	WT WRCP	WT S. Basin	WT WRCP	WT S. Basin	WT WRCP	WT S. Basin
Year	m ³										
2028	1,080,000	616,680	27,600	98,467	4,590,840	0	0	0	0	0	0
2029	0	0	176,640	272,913	3,821,891	0	0	0	0	0	0
2030	0	0	165,600	264,626	3,271,749	5,520	0	0	0	0	0
2031	0	0	0	235,974	0	154,560	3,337,711	0	0	0	0
2032	0	0	0	272,027	0	138,000	3,333,960	0	0	0	0
2033	0	0	0	313,736	0	259,440	3,406,900	0	0	0	0
2034	0	0	0	0	0	231,840	3,466,316	0	0	0	0
2035	0	0	0	0	0	242,880	3,585,232	0	0	0	0
2036	0	0	0	0	0	226,320	3,358,025	0	0	0	0
2037	0	0	0	0	0	276,000	3,422,171	0	0	0	0
2038	0	0	0	0	0	242,880	3,365,121	0	0	0	0
2039	0	0	0	0	0	115,920	1,072,440	132,480	2,257,031	0	0
2040	0	0	0	0	0	0	0	220,800	3,334,136	0	0
2041	0	0	0	0	0	0	0	215,280	3,382,163	0	0
2042	0	0	0	0	0	0	0	242,880	3,315,853	0	0
2043	0	0	0	0	0	0	0	303,600	3,489,765	0	0
2044	0	0	0	0	0	0	0	138,000	1,747,680	93,840	1,650,152
2045	0	0	0	0	0	0	0	0	0	132,480	1,271,040
2046	0	0	0	0	0	0	0	0	0	0	0
Total	1,080,000	616,680	369,840	1,457,743	11,684,481	1,893,360	28,347,875	1,253,040	17,526,627	226,320	2,921,192

Notes:

¹ Total volume comprised of underground mine water stored in GSP-1 and IVR Pit East Lobe and contact water from IVR Attenuation Pond.

² Represents the conjoined Whale Tail and IVR Pit complex above the 123 m sill elevation.

**Table 5-10:
 Active Closure Mine Void Inflows from Pit Wall and Natural Catchment Runoff, and Adjacent Reservoir Inflows**

Year	IVR Pit		WT Pit				
	Catchment Runoff	Uncaptured Pit Wall Runoff	Catchment Runoff	GW Inflow	Uncaptured Pit Wall Runoff	IVR Pit Overflow	WT Attenuation Pond Overflow
2028	106,304	42,336	57,740	624,260	73,126	0	0
2029	281,836	13,152	51,528	0	36,045	0	176,857
2030	296,824	9,497	54,882	0	35,152	18,286	444,924
2031	303,151	7,965	79,019	0	31,813	469,348	467,203
2032	297,432	8,070	124,084	0	28,283	491,208	516,777
2033	305,122	8,073	152,688	247	25,456	475,095	525,092
2034	311,516	23,059	167,762	2,365	66,035	240,412	670,626
2035	321,764	23,059	183,973	3,849	60,080	244,052	732,565
2036	306,358	22,762	188,557	233,094	52,784	231,229	589,022
2037	308,504	23,060	205,055	884,650	46,710	234,857	212,465
2038	315,131	22,771	222,423	1,438,277	38,772	238,159	0
2039	305,121	22,334	228,647	766,056	33,687	223,181	0
2040	320,195	17,697	243,862	0	27,409	220,827	0
2041	325,576	14,216	254,570	0	21,289	228,189	0
2042	327,389	11,484	258,184	0	19,160	233,714	0
2043	331,510	8,883	267,064	0	14,572	221,088	0
2044	336,101	6,823	273,391	0	11,286	211,394	0
2045	342,453	2,114	285,037	0	4,818	204,888	0
2046	352,143	1,861	291,017	0	3,866	205,451	0
Total	5,794,430	289,216	3,589,482	3,952,800	630,344	4,391,378	4,335,531

6. Water Quality Model Results



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6. Water Quality Model Results

Water quality model results for mine site water, treated effluent from the O-WTP, and receiving lakes during Operations, Active Closure, and Post-Closure are presented in this section. Model predictions shown in figures represent daily results, while tables in this section represent monthly mean values. All constituents are presented as dissolved concentrations similar to the 2018 Final Environmental Impact Statement (FEIS) model (Golder, 2018b and 2019e).

Effluent predictions at the end of pipe of the O-WTP are screened against the NWB Water License/MDMER effluent limits during Operations. Water quality predictions in the receiving environment and downstream lakes are compared against the following criteria throughout all mine phases:

- Long-term water quality guidelines for the protection of aquatic life established by the Canadian Council of Ministers of the Environment (CCME); and,
- Site-specific water quality objective (SSWQO) of 0.025 mg/L for arsenic

The full water quality model results screened against relevant guidelines are provided in Appendix C. Overall, the results show that all parameters are predicted to remain below their respective guidelines in receiving lakes. Time series predictions for arsenic are presented in the following sections and compared against previous model results, the 2023 Annual Report Model and FEIS predictions. Complete time series results for all parameters can be found in Appendix C.

6.1 Operations

During Operations, all surface contact water generated from mine facilities is collected and routed through a series of sumps and attenuation ponds and treated by the O-WTP prior to discharge to the receiving environment. Arsenic predictions in open pit sumps (Whale Tail Pit and IVR Pit), attenuation ponds (Whale Tail Attenuation Pond, IVR Attenuation Pond), O-WTP treated effluent, and receiving lakes are presented in the following subsections.

6.1.1 Whale Tail Pit and IVR Pit

IVR Pit receives pit wall runoff and natural runoff from the surrounding catchment. Beginning in 2026, the IVR Pit East Lobe will start receiving underground mine water and will no longer be dewatered to attenuation ponds or discharged to the receiving environment. Starting in June 2026, the only IVR Pit water managed through attenuation ponds will originate from the IVR West Lobe. This change in water management will

reduce the overall As loading from IVR Pit reporting to the attenuation ponds but will have little influence on pit sump concentrations in the west lobe.

Arsenic concentrations in the Whale Tail Pit vary seasonally due to groundwater seepage through the south wall (Figure 6-1). This provides a source of dilution in winter months generating the strong seasonal signature observed in sump water, and variability in summer months as meteoric events dictated by the climate time series control the timing that pit wall runoff enters mine sumps.

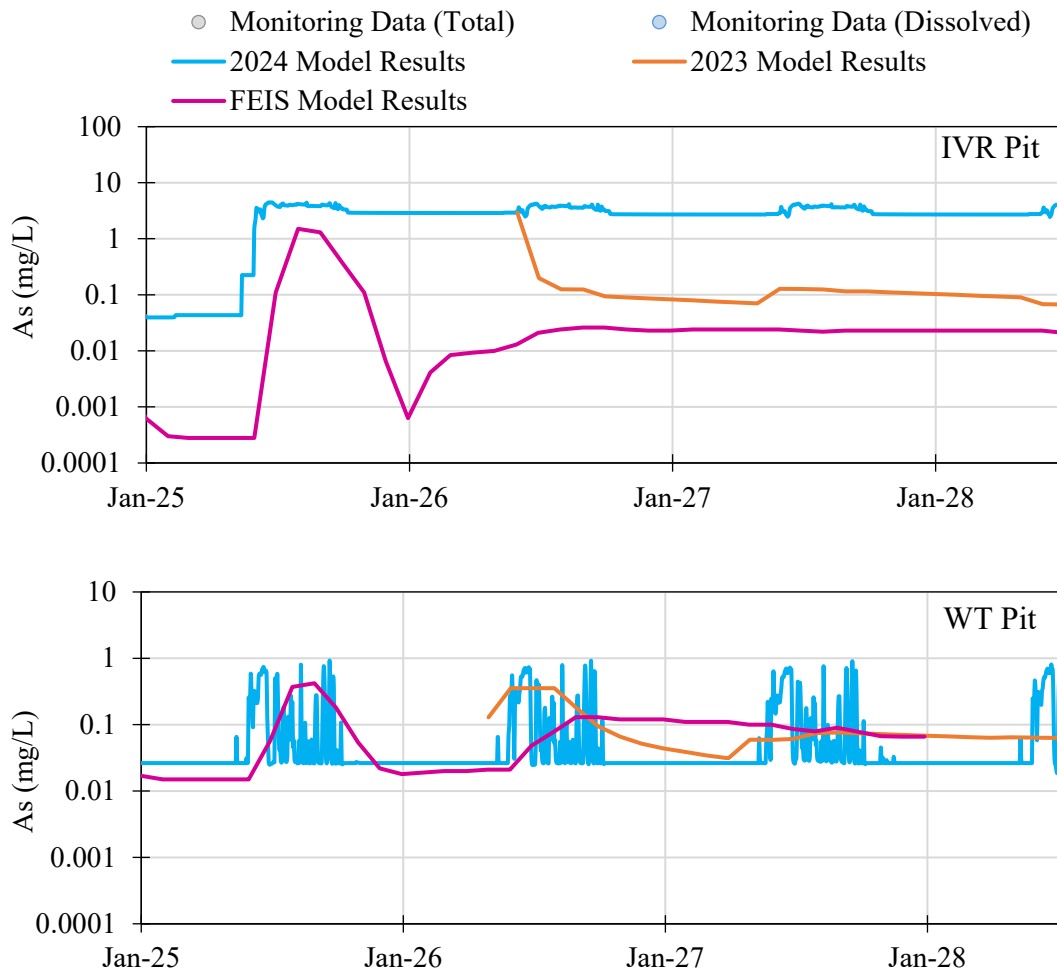


Figure 6-1: Arsenic concentrations for IVR Pit (top) and Whale Tail Pit (bottom) predicted in the 2024 Annual Report Model, 2023 Annual Report Model and FEIS for the remainder of operations.

6.1.2 Attenuation Ponds and O-WTP Effluent Discharge

Surface contact water generated from mine facilities during Operations is collected in the Whale Tail and IVR attenuation ponds and routed to the O-WTP for treatment. Pumped flows from the IVR Pit and Whale Tail Pit are the main source of arsenic in the attenuation ponds.

The WT Attenuation Pond receives contact water from Whale Tail Dike Seepage and Whale Tail Pit. The arsenic concentrations show a strong seasonal signature similar to the Whale Tail Pit. The IVR Attenuation Pond receives contact water from the IVR Pit, Whale Tail Pushback, Whale Tail WRSF, and IVR WRSF as well as some flows from the Whale Tail Attenuation Pond, which results in higher predicted concentrations in the IVR Attenuation Pond relative to the Whale Tail Attenuation Pond (Figure 6-2).

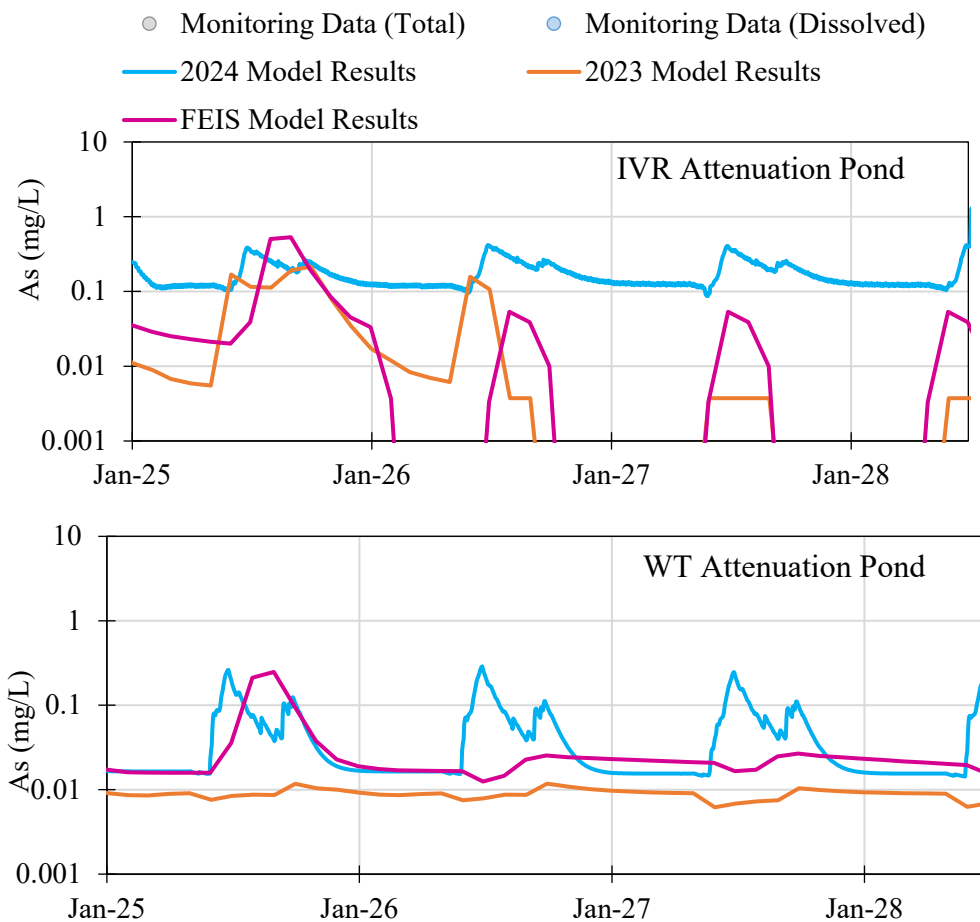


Figure 6-2: Arsenic concentrations for IVR Attenuation Pond (top) and Whale Tail Attenuation pond (bottom) predicted in the 2024 Annual Report Model, 2023 Annual Report Model and FEIS for the remainder of operations.

Water from the attenuation ponds will be treated at the O-WTP before being discharged to Whale Tail South Basin or Kangislulik Lake (Section 2.3.1). Effluent discharged from the O-WTP is predicted to meet the NWB Water License/MDMER effluent limits for all parameters (Table 6-1).

**Table 6-1:
 Maximum End-Of-Pipe Predictions during the remainder of Operations (Jan.2025-
 Jun.2028)**

Constituents	Units	End of Pipe Discharge to Whale Tail South Basin	End of Pipe Discharge to Kangislulik Lake	NWB Water License/MDMER (End-of-Pipe)
Ammonia-N	mg-N/L	0.97	2.27	16
Nitrate-N	mg-N/L	1.3	3.8	-
Chloride	mg/L	34	37	-
Fluoride	mg/L	0.15	0.18	-
Sulphate	mg/L	67	152	-
Aluminum	mg/L	0.012	0.037	0.5
Arsenic	mg/L	0.017	0.052	0.1
Cadmium	mg/L	0.000020	0.000044	0.002
Chromium	mg/L	0.00042	0.00043	0.02
Copper	mg/L	0.0017	0.0032	0.1
Iron	mg/L	0.23	0.21	1
Mercury	mg/L	0.0000083	0.000014	0.004
Manganese	mg/L	0.24	0.54	-
Nickel	mg/L	0.023	0.075	0.25
Phosphorus	mg/L	0.011	0.0106	0.3
Lead	mg/L	0.00016	0.00017	0.05
Selenium	mg/L	0.00060	0.00086	-
Zinc	mg/L	0.0039	0.0042	0.1

6.1.3 Receiving Environment and Downstream Lakes

Treated effluent is pumped from the O-WTP to the Whale Tail South Basin during winter months (typically October to June) and to Kangislulik Lake during summer months (typically May to September), with some overlap during the seasonal transition.

Arsenic concentrations are predicted to be elevated in Kangislulik Lake relative to Whale Tail South Basin, since it receives O-WTP treated effluent during the open water season

(Figure 6-3) when attenuation pond arsenic concentrations are relatively high due to pit wall runoff, in addition to being downstream of Whale Tail South Basin.

Maximum concentrations predicted in Kangislulik Lake and Whale Tail South Basin for the remainder of operations are screened against SSWQO/CCME guidelines in Table 6-2. Model results indicate that all parameters will remain below receiving environment guidelines.

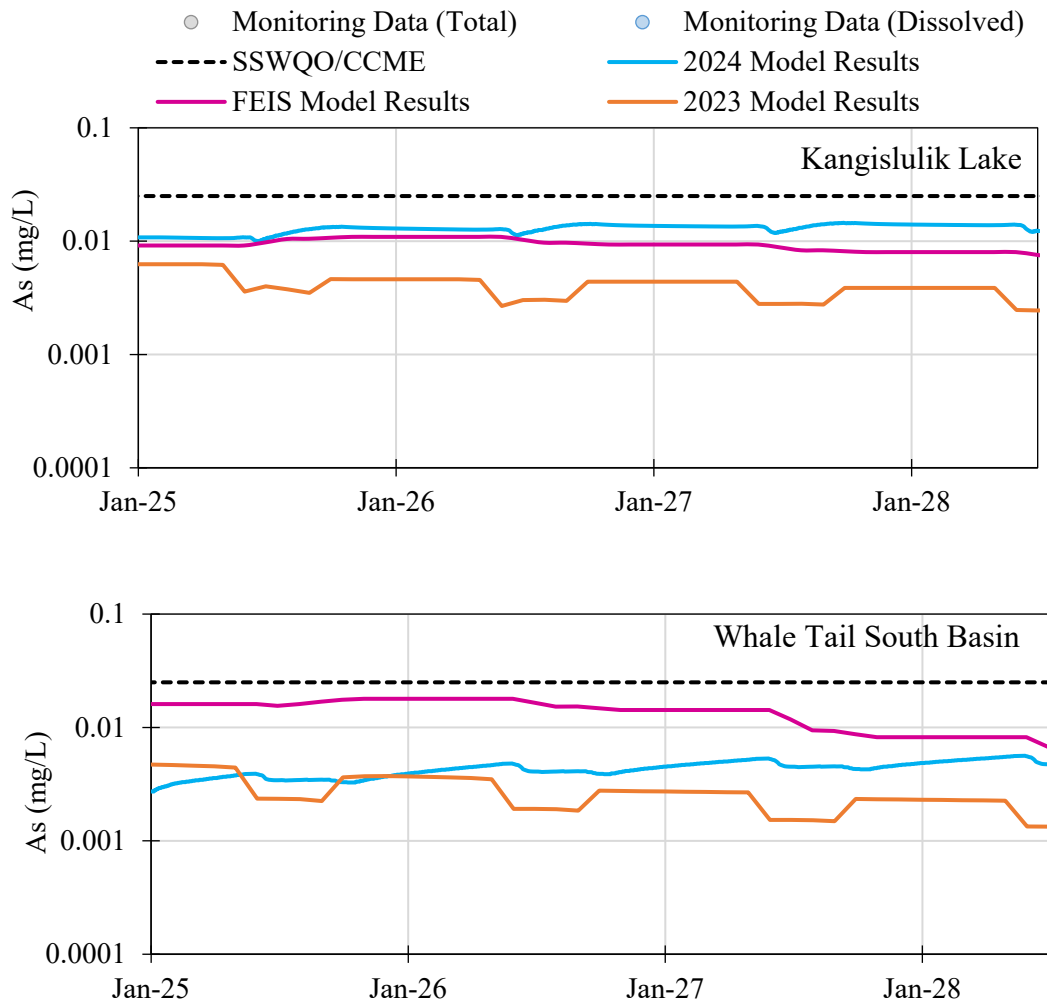


Figure 6-3: Operations arsenic concentrations for Kangislulik Lake (top) and Whale Tail South Basin (bottom) predicted in the 2024 Annual Report Model, 2023 Annual Report Model and FEIS.

**Table 6-2:
 Maximum Monthly Predictions in the Receiving Environment and Downstream
 Lakes during remainder of Operations (Jan. 2025-Jun. 2028)**

Constituents	Units	Kangislulik	Whale Tail	CCME/
		Lake	South Basin	SSWQ
Total Ammonia ¹	mg-N/L	0.35	0.07	0.58
Nitrate	mg-N/L	2.1	0.78	2.93
Chloride	mg/L	41	24	120
Fluoride	mg/L	0.10	0.078	0.12
Sulphate	mg/L	46	19	-
Aluminum	mg/L	0.015	0.011	0.1
Arsenic	mg/L	0.014	0.0056	0.025
Cadmium	mg/L	0.000013	0.0000063	variable
Chromium ²	mg/L	0.00080	0.00046	0.001-0.0089
Copper	mg/L	0.0014	0.00095	variable
Iron	mg/L	0.18	0.12	0.3
Mercury	mg/L	0.0000070	0.0000046	0.000026
Manganese	mg/L	0.16	0.10	variable
Nickel	mg/L	0.018	0.0059	variable
Phosphorus	mg/L	0.0076	0.0081	0.01
Lead	mg/L	0.00013	0.000072	variable
Selenium	mg/L	0.00033	0.00018	0.001
Zinc	mg/L	0.0049	0.0028	variable

Note:

CCME = Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment

SSWQO = Site Specific Water Quality Objective

Variable guidelines are dependent on predicted hardness, pH, temperature, and DOC

1. The CCME guideline for total ammonia conservatively assumes pH of 8 and temperature of 15°C.

2. The CCME guidelines for Cr include both Cr(VI) 0.001 mg/L and Cr(III) 0.0089 mg/L. Given that Cr is expected to be present primarily as Cr (III) in mine water, model predictions are compared against the CCME Cr(III) guideline for initial screening.

6.1.4 Dry- and Wet-Year Sensitivities

The influence of drier or wetter than average climate conditions on WBWQM predictions was tested by modelling repeated dry-years (10th percentile historical precipitation; 277 mm) and repeating wet-years (90th percentile historical precipitation; 449 mm) for the remainder of operations (2025-2028). Water quality results for arsenic in Kangislulik Lake and Whale Tail South Basin are shown in Figure 6-4 and maximum concentrations for all parameters are screened against SSWQO/CCME guidelines in Table 6-3.

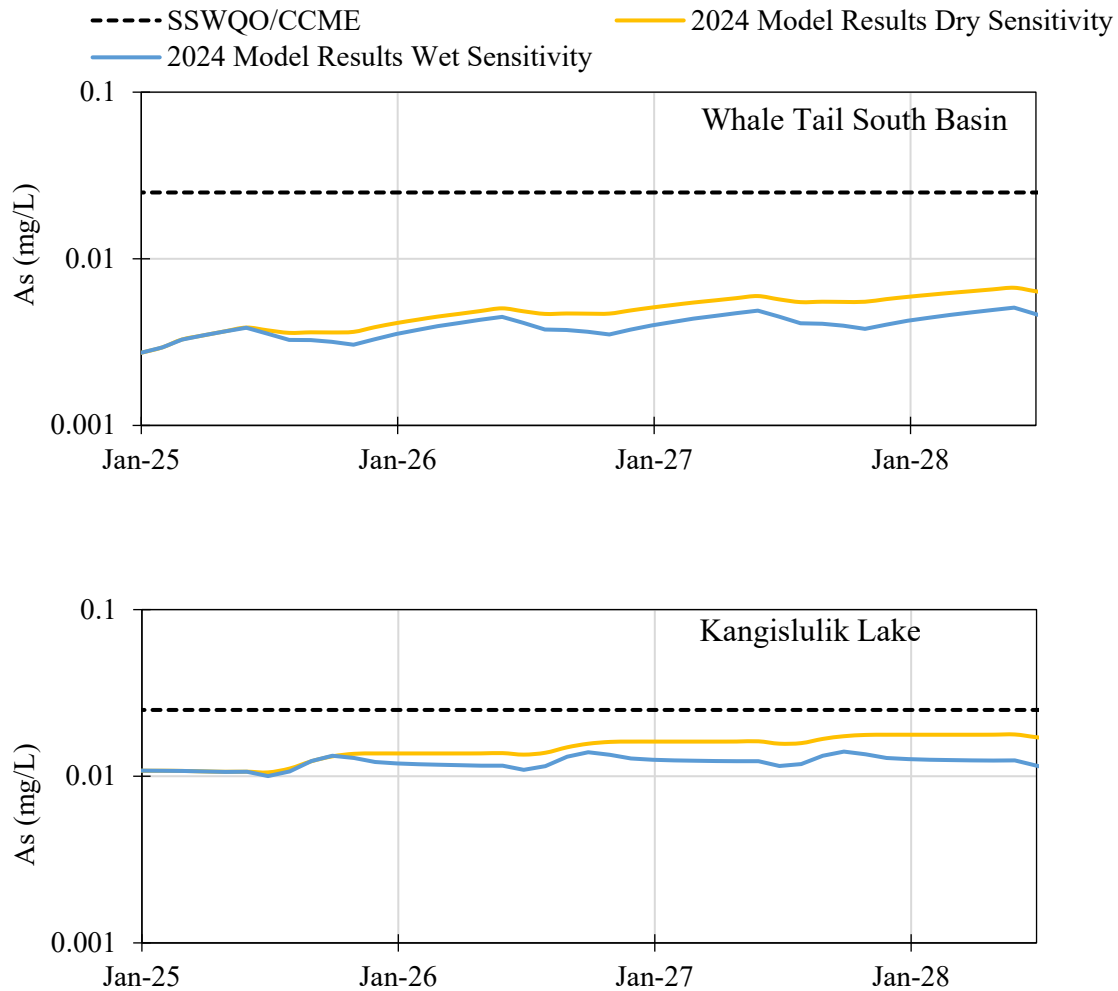


Figure 6-4: Operations arsenic concentrations for Whale Tail South Basin (top) and Kangislulik Lake (bottom) for the Dry Year and Wet Year sensitivity screened against SSWQO guidelines.

The wet year sensitivity analysis results in increased volumes of mine water being discharged to the environment and greater runoff from natural catchments into receiving lakes. Overall, the higher mine site discharge is offset by increased flows in receiving lakes, leading to a minimal change in concentrations compared to base case conditions. In contrast, the dry-year sensitivity analysis results in reduced flow rates, leading to higher concentrations of most parameters. For example, arsenic concentrations increase by 25% in Whale Tail South Basin and 29% in Kangislulik Lake, respectively.

**Table 6-3:
 Maximum Monthly Predictions in the Receiving Environment and Downstream
 Lakes during remainder of Operations for dry and wet year sensitivities
 (Jan. 2025-Jun. 2028)**

Constituents	Units	WTS Lake Dry	Kang Lake Dry	WTS Lake Wet	Kang Lake Wet	CCME/ SSWQO
Total Ammonia ¹	mg-N/L	0.07	0.37	0.08	0.37	0.58
Nitrate	mg-N/L	0.8	2.1	0.8	2.1	2.93
Chloride	mg/L	27	41	24	41	120
Fluoride	mg/L	0.09	0.11	0.07	0.10	0.12
Sulphate	mg/L	23	56	17	44	-
Aluminum	mg/L	0.011	0.016	0.011	0.015	0.1
Arsenic	mg/L	0.007	0.018	0.005	0.014	0.025
Cadmium	mg/L	0.000007	0.000016	0.000006	0.000013	variable
Chromium ²	mg/L	0.00046	0.00080	0.00046	0.00080	0.001-0.0089
Copper	mg/L	0.0011	0.0016	0.0009	0.0014	variable
Iron	mg/L	0.13	0.18	0.11	0.18	0.3
Mercury	mg/L	0.0000052	0.0000079	0.0000046	0.0000070	0.000026
Manganese	mg/L	0.11	0.21	0.10	0.15	variable
Nickel	mg/L	0.007	0.020	0.006	0.018	variable
Phosphorus	mg/L	0.0090	0.0081	0.0078	0.0072	0.01
Lead	mg/L	0.00009	0.00013	0.00007	0.00013	variable
Selenium	mg/L	0.00021	0.00042	0.00016	0.00031	0.001
Zinc	mg/L	0.0029	0.0049	0.0028	0.0049	variable

Note:

CCME = Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment

SSWQO = Site Specific Water Quality Objective

Variable guidelines are dependent on predicted hardness, pH, temperature, and DOC

1. The CCME guideline for total ammonia conservatively assumes pH of 8 and temperature of 15°C.

2. The CCME guidelines for Cr include both Cr(VI) 0.001 mg/L and Cr(III) 0.0089 mg/L. Given that Cr is expected to be present primarily as Cr (III) in mine water, model predictions are compared against the CCME Cr(III) guideline for initial screening.

6.2 Active Closure and Post-Closure

Active flooding of the underground mine voids and pit lakes spans the period from July 2028 through July 2045 (Active Closure). Active flooding begins with IVR Pit in July 2028 which is filled to the spill point elevation of 123 masl by October 2030. Whale Tail Pit active flooding begins in June 2031 and is filled to the spill point elevation of 123 masl by July 2039. Once the Whale Tail Pit and IVR Pit lakes join above the 123 m sill elevation, the Whale Tail /IVR Complex is formed. This occurs in August 2039; active flooding of the Whale Tail North Basin continues until July 2045 when the final water level of 153.5 masl is reached.

6.2.1 Pit Lakes

Active flooding of mine pits begins with IVR Pit in 2028, leading to a rapid improvement in water quality (Figure 6-5 and Figure 6-6). After IVR Pit flooding is completed in 2031, arsenic concentrations begin to increase again due to exposure to the remaining IVR Pit walls. Whale Tail Pit flooding begins in 2031, resulting in a rapid improvement of water quality similar to what was initially observed at IVR Pit. The reduction in arsenic concentrations during the first 6 years of Active Closure is further enhanced by continued operation of the O-WTP, which treats mine contact water including, 65% of pit wall runoff, with treated water discharged to the IVR Pit.

In 2039, water levels will exceed the 123 m sill elevation and IVR Pit and Whale Tail Pit will merge to form the Whale Tail-IVR Complex. The Whale Tail-IVR Complex begins to overflow into the Whale Tail Attenuation Pond in July 2044, forming the Whale Tail North Basin. The Whale Tail North Basin continues flooding until July 2045 when the Kangislulik Dike is breached; note that breaching will only take place once water quality within the Whale Tail North Basin meets CCME water quality guidelines, baseline concentrations, or SSWQOs.

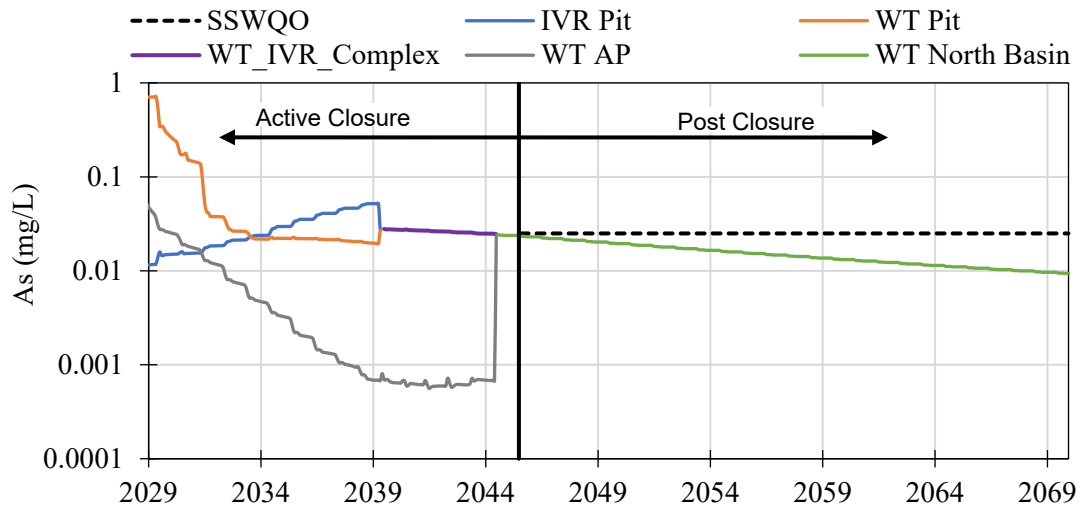


Figure 6-5: Active Closure and Post Closure arsenic concentrations for IVR Pit, WT Pit, WT_IVR Complex, and WT North Basin for the 2024 Annual Report Model.

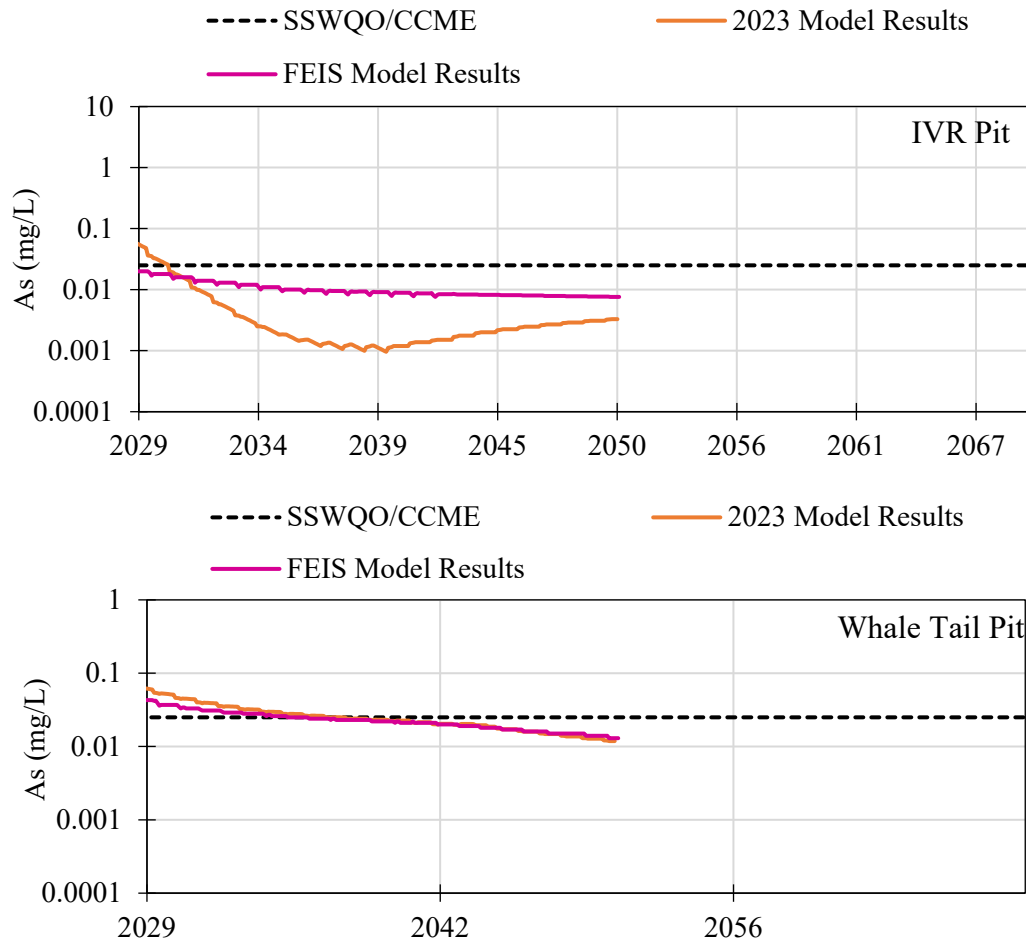


Figure 6-6: Active Closure and Post Closure arsenic concentrations for IVR Pit (top) and Whale Tail Pit (bottom) predicted in the 2023 Annual Report Model and FEIS. The Post Closure phase begins in 2045 in the 2023 Annual Report Model, and 2042 in the FEIS model.

Arsenic concentrations are expected to decline throughout this flooding period, with concentrations declining below SSWQO guidelines by the end of Active Closure. Concentrations are expected to continue declining during Post-Closure (modelled out to 2069). Maximum concentrations for the mine pit complex (Whale Tail North Basin) are screened against SSWQO and CCME guidelines in Table 6-4. All parameters are predicted to meet receiving environment water quality criteria.

6.2.2 Receiving Environment and Downstream Lakes

At the end of operations, water quality in receiving lakes is expected to initially improve due to the cessation of mine effluent discharge (Figure 6-7). This improving trend will continue throughout Active Closure, until the Kangislulik Dike is breached in July 2045 (breaching will only take place once water quality within Whale Tail North Basin meets

CCME water quality guidelines, baseline conditions or SSWQOs). At this point, Whale Tail North Basin water will begin to flow into Kangislulik Lake, resulting in a temporary increase in concentrations. After the Lakes are reconnected, arsenic concentrations are expected to decrease as non-contact flows from surrounding catchments report to the lakes.

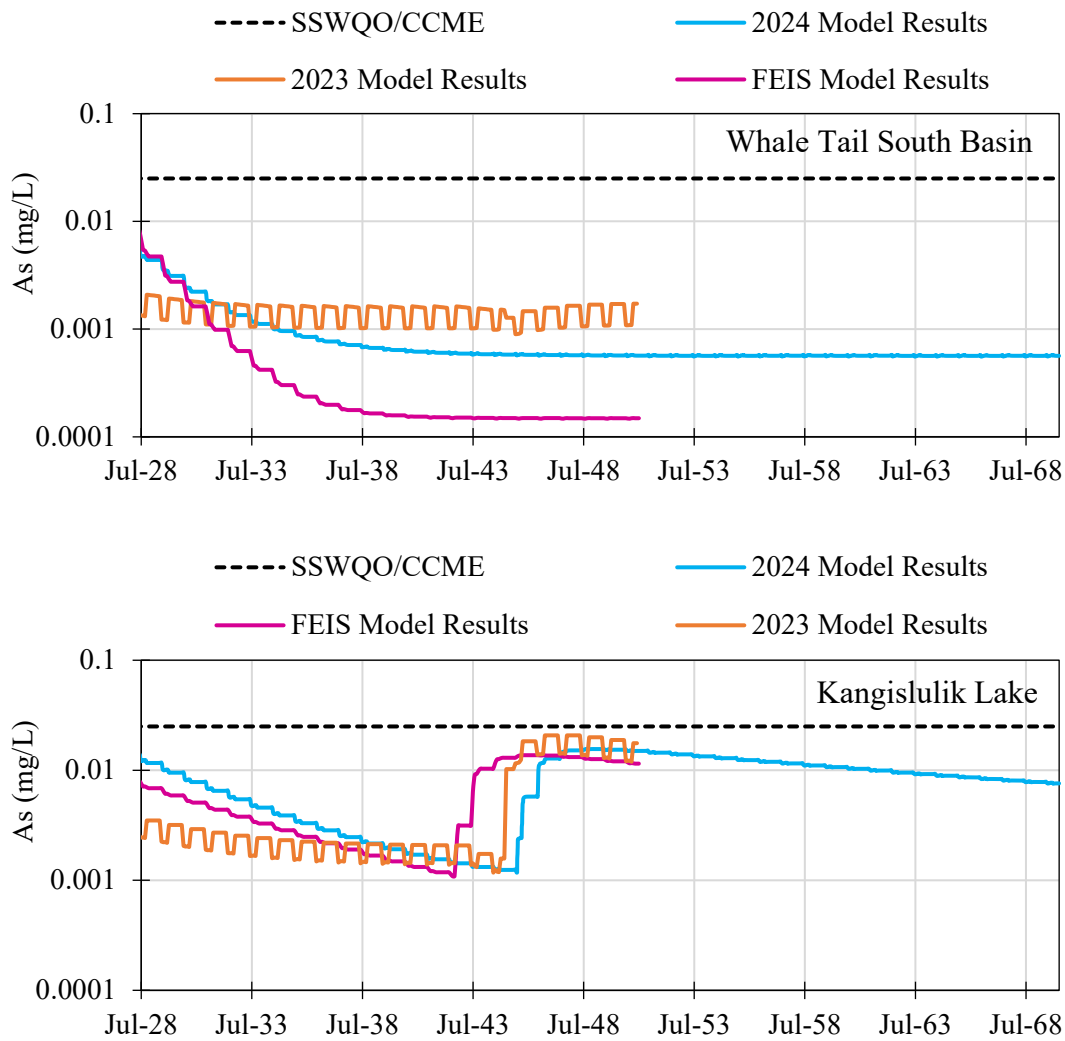


Figure 6-7: Closure arsenic concentrations for Whale Tail South Basin (top) and Kangislulik Lake (bottom) predicted in the 2024 Annual Report Model, 2023 Annual Report Model and FEIS.

Maximum concentrations for the Kangislulik Lake and Whale Tail South Basin are screened against SSWQO and CCME guidelines in Table 6-4. All parameters are predicted to meet receiving environment water quality criteria.

**Table 6-4:
 Maximum Monthly Predictions in the Receiving Environment and Downstream
 Lakes during Post Closure (July 2045 onwards)**

Parameter	Maximum Monthly Concentration during Post-Closure Jul.2045-Dec.2069 (mg/L)			CCME or SSWQO
	WTS Lake	Kangislulik Lake	WT North Basin	
Total Ammonia (as N)	0.0028	0.0017	0.0010	0.58
Nitrate (as N)	0.10	0.55	0.20	2.93
Chloride	12	29	14	120
Fluoride	0.043	0.067	0.062	0.12
Sulphate	4.5	18	21	variable
Aluminum	0.0071	0.0149	0.014	0.1
Arsenic	0.00058	0.016	0.023	0.025
Cadmium	0.0000027	0.0000061	0.0000073	variable
Chromium	0.00021	0.00020	0.00022	0.001
Copper	0.00051	0.00099	0.0010	variable
Iron	0.048	0.049	0.054	0.3
Mercury	0.0000026	0.0000045	0.0000043	0.000026
Manganese	0.026	0.051	0.041	variable
Nickel	0.0014	0.0070	0.010	variable
Phosphorus	0.0049	0.0050	0.0050	0.01
Lead	0.000038	0.000042	0.00004	0.001
Selenium	0.000027	0.00015	0.00012	0.001
Zinc	0.0016	0.0019	0.0019	variable

Note:

CCME = Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment

SSWQO = Site Specific Water Quality Objective

Variable guidelines are dependent on predicted hardness, pH, temperature, and DOC

1. The CCME guideline for total ammonia conservatively assumes pH of 8 and temperature of 15°C.

2. The CCME guidelines for Cr include both Cr(VI) 0.001 mg/L and Cr(III) 0.0089 mg/L. Given that Cr is expected to be present primarily as Cr (III) in mine water, model predictions are compared against the CCME Cr(III) guideline for initial screening.

6.3 Comparison of Model Forecasts

Previous model forecasts are not directly comparable to the current model, as they were completed before the LOM mine plan extended operations until July 2028. Most variations between model iterations for the remaining operational period are due to changes in the mine plan and updates to water management strategies.

For example, the 2023 Annual Report assumed that mine site water would be routed directly to the IVR Attenuation Pond, bypassing the WT Attenuation Pond. This resulted in a lower estimate of Whale Tail Attenuation Pond concentrations in 2025 compared to the FEIS and 2024 Annual Report models (Table 6-2). Beginning in 2026, both the FEIS and 2023 Annual Report models assume that closure activities will commence, leading to a gradual improvement in pit sump and attenuation pond water quality.

In the receiving environment, the FEIS model assumed that treated effluent would be discharged into Kangislulik Lake until May 2021 and into the Whale Tail South Basin from June 2021 through the end of operations. However, in reality, mine water is discharged into Whale Tail South Basin only during winter months (typically October to June), with most mine water being discharged into Kangislulik Lake during the open-water season (typically May to September). As a result, the FEIS model overpredicts concentrations in the Whale Tail South Basin. Notably, all three models should be considered conservative, as they have historically overestimated arsenic concentrations in both the Whale Tail South Basin and Kangislulik Basin (Figure 6-3).

Both the 2023 Annual Report model and the FEIS forecasts predict a decline in arsenic concentrations after 2026, as they were completed before the mine life extension to June 2028. In contrast, the current model projects a modest increase in arsenic concentrations from 2026 to 2028 due to the extended period of mine water discharge.

During the Active Closure phase, model comparison is further confounded by differences in pit flooding times. The FEIS model projected an active closure period of 2026 to 2042, and the 2023 Annual Report Model projected an active closure period of 2026 to 2045. These models provided results for IVR Pit and Whale Tail Pit during the flooding phase, while the current model provides resolution on sequential basin flooding during the active closure phase. In general, all models show a similar trend of declining concentrations during the pit flooding phase, with water quality projections being below CCME/SSWQO limits by the beginning of Post Closure (Figure 6-6 and Figure 6-7).

7. Summary



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7. Summary

A water balance and water quality model was constructed to predict the movement of water and water quality for the Whale Tail mine plan during Operations, Active Closure and Post Closure. The model operates on a daily time-step and is driven by a climate forcing series consisting of a repeating average year climate, for a 50-year period from 2020 to 2069, with predictions presented for 2025 onwards. Two sensitivities are run whereby the remainder of the Operations phase is represented by repeating dry- and wet-year climate scenarios. The mine plan is replicated on an annual basis, with sub-catchment areas and mine facility footprints reflective of the Whale Tail mine schedule and mine site layout.

All mine site components, including open pits, underground operations, WRSFs, ore pads and underground WRSFs are assigned runoff and interflow signatures, as well as geochemical source terms. All water management infrastructure is incorporated into the model, along with the lake water and load balances for the Whale Tail South Basin and Kangislulik Lake.

Mine site flows and source loadings were parameterized via a calibration exercise that utilized measured data from mine operations in 2020 to 2022. These calibrated parameter sets were then carried forward for use in the predictive model, which was validated using monitoring data from 2023 and 2024.

- The water levels in the Whale Tail Attenuation Pond and IVR Attenuation Pond are predicted to remain within the operational criteria for the duration of Operations.
- Model results indicate that under the LOM mine plan, the existing mine water management infrastructure can handle the additional contact water generated by the pit pushbacks.

At EOM, GSP-1 is predicted to contain 115,300 m³ of groundwater and 752,643 m³ is stored in IVR Pit as of June 30, 2028, under the average year scenario. Approximately 89% of this stored water is of underground provenance. The East Lobe IVR Pit wall runoff and surrounding catchment runoff contributes 9% of the total. Under the dry- and wet-year scenarios, the volume of underground mine water stored in the East Lobe of IVR Pit is 637,671 m³ and 819,499 m³, respectively. These volumes are pumped into the underground void in July 2028, at the onset of Active Closure.

- During the Active Closure phase, the sequence of active flooding of mine voids is as follows:
 - Active flooding of the underground mine voids occurs in July 2028;

- IVR Pit active flooding begins in August 2028, and is filled to the spill point elevation of 123 masl by October 2030 (Dry-year = July 2031; Wet-year = September 2030);
- Whale Tail Pit active flooding begins in June 2031, and is filled to the spill point elevation of 123 masl by July 2039 (Dry-year = September 2039; Wet-year = June 2039);
- Once the flooded Whale Tail and IVR Pits join above the 123 m sill elevation, the Whale Tail/IVR Complex is formed. This occurs in July 2044 (Dry-year = October 2044; Wet-year = June 2044); and,
- Active flooding of the Whale Tail North Basin continues until July 2045 (Dry-year = September 2045; Wet-year = June 2045) when the final water level of 153.5 masl is reached.
- Water is pumped from the Whale Tail WRSF Collection Pond and the Whale Tail South Basin during this active flooding campaign. The maximum pumped volume from the Whale Tail South Basin to the mine voids is 2,855 m³/hour in 2028 (4.6 Mm³/year), and 2.1 to 4.1 Mm³/year for the remainder of the Active Closure phase.

During the operational years of 2024 through 2028, treated effluent discharged from the O-WTP is predicted to meet NWB water licence limits for all parameters. The O-WTP will be operated for the first six years of Active Closure and will treat mine contact water including 65% of pit wall runoff, with treated effluent discharged to the IVR Pit. Once effluent discharge ceases in Active Closure, concentrations are expected to decrease and remain below guidelines in the receiving environment and downstream lakes. All parameters are expected to meet their respective guidelines throughout closure.

8. Closure



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8. Closure

We trust that this report meets your requirements at this time. Please contact us should you have any questions or concerns or require additional information in support of this work.

Yours sincerely,

LORAX ENVIRONMENTAL SERVICES LTD.

Prepared by:

Scott Jackson, M.Sc., P.GEO. (BC, NT/NU)
Senior Hydrologist

Okan Aygün, Ph.D., E.I.T. (BC)
Numerical Modeller

John Dockrey, M.Sc., P.GEO (BC, NT/NU, ON)
Senior Geochemist

Nicole Marsh, M.Sc., P.GEO (BC)
Geochemist

Reviewed by:

David Flather, M.Sc.
Principal Scientist

PERMIT TO PRACTICE	
LORAX ENVIRONMENTAL SERVICES LTD.	
Signature	
Date	March 13, 2025
PERMIT NUMBER: P 1487	
NT/NU Association of Professional Engineers and Geoscientists	

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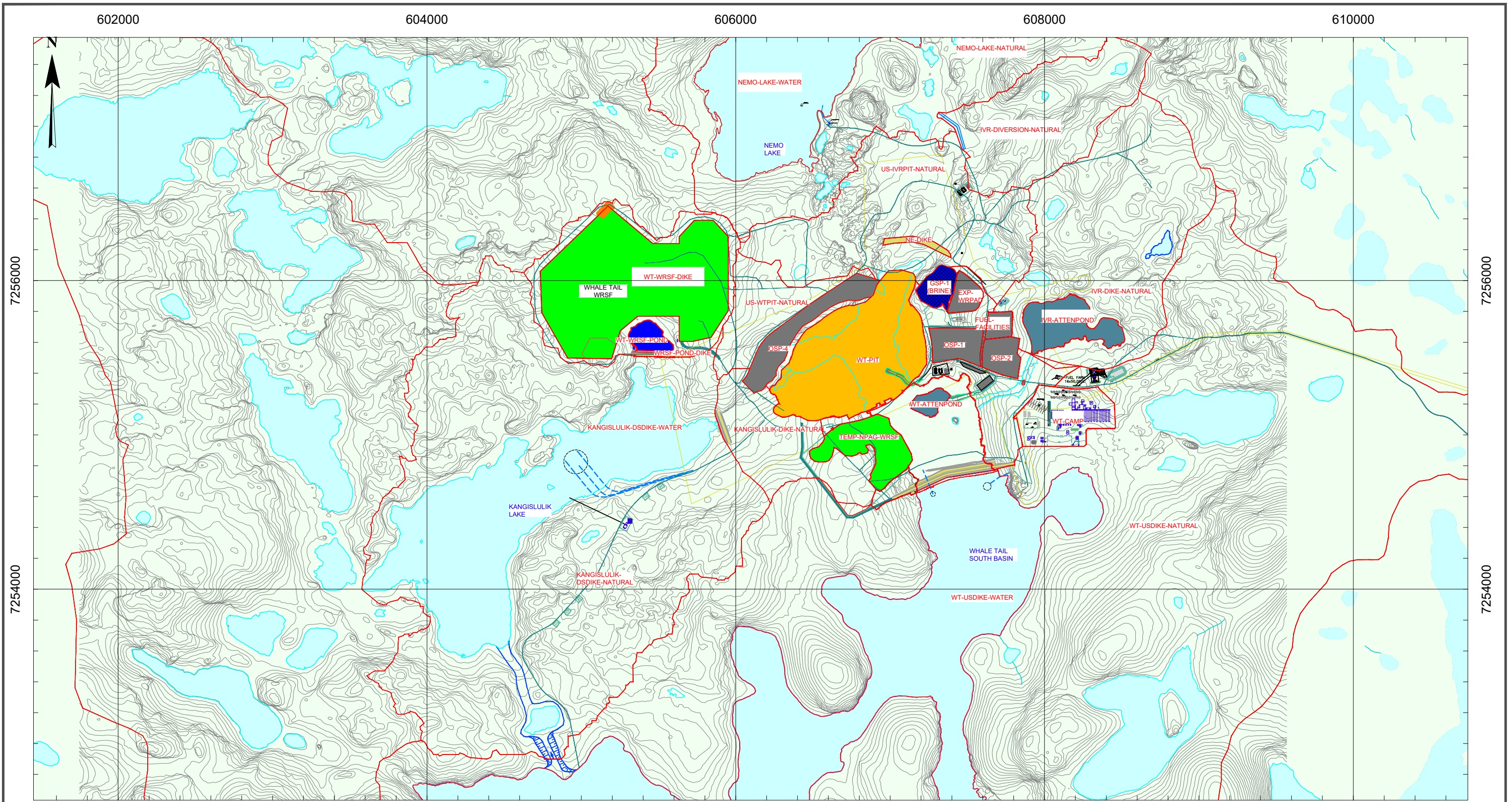
Appendix A: Whale Tail Mine Annual Layouts and Catchment Areas

APPENDIX A.1: WHALE TAIL MINE ANNUAL LAYOUTS

APPENDIX A.2: WHALE TAIL MINE ANNUAL CATCHMENT AREAS



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LEGEND

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|--|-----------------------------------|--|---------------------|--|-----------------------------|
| | WATER BALANCE CATCHMENT | | CONTACT WATER POND | | DIKE |
| | MAJOR AND MINOR CONTOURS FOR PITS | | SALINE POND | | OPEN PIT |
| | EXISTING GROUND | | WATERBODY (NATURAL) | | WASTE ROCK STORAGE FACILITY |
| | HAUL ROAD | | BACKFILL | | STOCKPILE |
| | ROAD, SALT PROTECTION | | | | |
| | SERVICE ROAD | | | | |
| | WATERCOURSE | | | | |
| | PIPE LINE | | | | |
| | DIVERSION CHANNEL | | | | |

DATE SAVED: Mar 24, 2023
DRAWN BY: GM
REVIEWED: SJ
VERSION: 1

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 Drawing Number 2022Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.

CLIENT:



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PROJECT:

Whale Tail WB/WQM

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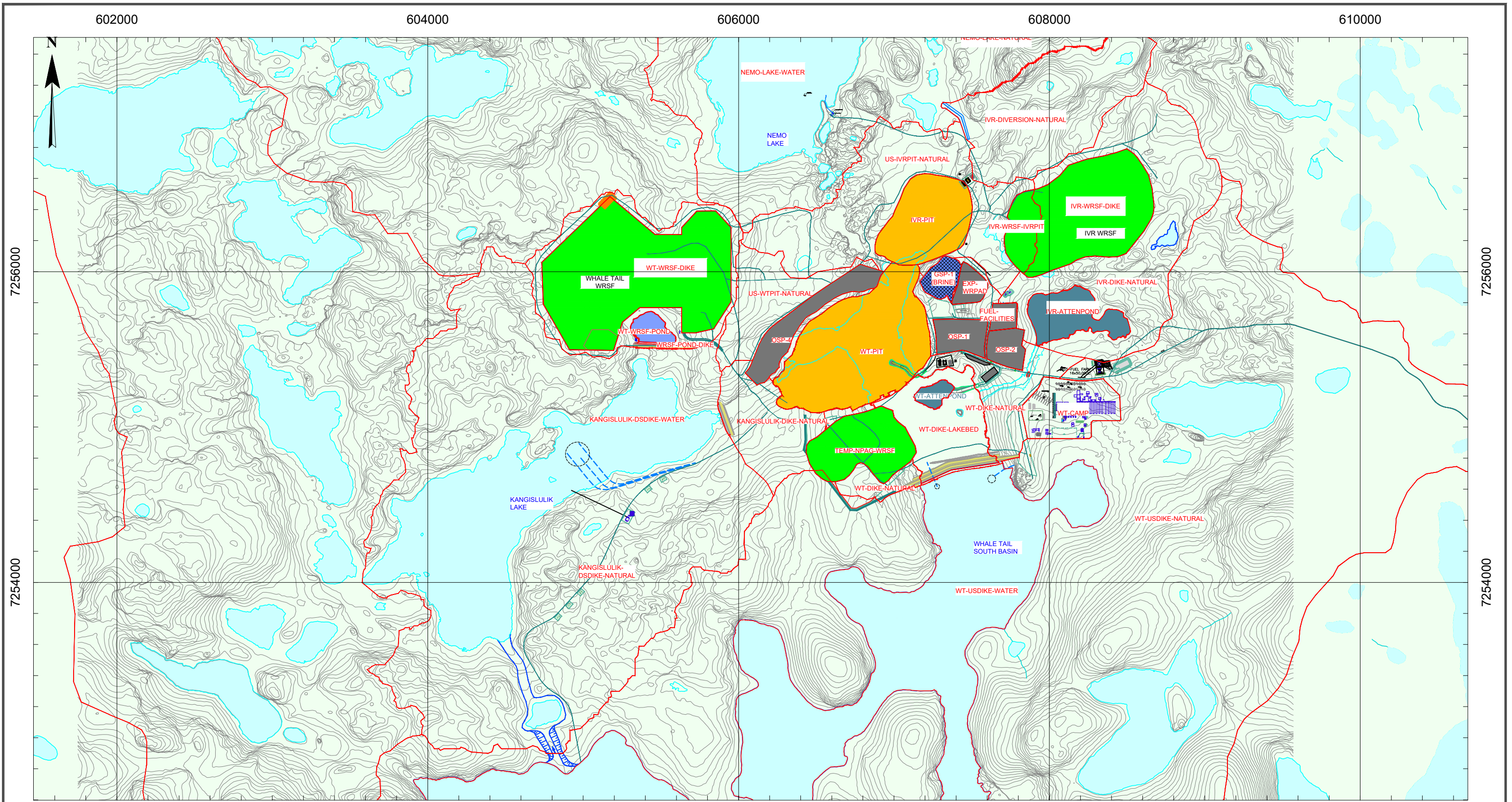
Whale Tail Annual
Layout - 2020

PROJECT #:

A766-1

FIGURE:

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| MAJOR AND MINOR CONTOURS FOR PITS | SALINE POND | OPEN PIT |
| EXISTING GROUND | WATERBODY (NATURAL) | WASTE ROCK STORAGE FACILITY |
| HAUL ROAD | BACKFILL | |
| ROAD, SALT PROTECTION | STOCKPILE | |
| SERVICE ROAD | | |
| WATERCOURSE | | |
| PIPE LINE | | |
| DIVERSION CHANNEL | | |

DATE SAVED: Apr 28, 2023
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REVIEWED: SJ
VERSION: 1

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CLIENT:



PROJECT:

Whale Tail WB/WQM

TITLE:

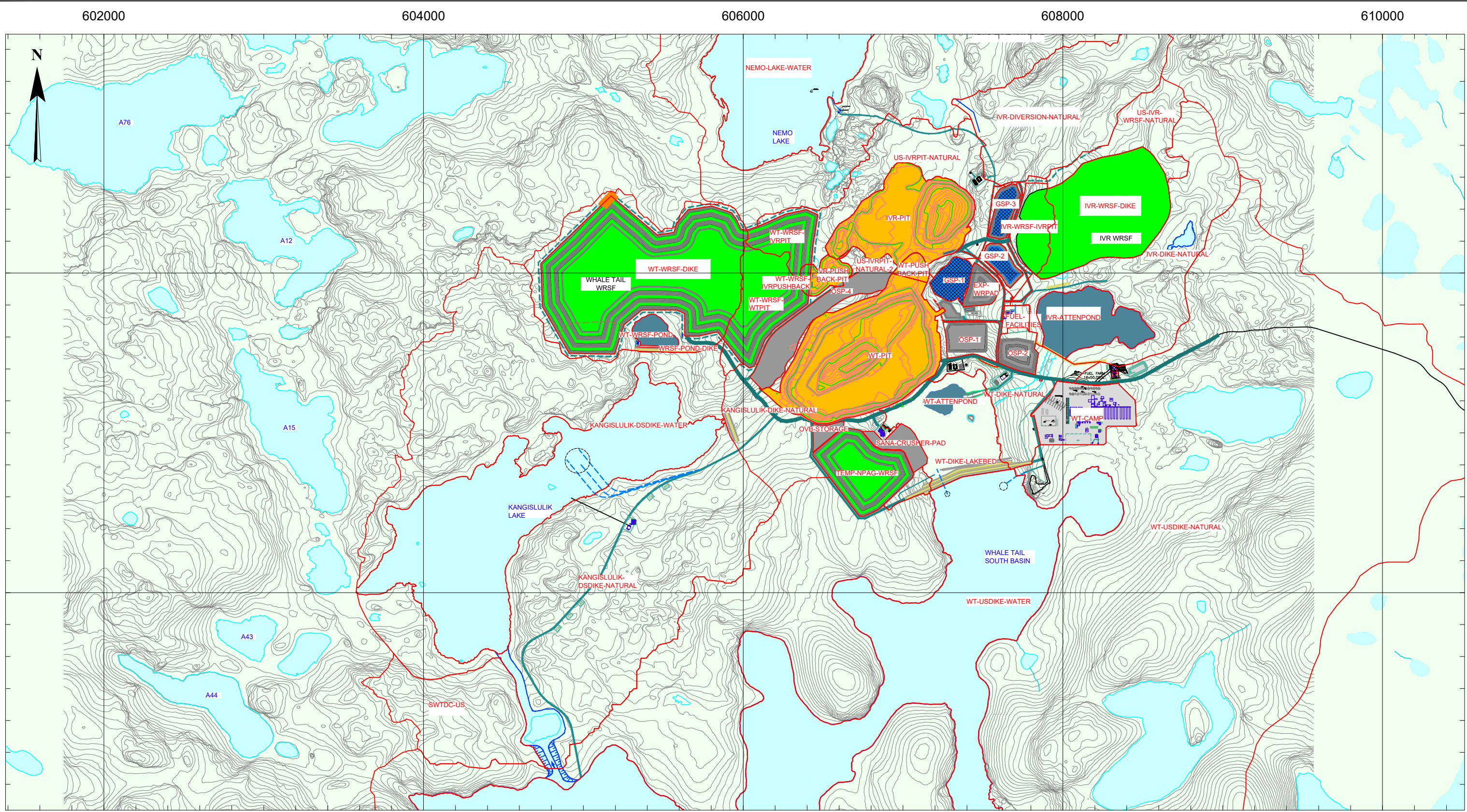
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A766-1

FIGURE:

A.2



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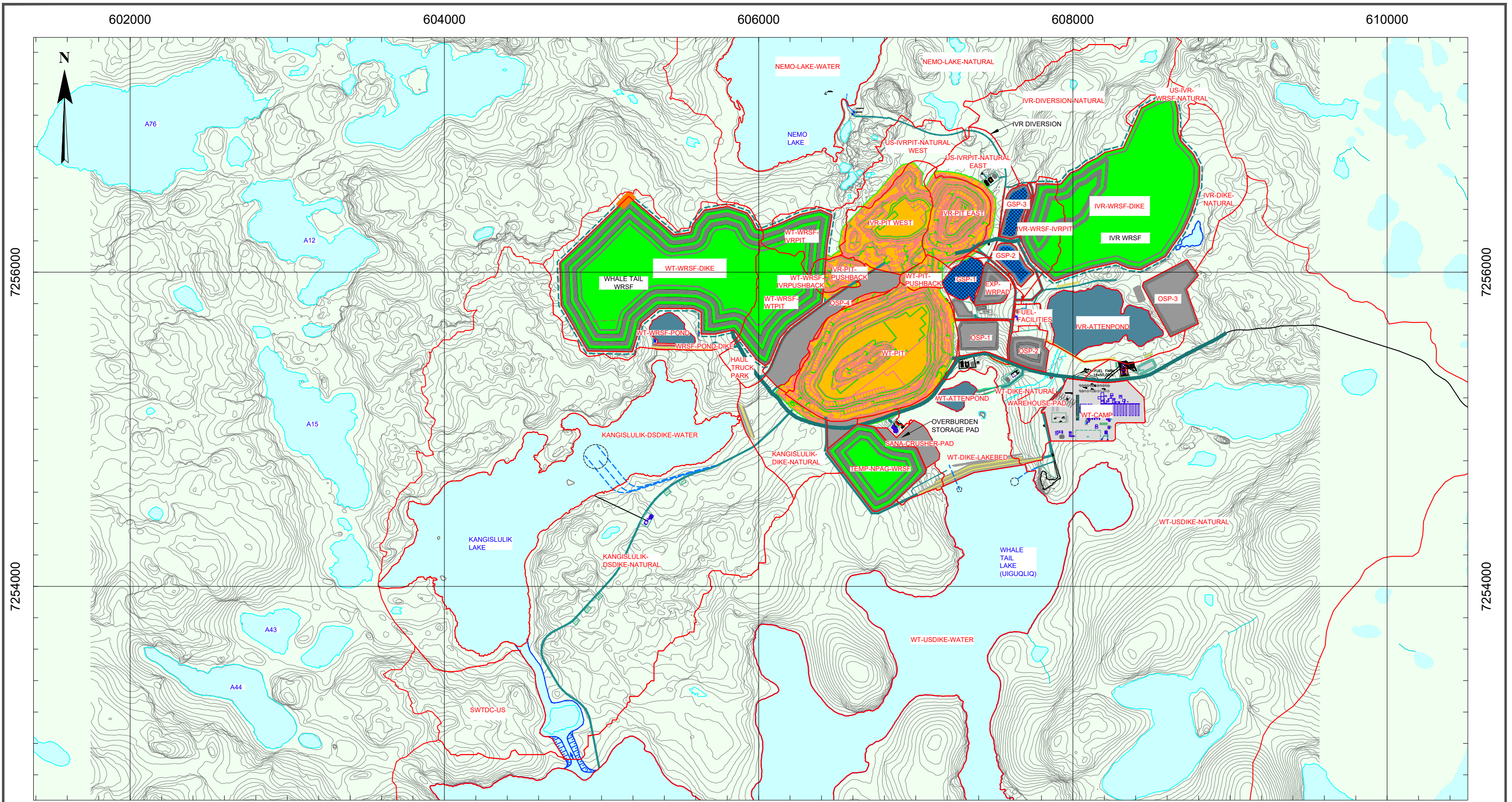
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MAJOR AND MINOR CONTOURS FOR PITS	SALINE POND	OPEN PIT
EXISTING GROUND	WATERBODY (NATURAL)	WASTE ROCK STORAGE FACILITY
HAUL ROAD	BACKFILL	STOCKPILE
ROAD, SALT PROTECTION	SERVICE ROAD	
WATERCOURSE	PIPE LINE	
DIVERSION CHANNEL		

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TITLE:	Whale Tail Annual Layout - 2022	
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| MAJOR AND MINOR CONTOURS FOR PITS | SALINE POND | OPEN PIT |
| EXISTING GROUND | WATERBODY (NATURAL) | WASTE ROCK STORAGE FACILITY |
| HAUL ROAD | BACKFILL | |
| ROAD, SALT PROTECTION | STOCKPILE | |
| SERVICE ROAD | | |
| WATERCOURSE | | |
| PIPE LINE | | |
| DIVERSION CHANNEL | | |

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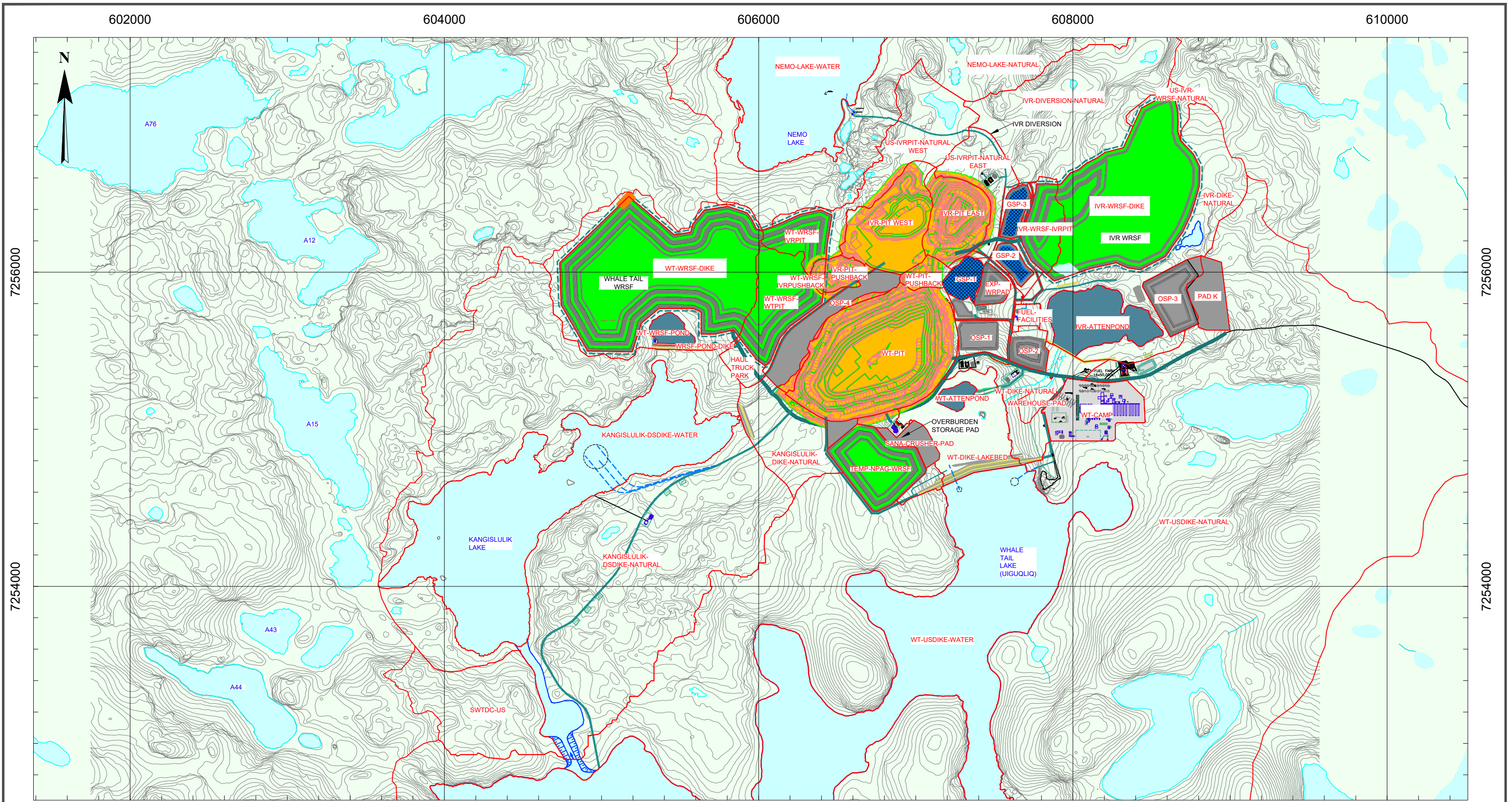
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Whale Tail WB/WQM

Whale Tail
 Water Balance Layout - 2023

A766-1

FIGURE: A.4



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|-----------------------------------|---------------------|-----------------------------|
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| MAJOR AND MINOR CONTOURS FOR PITS | SALINE POND | OPEN PIT |
| EXISTING GROUND | WATERBODY (NATURAL) | WASTE ROCK STORAGE FACILITY |
| HAUL ROAD | BACKFILL | |
| ROAD, SALT PROTECTION | STOCKPILE | |
| SERVICE ROAD | | |
| WATERCOURSE | | |
| PIPE LINE | | |
| DIVERSION CHANNEL | | |

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PROJECT:

Whale Tail WB/WQM

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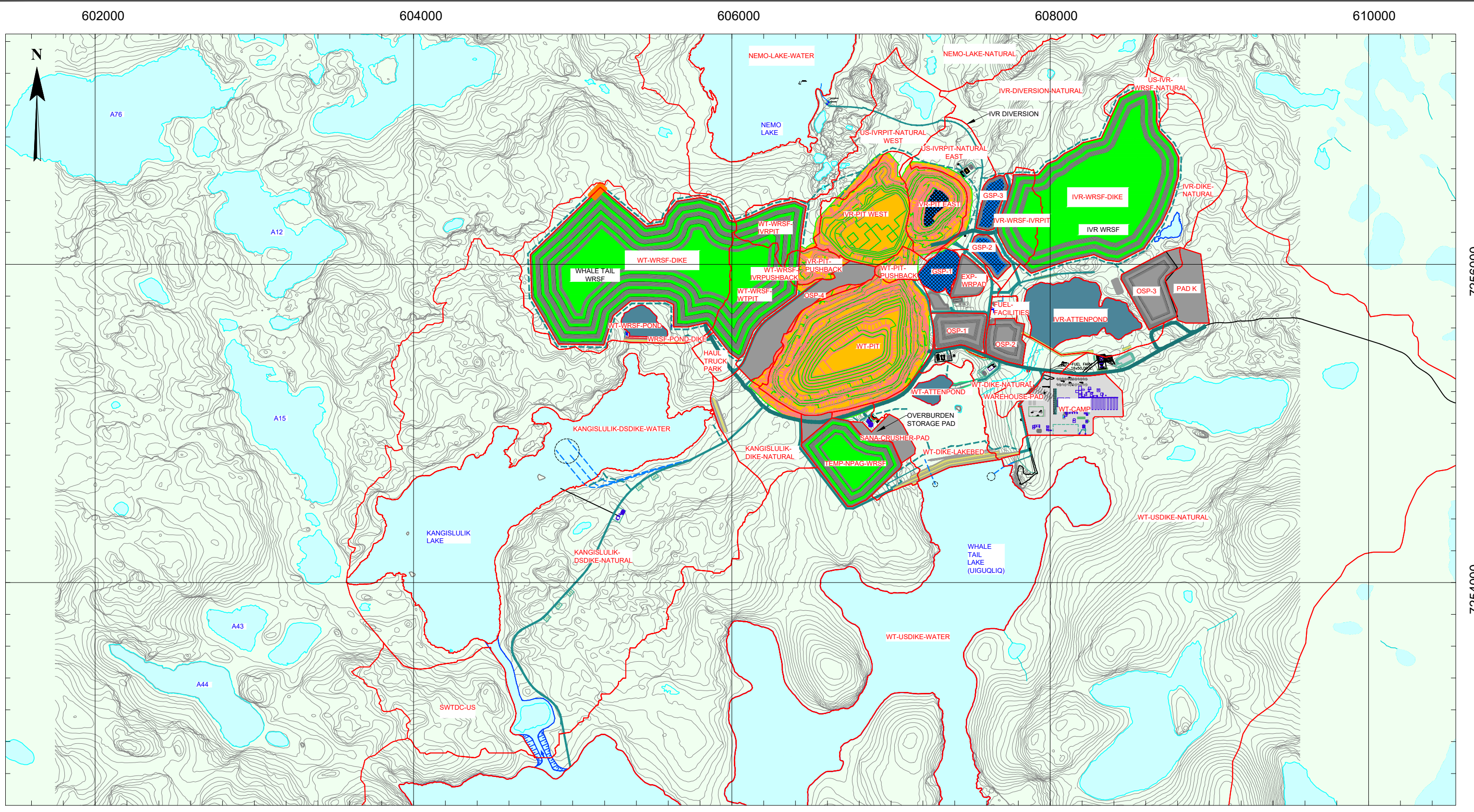
Whale Tail
Water Balance Layout - 2024

PROJECT #:

A766-1

FIGURE:

A.5



LEGEND					
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	EXISTING GROUND		WATERBODY (NATURAL)		WASTE ROCK STORAGE FACILITY
	HAUL ROAD		BACKFILL		
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	WATERCOURSE				
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	DIVERSION CHANNEL				

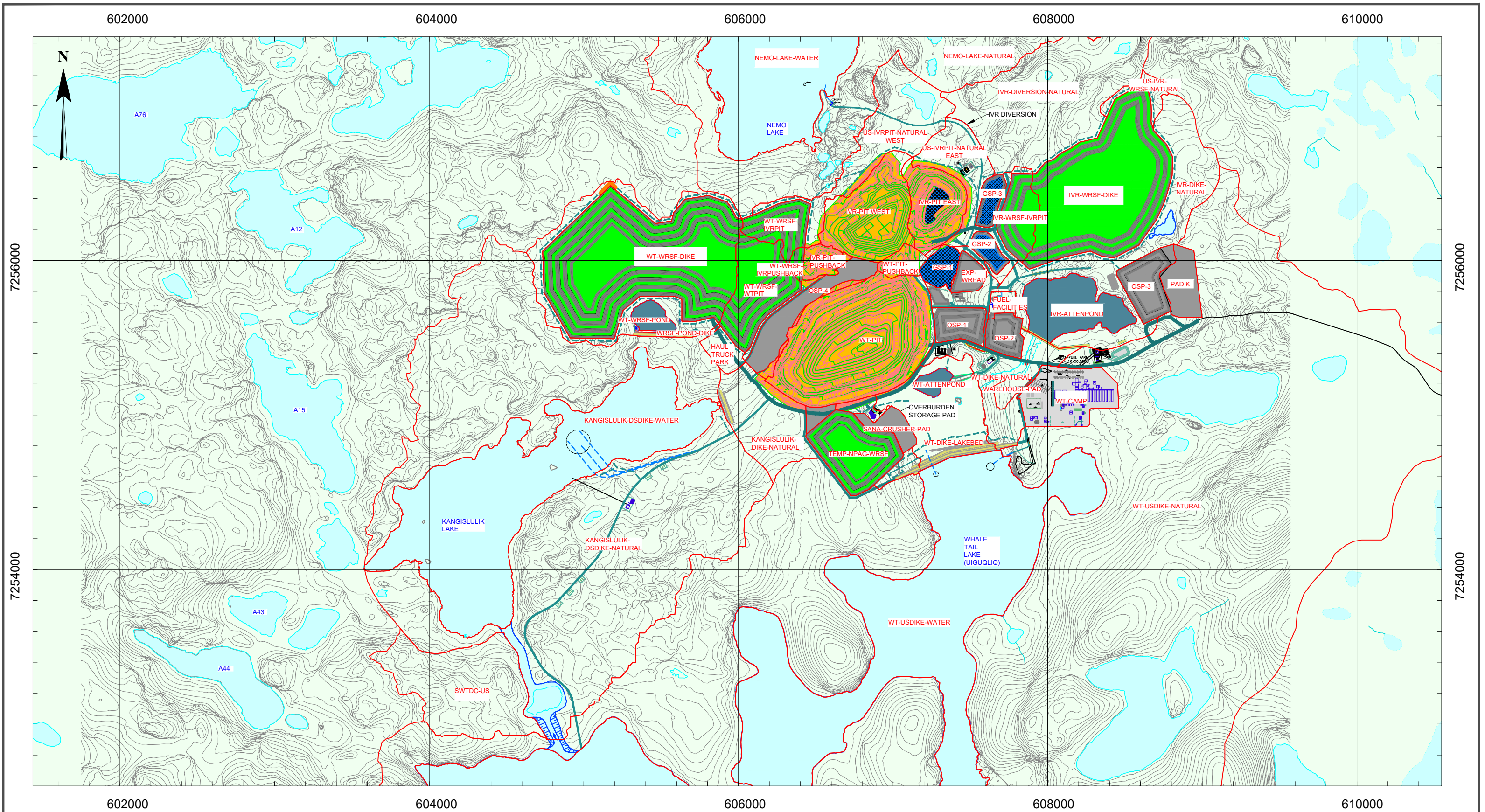
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Site General Arrangement.
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PROJECT:		Whale Tail WB/WQM	
TITLE:		Whale Tail Water Balance Layout - 2025	
PROJECT #:	A766-1	FIGURE:	A.6



LEGEND

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|-----------------------------------|---------------------|-----------------------------|
| WATER BALANCE CATCHMENT | CONTACT WATER POND | DIKE |
| MAJOR AND MINOR CONTOURS FOR PITS | SALINE POND | OPEN PIT |
| EXISTING GROUND | WATERBODY (NATURAL) | WASTE ROCK STORAGE FACILITY |
| HAUL ROAD | BACKFILL | STOCKPILE |
| ROAD, SALT PROTECTION | | |
| SERVICE ROAD | | |
| WATERCOURSE | | |
| PIPE LINE | | |
| DIVERSION CHANNEL | | |

DATE SAVED: Mar 22, 2024
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VERSION: 1

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Whale Tail WB/WQM

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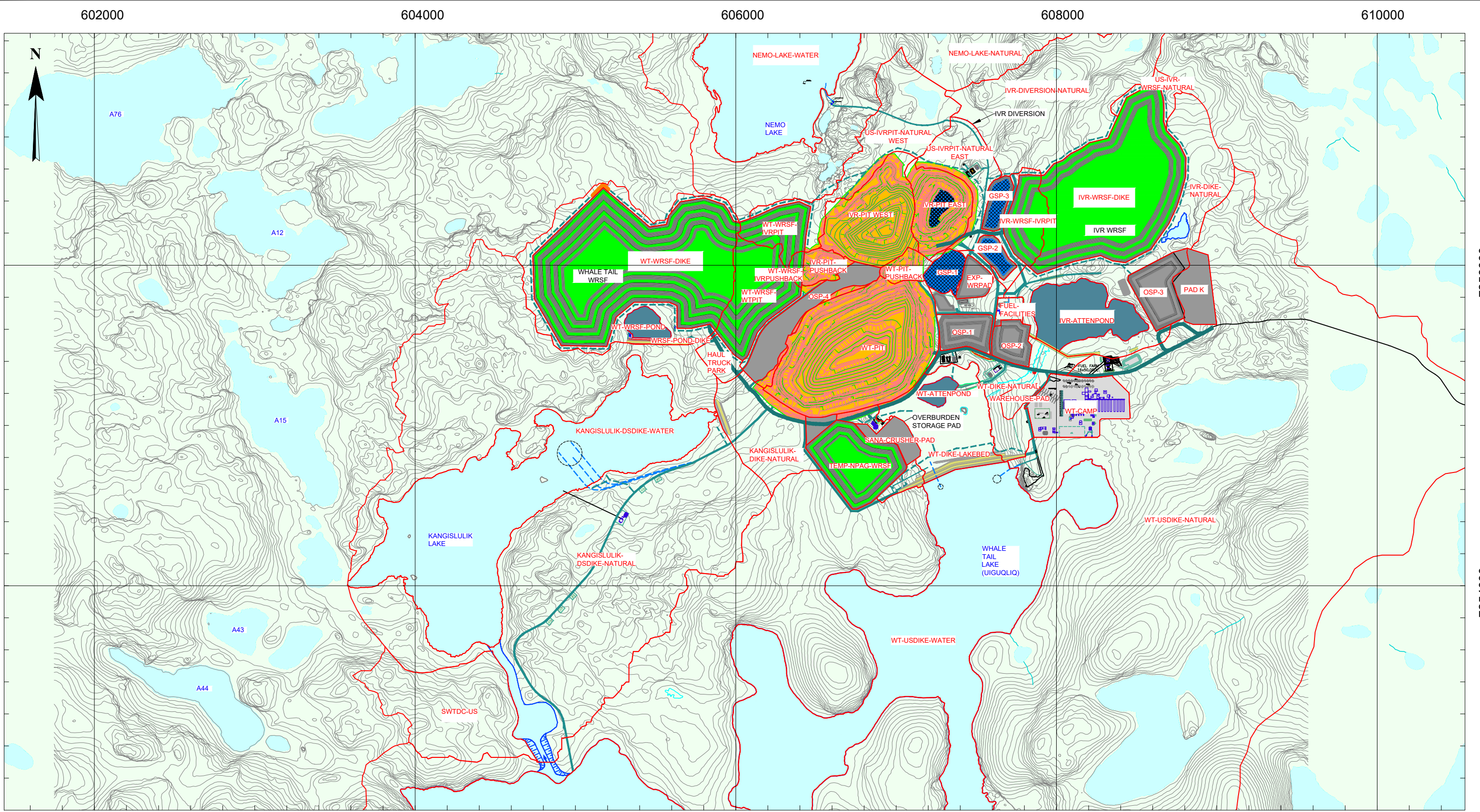
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PROJECT #:

A766-1

FIGURE:

A.7



LEGEND

- | | | | | | |
|--|-----------------------------------|--|---------------------|--|-----------------------------|
| | WATER BALANCE CATCHMENT | | CONTACT WATER POND | | DIKE |
| | MAJOR AND MINOR CONTOURS FOR PITS | | SALINE POND | | OPEN PIT |
| | EXISTING GROUND | | WATERBODY (NATURAL) | | WASTE ROCK STORAGE FACILITY |
| | HAUL ROAD | | BACKFILL | | STOCKPILE |
| | ROAD, SALT PROTECTION | | | | |
| | SERVICE ROAD | | | | |
| | WATERCOURSE | | | | |
| | PIPE LINE | | | | |
| | DIVERSION CHANNEL | | | | |

DATE SAVED: Mar 22, 2024
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REVIEWED: SJ
VERSION: 1

Original Drawing:
 Drawing Number 2024Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.

CLIENT:



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LORAX ENVIRONMENTAL

PROJECT:

Whale Tail WB/WQM

TITLE:

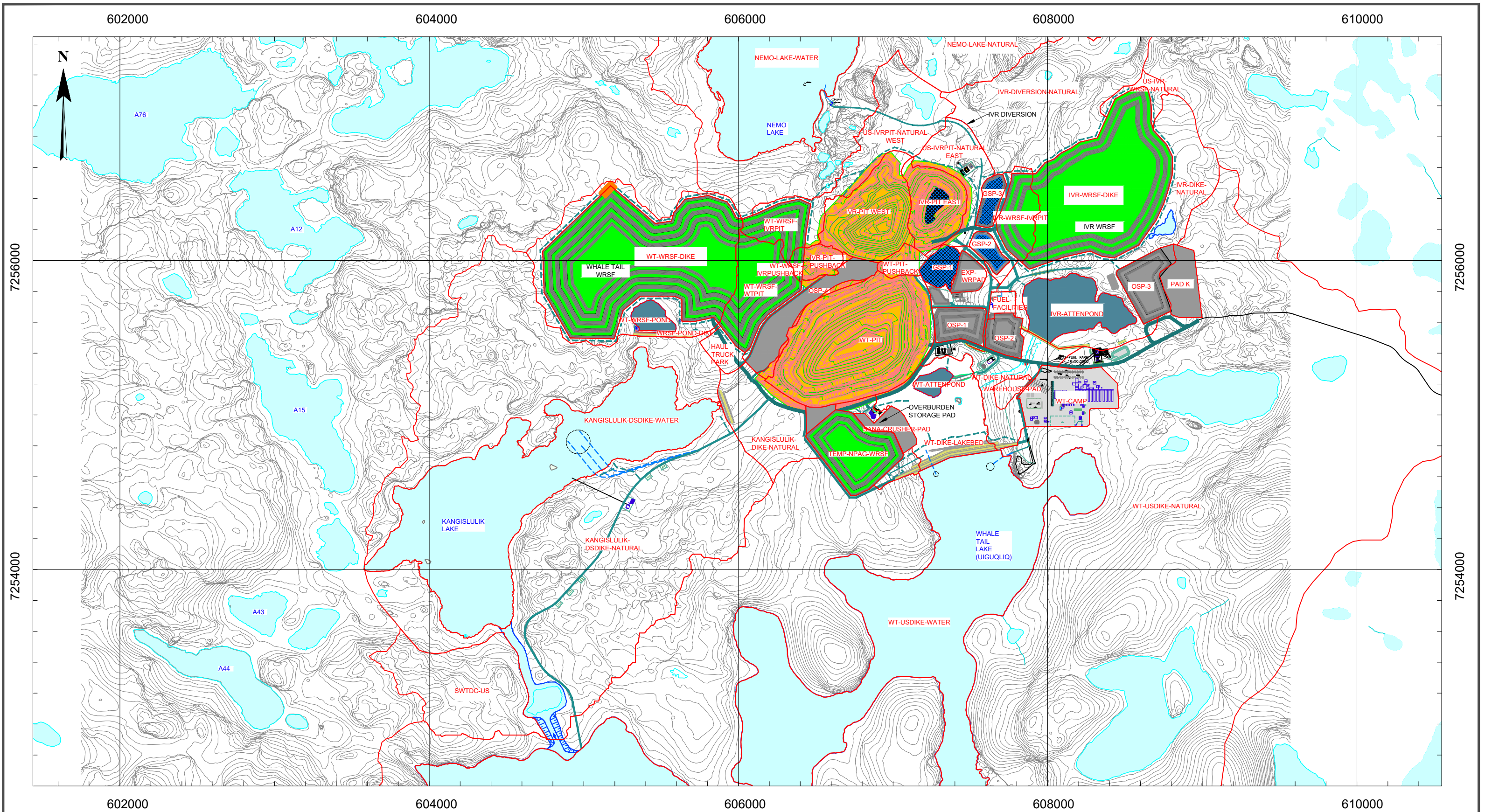
Whale Tail
Water Balance Layout - 2027

PROJECT #:

A766-1

FIGURE:

A.8



LEGEND

- | | | | | | |
|--|-----------------------------------|--|---------------------|--|-----------------------------|
| | WATER BALANCE CATCHMENT | | CONTACT WATER POND | | DIKE |
| | MAJOR AND MINOR CONTOURS FOR PITS | | SALINE POND | | OPEN PIT |
| | EXISTING GROUND | | WATERBODY (NATURAL) | | WASTE ROCK STORAGE FACILITY |
| | HAUL ROAD | | BACKFILL | | |
| | ROAD, SALT PROTECTION | | STOCKPILE | | |
| | SERVICE ROAD | | | | |
| | WATERCOURSE | | | | |
| | PIPE LINE | | | | |
| | DIVERSION CHANNEL | | | | |

DATE SAVED: Mar 22, 2024
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VERSION: 1

Original Drawing:
 Drawing Number 2024Q4. Amaruq Mine
 Site General Arrangement.
 Produced May 2, 2019 by Agnico Eagle.

CLIENT:



PROJECT:

Whale Tail WB/WQM

TITLE:

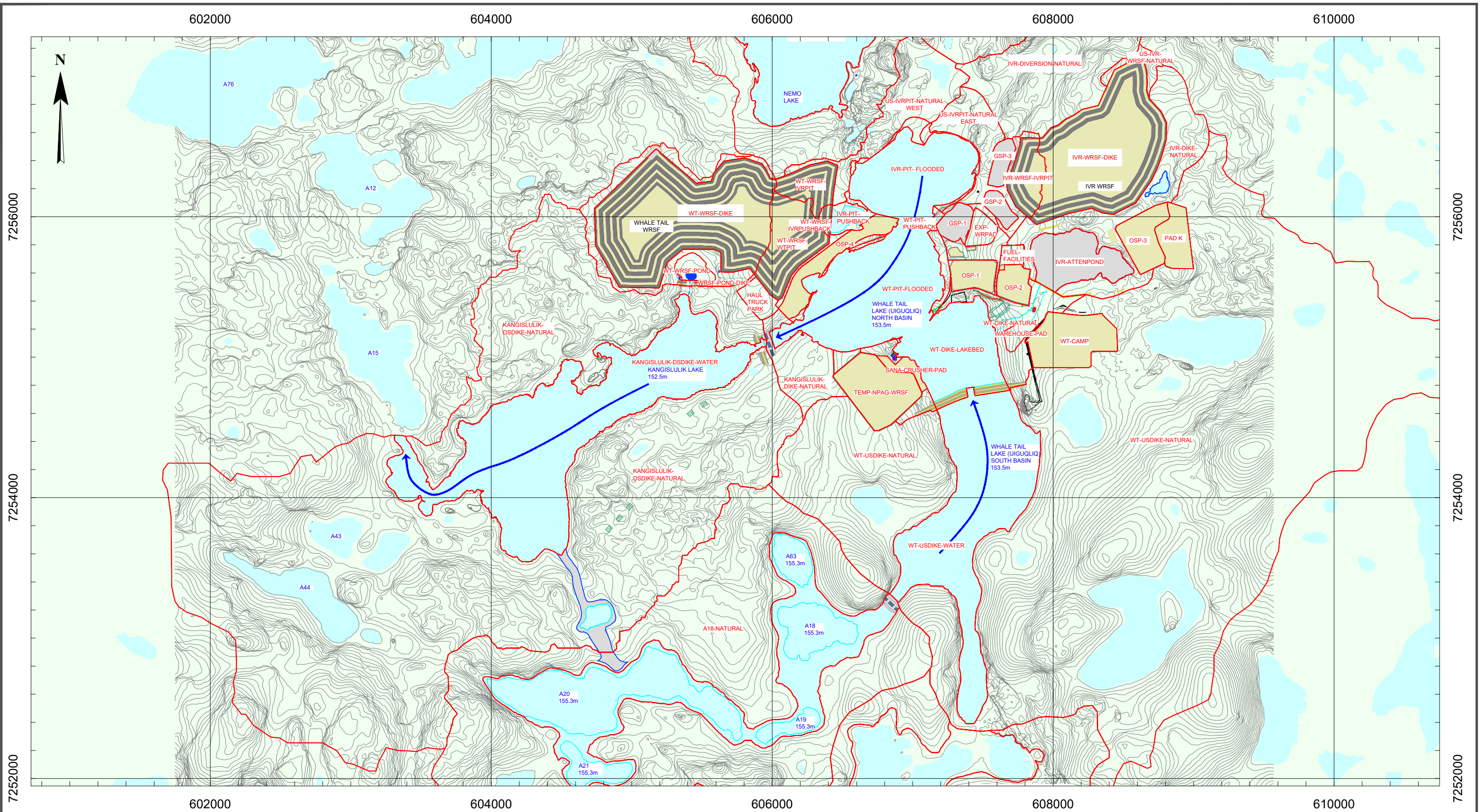
Whale Tail
 Water Balance Layout - 2028

PROJECT #:

A766-1

FIGURE:

A.9



LEGEND

- WATER BALANCE CATCHMENT
- MAJOR AND MINOR CONTOURS FOR PITS
- EXISTING GROUND
- HAUL ROAD
- ROAD, SALT PROTECTION
- SERVICE ROAD
- WATERCOURSE
- PIPE LINE
- DIVERSION CHANNEL
- BACKFILLED POND (NPAG)
- DIKE
- RECLAIMED MINE INFRASTRUCTURE
- WATERBODY (NATURAL)

DATE SAVED: Mar 22, 2024
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VERSION: 1

Notes:
 1. Original Drawing: Drawing Number 2042 POST CLOSURE. *Amaruq Mine Site General Arrangement.* Produced May 2, 2019 by Agnico Eagle.
 2. Whale Tail WRSF extension design provided by Okane Consultants
 3. Pit Extension provided by BBA - Whale Tail Phase 3 Underground End of Period Surfaces

CLIENT:



PROJECT:

Whale Tail WB/WQM

TITLE: **Whale Tail Water Balance Layout - Post-Closure**

PROJECT #: **A766-1** FIGURE: **A.10**

Appendix A.2: Whale Tail Mine Area Annual Catchment Areas

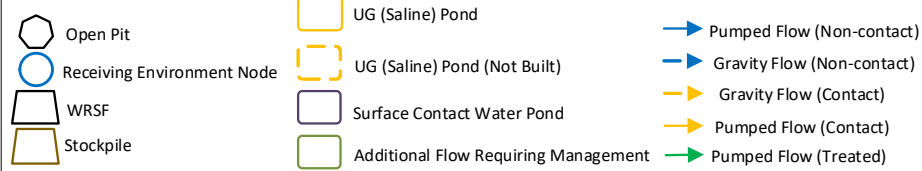
Catchment	Area (ha)									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	Post-Closure
A18-Natural	-	-	-	-	-	-	-	-	-	422.61
A18-Water	-	-	-	-	-	-	-	-	-	134.14
EXP-WRPAD	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
Fuel-Facilities	2.79	2.79	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
GSP-1	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99
GSP-2	-	-	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59
GSP-3	-	-	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16
Haultruck-Park	-	-	-	4.80	4.80	4.80	4.80	4.80	4.80	4.80
IVR-Attenpond	14.90	14.89	20.98	20.98	20.98	20.98	20.98	20.98	20.98	20.98
IVR-Dike-Natural	71.91	71.91	72.03	48.06	48.06	48.06	48.06	48.06	48.06	48.06
IVR-Diversion-Natural	137.49	72.90	67.53	71.70	71.70	71.70	71.70	71.70	71.70	71.70
IVR-Pit	1.71	26.53	37.17	41.75	41.75	41.75	41.75	41.75	41.75	5.15
IVR-Pit West Lobe	-	-	-	24.86	24.86	26.26	26.26	26.26	26.26	3.22
IVR-Pit East Lobe	-	-	-	16.89	16.89	15.49	15.49	15.49	15.49	1.93
IVR-Pit West_Flooded	-	-	-	-	-	-	-	-	-	24.70
IVR-Pit East_Flooded	-	-	-	-	-	-	-	-	-	15.22
IVR-Pit-Pushback	-	-	4.37	4.68	4.68	4.68	4.68	4.68	4.68	4.68
IVR-Saline Water Storage	-	-	-	-	-	1.80	1.80	1.80	1.80	1.80
IVR-WRSF-DIKE	-	44.55	44.55	67.67	67.67	67.67	67.67	67.67	67.67	67.67
IVR-WRSF-IVRPit	-	8.72	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75
Kangislulik-DIKE-Natural	43.29	35.76	28.87	26.87	26.87	26.87	26.87	26.87	26.87	20.93
Kangislulik-DSDIKE-Natural	387.80	387.80	348.87	347.32	347.32	347.32	347.32	347.32	347.32	753.76
Kangislulik-DSDIKE-Water	133.48	133.48	133.48	133.48	133.48	133.48	133.48	133.48	133.48	148.68
Nemo Lake - Natural	218.92	218.92	218.77	218.77	218.68	218.68	218.68	218.68	218.68	218.68
Nemo Lake - Water	118.60	118.60	118.60	118.60	118.60	118.60	118.60	118.60	118.60	118.60
OSP-1	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07
OSP-2	5.46	5.46	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
OSP-3	-	-	-	11.02	11.02	11.02	11.02	11.02	11.02	11.02
OSP-4	14.17	14.17	14.12	13.28	13.28	13.28	13.28	13.28	13.28	11.90
Pad K	-	-	-	-	8.64	8.64	8.64	8.64	8.64	8.64
OVB-STORAGE	-	-	1.84	1.94	1.94	1.94	1.94	1.94	1.94	1.73
Sana-Crusher-Pad	-	-	4.70	4.70	4.70	4.70	4.70	4.70	4.70	2.73
TEMP-NPAG-WRSF	15.34	23.33	19.94	19.94	19.94	19.94	19.94	19.94	19.94	19.94
US-IVRPit-Natural	115.69	82.42	48.77	-	-	-	-	-	-	-
US-IVRPit-Natural West	-	-	-	36.39	36.39	36.39	36.39	36.39	36.39	36.31
US-IVRPit-Natural East	-	-	-	23.32	23.32	23.32	23.32	23.32	23.32	23.32
US-IVRWRSF-Natural	-	20.04	20.04	4.07	4.07	4.07	4.07	4.07	4.07	4.07
US-SWTDC	-	-	46.21	46.21	46.21	46.21	46.21	46.21	46.21	-
US-WTPit-Natural	30.83	30.83	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.08
Warehouse-Pad	-	-	-	2.73	2.73	2.73	2.73	2.73	2.73	2.73
WT-AttenPond	2.86	2.86	2.86	2.84	2.84	2.84	2.84	2.84	2.84	2.84
WT-Camp	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88
WT-DIKE-Lakebed	31.82	31.82	31.19	29.84	29.84	29.84	29.84	29.84	29.84	29.84
WT-DIKE-Natural	41.13	41.13	41.78	35.80	35.80	35.80	35.80	35.80	35.80	40.02
WT-Pit	60.93	60.66	62.39	64.16	64.16	64.16	64.16	64.16	64.16	4.08
WT-Pit_Flooded	-	-	-	-	-	-	-	-	-	61.39
WT-NorthBasin(WT Dike to WT Pit)	-	-	-	-	-	-	-	-	-	34.75
WT-NorthBasin and Pit-Flooded	-	-	-	-	-	-	-	-	-	147.34
WT-Pit-Pushback	-	-	2.59	4.45	4.45	4.45	4.45	4.45	4.45	0.89
WT-Pit-Pushback_Flooded	-	-	-	-	-	-	-	-	-	3.56
WT-USDIKE-Natural	1,463.09	1,463.09	1,462.43	1,462.62	1,453.74	1,453.74	1,453.74	1,453.74	1,453.74	877.08
WT-USDIKE-SOUTHBASIN-NATURAL	-	-	-	-	-	-	-	-	-	245.87
WT-USDIKE-SOUTHBASIN-WATER	-	-	-	-	-	-	-	-	-	84.31
WT-USDIKE-Water	407.83	407.83	407.83	407.83	407.83	407.83	407.83	407.83	407.83	97.35
WT-WRSF-DIKE	81.02	81.02	85.98	85.98	85.98	85.98	85.98	85.98	85.98	85.98
WT-WRSF-IVRPIT	-	-	10.77	10.35	10.35	10.35	10.35	10.35	10.35	10.35
WT-WRSF-IVRPUSHBACK	-	-	0.98	1.44	1.44	1.44	1.44	1.44	1.44	1.44
WT-WRSF-Pond	-	-	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
WT-WRSF-Natural-IVRPushback	-	-	-	1.50	1.50	1.50	1.50	1.50	1.50	1.50
WT-WRSF-Pond-Natural	25.66	25.66	20.71	19.20	19.20	19.20	19.20	19.20	19.20	19.20
WT-WRSF-WTPIT	-	-	21.67	21.62	21.62	21.62	21.62	21.62	21.62	21.62
Total	3,463	3,463	3,472	3,528	3,528	3,529	3,529	3,529	3,529	4,049

***Appendix B:
Whale Tail Mine WBWQM Flow
Diagrams***



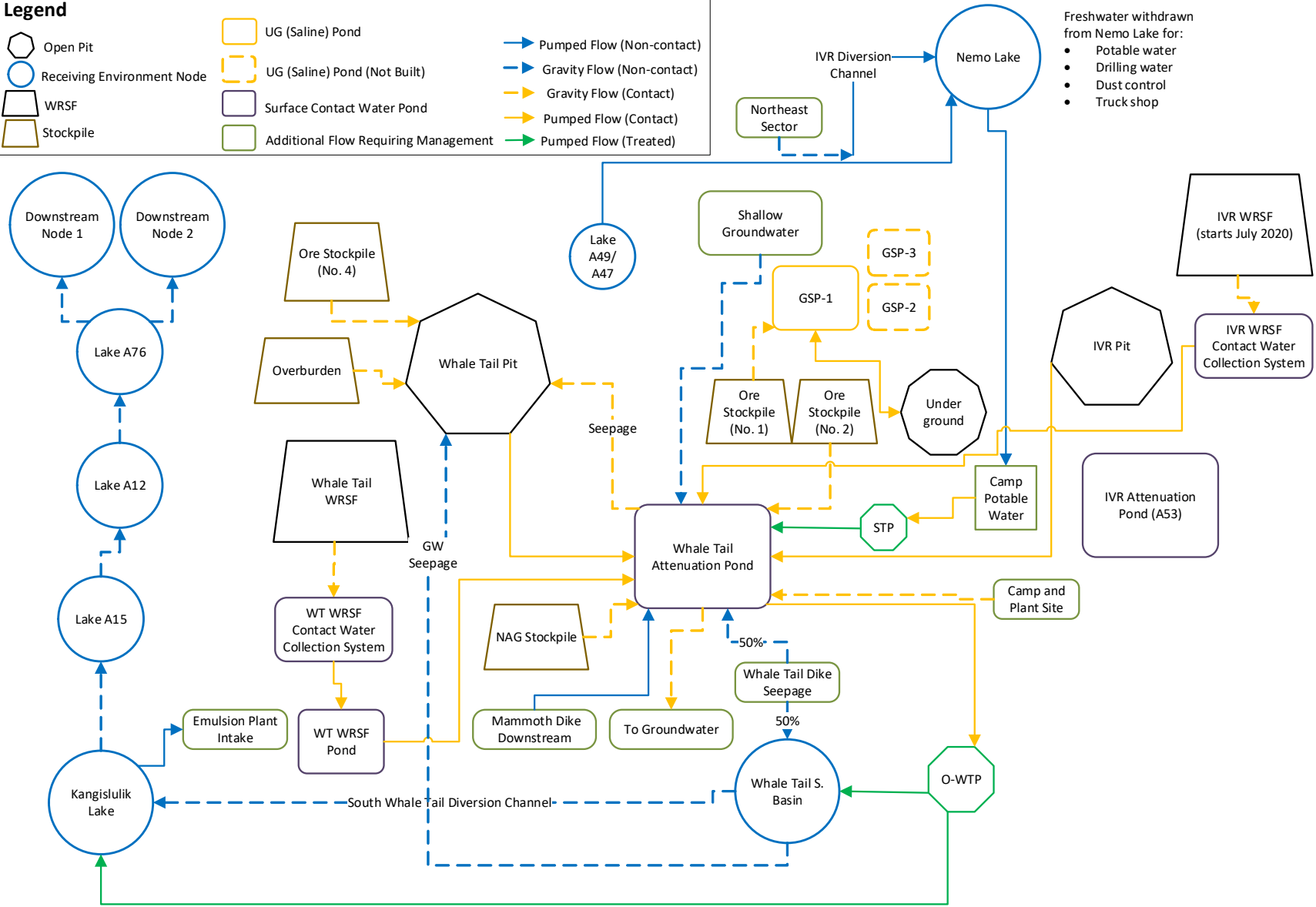
AGNICO EAGLE

Legend



Freshwater withdrawn from Nemo Lake for:

- Potable water
- Drilling water
- Dust control
- Truck shop



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














PROJECT: **Whale Tail: Water Balance and Water Quality Model**

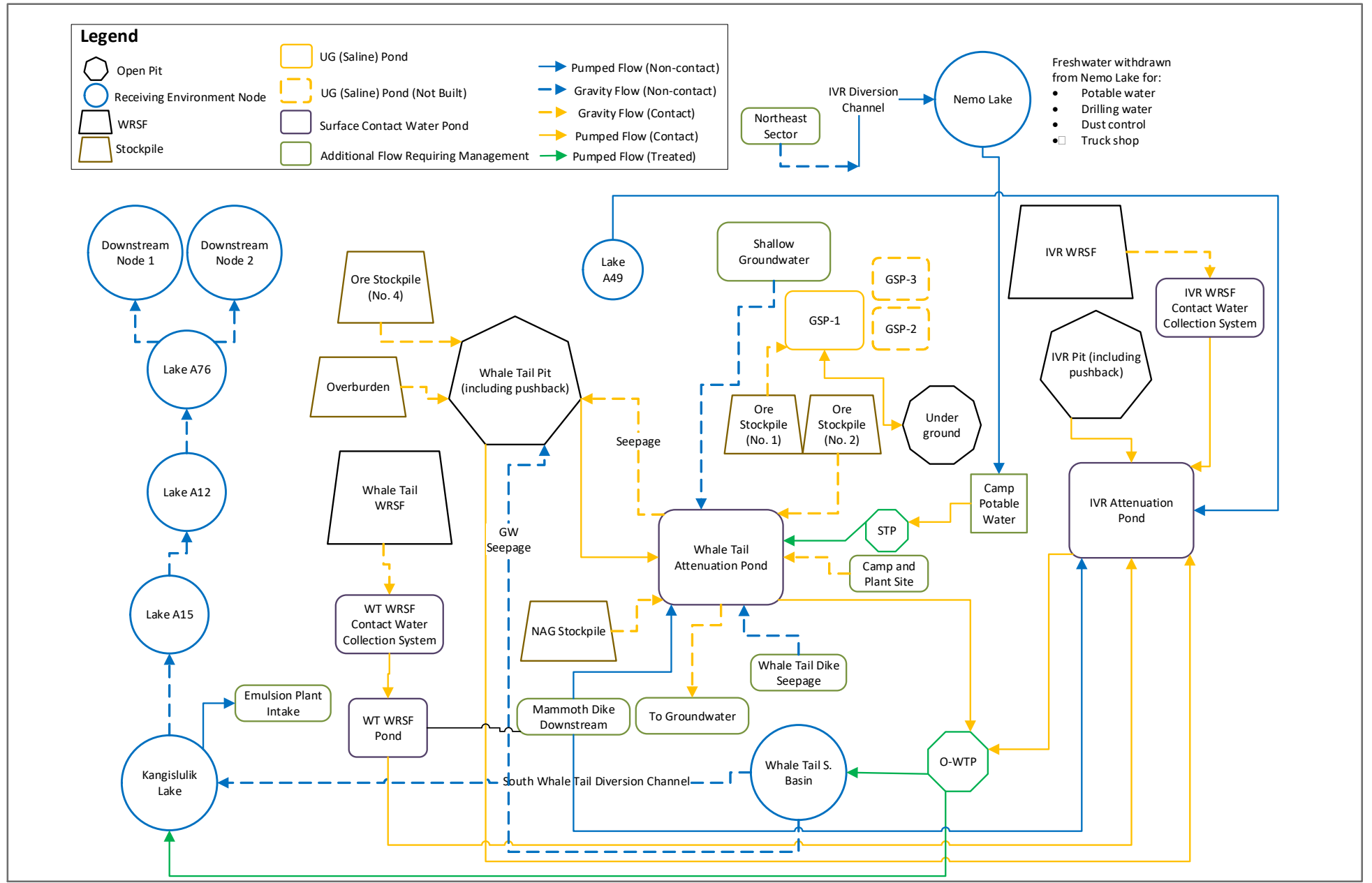
TITLE: Whale Tail
 WBWQM Flow Diagram (2020)

PROJECT #: A766-1 FIGURE: B1.1

Legend

-  Open Pit
-  Receiving Environment Node
-  WRSF
-  Stockpile
-  UG (Saline) Pond
-  UG (Saline) Pond (Not Built)
-  Surface Contact Water Pond
-  Additional Flow Requiring Management
-  Pumped Flow (Non-contact)
-  Gravity Flow (Non-contact)
-  Gravity Flow (Contact)
-  Pumped Flow (Contact)
-  Pumped Flow (Treated)

- Freshwater withdrawn from Nemo Lake for:
- Potable water
 - Drilling water
 - Dust control
 - ☐ Truck shop



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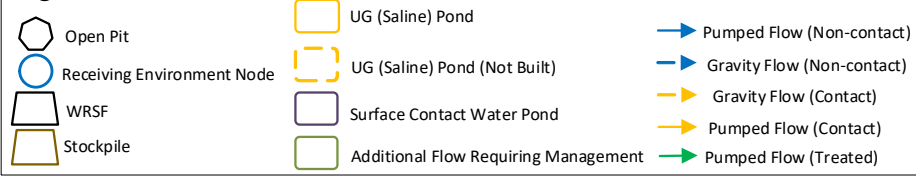
CLIENT: **AGNICO EAGLE**

PROJECT: **Whale Tail: Water Balance and Water Quality Model**

TITLE: **Whale Tail WBWQM Flow Diagram (2021)**

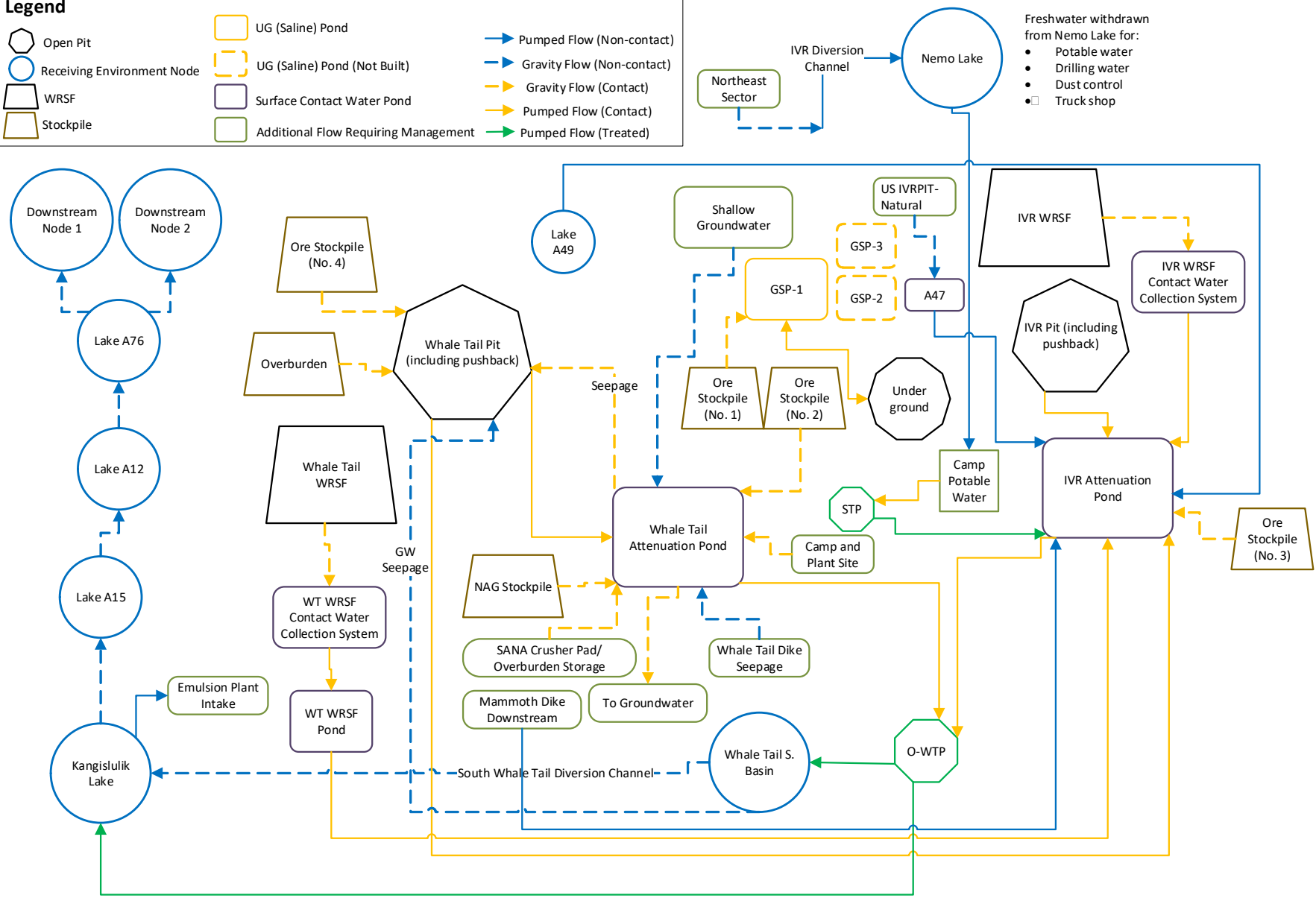
PROJECT #: **A766-1** FIGURE: **B1.2**

Legend



Freshwater withdrawn from Nemo Lake for:

- Potable water
- Drilling water
- Dust control
- Truck shop

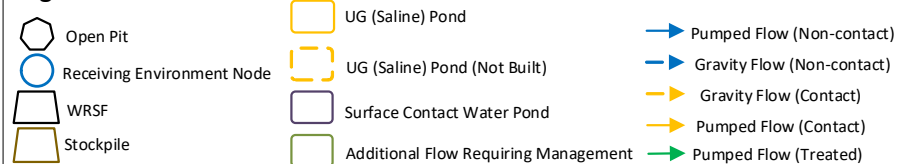


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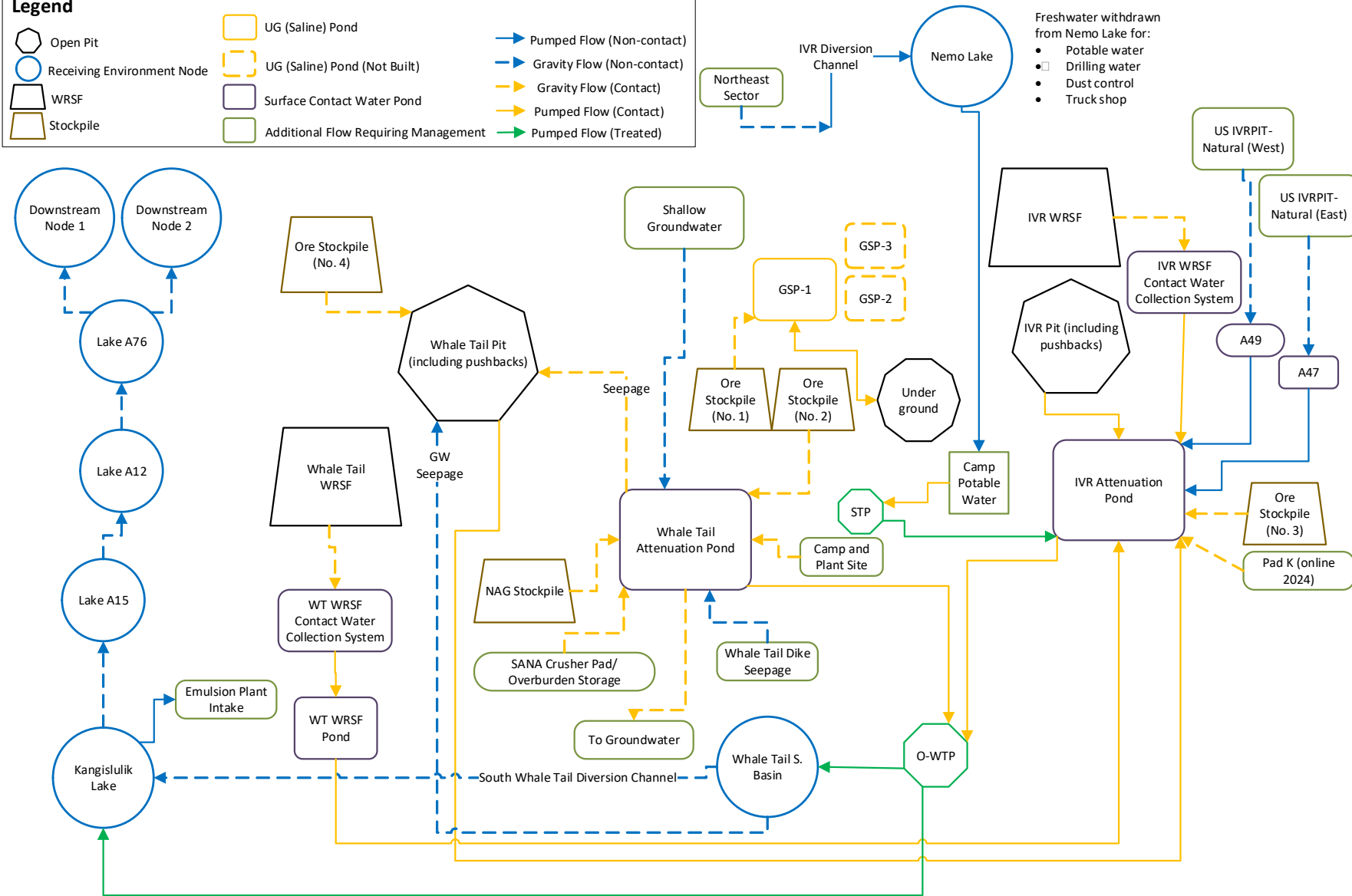


CLIENT: **AGNICO EAGLE**
 PROJECT: **Whale Tail: Water Balance and Water Quality Model**
 TITLE: **Whale Tail WBWQM Flow Diagram (2022)**
 PROJECT #: **A766-1** FIGURE: **B1.3**

Legend



- Freshwater withdrawn from Nemo Lake for:
- Potable water
 - Drilling water
 - Dust control
 - Truck shop

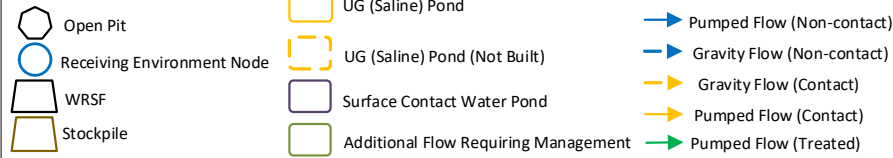


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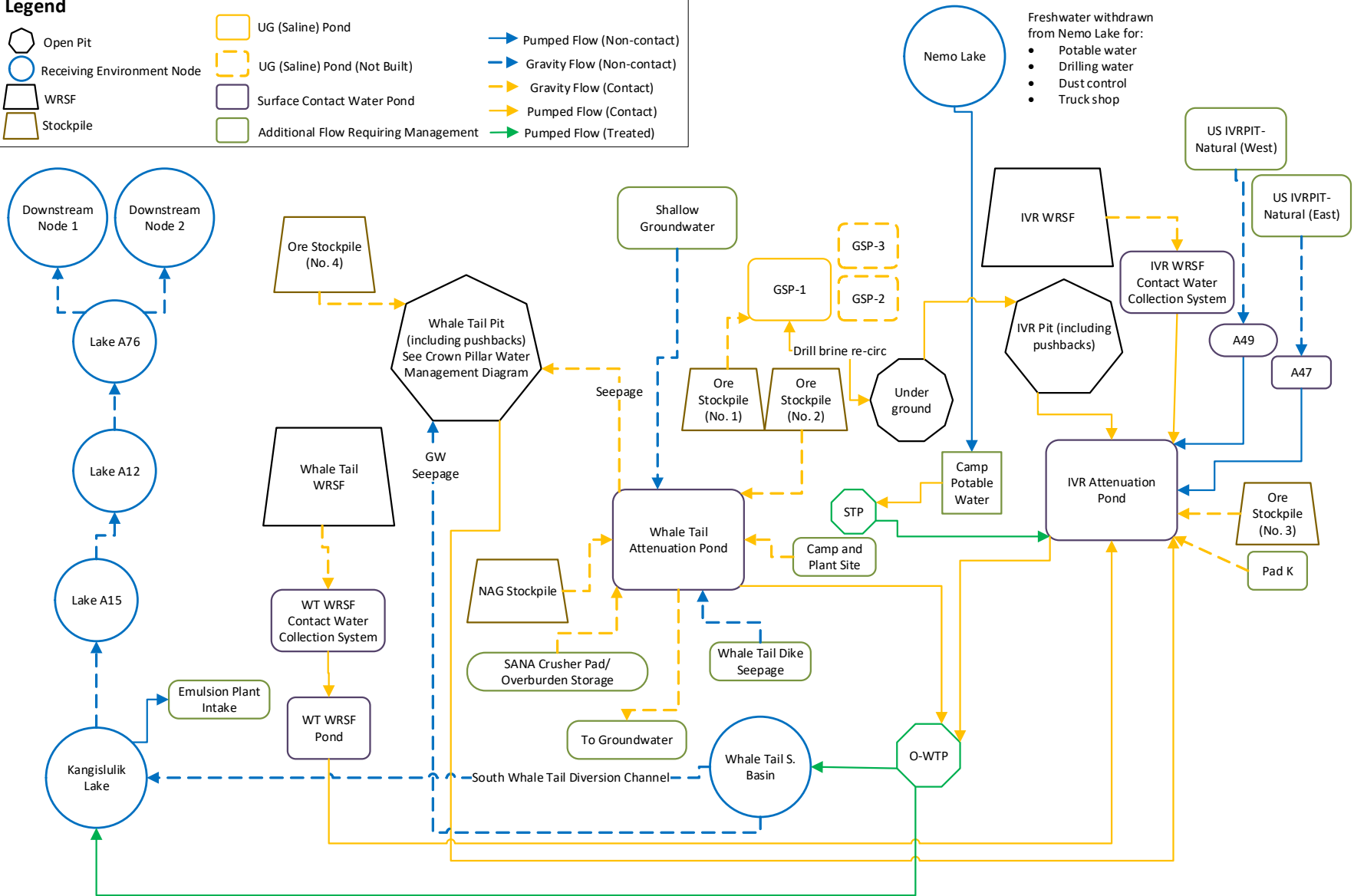
CLIENT: **AGNICO EAGLE**
 PROJECT: **Whale Tail: Water Balance and Water Quality Model**
 TITLE: **Whale Tail WBQM Flow Diagram (2023-24)**
 PROJECT #: **A766-1** FIGURE: **B1.4**

Legend



Freshwater withdrawn from Nemo Lake for:

- Potable water
- Drilling water
- Dust control
- Truck shop



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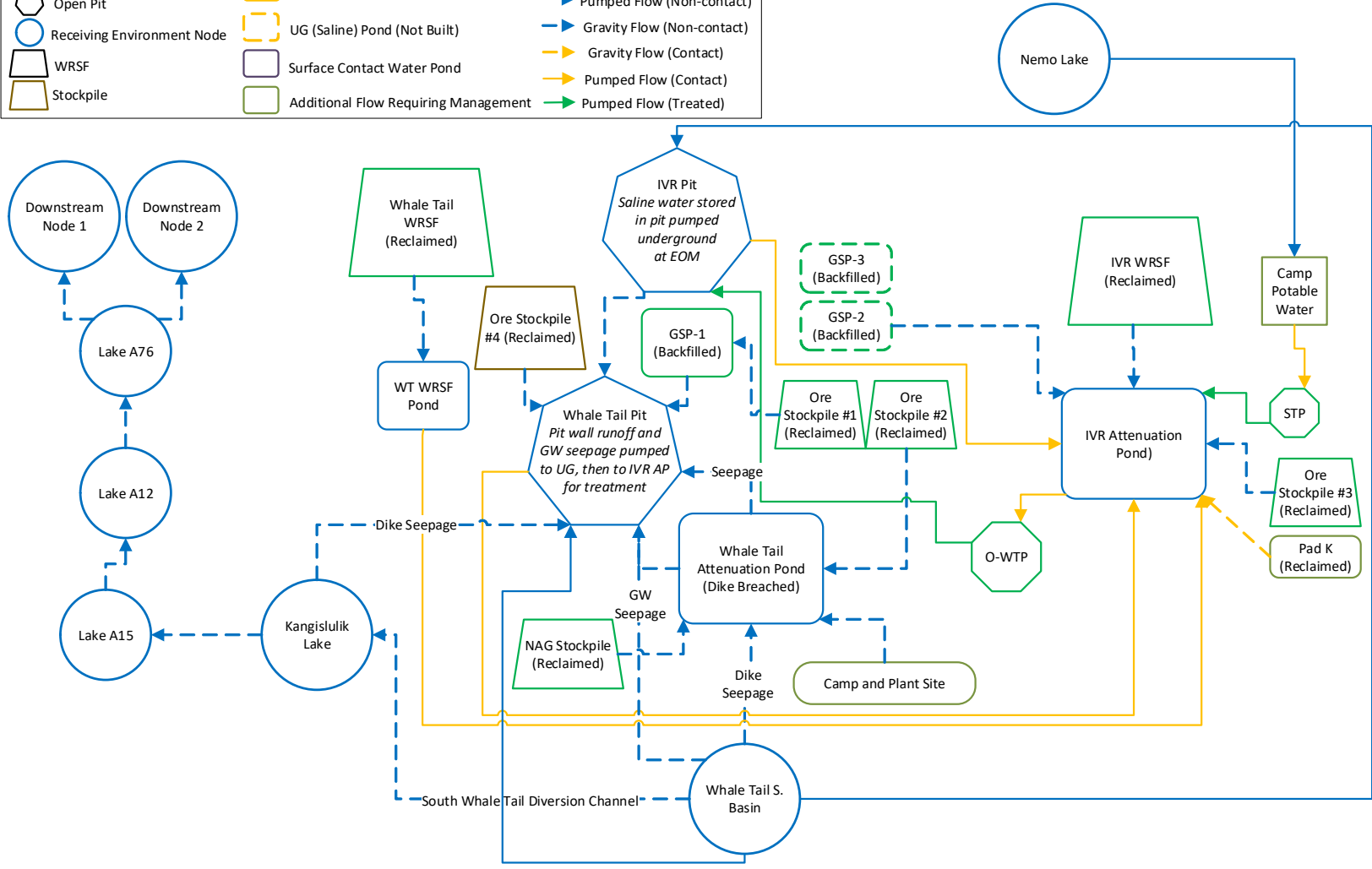
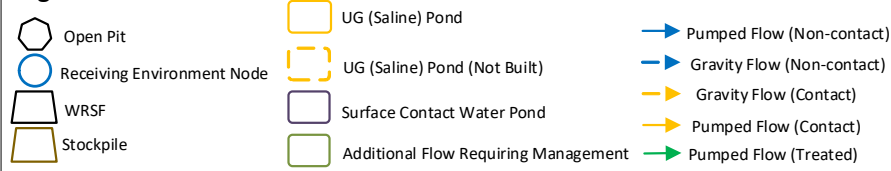


PROJECT: **Whale Tail: Water Balance and Water Quality Model**

TITLE: **Whale Tail WBQM Flow Diagram (2025-28)**

PROJECT #: A766-1 FIGURE: B1.5

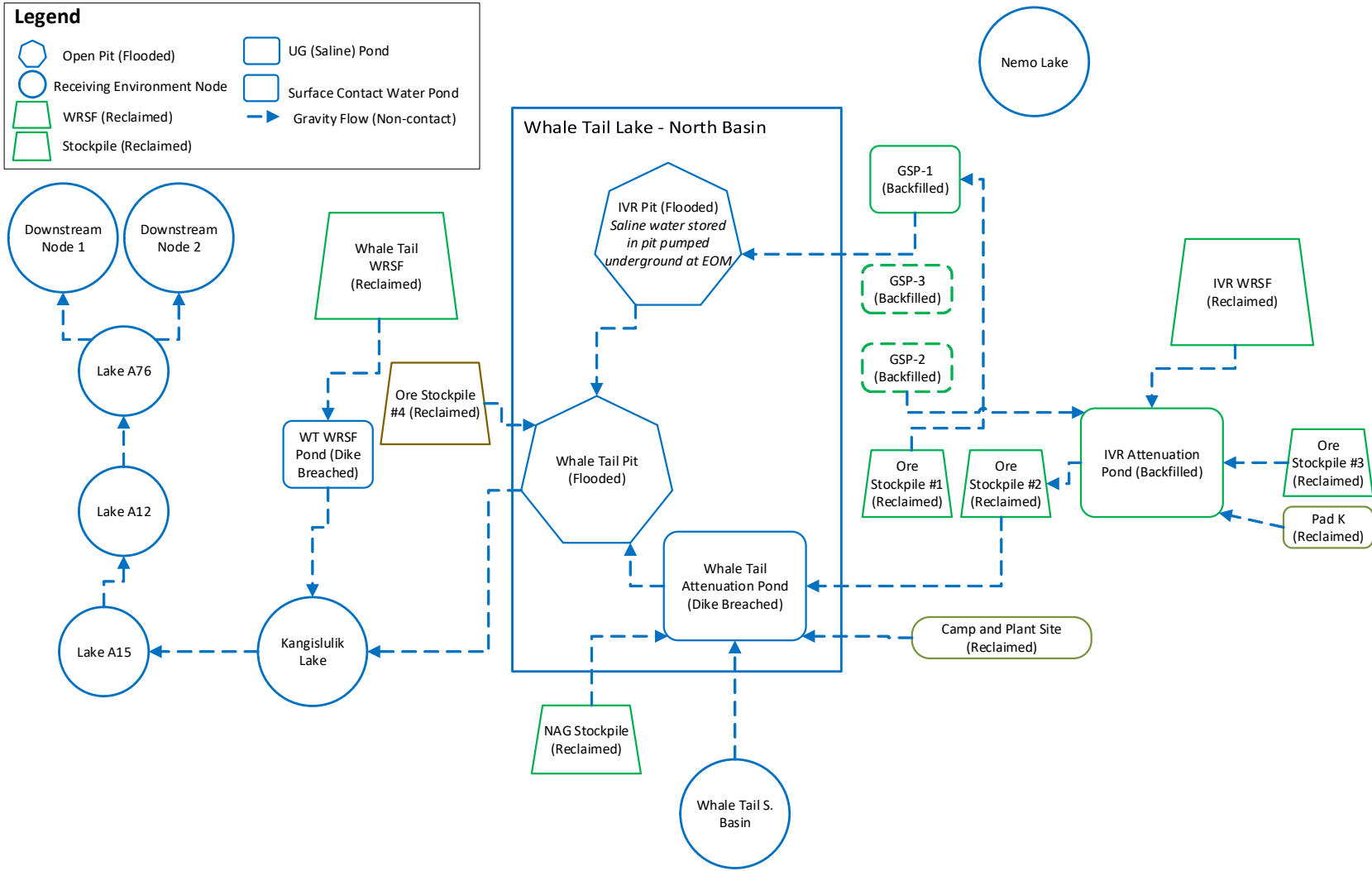
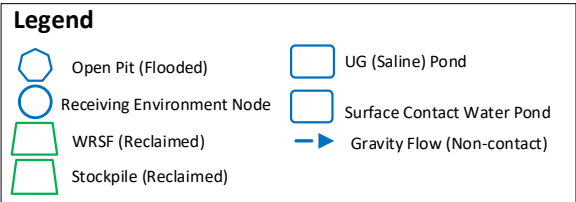
Legend



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PROJECT: **Whale Tail: Water Balance and Water Quality Model**
 TITLE: Whale Tail WBQM Flow Diagram (Active Closure)
 PROJECT #: A766-1
 FIGURE: B1.6



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 VERSION: 1



PROJECT: **Whale Tail: Water Balance and Water Quality Model**
 TITLE: Whale Tail WBWQM Flow Diagram (Post-closure)
 PROJECT #: A766-1
 FIGURE: B1.7

***Appendix C:
Water Quality Model Results and
Validation***



AGNICO EAGLE

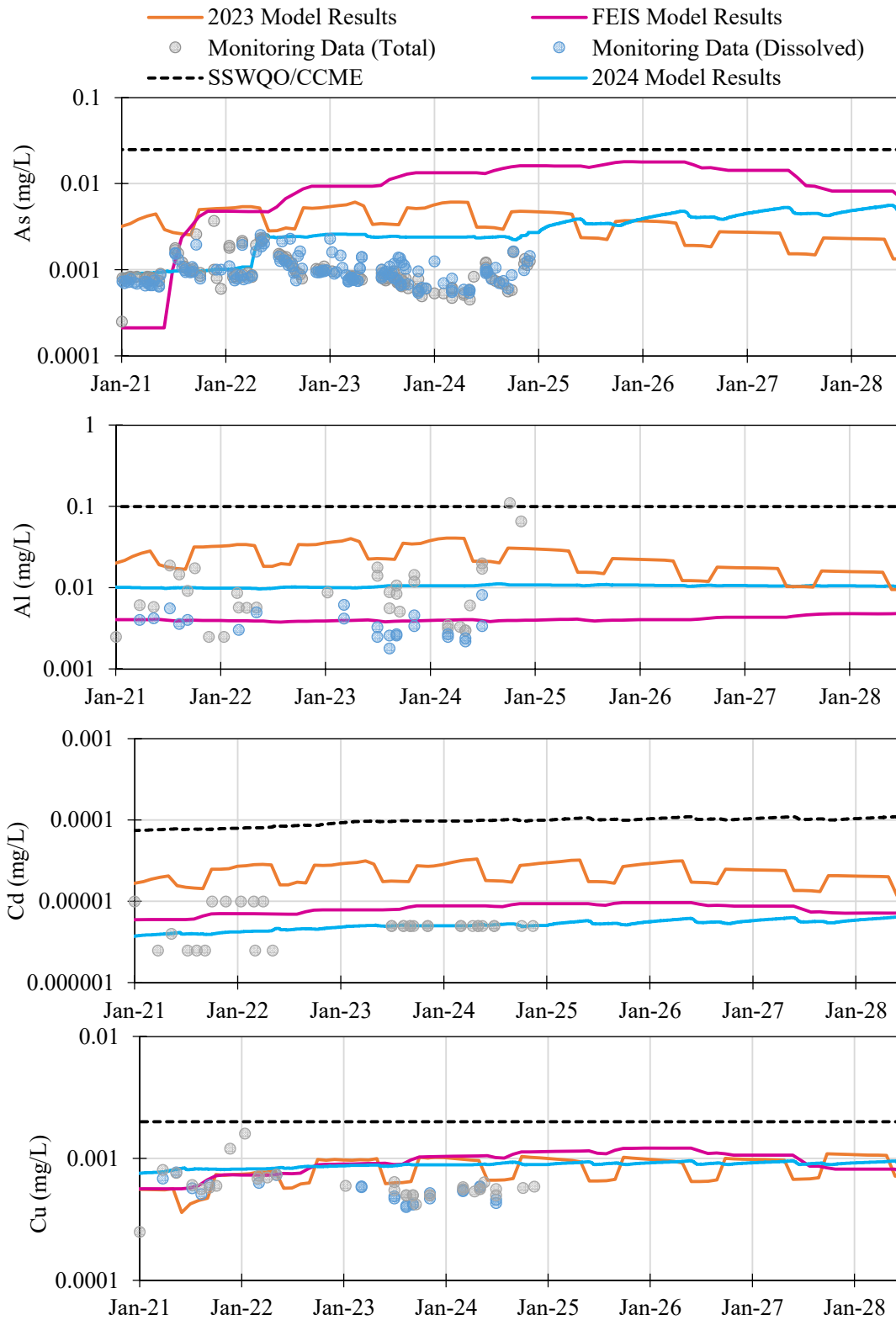


Figure C.1-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

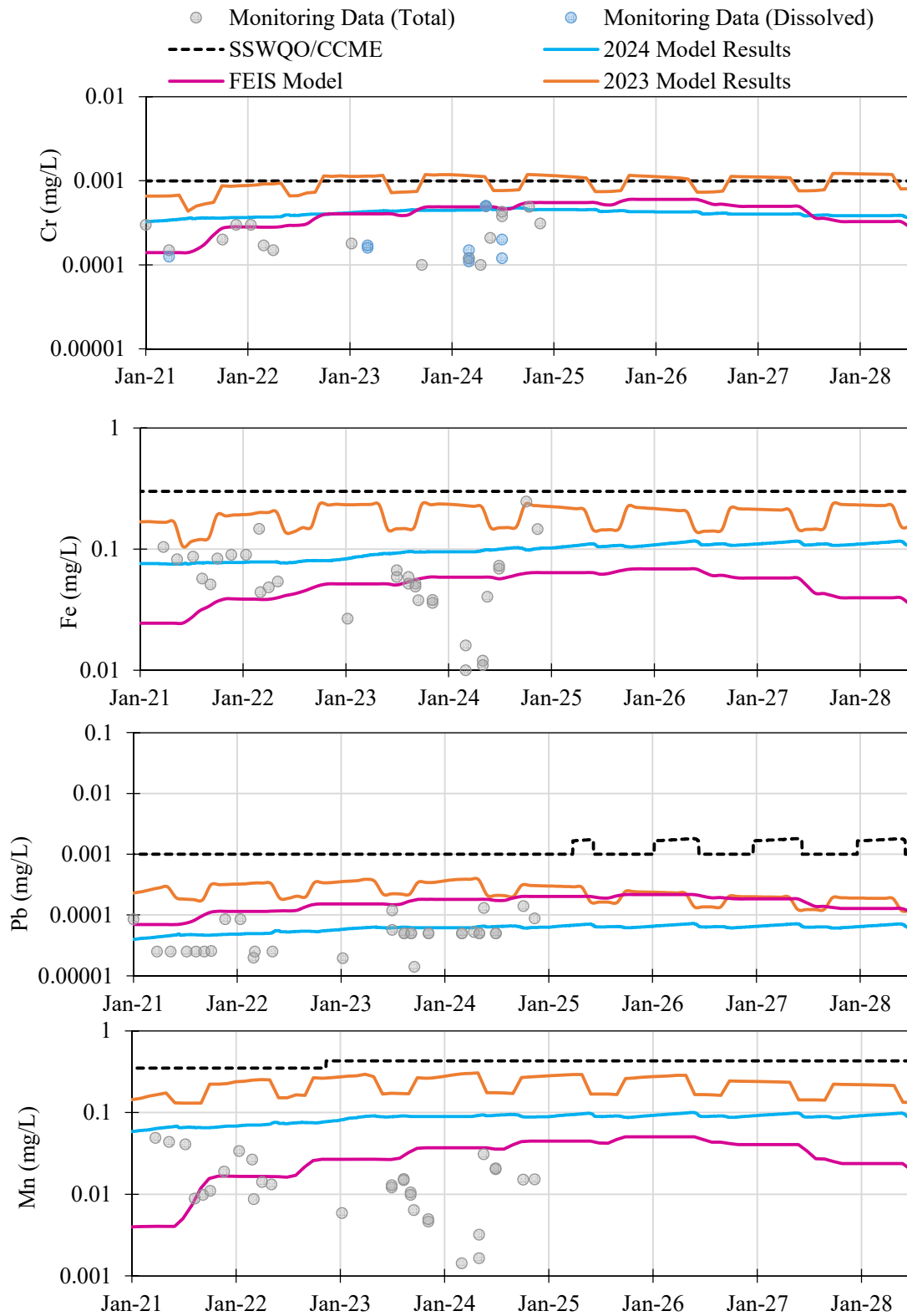


Figure C.1-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

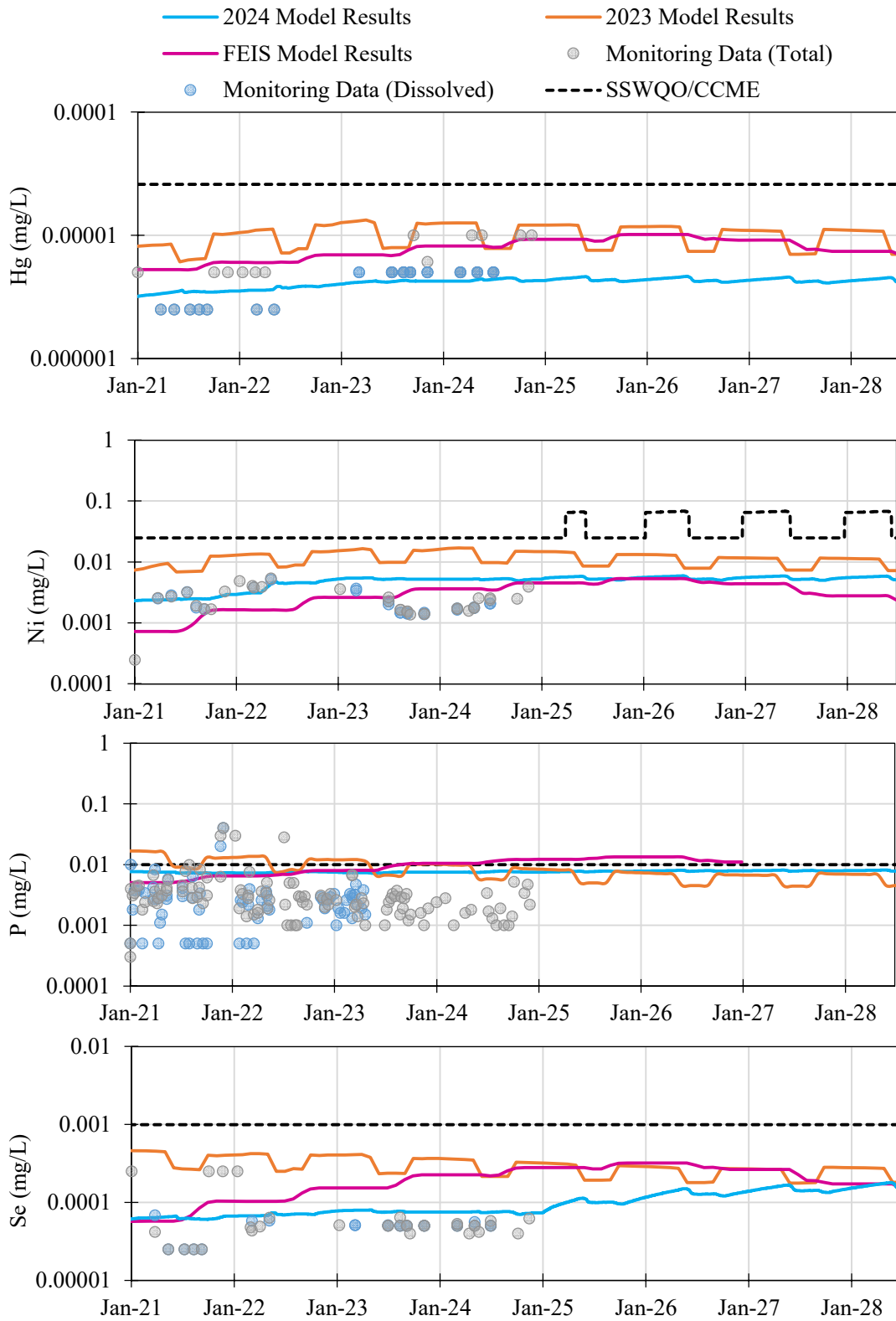


Figure C.1-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

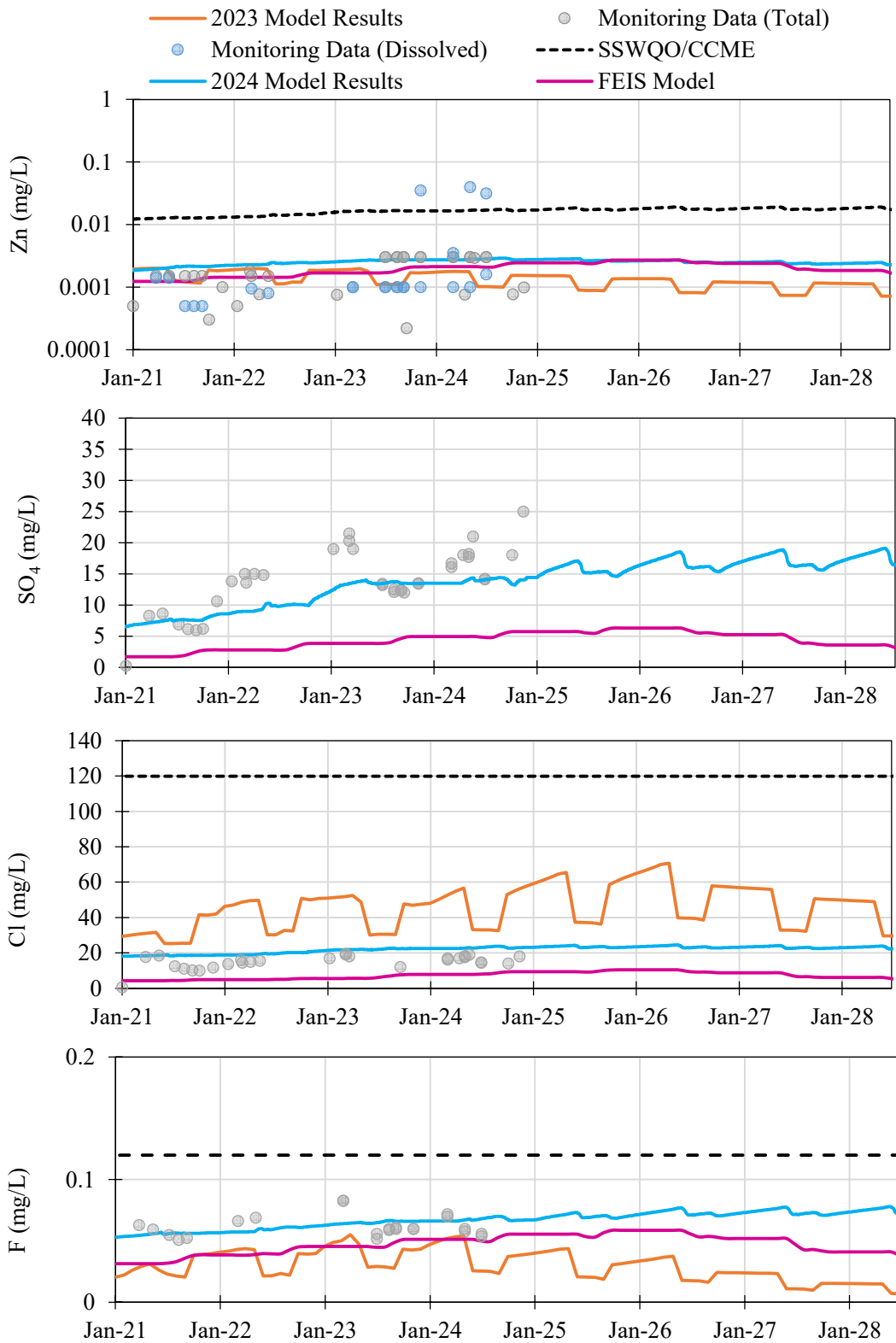


Figure C.1-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

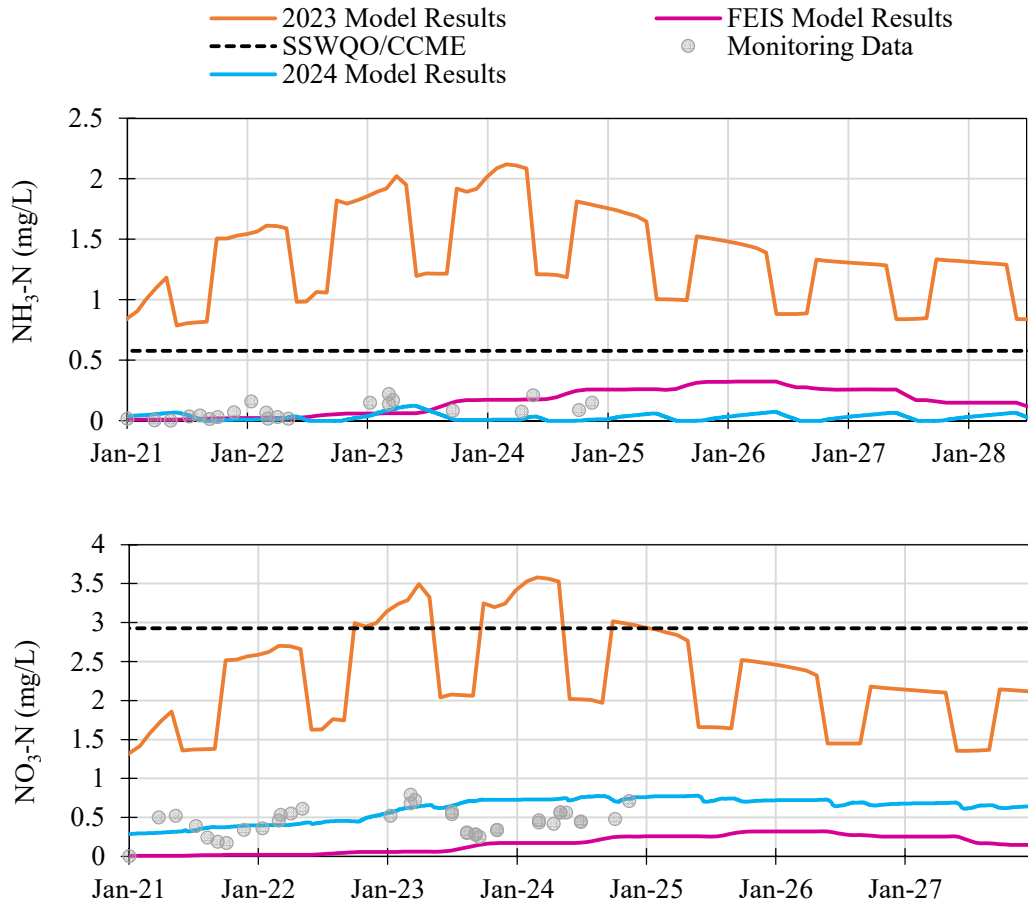


Figure C.1-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

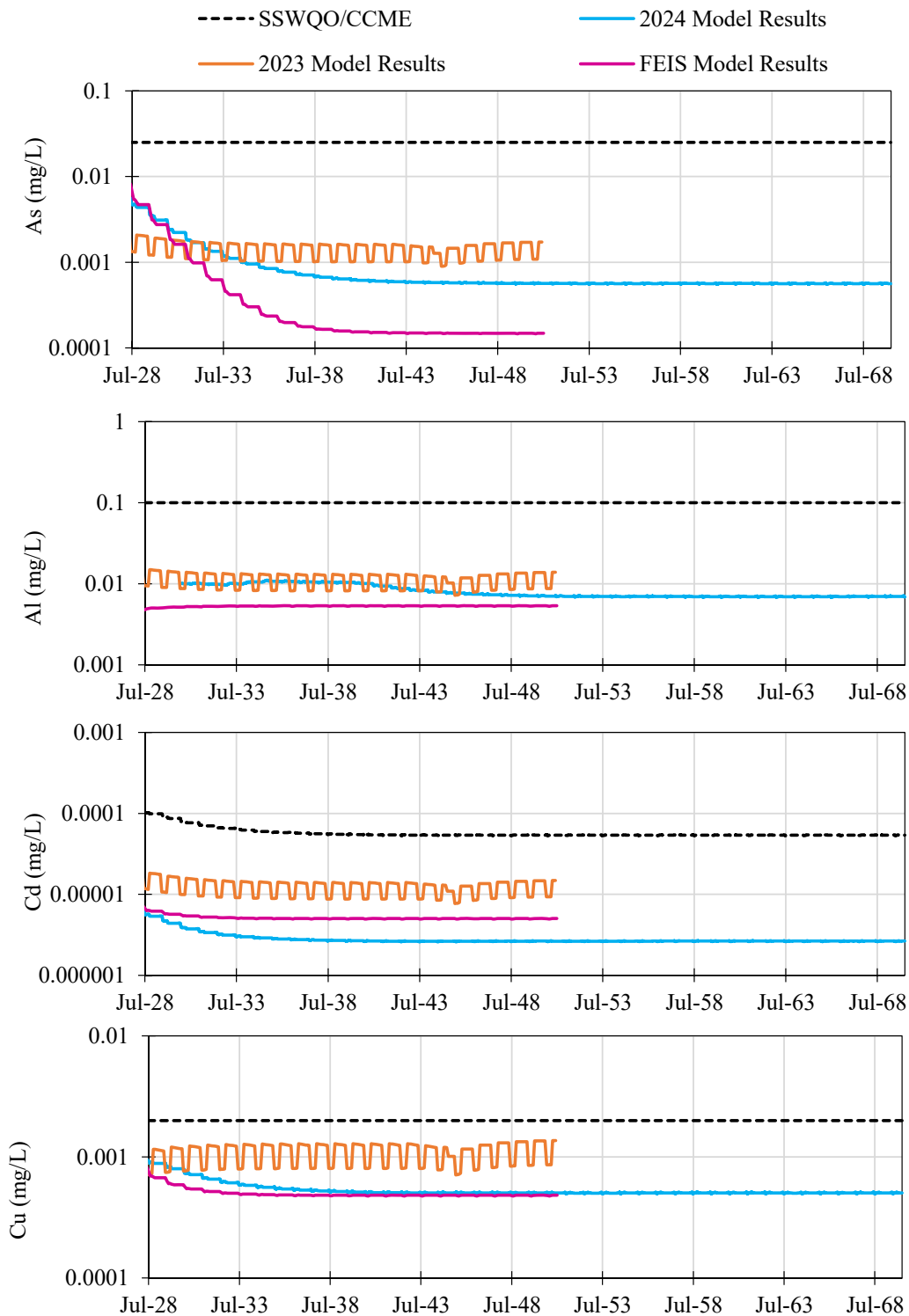


Figure C.2-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

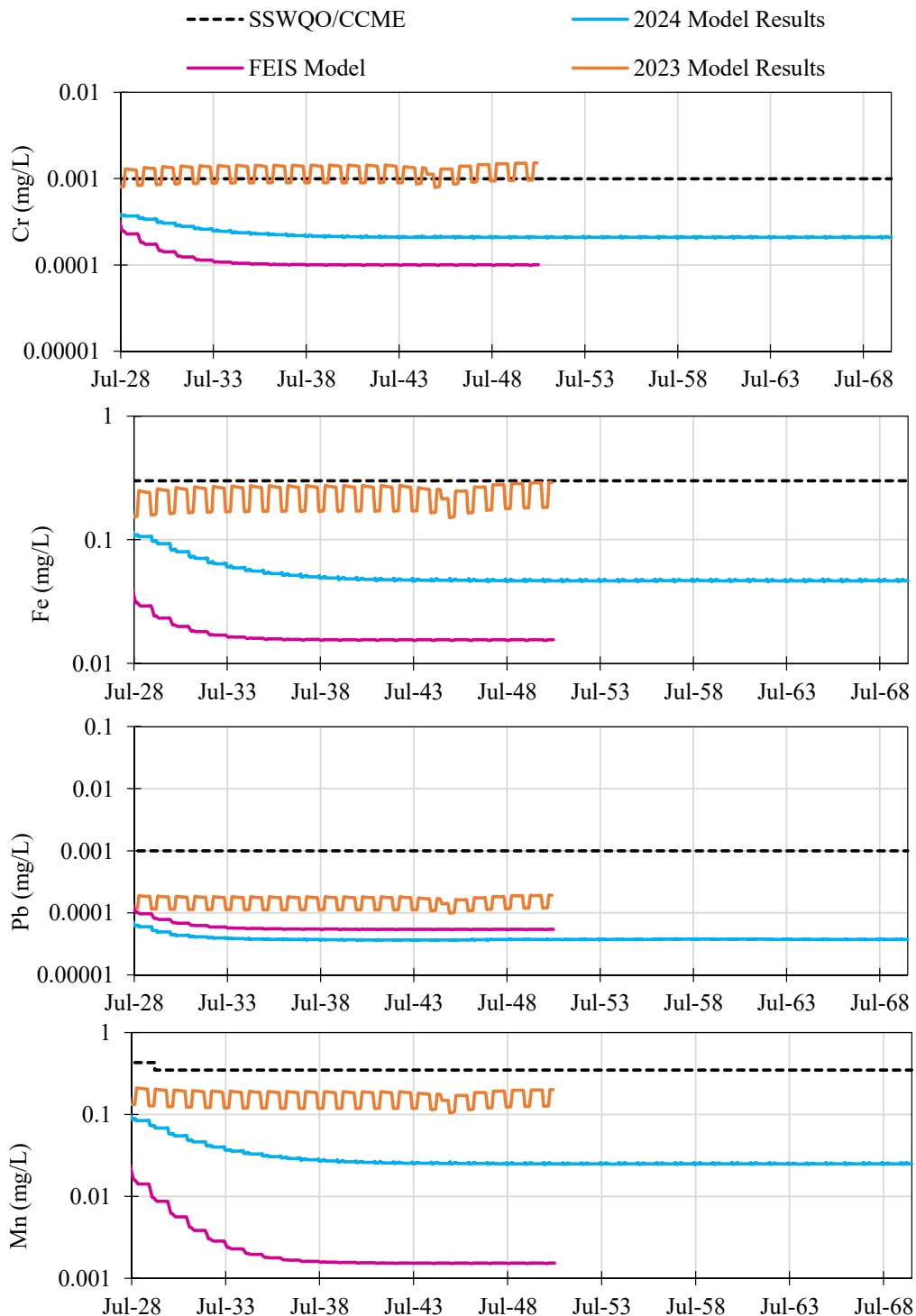


Figure C.2-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria

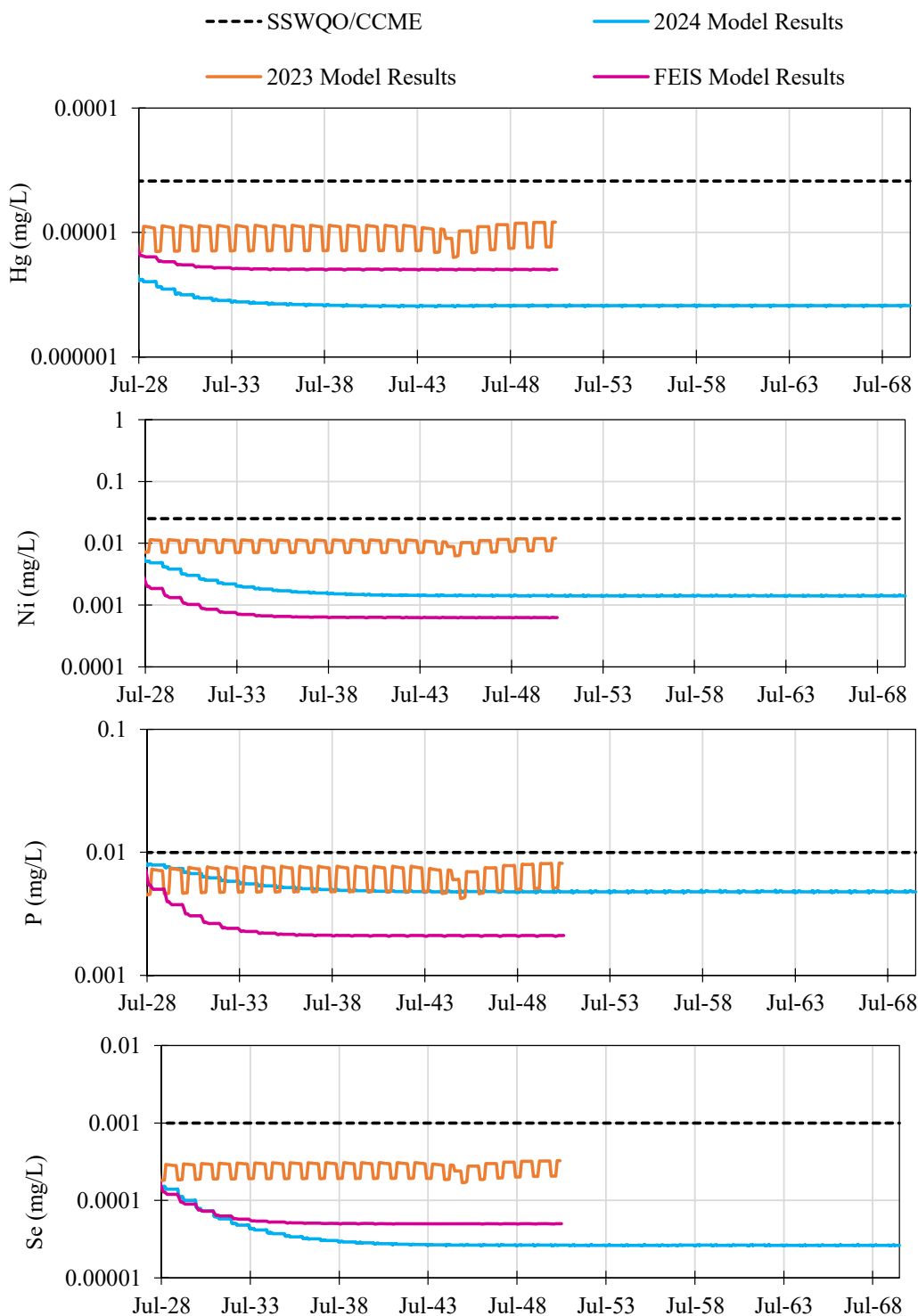


Figure C.2-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria (CCME/SSWQO).

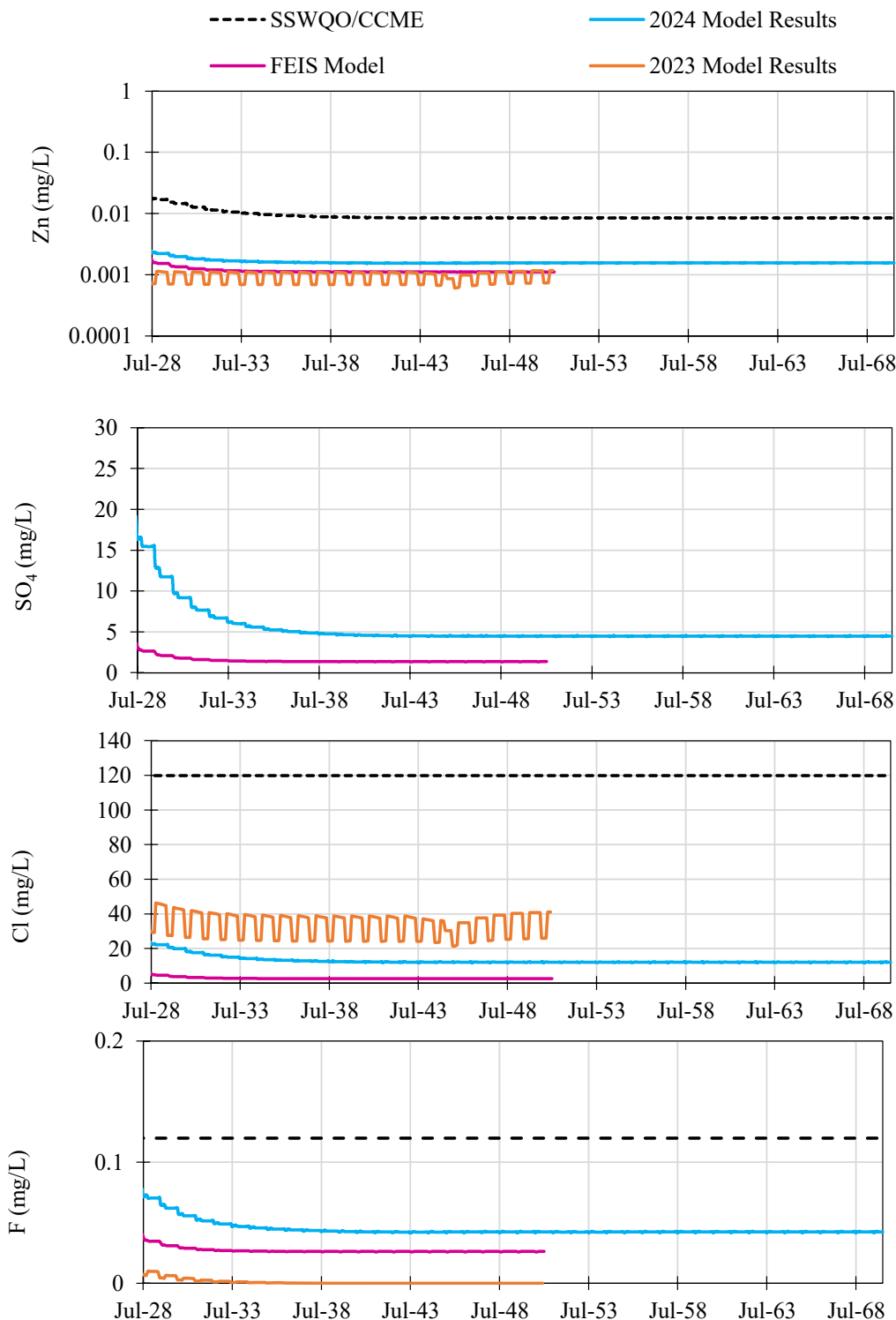


Figure C.2-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria (CCME/SSWQO).

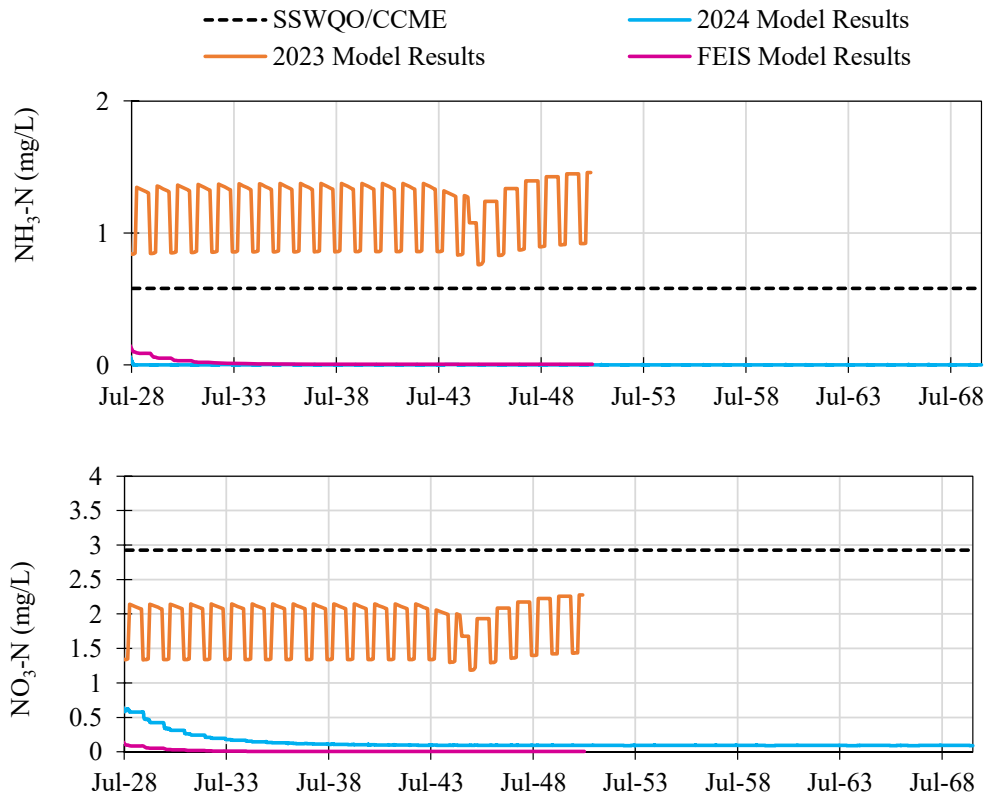


Figure C.2-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail South compared against receiving environment water quality criteria (CCME/SSWQO).

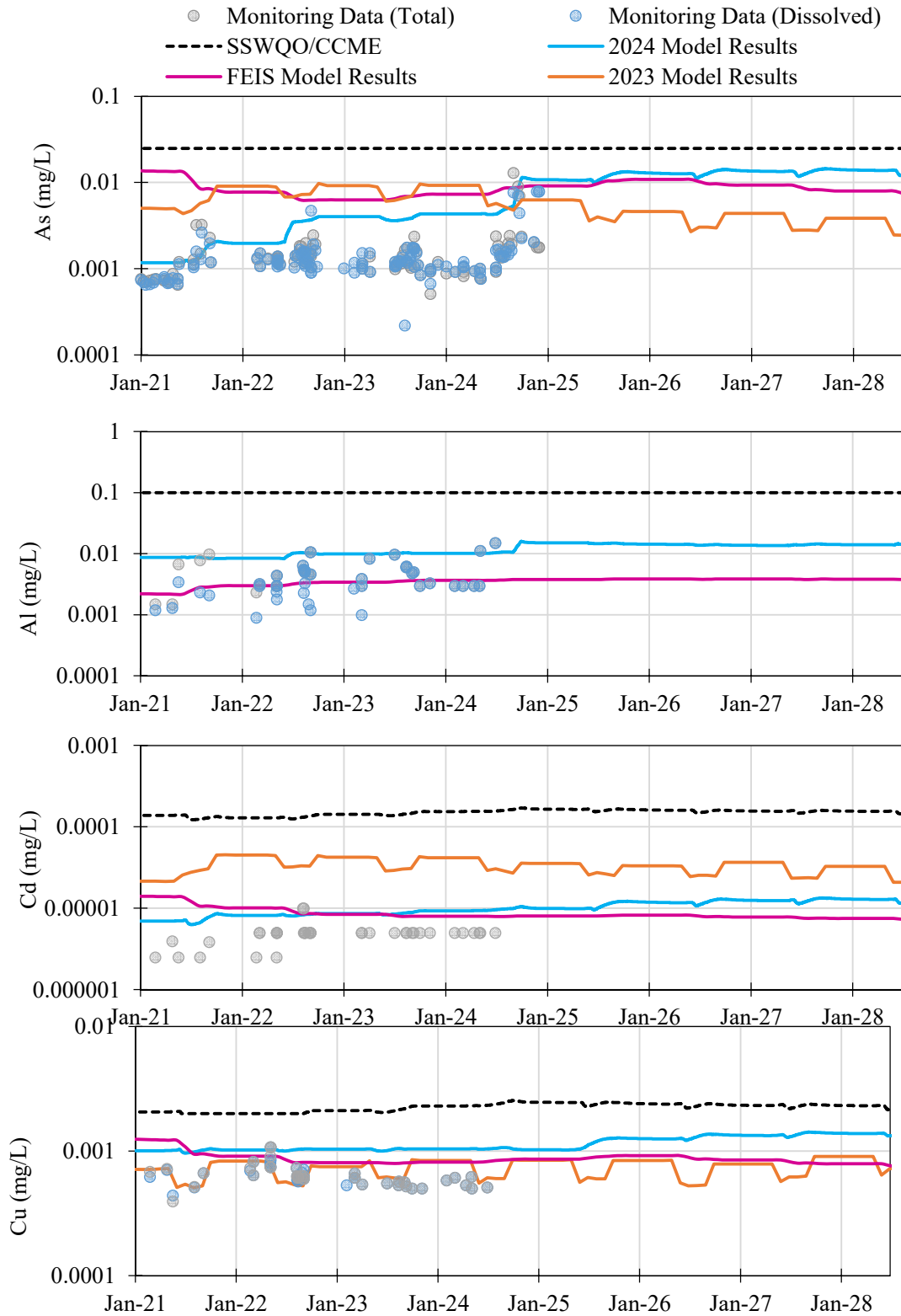


Figure C.3-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

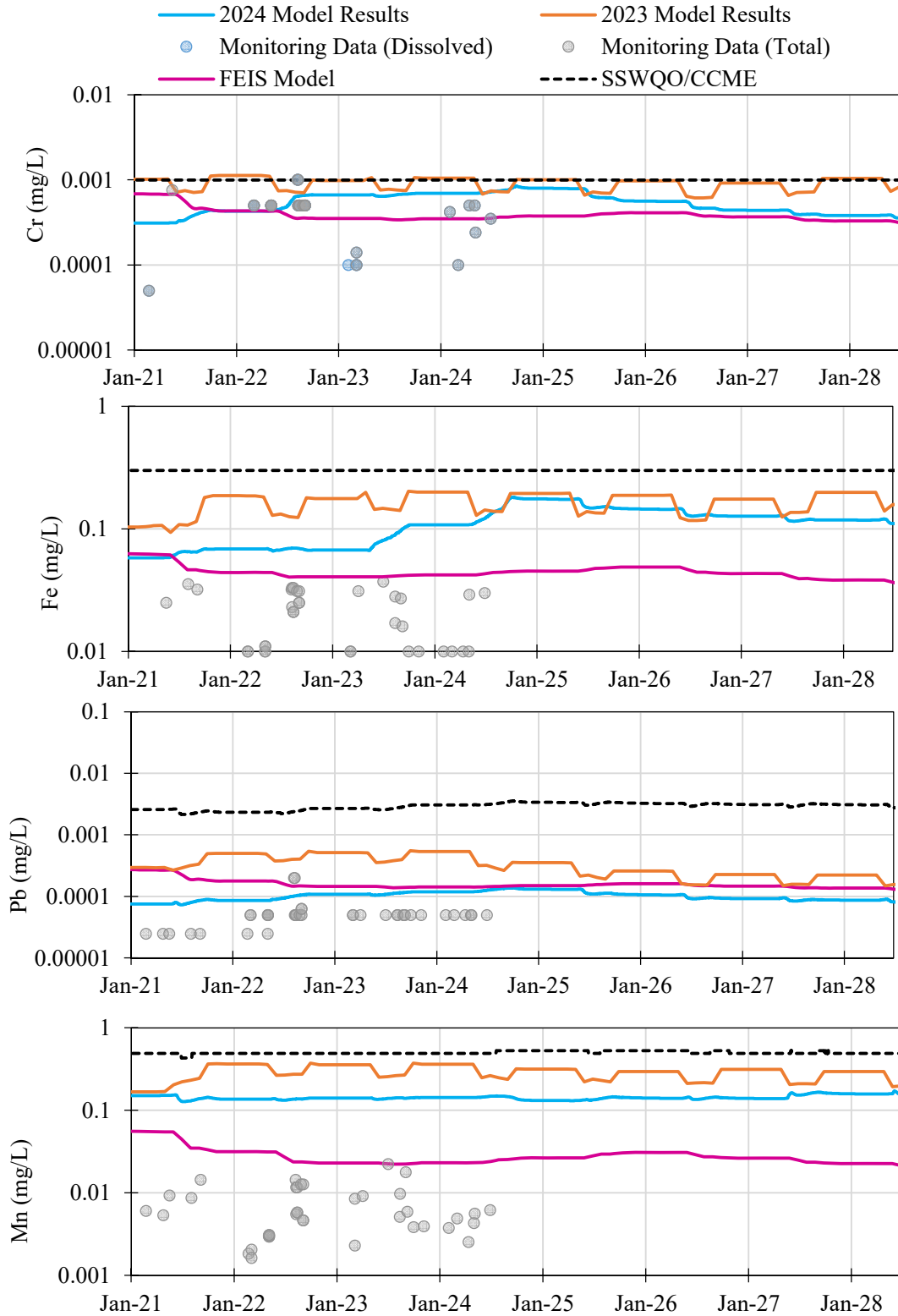


Figure C.3-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

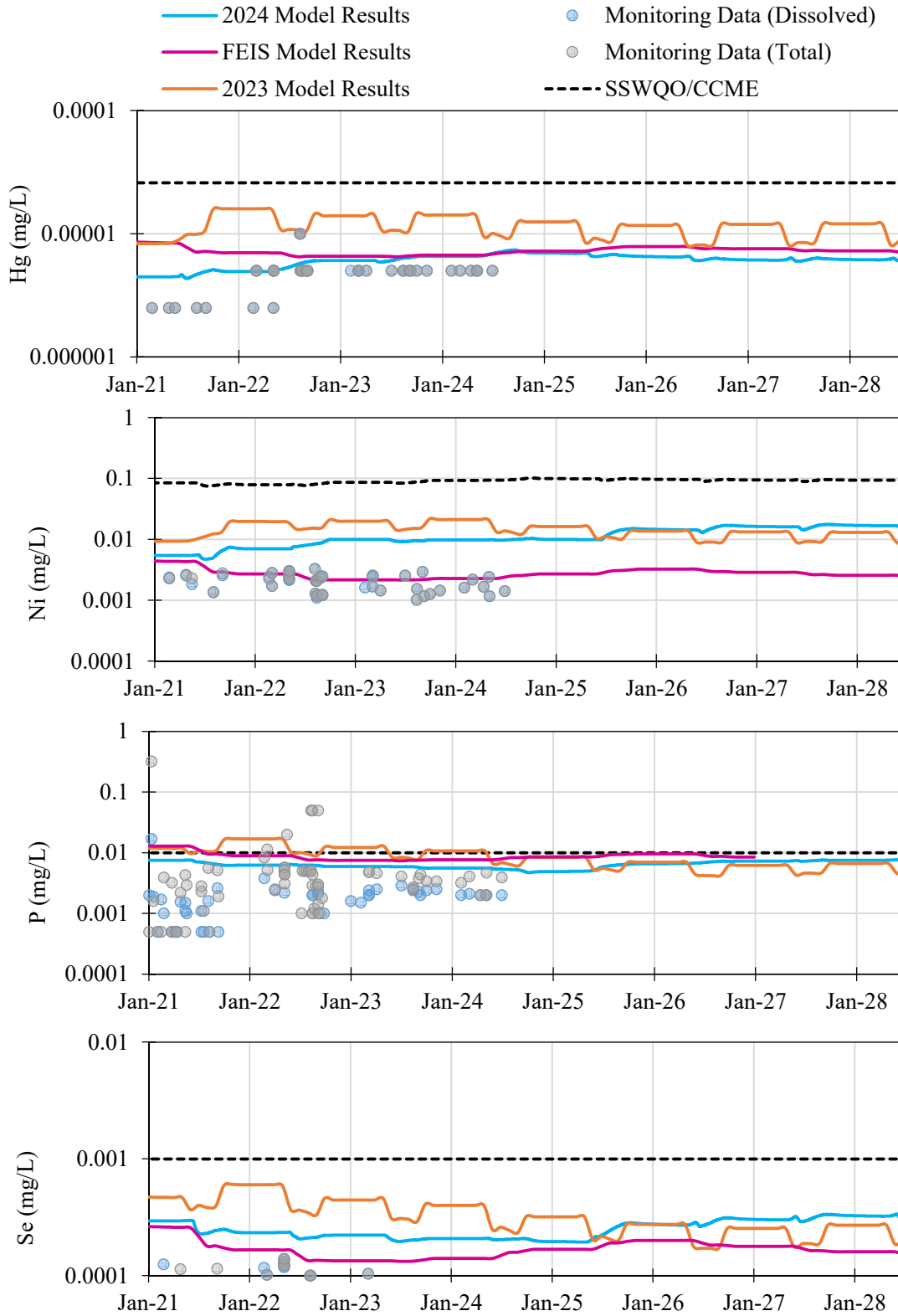


Figure C.3-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

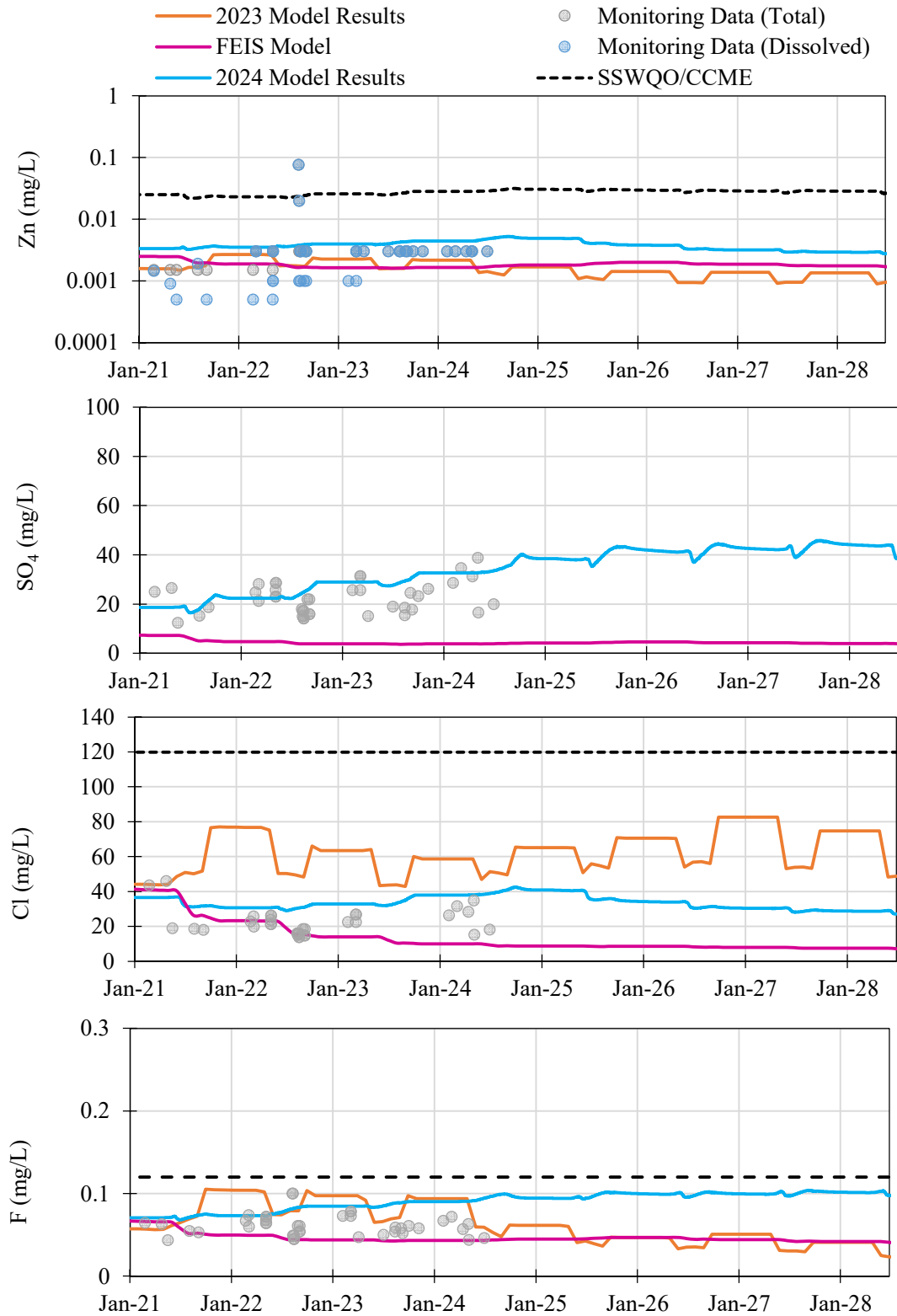


Figure C.3-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

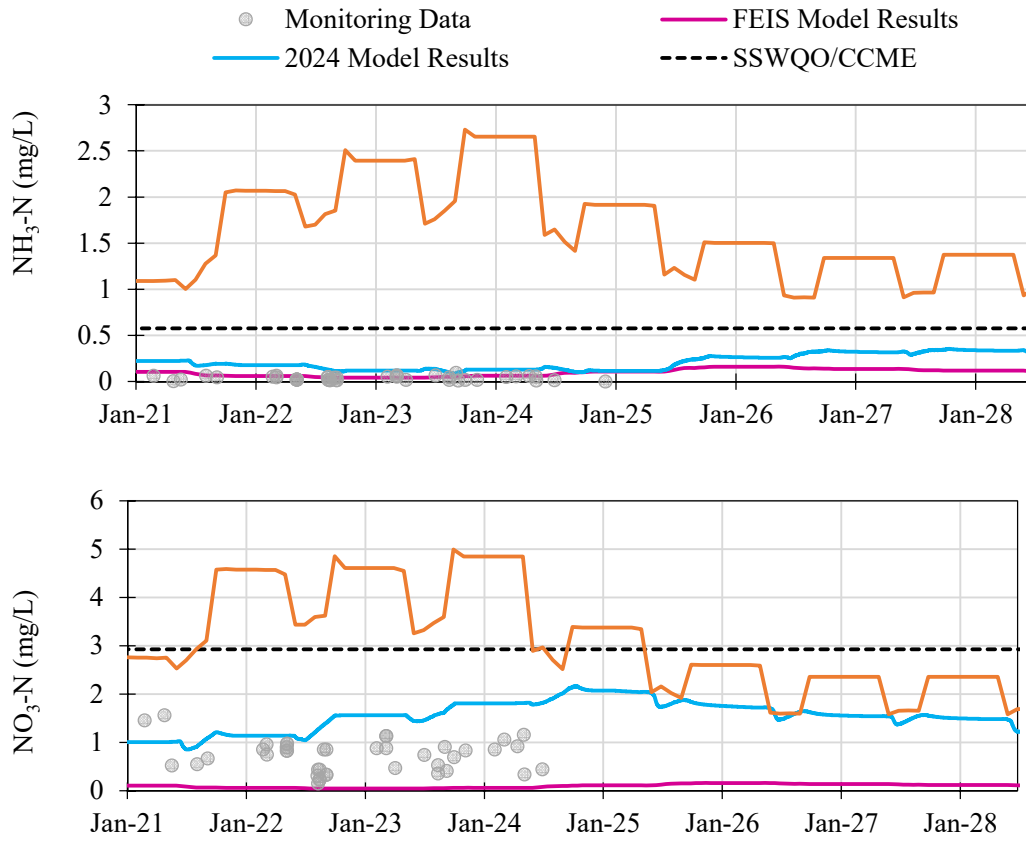


Figure C.3-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

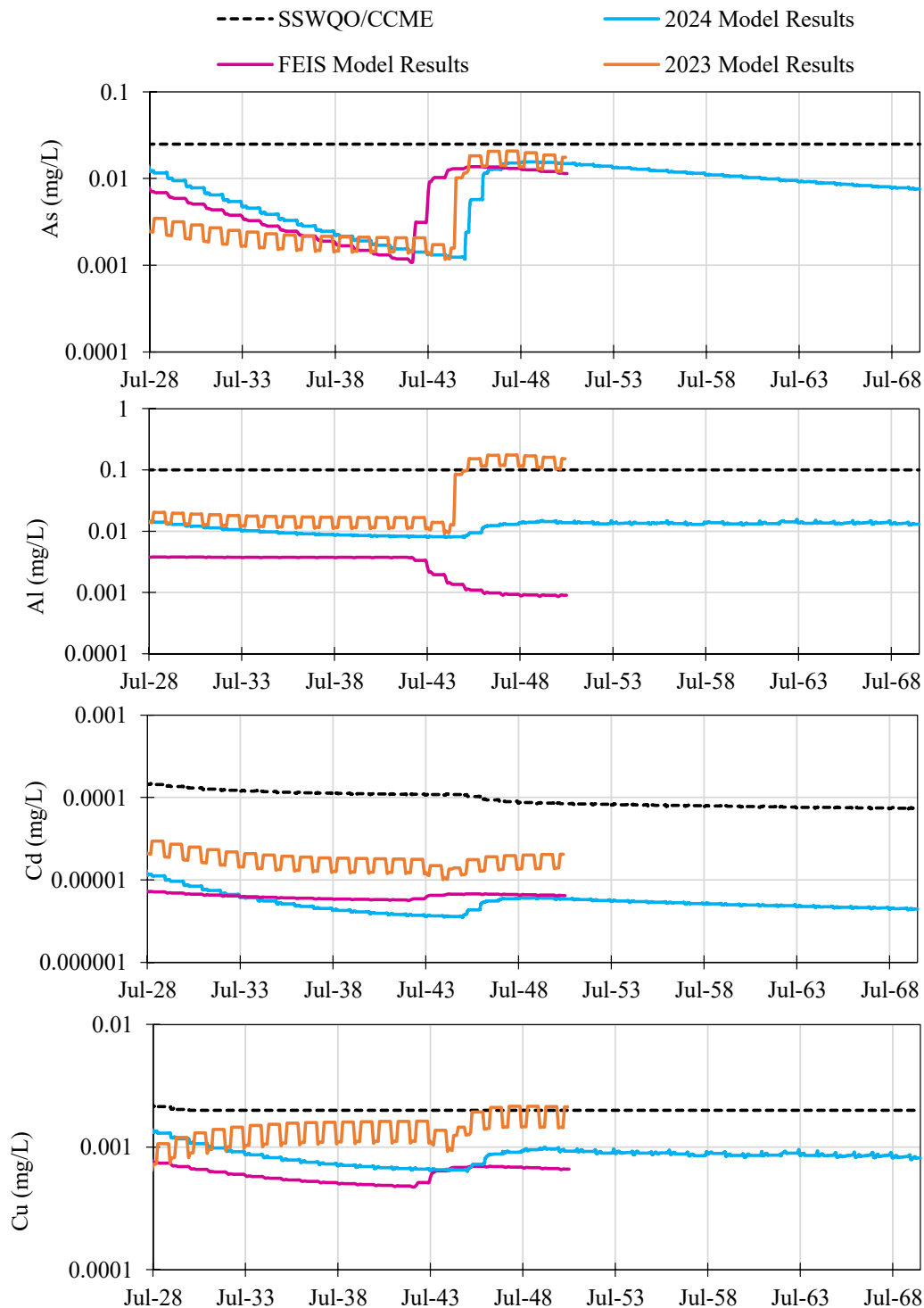


Figure C.4-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria (CCME/SSWQO).

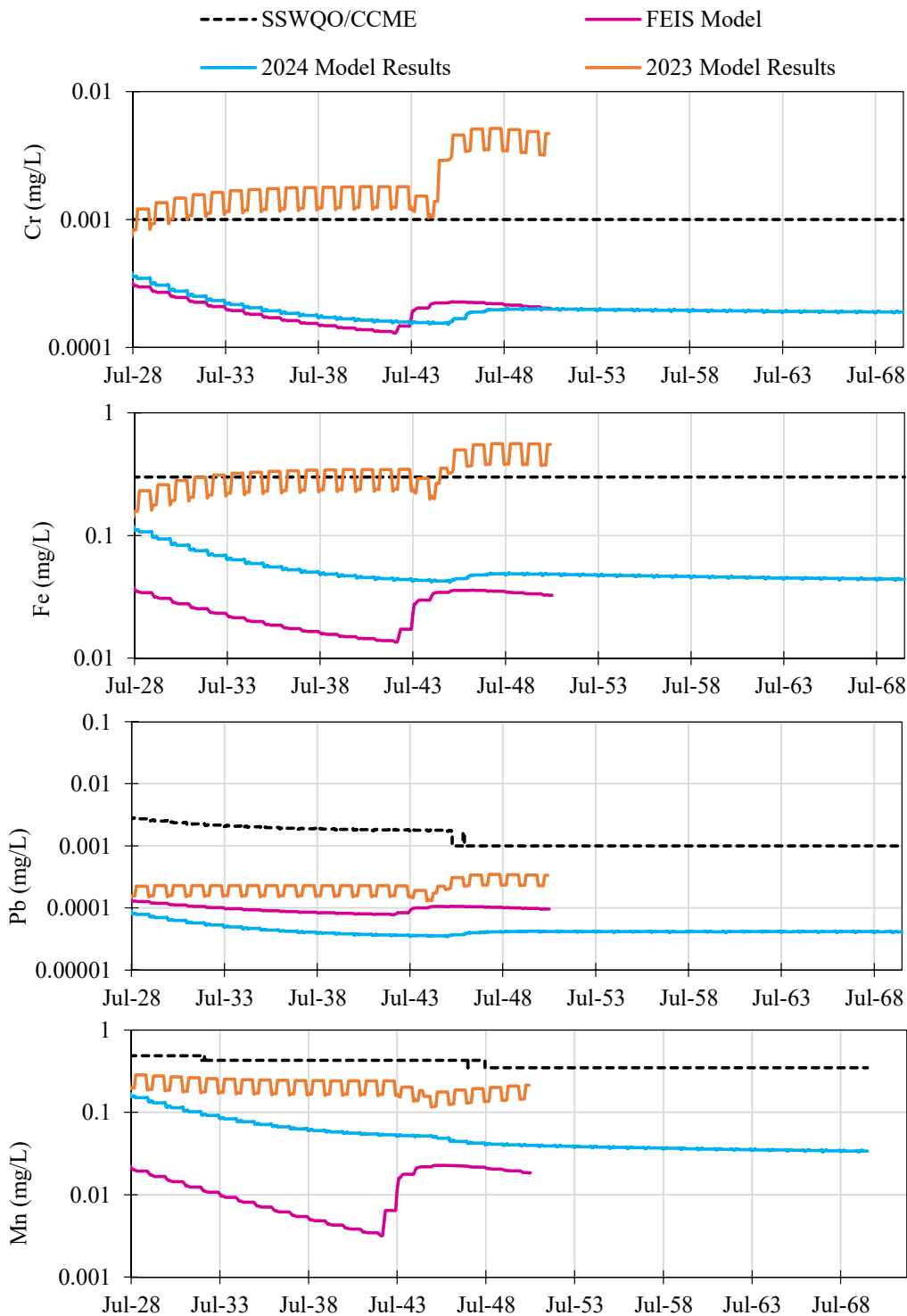


Figure C.4-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria (CCME/SSWQO).

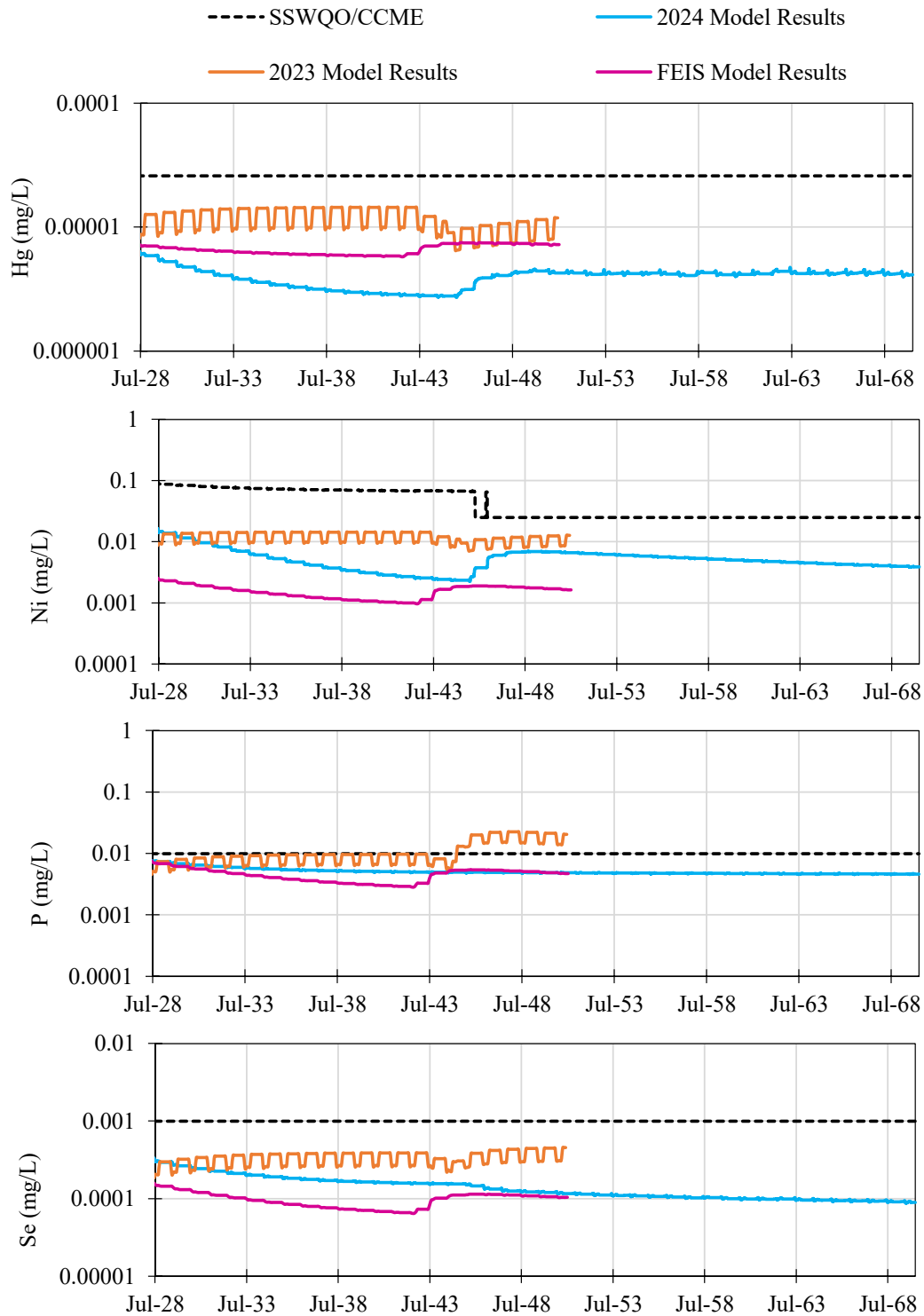


Figure C.4-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangisluik Lake compared against receiving environment water quality criteria (CCME/SSWQO).

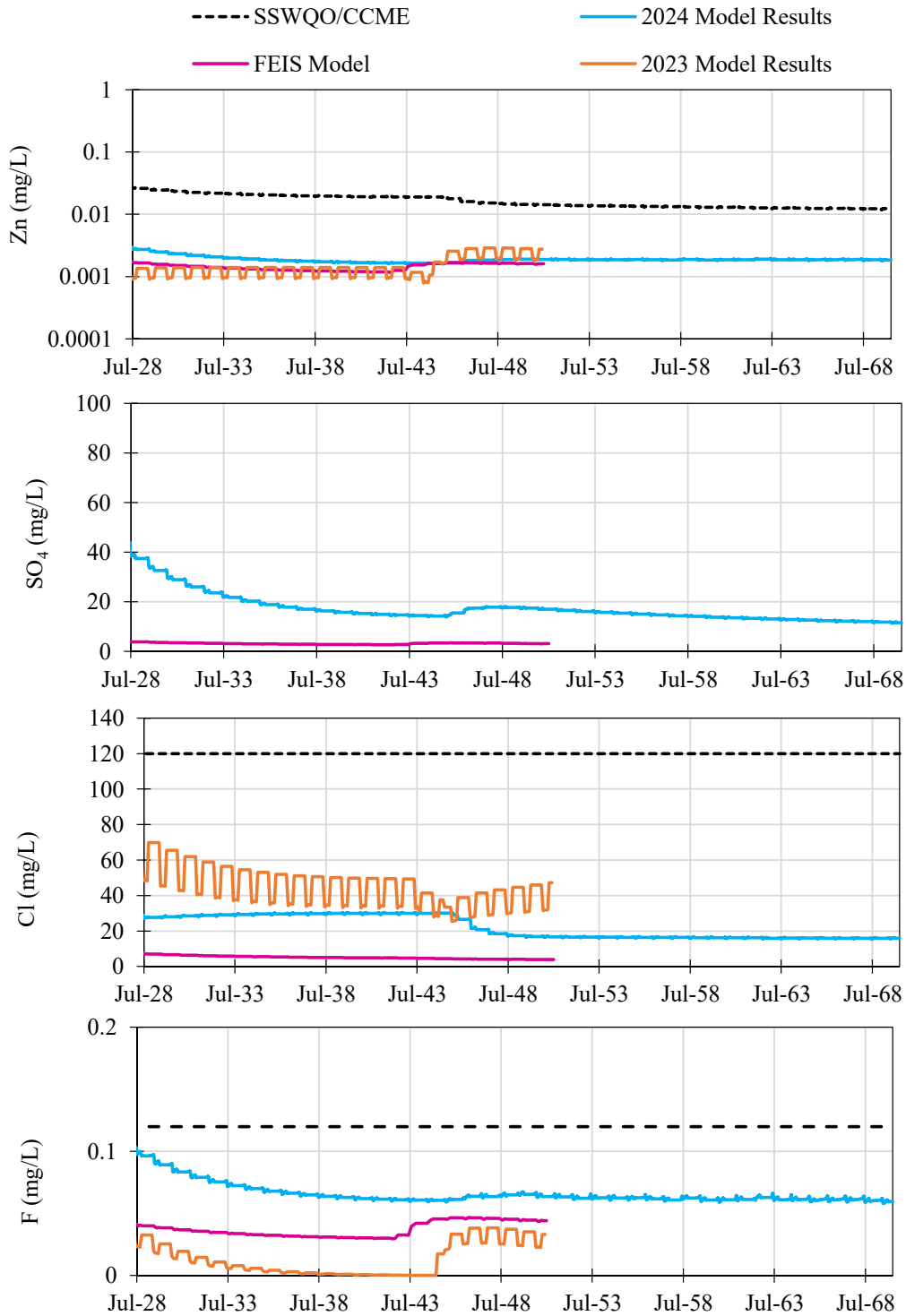


Figure C.4-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kanglulalik Lake compared against receiving environment water quality criteria (CCME/SSWQO).

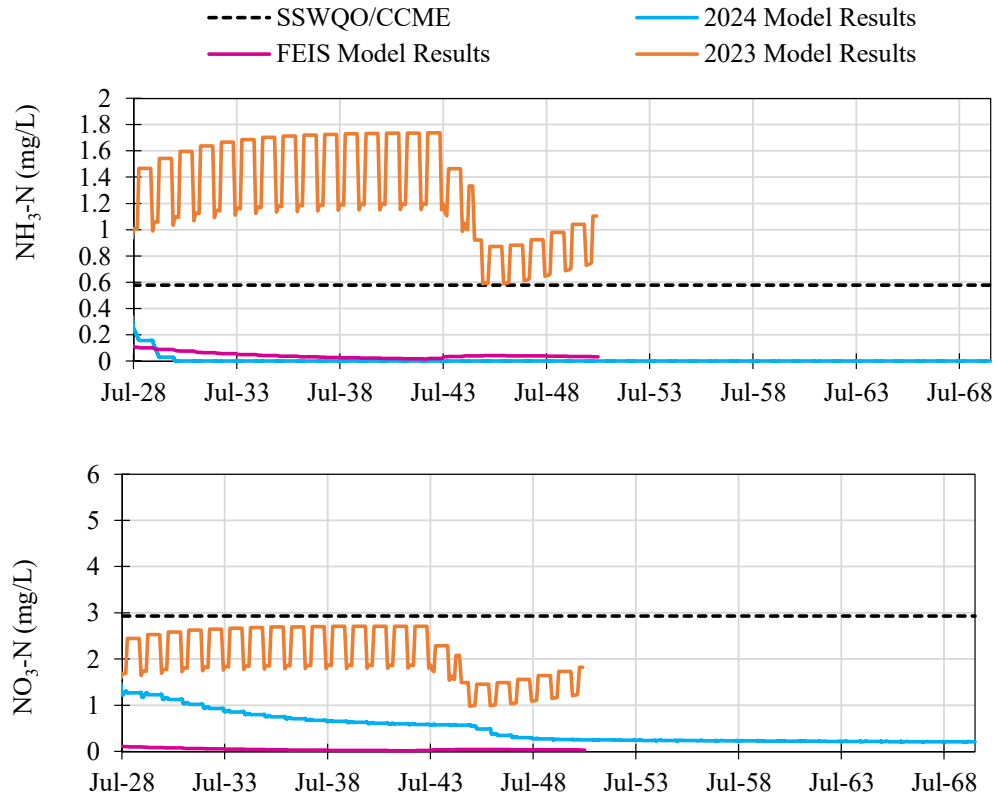


Figure C.4-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Kangislulik Lake compared against receiving environment water quality criteria

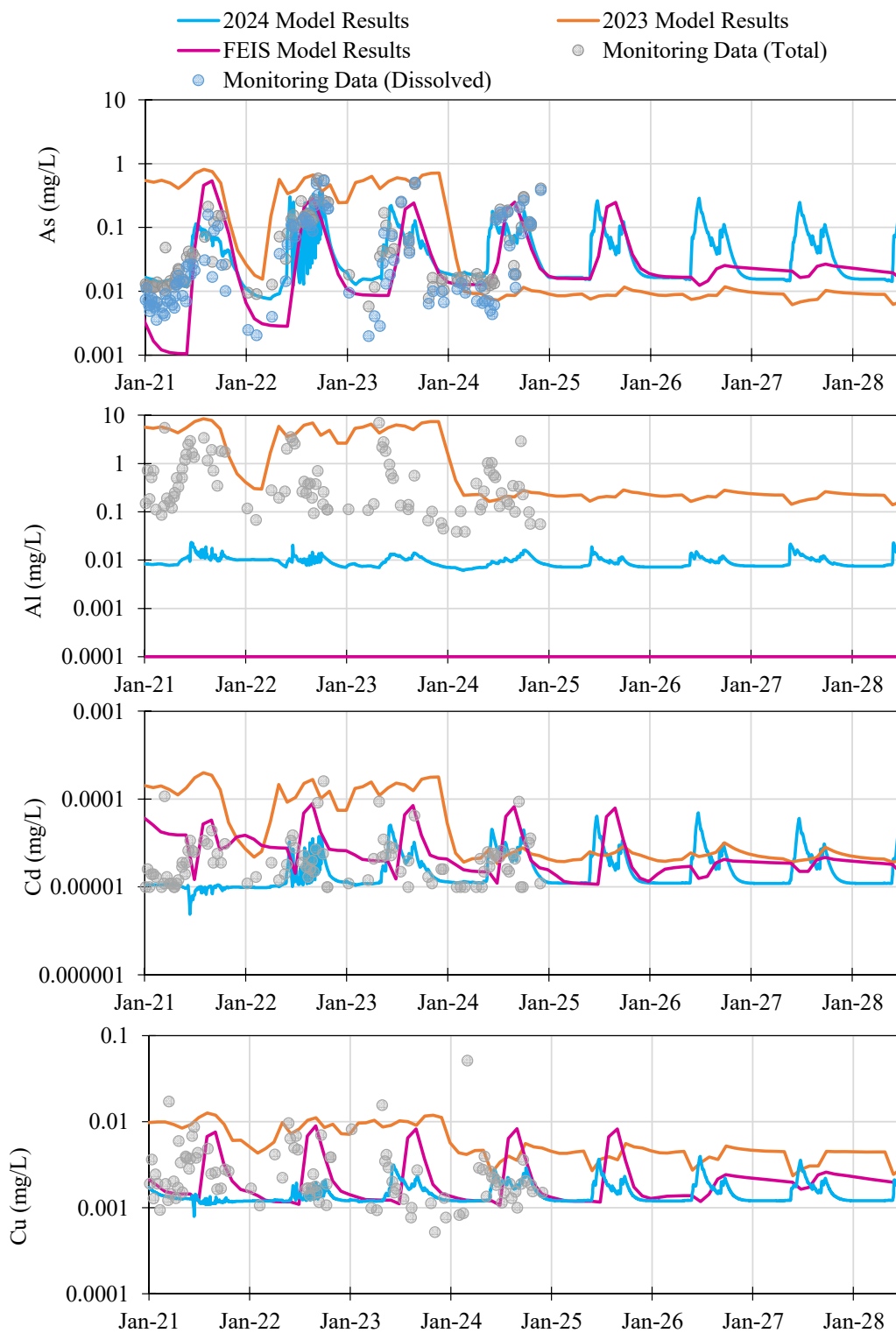


Figure C.5-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Attenuation Pond.

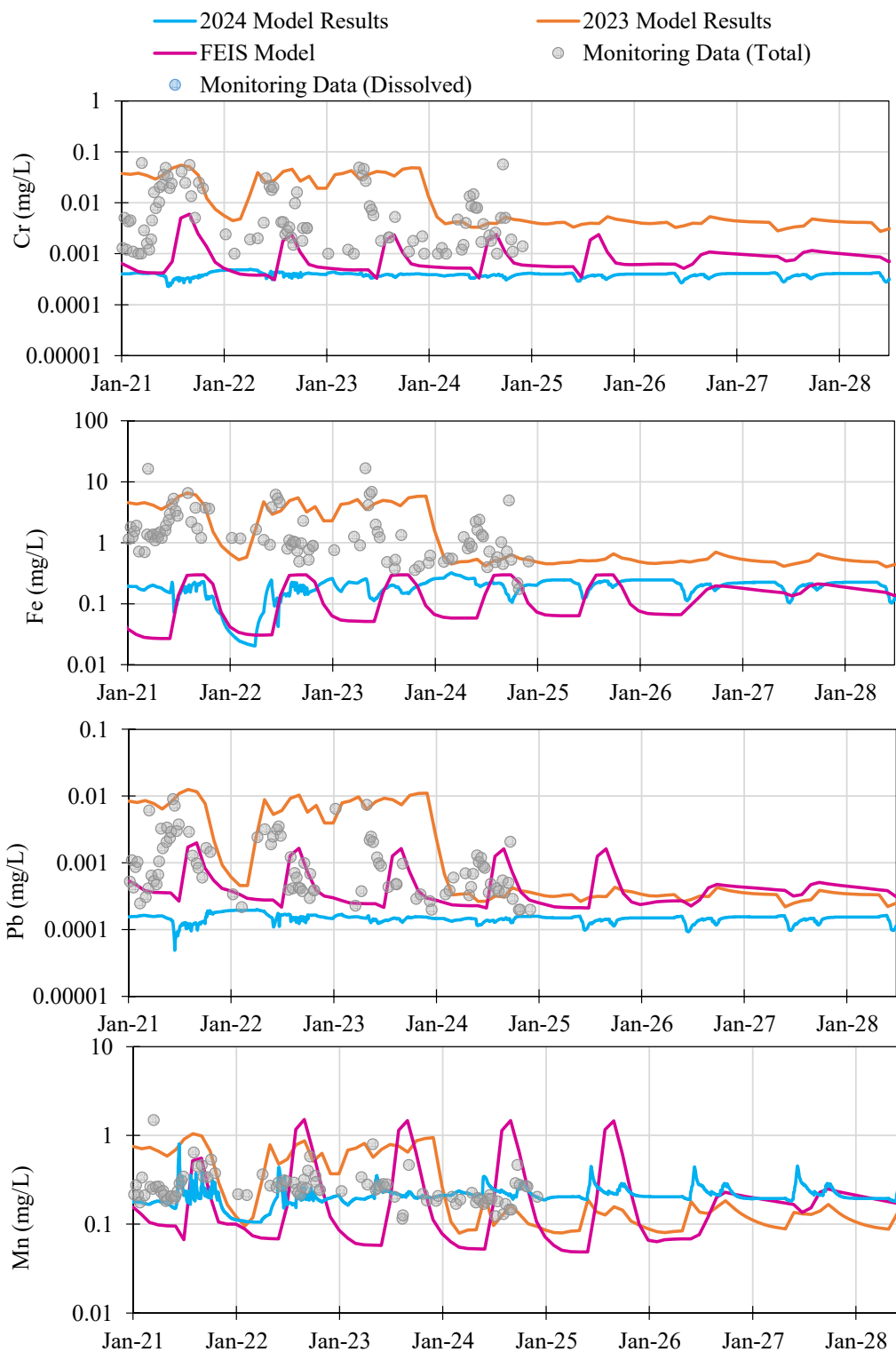


Figure C.5-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Attenuation Pond.

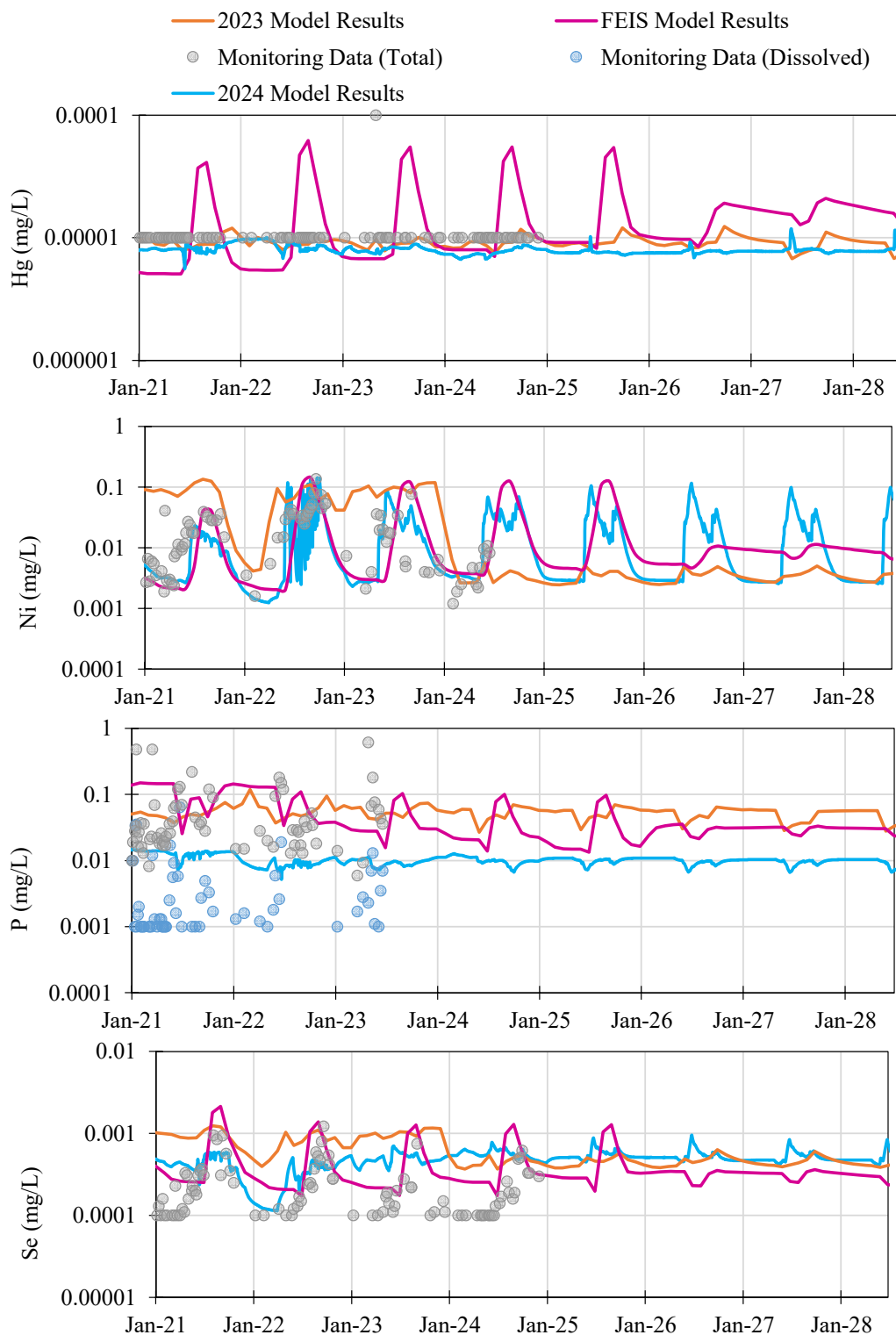


Figure C.5-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Attenuation Pond.

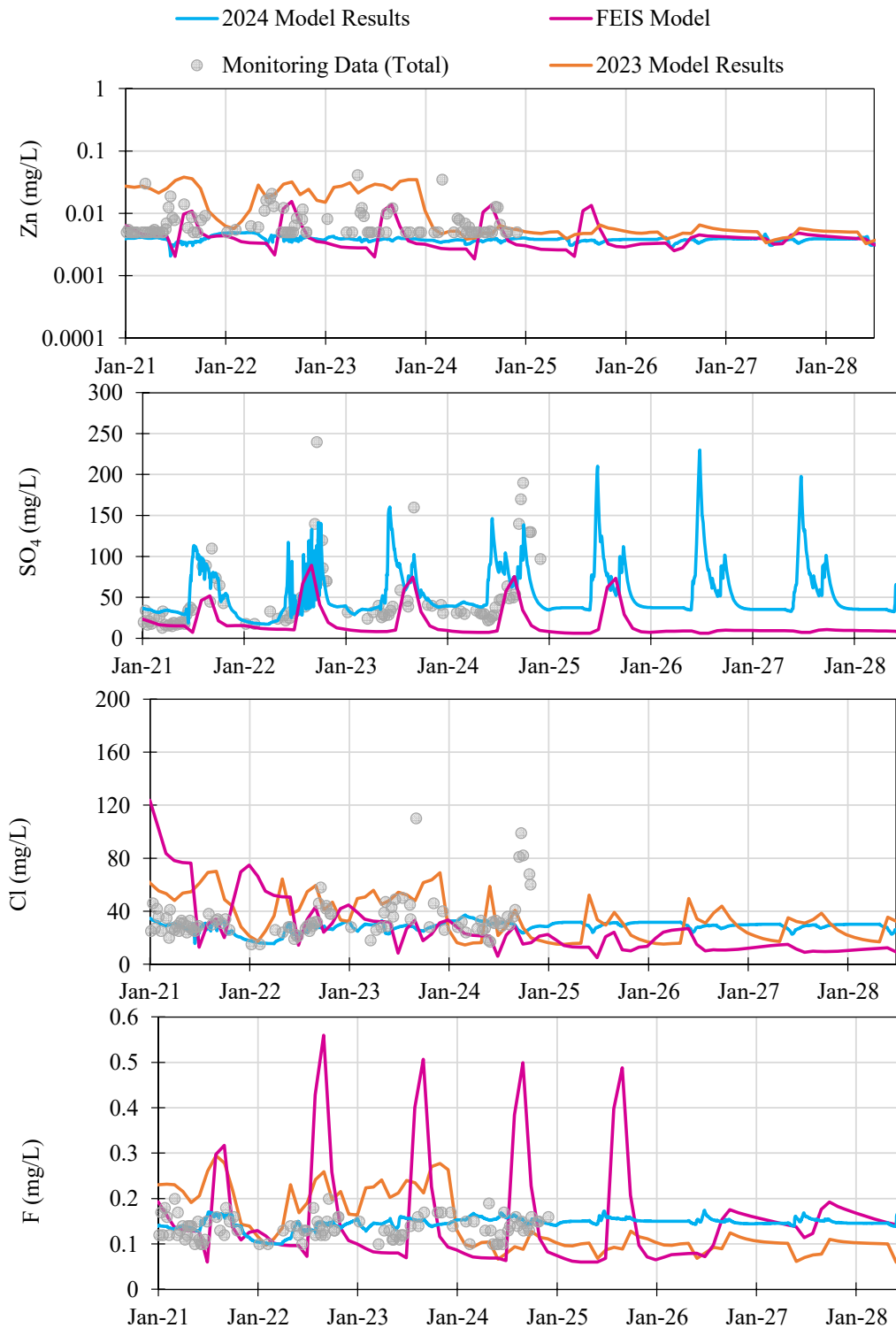


Figure C.5-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Attenuation Pond.

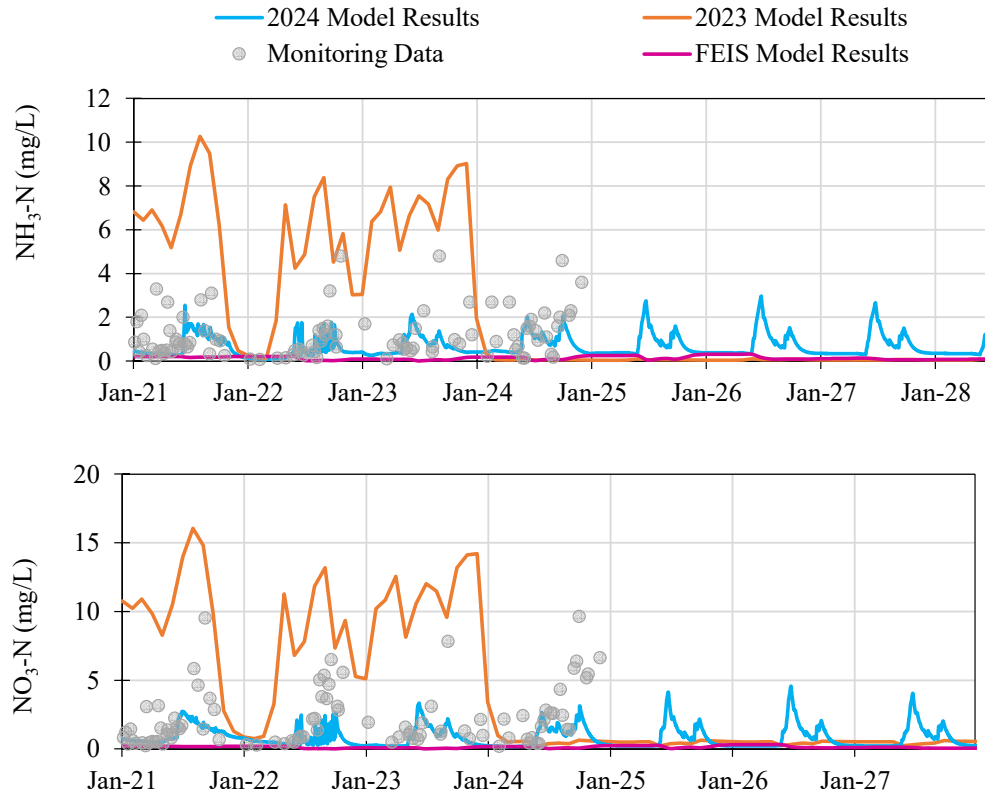


Figure C.5-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Attenuation Pond.

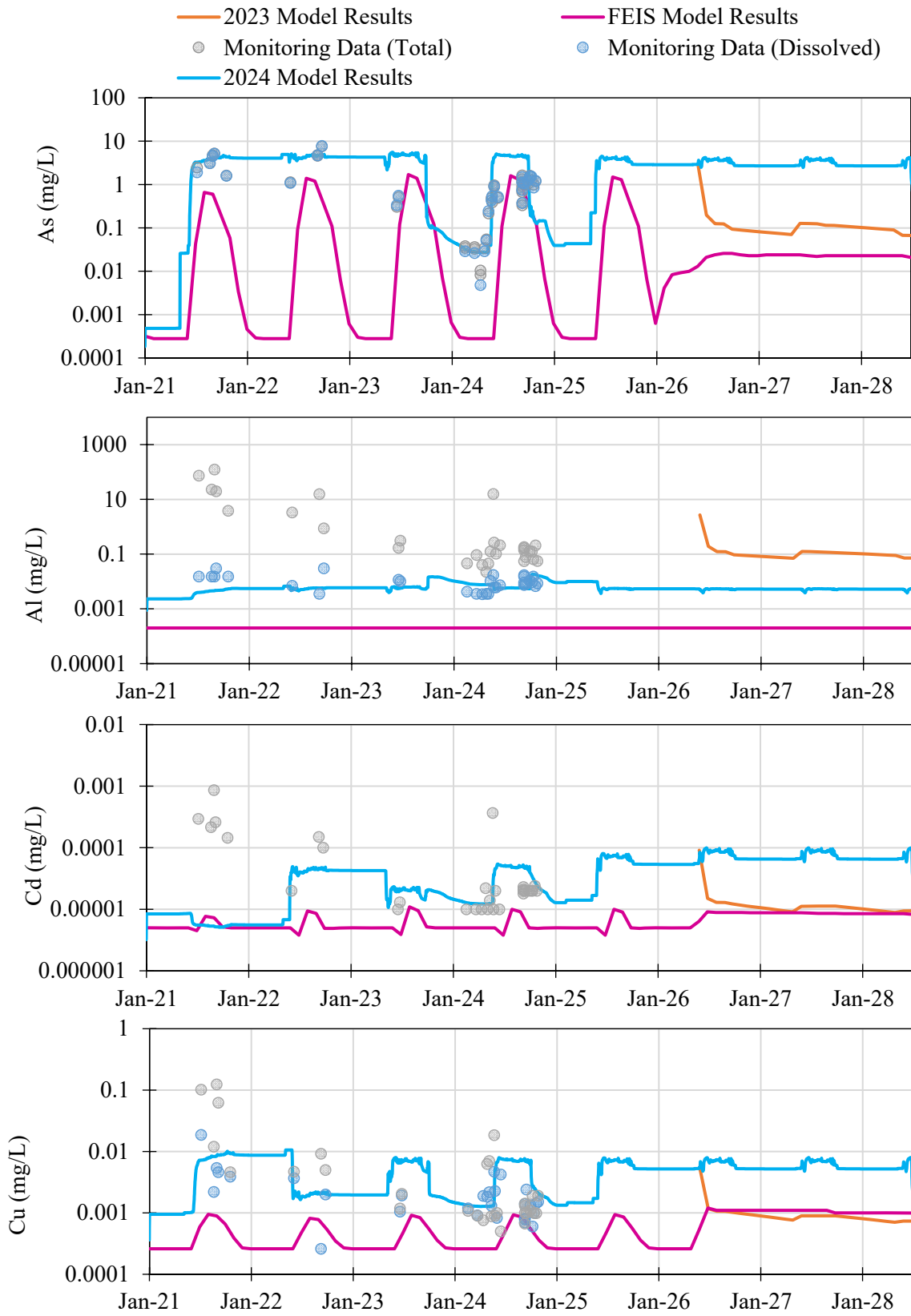


Figure C.6-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

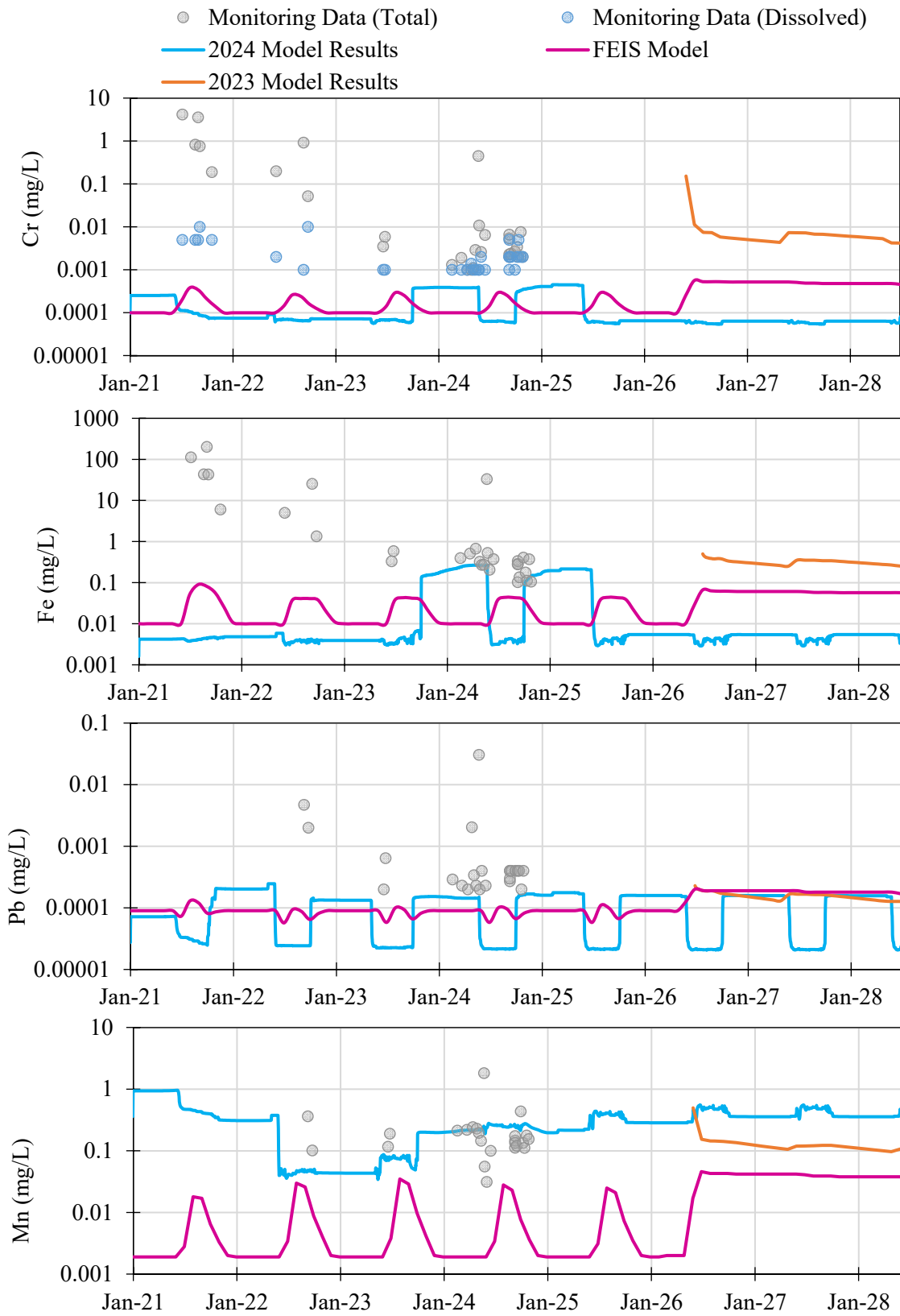


Figure C.6-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

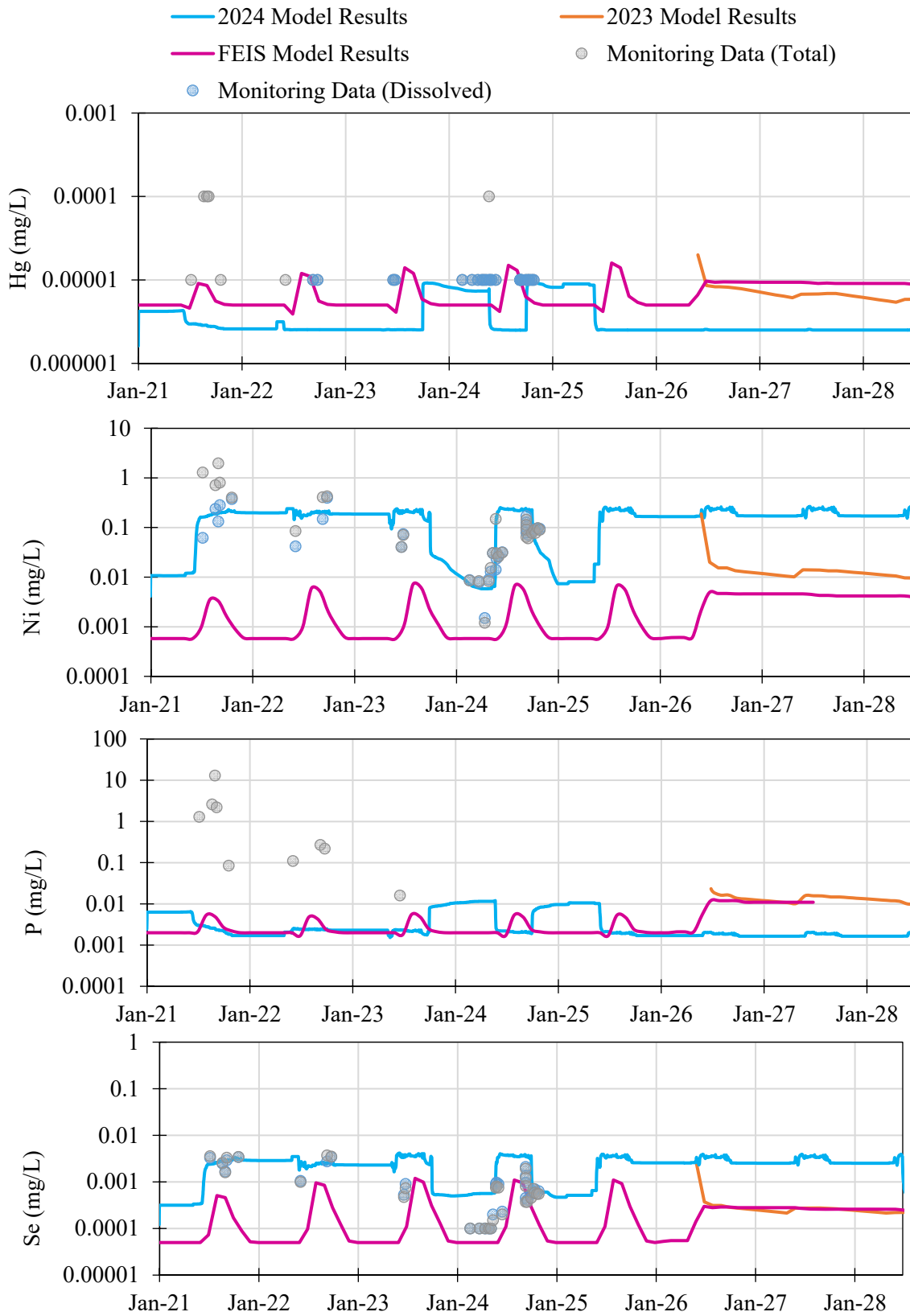


Figure C.6-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

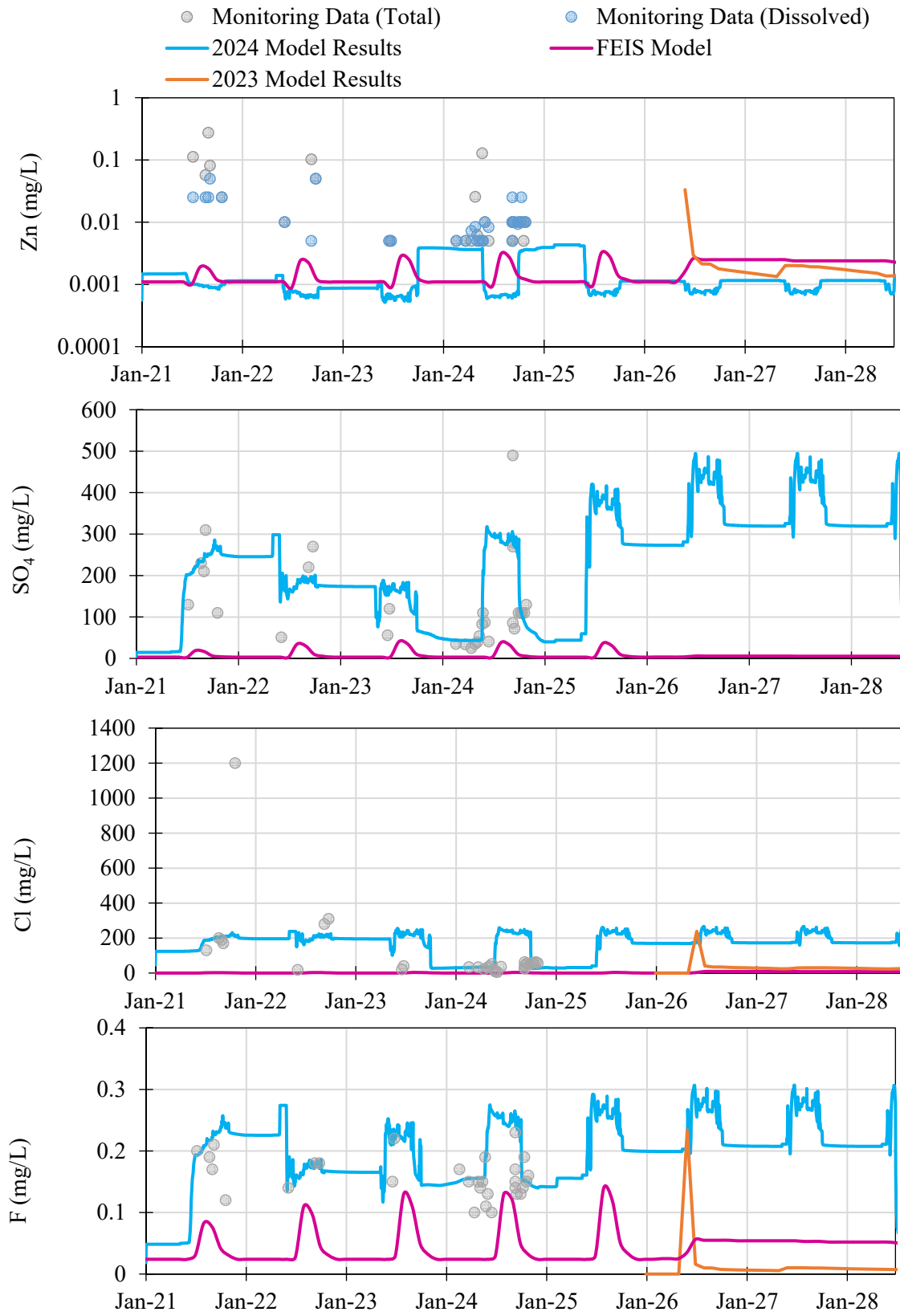


Figure C.6-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

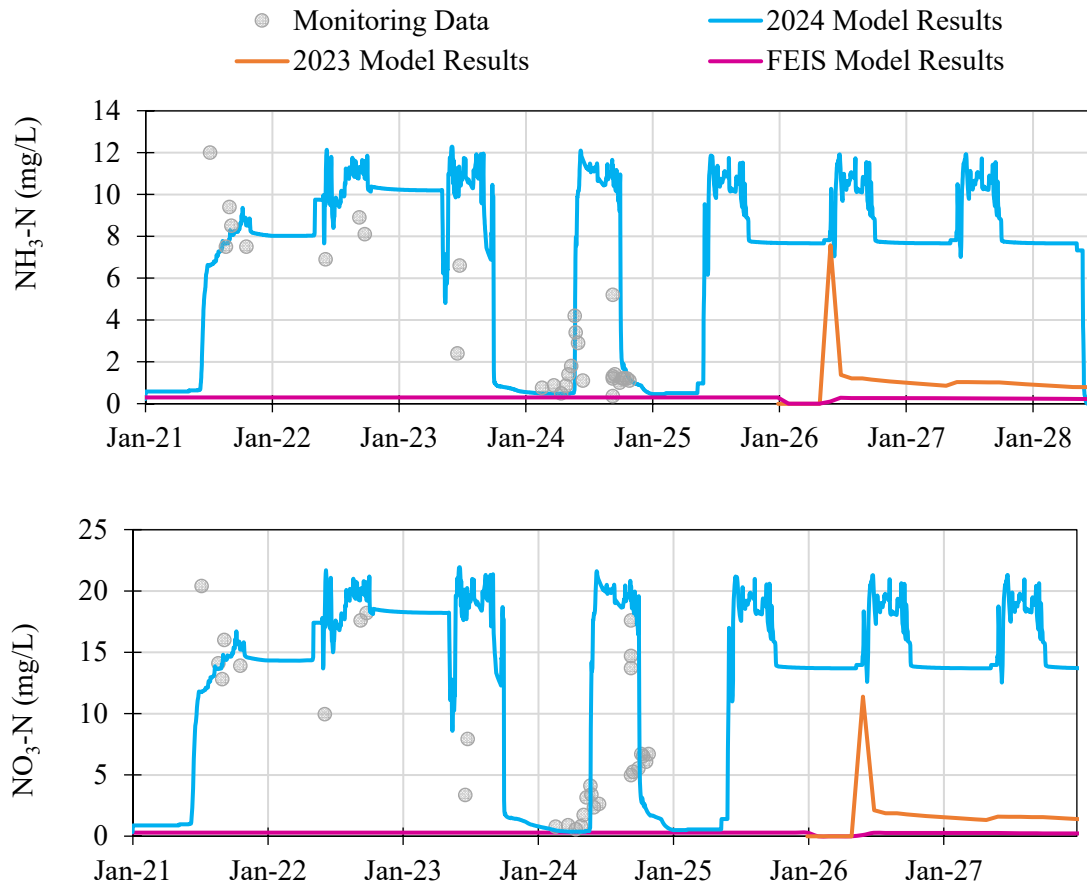


Figure C.6-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

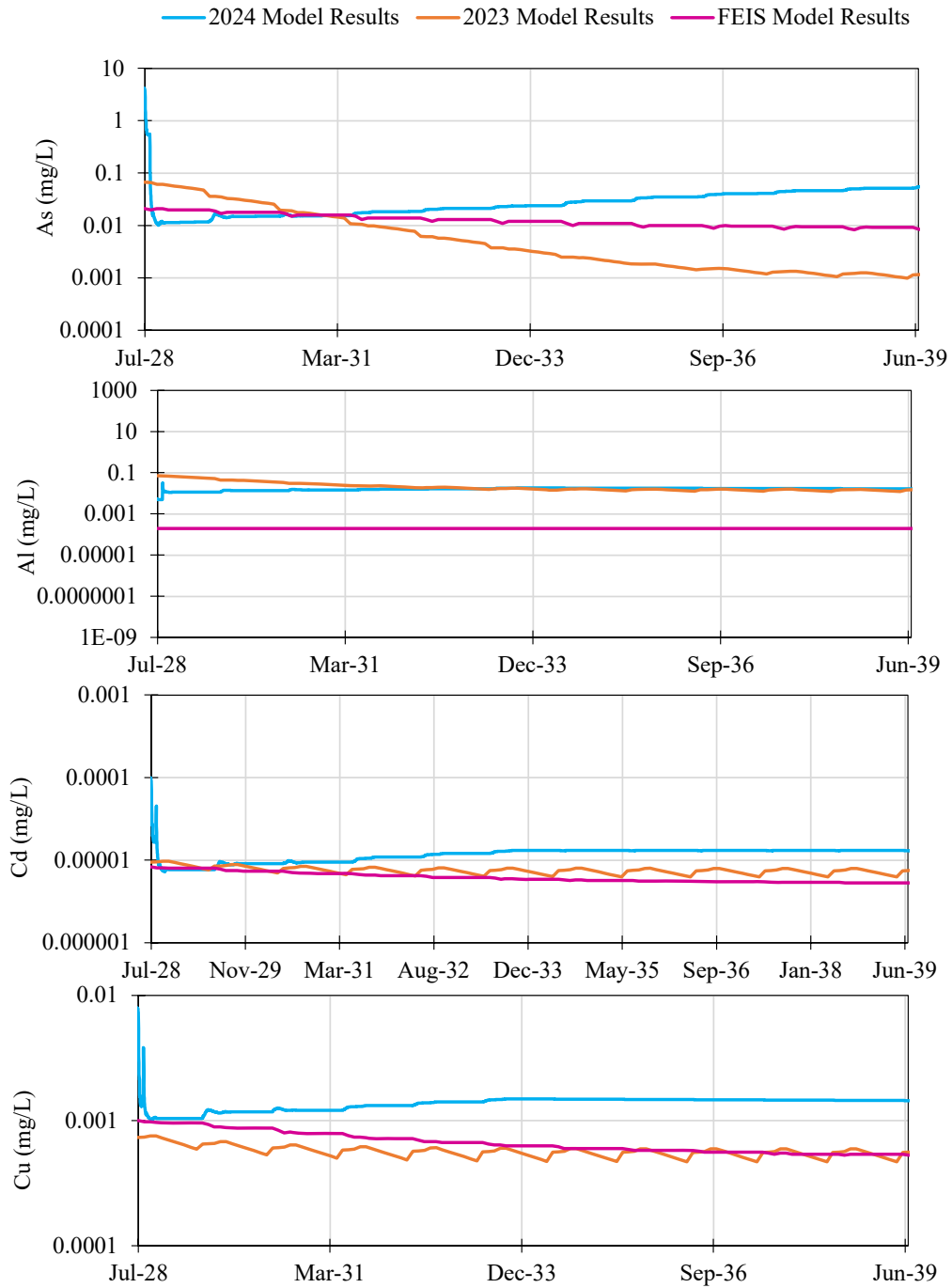


Figure C.7-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

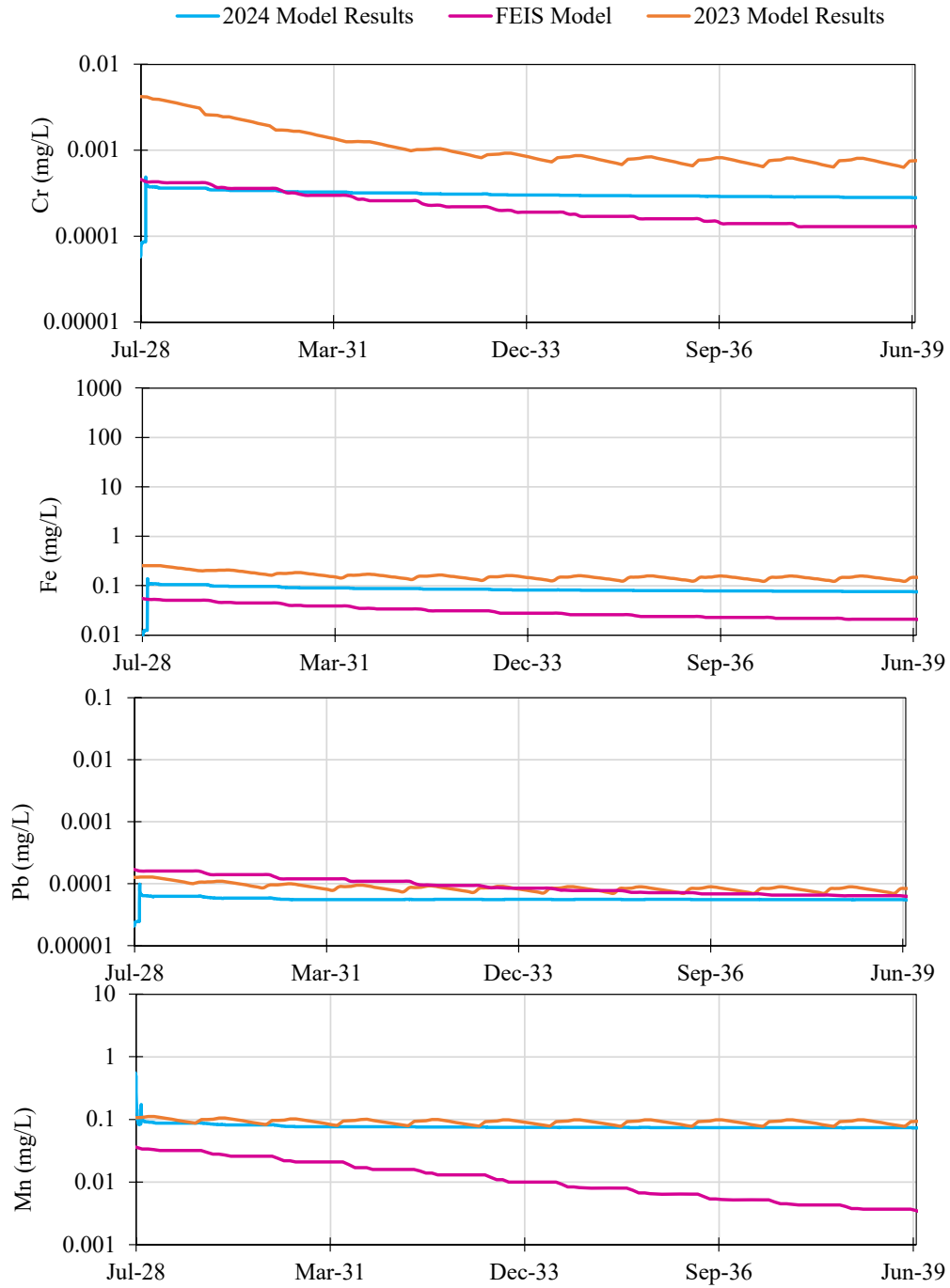


Figure C.7-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

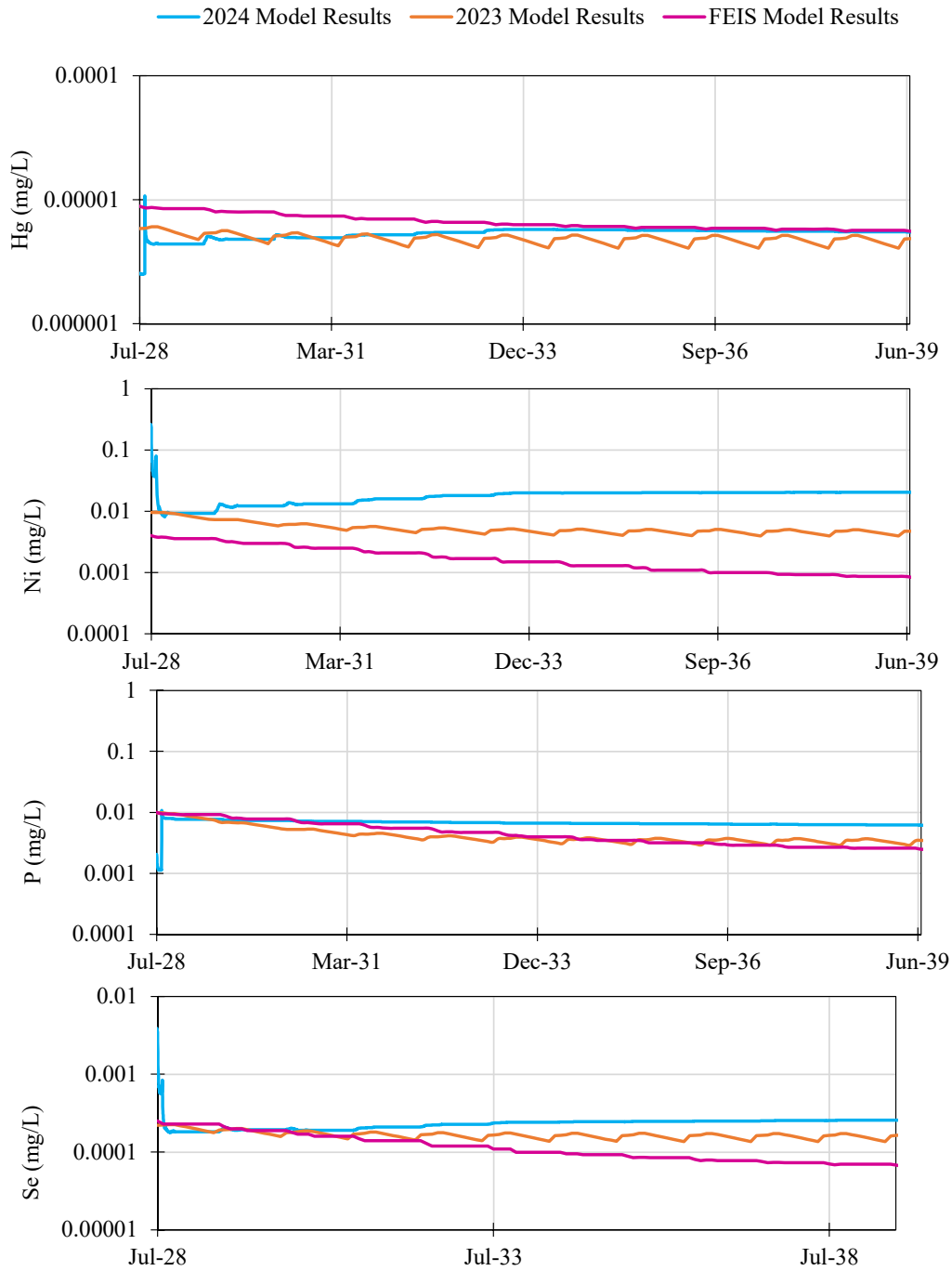


Figure C.7-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

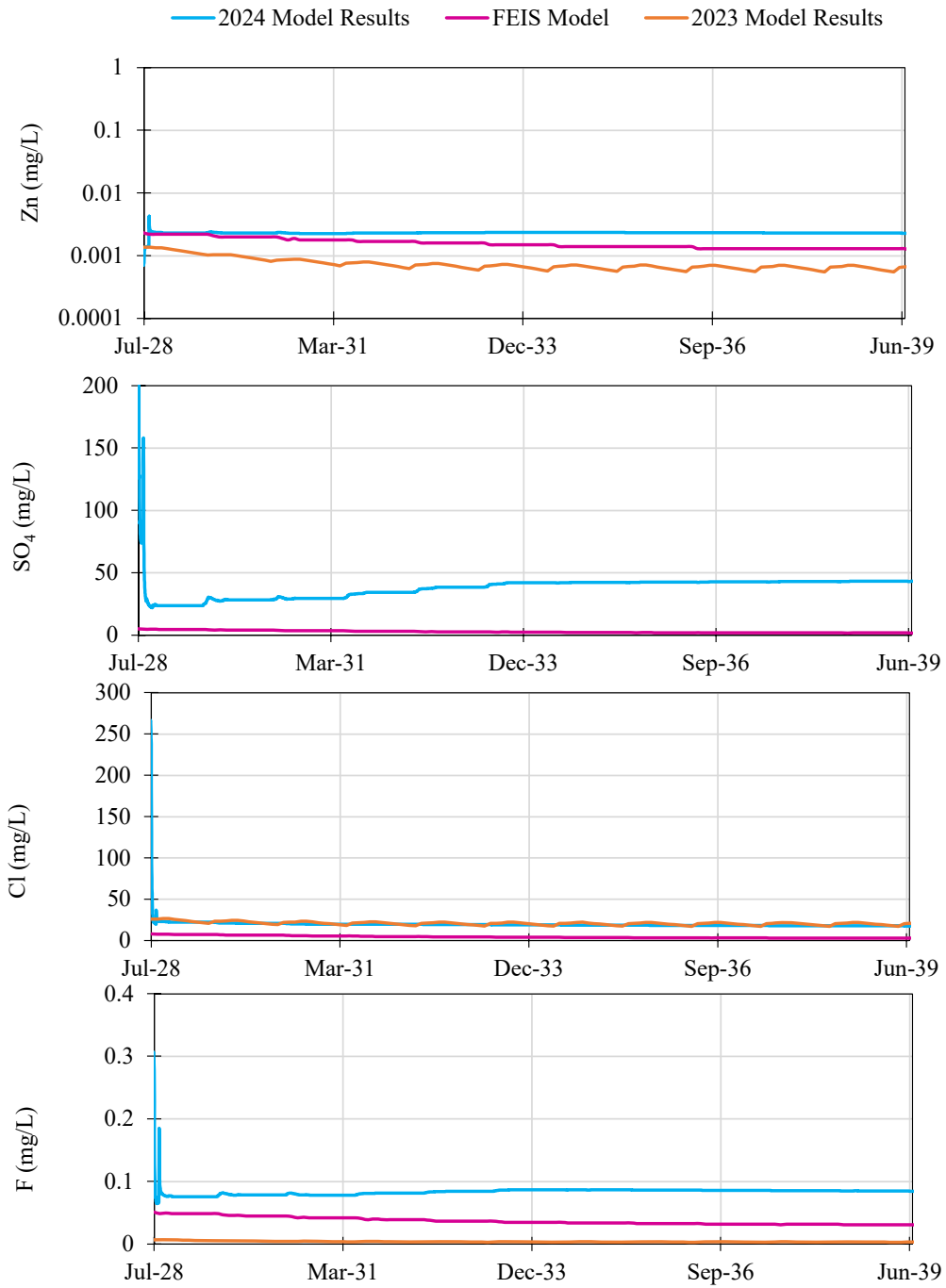


Figure C.7-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

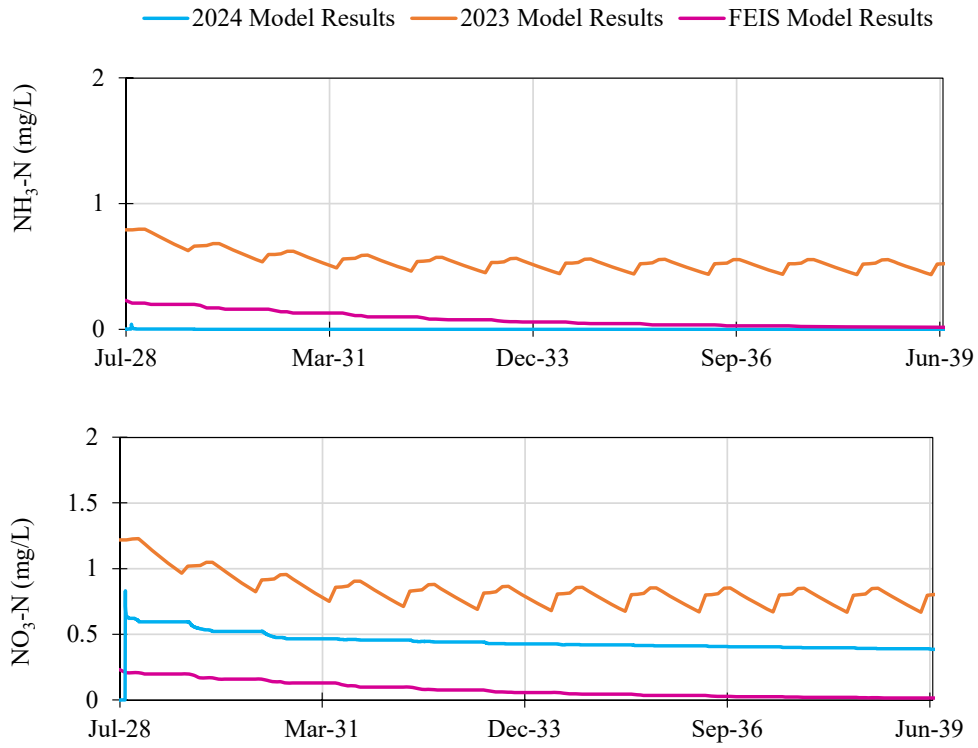


Figure C.7-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Pit.

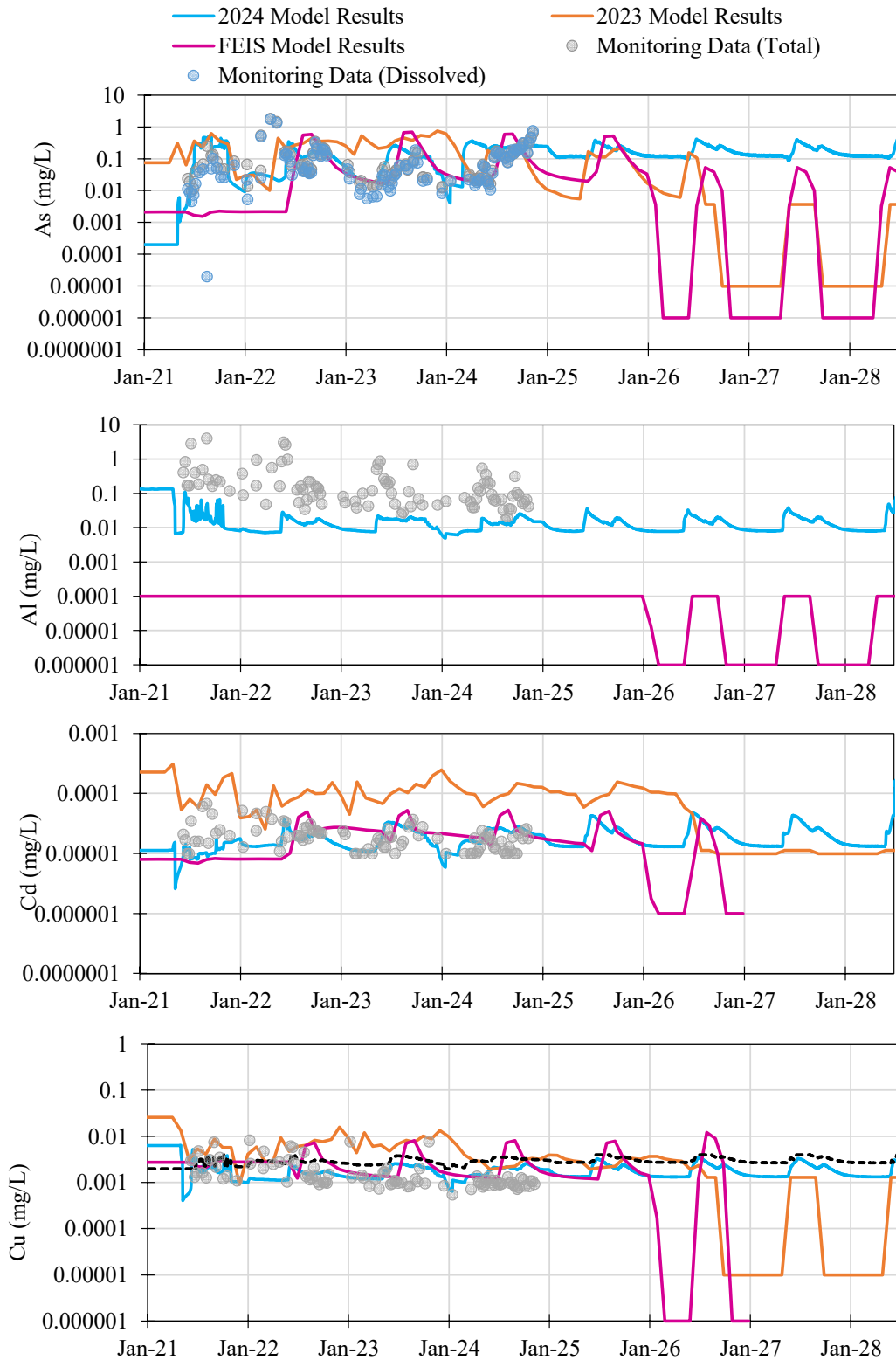


Figure C.8-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Attenuation Pond.

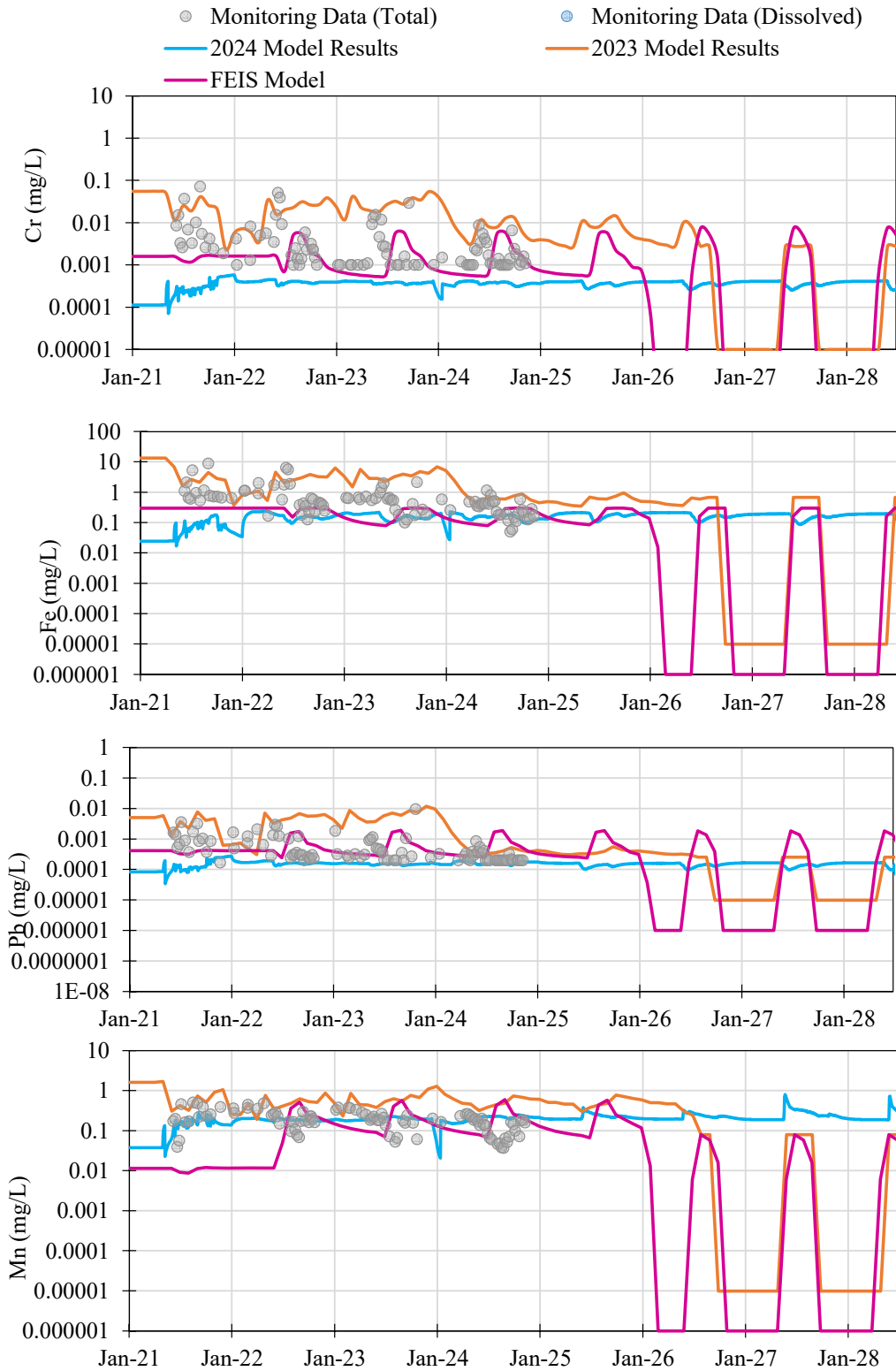


Figure C.8-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Attenuation Pond.

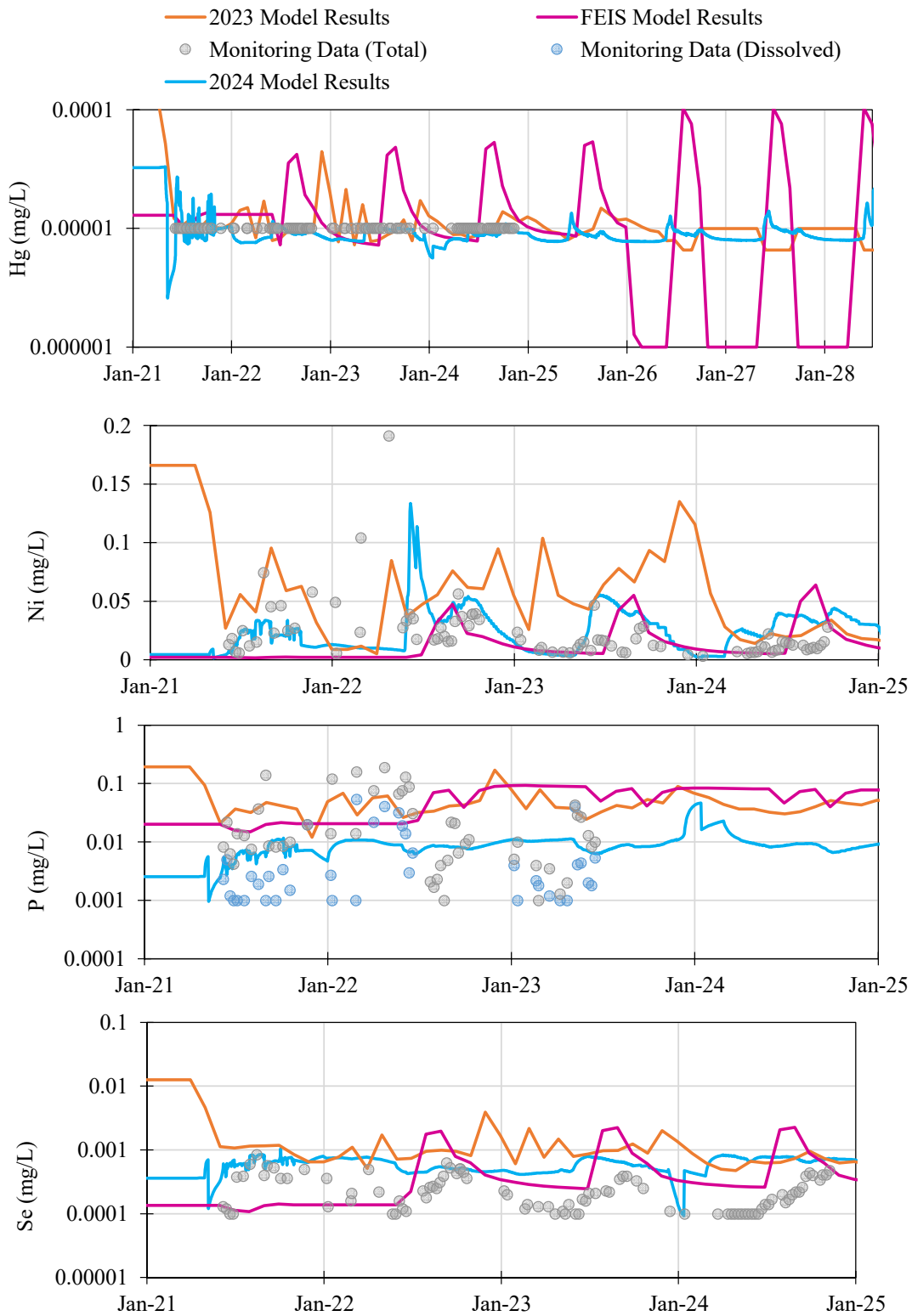


Figure C.8-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Attenuation Pond.

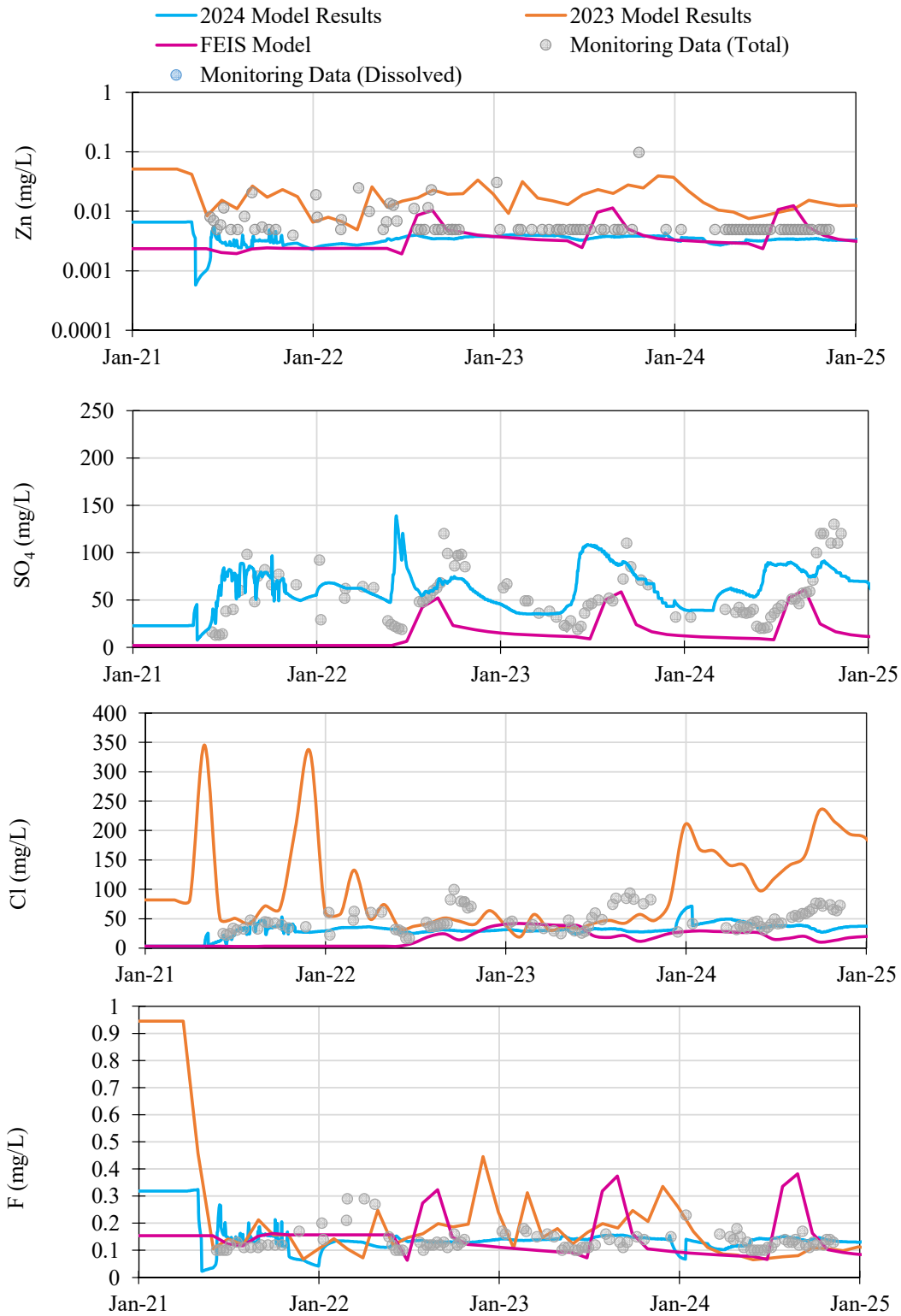


Figure C.8-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Attenuation Pond.

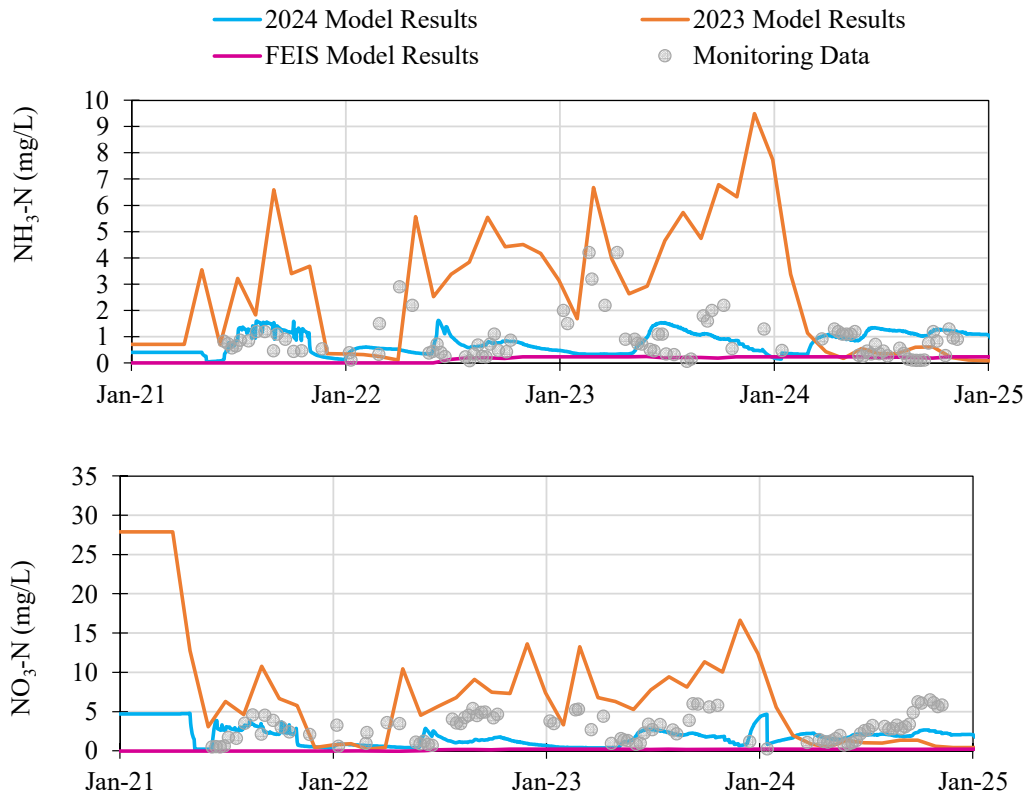


Figure C.8-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for IVR Attenuation Pond.

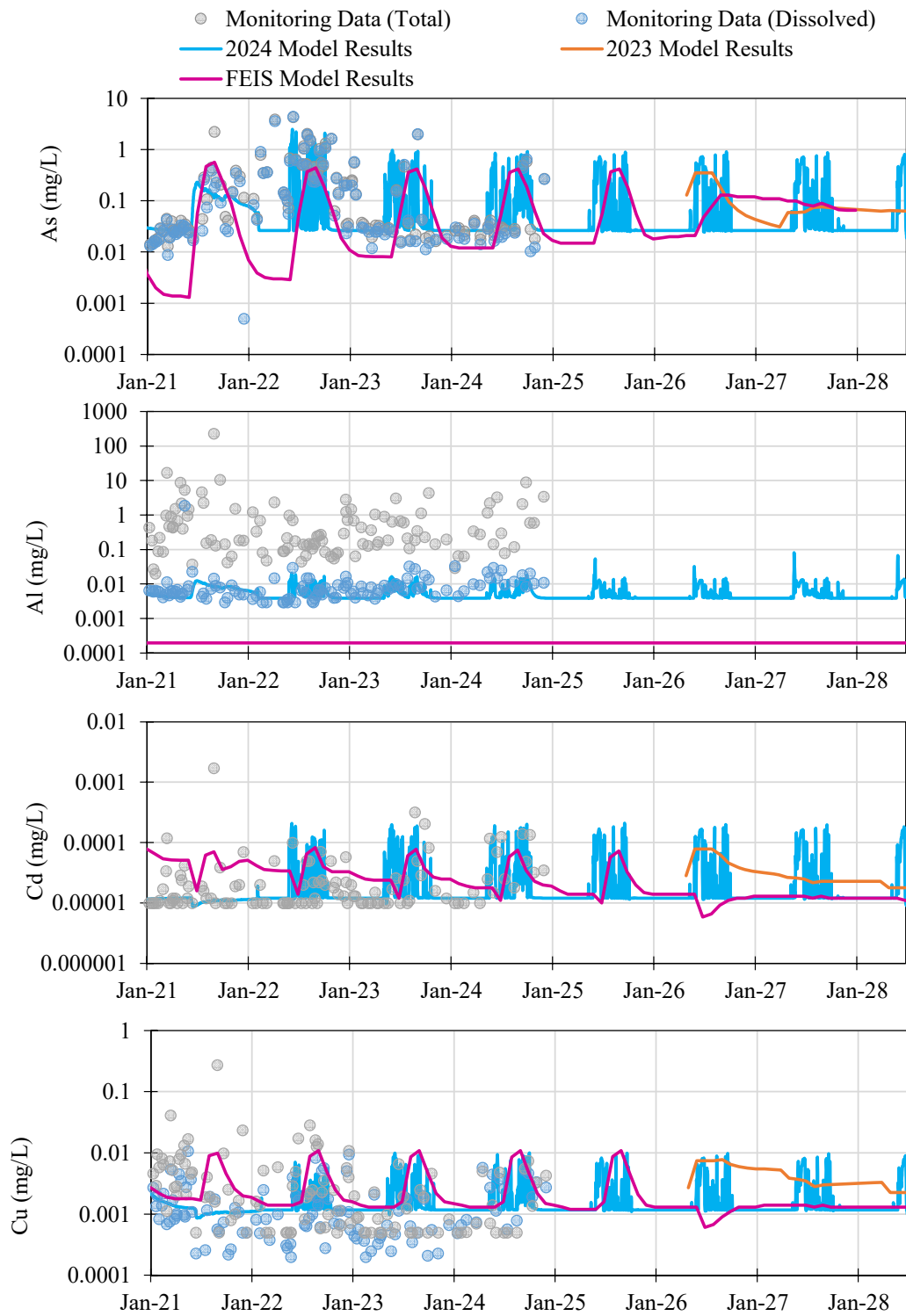


Figure C.9-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

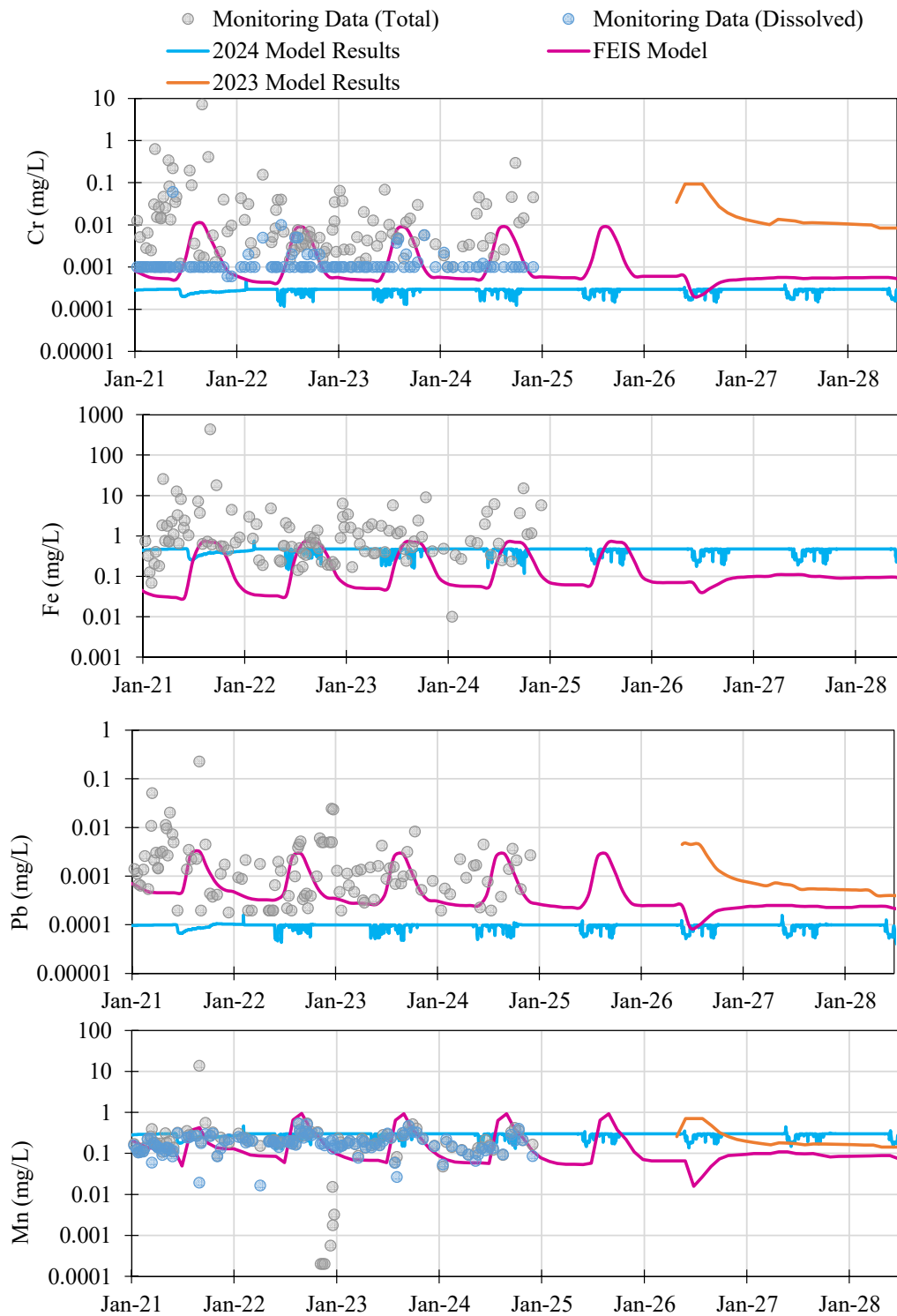


Figure C.9-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

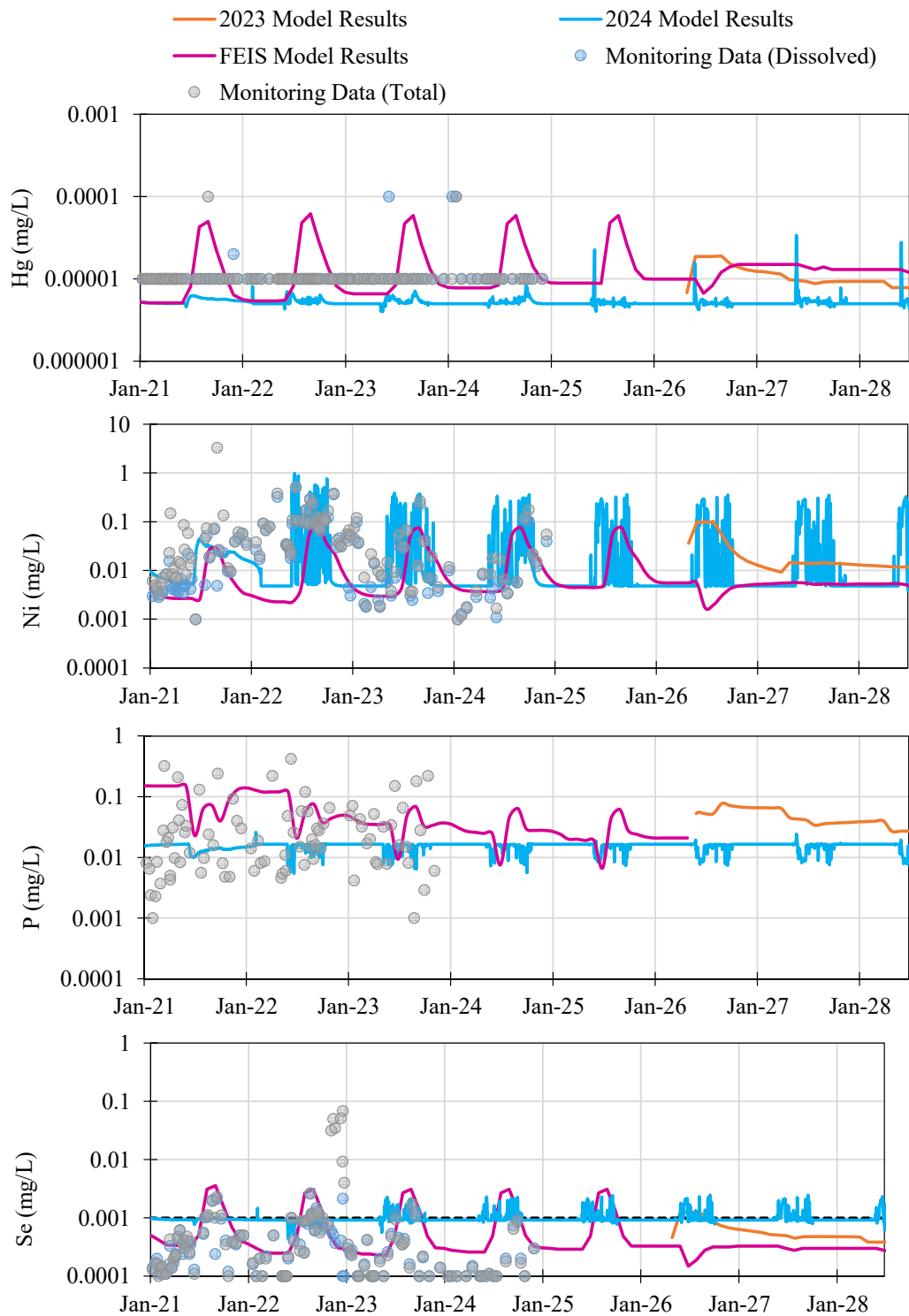


Figure C.9-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

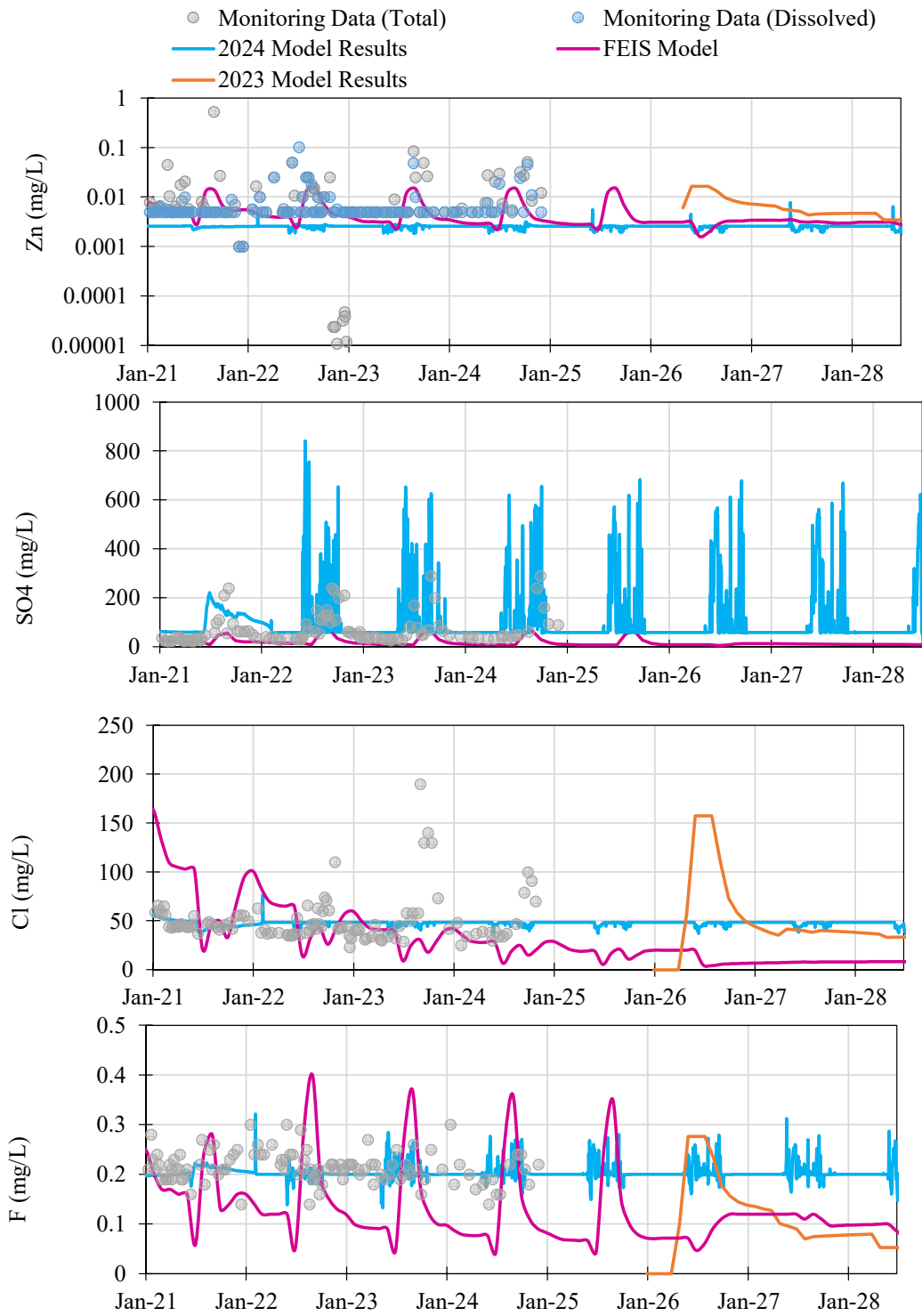


Figure C.9-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

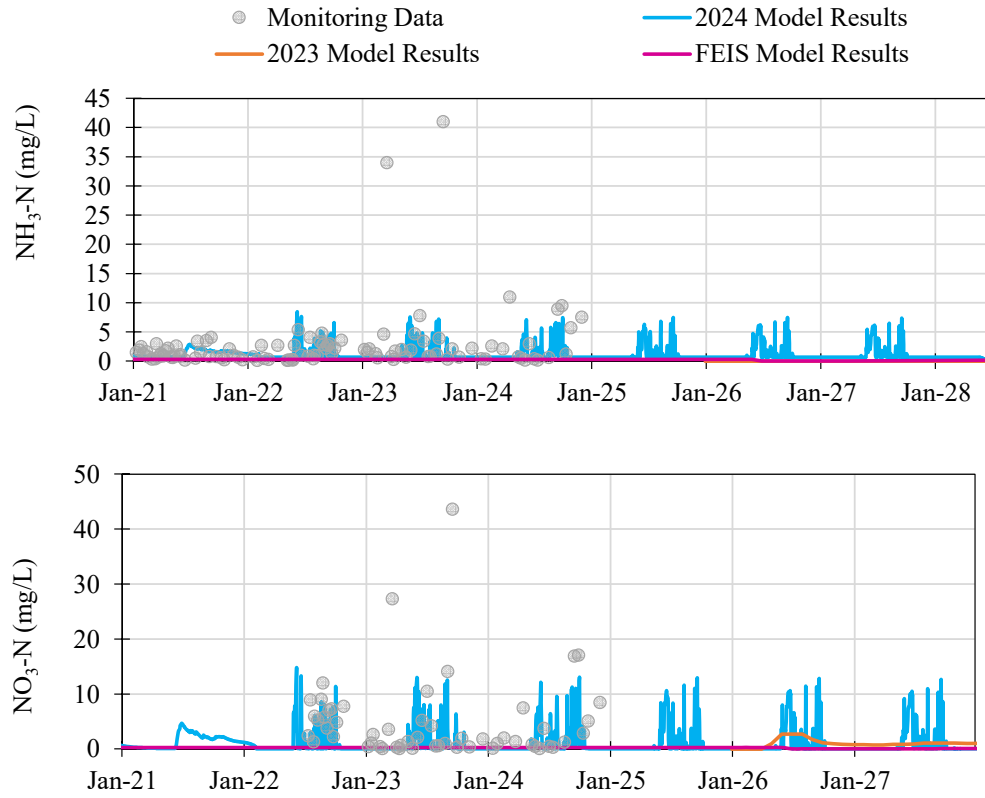


Figure C.9-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

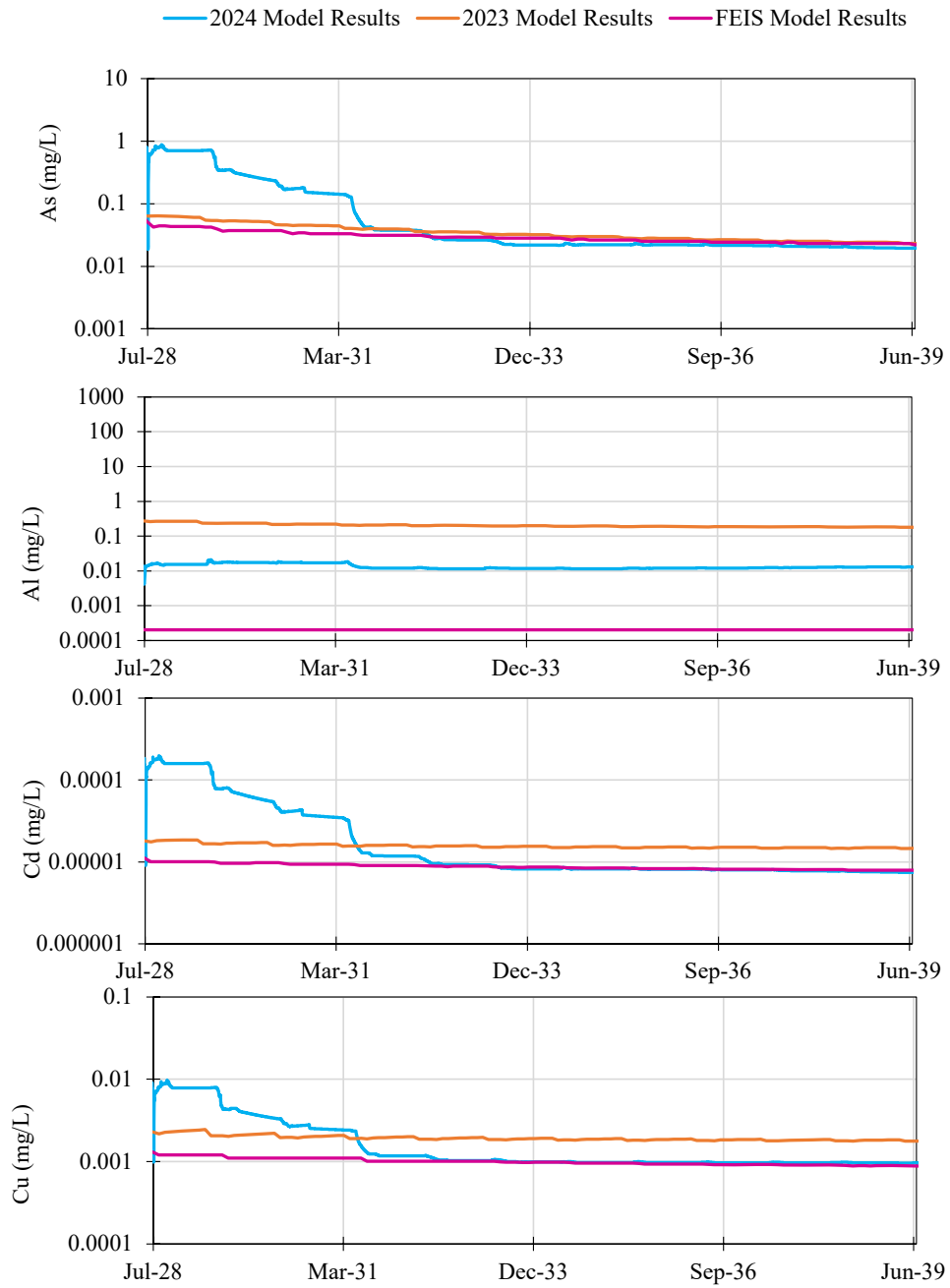


Figure C.10-1: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

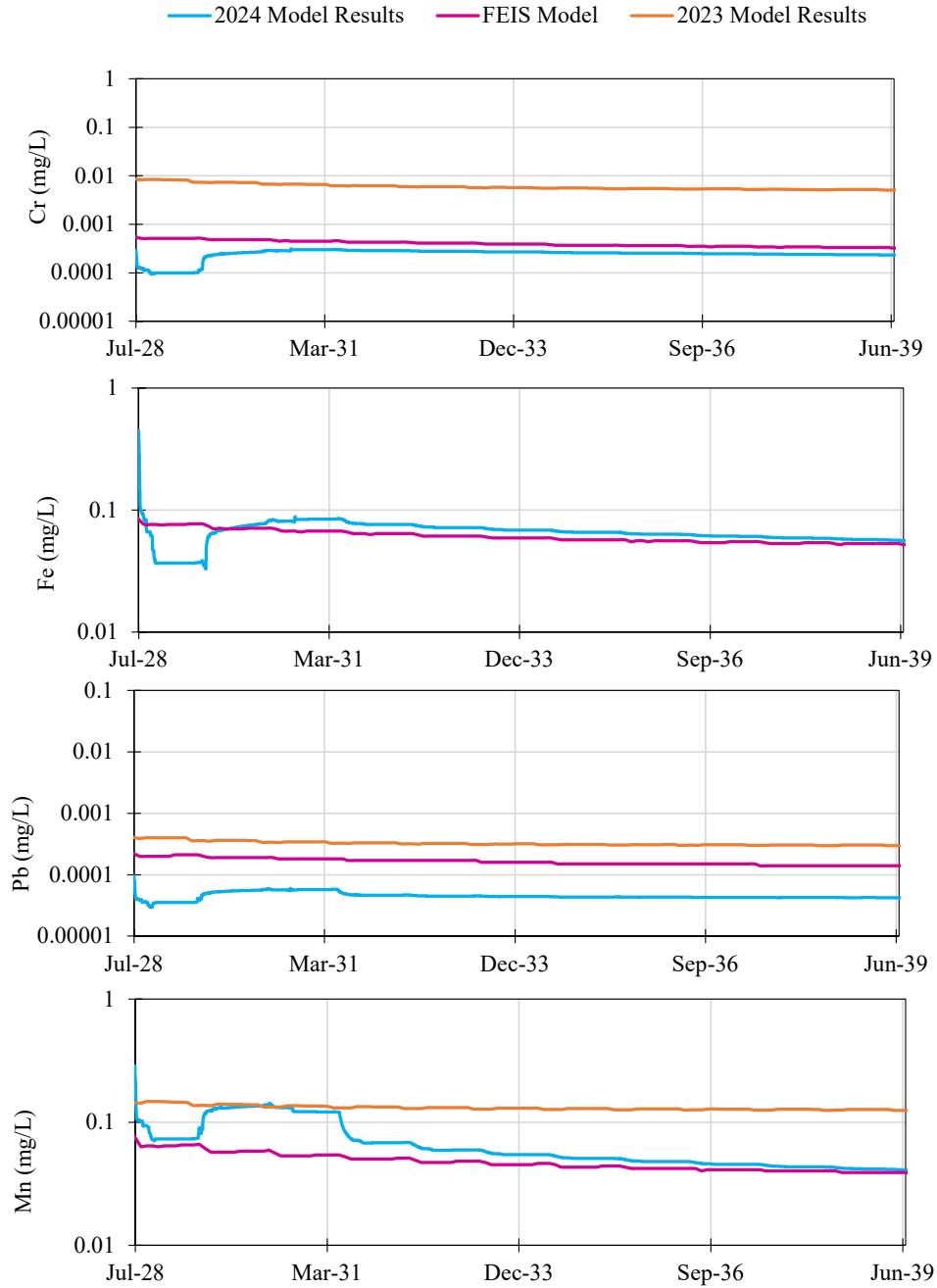


Figure C.10-2: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

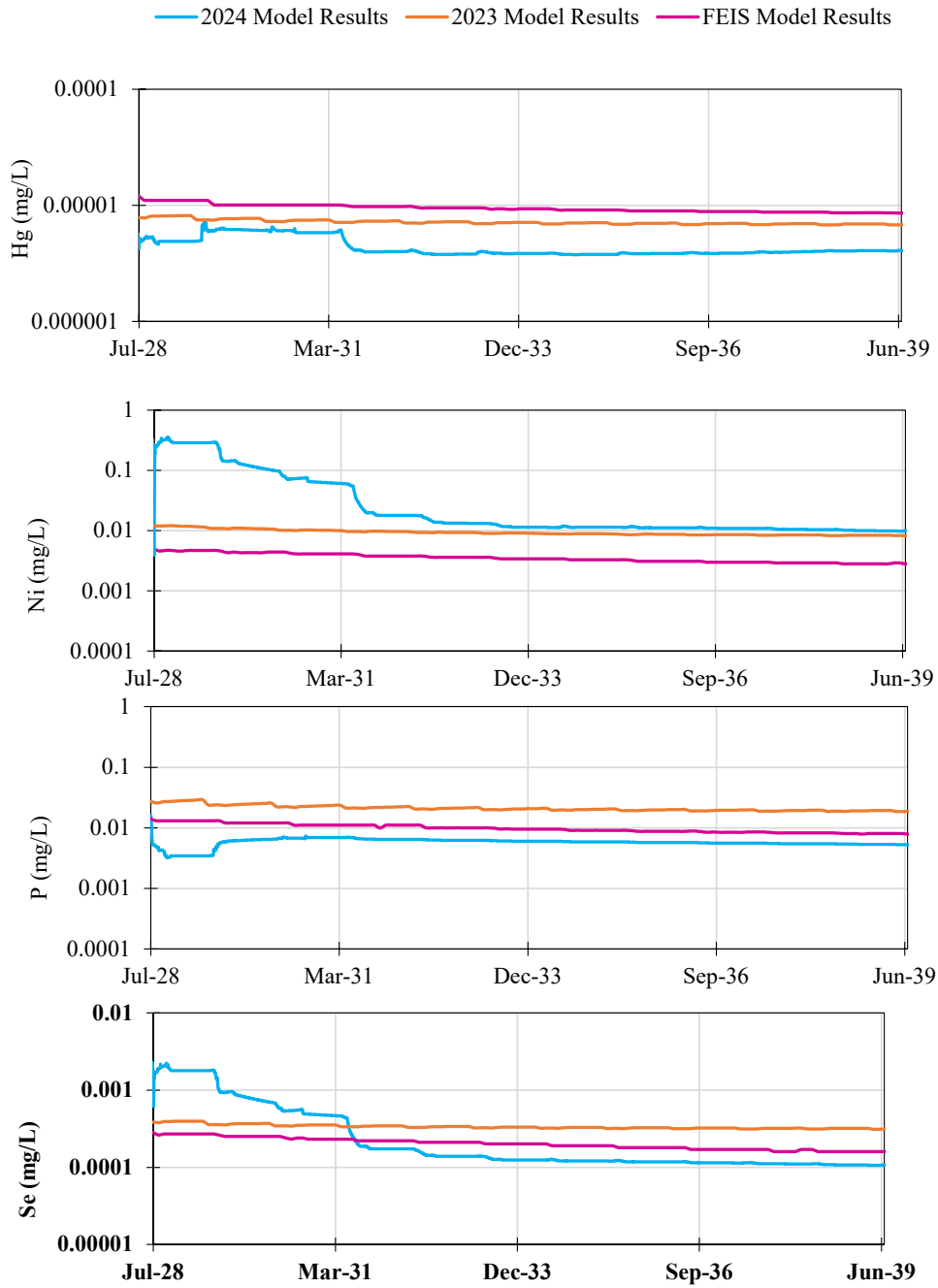


Figure C.10-3: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

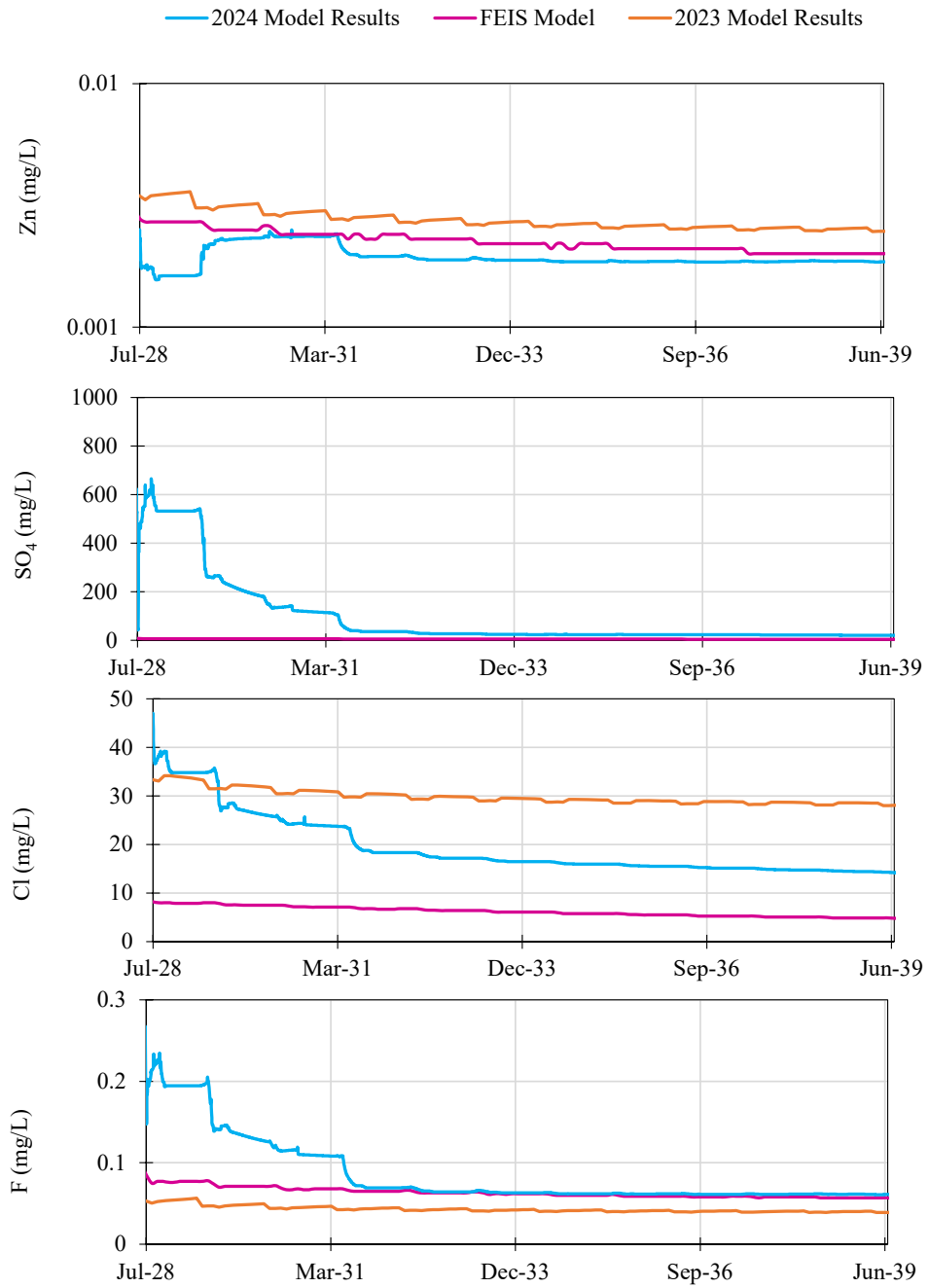


Figure C.10-4: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

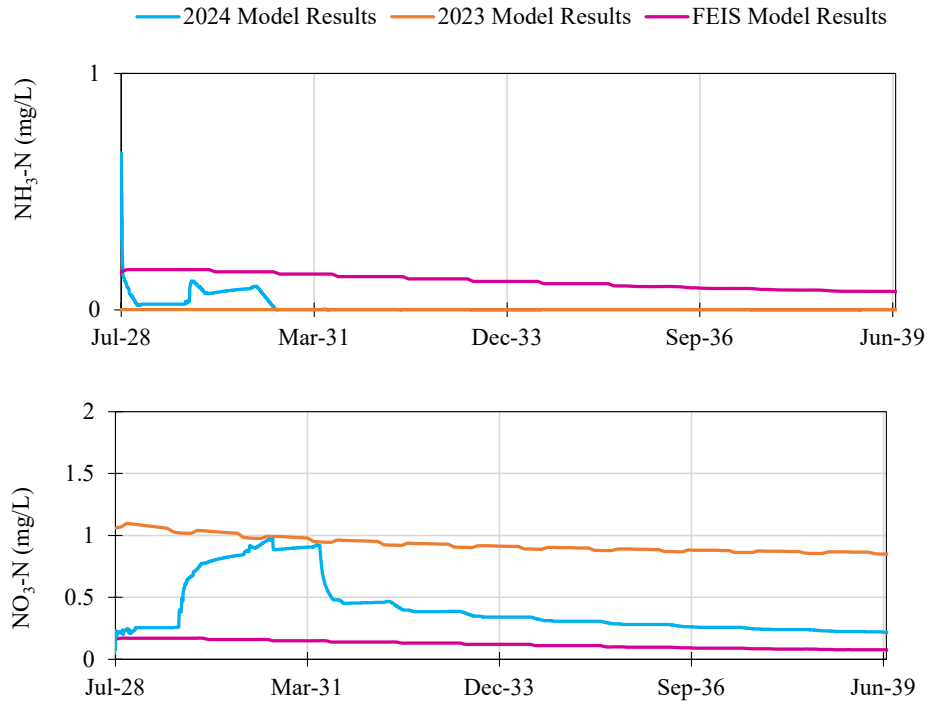


Figure C.10-5: Water quality model results from the FEIS, 2023 Annual Report, and the 2024 Annual Report for Whale Tail Pit.

Periods	WT_Natural_Runoff	WT_Pitwall_Runoff_Reporting_to_Pit	WT_Surface_RainSnowmelt	KL_Dike_Natural_to_WTPit	GW_Inflow_into_WT_Pit	OSP4_Pad_Runoff	GSP1_closure_to_WT	IVR_Closure_Overflow_to_WT_Pit	WTAP_Overflow_to_WT_closure	WTS_pump_to_WT_Pit	WT_WRSF_Closure_Pump_to_WT_Pit	WT_Pit_Net_Inflow (excluding CP)	WT_Pitlake	WT_Pitlake_Level	WT_Pit_Inflow_to_WT_Pit_UG_Sump_by_CP	WT_Pump_to_WTA	WT_Pitwall_Runoff_to_IVRAP_Closure	WT_Pit_GW_Inflow_to_IVRAP_Closure	WT_Closure_Overflow
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3	m	m3/month	m3/month	m3/month	m3/month	m3/month
2043 Jul	339.3	1185.1	18864.8	2338.2	0.0	1984.6	0.0	6177.5	0.0	0.0	0.0	30889.4	41580864.0	123.0	0.0	0.0	0.0	0.0	352.5
2043 Aug	176.0	760.3	12745.2	1213.0	0.0	1029.6	0.0	0.0	0.0	0.0	0.0	15924.2	41545760.0	122.9	0.0	0.0	0.0	0.0	0.0
2043 Sep	1014.7	2762.8	46859.9	6992.3	0.0	5935.0	406.0	41621.2	0.0	0.0	0.0	105591.9	41554216.0	122.9	0.0	0.0	0.0	0.0	23581.7
2043 Oct	169.4	58.6	668.9	1167.2	0.0	990.7	436.1	6741.3	0.0	0.0	0.0	10232.3	41593576.0	123.0	0.0	0.0	0.0	0.0	7731.4
2043 Nov	3.0	0.0	0.0	20.5	0.0	17.4	0.0	0.0	0.0	0.0	0.0	40.9	41591876.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Dec	1.7	0.0	0.0	11.5	0.0	9.7	0.0	0.0	0.0	0.0	0.0	22.9	41591864.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Jan	0.9	0.0	0.0	6.1	0.0	5.2	0.0	0.0	0.0	0.0	0.0	12.2	41591880.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Feb	0.5	0.0	0.0	3.1	0.0	2.7	0.0	0.0	0.0	0.0	0.0	6.2	41591888.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Mar	0.3	0.0	0.0	1.8	0.0	1.5	0.0	0.0	0.0	0.0	0.0	3.6	41591780.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Apr	0.1	0.0	0.0	1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.9	41590448.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 May	259.2	253.3	4495.1	1786.2	0.0	1516.1	0.0	0.0	0.0	0.0	0.0	8309.9	41577544.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Jun	3217.4	6823.6	86403.7	22171.0	0.0	18818.5	14443.4	167099.0	0.0	0.0	0.0	318976.6	41592564.0	123.0	0.0	0.0	0.0	0.0	252798.2
2044 Jul	317.9	906.7	18948.6	2190.9	0.0	1859.6	0.0	7596.3	0.0	0.0	0.0	31820.1	41580316.0	123.0	0.0	0.0	0.0	0.0	221.7
2044 Aug	173.0	552.5	12974.6	1192.0	0.0	1011.8	0.0	0.0	0.0	0.0	0.0	15903.8	41544464.0	122.9	0.0	0.0	0.0	0.0	0.0
2044 Sep	965.8	1933.7	48895.1	6655.0	0.0	5648.7	310.3	33723.0	0.0	0.0	0.0	98131.6	41552208.0	122.9	0.0	0.0	0.0	0.0	14751.1
2044 Oct	189.5	38.8	627.1	1305.6	0.0	1108.2	485.7	8616.7	0.0	0.0	0.0	12371.6	41593360.0	123.0	0.0	0.0	0.0	0.0	9810.9
2044 Nov	3.0	0.0	0.0	21.0	0.0	17.8	0.0	0.0	0.0	0.0	0.0	41.8	41591640.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Dec	1.7	0.0	0.0	11.7	0.0	9.9	0.0	0.0	0.0	0.0	0.0	23.4	41591628.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Jan	0.9	0.0	0.0	6.3	0.0	5.3	0.0	0.0	0.0	0.0	0.0	12.5	41591644.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Feb	0.5	0.0	0.0	3.1	0.0	2.6	0.0	0.0	0.0	0.0	0.0	6.2	41591652.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Mar	0.3	0.0	0.0	1.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0	3.8	41591544.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Apr	0.1	0.0	0.0	1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	2.0	41590300.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 May	192.9	118.2	3812.9	1329.4	0.0	1128.4	0.0	0.0	0.0	0.0	0.0	6581.8	41577064.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Jun	3328.5	3011.8	94825.4	22936.5	0.0	19468.3	14800.1	170919.3	0.0	0.0	0.0	329289.9	41590640.0	123.0	0.0	0.0	0.0	0.0	258741.3
2045 Jul	373.0	329.9	21714.9	2570.4	0.0	2181.7	0.0	10270.7	0.0	0.0	0.0	37440.6	41579672.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Aug	143.7	158.0	10191.6	990.0	0.0	840.3	0.0	0.0	0.0	0.0	0.0	12323.5	41540988.0	122.9	0.0	0.0	0.0	0.0	0.0
2045 Sep	947.2	785.7	51332.9	6526.8	0.0	5539.9	0.0	30567.2	0.0	0.0	0.0	95699.7	41543704.0	122.9	0.0	0.0	0.0	0.0	2259.5
2045 Oct	173.2	16.3	684.6	1193.8	0.0	1013.3	388.5	10205.0	0.0	0.0	0.0	13674.8	41593472.0	123.0	0.0	0.0	0.0	0.0	10950.0
2045 Nov	3.0	0.0	0.0	20.6	0.0	17.5	0.0	0.0	0.0	0.0	0.0	41.1	41591572.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Dec	1.7	0.0	0.0	11.5	0.0	9.8	0.0	0.0	0.0	0.0	0.0	22.9	41591552.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Jan	0.9	0.0	0.0	6.2	0.0	5.2	0.0	0.0	0.0	0.0	0.0	12.3	41591568.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Feb	0.4	0.0	0.0	3.1	0.0	2.6	0.0	0.0	0.0	0.0	0.0	6.1	41591576.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Mar	0.3	0.0	0.0	1.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0	3.7	41591468.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Apr	0.1	0.0	0.0	1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.9	41590168.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 May	190.9	61.6	3972.8	1315.3	0.0	1116.4	0.0	0.0	0.0	0.0	0.0	6657.0	41576368.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Jun	3386.2	2212.1	99773.8	23334.1	0.0	19805.7	15282.0	185722.6	0.0	0.0	0.0	349516.5	41591536.0	123.0	0.0	0.0	0.0	0.0	276176.5
2046 Jul	377.5	323.0	21263.1	2601.2	0.0	2207.9	0.0	8015.7	0.0	0.0	0.0	34788.4	41578724.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Aug	137.2	153.3	9893.1	945.1	0.0	802.2	0.0	0.0	0.0	0.0	0.0	11930.9	41539056.0	122.9	0.0	0.0	0.0	0.0	0.0
2046 Sep	944.2	802.1	52405.4	6506.3	0.0	5522.5	0.0	32034.6	0.0	0.0	0.0	98215.1	41542724.0	122.9	0.0	0.0	0.0	0.0	2739.1
2046 Oct	181.7	18.0	702.1	1252.4	0.0	1063.0	456.9	9083.3	0.0	0.0	0.0	12757.4	41593436.0	123.0	0.0	0.0	0.0	0.0	10026.6
2046 Nov	3.0	0.0	0.0	20.5	0.0	17.4	0.0	0.0	0.0	0.0	0.0	40.9	41591588.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Dec	1.7	0.0	0.0	11.5	0.0	9.7	0.0	0.0	0.0	0.0	0.0	22.8	41591572.0	123.0	0.0	0.0	0.0	0.0	0.0

Periods	IVR_Pitwall_Runoff	IVR_Pitwall_Runoff_Reporting_to_Pit	IVR_Natural_Runoff_Reporting_to_Pit	IVR_Surface_RainSnow_melt	IVR_Div_Natural_Runoff_Closure	WTS_to_IVR_Pit_Closure_Pump	WTWRSF_Closure_Pump_to_IVR_Pit	WTP_Closure_Treated_DischARGE_to_IVR
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month
2025 Jan	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
2025 Feb	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
2025 Mar	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
2025 Apr	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2025 May	621.1	621.1	244.9	12.1	0.0	0.0	0.0	0.0
2025 Jun	18054.8	18054.8	3552.3	207.4	0.0	0.0	0.0	0.0
2025 Jul	3471.0	3471.0	354.3	67.4	0.0	0.0	0.0	0.0
2025 Aug	1972.7	1972.7	223.1	38.3	0.0	0.0	0.0	0.0
2025 Sep	8179.1	8179.1	1184.7	158.4	0.0	0.0	0.0	0.0
2025 Oct	182.2	182.2	209.8	2.4	0.0	0.0	0.0	0.0
2025 Nov	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0
2025 Dec	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
2026 Jan	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2026 Feb	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
2026 Mar	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2026 Apr	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2026 May	618.4	618.4	242.2	12.0	0.0	0.0	0.0	0.0
2026 Jun	22293.7	22293.7	3999.5	294.9	0.0	0.0	0.0	0.0
2026 Jul	3258.6	3258.6	454.6	63.3	0.0	0.0	0.0	0.0
2026 Aug	1972.3	1972.3	222.3	38.3	0.0	0.0	0.0	0.0
2026 Sep	8153.1	8153.1	1187.3	157.9	0.0	0.0	0.0	0.0
2026 Oct	175.4	175.4	201.1	2.4	0.0	0.0	0.0	0.0
2026 Nov	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0
2026 Dec	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
2027 Jan	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2027 Feb	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
2027 Mar	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2027 Apr	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2027 May	630.8	630.8	251.4	12.3	0.0	0.0	0.0	0.0
2027 Jun	22232.1	22232.1	3980.3	293.9	0.0	0.0	0.0	0.0
2027 Jul	3055.8	3055.8	402.2	59.4	0.0	0.0	0.0	0.0
2027 Aug	1712.2	1712.2	195.3	33.3	0.0	0.0	0.0	0.0
2027 Sep	8207.0	8207.0	1167.5	158.9	0.0	0.0	0.0	0.0
2027 Oct	182.2	182.2	210.2	2.4	0.0	0.0	0.0	0.0
2027 Nov	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0
2027 Dec	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
2028 Jan	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2028 Feb	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
2028 Mar	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2028 Apr	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2028 May	780.6	780.6	313.3	15.2	0.0	0.0	0.0	0.0
2028 Jun	22641.7	22641.7	4061.2	301.8	0.0	0.0	0.0	0.0
2028 Jul	4178.8	1462.6	4928.8	166.0	8798.2	380778.3	0.0	6391.3
2028 Aug	2904.9	1016.7	3535.8	1285.3	4251.4	2124120.0	234.4	10381.9
2028 Sep	9096.7	3183.8	20188.4	8832.9	24273.9	2055600.0	8812.5	52175.5
2028 Oct	195.7	68.5	3156.8	159.3	3795.6	68520.0	2828.4	645.7
2028 Nov	0.0	0.0	57.2	0.0	68.8	0.0	0.0	0.0
2028 Dec	0.0	0.0	32.0	0.0	38.4	0.0	0.0	0.0
2029 Jan	0.0	0.0	17.1	0.0	20.5	0.0	0.0	0.0
2029 Feb	0.0	0.0	8.5	0.0	10.2	0.0	0.0	0.0
2029 Mar	0.0	0.0	5.2	0.0	6.2	0.0	0.0	0.0
2029 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2029 May	660.9	231.3	3754.9	808.6	4514.7	0.0	8700.3	0.0
2029 Jun	23107.8	8087.7	65498.2	21677.7	78752.9	1119482.3	45433.5	157446.0
2029 Jul	3037.7	1063.2	7582.4	5295.6	9116.8	1231320.0	5971.3	19739.4
2029 Aug	1849.4	647.3	3873.5	3999.6	4657.4	993000.0	2564.1	11386.2
2029 Sep	6513.7	2279.8	18634.6	15745.6	22405.7	547755.3	18245.0	57182.5
2029 Oct	134.8	47.2	3655.8	217.6	4395.6	24400.9	3520.8	1043.0
2029 Nov	0.0	0.0	59.1	0.0	71.1	0.0	0.0	0.0
2029 Dec	0.0	0.0	33.0	0.0	39.7	0.0	0.0	0.0
2030 Jan	0.0	0.0	17.7	0.0	21.2	0.0	0.0	0.0
2030 Feb	0.0	0.0	8.8	0.0	10.5	0.0	0.0	0.0
2030 Mar	0.0	0.0	5.4	0.0	6.4	0.0	0.0	0.0
2030 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2030 May	496.7	173.8	3963.9	1250.0	4766.1	0.0	8396.9	0.0
2030 Jun	16366.4	5728.2	65572.0	32816.3	78841.6	1112160.0	58177.7	163333.6
2030 Jul	2241.9	784.7	7487.5	7744.3	9002.7	1231320.0	5478.3	19248.8
2030 Aug	962.5	336.9	2977.1	3849.3	3579.5	295331.0	0.0	8779.0
2030 Sep	4949.3	1732.3	19133.5	20066.1	23005.5	629031.4	7694.8	50275.1
2030 Oct	94.5	33.1	3290.9	282.5	3956.8	39033.7	1159.7	349.0
2030 Nov	0.0	0.0	58.7	0.0	70.6	0.0	0.0	0.0
2030 Dec	0.0	0.0	32.8	0.0	39.4	0.0	0.0	0.0
2031 Jan	0.0	0.0	17.5	0.0	21.1	0.0	0.0	0.0
2031 Feb	0.0	0.0	8.7	0.0	10.5	0.0	0.0	0.0
2031 Mar	0.0	0.0	5.3	0.0	6.4	0.0	0.0	0.0
2031 Apr	0.0	0.0	2.8	0.0	3.3	0.0	0.0	0.0
2031 May	361.8	126.6	3900.7	1564.2	4690.1	0.0	0.0	0.0
2031 Jun	12898.5	4514.5	64305.9	37779.0	77319.4	0.0	0.0	158235.8
2031 Jul	1921.6	672.6	7083.3	8317.4	8516.7	0.0	0.0	17762.0
2031 Aug	949.2	332.2	2972.0	4103.9	3573.5	0.0	0.0	9197.6
2031 Sep	4823.1	1688.1	19088.3	20799.5	22951.1	0.0	0.0	51443.2
2031 Oct	96.5	33.8	3332.3	281.7	4006.7	0.0	0.0	996.8
2031 Nov	0.0	0.0	60.4	0.0	72.6	0.0	0.0	0.0
2031 Dec	0.0	0.0	33.7	0.0	40.6	0.0	0.0	0.0
2032 Jan	0.0	0.0	18.0	0.0	21.7	0.0	0.0	0.0
2032 Feb	0.0	0.0	9.2	0.0	11.0	0.0	0.0	0.0
2032 Mar	0.0	0.0	5.4	0.0	6.5	0.0	0.0	0.0
2032 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2032 May	450.2	157.6	5014.7	1946.8	6029.6	0.0	0.0	0.0
2032 Jun	12685.0	4439.7	63569.4	36906.1	76433.9	0.0	0.0	197790.6
2032 Jul	1896.6	663.8	6301.8	8208.9	7577.1	0.0	0.0	16067.0
2032 Aug	1101.6	385.6	2941.4	4763.0	3536.6	0.0	0.0	8954.1
2032 Sep	4520.0	1582.0	18920.0	19496.0	22748.8	0.0	0.0	53383.3
2032 Oct	98.2	34.4	3447.3	284.5	4145.0	0.0	0.0	48.6
2032 Nov	0.0	0.0	57.3	0.0	68.9	0.0	0.0	0.0
2032 Dec	0.0	0.0	32.0	0.0	38.5	0.0	0.0	0.0
2033 Jan	0.0	0.0	17.1	0.0	20.6	0.0	0.0	0.0
2033 Feb	0.0	0.0	8.5	0.0	10.2	0.0	0.0	0.0
2033 Mar	0.0	0.0	5.2	0.0	6.2	0.0	0.0	0.0
2033 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2033 May	676.7	236.8	5498.5	2927.4	6611.2	0.0	0.0	0.0
2033 Jun	12883.7	4509.3	64212.9	37811.7	77207.5	0.0	0.0	177641.5
2033 Jul	1944.7	680.7	6699.2	8418.6	8055.0	0.0	0.0	22599.7
2033 Aug	1072.4	375.3	2895.4	4639.9	3481.3	0.0	0.0	12662.4
2033 Sep	4675.8	1636.5	20012.0	20163.1	24061.8	0.0	0.0	53987.7
2033 Oct	103.2	36.1	3255.0	287.3	3913.7	0.0	0.0	319.3
2033 Nov	0.0	0.0	59.0	0.0	71.0	0.0	0.0	0.0
2033 Dec	0.0	0.0	33.0	0.0	39.7	0.0	0.0	0.0
2034 Jan	0.0	0.0	17.6	0.0	21.2	0.0	0.0	0.0
2034 Feb	0.0	0.0	8.8	0.0	10.5	0.0	0.0	0.0
2034 Mar	0.0	0.0	5.4	0.0	6.4	0.0	0.0	0.0
2034 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2034 May	360.1	360.1	3854.4	1557.0	4634.4	0.0	0.0	0.0

Periods	IVR_Pitwall_Runoff	IVR_Pitwall_Runoff_Reporting_to_Pit	IVR_Natural_Runoff_Reporting_to_Pit	IVR_Surface_RainSnow_melt	IVR_Div_Natural_Runoff_Closure	WTS_to_IVR_Pit_Closure_Pump	WTWRSF_Closure_Pump_to_IVR_Pit	WTP_Closure_Treated_DischARGE_to_IVR
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month
2034 Jun	12845.1	12845.1	63816.8	37547.7	76731.3	0.0	0.0	0.0
2034 Jul	2142.9	2142.9	7947.3	9274.8	9555.6	0.0	0.0	0.0
2034 Aug	1218.9	1218.9	3734.9	5266.4	4490.7	0.0	0.0	0.0
2034 Sep	5059.1	5059.1	20397.1	21813.1	24524.8	0.0	0.0	0.0
2034 Oct	110.0	110.0	3327.6	304.8	4001.0	0.0	0.0	0.0
2034 Nov	0.0	0.0	59.5	0.0	71.5	0.0	0.0	0.0
2034 Dec	0.0	0.0	33.2	0.0	40.0	0.0	0.0	0.0
2035 Jan	0.0	0.0	17.8	0.0	21.4	0.0	0.0	0.0
2035 Feb	0.0	0.0	8.8	0.0	10.6	0.0	0.0	0.0
2035 Mar	0.0	0.0	5.4	0.0	6.5	0.0	0.0	0.0
2035 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2035 May	421.7	421.7	4876.4	1823.2	5863.2	0.0	0.0	0.0
2035 Jun	13210.4	13210.4	66823.9	39143.7	80347.0	0.0	0.0	0.0
2035 Jul	2053.5	2053.5	7742.6	8887.5	9309.5	0.0	0.0	0.0
2035 Aug	1225.7	1225.7	3721.1	5295.8	4474.2	0.0	0.0	0.0
2035 Sep	4964.5	4964.5	19955.5	21412.2	23993.9	0.0	0.0	0.0
2035 Oct	108.2	108.2	3459.0	305.0	4159.0	0.0	0.0	0.0
2035 Nov	0.0	0.0	60.2	0.0	72.4	0.0	0.0	0.0
2035 Dec	0.0	0.0	33.6	0.0	40.5	0.0	0.0	0.0
2036 Jan	0.0	0.0	18.0	0.0	21.6	0.0	0.0	0.0
2036 Feb	0.0	0.0	9.2	0.0	11.0	0.0	0.0	0.0
2036 Mar	0.0	0.0	5.4	0.0	6.4	0.0	0.0	0.0
2036 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2036 May	590.0	590.0	4925.0	2551.9	5921.6	0.0	0.0	0.0
2036 Jun	12633.5	12633.5	64213.9	36681.2	77208.7	0.0	0.0	0.0
2036 Jul	1845.0	1845.0	6141.0	7984.5	7383.7	0.0	0.0	0.0
2036 Aug	1266.1	1266.1	3418.5	5468.4	4110.2	0.0	0.0	0.0
2036 Sep	4649.7	4649.7	18897.6	20045.2	22721.8	0.0	0.0	0.0
2036 Oct	103.1	103.1	3486.4	272.9	4191.9	0.0	0.0	0.0
2036 Nov	0.0	0.0	57.2	0.0	68.7	0.0	0.0	0.0
2036 Dec	0.0	0.0	32.0	0.0	38.4	0.0	0.0	0.0
2037 Jan	0.0	0.0	17.1	0.0	20.5	0.0	0.0	0.0
2037 Feb	0.0	0.0	8.5	0.0	10.2	0.0	0.0	0.0
2037 Mar	0.0	0.0	5.2	0.0	6.2	0.0	0.0	0.0
2037 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2037 May	479.4	479.4	5045.6	2073.3	6066.7	0.0	0.0	0.0
2037 Jun	12942.7	12942.7	65553.1	37971.5	78819.0	0.0	0.0	0.0
2037 Jul	1951.9	1951.9	6745.8	8447.6	8110.9	0.0	0.0	0.0
2037 Aug	1314.8	1314.8	3512.7	5679.3	4223.6	0.0	0.0	0.0
2037 Sep	4592.8	4592.8	18563.8	19789.1	22320.6	0.0	0.0	0.0
2037 Oct	107.3	107.3	3439.9	292.6	4136.0	0.0	0.0	0.0
2037 Nov	0.0	0.0	57.7	0.0	69.3	0.0	0.0	0.0
2037 Dec	0.0	0.0	32.2	0.0	38.7	0.0	0.0	0.0
2038 Jan	0.0	0.0	17.2	0.0	20.7	0.0	0.0	0.0
2038 Feb	0.0	0.0	8.5	0.0	10.3	0.0	0.0	0.0
2038 Mar	0.0	0.0	5.2	0.0	6.3	0.0	0.0	0.0
2038 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2038 May	467.7	467.7	5083.7	2022.5	6112.4	0.0	0.0	0.0
2038 Jun	12728.8	12728.8	63761.9	37051.7	76665.2	0.0	0.0	0.0
2038 Jul	1925.5	1925.5	6398.2	8333.2	7693.0	0.0	0.0	0.0
2038 Aug	1285.8	1285.8	3625.6	5553.3	4359.3	0.0	0.0	0.0
2038 Sep	4985.5	4985.5	21517.2	21488.7	25871.5	0.0	0.0	0.0
2038 Oct	106.0	106.0	3395.6	317.9	4082.8	0.0	0.0	0.0
2038 Nov	0.0	0.0	59.7	0.0	71.8	0.0	0.0	0.0
2038 Dec	0.0	0.0	33.4	0.0	40.2	0.0	0.0	0.0
2039 Jan	0.0	0.0	17.9	0.0	21.5	0.0	0.0	0.0
2039 Feb	0.0	0.0	8.9	0.0	10.7	0.0	0.0	0.0
2039 Mar	0.0	0.0	5.4	0.0	6.5	0.0	0.0	0.0
2039 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2039 May	360.5	360.5	3866.6	1558.7	4649.1	0.0	0.0	0.0
2039 Jun	12920.3	12920.3	64260.0	37876.7	77264.2	0.0	0.0	0.0
2039 Jul	1673.6	1673.6	6441.2	7891.1	7744.7	0.0	0.0	0.0
2039 Aug	854.4	854.4	2849.8	4213.2	3426.5	0.0	0.0	0.0
2039 Sep	4579.7	4579.7	20179.6	22766.6	24263.3	0.0	0.0	0.0
2039 Oct	89.5	89.5	3328.5	318.0	4002.0	0.0	0.0	0.0
2039 Nov	0.0	0.0	60.2	0.0	72.4	0.0	0.0	0.0
2039 Dec	0.0	0.0	33.6	0.0	40.4	0.0	0.0	0.0
2040 Jan	0.0	0.0	18.0	0.0	21.6	0.0	0.0	0.0
2040 Feb	0.0	0.0	9.2	0.0	11.0	0.0	0.0	0.0
2040 Mar	0.0	0.0	5.4	0.0	6.4	0.0	0.0	0.0
2040 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2040 May	398.4	398.4	5085.4	2085.3	6114.6	0.0	0.0	0.0
2040 Jun	10515.3	10515.3	63924.6	40476.1	76860.9	0.0	0.0	0.0
2040 Jul	1334.1	1334.1	6098.0	9169.8	7332.0	0.0	0.0	0.0
2040 Aug	887.3	887.3	3664.6	6474.7	4406.2	0.0	0.0	0.0
2040 Sep	3123.2	3123.2	18082.1	22964.6	21741.4	0.0	0.0	0.0
2040 Oct	76.0	76.0	3405.3	355.1	4094.5	0.0	0.0	0.0
2040 Nov	0.0	0.0	56.9	0.0	68.4	0.0	0.0	0.0
2040 Dec	0.0	0.0	31.8	0.0	38.2	0.0	0.0	0.0
2041 Jan	0.0	0.0	17.0	0.0	20.4	0.0	0.0	0.0
2041 Feb	0.0	0.0	8.4	0.0	10.1	0.0	0.0	0.0
2041 Mar	0.0	0.0	5.2	0.0	6.2	0.0	0.0	0.0
2041 Apr	0.0	0.0	2.7	0.0	3.2	0.0	0.0	0.0
2041 May	301.8	301.8	4496.8	2305.3	5406.8	0.0	0.0	0.0
2041 Jun	8524.1	8524.1	65075.2	45018.8	78244.3	0.0	0.0	0.0
2041 Jul	1196.7	1196.7	6459.1	10145.6	7766.2	0.0	0.0	0.0
2041 Aug	687.0	687.0	3291.7	6696.4	3957.9	0.0	0.0	0.0
2041 Sep	2537.7	2537.7	19208.1	25383.2	23095.2	0.0	0.0	0.0
2041 Oct	59.4	59.4	3345.4	435.4	4022.4	0.0	0.0	0.0
2041 Nov	0.0	0.0	59.5	0.0	71.6	0.0	0.0	0.0
2041 Dec	0.0	0.0	33.3	0.0	40.0	0.0	0.0	0.0
2042 Jan	0.0	0.0	17.8	0.0	21.4	0.0	0.0	0.0
2042 Feb	0.0	0.0	8.8	0.0	10.6	0.0	0.0	0.0
2042 Mar	0.0	0.0	5.4	0.0	6.5	0.0	0.0	0.0
2042 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2042 May	234.7	234.7	5101.9	2481.1	6134.4	0.0	0.0	0.0
2042 Jun	6568.7	6568.7	64188.8	48277.5	77178.6	0.0	0.0	0.0
2042 Jul	945.3	945.3	6454.0	10683.3	7760.0	0.0	0.0	0.0
2042 Aug	466.7	466.7	2597.1	5487.4	3122.7	0.0	0.0	0.0
2042 Sep	2200.9	2200.9	18580.8	26107.0	22341.0	0.0	0.0	0.0
2042 Oct	47.5	47.5	3001.4	391.0	3608.8	0.0	0.0	0.0
2042 Nov	0.0	0.0	58.1	0.0	69.8	0.0	0.0	0.0
2042 Dec	0.0	0.0	32.4	0.0	39.0	0.0	0.0	0.0
2043 Jan	0.0	0.0	17.3	0.0	20.9	0.0	0.0	0.0
2043 Feb	0.0	0.0	8.6	0.0	10.3	0.0	0.0	0.0
2043 Mar	0.0	0.0	5.3	0.0	6.3	0.0	0.0	0.0
2043 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2043 May	203.1	203.1	5137.6	2620.9	6177.2	0.0	0.0	0.0
2043 Jun	5186.9	5186.9	64894.5	50141.0	78027.1	0.0	0.0	0.0
2043 Jul	723.5	723.5	6660.6	11225.9	8008.5	0.0	0.0	0.0
2043 Aug	465.7	465.7	3455.5	7581.8	4154.8	0.0	0.0	0.0
2043 Sep	1697.0	1697.0	19918.4	27866.1	23949.3	0.0	0.0	0.0
2043 Oct	36.2	36.2	3325.0	397.5	3997.8	0.0	0.0	0.0

Periods	IVR_Pitwall_Runoff	IVR_Pitwall_Runoff_Reporting_to_Pit	IVR_Natural_Runoff_Reporting_to_Pit	IVR_Surface_RainSnow_melt	IVR_Div_Natural_Runoff_Closure	WTS_to_IVR_Pit_Closure_Pump	WTWRSF_Closure_Pump_to_IVR_Pit	WTP_Closure_Treated_DischARGE_to_IVR
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month
2043 Nov	0.0	0.0	58.5	0.0	70.3	0.0	0.0	0.0
2043 Dec	0.0	0.0	32.7	0.0	39.3	0.0	0.0	0.0
2044 Jan	0.0	0.0	17.5	0.0	21.0	0.0	0.0	0.0
2044 Feb	0.0	0.0	8.9	0.0	10.7	0.0	0.0	0.0
2044 Mar	0.0	0.0	5.2	0.0	6.3	0.0	0.0	0.0
2044 Apr	0.0	0.0	2.7	0.0	3.3	0.0	0.0	0.0
2044 May	156.8	156.8	5088.1	2670.6	6117.8	0.0	0.0	0.0
2044 Jun	4265.7	4265.7	63157.0	51285.4	75937.9	0.0	0.0	0.0
2044 Jul	558.1	558.1	6241.1	11273.9	7504.1	0.0	0.0	0.0
2044 Aug	318.8	318.8	3395.6	7776.0	4082.8	0.0	0.0	0.0
2044 Sep	1045.7	1045.7	18957.7	29469.5	22794.2	0.0	0.0	0.0
2044 Oct	17.2	17.2	3719.3	382.3	4472.0	0.0	0.0	0.0
2044 Nov	0.0	0.0	59.8	0.0	71.8	0.0	0.0	0.0
2044 Dec	0.0	0.0	33.4	0.0	40.1	0.0	0.0	0.0
2045 Jan	0.0	0.0	17.8	0.0	21.5	0.0	0.0	0.0
2045 Feb	0.0	0.0	8.9	0.0	10.6	0.0	0.0	0.0
2045 Mar	0.0	0.0	5.4	0.0	6.5	0.0	0.0	0.0
2045 Apr	0.0	0.0	2.8	0.0	3.4	0.0	0.0	0.0
2045 May	48.5	48.5	3786.9	2332.3	4553.3	0.0	0.0	0.0
2045 Jun	1263.1	1263.1	65337.7	57652.6	78559.9	0.0	0.0	0.0
2045 Jul	159.0	159.0	7322.1	13062.6	8803.8	0.0	0.0	0.0
2045 Aug	75.3	75.3	2820.2	6133.8	3390.9	0.0	0.0	0.0
2045 Sep	377.9	377.9	18592.5	30882.1	22355.1	0.0	0.0	0.0
2045 Oct	7.9	7.9	3400.7	411.8	4088.9	0.0	0.0	0.0
2045 Nov	0.0	0.0	58.7	0.0	70.5	0.0	0.0	0.0
2045 Dec	0.0	0.0	32.8	0.0	39.4	0.0	0.0	0.0
2046 Jan	0.0	0.0	17.5	0.0	21.1	0.0	0.0	0.0
2046 Feb	0.0	0.0	8.7	0.0	10.5	0.0	0.0	0.0
2046 Mar	0.0	0.0	5.3	0.0	6.4	0.0	0.0	0.0
2046 Apr	0.0	0.0	2.8	0.0	3.3	0.0	0.0	0.0
2046 May	29.3	29.3	3746.7	2391.1	4504.9	0.0	0.0	0.0
2046 Jun	1066.6	1066.6	66470.2	60018.1	79921.6	0.0	0.0	0.0
2046 Jul	155.7	155.7	7409.9	12790.8	8909.4	0.0	0.0	0.0
2046 Aug	73.1	73.1	2692.2	5954.2	3237.1	0.0	0.0	0.0
2046 Sep	385.7	385.7	18534.0	31527.3	22284.7	0.0	0.0	0.0
2046 Oct	8.7	8.7	3567.6	422.3	4289.6	0.0	0.0	0.0
2046 Nov	0.0	0.0	58.4	0.0	70.2	0.0	0.0	0.0
2046 Dec	0.0	0.0	32.6	0.0	39.2	0.0	0.0	0.0

Periods	WTA_pump_to_IVR	IVR_Pitlake	IVR_Pitlake_Le vel	IVR_Pit_Pump_t o_IVRA	IVR Pitwall_to_IVRAP_Closure	IVR_Closure_Overflow_to_WT_Pit	IVR_Nat_Runoff_to_East_Lobe	IVR_East_Pitwall_Runoff
	m3/month	m3	m	m3/month	m3/month	m3/month	m3/month	m3/month
2025 Jan	4999.0	77270.8	3.6	93000.0	0.0	0.0	0.9	0.0
2025 Feb	0.0	6306.5	-8.3	28433.5	0.0	0.0	0.5	0.0
2025 Mar	0.0	1000.0	-9.7	0.4	0.0	0.0	0.3	0.0
2025 Apr	0.0	1000.0	-9.7	0.2	0.0	0.0	0.1	0.0
2025 May	0.0	1000.0	-9.7	878.0	0.0	0.0	156.9	354.2
2025 Jun	0.0	1000.0	-9.7	21814.5	0.0	0.0	2276.7	10274.3
2025 Jul	0.0	1000.0	-9.7	3892.8	0.0	0.0	227.1	1971.5
2025 Aug	0.0	1000.0	-9.7	2234.2	0.0	0.0	143.0	1120.2
2025 Sep	0.0	1000.0	-9.7	9522.1	0.0	0.0	759.3	4639.3
2025 Oct	0.0	1000.0	-9.7	394.4	0.0	0.0	134.5	103.2
2025 Nov	0.0	1000.0	-9.7	3.6	0.0	0.0	2.3	0.0
2025 Dec	0.0	1000.0	-9.7	2.0	0.0	0.0	1.3	0.0
2026 Jan	0.0	1000.0	-9.7	1.1	0.0	0.0	0.7	0.0
2026 Feb	0.0	1000.0	-9.7	0.5	0.0	0.0	0.3	0.0
2026 Mar	0.0	1000.0	-9.7	0.3	0.0	0.0	0.2	0.0
2026 Apr	0.0	1000.0	-9.7	0.2	0.0	0.0	0.1	0.0
2026 May	0.0	1000.0	-9.7	872.7	0.0	0.0	155.2	350.1
2026 Jun	0.0	1000.0	-9.7	26588.1	0.0	0.0	2563.4	12506.2
2026 Jul	0.0	1000.0	-9.7	3776.5	0.0	0.0	291.3	1812.2
2026 Aug	0.0	1000.0	-9.7	2233.0	0.0	0.0	142.5	1079.7
2026 Sep	0.0	1000.0	-9.7	9498.2	0.0	0.0	760.9	4370.7
2026 Oct	0.0	1000.0	-9.7	378.9	0.0	0.0	128.9	93.2
2026 Nov	0.0	1000.0	-9.7	3.7	0.0	0.0	2.3	0.0
2026 Dec	0.0	1000.0	-9.7	2.0	0.0	0.0	1.3	0.0
2027 Jan	0.0	1000.0	-9.7	1.1	0.0	0.0	0.7	0.0
2027 Feb	0.0	1000.0	-9.7	0.5	0.0	0.0	0.3	0.0
2027 Mar	0.0	1000.0	-9.7	0.3	0.0	0.0	0.2	0.0
2027 Apr	0.0	1000.0	-9.7	0.2	0.0	0.0	0.1	0.0
2027 May	0.0	1000.0	-9.7	894.5	0.0	0.0	161.1	319.2
2027 Jun	0.0	1000.0	-9.7	26506.3	0.0	0.0	2551.1	11161.4
2027 Jul	0.0	1000.0	-9.7	3517.3	0.0	0.0	257.8	1522.8
2027 Aug	0.0	1000.0	-9.7	1940.8	0.0	0.0	125.2	849.2
2027 Sep	0.0	1000.0	-9.7	9533.4	0.0	0.0	748.3	4042.9
2027 Oct	0.0	1000.0	-9.7	394.8	0.0	0.0	134.7	89.3
2027 Nov	0.0	1000.0	-9.7	3.6	0.0	0.0	2.3	0.0
2027 Dec	0.0	1000.0	-9.7	2.0	0.0	0.0	1.3	0.0
2028 Jan	0.0	1000.0	-9.7	1.1	0.0	0.0	0.7	0.0
2028 Feb	0.0	1000.0	-9.7	0.6	0.0	0.0	0.4	0.0
2028 Mar	0.0	1000.0	-9.7	0.3	0.0	0.0	0.2	0.0
2028 Apr	0.0	1000.0	-9.7	0.2	0.0	0.0	0.1	0.0
2028 May	0.0	1000.0	-9.7	1109.1	0.0	0.0	200.8	355.6
2028 Jun	0.0	1000.0	-9.7	27004.7	0.0	0.0	2602.9	10245.1
2028 Jul	0.0	40320.6	-3.9	0.0	2716.2	0.0	2388.6	1214.0
2028 Aug	0.0	1443253.9	45.6	0.0	1888.2	0.0	0.0	0.0
2028 Sep	0.0	3588740.0	71.2	0.0	5912.9	0.0	0.0	0.0
2028 Oct	0.0	4786813.0	81.0	0.0	127.2	0.0	0.0	0.0
2028 Nov	0.0	4791190.0	81.0	0.0	0.0	0.0	0.0	0.0
2028 Dec	0.0	4791277.0	81.0	0.0	0.0	0.0	0.0	0.0
2029 Jan	0.0	4791329.5	81.0	0.0	0.0	0.0	0.0	0.0
2029 Feb	0.0	4791357.0	81.0	0.0	0.0	0.0	0.0	0.0
2029 Mar	0.0	4791348.0	81.0	0.0	0.0	0.0	0.0	0.0
2029 Apr	0.0	4791091.5	81.0	0.0	0.0	0.0	0.0	0.0
2029 May	0.0	4789108.0	81.0	0.0	429.6	0.0	0.0	0.0
2029 Jun	0.0	5511690.0	86.0	0.0	15020.1	0.0	0.0	0.0
2029 Jul	0.0	6910865.0	94.8	0.0	1974.5	0.0	0.0	0.0
2029 Aug	0.0	8137545.0	101.4	0.0	1202.1	0.0	0.0	0.0
2029 Sep	0.0	8782018.0	104.6	0.0	4233.9	0.0	0.0	0.0
2029 Oct	0.0	9264175.0	107.0	0.0	87.6	0.0	0.0	0.0
2029 Nov	0.0	9267982.0	107.0	0.0	0.0	0.0	0.0	0.0
2029 Dec	0.0	9268066.0	107.0	0.0	0.0	0.0	0.0	0.0
2030 Jan	0.0	9268121.0	107.0	0.0	0.0	0.0	0.0	0.0
2030 Feb	0.0	9268149.0	107.0	0.0	0.0	0.0	0.0	0.0
2030 Mar	0.0	9268128.0	107.0	0.0	0.0	0.0	0.0	0.0
2030 Apr	0.0	9267732.0	107.0	0.0	0.0	0.0	0.0	0.0
2030 May	0.0	9263899.0	107.0	0.0	322.8	0.0	0.0	0.0
2030 Jun	0.0	10012857.0	110.4	0.0	10638.2	0.0	0.0	0.0
2030 Jul	0.0	11397113.0	116.3	0.0	1457.2	0.0	0.0	0.0
2030 Aug	0.0	12282189.0	119.8	0.0	625.6	0.0	0.0	0.0
2030 Sep	0.0	12556655.0	120.9	0.0	3217.1	0.0	0.0	0.0
2030 Oct	0.0	13104508.0	123.0	0.0	61.5	13453.3	0.0	0.0
2030 Nov	0.0	13104483.0	123.0	0.0	0.0	0.0	0.0	0.0
2030 Dec	0.0	13104563.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 Jan	0.0	13104616.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 Feb	0.0	13104644.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 Mar	0.0	13104614.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 Apr	0.0	13104111.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 May	0.0	13099019.0	123.0	0.0	235.2	0.0	0.0	0.0
2031 Jun	0.0	13105449.0	123.0	0.0	8384.1	31886.7	0.0	0.0
2031 Jul	0.0	13103527.0	123.0	0.0	1249.0	22334.8	0.0	0.0
2031 Aug	0.0	13101021.0	123.0	0.0	617.0	876.6	0.0	0.0
2031 Sep	0.0	13104540.0	123.0	0.0	3135.0	101806.1	0.0	0.0
2031 Oct	0.0	13105061.0	123.0	0.0	62.7	7467.9	0.0	0.0
2031 Nov	0.0	13104457.0	123.0	0.0	0.0	0.0	0.0	0.0
2031 Dec	0.0	13104540.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 Jan	0.0	13104595.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 Feb	0.0	13104624.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 Mar	0.0	13104591.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 Apr	0.0	13104024.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 May	0.0	13098978.0	123.0	0.0	292.6	0.0	0.0	0.0
2032 Jun	0.0	13105542.0	123.0	0.0	8245.2	357918.8	0.0	0.0
2032 Jul	0.0	13103182.0	123.0	0.0	1232.8	19739.6	0.0	0.0
2032 Aug	0.0	13100754.0	123.0	0.0	716.1	358.8	0.0	0.0
2032 Sep	0.0	13104782.0	123.0	0.0	2938.0	102801.5	0.0	0.0
2032 Oct	0.0	13105054.0	123.0	0.0	63.9	6850.9	0.0	0.0
2032 Nov	0.0	13104481.0	123.0	0.0	0.0	0.0	0.0	0.0
2032 Dec	0.0	13104563.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 Jan	0.0	13104615.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 Feb	0.0	13104642.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 Mar	0.0	13104609.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 Apr	0.0	13104051.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 May	0.0	13099158.0	123.0	0.0	439.9	1754.9	0.0	0.0
2033 Jun	0.0	13105544.0	123.0	0.0	8374.4	340451.2	0.0	0.0
2033 Jul	0.0	13104603.0	123.0	0.0	1264.1	24023.1	0.0	0.0
2033 Aug	0.0	13102779.0	123.0	0.0	697.0	4959.7	0.0	0.0
2033 Sep	0.0	13105255.0	123.0	0.0	3039.2	108012.0	0.0	0.0
2033 Oct	0.0	13105071.0	123.0	0.0	67.1	6620.6	0.0	0.0
2033 Nov	0.0	13104454.0	123.0	0.0	0.0	0.0	0.0	0.0
2033 Dec	0.0	13104535.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Jan	0.0	13104589.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Feb	0.0	13104617.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Mar	0.0	13104587.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Apr	0.0	13104084.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 May	0.0	13098998.0	123.0	0.0	0.0	0.0	0.0	0.0

Periods	WTA_pump_to_IVR	IVR_Pitlake	IVR_Pitlake_Le vel	IVR_Pit_Pump_t o_IVRA	IVR_Pitwall_to_IVRAP_Closure	IVR_Closure_Overflow_to_WT_Pit	IVR_Nat_Runoff_to_East_Lobe	IVR_East_Pitwall_Runoff
	m3/month	m3	m	m3/month	m3/month	m3/month	m3/month	m3/month
2034 Jun	0.0	13105453.0	123.0	0.0	0.0	167983.1	0.0	0.0
2034 Jul	0.0	13102696.0	123.0	0.0	0.0	12528.7	0.0	0.0
2034 Aug	0.0	13094779.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Sep	0.0	13100773.0	123.0	0.0	0.0	49604.3	0.0	0.0
2034 Oct	0.0	13105039.0	123.0	0.0	0.0	6555.7	0.0	0.0
2034 Nov	0.0	13104442.0	123.0	0.0	0.0	0.0	0.0	0.0
2034 Dec	0.0	13104523.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Jan	0.0	13104577.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Feb	0.0	13104606.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Mar	0.0	13104576.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Apr	0.0	13104073.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 May	0.0	13099008.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Jun	0.0	13105543.0	123.0	0.0	0.0	178992.1	0.0	0.0
2035 Jul	0.0	13102636.0	123.0	0.0	0.0	11724.1	0.0	0.0
2035 Aug	0.0	13094683.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Sep	0.0	13100580.0	123.0	0.0	0.0	48021.5	0.0	0.0
2035 Oct	0.0	13105092.0	123.0	0.0	0.0	6770.2	0.0	0.0
2035 Nov	0.0	13104521.0	123.0	0.0	0.0	0.0	0.0	0.0
2035 Dec	0.0	13104604.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Jan	0.0	13104659.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Feb	0.0	13104688.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Mar	0.0	13104655.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Apr	0.0	13104087.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 May	0.0	13099083.0	123.0	0.0	0.0	377.9	0.0	0.0
2036 Jun	0.0	13105544.0	123.0	0.0	0.0	170033.2	0.0	0.0
2036 Jul	0.0	13101921.0	123.0	0.0	0.0	8424.7	0.0	0.0
2036 Aug	0.0	13093034.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Sep	0.0	13100171.0	123.0	0.0	0.0	43172.6	0.0	0.0
2036 Oct	0.0	13105075.0	123.0	0.0	0.0	6835.1	0.0	0.0
2036 Nov	0.0	13104535.0	123.0	0.0	0.0	0.0	0.0	0.0
2036 Dec	0.0	13104617.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Jan	0.0	13104670.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Feb	0.0	13104697.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Mar	0.0	13104664.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Apr	0.0	13104105.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 May	0.0	13099171.0	123.0	0.0	0.0	249.1	0.0	0.0
2037 Jun	0.0	13105544.0	123.0	0.0	0.0	174518.0	0.0	0.0
2037 Jul	0.0	13101937.0	123.0	0.0	0.0	10550.3	0.0	0.0
2037 Aug	0.0	13092873.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Sep	0.0	13100095.0	123.0	0.0	0.0	41646.9	0.0	0.0
2037 Oct	0.0	13105029.0	123.0	0.0	0.0	6716.6	0.0	0.0
2037 Nov	0.0	13104454.0	123.0	0.0	0.0	0.0	0.0	0.0
2037 Dec	0.0	13104535.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Jan	0.0	13104588.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Feb	0.0	13104615.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Mar	0.0	13104582.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Apr	0.0	13104026.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 May	0.0	13099074.0	123.0	0.0	0.0	135.7	0.0	0.0
2038 Jun	0.0	13105544.0	123.0	0.0	0.0	169334.0	0.0	0.0
2038 Jul	0.0	13101938.0	123.0	0.0	0.0	9389.7	0.0	0.0
2038 Aug	0.0	13093202.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Sep	0.0	13100505.0	123.0	0.0	0.0	50739.1	0.0	0.0
2038 Oct	0.0	13105072.0	123.0	0.0	0.0	6680.7	0.0	0.0
2038 Nov	0.0	13104479.0	123.0	0.0	0.0	0.0	0.0	0.0
2038 Dec	0.0	13104560.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Jan	0.0	13104615.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Feb	0.0	13104644.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Mar	0.0	13104613.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Apr	0.0	13104110.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 May	0.0	13099022.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Jun	0.0	13105454.0	123.0	0.0	0.0	169163.6	0.0	0.0
2039 Jul	0.0	13101980.0	123.0	0.0	0.0	8544.8	0.0	0.0
2039 Aug	0.0	13090187.0	122.9	0.0	0.0	0.0	0.0	0.0
2039 Sep	0.0	13097766.0	123.0	0.0	0.0	42724.8	0.0	0.0
2039 Oct	0.0	13105008.0	123.0	0.0	0.0	6508.6	0.0	0.0
2039 Nov	0.0	13104369.0	123.0	0.0	0.0	0.0	0.0	0.0
2039 Dec	0.0	13104450.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Jan	0.0	13104505.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Feb	0.0	13104534.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Mar	0.0	13104498.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Apr	0.0	13103893.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 May	0.0	13098499.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Jun	0.0	13105538.0	123.0	0.0	0.0	167871.8	0.0	0.0
2040 Jul	0.0	13101065.0	123.0	0.0	0.0	7382.5	0.0	0.0
2040 Aug	0.0	13089342.0	122.9	0.0	0.0	0.0	0.0	0.0
2040 Sep	0.0	13098046.0	123.0	0.0	0.0	36843.0	0.0	0.0
2040 Oct	0.0	13104926.0	123.0	0.0	0.0	6507.7	0.0	0.0
2040 Nov	0.0	13104244.0	123.0	0.0	0.0	0.0	0.0	0.0
2040 Dec	0.0	13104323.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Jan	0.0	13104375.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Feb	0.0	13104402.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Mar	0.0	13104360.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Apr	0.0	13103695.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 May	0.0	13097624.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Jun	0.0	13105479.0	123.0	0.0	0.0	168348.4	0.0	0.0
2041 Jul	0.0	13100899.0	123.0	0.0	0.0	8161.0	0.0	0.0
2041 Aug	0.0	13086876.0	122.9	0.0	0.0	0.0	0.0	0.0
2041 Sep	0.0	13096154.0	123.0	0.0	0.0	36516.2	0.0	0.0
2041 Oct	0.0	13104783.0	123.0	0.0	0.0	6450.8	0.0	0.0
2041 Nov	0.0	13103981.0	123.0	0.0	0.0	0.0	0.0	0.0
2041 Dec	0.0	13104061.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Jan	0.0	13104115.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Feb	0.0	13104144.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Mar	0.0	13104098.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Apr	0.0	13103384.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 May	0.0	13096870.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Jun	0.0	13105480.0	123.0	0.0	0.0	166142.5	0.0	0.0
2042 Jul	0.0	13100390.0	123.0	0.0	0.0	8196.5	0.0	0.0
2042 Aug	0.0	13082672.0	122.9	0.0	0.0	0.0	0.0	0.0
2042 Sep	0.0	13092584.0	123.0	0.0	0.0	29166.4	0.0	0.0
2042 Oct	0.0	13104739.0	123.0	0.0	0.0	5616.6	0.0	0.0
2042 Nov	0.0	13103901.0	123.0	0.0	0.0	0.0	0.0	0.0
2042 Dec	0.0	13103978.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Jan	0.0	13104031.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Feb	0.0	13104059.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Mar	0.0	13104011.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Apr	0.0	13103271.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 May	0.0	13096495.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Jun	0.0	13105459.0	123.0	0.0	0.0	166744.4	0.0	0.0
2043 Jul	0.0	13100049.0	123.0	0.0	0.0	7941.8	0.0	0.0
2043 Aug	0.0	13083632.0	122.9	0.0	0.0	0.0	0.0	0.0
2043 Sep	0.0	13093188.0	123.0	0.0	0.0	34395.8	0.0	0.0
2043 Oct	0.0	13104838.0	123.0	0.0	0.0	6180.2	0.0	0.0

Periods	WTA_pump_to_IVR	IVR_Pitlake	IVR_Pitlake_Level	IVR_Pit_Pump_to_IVRA	IVR_Pitwall_to_IVRAP_Closure	IVR_Closure_Overflow_to_WT_Pit	IVR_Nat_Runoff_to_East_Lobe	IVR_East_Pitwall_Runoff
	m3/month	m3	m	m3/month	m3/month	m3/month	m3/month	m3/month
2043 Nov	0.0	13103953.0	123.0	0.0	0.0	0.0	0.0	0.0
2043 Dec	0.0	13104025.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Jan	0.0	13104078.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Feb	0.0	13104107.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Mar	0.0	13104054.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Apr	0.0	13103271.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 May	0.0	13096102.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Jun	0.0	13105420.0	123.0	0.0	0.0	161544.7	0.0	0.0
2044 Jul	0.0	13099621.0	123.0	0.0	0.0	6717.9	0.0	0.0
2044 Aug	0.0	13082347.0	122.9	0.0	0.0	0.0	0.0	0.0
2044 Sep	0.0	13092273.0	122.9	0.0	0.0	31690.1	0.0	0.0
2044 Oct	0.0	13104775.0	123.0	0.0	0.0	6832.1	0.0	0.0
2044 Nov	0.0	13103869.0	123.0	0.0	0.0	0.0	0.0	0.0
2044 Dec	0.0	13103943.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Jan	0.0	13103997.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Feb	0.0	13104026.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Mar	0.0	13103973.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Apr	0.0	13103220.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 May	0.0	13095390.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Jun	0.0	13105039.0	123.0	0.0	0.0	163190.2	0.0	0.0
2045 Jul	0.0	13099480.0	123.0	0.0	0.0	7555.9	0.0	0.0
2045 Aug	0.0	13079087.0	122.9	0.0	0.0	0.0	0.0	0.0
2045 Sep	0.0	13087645.0	122.9	0.0	0.0	24027.9	0.0	0.0
2045 Oct	0.0	13104741.0	123.0	0.0	0.0	6196.5	0.0	0.0
2045 Nov	0.0	13103731.0	123.0	0.0	0.0	0.0	0.0	0.0
2045 Dec	0.0	13103800.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Jan	0.0	13103854.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Feb	0.0	13103882.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Mar	0.0	13103827.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Apr	0.0	13103052.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 May	0.0	13095007.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Jun	0.0	13105054.0	123.0	0.0	0.0	167001.1	0.0	0.0
2046 Jul	0.0	13099411.0	123.0	0.0	0.0	7712.5	0.0	0.0
2046 Aug	0.0	13078701.0	122.9	0.0	0.0	0.0	0.0	0.0
2046 Sep	0.0	13087603.0	122.9	0.0	0.0	24104.7	0.0	0.0
2046 Oct	0.0	13104742.0	123.0	0.0	0.0	6455.0	0.0	0.0
2046 Nov	0.0	13103762.0	123.0	0.0	0.0	0.0	0.0	0.0
2046 Dec	0.0	13103831.0	123.0	0.0	0.0	0.0	0.0	0.0

Periods	IVR_East_Surface_RainSnowmelt	GSP1_UG_Discharge_to_IVR_East	WT_Pit_CrownPillar_to_IVR_East	IVR_Pittlake_East_Lobe	IVR_East_Lobe_WL	IVR_East_Overflow_to_West_Ops	IVR_East_Pump_to_UG_Closure
	m3/month	m3/month	m3/month	m3/month	m	m3/month	m3/month
2025 Jan	0.0	0.0	0.0	20703.2	35.3	0.0	0.0
2025 Feb	0.0	0.0	0.0	20703.8	35.3	0.0	0.0
2025 Mar	0.0	0.0	0.0	20703.1	35.3	0.0	0.0
2025 Apr	0.0	0.0	0.0	20691.2	35.3	0.0	0.0
2025 May	37.3	0.0	0.0	20592.2	35.3	0.0	0.0
2025 Jun	665.6	0.0	0.0	27451.6	36.3	0.0	0.0
2025 Jul	229.0	0.0	0.0	34750.3	37.4	0.0	0.0
2025 Aug	130.9	0.0	0.0	35975.8	37.6	0.0	0.0
2025 Sep	553.4	0.0	0.0	38747.1	38.0	0.0	0.0
2025 Oct	8.6	0.0	0.0	42202.1	38.5	0.0	0.0
2025 Nov	0.0	0.0	0.0	42225.8	38.5	0.0	0.0
2025 Dec	0.0	0.0	0.0	42227.0	38.5	0.0	0.0
2026 Jan	0.0	0.0	0.0	42228.0	38.5	0.0	0.0
2026 Feb	0.0	0.0	0.0	42228.5	38.5	0.0	0.0
2026 Mar	0.0	0.0	0.0	42227.5	38.5	0.0	0.0
2026 Apr	0.0	0.0	0.0	42213.4	38.5	0.0	0.0
2026 May	43.7	0.0	0.0	42091.9	38.5	0.0	0.0
2026 Jun	1231.4	18547.1	0.0	59102.8	40.5	0.0	0.0
2026 Jul	311.7	3441.6	22118.7	90264.6	43.9	0.0	0.0
2026 Aug	231.4	2109.2	21805.9	115849.5	46.2	0.0	0.0
2026 Sep	1184.1	7259.8	25815.0	145386.4	48.3	0.0	0.0
2026 Oct	19.0	1667.6	20884.2	178450.3	50.4	0.0	0.0
2026 Nov	0.0	703.2	19806.1	199545.4	51.6	0.0	0.0
2026 Dec	0.0	720.4	20463.4	220392.3	52.8	0.0	0.0
2027 Jan	0.0	656.9	21267.8	241936.2	53.9	0.0	0.0
2027 Feb	0.0	590.0	19208.9	262797.5	54.9	0.0	0.0
2027 Mar	0.0	652.2	21266.6	283653.1	55.9	0.0	0.0
2027 Apr	0.0	630.6	20580.3	305182.0	56.9	0.0	0.0
2027 May	139.3	1290.2	23081.4	326559.8	57.8	0.0	0.0
2027 Jun	3461.7	19700.3	38447.9	376914.3	59.9	0.0	0.0
2027 Jul	733.9	3079.7	23586.2	427389.6	62.0	0.0	0.0
2027 Aug	421.4	1844.1	22527.2	452196.0	63.0	0.0	0.0
2027 Sep	2080.9	7012.8	26601.0	481721.8	64.1	0.0	0.0
2027 Oct	31.8	1658.1	21743.0	515681.1	65.4	0.0	0.0
2027 Nov	0.0	643.3	20612.6	537547.4	66.2	0.0	0.0
2027 Dec	0.0	658.4	21269.4	559130.0	66.9	0.0	0.0
2028 Jan	0.0	595.0	21267.8	581028.0	67.6	0.0	0.0
2028 Feb	0.0	553.0	19894.9	602182.8	68.2	0.0	0.0
2028 Mar	0.0	590.2	21266.5	623329.1	68.9	0.0	0.0
2028 Apr	0.0	570.6	20580.3	644762.3	69.5	0.0	0.0
2028 May	271.0	1681.2	22174.8	665646.1	70.0	0.0	0.0
2028 Jun	5488.4	19772.8	39493.6	717838.1	71.5	0.0	0.0
2028 Jul	615.5	128.5	0.0	202563.2	45.2	0.0	755587.4
2028 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2028 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2028 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2028 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2028 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2029 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2030 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2031 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2032 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2033 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2034 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2034 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2034 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2034 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2034 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0

Periods	IVR_East_Surface_RainSnowmelt	GSP1_UG_Discharge_to_IVR_East	WT_Pit_CrownPillar_to_IVR_East	IVR_Pittlake_East_Lobe	IVR_East_Lobe_WL	IVR_East_Overflow_to_West_Ops	IVR_East_Pump_to_UG_Closure
	m3/month	m3/month	m3/month	m3/month	m	m3/month	m3/month
2043 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2043 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2044 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2045 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Jan	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Feb	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Mar	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Apr	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 May	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Jun	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Jul	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Aug	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Sep	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Oct	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Nov	0.0	0.0	0.0	1000.0	30.7	0.0	0.0
2046 Dec	0.0	0.0	0.0	1000.0	30.7	0.0	0.0

Periods	WTS_Seepage_to_WTA	WTA_Exp_Sediment_Runoff	Fuel_Facility_to_WTA	STP_to_WTA	Camp_Surface_Runoff	OSP2_Pad_Runoff	Quarry1_to_WTA	OVB_Storage_Runoff_to_WTAP	WT_Pit_to_WTA	GSP1_to_WTA	WT_WRCP_to_WTA
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month
2043 Oct	22728.3	0.0	201.7	0.0	1654.5	484.9	0.0	144.0	0.0	0.0	0.0
2043 Nov	21978.4	0.0	3.5	0.0	29.1	8.5	0.0	2.5	0.0	0.0	0.0
2043 Dec	22097.9	0.0	2.0	0.0	16.3	4.8	0.0	1.4	0.0	0.0	0.0
2044 Jan	21421.5	0.0	1.1	0.0	8.7	2.5	0.0	0.8	0.0	0.0	0.0
2044 Feb	19481.7	0.0	0.5	0.0	4.4	1.3	0.0	0.4	0.0	0.0	0.0
2044 Mar	20247.8	0.0	0.3	0.0	2.6	0.8	0.0	0.2	0.0	0.0	0.0
2044 Apr	19050.8	0.0	0.2	0.0	1.4	0.4	0.0	0.1	0.0	0.0	0.0
2044 May	38549.1	0.0	308.7	0.0	2531.8	742.1	0.0	220.4	0.0	0.0	0.0
2044 Jun	141900.0	0.0	3831.3	0.0	31426.1	9211.1	0.0	2735.8	0.0	0.0	0.0
2044 Jul	20637.6	0.0	378.6	0.0	3105.5	910.2	0.0	270.4	0.0	0.0	0.0
2044 Aug	8927.4	0.0	206.0	0.0	1689.6	495.2	0.0	147.1	0.0	0.0	0.0
2044 Sep	11733.4	0.0	1150.0	0.0	9433.1	2764.9	0.0	821.2	0.0	0.0	0.0
2044 Oct	14320.4	0.0	225.6	0.0	1850.7	542.4	0.0	161.1	0.0	0.0	0.0
2044 Nov	14430.5	0.0	3.6	0.0	29.7	8.7	0.0	2.6	0.0	0.0	0.0
2044 Dec	14838.6	0.0	2.0	0.0	16.6	4.9	0.0	1.4	0.0	0.0	0.0
2045 Jan	14704.4	0.0	1.1	0.0	8.9	2.6	0.0	0.8	0.0	0.0	0.0
2045 Feb	13159.3	0.0	0.5	0.0	4.4	1.3	0.0	0.4	0.0	0.0	0.0
2045 Mar	14431.6	0.0	0.3	0.0	2.7	0.8	0.0	0.2	0.0	0.0	0.0
2045 Apr	13815.9	0.0	0.2	0.0	1.4	0.4	0.0	0.1	0.0	0.0	0.0
2045 May	105918.5	0.0	229.7	0.0	1884.3	552.3	0.0	164.0	0.0	0.0	0.0
2045 Jun	144000.0	0.0	3963.6	0.0	32511.2	9529.1	0.0	2830.3	0.0	0.0	0.0
2045 Jul	3887.2	0.0	444.2	0.0	3643.4	1067.9	0.0	317.2	0.0	0.0	0.0
2045 Aug	0.0	0.0	171.1	0.0	1403.3	411.3	0.0	122.2	0.0	0.0	0.0
2045 Sep	0.0	0.0	1127.9	0.0	9251.4	2711.6	0.0	805.4	0.0	0.0	0.0
2045 Oct	0.0	0.0	206.3	0.0	1692.2	496.0	0.0	147.3	0.0	0.0	0.0
2045 Nov	0.0	0.0	3.6	0.0	29.2	8.6	0.0	2.5	0.0	0.0	0.0
2045 Dec	0.0	0.0	2.0	0.0	16.3	4.8	0.0	1.4	0.0	0.0	0.0
2046 Jan	0.0	0.0	1.1	0.0	8.7	2.6	0.0	0.8	0.0	0.0	0.0
2046 Feb	0.0	0.0	0.5	0.0	4.3	1.3	0.0	0.4	0.0	0.0	0.0
2046 Mar	0.0	0.0	0.3	0.0	2.6	0.8	0.0	0.2	0.0	0.0	0.0
2046 Apr	0.0	0.0	0.2	0.0	1.4	0.4	0.0	0.1	0.0	0.0	0.0
2046 May	0.0	0.0	227.3	0.0	1864.3	546.4	0.0	162.3	0.0	0.0	0.0
2046 Jun	0.0	0.0	4032.3	0.0	33074.7	9694.3	0.0	2879.3	0.0	0.0	0.0
2046 Jul	0.0	0.0	449.5	0.0	3687.1	1080.7	0.0	321.0	0.0	0.0	0.0
2046 Aug	0.0	0.0	163.3	0.0	1339.6	392.6	0.0	116.6	0.0	0.0	0.0
2046 Sep	0.0	0.0	1124.3	0.0	9222.3	2703.1	0.0	802.8	0.0	0.0	0.0
2046 Oct	0.0	0.0	216.4	0.0	1775.2	520.3	0.0	154.5	0.0	0.0	0.0
2046 Nov	0.0	0.0	3.5	0.0	29.1	8.5	0.0	2.5	0.0	0.0	0.0
2046 Dec	0.0	0.0	2.0	0.0	16.2	4.8	0.0	1.4	0.0	0.0	0.0

Periods	NPAG_to_WTA	IVR_Pit_to_WTA	WTA_Pond_Bank_Runoff	WTA_Pond_Surface_RainSnowmelt	IVRAP_to_WTAP_closure	WTS_to_WTAP_closure	SANA_to_WTAP	Warehouse_to_WTAP	WTA_Pond	WTA_Level
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3	m
2043 Oct	1659.2	0.0	0.0	211.7	5763.2	0.0	226.9	227.1	734809.5	149.5
2043 Nov	29.2	0.0	0.0	0.0	0.0	0.0	4.0	4.0	746266.4	149.5
2043 Dec	16.3	0.0	0.0	0.0	1523.5	0.0	2.2	2.2	756492.5	149.6
2044 Jan	8.7	0.0	0.0	0.0	33.1	0.0	1.2	1.2	766758.2	149.6
2044 Feb	4.4	0.0	0.0	0.0	59.9	0.0	0.6	0.6	775243.5	149.7
2044 Mar	2.6	0.0	0.0	0.0	155.1	0.0	0.4	0.4	783295.3	149.7
2044 Apr	1.4	0.0	0.0	0.0	68.7	0.0	0.2	0.2	790650.1	149.7
2044 May	2539.0	0.0	0.0	1541.0	16782.9	0.0	347.2	347.5	809123.0	149.8
2044 Jun	31515.7	0.0	0.0	32292.9	110676.8	0.0	4309.1	4314.0	933293.6	150.4
2044 Jul	3114.4	0.0	0.0	7085.8	9335.4	0.0	425.8	426.3	956932.9	150.5
2044 Aug	1694.4	0.0	0.0	4785.3	1247.4	0.0	231.7	231.9	955984.2	150.5
2044 Sep	9460.0	0.0	0.0	17938.7	40331.6	0.0	1293.4	1294.9	956848.3	150.5
2044 Oct	1856.0	0.0	0.0	226.6	7425.5	0.0	253.8	254.0	956947.0	150.5
2044 Nov	29.8	0.0	0.0	0.0	0.0	0.0	4.1	4.1	956947.0	150.5
2044 Dec	16.7	0.0	0.0	0.0	8.4	0.0	2.3	2.3	956947.0	150.5
2045 Jan	8.9	0.0	0.0	0.0	25.8	0.0	1.2	1.2	956947.0	150.5
2045 Feb	4.4	0.0	0.0	0.0	12.8	0.0	0.6	0.6	956947.0	150.5
2045 Mar	2.7	0.0	0.0	0.0	4.1	0.0	0.4	0.4	956947.0	150.5
2045 Apr	1.4	0.0	0.0	0.0	44.2	0.0	0.2	0.2	956947.0	150.5
2045 May	1889.7	0.0	0.0	1371.6	0.0	0.0	258.4	258.7	956577.9	150.5
2045 Jun	32603.9	0.0	0.0	33509.5	155063.9	0.0	4457.8	4462.9	956947.0	150.5
2045 Jul	3653.7	0.0	0.0	7528.1	8839.5	164224.6	499.6	500.1	956943.9	150.5
2045 Aug	1407.3	0.0	0.0	3523.5	0.0	44850.0	192.4	192.6	954305.8	150.5
2045 Sep	9277.8	0.0	0.0	17791.6	38018.1	723203.9	1268.5	1270.0	956296.2	150.5
2045 Oct	1697.0	0.0	0.0	237.3	7242.7	268847.7	232.0	232.3	956947.0	150.5
2045 Nov	29.3	0.0	0.0	0.0	0.0	17997.9	4.0	4.0	956947.0	150.5
2045 Dec	16.4	0.0	0.0	0.0	0.0	2791.5	2.2	2.2	956947.0	150.5
2046 Jan	8.7	0.0	0.0	0.0	0.0	790.2	1.2	1.2	956947.0	150.5
2046 Feb	4.3	0.0	0.0	0.0	0.0	334.8	0.6	0.6	956947.0	150.5
2046 Mar	2.7	0.0	0.0	0.0	0.0	105.5	0.4	0.4	956911.3	150.5
2046 Apr	1.4	0.0	0.0	0.0	0.0	0.0	0.2	0.2	956467.4	150.5
2046 May	1869.6	0.0	0.0	1372.0	3449.1	0.0	255.6	255.9	952261.3	150.5
2046 Jun	33169.0	0.0	0.0	34588.7	144876.8	2604768.8	4535.1	4540.3	956942.0	150.5
2046 Jul	3697.6	0.0	0.0	7371.5	10769.0	275435.4	505.6	506.1	956947.0	150.5
2046 Aug	1343.4	0.0	0.0	3420.3	3.3	40637.6	183.7	183.9	954238.0	150.5
2046 Sep	9248.6	0.0	0.0	18165.1	48548.4	754476.3	1264.5	1266.0	956426.8	150.5
2046 Oct	1780.3	0.0	0.0	243.4	8219.2	253297.8	243.4	243.7	956947.0	150.5
2046 Nov	29.1	0.0	0.0	0.0	1367.4	17514.5	4.0	4.0	956947.0	150.5
2046 Dec	16.3	0.0	0.0	0.0	187.7	2741.9	2.2	2.2	956947.0	150.5

Periods	WTA_Pump_to_WTS_pre2022	WTA_Pump_to_ML_pre2022	WTA_Pump_to_Ops_WTP	WTA_Pump_to_IVRA	WTA_Pond_Overflow	WTA_closure_overflow	WTAP_Pump_to_IVR
	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month	m3/month
	#-	#-	#-	#-	#-	#-	#-
2025 Jan	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2025 Feb	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2025 Mar	0.0	0.0	20137.3	147290.0	0.0	0.0	0.0
2025 Apr	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2025 May	0.0	0.0	12600.0	199239.3	0.0	0.0	0.0
2025 Jun	0.0	0.0	0.0	376081.4	0.0	0.0	0.0
2025 Jul	0.0	0.0	0.0	201829.2	0.0	0.0	0.0
2025 Aug	0.0	0.0	0.0	176483.6	0.0	0.0	0.0
2025 Sep	0.0	0.0	0.0	221351.0	0.0	0.0	0.0
2025 Oct	0.0	0.0	10080.0	160645.6	0.0	0.0	0.0
2025 Nov	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2025 Dec	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2026 Jan	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2026 Feb	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2026 Mar	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2026 Apr	0.0	0.0	20160.0	147456.0	0.0	0.0	0.0
2026 May	0.0	0.0	10080.0	200611.2	0.0	0.0	0.0
2026 Jun	0.0	0.0	0.0	399431.8	0.0	0.0	0.0
2026 Jul	0.0	0.0	0.0	170346.4	0.0	0.0	0.0
2026 Aug	0.0	0.0	0.0	156202.3	0.0	0.0	0.0
2026 Sep	0.0	0.0	0.0	206819.5	0.0	0.0	0.0
2026 Oct	0.0	0.0	10080.0	154175.8	0.0	0.0	0.0
2026 Nov	0.0	0.0	15120.0	110592.0	0.0	0.0	0.0
2026 Dec	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2027 Jan	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2027 Feb	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2027 Mar	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2027 Apr	0.0	0.0	16957.9	124035.1	0.0	0.0	0.0
2027 May	0.0	0.0	10080.0	190402.6	0.0	0.0	0.0
2027 Jun	0.0	0.0	0.0	364942.4	0.0	0.0	0.0
2027 Jul	0.0	0.0	0.0	185071.8	0.0	0.0	0.0
2027 Aug	0.0	0.0	0.0	141780.0	0.0	0.0	0.0
2027 Sep	0.0	0.0	0.0	217161.9	0.0	0.0	0.0
2027 Oct	0.0	0.0	10080.0	141707.2	0.0	0.0	0.0
2027 Nov	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2027 Dec	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2028 Jan	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2028 Feb	0.0	0.0	15120.0	110592.0	0.0	0.0	0.0
2028 Mar	0.0	0.0	17640.0	129024.0	0.0	0.0	0.0
2028 Apr	0.0	0.0	18022.2	131819.5	0.0	0.0	0.0
2028 May	0.0	0.0	10702.9	180160.7	0.0	0.0	0.0
2028 Jun	0.0	0.0	0.0	390588.3	0.0	0.0	0.0
2028 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029 Jun	0.0	0.0	0.0	0.0	68679.3	68679.3	0.0
2029 Jul	0.0	0.0	0.0	0.0	19665.7	19665.7	0.0
2029 Aug	0.0	0.0	0.0	0.0	8159.2	8159.2	0.0
2029 Sep	0.0	0.0	0.0	0.0	41743.1	41743.1	0.0
2029 Oct	0.0	0.0	0.0	0.0	12956.6	12956.6	0.0
2029 Nov	0.0	0.0	0.0	0.0	14266.0	14266.0	0.0
2029 Dec	0.0	0.0	0.0	0.0	14668.0	14668.0	0.0
2030 Jan	0.0	0.0	0.0	0.0	14548.4	14548.4	0.0
2030 Feb	0.0	0.0	0.0	0.0	13029.9	13029.9	0.0
2030 Mar	0.0	0.0	0.0	0.0	14207.9	14207.9	0.0
2030 Apr	0.0	0.0	0.0	0.0	11915.6	11915.6	0.0
2030 May	0.0	0.0	0.0	0.0	101211.4	101211.4	0.0
2030 Jun	0.0	0.0	0.0	0.0	195639.2	195639.2	0.0
2030 Jul	0.0	0.0	0.0	0.0	17305.4	17305.4	0.0
2030 Aug	0.0	0.0	0.0	0.0	655.4	655.4	0.0
2030 Sep	0.0	0.0	0.0	0.0	33162.5	33162.5	0.0
2030 Oct	0.0	0.0	0.0	0.0	12720.7	12720.7	0.0
2030 Nov	0.0	0.0	0.0	0.0	14199.4	14199.4	0.0
2030 Dec	0.0	0.0	0.0	0.0	14729.5	14729.5	0.0
2031 Jan	0.0	0.0	0.0	0.0	14609.0	14609.0	0.0
2031 Feb	0.0	0.0	0.0	0.0	13084.1	13084.1	0.0
2031 Mar	0.0	0.0	0.0	0.0	14267.4	14267.4	0.0
2031 Apr	0.0	0.0	0.0	0.0	12534.3	12534.3	0.0
2031 May	0.0	0.0	0.0	0.0	101821.0	101821.0	0.0
2031 Jun	0.0	0.0	0.0	0.0	191159.1	191159.1	0.0
2031 Jul	0.0	0.0	0.0	0.0	20369.9	20369.9	0.0
2031 Aug	0.0	0.0	0.0	0.0	1976.5	1976.5	0.0
2031 Sep	0.0	0.0	0.0	0.0	43948.3	43948.3	0.0
2031 Oct	0.0	0.0	0.0	0.0	17107.5	17107.5	0.0
2031 Nov	0.0	0.0	0.0	0.0	14302.8	14302.8	0.0
2031 Dec	0.0	0.0	0.0	0.0	14797.7	14797.7	0.0
2032 Jan	0.0	0.0	0.0	0.0	14655.6	14655.6	0.0
2032 Feb	0.0	0.0	0.0	0.0	13582.3	13582.3	0.0
2032 Mar	0.0	0.0	0.0	0.0	14291.9	14291.9	0.0
2032 Apr	0.0	0.0	0.0	0.0	11710.4	11710.4	0.0
2032 May	0.0	0.0	0.0	0.0	109814.2	109814.2	0.0
2032 Jun	0.0	0.0	0.0	0.0	243242.9	243242.9	0.0
2032 Jul	0.0	0.0	0.0	0.0	14960.3	14960.3	0.0
2032 Aug	0.0	0.0	0.0	0.0	1936.9	1936.9	0.0
2032 Sep	0.0	0.0	0.0	0.0	43452.0	43452.0	0.0
2032 Oct	0.0	0.0	0.0	0.0	17425.5	17425.5	0.0
2032 Nov	0.0	0.0	0.0	0.0	14385.4	14385.4	0.0
2032 Dec	0.0	0.0	0.0	0.0	14852.9	14852.9	0.0
2033 Jan	0.0	0.0	0.0	0.0	14710.8	14710.8	0.0
2033 Feb	0.0	0.0	0.0	0.0	13165.5	13165.5	0.0
2033 Mar	0.0	0.0	0.0	0.0	14353.4	14353.4	0.0
2033 Apr	0.0	0.0	0.0	0.0	11794.4	11794.4	0.0
2033 May	0.0	0.0	0.0	0.0	117489.4	117489.4	0.0
2033 Jun	0.0	0.0	0.0	0.0	247695.9	247695.9	0.0
2033 Jul	0.0	0.0	0.0	0.0	18073.1	18073.1	0.0
2033 Aug	0.0	0.0	0.0	0.0	2772.5	2772.5	0.0
2033 Sep	0.0	0.0	0.0	0.0	43925.1	43925.1	0.0
2033 Oct	0.0	0.0	0.0	0.0	16942.0	16942.0	0.0
2033 Nov	0.0	0.0	0.0	0.0	14245.5	14245.5	0.0
2033 Dec	0.0	0.0	0.0	0.0	14737.5	14737.5	0.0
2034 Jan	0.0	0.0	0.0	0.0	14595.1	14595.1	0.0
2034 Feb	0.0	0.0	0.0	0.0	13060.7	13060.7	0.0
2034 Mar	0.0	0.0	0.0	0.0	14234.8	14234.8	0.0
2034 Apr	0.0	0.0	0.0	0.0	11937.0	11937.0	0.0

Periods	WTA_Pump_to_WTS_pre2022 m3/month	WTA_Pump_to_ML_pre2022 m3/month	WTA_Pump_to_Ops_WTP m3/month	WTA_Pump_to_IVRA m3/month	WTA_Pond_Overflow m3/month	WTA_closure_overflow m3/month	WTAP_Pump_to_IVR m3/month
2034 May	0.0	0.0	0.0	0.0	103666.8	103666.8	0.0
2034 Jun	0.0	0.0	0.0	0.0	332395.1	332395.1	0.0
2034 Jul	0.0	0.0	0.0	0.0	27738.5	27738.5	0.0
2034 Aug	0.0	0.0	0.0	0.0	5360.3	5360.3	0.0
2034 Sep	0.0	0.0	0.0	0.0	91970.2	91970.2	0.0
2034 Oct	0.0	0.0	0.0	0.0	23825.2	23825.2	0.0
2034 Nov	0.0	0.0	0.0	0.0	14518.8	14518.8	0.0
2034 Dec	0.0	0.0	0.0	0.0	14633.2	14633.2	0.0
2035 Jan	0.0	0.0	0.0	0.0	14468.0	14468.0	0.0
2035 Feb	0.0	0.0	0.0	0.0	12935.3	12935.3	0.0
2035 Mar	0.0	0.0	0.0	0.0	14085.5	14085.5	0.0
2035 Apr	0.0	0.0	0.0	0.0	11788.2	11788.2	0.0
2035 May	0.0	0.0	0.0	0.0	131381.0	131381.0	0.0
2035 Jun	0.0	0.0	0.0	0.0	366539.6	366539.6	0.0
2035 Jul	0.0	0.0	0.0	0.0	31661.9	31661.9	0.0
2035 Aug	0.0	0.0	0.0	0.0	5644.9	5644.9	0.0
2035 Sep	0.0	0.0	0.0	0.0	93663.2	93663.2	0.0
2035 Oct	0.0	0.0	0.0	0.0	26677.3	26677.3	0.0
2035 Nov	0.0	0.0	0.0	0.0	16025.1	16025.1	0.0
2035 Dec	0.0	0.0	0.0	0.0	14986.8	14986.8	0.0
2036 Jan	0.0	0.0	0.0	0.0	14818.3	14818.3	0.0
2036 Feb	0.0	0.0	0.0	0.0	13719.4	13719.4	0.0
2036 Mar	0.0	0.0	0.0	0.0	14423.9	14423.9	0.0
2036 Apr	0.0	0.0	0.0	0.0	14571.4	14571.4	0.0
2036 May	0.0	0.0	0.0	0.0	144796.9	144796.9	0.0
2036 Jun	0.0	0.0	0.0	0.0	348546.6	348546.6	0.0
2036 Jul	0.0	0.0	0.0	0.0	16548.3	16548.3	0.0
2036 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2036 Sep	0.0	0.0	0.0	0.0	23330.8	23330.8	0.0
2036 Oct	0.0	0.0	0.0	0.0	3522.4	3522.4	0.0
2036 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2036 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Jun	0.0	0.0	0.0	0.0	201075.9	201075.9	0.0
2037 Jul	0.0	0.0	0.0	0.0	4892.2	4892.2	0.0
2037 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2037 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2038 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2039 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2040 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2041 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2042 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Periods	WTA_Pump_to_WTS_ pre2022 m3/month	WTA_Pump_to_ML_ pre2022 m3/month	WTA_Pump_to_ Ops_WTP m3/month	WTA_Pump_to_ IVRA m3/month	WTA_Pond_ Overflow m3/month	WTA_closure_ overflow m3/month	WTAP_Pump_ to_IVR m3/month
2043 Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2043 Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2044 Jun	0.0	0.0	0.0	0.0	227158.5	0.0	0.0
2044 Jul	0.0	0.0	0.0	0.0	22555.6	0.0	0.0
2044 Aug	0.0	0.0	0.0	0.0	3384.9	0.0	0.0
2044 Sep	0.0	0.0	0.0	0.0	86031.2	0.0	0.0
2044 Oct	0.0	0.0	0.0	0.0	24488.8	0.0	0.0
2044 Nov	0.0	0.0	0.0	0.0	13718.4	0.0	0.0
2044 Dec	0.0	0.0	0.0	0.0	14187.2	0.0	0.0
2045 Jan	0.0	0.0	0.0	0.0	14055.4	0.0	0.0
2045 Feb	0.0	0.0	0.0	0.0	12557.5	0.0	0.0
2045 Mar	0.0	0.0	0.0	0.0	13661.5	0.0	0.0
2045 Apr	0.0	0.0	0.0	0.0	11422.1	0.0	0.0
2045 May	0.0	0.0	0.0	0.0	102914.4	0.0	0.0
2045 Jun	0.0	0.0	0.0	0.0	404635.3	0.0	0.0
2045 Jul	0.0	0.0	0.0	0.0	172612.9	0.0	0.0
2045 Aug	0.0	0.0	0.0	0.0	40567.2	0.0	0.0
2045 Sep	0.0	0.0	0.0	0.0	791249.5	0.0	0.0
2045 Oct	0.0	0.0	0.0	0.0	279055.3	0.0	0.0
2045 Nov	0.0	0.0	0.0	0.0	17966.2	0.0	0.0
2045 Dec	0.0	0.0	0.0	0.0	2835.9	0.0	0.0
2046 Jan	0.0	0.0	0.0	0.0	814.5	0.0	0.0
2046 Feb	0.0	0.0	0.0	0.0	346.8	0.0	0.0
2046 Mar	0.0	0.0	0.0	0.0	102.6	0.0	0.0
2046 Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2046 May	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2046 Jun	0.0	0.0	0.0	0.0	2857450.8	0.0	0.0
2046 Jul	0.0	0.0	0.0	0.0	281808.2	0.0	0.0
2046 Aug	0.0	0.0	0.0	0.0	36204.3	0.0	0.0
2046 Sep	0.0	0.0	0.0	0.0	833281.3	0.0	0.0
2046 Oct	0.0	0.0	0.0	0.0	264722.7	0.0	0.0
2046 Nov	0.0	0.0	0.0	0.0	18849.9	0.0	0.0
2046 Dec	0.0	0.0	0.0	0.0	2973.9	0.0	0.0

APPENDIX D • 2025 FRESHET ACTION PLAN



AGNICO EAGLE

MEADOWBANK COMPLEX

WHALE TAIL FRESHET ACTION PLAN

MARCH 2025

VERSION 7

EXECUTIVE SUMMARY

The purpose of this Freshet Action Plan is to identify areas of concern around the Whale Tail Mine and the associated Hauling road needing to be managed in an organized and timely manner during the annual freshet period to prevent adverse environmental and operational impacts. The Plan outlines specified actions that will be taken by Agnico to manage and mitigate areas where environmental incidents could occur, as well as addressing historical incidents, specifically the WRSF dike seepage.

The freshet period is typically initiated during the annual snow and ice melt sometime around mid-May. During this period excess water is created and must be managed through additional pumping and management practices at vulnerable areas around the site. Mitigation techniques, timeframes and specified roles and responsibilities are outlined in this document for each area of concern.

The main areas of concern are the mining pit, the WT WRSF surrounding and pond, the IVR WRSF, the Whale Tail Attenuation Pond, the IVR attenuation Pond, the South Whale Tail Diversion Channel, and the IVR Diversion Channel.

It is important for all water management and associated infrastructure to be in good working order and adequate to manage the expected water flows associated with the freshet period; this includes but is not limited to pumps, ditch, culvert and sump maintenance, critical piping system installation and inspection, as well as adequate resource allocation for preparative work. A summary of the 2025 preparation works and roles and responsibilities is presented in the attached Appendix 1 (2025 Freshet Action Plan Procedures). Appendix 1 will be updated yearly to reflect changes in conditions at the Whale Tail site.

DOCUMENT CONTROL

Revision				Pages Revised	Remarks
#	Prep.	Rev.	Date		
01	Agnico	Internal	March 2019	All	Initial Version
02	Agnico	Internal	March 2020	All	Comprehensive update from 2019 plan
03	Agnico	Internal	March 2021	All	Comprehensive update from 2020 plan to include IVR infrastructures
04	Agnico	Internal	March 2022	All	Comprehensive update from 2021 plan
05	Agnico	Internal	March 2023	2	Figure 2-1 was updated
				5	Included the new pads that were built in 2022
				6	Section 2.13 was added to include the east and west abutment
				Appendix 2	Included a 2023 version
				Appendix 3	Included a 2023 version - Modifications with the pit transfers
06	Agnico	Internal	March 2024	4	Section 2.4 was updated
				6	Section 2.13 was removed
				Appendix 1	Freshet action plan procedure was updated
				Appendix 2	Snow management map was updated
				Appendix 3	Freshet flowchart and plan view were updated
07	Agnico	Internal	March 2025	Appendix 2	Snow management map was updated
				Appendix 3	Freshet flowchart and plan view were updated

Prepared By: Meadowbank Environment

Approved by:

Eric Haley

Environnement & Critical Infrastructure Superintendent

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1 INTRODUCTION

The purpose of the Whale Tail (WT) Freshet Action Plan is to ensure that Agnico can address and manage excess water associated with the freshet season at the Whale Tail site, and to ensure Agnico has implemented specific management and mitigation measures in response to environmental incidents with potential for offsite impacts to water or land.

The freshet season is loosely defined as starting approximately May 15th, and in some cases, actions and mitigation measures can extend up to early fall when freezing re-occurs. There are many areas around the site that are vulnerable to excess water; the goal is to identify these areas and develop a clear plan with defined roles and responsibilities (amongst Agnico departments), and to manage the freshet flows.

In addition, several guiding principles are applicable to the formation of this plan. The highest priority principles are:

- 1) to ensure that the health and safety of Agnico employees is protected, especially with respect to mining operations when excess water is present.
- 2) to ensure that mine contact water from runoff or seepage is managed to prevent adverse environmental impacts; and
- 3) to make sure the site is compliant with the Nunavut Water Board (NWB) License, Part D, Item 21 and Part E, Item 11.

The plan will identify the areas of concern and discuss the potential risks as well as mitigation measures necessary to address the identified issues. Experience needs to be gained in identifying key location; lessons learned from the Meadowbank site will provide the necessary guidance. Appendix 1 contains the defined 2025 procedures, the roles and responsibilities and associated timelines. Agnico's intent is to update the Procedural Appendix on a yearly basis. There may be additional mitigation measures for a defined problem area or in some cases a previously defined issue may be permanently rectified.

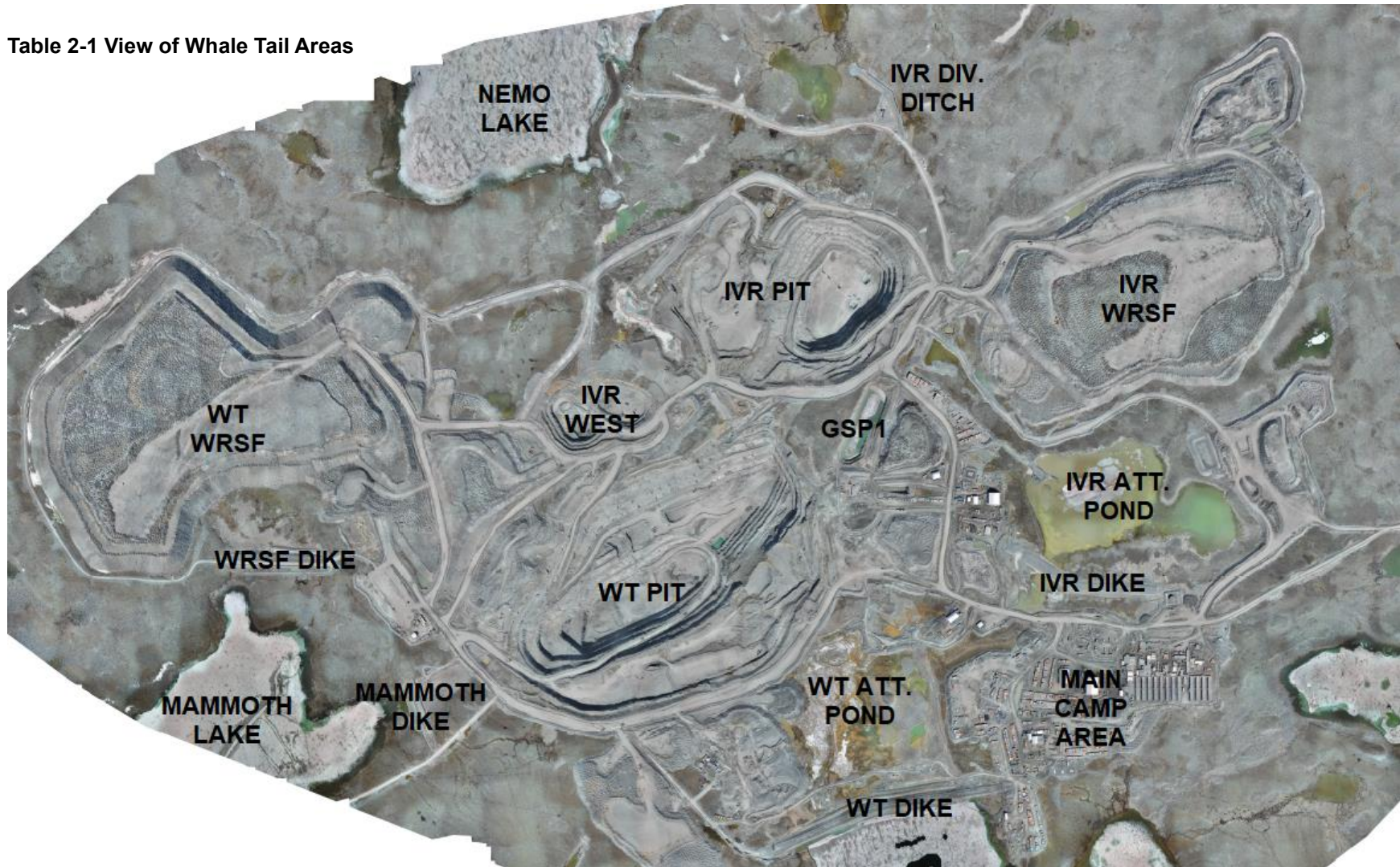
The main areas of concern are:

- Mining pits and pits walls.
- Whale Tail WRSF and WRSF pond.
- IVR WRSF.
- South Whale Tail Diversion Channel.
- IVR Diversion Channel.
- Whale Tail Attenuation Pond.
- Whale Tail Dike Seepage.
- IVR Attenuation Pond.
- WT Fuel Tank farms.
- Haul road culverts and bridges.
- Pads and roads built since 2022.
- Underground WRSF; and
- Whale Tail Dike East and West Abutment.

Each area identified above will be discussed in detail below. All areas of concern are considered priorities based on the guiding principles.

2 AREAS OF CONCERN

Table 2-1 View of Whale Tail Areas



2.1 MINING PITS AND PIT WALLS

All ramps, jump ramps, ditches and sumps must be cleaned of all ice and snow before May in order to contain any water resulting from the snow melt. All allocated pumps must be checked and serviced before the month of May. In addition, a check must be completed confirming that all piping systems starting from the different pits leading to the Whale Tail attenuation pond are free of ice, or any obstruction.

The water management strategy for the pits will be to send water from the WT Pit and IVR Pit area to either the WT Attenuation Pond or the IVR Attenuation Pond.

- A sump and ditch system is used to manage runoff water within the pit footprints. The infrastructures location will be modified or added as required based on the mining sequence.
- Sumps outside of the pit footprint are planned to prevent runoff from reporting to the Pit and to prevent water from ponding against the pit crest.
 - At WT Pit this includes the sumps located at the downstream area of Mammoth Dike and the North-West sump;
 - At IVR Pit this includes the sump located in former Lake A47 (A47-S sump) and in the Northern area of IVR Pit (A47-N sump).

2.2 WHALE TAIL WASTE ROCK STORAGE FACILITY

Runoff from the Whale Tail Waste Rock Storage Facility (WT WRSF) is collected by 4 sumps (WT WRSF 1,2,3,4) as well as the WRSF pond delimited by WRSF Dike. Water from these sumps is pumped to the WRSF Pond and the WRSF Pond water is pumped to the WT Attenuation Pond or IVR Attenuation Pond.

The WT WRSF will require weekly inspections around the perimeter beginning as soon as the freshet starts (May) until freeze up to identify any seepage. In the event that seepage is observed from the WT WRSF, it must be reported to the Environment Departments and samples must be taken to determine the water quality and source. A mitigation plan will be prepared and implemented if necessary. Based on field observation, it may be deemed necessary to remove snow accumulation in the sumps around the WT WRSF to mitigate risk of snowmelt reporting to the surrounding environment. Runoff originating from the WT WRSF ultimately ends up in the WT WRSF Pond. In August 2019, seepage from this pond was found to have reported through the WRSF Dike to the Kangislulik Lake. Remediation measures put in place in 2020 demonstrated to be successful. Daily inspections of the WRSF Downstream Pond will be required to confirm no seepage is occurring. A pump must be available in this location to pump any water potentially seeping through the structure back into the WRSF Pond.

2.3 IVR WASTE ROCK STORAGE FACILITY

Runoff from the IVR Waste Rock Storage Facility (WRSF) is collected by 5 sumps (IW A,B,C,D,E). Water from these sumps is sent to the IVR Attenuation Pond either by pumping or by gravity.

The IVR Waste Rock Storage Facility (IVR WRSF) will require weekly inspections around the perimeter beginning as soon as the freshet starts (May) until freeze up to identify any seepage and ensure that the gravity flow to the IVR Attenuation Pond is occurring as planned. In the event that seepage is observed from the IVR WRSF, it must be reported to the Environment Departments and samples must be taken to determine the water quality and source. A mitigation plan will be prepared and implemented if necessary.

Based on field observation, it may be deemed necessary to remove snow accumulation in key locations around the IVR WRSF to mitigate risk of snowmelt reporting to the surrounding environment.

2.4 SOUTH WHALE TAIL DIVERSION CHANNEL

The South Whale Tail Diversion Channel was constructed in 2020. In early May, partial snow removal may be required in this infrastructure to form a preferential water path and prevent snow blockage. Daily inspection at the start of freshet will be required until freshet is completed and following rain events, to ensure no contaminant is transported into Kangislulik Lake.

2.5 IVI DIVERSION CHANNEL

The IVR Diversion Channel was constructed during the fall of 2020. The IVR Diversion Channel serves to divert the watershed reporting to the IVR Pit towards the C-Watershed. This will reduce the amount of contact water to manage on site. In early May, partial snow removal will be required in this infrastructure to form a preferential water path and prevent snow blockage. Daily inspection at the start of freshet will be required until freshet is completed and following rain events, to ensure no contaminant is transported into the surrounding environment. Additional mitigation measures may be required, based on field observations.

2.6 WHALE TAIL ATTENUATION POND

The Whale Tail Attenuation Pond is the secondary contact water management basin on site. Contact water from surrounding infrastructure is pumped to the pond. From there, Whale Tail Attenuation Pond water can be pumped to either the IVR Attenuation Pond or the AsWTP, for treatment, if required, and discharged to approved final effluent locations within Whale Tail South or Kangislulik Lake. A 10-day notice prior to changing effluent discharge locations must be submitted to CIRNAC. The plant's treatment abilities were designed to remove TSS and arsenic. All piping and the discharge diffuser must be inspected prior to freshet, in order to have all installations in place to proceed with pumping and/or treatment activities during freshet. The pond water levels will be managed closely and inspected regularly.

2.7 WHALE TAIL DIKE SEEPAGE

Water from the Whale Tail Dike seepage is reporting to the WT Attenuation Pond through either a pumping system or by gravity. If water quality criteria are met, it is possible for the system to discharge directly to WTS, a 10-day notice to ECCC would be required. The system is not expected to be put in operation due to the current water quality.

2.8 IVR ATTENUATION POND

The IVR Attenuation Pond is the main contact water management basin on site. Contact water from surrounding infrastructure is pumped to the pond. From there, water can be discharged to approved final effluent locations within Whale Tail South or Kangislulik Lake, or may be sent to the AsWTP, for treatment, if required, prior to discharge. A 10-day notice prior to changing effluent discharge locations must be submitted to CIRNAC. The plant's treatment abilities were designed to remove TSS and arsenic. All piping and the discharge diffuser must be inspected prior to freshet, in order to have all installations in place to proceed with pumping and/or treatment activities during freshet. The pond water levels will be managed closely and inspected regularly.

2.9 WHALE TAIL BULK FUEL STORAGE FACILITIES

The main fuel farm containment was built in 2019, and the underground genset secondary containment was built in 2021. All fuel tank farms will be monitored throughout freshet. Snow and ice accumulation within the fuel tank farms must be adequately managed to prevent overflow to the environment and/or damage to the fuel handling systems. The Energy and Infrastructure Department will advise the Environmental Department of their intent to pump the containment area once ice/snow begins to melt. Water samples will be taken in accordance with the Water License to ensure compliance prior to its release. A notice must be provided to the CIRNAC Inspector 10 days prior to this pumping activity. Once sample results have been obtained, the Environmental Department will advise the Energy and Infrastructure Department. If sample results permit, the pumping may begin to direct water to the tundra/ground in a way to prevent erosion. The volume of water pumped from secondary containment(s) will be tracked by the Energy and Infrastructure Department and/or Environment Department. In the event that the water sample results do not meet discharge criteria the water could be trucked in a tanker and transported to the Meadowbank site to be disposed of in the TSF.

2.10 HAUL ROAD CULVERTS AND BRIDGES

Daily inspections will be undertaken starting in May at all culverts and bridges along the Haul road to ensure that water during freshet is flowing freely, free of aggregate and no erosion is occurring. Bridges and abutments will be maintained in a way that prevents the addition of aggregate to the water course. If elevated TSS/Turbidity levels are observed sampling will occur and the results assessed. Turbidity barrier will be installed if required. The Energy and Infrastructure department will also be advised if severe erosion/scouring is observed. In addition, snow and ice removal may be required to allow the water to flow as per design specifications. Daily inspections will be performed during the freshet period by the Environment department.

2.11 PAD CONSTRUCTIONS AND ROAD CULVERTS

Weekly inspections at the start of snowmelt will be required to monitor potential erosion and sediment transport. Mitigation measures may be required to minimize transport of sediments towards water bodies. See below for a list of such constructions:

- Underground Emulsion transfer pads.
- Nemo Lake pad.
- Kangislulik Lake road; and
- Qamanittuaq SANA crusher pad.

In addition to the pads, some culverts around site drain towards water bodies. Daily inspections will be undertaken by the Environment Department starting in May for all culverts around the mine site to ensure the water during freshet is flowing freely and no erosion is occurring. If elevated TSS/Turbidity levels are observed sampling will occur and the results assessed. Turbidity control equipment will be installed if required. Snow and ice removal may be required to allow the water to flow as per design specifications.

2.12 UNDERGROUND WRSF WATER COLLECTION SYSTEM

The Underground WRSF Water Collection System was built in 2019 to collect any water running off the underground infrastructure, and direct runoff water into GSP1. Steaming of culverts may be necessary if snow or ice blockage are identified prior to the start of freshet. Weekly inspection will be required during freshet to validate operationality and liner integrity of collection system.

3 ADAPTIVE WATER MANAGEMENT STRATEGY

An Adaptive Water Management Plan was developed to document specific mitigation measures and associated management actions to be taken when specified thresholds are exceeded. Mitigation measures may include special studies, operational changes, revised or new water and waste management systems, structures and/or facilities, or implementing mitigation activities to prevent, stabilize or reverse a change in environmental conditions or to otherwise protect the receiving environment. The Adaptive Management Plan is to be reviewed periodically to account for the dynamics of mine construction and operation and adjusted as needed.

Various level thresholds were identified for surface water management, based on the capacity of different water management infrastructure to retain water on site. The objective is to trigger management strategy actions based on the capacity of these structures. The main management response is based on increasing the discharge rate especially when water meets effluent discharge criteria.

4 SNOW MANAGEMENT

A snow management procedure has been developed internally in 2020 and will be updated annually. Refer to Appendix 2 for the snow management map. Temporary snow storage dumps and snow accumulation areas of concern were identified on a map. Removal will be managed accordingly.



APPENDIX 1

2025 Freshet Action Plan Procedure

Section	Area of Concern	Role/Action	Responsibilities	Dates
2.1 MINING PITS AND PIT WALLS				
2.1	Mining Pit and Pit walls - General	1) Clean all ice, mud and snow on all permanent ramps, jump ramps, etc.	Mine Operations	Before May
		2) Check and service all pumps.	E&I (Energy and Infrastructure) and Maintenance	Before May
		3) Check that all piping systems starting from the pit leading to the Attenuation ponds are free of ice by validating pumping values (if pumping systems active) and/or performing an air test in the pipe with a compressor.	E&I/Mine Operations	Before May
2.2 WHALE TAIL WASTE ROCK STORAGE FACILITY				
2.2.	WT WRSF Inspection	1) Weekly inspection around the WRSF perimeter to identify any seepage.	Env. Department	May - as soon as freshet starts until freeze up
		2) Pump if required from the WRSF periphery to WRSF Pond	E&I	May - as soon as freshet starts until freeze up
		3) If seepage observed notify Env Department AND sample for Water License Parameters.	Env. Department	May - as soon as freshet starts until freeze up

WRSF Pond		Perform daily inspections or inspections as required and keep records.	Env. Department	May - until freshet complete and after rain events
		1) Maintain WRSF Pond as dry as possible	E&I	May - until freeze up
		2) Pump any water reporting to the WRSF downstream water collection system – Volumes required to be documented	E&I/Engineering	May - until freeze up
		3) Sample upstream and downstream	Env. Department	May - until freeze up
		4) Report any discharge of TSS to Mammoth Lake to ECCC/NWB (if grab > 30 mg/L).	Env. Department	May - until freshet complete and after rain events
2.3 IVR WASTE ROCK STORAGE FACILITY				
2.3.	IVR WRSF Inspection	1) Weekly inspection around the IVR WRSF perimeter to identify any seepage.	Env. Department	May - as soon as freshet starts until freeze up
		2) Pump if required from the IVR WRSF periphery to IVR attenuation pond	E&I	May - as soon as freshet starts until freeze up
		3) If seepage observed notify Env Department AND sample for Water License Parameters.	Env. Department	May - as soon as freshet starts until freeze up

2.4 SOUTH WHALE TAIL DIVERSION CHANNEL				
2.4	South Whale Tail Diversion Channel	1) Perform daily inspections or inspections as required and keep records.	Env. Department	May - until freshet complete and after rain events
		2) Install mitigation measures, if needed (elevated TSS observed), and maintain	Env. Department	May - until freshet complete and after rain events
		3) Sample monitoring for TSS, if excess turbidity observed - use external lab.	Env. Department	May - until freshet complete and after rain events
		4) Report any discharge of TSS to Mammoth Lake to ECCCNWB (if grab > 30 mg/L).	Env. Department	May - until freshet complete and after rain events
2.5 IVR DIVERSION CHANNEL				
2.5	IVR Diversion Channel	1) Perform daily inspections or inspections as required and keep records.	Env. Department	May - until freshet complete and after rain events
		2) Install mitigation measures, if needed (elevated TSS observed), and maintain	Env. Department	May - until freshet complete and after rain events
		3) Sample monitoring for TSS, if excess turbidity observed - use external lab.	Env. Department	May - until freshet complete and after rain events
		4) Report any discharge of TSS to Mammoth Lake to ECCCNWB (if grab > 30 mg/L).	Env. Department	May - until freshet complete and after rain events

2.6 WHALE TAIL ATTENUATION POND				
2.6	Whale Tail Attenuation Pond	1) Set-up pumping of the WT Attenuation Pond to prevent water from flowing into the pit area, keeping track of all daily volumes	E&I	At all time
		2) Notify Environmental Department before any environmental discharge.	E&I	At all time
		3) Inspect all piping and discharge diffuser	E&I	May
2.8 IVR ATTENUATION POND				
2.8	IVR Attenuation Pond	1) Set-up pumping of IVR Attenuation Pond through the AsWTP, keeping track of all daily volumes	E&I	At all time
		2) Notify Environmental Department before any environmental discharge.	E&I	At all time
		3) Inspect all piping and discharge diffuser	E&I	May

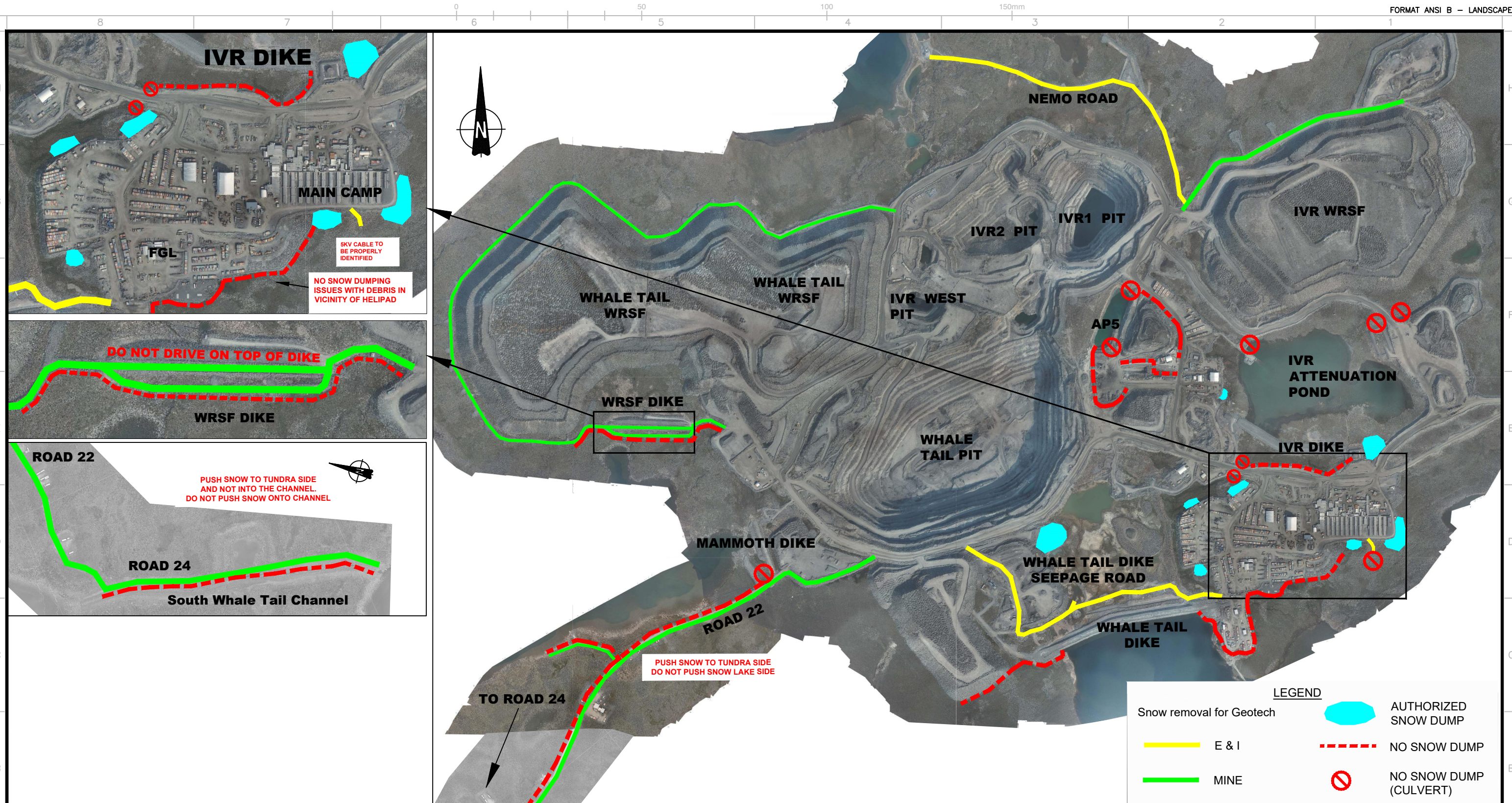
2.9 FUEL TANK FARMS				
2.9	Bulk Fuel Storage Facilities (Main Tank Farm, Power House, Underground Gensets and Dyno)	1) E&I Dept to advise Env Dept in advance of intent to pump once ice melts in containment area.	E&I and Env. Department	Probably mid-June and September
		2) Sample water in accordance with Water License to ensure compliance with limits prior to release.	Env. Department	Probably mid-June and September
		3) Provide notice to Inspector 10 days prior to pumping.	Env. Department	Probably mid-June and September
		4) Advise Energy and Infrastructure Dept if pumping can begin based on sample results.	Env. Department	Probably mid-June and September
		5) Pump to tundra/ground or Meadowbank TSF. NOTE: The water cannot be pumped out to the tundra if it does not meet the Water License criteria.	E&I	Probably mid-June and September
2.10 WHALE TAIL HAUL ROAD CULVERTS AND BRIDGES				
2.10	Recent pad and road constructions	1) Perform daily inspections or inspections as required, and keep records	Env. Department	May and after rain events
		2) Sample for TSS and Turbidity if elevated TSS observed.	Env. Department	May - until freeze up
		3) Notify E&I Dept & the mine department if severe erosion/scouring observed - for repair action.	Env. Department	May - until freeze up
		4) Install mitigation measures if required.	Env. Department	May - until freeze up

2.11 RECENT PAD AND ROAD CONSTRUCTIONS				
2.11	Recent pad and road constructions	1) Perform daily inspections or inspections as required, and keep records	Env. Department	May and after rain events
		2) Weekly inspection of toes of constructions built in the last year.	Env. Department	May and after rain events
		3) Sample for TSS and Turbidity if elevated TSS observed.	Env. Department	May - until freeze up
		4) Notify E&I Dept if severe erosion/scouring observed - for repair action.	Env. Department	May - until freeze up
		5) Install mitigation measures if required.	Env. Department	May - until freeze up



APPENDIX 2

2024-2025 Snow Management Map



LEGEND	
Snow removal for Geotech	AUTHORIZED SNOW DUMP
E & I	NO SNOW DUMP
MINE	NO SNOW DUMP (CULVERT)

TITLE	# DWG	REV	DESCRIPTION	DATE	BY
REFERENCE DRAWINGS		1	REVISIONS		



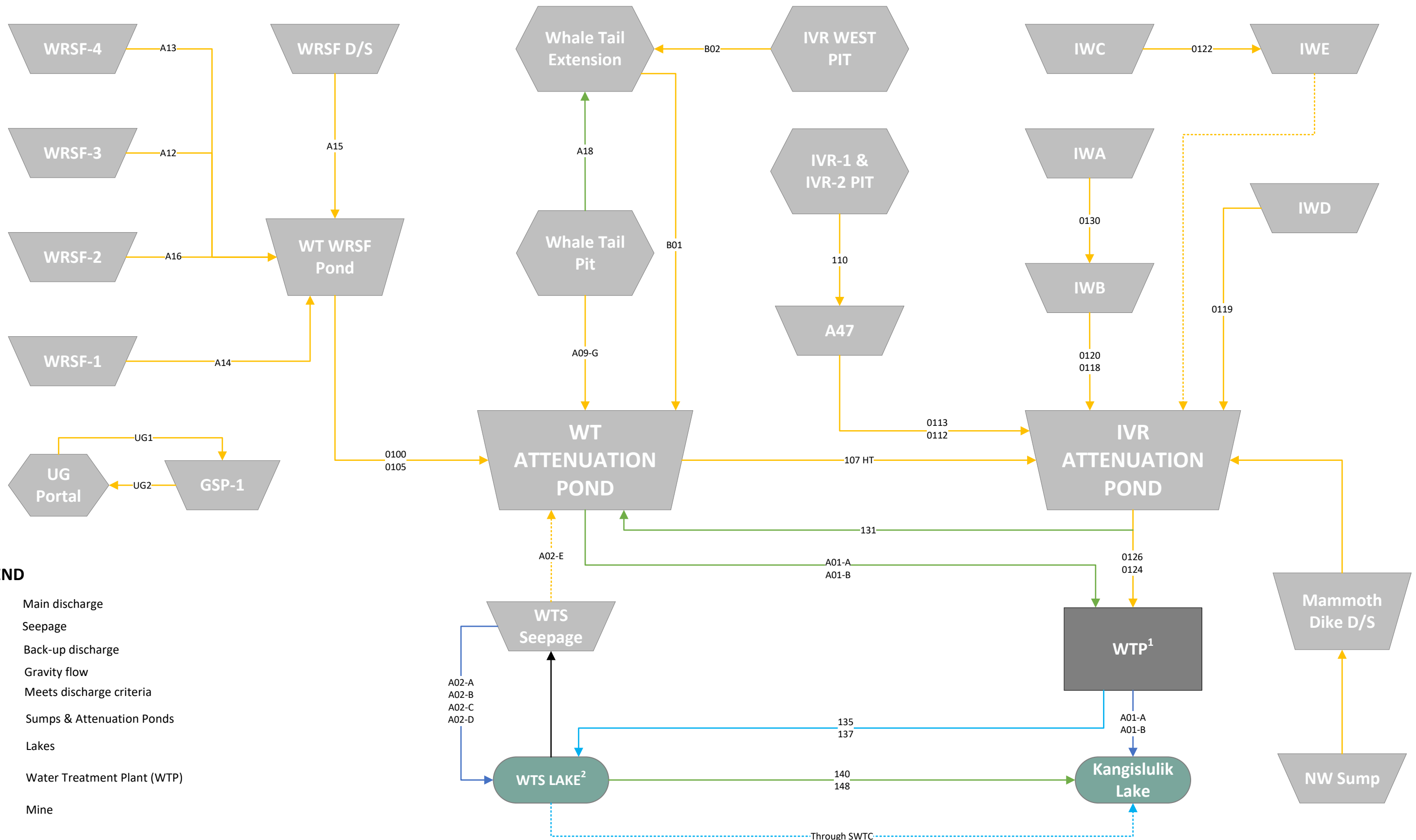
DRAWN BY C. Pelletier	DATE 2024-09-11	TITLE AGNICO-EAGLE - MEADOWBANK DIVISION GEOTECHNICAL REQUIREMENTS SNOW CLEARING MAP 2024-2025
CHECKED BY		SCALE N.T.S.
APPROVED BY		FILE .DWG
PROJECT NO.		DRAWING NO.
DATE		REVISION
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APPENDIX 3

2025 Freshet flowchart and plan view

Whale Tail Mine Freshet Detailed Flowsheet - 2025

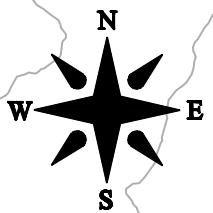
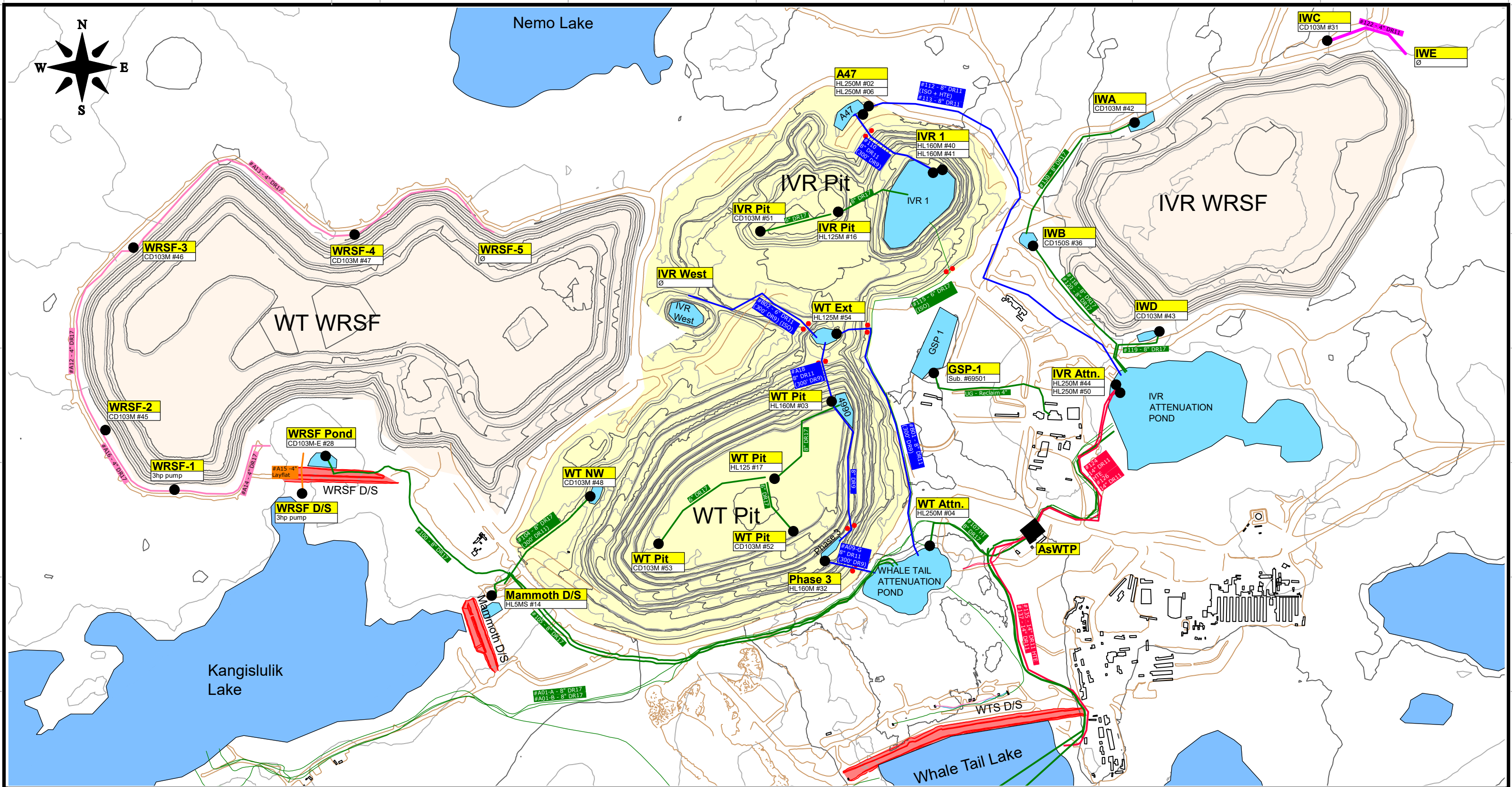


LEGEND

- Main discharge
- Seepage
- Back-up discharge
- Gravity flow
- Meets discharge criteria
- Sumps & Attenuation Ponds
- Lakes
- Water Treatment Plant (WTP)
- Mine

¹ WTP can be by-passed if water quality in pond meet discharge criteria.

² Winter discharge (Q1, Q2, Q4).



LEGEND

- Pump
- Sump / Pond
- Anchor

DRAWN BY	UG	DATE	2025-02-18	TITLE	Whale Tail Mine Freshet 2025 Plan					
MODIFY BY	UG	DATE	2025-03-09							
				SCALE	1:11000	DATE	2025-03-09	FILE		
				DEPARTMENT	DEWATERING		REVISION	03	SHEET	1 / 1

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