Appendix 20A

Fish and Fish Habitat Baseline Report

Appendix 20A

Fish and Fish Habitat Baseline Report

Grays Bay Road and Port Project
Fish and Fish Habitat Baseline Report

Prepared for:

West Kitikmeot Resources Corp

Prepared by:

Nunami Stantec Limited

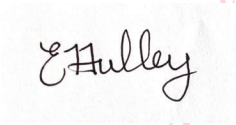
March 2026

Project No.: 123514868

Sign-off

This Report titled Grays Bay Road and Port Project: Fish and Fish Habitat Baseline Report was prepared and reviewed by the following:

Prepared by:



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Abbreviations

CCME.....Canadian Council of Ministers of the Environment
CPUE ..... Catch per unit effort
DEIS.....Draft Environmental Impact Statement
DFO..... Fisheries
GBEEC.....Grays Bay Engineering and Environmental Consultants
GBRP .....Grays Bay Road and Port Project
ICP ..... Izok Corridor Project
IK ..... Inuit Knowledge
LSA.....Local Study Area
MWCT ..... Master Watercourse Table
MMG.....Minerals and Metals Group
NIRB..... Nunavut Impact Review Board
RSA .....Regional Study Area
SARA.....*Species at Risk Act*
SD ..... Standard Deviation
TDR..... Technical Data Report
VC ..... Valued Component
WKR.....West Kitikmeot Resources Corp.
WQG-FAL..... Water Quality Guidelines for the Protection of Freshwater Aquatic Life
YOY.....Young of Year

Symbols and Unites of Measure

cm..... centimetre
°C .....degrees Celsius
km..... kilometre

1 Introduction

West Kitikmeot Resources Corp. (WKR) is an Inuit-owned, Inuit-led company focused on the advancement of the Grays Bay Road and Port Project (the "Project") in the Kitikmeot Region of Nunavut. WKR's largest shareholder is a wholly-owned subsidiary of the Kitikmeot Inuit Association. The Project is proposed as multi-user, multi-use transportation infrastructure to be located on a combination of Inuit Owned Land and Crown land in the Kitikmeot Region of western Nunavut. Subject to approval, the Project would result in the establishment of the first deep water port in the Canadian Central Arctic at Grays Bay, as well as a 230 kilometre (km) all-season access road between Grays Bay and Jericho Station near Contwoyto Lake. The Project will connect to the already approved Tibbitt to Contwoyto Winter Road (TCWR). The multi-user, multi-use Project would allow for the establishment of shared infrastructure with many potential users including the federal and territorial governments, communities, community members, resource companies, and defense agencies.

The Project has the potential to interact with freshwater fish during construction and operations of the road and land-based infrastructure and therefore Freshwater Fish and Fish Habitat was selected as a valued component (VC) for the Project environmental assessment process for the Grays Bay Road and Port Project, and in the preparation of an Impact Statement (IS). This baseline report presents the existing conditions for the Freshwater Fish and Fish Habitat VC.

The objective of the Freshwater Fish and Fish Habitat Baseline Report is to characterize existing conditions within the local assessment area (LAA; defined in Section 2) by:

- Identifying watercourses and waterbodies that provide fish habitat within the LAA.
- Identifying fish species present or potentially present in watercourses and waterbodies within the LAA, including any species at risk or their critical habitat.
- Summarizing habitat requirements for each fish species present, as well as species significant to ecological functions and Inuit life and culture.
- Summarizing physical characteristics of watercourses within the LAA, including any barriers to fish movement, aquatic and riparian vegetation.
- Summarizing habitat quality and seasonal use of fish habitat within the LAA.

1.1 Inuit Knowledge, Traditional Knowledge, and Community Knowledge

A considerable amount of Inuit Knowledge has been documented for the Project, which has substantially informed WKR's understanding of baseline environmental and socio-economic conditions in the Project Development Area (PDA). For the purposes of the IS, focus is placed on Inuit of the Kitikmeot Region, or Kitikmiut. The Project is located wholly within the Kitikmeot Region; as such, the region and its people are where key Project interactions and effects are most likely to occur.

Verified Inuit Knowledge and perspectives considered and integrated in the IS were shared through two primary Project-specific sources.

1. **Naonaiyaotit Traditional Knowledge Project (NTKP):** The Kitikmeot Inuit Association maintains a repository of Inuit Knowledge for the Kitikmeot Region within a Geographic Information System (GIS)-based database called the NTKP. The NTKP contains the collective body of documented and verified Inuit Knowledge of the Kitikmeot Region, including but not limited to knowledge of birds, fish, terrestrial and marine mammals, water quality, travel routes, gathering places, and heritage. The Kitikmeot Inuit Association compiled a Project-specific report called *Kitikmiut Knowledge of the Proposed Kogloktoakyok (Grays Bay) Port and Road Project* (Banci and Spicker 2024), which provides the majority of the Inuit Knowledge shared and integrated in the IS.
2. **Inuit Advisory Group (IAG)**: Initiated in 2018 by the previous Project proponent, WKR re-initiated the IAG in 2025. Through a series of IAG workshops, WKR and Inuit land users, Elders, and Knowledge Holders have met to discuss and document feedback and advice about the Project, including but not limited to dialogue about wildlife, fisheries, land use, archaeology, water, air quality, and access management. Through the IAG, multiple perspectives have been shared, allowing for the integration of knowledge systems (both Inuit Knowledge and western science), resulting in a more informed and sustainable Project. At the time of filing, four IAG workshops had occurred (GBEEC 2018c, 2018d; IAG 2025a, 2025b), with additional workshops planned for the future.

Pertinent baseline information from these sources of Inuit Knowledge is not presented further here; rather, this information is provided in the above-noted reports themselves, the ‘Baseline Conditions’ sections of each assessment section, and integrated in the Assessment of Potential Effects on Freshwater Fish and Fish Habitat sections where appropriate. The same process was applied when integrating baseline information associated with applicable Traditional Knowledge and Community Knowledge shared in publicly available literature and through the Project-specific engagement program.

2 Assessment Areas

The local and regional assessment areas (LAA and RAA) represent the spatial extent where freshwater fish and fish habitat information was collected to characterize the environment and enable determination of potential Project effects on freshwater fish and fish habitat. Spatial boundaries, including the PDA, LAA, and RAA, are shown in Figure 2.1 and Figure 2.2, with a description of these areas presented in Table 2.1. The LAA's were developed to include the area in which Project-related effects can be predicted or measured with a level of confidence that allows for the assessment wherein there is a reasonable expectation that those effects could be of concern. The RAA's were developed to include the area that establishes the context for the determination of significance of Project-related effects and encompasses the area within which Project-specific effects may overlap with effects of other past, present, reasonably foreseeable, and reasonably foreseeable induced projects.

Table 2.1 Assessment Areas for the Freshwater Fish and Fish Habitat TDR

Study Area	Description
PDA	The Project Development Area (PDA) encompasses the physical footprint of all Project components, including both permanent and temporary disturbances (e.g., extent of Project infrastructure, planned clearing, and laydown areas). The PDA includes six sub-areas based on the types of components to be developed: the Port (which is further divided into marine and landside infrastructure), Road, Aerodrome, Jericho Station, and Winter Road PDAs. The boundaries of the PDAs were created by applying buffers around where the Project components will be sited, and varies by each of the sub-areas depending on necessary flexibility for final siting of certain Project components based on conditions on the ground. For the Road PDA and Winter Road PDA, a 75 m buffer was applied to the roads centreline, for the Port PDA and the Aerodrome PDA, the areas were subdivided based on the conceptual Project component locations and then buffered approximately 1,000 m for the landside Port PDA, approximately 300 m for the marine Port PDA, and 500 m for the Aerodrome PDA. The Jericho Station PDA was buffered based on the existing development from the old Jericho Mine site that will be used for the Project and the need for additional space to accommodate the Project components that will be developed as part of the Project for this location. The Winter Road PDA will only exist annually between the beginning of February and end of March, will be built on land where the existing Jericho Station road ends, at the southeastern portion of Jericho Station, to the shoreline of Contwoyto Lake where it will connect to the TCWR. For the purposes of the impact assessment, the PDA is the same as the Site Study Area identified in the IS Guidelines (Figure 2.1 and Figure 2.2).
LAA	The Port portion of the LAA encompasses the area that will be directly disturbed by construction and operation activities, including all Port infrastructure and Aerodrome (e.g., airstrip, laydown and storage areas, landfill, administration offices and accommodations) and includes a 100 m buffer around the Port and Aerodrome PDA, plus an extension to the northwest side of the Kennarctic River west of the Aerodrome PDA (Figure 2.1). The Road PDA of the LAA includes the area extending 100 m upstream and downstream of the centerline (i.e., the Road PDA plus 25 m); at larger, more sensitive watercourses, assessment will include areas up to 300 meters (m) downstream depending on site-specific conditions (Figure 2.2).
RAA	The Port portion of the RAA includes a 10 km land-based buffer around the Port and Aerodrome PDA (Figure 2.1). The road portion of the RAA includes a 10 km buffer on the PDA for southern watersheds, and the entirety of the Arctic Ocean and Kennarctic River watersheds at the north end of the PDA (Figure 2.2). The Jericho Station portion of the RAA includes a 10 km buffer around the PDA.

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

Grays Bay Road
Local Assessment Area (LAA)
Regional Assessment Area (RAA)

Project Development Area (PDA)
Aerodrome
Port (Landside Infrastructure)
Port (Marine-based Infrastructure)

0 2 4 Kilometres
(At original document size of 8.5x11) 1:160,000

N

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2026-02-02
TR by SA on 2026-02-02

Client/Project
West Kitikmeot Resources Corp
Grays Bay Road and Port

123514868_109

Figure No.
2.1

Title
Freshwater Fish and Fish Habitat Assessment Areas - Grays Bay Port

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Grays Bay Port
Local Assessment Area (LAA)
Regional Assessment Area (RAA)
Tibbitt to Contwoyto Winter Road
Watercourse

0 10 20 Kilometres
(At original document size of 8.5x11)
1:1,280,000

N

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WEST KITIKMEOT RESOURCES CORP

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_110

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
2.2

Title
Freshwater Fish and Fish Habitat Assessment Areas - Grays Bay Road

3 Methods

The information sources for this baseline report include historical field data (2001 to 2012), the results of a desktop assessment completed in 2024, and the results of field assessments for fish and fish habitat completed by Nunami Stantec Limited (Stantec) in 2024 and 2025.

3.1 Desktop Assessment

A desktop assessment of existing background data and information was conducted to compile existing relevant fish and fish habitat data and identify potential gaps in the freshwater fish and fish habitat datasets to support ongoing Project planning, design, and requirements for the preparation of a IS for the Project. A review of available relevant information, including IK, documents, and data, was used to refine the field workplan for freshwater fish and fish habitat.

3.1.1 Information Sources

The review of desktop information included the following historical reports and information sources:

- High Lake Project
- Izok Mine and Road Corridor Project
- Grays Bay Road and Port Project – Jericho Connection
- Canadian Science Advisory Secretariat (CSAS) Publications
- Scientific peer-reviewed literature
- Publicly available online information

A detailed summary of key historical sources is provided below.

High Lake Project (Wolfden 2006)

During the summer of 2004 and 2005, baseline conditions in streams and lakes in the vicinity of High Lake and the road corridor were sampled to determine fish species presence, distribution, health, community structure, habitat quality and quantity. The main objectives were to establish baseline conditions, identify sensitive aquatic receptors, and inform the development of mitigation measures. The baseline data was summarized in “Volume 5, Section 4: Freshwater Aquatic Organisms and Habitat”, as part of the previously submitted DEIS for the High Lake Site and Road Corridor. Relevant components of the aquatic baseline included:

- Description of non-fish aquatic life, including zooplankton, phytoplankton, benthic invertebrates, and periphyton (from the Kennarctic River).
- Collection of fish life history information such as species, sex, maturity, fork length, weight, age, stomach contents, condition, and fish tissue metal concentrations.

- Characterization of stream habitat, including substrate composition, gradient, flow velocity, cover, riparian vegetation, and bank stability.
- Characterization of fish habitat for lakes and the Kennarctic River, including bathymetry and substrate composition.

Izok Corridor Project (GLL 2008; RC Bio 2012; Golder 2013; MMG 2013; NHC 2013)

A fall fisheries program was completed in 2007 to collect baseline data for the Izok Mine and Road Corridor Project. Objectives of the "Izok Project 2007 Fisheries Field Report" (GLL 2008) included:

- Confirm fish species presence and relative abundance in waterbodies near the Izok Mine.
- Identify watercourses and waterbodies near the Izok Mine not previously assessed to determine fish and fish habitat potential.
- Aerial reconnaissance for the Izok Road Corridor route and classify streams for potential all-season road crossings (i.e., ephemeral, intermittent, or permanent).
- Fish and fish habitat assessment for the stream crossings classified as intermittent or permanent during the fall (i.e., low-flow) season.

Baseline data for the Izok Mine and Road Corridor Project was collected in 2012 to provide information on fish and fish habitat for future assessment of environmental impacts. Key objectives from the "Fisheries Izok Lake Mine – 2012 Field Data Report" (Golder 2013) included:

- Fish habitat assessment and fish abundance and distribution in streams that may be impacted by Izok Mine development.
- Fish habitat assessment (bathymetry, substrate) and fish abundance and distribution in waterbodies that may be impacted by Izok Mine Development.
- Quantitative assessment of fish populations in Izok Lake using gill netting and hydroacoustic methods.
- Collection of fish tissue for metal analysis.

A fisheries program was also completed along two proposed winter roads and along portions of the Road Corridor (RC Bio 2012). As summarized in the "2012 Field Report for the Road Corridor and High Lake Site", study objectives included:

- Collection of fish and fish habitat data at watercourse crossings along the Road Corridor route.
- Collection of bathymetry data from small lakes along proposed winter roads.
- Sampling of fish and food web components in specific lakes in the High Lake area to address information requests from the previous baseline program (Wolfden 2006).

Additional baseline studies were collected for the Izok Corridor Project in 2012 to characterize fish and fish habitat characteristics in streams and lakes near the Izok Mine, Road Corridor, and High Lake areas during open water and under-ice conditions (MMG 2013). Field studies were conducted to collect data in sufficient detail to provide support for engineering designs, meet regulatory expectations, and provide baseline conditions to evaluate potential impacts of the Project for future environmental impact

assessments. Overall objectives from the “Izok Corridor Project Fish and Fish Habitat Baseline Appendix Report” (MMG 2013) included:

- Characterization of fish habitat, including lower trophic organisms, of streams and lakes within the study areas.
- Characterization of spatial and temporal variability in fish abundance and life history.

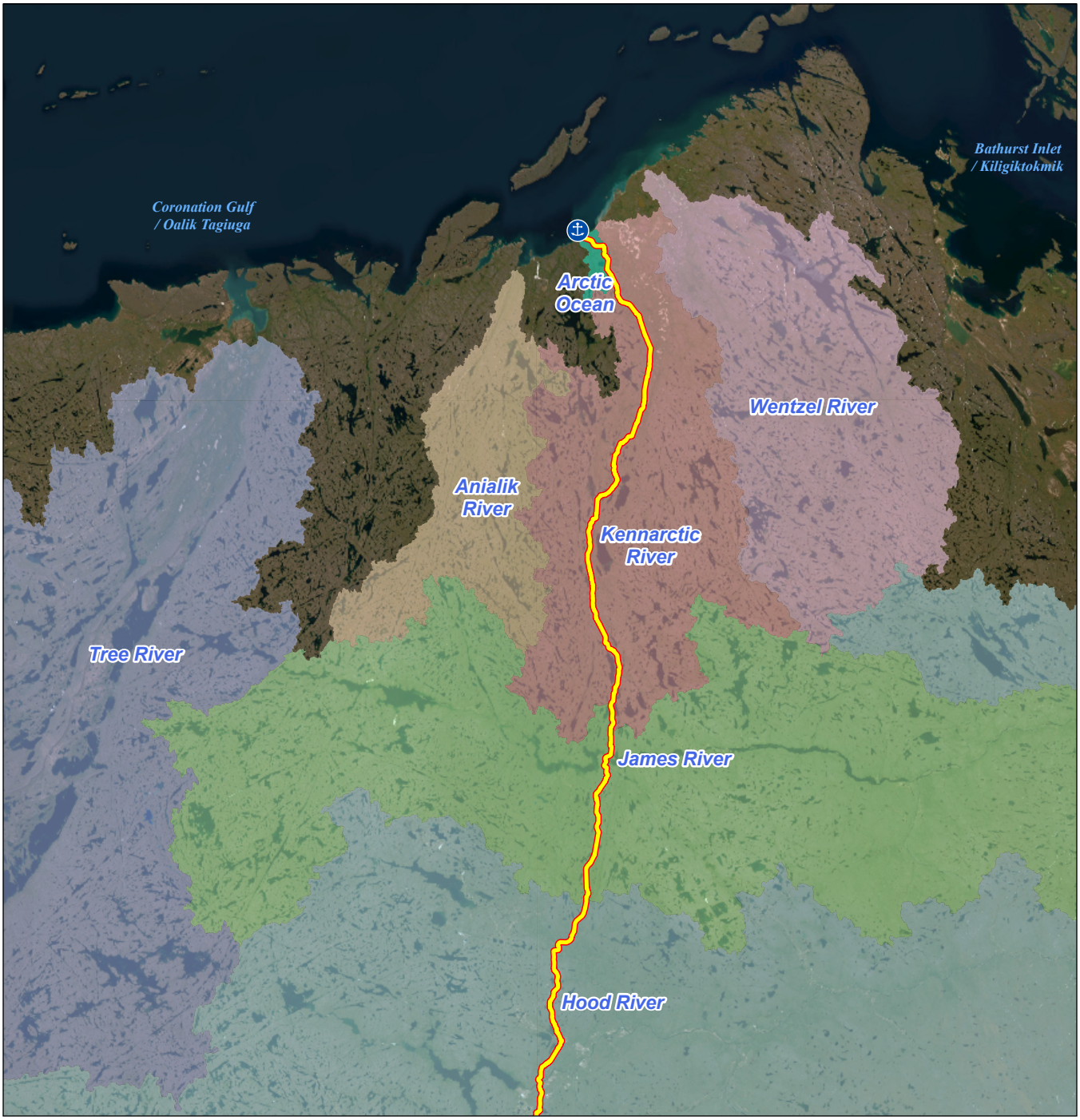
A hydrotechnical assessment of all stream crossings at the Road Corridor was completed for the “Izok Corridor Project Flood Hydrology of Streams Along the All Season Road Corridor and Hydraulic Design of Crossings” (NHC 2013). The report summarizes the development of methods used to derive flood frequencies based on drainage areas at large and small streams for each water crossing. The report also includes preliminary designs for large stream crossings and culvert sizing for small stream crossings.

Grays Bay Road and Port Project (GBEEC 2018a, 2018b)

Aerial reconnaissance and fish and fish habitat assessments were completed in September 2017 along the Jericho Connection segment of the Grays Bay Road. The Jericho Connection is a new alignment along the Road Corridor that was previously assessed for the Izok Corridor Project (RC Bio 2012; Golder 2013; MMG 2013; NHC 2013). The “Grays Bay Road and Port Project – Fisheries Technical Data Report” provides a review of previous studies and summarizes the aerial reconnaissance and fish and fish habitat assessment (channel characteristics, water quality, fish sampling) at 16 watercourse crossings along the Jericho Connection alignment.

3.1.2 Data Compilation

Historical watercourse data (i.e., fish habitat, fish presence, and fish community) from sources outlined in Section 3.1.1 for known stream crossings within the LAA along the road route was compiled into a master watercourse table (MWCT), fish collection dataset, stream measurements dataset and water quality dataset (Appendix A.1). To summarize historical results, stream crossings along the road route were grouped into five broad geographical areas based on drainage basin: Arctic Ocean, the Kennarctic River, James River, Hood River, and Burnside River (Figure 3.1; Appendix B).



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

Watershed
- Anialik River
- Arctic Ocean
- Hood River
- James River
- Kennarctic River
- Tree River
- Wentzel River

- Grays Bay Port
- Grays Bay Road

0 5 10 Kilometres
(At original document size of 8.5x11) 1:800,000

N

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WEST KITIKMEOT RESOURCES CORP

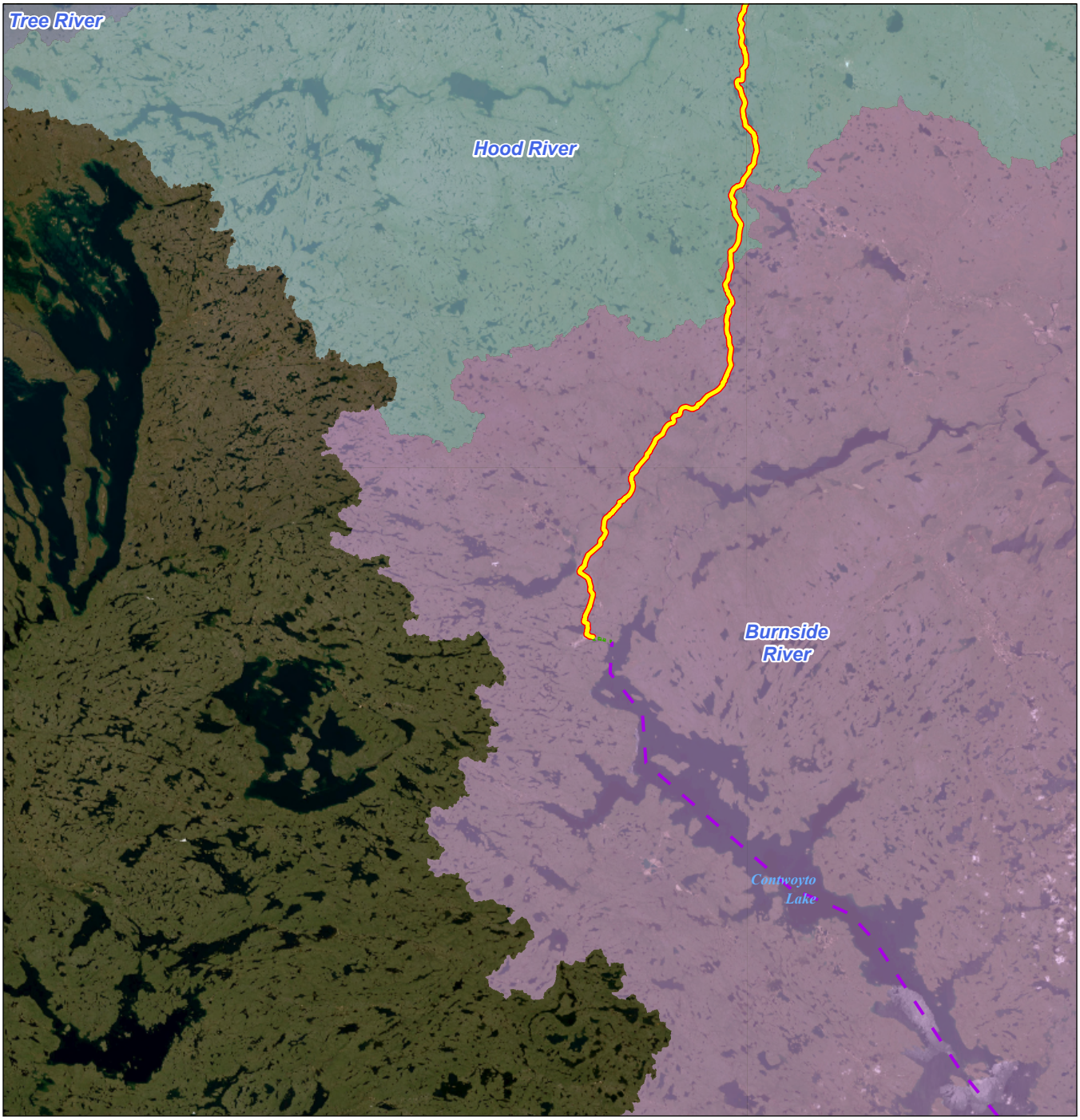
Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_111
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
3.1

Title
Grays Bay Road and Port with Watersheds



Watershed

- Burnside River
- Hood River
- Tree River

- Grays Bay Road
- Grays Bay Winter Road
- Tibbitt to Contwoyto Winter Road

0 5 10 Kilometres

(At original document size of 8.5x11) 1:800,000

N

Notes

1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project 123514868_111

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
3.1

Title
Grays Bay Road and Port with Watersheds

2 of 2

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3.2 Field Sampling Program

The fish and fish habitat field program was developed to address spatial and temporal gaps pertaining to the PDA, and specifically the Port and Road LAA, which was not previously surveyed. Field sampling for fish and fish habitat was completed by Stantec in August 2024 and in July/August 2025, and focused on the Port and Road LAA, including the aerodrome and two proposed water intake lake locations (PWI-1 and PWI-2) (Figure 2.1 and Figure 2.2).

3.2.1 Fish Habitat

The fish and fish habitat assessment of watercourse crossings that are within the Port and Road LAA were completed using a field protocol based on the BC Reconnaissance (1:20,000) Fish and Fish Habitat: Stream Inventory Standards and Procedures method (BC FISB 2001). There is no territorial or federally developed protocol for watercourse assessments and therefore the BC procedure was selected as it is robust and well accepted as appropriate in a variety of conditions and provides measurement or classification methods for all stream morphology components. Data collected included channel morphology (e.g., pool, riffle, run), stream geometry (e.g., channel and bankfull width and depth, bank heights, gradient), dominant and subdominant substrates (e.g., gravel, cobble), bank composition and texture, dominant and subdominant cover for fish (e.g., undercut banks, large woody debris), riparian vegetation type and maturity, and in-situ water quality measurements (i.e., temperature, dissolved oxygen, pH, conductivity, and turbidity). Digital photographs of each site were taken showing upstream, downstream, left bank, right bank, and instream substrate. Drone imagery was also collected at all large permanent crossings. Detailed field methods for fish habitat parameters are presented in Table 3.1.

Watercourses were assigned a stream class following assessment. The BC standard was not used for stream class determination as the classes are not as representative of northern stream morphology; instead, stream class definitions were developed based on the Government of Alberta (GOA 2023) with the addition of ephemeral and boulder field categories. Definitions used are:

- Ephemeral – Linear depression or gully feature that has no defined bed or banks and is often vegetated by terrestrial plant species. Flow source is run-off from snow melt or rainfall. Flow may occur for several months each year (i.e., during or after precipitation events) but will seldom occur during the dry season.
- Intermittent – Small stream channels and small springs are the main source outside periods of spring runoff and heavy rainfall. Distinct channel development: channel usually has no terrestrial vegetation; channel width is less than 0.7 m; usually some bank development.
- Small Permanent – Permanent streams, often small valley bottoms; bench floodplain development. Banks and channels have well-defined channel widths from greater than 0.7 m to 5 m.
- Large Permanent – Major streams or rivers; well-defined flood plains; often wide valley bottoms. Non-vegetated channel width exceeds 5 m.
- Boulder field – stream channels with no distinct defined bank structure. Flow through coarse substrates (cobble to boulder) in undefined flow paths. Typically, large channels but can also occur in small and mid-sized channels. Typically, low gradient channels connecting ponds/lakes.

Table 3.1 Field Methods for Assessing Fish Habitat Parameters in Streams

Parameter	Field and Analysis Methods
Channel characteristics	Visually classified based on observations made along the length of transects to include pattern, islands, bars, coupling, confinement, and morphology.
Channel measurements[1,2]	Measured channel and wetted width, channel depth, residual and pool depth at transects with measuring stick or measuring tape. Measured gradient at transects with a clinometer[1].
Cover characteristics	Visually estimated instream cover, overhead cover, and riparian vegetation cover.
Stream banks	Visually categorized stream banks along the surveyed stream for height (measured if less than 2 m), shape, stability, substrate texture, vegetation cover, and vegetation type and stage.
Substrates	Visually estimated percent composition of channel bed substrates: organics, fines (<0.06 mm), sand (0.06–2 mm), small gravel (2–16 mm), large gravel (17–64 mm), cobble (65–256 mm), small boulder (>257–1,000 mm), large boulder (>1,000 mm) and bedrock. Included estimate for percent embeddedness and percent of available spawning gravels (for gravel spawning species).
Water quality	Measured in situ temperature (°C), pH, specific conductance (micro Siemens per centimetre [µS/cm]), turbidity (NTU), and dissolved oxygen (mg/L) using an Aqua TROLL 600 Multiparameter Sonde.
Additional features	Additional observations during the survey included barriers to fish passage and wildlife observations.

Notes:

[1] Measurement and estimation techniques are as outlined in BC FISB (2001).

[2] Slope was recorded by using a clinometer

Fish habitat parameters were collected for streams with well defined channels (i.e., small permanent, large permanent streams). Intermittent and ephemeral streams were mapped and photographed – no physical parameters were collected. Boulder fields were mapped and photographed with channel depths and widths collected where possible. Drone imagery was collected at all large permanent crossings to facilitate qualitative characterization of fish habitat within the LAA, including riparian and instream habitat, instream substrates, and notable habitat features (e.g., large pools, spawning riffles).

3.2.2 Fish Community

Fish community surveys were conducted to determine the presence of fish species and life stages in watercourses within the Port and Road LAA. Fish were collected under Fisheries and Oceans Canada Scientific License S-24/25-1034-NU in 2024 and S-25/26-3000-YK in 2025.

Fish sampling was conducted to evaluate fish species presence, relative abundance, and seasonal habitat use. Sampling was conducted in late summer/early fall to provide evidence for late summer utilization and to assist with confirmation of the fish-bearing status of the watercourses, including sampling upstream of identified barriers or impediments to upstream fish passage.

Depending on habitat and flow conditions, fish sampling used in watercourses consisted of a backpack electrofisher and baited minnow traps. Sampling distance and start and end times were recorded so that catch-per-unit-effort (CPUE) could be calculated. CPUE provides an estimate of relative abundance by standardizing catch data by fishing effort. The CPUE for electrofishing was calculated as the number of fish captured per 60 seconds of effort. The CPUE for minnow trapping was calculated as the number of fish captured per minnow trap per day (24 hours).

Captured fish were identified to species and measured for fork length or total length (depending on the species body form). Lengths were recorded for up to 10 individuals per species. Fish were examined externally for the presence of any deformities, parasites, or injuries. Handling was kept to a minimum and fish were released at the capture site after data collection. Fish visually observed but not captured were also recorded and identified to species if possible.

3.2.3 Potential Water Intake Lakes

3.2.3.1 Fish Habitat

Fish habitat mapping was completed following the BC Reconnaissance (1:20,000) Fish and Fish Habitat: Lake Inventory Standards and Procedures methods (BC FISB 2001) to quantify and qualify existing fish habitat in the potential water intake lakes (PWI-1 and PWI-2).

Data collected during the habitat assessments included descriptions of surrounding terrain, shoreline characteristics, lake access, and inlet and outlet streams. Observations of aquatic vegetation and wildlife were recorded, and physical and biological features of the lake were photographed. Detailed field methods for fish habitat parameters are presented in Table 3.2.

Table 3.2 Field Methods for Assessing Fish Habitat Parameters in PWI-1 and PWI-2

Parameter	Field and Analysis Method
Shoreline characteristics	Visually assessed shorelines for riparian bank stability, riparian vegetation cover, and riparian vegetation type.
Shoreline cover	Visually categorized percentage of debris and overhanging vegetation within 1 m height of the shoreline.
Shoreline and littoral zone substrate	Visually estimated percent composition of substrates: organics, fines (<0.06 mm), sand (0.06–2 mm), small gravel (2–16 mm), large gravel (17–64 mm), cobble (65–256 mm), small boulder (>257–1,000 mm), large boulder (>1,000 mm) and bedrock.
Aquatic vegetation	Visually estimated percent composition of emergent and submergent vegetation. Included observations of floating algae.
Additional features	Additional observations during the survey including access, weather, wildlife observations, and inlets and outlets.

3.2.3.2 Fish Community

Fish sampling was conducted at PWI-1 to evaluate fish species presence and life stage use of the lake. Fish were collected under Fisheries and Oceans Canada Permit S-24/25-1034-NU.

Fish sampling consisted of backpack electrofishing sections of the shoreline, and minnow trapping, angling, and gillnetting throughout the lake. Captured fish were identified to species and measured for fork length or total length. Lengths were recorded for up to 10 individuals per fish species. Fishes were examined externally for the presence of any deformities, parasites, or injuries. Handling was kept to a minimum, and fish were released at the capture site after data collection.

Total CPUE was calculated for each fishing method to provide a measure of relative abundance of fish in the Port Intake Lake and to standardize results for use in comparisons with other locations. The CPUE for electrofishing was calculated as the number of fish captured per 60 seconds of effort. The CPUE for minnow trapping was calculated as the number of fish captured per minnow trap per day (24 hours). The CPUE for gillnetting was calculated as the number of fish captured per 100 m^2 per hour. The CPUE for angling was calculated as the number of fish captured per angler hour.

4 Results

4.1 Historical Fish and Fish Habitat

Historical watercourse data (i.e., fish habitat, fish presence, and fish community) for known watercourse crossings within the LAA have been compiled into a MWCT (Appendix A.1) for known watercourse crossings within the LAA. The following sections summarize the fish habitat and fish community results from the desktop assessment.

4.1.1 Fish Habitat

Fish habitat assessments have been completed at potential watercourse crossings within the Port and Road LAA since 2001 by various proponents (see Section 3.1.1). Fish and fish habitat data were compiled and summarized for the Izok Corridor Project (ICP) by the MMG in the Fish and Fish Habitat Baseline Report in 2013 (MMG 2013). This report summarizes the historical data collected from 2001 to 2008, and 2012. The High Lake and Izok Mine study areas, which included data for the areas of the mine infrastructure, and the road corridor data extending beyond Contwoyto Lake, are outside of the Project LAAs and excluded from this compilation. Watercourse crossings and relevant fish and fish habitat data have been compiled into a MWCT and mapped to identify watercourse crossings within the Port and Road RAA. The initial compilation resulted in inclusion of hundreds of streams over a large geographic area. Watercourses have been grouped by watersheds from North to South: Arctic Ocean, Kennarctic River, James River, Hood River, and Burnside River. These crossings were reduced to 127 watercourse crossings which were considered relevant to the Project as they were within the Port and Road LAAs. Of these 127 watercourse crossings, four are located within the Arctic Ocean, 53 within the Kennarctic River watershed, eight within the James River watershed, 36 within the Hood River watershed, and 26 within the Burnside River watershed (Appendix A.2). Based on historical studies, fish habitat availability in the majority of streams is rated as poor or none, as 61% of watercourses were described as ephemeral or intermittent and 9% were described as unknown or boulder field. Small and large permanent represented 29% of the total surveyed watercourses.

Historical data for stream channel characteristics average channel width, bankfull max depth, wetted width and depth were available for some of the watercourses included within the MWCT (Appendix A.2). Large permanent watercourses were observed in four of the five watersheds (Kennarctic River, James River, Hood River, and Burnside River). The largest watercourses (e.g., channel width, wetted width and depths) for the large permanents were observed at the Kennarctic River (D44) and Burnside River (68) watercourse crossings. Small permanent watercourses were observed in the Arctic Ocean, Kennarctic River, Hood River, and Burnside River watersheds, with the greatest number within the Kennarctic River watershed. Ephemeral watercourses were present within all watersheds. Boulder fields were only observed in the Kennarctic River and Hood River watersheds.

In situ water quality data were available for 41 sites along the Port and Road LAA (Table 4.1 and Appendix A.2, Table A.2-3). Water quality data were collected at these sites in July and August 2012 and included in situ measurements for temperature, pH, dissolved oxygen, turbidity, and conductivity. Water quality was within CCME Water Quality Guidelines for the Protection of Freshwater Aquatic Life (WQG-FAL) (CCME 2025), with the exception of the following:

- pH was below the CCME WQG-FAL of 6.5 at two sites within the Hood River (92A) and Kennarctic River (D39) watersheds.
- Dissolved oxygen was below the CCME WQG-FAL of 6.5 mg/L at two sites within the Kennarctic River (D12 and D39) watershed.

Table 4.1 Summary of Historical In Situ Stream Water Quality Sample Data Collected, July and August 2012

		Temperature (°C)		pH		Dissolved Oxygen (mg/L)		Conductivity (µS/cm)		Turbidity (NTU)	
Watersheds	**n**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
Arctic Ocean	6	7.1	19.9	7.0	7.6	7.9	10.9	280	705	11.0	60.9
Burnside River	2	4.7	10.4	7.2	7.9	9.7	10.9	40	351	16.7	17.4
Hood River	8	7.2	21.3	**6.3**	7.9	7.1	11.6	10	42	0	15.0
James River	1	17.9		6.8		6.5		54		-	
Kennarctic River	24	3.8	17.6	**5.4**	8.1	**6.0**	11.2	17	311	0.1	111.0

Notes:

ºC = degrees Celsius; mg/L = milligram per litre; µS/cm = microsiemens per centimeter; NTU = Nephelometric Turbidity Unit; n= number of samples recorded; min = minimum; max = maximum, dashes indicate no data available

Bolded text indicates an exceedance of CCME WQG-FAL (CCME 2025).

4.1.2 Fish Community

Fish community studies have been completed within the Project RAA in 2001, 2007, 2008, 2012, and 2017 as part of the baseline studies for the High Lake Project, Izok Lake Project, and Grays Bay Road and Port Project (Appendix A.2; Appendix D). Eight fish species have been identified within the RAA, including lake trout/*ihuuqit* (*Salvelinus namaycush*), Arctic char/iqalukpiit (*Salvelinus alpinus*), Arctic grayling/*ihulukpaukkait* (*Thymallus arcticus*), burbot/*tiktalik* (*Lota lota*), round whitefish (*Prosopium cylindraceum*), slimy sculpin (*Cottus cognatus*), longnose sucker (*Catostomus catostomus*) and ninespine stickleback (*Pungitius pungitius*) (Table 4.2). Fish species, presence, distribution and abundance varied between sampling years and by watershed (Table 4.2; Table 4.3). The following sections provide information on each species' distribution, habitat preferences, and likelihood to occur within the study areas (LAA, RAA).

Table 4.2 Fish Species Found Within the Watersheds Overlapping the LAA, 2001 to 2012

Species Information					Legislated Protection	
Family	**Common Name**	**Inuit Name**	**Scientific Name**	**Species Code**	**SARA[a] (Federal)**	**Watershed**
Salmonidae	Lake Trout	*ihuuqit / ihok / ehok*	*Salvelinus namaycush*	LKTR	Not listed	Burnside, Hood, James, Kennarctic, Arctic
	Arctic char	*iqalukpiit / ikalukpik / ekalukpik*	*Salvelinus alpinus*	ARCH	Not listed	Kennarctic, Arctic, Burnside[b]
	Arctic grayling	*Ihulukpaukkait / hulukpaugan*	*Thymallus arcticus*	ARGR	Not listed	Burnside, Hood, James[b]
	Round whitefish	-	*Prosopium cylindraceum*	RBWH	Not listed	Burnside
Gadidae	Burbot	*tiktalik*	*Lota lota*	BURB	Not listed	Burnside, Hood, James, Kennarctic, Arctic
Cottidae	Slimy sculpin	*kanayuk*	*Cottus cognatus*	SLSC	Not listed	Burnside, Hood, James, Kennarctic, Arctic
Catostomidae	Longnose sucker	*milugiak*	*Catostomus catostomus*	LNSC	Not Listed	Burnside
Gasterosteidae	Ninespine stickleback	-	*Pungitius pungitius*	NNST	Not listed	Burnside, Kennarctic, Arctic

Notes:

[a] Species at Risk Public Registry (GOC 2022)

[b] Banci and Spicker 2024

Table 4.3 Fish Catch Summary and CPUE in the LAA, 2001 to 2012

Watershed	Stream Class	n	Effort (s)	CPUE (fish/min)[1]									
				ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total
Burnside River	Large Permanent	6	7,098	-	-	1.67	-	-	-	0.15	1.03	0.09	2.93
	Small Permanent	2	2,872	-	-	0.62	-	-	-	-	-	-	0.62
	Ephemeral	3	2,002	-	0.39	-	0.04	-	-	0.14	0.31	-	0.89
	Unknown	2	1,298	-	-	0.74	0.04	-	-	-	-	0.04	0.83
	TOTAL		**13,270**	**-**	**0.39**	**3.03**	**0.08**	**-**	**-**	**0.29**	**1.34**	**0.13**	**5.27**
Hood River	Large Permanent	4	3,413	-	0.16	0.05	-	-	-	0.08	0.68	-	0.97
	Small Permanent	4	4,313	-	0.10	0.75	-	-	-	0.05	0.93	-	1.82
	TOTAL		**9,122**	**-**	**0.26**	**0.80**	**-**	**-**	**-**	**0.13**	**1.61**	**-**	**2.79**
James River	Ephemeral	2	507	-	0.07	-	-	-	-	-	0.07	-	0.14
	TOTAL		**507**	**-**	**0.07**	**-**	**-**	**-**	**-**	**-**	**0.07**	**-**	**0.14**
Kennartic River	Large Permanent	5	8,272	0.51	-	-	-	-	-	-	0.66	-	1.17
	Small Permanent	6	6,096	0.71	0.04	-	-	-	-	-	0.53	1.79	3.07
	Ephemeral	8	4,686	0.03	0.23	0.37	-	-	-	-	1.09	0.15	1.86
	TOTAL		**17,724**	**1.25**	**0.27**	**0.37**	**-**	**-**	**-**	**-**	**2.28**	**1.94**	**6.11**
Arctic	Small Permanent	1	741	-	-	-	-	-	-	-	-	0.10	0.10
	Ephemeral	1	354	-	-	-	-	-	-	-	0.26	-	0.26
	TOTAL		**1,095**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.26**	**0.10**	**0.36**

Notes:

CPUE = Catch Per Unit Effort; n = sample size for sampling effort; ARCH = Arctic Char; LKTR = Lake Trout; ARGR = Arctic Grayling; RNWH = Round Whitefish; CISC = Cisco; LNSC = Longnose Sucker; BURB = Burbot; SLSC = Slimy Sculpin; NNST = Ninespine Stickleback; "-" = no individuals captured.

[1] Wolfden 2006; MMG 2013

[2] CPUE from Wolfden (2006) was not provided for gill net effort (#/100m^2 per 12h)

4.1.2.1 Lake Trout

Lake trout are a species of char in the Salmonidae family that are widely distributed throughout North America, ranging from the Laurentian Great Lakes to the Canadian Arctic (Scott and Crossman 1973). Lake trout prefer cold water (10 °C) and primarily live in large, deep lakes but are occasionally found in large rivers and shallower bodies of water. Lake trout are predaceous and feed on crustaceans, aquatic and terrestrial insects, many species of fish (including smaller lake trout), and small mammals (Scott and Crossman 1973). They are predominantly freshwater species; however, lake trout have been observed using brackish and coastal marine environments in the Canadian Arctic (Swanson et al. 2010; Kissinger et al. 2016). Lake trout have been described as semi-anadromy in the West Kitikmeot region of Nunavut, where they migrate from freshwater to brackish water for feeding in the summer (Swanson et al. 2010; Kissinger et al. 2016). Lake trout are harvested for consumption by many Inuit communities in Nunavut (Harris et al. 2022).

In northern Canada, lake trout spawn in the fall from early September to October (Scott and Crossman 1973). They migrate to rocky shoals in nearshore areas of lakes (Gunn 1995); this generally occurs when surface water temperatures are 12°C or lower (Redick 1967). Eggs are spawned directly on to the well-sorted cobble substrate in the interstitial spaces – no spawning redds are constructed or maintained (Scott and Crossman 1973; Callaghan et al. 2016). The preferred spawning habitat for lake trout is generally found near exposed shorelines, islands or shoals (Martin and Olver 1980). Spawning shoals are typically less than 12 m deep; however, there has been evidence of spawning in both shallow and small lakes to large and deep lakes (Callaghan et al. 2016). Eggs remain in the rocky incubator for many months and typically hatch in March or April but can be as late as June. Within a month of hatching lake trout will move deeper to forage and avoid predation, but in the north lake trout can stay in inshore waters for months or even years (Scott and Crossman 1973).

Lake trout have been observed or captured in all five watersheds (Table 4.2). Lake trout were most abundant in the Burnside and Kennarctic River watersheds, with a total CPUE of 0.39 and 0.27 fish/ min (Table 4.3). Lake trout were also the most abundant species captured in the Kennarctic River watershed, with a mean CPUE of 40.9 fish/100m^2 per 12h for gillnetting (MMG 2013) and 0.27 fish/min for electrofishing (Table 4.3). Lake trout ranged in fork length from 29 to 900 mm (mean=146 mm, standard deviation [SD] ± 128) and in relative weight from 52 to 153 g (mean=103 g; SD ± 17) (MMG 2013). Lake trout captured from Hood River had the greatest fork length and mean relative weight from those captured in other watersheds (MMG 2013).

4.1.2.2 Arctic Char

Arctic char are a species of char within the Salmonidae family found throughout circumpolar regions of Northern Canada, Greenland, Iceland, Europe, Asia and Alaska (DFO 2016). There are both anadromous and freshwater populations. Some freshwater populations live in landlocked lakes, and others live in lakes connected to the ocean, but do not migrate like their anadromous counterparts (Harris et al. 2022).

Anadromous or “sea-run” Arctic char in northern Canada migrate to marine waters from the spring to fall, where they forage in shallow coastal and intertidal waters. They return to freshwater environments, freshwater streams and rivers in the summer and early fall to spawn (COSEWIC 2010; MMG 2013). Arctic char can live up to 30 years; they migrate repeatedly from freshwater to marine environments and continuously spawn throughout their lives (Harris et al. 2022). Arctic char spawn in September or October over gravel or rocky shoals in lakes or slow-moving pools in rivers at depths of 1.0 to 4.5 m (Scott and Crossman 1973). Eggs are buried in gravel and remain overwinter and hatch the following spring around April. Emergence from gravel occurs following ice breakup around mid-July. Juvenile Arctic char migrate from rivers downstream to marine waters to forage (Scott and Crossman 1973). Arctic char are carnivorous but feed on a variety of sources, including zooplankton, insects, and other fish (including smaller char) (Scott and Crossman 1973).

Arctic char are an extremely valuable subsistence food source and resource for the Inuit across the Canadian Arctic and are harvested for consumption in nearly all Inuit communities (Priest and User 2004). Arctic char are the most harvested fish recorded in Kitikmeot (Priest and Usher 2004) and the second most consumed country food after caribou in Nunavut (ONCS WWF DUC 2018).

Arctic char have only been observed or captured in the Kennarctic River and Arctic Ocean watersheds during previous surveys (Table 4.2), although landlocked Arctic char are known to be present within the Burnside River. Arctic char were the third most abundant species captured in the Kennarctic watershed, with an electrofishing CPUE of 1.25 fish/min (Table 4.3). Arctic char ranged from 36 to 254 mm in fork length (mean=125 mm, SD ± 55) (MMG 2013). Large Arctic char characteristics of sea-run populations were absent from the catch (Wolfden 2006).

4.1.2.3 Arctic Grayling

Arctic grayling are a freshwater species in the Salmonidae family, which reside in northern freshwater drainages. In northern Canada they are found throughout the Yukon and Northwest Territories (Scott and Crossman 1973). In Nunavut, they are found in the Kitikmeot and Kivalliq regions (excluding Arctic islands) (Larocque et al. 2014).

Different populations of Arctic grayling are often identified as lacustrine, fluvial or adfluvial populations based on their life history strategies (Ellenor 2020). Lacustrine populations carry out their life cycles (including spawning) in lakes (Northcote 1995; Ellenor 2020). Fluvial populations migrate from large rivers to small tributaries during open water season to spawn and forage and adfluvial populations utilize both lake and stream habitats (Scott and Crossman 1973; West et al. 1992). Spawning occurs from April to June during freshet and occurs over a variety of substrates that range from silt to cobble and boulders, but most commonly over small, unembedded substrates (Scott and Crossman 1973; West et al. 1992; Ellenor 2020). Egg incubation time varies with temperature, and the young of year (YOY) remain in their natal streams until late summer and out-migrate to deeper overwintering habitats before freeze-up begins (Heim et al. 2015).

Arctic grayling have previously been captured in the Burnside and Hood River watersheds, with higher abundances from Burnside River than Hood River (Table 4.2). Arctic grayling were the most abundant species captured in Burnside River watershed, with a total electrofishing CPUE of 3.03 fish/min (Table 4.3). Arctic grayling ranged in fork length from 12 to 430 mm (mean=77 mm, SD ± 56) and in relative weight from 38 to 181 g (mean=91 g; SD ± 21) (MMG 2013).

4.1.2.4 Round Whitefish

Round whitefish are a freshwater species in the Salmonidae family which can be found widespread across North America and northeastern Asia (Scott and Crossman 1973). In Canada, round whitefish can be found throughout southern Ontario, northern New Brunswick, and most of northwestern Canada from Nunavut to British Columbia and Yukon (Scott and Crossman 1973).

Round whitefish can be found throughout lakes, rivers, and streams across their distribution range. Seasonal migration to spawning sites is known to occur, however the timing is variable and has been recorded in late August and September in the Northwest Territories, or later at lower latitudes (Scott and Crossman 1973; Stewart et al. 2007). Spawning occurs in September to October in gravel lake shallows, mouths of rivers, or in shallow river tributaries (Scott and Crossman 1973; Stewart et al. 2007). Spawning substrate is variable and can range from cobble, gravel, and sand over a range of depths (Holst 2023; Scott and Crossman 1973). Peak fry emergence occurs in late April but begins as early as March (Scott and Crossman 1973).

Round whitefish have only been observed or captured in Burnside River watershed and at relatively low abundances (Table 4.2; Table 4.3). Four round whitefish sampled from previous surveys had fork lengths that ranged from 107 to 156 mm (mean=129 mm, SD ± 20) (MMG 2013).

4.1.2.5 Burbot

Burbot are a freshwater cod species in the Lotidae family and are widely distributed throughout the northern hemisphere. Their wide distribution throughout the Holarctic region is a unique characteristic of their species (McPhail 1997). Juvenile burbot are found in main watercourses, side channels and lakes in shallow littoral areas with rocks, weeds and debris used for instream cover while adults are typically encountered in deep lakes, rivers and reservoirs (McPhail 1997). Burbot are predaceous and feed at night on aquatic insects, crayfish, molluscs, and many species fish (Scott and Crossman 1973).

Burbot populations are identified as lacustrine/adfluvial or fluvial based on their varying life strategies (McPhail 1997). Lacustrine burbot populations, which primarily live in lakes, are often adfluvial and will often migrate from their resident lakes to rivers to spawn and fluvial populations primarily live in rivers and will migrate long distances to specific spawning sites (McPhail 1997). Spawning occurs in both lakes and rivers in the winter from January to March (Scott and Crossman 1973). In lakes, spawning typically occurs in shallow near-shore areas; however, deep-water spawning events have been documented (McPhail 1997). Spawning substrate in lakes is typically comprised of sand, gravel and cobbles which does not contain fines or silt. In rivers, burbot spawn in low velocity areas in main channels and inside channels (McPhail 1997). In rivers, their preferred substrate for spawning is small gravel, sand and silt (McPhail 1997). Eggs hatch in a month, and YOY appear from late February to June (Scott and Crossman 1973).

Burbot have been observed or captured in all five watersheds (Table 4.2). Burbot have been captured in lower abundances than other fish species, with electrofishing CPUE ranging from 0.05 to 0.15 fish/min (Table 4.3). Total length of captured burbot ranged from 26 to 630 mm (mean=97 mm, SD ± 99), with more than 75% of burbot recorded less than 100 mm in total length (MMG 2013).

4.1.2.6 Slimy Sculpin

Slimy sculpin are an extremely widespread freshwater sculpin and can be found in freshwater and brackish environments across most of Canada including in Nunavut (ADFG 2004a). Adults of this species primarily reside in lakes and streams with boulder, rubble and cobble substrate (Gray et al. 2018). Juvenile slimy sculpin exhibit preference for smaller substrates compared to adults and can be most often found in gravel substrates (Gray et al. 2018). Slimy sculpin have been observed to consume plant material, aquatic insects, crustaceans, and smaller fish. Many large predaceous fish, such as lake trout and burbot, feed on slimy sculpin (Scott and Crossman 1973).

Slimy sculpin spawn in spring freshet conditions in shallow water typically under overhead cover such as a rock or log (ADFG 2004a). No major seasonal migrations have been observed for this species; however, some small migrations (<120 m) have been observed prior to spawning as males select optimal nest sites (Gray et al. 2018). This species does not travel large distances due to its general inability to swim resulting from the lack of a swim bladder (ADFG 2004a; Gray et al. 2018). Juvenile slimy sculpin emerge after approximately 30 days post fertilization which generally coincides with early to mid-summer (ADFG 2004a; Gray et al. 2018).

Slimy sculpin have been observed or captured in all five watersheds (Table 4.2; Table 4.3). Slimy sculpin had the highest abundance in the Kennarctic River (electrofishing CPUE = 2.28 fish/min), followed by Hood River (electrofishing CPUE = 1.61 fish/min) and Burnside River (electrofishing CPUE = 1.34 fish/min) watersheds (Table 4.3). Slimy sculpin were the most abundant species in Hood River and the second most abundant species in the Burnside and Kennarctic River watersheds. Total length of captured slimy sculpin ranged from 13 to 115 mm (mean= 66 mm, SD ± 16 with more than 75% of sculpin recorded less than 100 mm in total length (MMG 2013).

4.1.2.7 Longnose Sucker

Longnose sucker is a well distributed species ranging across most of Canada, including throughout Nunavut (Scott and Crossman 1973). Longnose sucker spawn in spring months in Canada (April to May), generally in streams and shallows of lakes with water depths from 15 to 28 centimetres (cm) over small gravel substrate (Scott and Crossman 1973). Spawning migrations are triggered when water temperatures exceed 5°C and involve mass movement of longnose sucker upstream during evening hours (Scott and Crossman 1973). Eggs are deposited on spawning gravel and begin hatching eight days post fertilization (Scott and Crossman 1973). Outbound juvenile migration from streams to open water lakes occurs an additional one to two weeks post emergence (Scott and Crossman 1973). Longnose sucker diet is highly variable but is generally comprised of a variety of aquatic invertebrates (Scott and Crossman 1973).

Longnose sucker have only been observed or captured in low abundances in the Burnside River watershed (Table 4.2; MMG 2013). Seven longnose suckers sampled had fork lengths that ranged from 280 to 500 mm (mean=129 mm, SD ± 20) (MMG 2013).

4.1.2.8 Ninespine Stickleback

Ninespine stickleback are a wide-ranging species found in freshwater environments and nearshore marine/brackish environments across the northern hemisphere, including all Canadian provinces and territories (Scott and Crossman 1973). Ninespine stickleback utilize a variety of aquatic habitat types and depths including ponds, lakes, estuaries, and streams with both vegetated and open sand substrates (ADFG 2004b). Some degree of aquatic vegetation is typically present during spawning, as the male uses this vegetation to construct a nest prior to initiation of mating (Scott and Crossman 1973). Ninespine stickleback spawning occurs in freshwater during the spring and summer months (May to late July in the Arctic), including multiple spawning events per individual per season by both sexes (Scott and Crossman 1973; Grant and Lee 2004). Ninespine stickleback primarily consume small aquatic invertebrates such as crustaceans and aquatic insects, however they are also known to consume small fish fry and eggs (ADFG 2004b; Scott and Crossman 1973).

Ninespine stickleback have been previously observed or captured in the Burnside River, Kennarctic River, and Arctic Ocean watersheds (Table 4.2; Table 4.3). Ninespine stickleback were captured in greater abundances from the Kennarctic River watershed than the Burnside River and Arctic Ocean watersheds, with total electrofishing CPUE of 1.94, 0.13, and 0.10 fish/min, respectively (Table 4.3).

4.2 Project Existing Conditions

Existing conditions for fish habitat and fish communities have been separated into the following subsections for the Port and the Road LAA.

4.2.1 Port LAA

4.2.1.1 Watercourse Crossings

The watercourses assessed within the Port LAA are mainly low gradient streams located in grassy vegetated tundra valleys and plains bordering the Arctic Ocean. Eleven watercourses and four waterbodies have been identified within the Port LAA. Five watercourses (D2, D5, D6, WC-001 and WC-002) were classified as small permanent streams and one was classified as a large permanent (WC-004), which is a crossing of the Kennarctic River. Intermittent/ephemeral watercourses within the Port LAA were D1,148B, WC-003, EPH-01, and EPH-D6. Several waterbodies were also within the Port LAA, including four airstrip ponds (P1-P4) and three small ponds at D4 (Table 4.4). Detailed habitat results for the assessed watercourses and waterbodies within the Port and Aerodrome PDAs are provided in Appendix C.1, as well as a mapbook of the watercourse crossings are provided in Appendix B.1.

Table 4.4 Summary of Watercourses and Waterbodies Assessed During the 2024 and 2025 Field Program

Watercourse ID	Stream Classification	Site Assessed Historically	Number of Stream Transects	Fish Bearing Status	Comments
Port PDA					
WC-001	Small Permanent	No	1	Yes	Small defined channel downstream of wetland before flow to Arctic Ocean.
D2	Small Permanent	Yes	8	Yes	Upstream of crossing predominantly run habitat with alternating riffle/pool habitat. Downstream of crossing has flat habitat with areas of pool habitat and some riffles.
D1	Intermittent/Ephemeral	Yes	n/a	No	Low lying area, no channel definition. Wetted areas amongst mossy ground.
148B	Intermittent/Ephemeral	Yes	n/a	No	No defined channel, drainage wetland area, some wetted areas.
WC-003	Intermittent/Ephemeral	No	n/a	No	No defined channel, wetland drainage with pond/pool areas.
D4	Pond	Yes	n/a	No	Three shallow ponds (<0.5 m wetted depth) adjacent to crossing. No defined channel at crossing.
Aerodrome PDA					
WC-004	Large Permanent	No	3	Yes	Large permanent that crosses the Kennarctic River, depths were too great to safely assess.
D5	Small Permanent	Yes	6	Yes	The upstream end of the survey reach predominately flat and wetland habitat with lots of grasses and aquatic vegetation. There are several areas where the channel is undefined and flows overland through grasses. The downstream end of the survey reach was predominately run habitat with alternating riffle-pool/flat habitat.
WC-002	Small Permanent	No	5	No	Habitat was wetland/marsh with areas of no defined channel, particularly in upstream reach. No fish observed in surveyed reach.
D6	Small Permanent	Yes	18	Yes	Habitat predominately flat habitat with riffles, pools, and runs.
EPH-D6	Intermittent/Ephemeral	No	n/a	No	Ephemeral channel extends for approximately 625 m before draining into D6.

Watercourse ID	Stream Classification	Site Assessed Historically	Number of Stream Transects	Fish Bearing Status	Comments
EPH-D6-Ponds	Intermittent/Ephemeral	No	n/a	No	Ephemeral channel found downstream of the ponds. Undefined channel/wetland enters D6 approximately 700 m downstream of the ponds.
Airstrip Ponds (P1 to P4)	Ponds	No	n/a	No	Four large ponds within Aerodrome PDA.

Note:
n/a = not applicable.

The mean bankfull depth of the assessed watercourses range between 0.11 m to 0.9 m (Table 4.5). Mean wetted depth is less than 0.64 m throughout the assessed reaches. Channel widths mean range from 1.45 m to 75 m, with wetted widths from 1.45 m to 70 m. Flat is the most common habitat unit in the watercourses that pass through the Port and Aerodrome PDA (Table 4.5). Dominant substrates are organics and fines, with some sand and cobble (Table 4.5).

Instream cover is primarily provided by instream vegetation and water visibility. Small woody debris and boulders also provide refugia for fish (Appendix C, Table C.1-1). Overhead cover is provided by grass and shrubs. Undercut banks provide some overhead coverage in D6. Canopy closure is non-existent as the Port and Aerodrome PDA is in the Arctic Tundra, where tall vegetation high enough to provide canopy coverage are absent. Grasses are the dominant riparian vegetation, and shrubs and wetland vegetation is subdominant (Table 4.5; Appendix C, Table C.1-1).

Similar to the assessed watercourses, the airstrip ponds are primarily composed of organics and fines substrates (Table 4.6). Instream cover is provided by vegetation, including emergent and submergent vegetation and some algae. Grasses and wetlands are the dominant riparian vegetation in P1, P3, and P4; P2 riparian vegetation is primarily grasses with some shrubs (Table 4.6).

Table 4.5 Summary of Channel Measurements for Small and Large Permanent Watercourses Within the Port and Aerodrome PDAs, 2024 and 2025

Watercourse ID	Reach Length (m)	Dominant Habitat Type	Mean Wetted Width (m)	Mean Channel Width (m)	Mean Bankfull Max (m)	Mean Wetted Depth (m)	Mean Gradient (%)	Substrate		Total Cover (%)[1]	Dominant Riparian
								Dom	Sub Dom		
D2	2,440	Flat	1.49	1.74	0.81	0.44	2	Cobble	Organics	35	Grasses
D5	1,183	Flat	1.49	1.53	0.41	0.29	1	Organics	Fines	30	Grasses
D6	4,749	Flat	2.92	3.96	0.90	0.41	1.5	Organics	Fines	40	Grasses
WC-001	75	Flat	1.45	1.45	0.80	0.64	1	Organics	Fines	45	Grasses
WC-002	1,600	Wetland	1.59	1.97	0.20	0.11	1	Fines	Sand	65	Wetland
WC-004	111	Run (>1.0 m)	70.00	75.00	-	-	1	Fines	-	98	Shrubs

Notes:

[1] Total cover includes both overhead and instream cover (%).

m = metres

"-" data not available.

Table 4.6 Summary of Riparian, Substrate, and Cover Characteristics for Airstrip Ponds, August 2024

Pond ID	Riparian Vegetation Type (%)				Substrate Composition (%)							Overhead Cover (%)	Instream Cover (%)	Aquatic Vegetation (%)			Comments
	Bare	Grass	Shrub	Wetland	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock			Emergent	Submergent	Algae	
P1	0	50	5	45	40	40	20	0	0	0	0	30	30	90	10	0	Large pond with lots of emergent vegetation
P2	0	90	10	0	40	20	20	20	0	0	0	0	20	100	0	0	Large pond with sand/organic sediments and abundant emergent vegetation, and grass dominated riparian
P3	15	25	10	50	50	50	0	0	0	0	0	10	25	50	25	25	Organic, fines pond with some instream vegetation
P4	5	40	5	50	50	50	0	0	0	0	0	5	10	90	0	10	Large pond with grass/wetland riparian and emergent vegetation

Fish community sampling was completed at watercourses in the Port and Aerodrome PDAs using minnow trapping and backpack electrofishing. Table 4.7 summarizes the fishing effort and capture results, detailed fish sampling efforts are provided in Appendix C.1 Table C.1-3. During the fish community survey, a total of 94 ninespine stickleback (Photo 1) and three lake trout (Photo 2) were captured from the watercourses within the Port and Aerodrome PDAs (Table 4.7). Minnow trapping was the most effective for capturing ninespine stickleback (total CPUE 5.0 fish/h); lake trout were only captured by electrofishing (total CPUE 0.7 fish/100s). Three lake trout were captured at watercourses D5 and D6. Watercourse D2 had the highest abundance of ninespine stickleback captured (75 total; total CPUE 4.52 fish/h). There were no fish visually observed or captured in the four ponds in the Aerodrome PDA (total 171 h minnow trapping).

Table 4.7 Fishing Effort Summary and Results for Minnow Trapping and Electrofishing in the Port and Aerodrome PDAs, 2024 to 2025

Watercourse ID	Historical Fish Species Caught	Sampling Effort	Effort[1]	Catch		
				Species	Count	CPUE
D2	NNST	EF	393	NNST	17	4.33
		MT	16.6	NNST	75	4.52
D5	NFC	EF	368	LKTR	1	0.27
		MT	20.7	NFC	0	0
D6	NFC	EF	1015	LKTR	2	0.21
Airstrip Ponds (P1-P4)	-	MT	170.9	NFC	0	0
WC-004	-	MT	4.7	NNST	2	0.43

Notes:
[1] Units for effort for backpack electrofishing = seconds, minnow trapping, gill netting, and angling = hours.
CPUE = catch per unit effort; EF = backpack electrofishing; MT = minnow trapping; NNST = ninespine stickleback; LKTR = lake trout; NFC = no fish captured; "-" = not sampled.

Photo 1 Ninespine stickleback captured at D2, August 2024

Photo 2 Lake trout captured electrofishing at D6, August 2024

4.2.1.2 Potential Water Intake Lakes

Fish habitat mapping was completed at two potential water intake lakes, PWI-1 and PWI-2, to quantify and qualify existing fish habitat potential in the lakes. Fish community sampling was also completed at PWI-1 to evaluate fish species presence and life stage use of the lake. The following sections summarize fish and fish habitat and detailed results for the lakes are provided in Appendix C.2.

PWI-1

The potential water intake lake location PWI-1 has a surface area of 45.6 ha and a perimeter length of 2.86 km. A total of 10 habitat units were assessed along the perimeter of PWI-1 in the riparian and littoral zones (Figure 4.1; Table 4.8). Detailed fish habitat data and photographs of each lake habitat unit and additional physical features are presented in Appendix C.2

The lake shoreline is stable, and the riparian zone is predominantly rocky, with coarse substrates (i.e., cobble, boulder, bedrock) (Table 4.8, Appendix C.2 Photos 2, 5, 6, 9, 11 and 12). Shrubs and grasses are the subdominant riparian types along the shoreline (Appendix C.2 Photo 1, 4, 8 and 10). Littoral overhead cover provided by riparian vegetation is sparse along the perimeter of the lake, and minimal overhead cover is provided by shrubs.

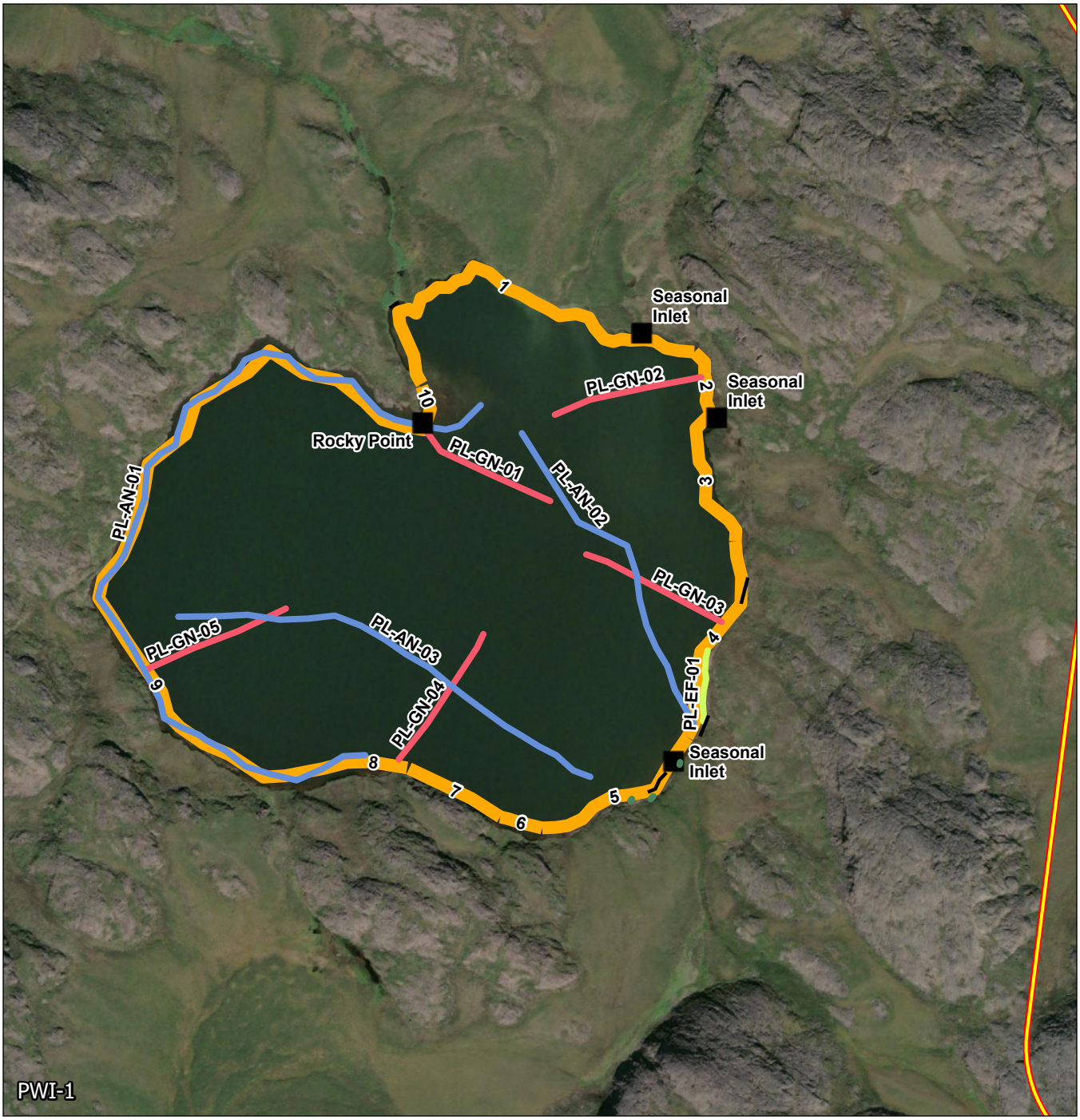
Substrate within the littoral zone is predominantly boulders, and fines are subdominant (Table 4.8, Appendix C.2 Photo 3). In-lake coverage in the littoral zone is variable throughout the 10 habitat units and ranges from 0-85%. Boulders are dominant and vegetation is the subdominant in-lake cover type in the littoral zone (Table 4.8). In-lake vegetation is primarily comprised of emergent and submerged vegetation; some macrophytic algae are in Habitat Unit 4, and no in-lake vegetation is present in Habitat Units 6, 7, 9 and 10.

Water quality data collected at three stations within PWI-1 are summarized in Appendix C.2, Table C.2-3 and C.2-4. In situ water quality profiles were collected (Table 4.9) and included temperature, pH, dissolved oxygen, specific conductivity, and turbidity. Water quality was within CCME WQG-FAL (CCME 2025). Water quality samples were compared to the CCME WQG-FAL (CCME 2025) and Health Canada Drinking Water Guideline (DWG) (Health Canada 2024). Water concentrations for these parameters in samples for PWI-1 were below guidelines for all sampling locations (Table 4.10).

Three seasonal drainages are present on the east side of PWI-1 and were dry at the time of the site visit (Figure 4.1).

During the fish community survey, a total of 1,155 ninespine stickleback (*Pungitius pungitius*) were captured from the PWI-1 (Table 4.11). Detailed fish capture data are presented in Appendix C.2 and Table 4.11.

Ninespine stickleback were the only fish captured and observed in PWI-1. Minnow trapping was the most effective for capturing ninespine stickleback (CPUE 86.6; Table 4.8), however thousands were visually observed throughout the lake while conducting fish and fish habitat sampling and fishing efforts.



Habitat Feature

Fishing Method

- Angling
- Backpack Electrofisher
- Gill Net
- Minnow Trap

Lake Habitat

Sandy Beach

Grays Bay Road

0 100 200 Metres

(At original document size of 8.5x11) 1:8,000

N

Notes

1. Coordinate System: WGS 1984 UTM Zone 12N

2. Data Sources: Government of Canada, Stantec, Vantor

NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

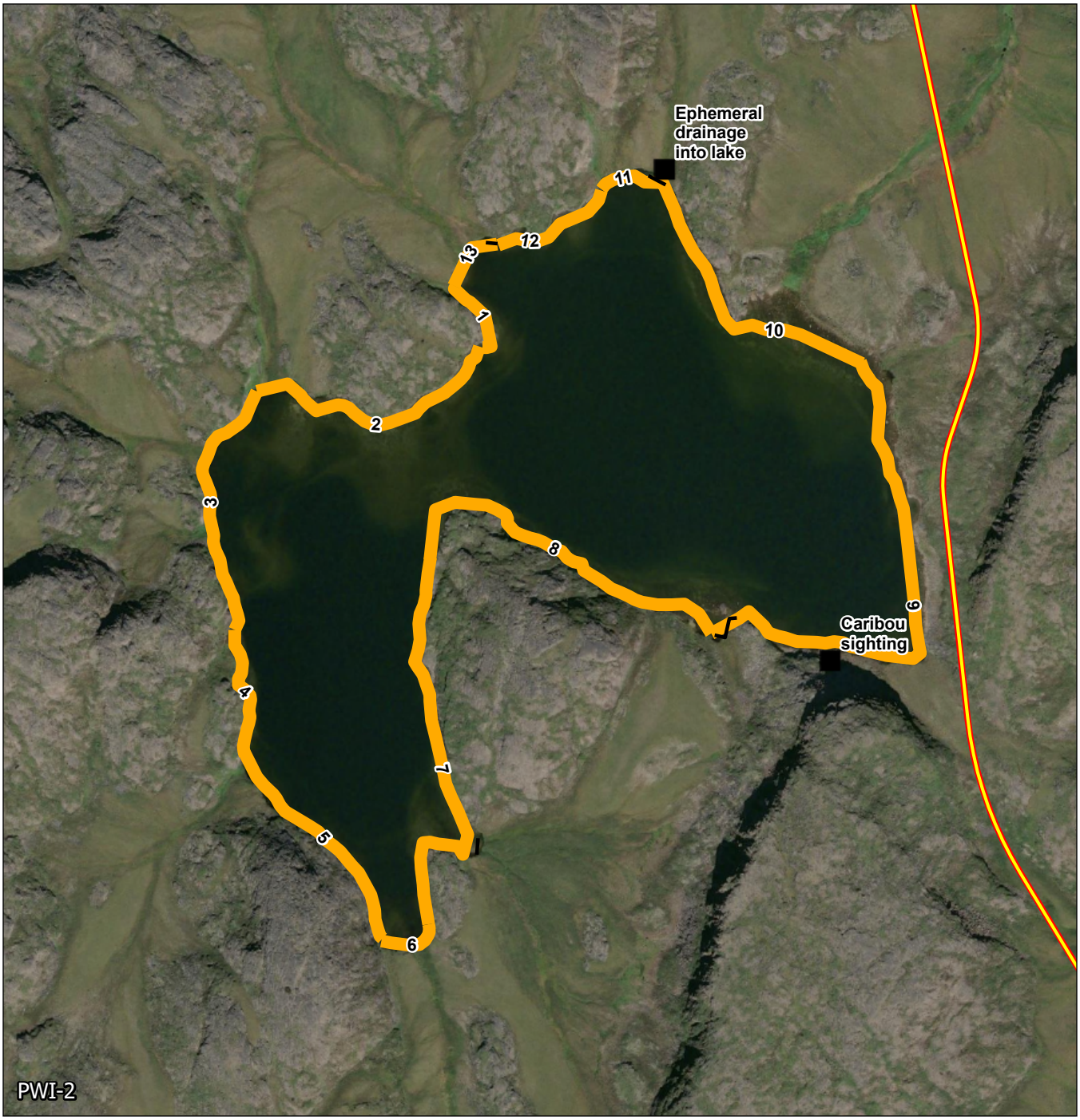
Prepared by DS on 2026-02-02
TR by SA on 2026-02-02

Client/Project 123514868_112

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
4.1

Title
Fish and Fish Habitat Assessment at PWI-1



Habitat Feature

Fishing Method

- Angling
- Backpack Electrofisher
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Lake Habitat

Sandy Beach

Grays Bay Road

0 100 200 Metres

(At original document size of 8.5x11) 1:8,000

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Notes

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TR by SA on 2026-02-02

Client/Project
123514868_112

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
4.1

Title
Fish and Fish Habitat Assessment at PWI-2

2 of 2

Table 4.8 Summary of Riparian and Littoral Zone Survey for PWI-1 Habitat Assessment, 2024

Habitat Unit	Riparian Composition (%)					Littoral Zone Substrate Composition (%)						Littoral Zone in Lake Cover (%)					Aquatic Vegetation (%)		
	Rocky[1]	Grass	Shrub	Wetland	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock	Total	SWD	Cobble	Boulder	Vegetation	Emergent	Submerged	Algae
1	0	15	75	10	45	40	0	0	0	10	0	80	15	0	10	50	25	75	0
2	50	25	25	0	0	10	10	10	30	30	0	30	0	20	10	0	100	0	0
3	0	25	75	0	40	40	0	0	5	15	0	80	25	5	10	45	25	75	0
4	40	30	30	0	0	25	10	30	15	20	0	30	0	20	10	5	50	0	50
5	20	20	60	0	10	20	20	10	10	30	0	20	0	0	15	5	100	0	0
6	25	25	25	25	20	10	10	0	30	30	0	10	0	0	30	20	0	0	0
7	90	0	10	0	0	20	20	0	0	30	30	0	0	0	30	0	0	0	0
8	10	40	25	25	20	20	20	0	0	40	0	15	0	0	10	5	100	0	0
9	80	0	20	0	10	30	5	0	5	20	30	30	0	0	30	0	0	0	0
10	70	5	25	0	0	10	0	0	0	55	30	40	10	0	40	0	0	0	0

Note:

[1] Rocky shorelines were comprised of coarse substrates (i.e., cobble, boulder, bedrock).

Table 4.9 Summary of In Situ Water Quality at PWI-1, 2024

Water Quality Stations	Temperature (ºC)		Dissolved Oxygen (mg/L)		Specific Conductivity (µS/cm)		Turbidity (NTU)		pH	
	min	max	min	max	min	max	min	max	min	max
PWI-1-1	11.79	13.40	9.91	11.03	183.9	184.5	4.20	6.11	7.46	7.87
PWI-1-2	12.08	13.54	10.65	11.01	184.1	184.7	4.70	8.76	7.62	7.78
PWI-1-3	12.01	14.03	10.80	10.93	182.2	184.1	3.32	4.44	7.75	7.82

Notes:
min = minimum; max = maximum
Bolded text indicates an exceedance of CCME WQG-FAL (CCME 2025).

Table 4.10 Water Quality Results from PWI-1 Sampling Locations, August 2024

Parameter	Units	Health Canada[1]	CCME WQG-FAL[2]		Mean[3]	±	Standard Deviation
			Short-term	Long-term			
Anions and Nutrients							
Ammonia, total (as N)	**mg/L**	-	-	0.715	0.0052	±	0.0005
Chloride	mg/L	250	640	120	46.9	±	0.4
Fluoride	mg/L	1.50	-	-	0.027	±	0.001
Nitrate (as N)	mg/L	45	550	13	0.0051	±	0.0003
Nitrite (as N)	mg/L	3.0	-	0.197	<0.0010		N/A
Total Metals							
Aluminum	mg/L	2.9	-	0.10	0.0562	±	0.0074
Antimony	mg/L	0.006	-	-	<0.00010	±	N/A
Arsenic	mg/L	0.010	-	0.005	0.00037	±	0.00002
Barium	mg/L	2.0	-	-	0.00271	±	0.00014
Boron	mg/L	5.0	29	1.5	<0.010	±	N/A
Cadmium	mg/L	0.0070	0.00067	0.000060	<0.0000050	±	N/A
Chromium	mg/L	0.050	-	0.001 (CrVI); 0.0089 (CrIII)	<0.00050	±	N/A
Copper	mg/L	2.0	-	0.0020	0.0012	±	0.0001
Iron	mg/L	0.30	-	0.30	0.105	±	0.016
Lead	mg/L	0.005	-	0.0010	0.000051	±	0.000002
Manganese	mg/L	0.12	-	-	0.0439	±	0.0085
Mercury	mg/L	0.0010	-	0.000026	<0.0000050	±	N/A
Nickel	mg/L	-	-	0.025	0.00058	±	0.00010
Selenium	mg/L	0.050	-	0.0010	<0.000050	±	N/A
Silver	mg/L	-	-	0.00025	<0.000010	±	N/A
Sodium	mg/L	200	-	-	25.3	±	0.6
Thallium	mg/L	-	-	0.0008	<0.000010	±	N/A
Uranium	mg/L	0.020	0.033	0.0015	0.000024	±	0.000000
Zinc	mg/L	5.0	0.044	0.0080	<0.0030	±	N/A
Dissolved Metals							
Manganese	mg/L	-	2.47	-	0.00052	±	0.00009
Zinc	mg/L	-	0.044	0.0090	0.0011	±	0.0002
Volatile Organic Compounds							
Dichlorobenzene, 1,2-	µg/L	-	-	0.70	<0.50	±	N/A
Dichlorobenzene, 1,3-	µg/L	-	-	150	<0.50	±	N/A
Dichlorobenzene, 1,4-	µg/L	5.0	-	26	<0.50	±	N/A
Trichlorofluoromethane	µg/L	-	-	13.3	<0.50	±	N/A
Carbon tetrachloride	µg/L	2.0	-	-	<0.50	±	N/A

Parameter	Units	Health Canada[1]	CCME WQG-FAL[2]		Mean[3]	±	Standard Deviation
			Short-term	Long-term			
Dichloroethane, 1,2-	µg/L	5.0	-	100	<0.50	±	N/A
Dichloromethane	µg/L	50	-	98.1	<1.0	±	N/A
Tetrachloroethylene	µg/L	10	-	-	<0.50	±	N/A
Trichloroethylene	µg/L	5.0	-	-	<0.50	±	N/A
Benzene	µg/L	5.0	-	370	<0.50	±	N/A
Ethylbenzene	µg/L	140	-	90	<0.50	±	N/A
Methyl-tert-butyl ether [MTBE]	µg/L	15	-	10000	<0.50	±	N/A
Styrene	µg/L	-	-	72	<0.50	±	N/A
Toluene	µg/L	60	-	2.0	<0.40	±	N/A
Xylenes, total	µg/L	90	-	-	<0.50	±	N/A
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	µg/L	-	-	5.8	<0.010	±	N/A
Acridine	µg/L	-	-	4.4	<0.010	±	N/A
Anthracene	µg/L	-	-	0.012	<0.010	±	N/A
Benz(a)anthracene	µg/L	-	-	0.018	<0.010	±	N/A
Benzo(a)pyrene	µg/L	0.040	-	0.015	<0.0050	±	N/A
Fluoranthene	µg/L	-	-	0.040	<0.010	±	N/A
Fluorene	µg/L	-	-	3.0	<0.010	±	N/A
Naphthalene	µg/L	-	-	1.1	<0.050	±	N/A
Phenanthrene	µg/L	-	-	0.40	<0.020	±	N/A
Pyrene	µg/L	-	-	0.025	<0.010	±	N/A
Quinoline	µg/L	-	-	3.40	<0.050	±	N/A

Notes:

Bold denotes exceedance of the short-term CCME WQG-FAL; Italics denotes exceedance of the long term CCME WQG-FAL; underline denotes exceedance of the Health Canada WQG.

1 Health Canada DWG (Health Canada 2024)

2 CCME WQG-FAL (CCME 2025)

3 Summary statistics were calculated using the DL as the value for results below DL

Table 4.11 Catch Per Unit Effort for Fish Captured from PWI-1, August 2024

Sampling Method	Sampling Effort		Ninespine Stickleback
Backpack Electrofishing	456 s	Abundance	125
		CPUE (#fish/min)	16.4
Minnow Trapping	35.8 h	Abundance	1,030
		CPUE (#fish/ h)	86.6
Gill Netting	7.7 h	Abundance	0
		CPUE (#fish/100m^2/h)	0
Angling	0.7 h	Abundance	0
		CPUE (#fish/angler/h)	0

PWI-2

The potential water intake lake location PWI-2 has an approximate surface area of 43.6 ha and a perimeter length of 4.0 km. A total of 13 habitat units were assessed along the perimeter of PWI-2 in the riparian and littoral zones (Table 4.12; Figure 4.1). Detailed fish habitat data and photographs of each lake habitat unit and additional physical features are presented in Appendix C.3.

The lake shoreline is stable with areas of moderate stability, and the riparian area is predominately rocky with coarse substrates (i.e., cobble, boulder, and bedrock) (Table 4.12; Appendix C.3 Photos 1, 3, 5, 7, 8, and 21). Shrubs and grasses are the subdominant riparian types with some areas of wetland vegetation. Similar to PWI-1, overhead cover provided by riparian vegetation is limited along the perimeter of the lake, and minimal overhead cover is provided by shrubs.

Substrate within the littoral zone is predominantly fines and organics with coarse substrates (cobble, boulder, and bedrock) (Table 4.12; Appendix C.3 Photos 2, 4, 6, 10, 14, 16, 18, and 22). In-lake cover in the littoral zone is variable throughout the habitat units, ranging from 5 to 75%. Boulders provide the most cover with cobble and in-lake vegetation as the subdominant cover type in the littoral zone (Table 4.12). Vegetation within the littoral zone is primarily comprised of emergent and submergent vegetation. No instream vegetation was observed in habitat units 4, 5, and 7.

In situ water quality profiles were collected at three stations within PWI-2 (Table 4.13; Appendix C.3 Table C.3-2). Water quality data collected included temperature, pH, dissolved oxygen, specific conductivity, and turbidity. Water quality was within CCME WQG-FAL (CCME 2025). Water quality samples were also collected at the three stations and compared to the CCME WQG-FAL (CCME 2025) and Health DWG (Health Canada 2024) (Appendix C.3 Table C.3-3). Water concentrations for these parameters in samples for PWI-2 were below guidelines for all sampling locations, with the exception of total copper (range 0.00252 to 0.00268 mg/L) which was above the long-term CCME WQG-FAL of 0.0020 mg/L in all samples (Table 4.14; Appendix C.3 Table C.3-3).

Table 4.12 Summary of Riparian and Littoral Zone Survey for PWI-2 Habitat Assessment, 2025

Habitat Unit	Riparian Composition (%)				Substrate Composition (%)							Overhead Cover (%)		Instream Cover (%)					Instream Vegetation (%)		
	Rocky[1]	Grass	Shrub	Wetland	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock	Total	Riparian	Total	SWD	Cobble	Boulder	Vegetation	Emergent	Submerged	Algae
1	100	0	0	0	30	60	0	0	0	10	0	5	0	10	0	0	10	10	0	100	0
2	20	60	20	0	0	20	0	0	20	50	1	5	5	75	0	20	60	5	75	25	0
3	25	25	25	25	20	20	0	0	20	35	5	5	5	50	0	10	40	10	75	25	0
4	100	0	0	0	0	55	0	0	5	10	25	0	0	5	0	0	5	0	0	0	0
5	90	5	5	0	0	75	0	0	0	15	10	0	0	5	0	0	5	0	0	0	0
6	0	25	75	0	75	15	5	0	3	2	0	5	5	50	25	0	0	40	25	75	0
7	70	25	5	0	0	30	5	5	20	40	0	0	0	30	0	10	20	0	0	0	0
8	60	20	20	0	0	20		5	20	35	20	5	5	50	0	10	40	5	25	75	0
9	25	50	25	0	0	15	0	5	25	55	5	3	3	50	5	40	50	5	75	25	0
10	20	60	20	0	0	5	5	5	40	40	0	5	5	30	0	40	10	5	100	0	0
11	0	50	0	50	45	45	0	0	5	5	0	5	5	20	0	0	0	20	75	25	0
12	25	50	25	0	5	50	0	5	15	20	0	0	0	25	0	20	20	5	75	25	0
13	0	25	75	0	100	0	0	0	0	0	0	5	5	10	10	0	0	10	25	75	0

Note:

[1] Rocky shorelines were comprised of coarse substrates (i.e., cobble, boulder, bedrock).

Table 4.13 Summary of In Situ Water Quality at PWI-2, 2025

Water Quality Stations	Temperature (ºC)		Dissolved Oxygen (mg/L)		Specific Conductivity (µS/cm)		Turbidity (NTU)		pH	
	min	max	min	max	min	max	min	max	min	max
PWI-2-1	9.33	9.83	10.97	11.19	60.18	60.35	1.16	1.37	6.80	6.99
PWI-2-2	9.39	9.74	11.17	11.25	59.73	59.83	1.05	1.32	6.76	7.14
PWI-2-3	9.48	9.94	11.18	11.30	59.53	59.79	1.03	1.49	6.89	7.31

Notes:

min = minimum; max = maximum

Bolded text indicates an exceedance of CCME WQG-FAL (CCME 2025).

Table 4.14 Water Quality Results from PWI-2 Sampling Locations, July 2025

Parameter	Units	Health Canada[1]	CCME WQG-FAL[2]		Mean[3]	±	Standard Deviation
			Short-term	Long-term			
Anions and Nutrients							
Ammonia, total (as N)	mg/L	-	-	3.26	0.0054	±	0.0009
Chloride	mg/L	250	640	120	10.56	±	1.01
Fluoride	mg/L	1.50	-	-	<0.020	±	N/A
Nitrate (as N)	mg/L	45	550	13	<0.0050	±	N/A
Nitrite (as N)	mg/L	3.0	-	0.197	<0.0010	±	N/A
Total Metals							
Aluminum	mg/L	2.9	-	0.10	0.0583	±	0.0039
Antimony	mg/L	0.006	-	-	<0.00010	±	N/A
Arsenic	mg/L	0.010	-	0.005	0.00018	±	0.00001
Barium	mg/L	2.0	-	-	0.00212	±	0.00009
Boron	mg/L	5.0	29	1.5	<0.010	±	N/A
Cadmium	mg/L	0.0070	0.00026	0.000040	<0.0000050	±	N/A
Chromium	mg/L	0.050	-	0.001 (CrVI); 0.0089 (CrIII)	0.00053	±	0.00007
Copper	mg/L	2.0	-	0.0020	*0.0026*	±	0.0001
Iron	mg/L	0.30	-	0.30	0.077	±	0.007
Lead	mg/L	0.005	-	0.0010	0.000063	±	0.000016
Manganese	mg/L	0.12	-	-	0.00559	±	0.00028
Mercury	mg/L	0.0010	-	0.000026	<0.0000050	±	N/A
Nickel	mg/L	-	-	0.025	0.00054	±	0.00002
Selenium	mg/L	0.050	-	0.0010	0.000050	±	0
Silver	mg/L	-	-	0.00025	<0.000010	±	N/A
Sodium	mg/L	200	-	-	6.38	±	0.21
Thallium	mg/L	-	-	0.0008	<0.000010	±	N/A
Uranium	mg/L	0.020	0.033	0.0015	0.000131	±	0.000006
Zinc	mg/L	5.0	0.019	0.0090	<0.0030	±	N/A
Dissolved Metals							
Manganese	mg/L	-	2.47	-	0.00106	±	0.00009
Zinc	mg/L	-	0.044	0.0090	0.0019	±	0.0004
Volatile Organic Compounds							
Dichlorobenzene, 1,2-	µg/L	-	-	0.70	<0.50	±	N/A
Dichlorobenzene, 1,3-	µg/L	-	-	150	<0.50	±	N/A
Dichlorobenzene, 1,4-	µg/L	5.0	-	26	<0.50	±	N/A
Trichlorofluoromethane	µg/L	-	-	13.3	<0.50	±	N/A

Parameter	Units	Health Canada[1]	CCME WQG-FAL[2]		Mean[3]	±	Standard Deviation
			Short-term	Long-term			
Carbon tetrachloride	µg/L	2.0	-	-	<0.50	±	N/A
Dichloroethane, 1,2-	µg/L	5.0	-	100	<0.50	±	N/A
Dichloromethane	µg/L	50	-	98.1	<1.0	±	N/A
Tetrachloroethylene	µg/L	10	-	-	<0.50	±	N/A
Trichloroethylene	µg/L	5.0	-	-	<0.50	±	N/A
Benzene	µg/L	5.0	-	370	<0.50	±	N/A
Ethylbenzene	µg/L	140	-	90	<0.50	±	N/A
Methyl-tert-butyl ether [MTBE]	µg/L	15	-	10000	<0.50	±	N/A
Styrene	µg/L	-	-	72	<0.50	±	N/A
Toluene	µg/L	60	-	2.0	<0.40	±	N/A
Xylenes, total	µg/L	90	-	-	<0.50	±	N/A
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	µg/L	-	-	5.8	<0.010	±	N/A
Acridine	µg/L	-	-	4.4	<0.010	±	N/A
Anthracene	µg/L	-	-	0.012	<0.010	±	N/A
Benz(a)anthracene	µg/L	-	-	0.018	<0.010	±	N/A
Benzo(a)pyrene	µg/L	0.040	-	0.015	<0.0050	±	N/A
Fluoranthene	µg/L	-	-	0.040	<0.010	±	N/A
Fluorene	µg/L	-	-	3.0	<0.010	±	N/A
Naphthalene	µg/L	-	-	1.1	<0.050	±	N/A
Phenanthrene	µg/L	-	-	0.40	<0.020	±	N/A
Pyrene	µg/L	-	-	0.025	<0.010	±	N/A
Quinoline	µg/L	-	-	3.40	<0.050	±	N/A

Notes:

Bold denotes exceedance of the short-term CCME WQG-FAL; Italics denotes exceedance of the long term CCME WQG-FAL; underline denotes exceedance of the Health Canada WQG.

1 Health Canada DWG (Health Canada 2024)

2 CCME WQG-FAL (CCME 2025)

3 Summary statistics were calculated using the DL as the value for results below DL

4.2.2 Road LAA

A total of 47 watercourses were assessed within the Road LAA: 18 large permanent, seven small permanent, 16 ephemeral, three intermittent, and three boulder fields. The following sections summarize fish habitat and fish community results by stream class; detailed fish habitat results for these watercourses are provided in Appendix C.4 and a mapbook of the watercourse crossings are provided in Appendix C.5.

4.2.2.1 Large Permanent Watercourses

Large permanent watercourses are present in all four watersheds along the Road LAA, with the greatest number present within the Kennarctic River (seven crossings) and Burnside River watersheds (six crossings; Table 4.15). Six of the larger permanent watercourses are named rivers, including D44 and DM2 (Kennarctic River), 115 (James River), 104 (Frayed Knots), 94 (Hood River), and 62 (Burnside River). Results from the drone imagery and images upstream and downstream at the road centreline for the large permanent watercourse crossings are provided in Appendix C.5. The mean channel widths range from 10.9 m (watercourse D42) to 67.4 m (watercourse 62), with wetted widths from 9.8 m (watercourse 133D) to 60 m (watercourse 88) (Table 4.15). Mean bankfull depths of the assessed watercourses are lowest at watercourse 104 (0.5 m) and greatest at DM2 (1.9 m). Wetted depths average between 0.24 m (watercourse 63) to 1.42 m (watercourse 104) (Table 4.15).

Riparian habitat along the watercourses is predominantly shrubs at 10 of the 18 watercourses (Table 4.15). Several watercourses are predominantly bare (i.e., comprised of coarse substrates including cobble, boulder, and bedrock), this was observed at watercourses D44 (Kennarctic), 133D, 127A, 94 (Hood), and 87. The large permanent watercourses are mainly low gradient, with the exception of 133D which had several steep falls within the surveyed area and a mean gradient of 20.6º. Dominant habitat types present during the field survey varied between the large permanent watercourses, ranging between runs, cascade/rapids, and riffle (Table 4.15). The dominant substrate across all large permanent watercourses is boulder, with the exception of watercourses D14, 127A and 105 which have dominant substrates of fines cobble and organics, respectively. The sub-dominant substrate varies between watercourses and includes cobble, bedrock, fines, organics, and boulder (Table 4.15).

Refugia for fish also varies among the large permanent watercourses, with total cover ranging from 0% at watercourse 133D to 90% at watercourse 72 (Table 4.15). Overhead cover is mainly provided by grasses and shrubs, some undercut banks were observed at watercourse 133D and 71. Instream cover is provided by boulders, water visibility, and instream vegetation, some small woody debris also provided cover at watercourses 71 and 62 (Burnside).

Fish community sampling has historically been completed at large permanent watercourses. Additional fish sampling was completed during the 2025 surveys at watercourses 115 (James) and 104 (Frayed Knots), which historically had no fish species caught. Habitat potential evaluations for spawning, rearing, migratory, and overwintering was also completed at each large permanent watercourse in 2025 and ranked as “none”, “poor”, “moderate”, or “high”. Table 4.16 summarizes fish species caught and habitat potential for each large permanent watercourse.

Fish have been captured at all large permanent watercourses, with the exception of 104 (Frayed Knots) (Table 4.16). Fish species caught include slimy sculpin, ninespine stickleback, lake trout, Arctic char, burbot, and round whitefish. Arctic graying and round whitefish were only caught in Burnside River watershed and Arctic char were only caught in the Kennarctic River watershed. Slimy sculpin were caught in large permanents from all watersheds. Lake trout were caught in all watersheds except Burnside River (Table 4.16).

The habitat potential within the surveyed areas varied among the large permanent watercourses (Table 4.16). Spawning potential was highest at DM2 (Kennarctic) and D44 (Kennarctic) and absent from 104 (Frayed Knots) and 123. Rearing habitat potential was high at eight of the 19 watercourses, including DM2 (Kennarctic), D44 (Kennarctic), 104 (Frayed Knots), 87, 72, 68, 62 (Burnside), and 1002. The remaining watercourses had moderate rearing potential, with the exception of 94 (Hood), which was ranked poor due to the extensive cascade/rapid morphology. Migratory habitat potential was moderate to high for the majority of the watercourses due to the absence of documented fish barriers within the surveyed areas. 133D had no migratory habitat potential as several large waterfalls (i.e., >10 m in height) in the surveyed reach likely act as barriers to upstream fish passage. The majority of the large permanent watercourses had poor to no overwintering habitat potential due to inadequate water depths; DM2 (Kennarctic) was the only watercourse with high overwintering habitat potential, D14, D44 (Kennarctic), and 115 (James) had moderate potential.

Table 4.15 Summary of Channel Measurements for Large Permanent Watercourses Within the Road PDA, 2025

Watercourse ID	Watershed	Assessment Length (m)	Dominant Habitat Type	Mean Wetted Width (m)	Mean Channel Width (m)	Mean Bankfull Max (m)[1]	Mean Wetted Depth (m)[1]	Mean Gradient (%)	Substrate		Total Cover (%)	Dominant Riparian[2]
									Dom[1]	Sub Dom[1]		
D14	Kennarctic	356	Run 2 (0.5 – 1.0 m)	15.9	19.0	0.95	0.61	2.4	Fines	Organics	30	Shrub
DM2 (Kennarctic)	Kennarctic	200	Run 2 (0.5 – 1.0 m)	44.2	57.2	1.90	0.72	2.6	Boulder	Cobble	10	Grasses
D42	Kennarctic	190	Cascade/ Rapid	10.0	10.9	0.85	0.38	4.3	Boulder	Cobble	25	Shrubs
D44 (Kennarctic)	Kennarctic	184	Riffle	38.3	63.3	1.50	0.57	1.5	-	-	55	Bare
133D	Kennarctic	240	Cascade/ Rapid	9.8	12.9	1.22	0.28	20.6	Boulder	Cobble	0	Bare
127A	Kennarctic	215	Riffle	9.9	12.4	0.85	0.33	6.2	Cobble	Boulder	25	Bare
123	Kennarctic	184	Run (unclassified)	41.8	61.3	1.50	0.49	2.3	Boulder	Bedrock	80	Shrubs
115 (James)	James	175	Cascade/ Rapid	22.0	26.0	1.61	1.25	2.8	Boulder	Cobble	60	Shrubs
105	Hood	167	Run 1 (>1.0 m)	22.5	26.3	-	-	0.8	Organics	Fines	10	Shrubs
104 (Frayed Knots)	Hood	182	Riffle	33.0	37.3	0.50	1.42	1.7	Boulder	Bedrock	40	Shrubs
94 (Hood)	Hood	167	Cascade/ Rapid	24.0	28.0	-	-	7.0	Bedrock	Boulder	50	Bare
87	Hood	120	Run 2 (0.5 – 1.0 m)	11.1	14.3	0.71	0.28	1.7	Boulder	Cobble	80	Bare
72	Burnside	315	Run 3 (< 0.5 m)	11.0	12.0	0.68	0.30	1.2	Boulder	Cobble	90	Shrubs
71	Burnside	155	Run 2 (0.5 – 1.0 m)	12.9	14.4	0.76	0.39	0.8	Bedrock	Boulder	0	Shrubs

Watercourse ID	Watershed	Assessment Length (m)	Dominant Habitat Type	Mean Wetted Width (m)	Mean Channel Width (m)	Mean Bankfull Max (m)[1]	Mean Wetted Depth (m)[1]	Mean Gradient (%)	Substrate		Total Cover (%)	Dominant Riparian[2]
									Dom[1]	Sub Dom[1]		
68	Burnside	160	Run 2 (0.5 – 1.0 m)	36.7	44.0	0.69	0.29	1.2	Boulder	Cobble	55	Shrubs
63	Burnside	156	Riffle	15.0	31.1	1.21	0.24	2.0	Boulder	Cobble	50	Grasses
62 (Burnside)	Burnside	160	Riffle	55.4	67.4	1.65	0.55	1.7	Boulder	Bedrock	80	Shrubs
1002	Burnside	147	Riffle	28.7	29.5	0.93	0.37	2.0	Boulder	Cobble	35	Grasses

Notes:

Dom = dominant; Sub Dom = sub dominant.

[1] Due to high and fast flows not all measurements were able to be safely completed at all the watercourses.

[2] Bare riparian comprised of were comprised of coarse substrates (e.g., cobble, boulder, bedrock).

Table 4.16 Fishing Community Summary for Large Permanent Watercourses in the Road PDA, 2025

Watercourse ID	Watershed	Habitat Potential				Historical Fish Species Caught	Fish Species Caught in 2025
		Spawning	Rearing	Migratory	Overwintering		
D14	Kennarctic	Poor	Moderate	Moderate	Moderate	NNST, SLSC	-
DM2 (Kennarctic)	Kennarctic	High	High	High	High	ARCH, NNST, SLSC	-
D42	Kennarctic	Moderate	Moderate	Moderate	Poor	ARCH, SLSC	-
D44 (Kennarctic)	Kennarctic	High	High	High	Moderate	LKTR, SLSC	-
133D	Kennarctic	Moderate	Moderate	None	Poor	ARCH, LKTR	-
127A	Kennarctic	Moderate	Moderate	Moderate	Poor	ARCH, SLSC, LKTR	-
123	Kennarctic	None	Moderate	Poor	Poor	SLSC	-
115 (James)	James	Moderate	Moderate	Moderate	Moderate	No fish caught	No fish caught
105	Hood	Poor	Moderate	High	Poor	LKTR	-
104 (Frayed Knots)	Hood	None	High	Moderate	Poor	No fish caught	SLSC
94 (Hood)	Hood	Poor	Poor	Poor	Poor	LKTR	-
87	Hood	Poor	High	Poor	Poor	LKTR, BURB, SLSC	-
72	Burnside	Poor	High	Poor	None	ARGR	-
71	Burnside	Poor	Moderate	Moderate	None	ARGR	-
68	Burnside	Poor	High	Moderate	None	ARGR, RNWH, NNST	-
63	Burnside	Moderate	Moderate	Moderate	Poor	ARGR, NNST	-
62 (Burnside)	Burnside	Moderate	High	High	Poor	ARGR, SLSC	-
1002	Burnside	Moderate	High	Moderate	Poor	ARGR, SLSC, BURB	-

Notes:
NNST = ninespine stickleback; SLSC = slimy sculpin; ARCH = Arctic Char; LKTR = lake trout; BURB = burbot; ARGR = Arctic Graying; RNWH = round whitefish.

4.2.2.2 Small Permanent Watercourses

Seven small permanent watercourses were surveyed along the Road LAA in the Arctic Ocean, Kennarctic River, and Hood River watersheds (Table 4.17). The mean channel widths range from 0.57 m (92d) to 3.12 m (d20c), with wetted widths from 0.37 m (92d) to 2.90 m (81D) (Table 4.17). Mean bankfull depths of the assessed watercourses are lowest at 92d and 81C with mean depths of 0.20 m and greatest at d20c with average depth of 0.59 m (Table 4.17). Small permanent watercourses are typically shallow with mean wetted depths were less than 0.22 m.

Riparian habitat along the watercourses varies between grass, shrubs, and wetlands. Dominant habitat types present during the field surveys are run and flat habitats, with the exception of 133B which is predominately riffle habitat (Table 4.17). Substrates are predominantly organics and fines at five of the seven small permanents, coarse substrates (i.e., gravel, cobble, and boulder) are the dominant substrates at 133B and 81D.

Overall total cover for fish is good among the small permanents, and ranges between 2% (92d) to 60% (D7E). Overhead cover is provided by grasses and some shrubs. Instream cover is provided mainly by instream vegetation and boulders with some water visibility and small woody debris.

Fish community sampling was completed at all small permanent watercourses in 2025 at six of the seven small permanent watercourses where historical sampling either had not been completed or no fish were caught. Similar to the large permanents, watercourse habitat potential evaluations for spawning, rearing, migration, and overwintering was completed (Table 4.18).

No fish were caught during the 2025 community sampling (Table 4.18), however one dead slimy sculpin was observed near the watercourse crossing along 92c. The habitat potential within the surveyed areas varied among the small permanent watercourses, ranging from none to high. Spawning habitat is moderate at 133B, 81C, and 81D and ranked as poor at the other watercourses. Rearing habitat is moderate to high at five of the seven watercourses, D7E and 92d have poor potential. Migratory habitat potential is primarily moderate, with the exception of D7E and 92d which have poor to no potential, respectively. Overwintering habitat potential ranges from none to poor at all watercourses (Table 4.18).

Table 4.17 Summary of Channel Measurements for Small Permanent Watercourses Within the Road PDA, 2025

Watercourse ID	Watershed	Assessment Length (m)	Dominant Habitat Type	Mean Wetted Width (m)	Mean Channel Width (m)	Mean Bankfull Max (m)	Mean Wetted Depth (m)	Mean Gradient (%)	Substrate		Total Cover (%)	Dominant Riparian[1]
									Dom	Sub Dom		
D7E	Arctic	165	Flat	1.41	1.64	0.35	0.08	3.3	Organics	Fines	60	Grasses
d20c	Kennarctic	187	Run 3 (< 0.5 m)	1.07	3.12	0.59	0.22	1.8	Fines	Boulders	35	Shrub
133B	Kennarctic	200	Riffle	1.80	2.17	0.31	0.13	3.2	Gravel	Cobble	30	Grasses
92d	Hood	170	Run 3 (< 0.5 m)	0.37	0.57	0.20	0.06	4.0	Organics	Fines	2	Wetland
92c	Hood	740	Flat	1.14	1.58	0.30	0.14	2.3	Organics	Fines	10	Wetland
81C	Hood	115	Run 3 (< 0.5 m)	1.30	2.73	0.20	0.10	0.5	Organics	Fines	15	Grasses
81D	Hood	183	Run 3 (< 0.5 m)	2.70	2.90	0.41	0.21	0.8	Boulder	Cobble	30	Grasses

Notes:

Dom = dominant; Sub Dom = sub dominant, m = metres

[1] Bare riparian comprised of were comprised of coarse substrates (e.g., cobble, boulder, bedrock).

Table 4.18 Fishing Community Summary for Small Permanents in the Road PDA, 2025

Watercourse ID	Watershed	Habitat Potential				Historical Fish Species Caught	Fish Species Caught in 2025
		Spawning	Rearing	Migratory	Overwintering		
D7E	Arctic	Poor	Poor	Poor	Poor	Not sampled	No fish caught
d20c	Kennarctic	Poor	Moderate	Moderate	Poor	Not sampled	No fish caught
133B	Kennarctic	Moderate	Moderate	Moderate	None	LKTR, SLSC	-
92d	Hood	Poor	Poor	None	None	Not sampled	No fish caught
92c	Hood	Poor	Moderate	Moderate	Poor	Not sampled	No fish caught, dead SLSC observed
81C	Hood	Moderate	Moderate	Moderate	Poor	No fish caught	No fish caught
81D	Hood	Moderate	High	Moderate	Poor	No fish caught	No fish caught

Notes:
LKTR = lake trout; SLSC = slimy sculpin.

4.2.2.3 Ephemeral, Intermittent, and Boulder Fields

A total of 22 ephemeral, intermittent, and boulder fields were assessed within the Road LAA (Table 4.19). Ephemeral, intermittent, and boulder fields typically have lower fish habitat quality compared to small and large permanent watercourses, however these stream classes contribute to fish and fish habitat in alternative ways. Ephemeral and intermittent watercourses can provide potential temporary habitat for fish during seasonal flows (e.g., migratory corridors between watercourses or waterbodies, high flow refugia), they also act as drainage systems to reduce flooding and provide nutrient inputs to fish and aquatic life in downstream fish-bearing receiving environments. Boulder fields can provide important foraging and refuge habitat for early life stages and fish species like sculpin with boulder substrates providing overhead/instream cover and attachments for algae and sessile invertebrates.

Ephemeral watercourses are defined as small stream channels with seasonal flow, no defined bed or banks. Ephemeral flow is from run-off only and may occur for several months each year (i.e., during or after precipitation events or freshet). Ephemeral watercourse crossings were surveyed in every watershed, with the greatest number present in the Kennarctic River watershed (seven of the total 16 ephemeral watercourses). Habitat potential for fish at the surveyed ephemeral watercourses is predominately poor to none for spawning, rearing, migratory, and overwintering (Table 4.19). The two exceptions were D11b and 93c, which have moderate potential for rearing habitat due to instream vegetation cover that would provide refugia. Watercourse 93c also has moderate overwintering potential as there is one pond within the surveyed reach that has depths over one meter. Fish sampling has been completed at six of the ephemeral watercourses, however no fish were caught (Table 4.19).

Intermittent watercourses are defined as small stream channels (widths less than 0.7 m) with distinct channel development, no terrestrial vegetation in channel, and some bank development. Flow is from small springs, seasonal runoff and heavy rainfalls. Three intermittent watercourse crossings were surveyed in the Burnside River watershed (Table 4.19). These three intermittent watercourses are connections between two lakes (49) or wetland areas (71b and 48). Historically fish have been caught at 49 and 48, however the habitat potential at these watercourses and 71b are rated poor to none for spawning, rearing, migratory, and overwintering (Table 4.19).

Boulder fields are watercourses with no defined bank structure where flow is through coarse substrates (i.e., cobble, boulder, bedrock) in undefined flow paths. Boulder fields typically are large channels but can be small and mid-sized channels. They typically are low gradient channels connecting ponds or lakes. Three boulder fields were surveyed in the Hood River watershed (Table 4.19). These watercourses are located between two lakes; 88 and 101 have areas of open water and visible flow downstream to the connecting lake, whereas 88A appeared to have no defined flow path and was elevated topographically limiting connectivity. Habitat potential for spawning, rearing, migratory, and overwintering is rated as poor at 101 and none at 88A. Habitat potential for spawning, rearing, and migratory is rated as moderate, juvenile salmonids were observed foraging in the downstream reach during the 2025 field survey (Table 4.19).

Table 4.19 Summary of Ephemeral, Intermittent, and Boulder Fields Fish and Fish Habitat, 2025

Watercourse ID	Watershed	Stream Class	Assessment Length (m)	Dominant Habitat Type	Habitat Potential				Historical Fish Species Caught	Fish Species Caught in 2025
					Spawning	Rearing	Migratory	Overwintering		
d11a	Kennarctic	Ephemeral	252	Wetland	None	None	None	None	-	NFC
D11b	Kennarctic	Ephemeral	175	Wetland	Poor	Moderate	Poor	None	-	-
d12a	Kennarctic	Ephemeral	118	Wetland	None	None	None	None	-	-
d12b	Kennarctic	Ephemeral	151	Wetland	None	None	None	None	-	-
DM2C	Kennarctic	Ephemeral	178	Wetland	None	None	None	None	-	NFC
D42H	Kennarctic	Ephemeral	224	Wetland	None	None	None	None	-	-
D43A	Kennarctic	Ephemeral	n/a	NVC	None	None	None	None	-	-
114	James	Ephemeral	50	Wetland	None	None	None	None	-	NFC
103	Hood	Ephemeral	200	Wetland	Poor	Poor	Poor	Poor	-	NFC
101	Hood	Boulder Field	200	Boulder Field	Poor	Poor	Poor	Poor	NFC	NFC
P017	Hood	Ephemeral	226	Wetland	None	None	None	None	-	NFC
93c	Hood	Ephemeral	280	NVC	Poor	Moderate	None	Moderate	-	NFC
88	Hood	Boulder Field	150	Boulder Field	Moderate	Moderate	Moderate	Poor	SLSC	Juvenile Salmonids observed
88A	Hood	Boulder Field	-	Boulder Field	None	None	None	None	-	-
81A	Hood	Ephemeral	-	NVC	None	None	None	None	NFC	-
81B	Hood	Ephemeral	-	Wetland	None	None	None	None	NFC	-
71b	Burnside	Intermittent	-	Wetland	None	None	None	None	-	-
8	Burnside	Ephemeral	-	Wetland	None	None	None	None	ARGR	-
P025	Burnside	Ephemeral	-	-	None	None	None	None	-	-
P026	Burnside	Ephemeral	-	-	None	None	None	None	-	-

Watercourse ID	Watershed	Stream Class	Assessment Length (m)	Dominant Habitat Type	Habitat Potential				Historical Fish Species Caught	Fish Species Caught in 2025
					Spawning	Rearing	Migratory	Overwintering		
49	Burnside	Intermittent	180	Flat	Poor	Poor	None	None	LKTR, RNWH, SLSC	-
48	Burnside	Intermittent	-	Wetland	Poor	Poor	None	None	LKTR	-

Notes:

NFC = no fish caught; "-" = data not available; NVC = no visible channel; ARGR = Arctic grayling; LKTR = lake trout; RNWH = round whitefish; SLSC = slimy sculpin.

5 Summary

This Fish and Fish Habitat Baseline Report evaluated baseline freshwater fish and fish habitat within the Port and Road LAA for the Project. Studies in support of the Baseline Report included historical field data (2001 to 2012), the results of a desktop assessment completed in 2024, and the results of field assessments for fish and fish habitat completed by Nunami Stantec Limited (Stantec) in 2024 and 2025. The results of the Baseline Report will be used to support the environmental effects assessment of the Project on Freshwater Fish and Fish Habitat, as well as support the refinement of engineering designs, Project footprints, and the development of mitigation measures to be used during construction and operations of the Project.

A total of 150 watercourses have been identified across the five watersheds within the Port and Road LAAs (Table 5.1). The number of watercourses within each watershed varied, ranging from seven in the Arctic Ocean watershed to 62 in the Kennarctic River watershed. Stream classes of the watercourses included 19 large permanent, 20 small permanent, 94 ephemeral, nine intermittent, and eight boulder fields (Table 5.1). Stream classes also vary among the watersheds with large permanent and intermittent watercourses absent from the Arctic Ocean watershed and boulder fields only present within the Hood River watershed. Ephemeral is the dominant stream class with the greatest numbers present in the Kennarctic and Hood River watersheds.

Eight fish species have been identified within the Port and Road LAA, including lake trout, Arctic char, Arctic grayling, burbot, round whitefish, longnose sucker, slimy sculpin, and ninespine stickleback. Fish species, presence, distribution and abundance varied between watersheds (Table 5.1). Lake trout, burbot, and slimy sculpin were captured in all five watersheds, whereas round whitefish and longnose sucker have only been captured in the Burnside River watershed.

Table 5.1 Summary of Stream Classes and Fish Species Present within the LAA Watersheds

Watershed	Stream Class[1]						Fish Species
	Large Permanent	Small Permanent	Ephemeral	Intermittent	Boulder Field	Total	
Arctic Ocean	0	3	4	0	0	7	LKRT, ARCH, BURB, SLSC, NNST
Kennarctic River	8	8	43	3	0	62	LKTR, ARCH, BURB, SLSC, NNST
James River	1	0	6	2	0	9	LKTR, ARGR, BURB, SLSC
Hood River	4	5	23	1	8	41	LKTR, ARGR, BURB, SLSC
Burnside River	6	4	18	3	0	31	LKTR, ARCH, ARGR, BURB, SLSC, LNSC, RNWH, NNST
Total	**19**	**20**	**94**	**9**	**8**	**150**	**n/a**

Notes:

[1] This total includes only primary watercourse channels crossing locations, some watercourses will have multiple (secondary) watercourse channel crossings.

LKTR = lake trout; ARCH = Arctic char; BURB = burbot; ARGR = Arctic grayling; SLSC = slimy sculpin; NNST = ninespine stickleback; LNSC = longnose sucker; RNWH = round whitefish.

6 References

ADFG (Alaska Department of Fish and Game). 2004a. Slimy sculpin. Available at: https://www.adfg.alaska.gov/static/education/wns/slimy_sculpin.pdf. Accessed: October 2024.

ADFG. 2004b. Ninespine stickleback. Available at: https://www.adfg.alaska.gov/static/species/speciesinfo/_aknhp/ninespine_stickleback.pdf. Accessed: October 2024.

Banci, V. and R. Spicker (Compilers, Editors & GIS). 2024. Kitikmiut Knowledge of the Proposed Kogloktoakyok (Grays Bay) Port and Road Project. Naonaiyaotit Inuit Knowledge Project (NTKP), Kitikmeot Inuit Association, Kugluktuk NU. October 2024.

BC FISB (British Columbia Fisheries Information Service Branch). 2001. Reconnaissance (1: 20 000) Fish and Fish Habitat Inventory: Standards and Procedures. Prepared for the Resources Inventory Committee. April 2001.

Callaghan, D., Blanchfield, P., and Cott, P. 2016. Lake trout (Salvelinus namaycush) spawning habitat in a northern lake: The role of wind and physical characteristics on habitat quality. Journal of Great Lakes Research, Volume 42, Issue 2, Pages 299-307, ISSN 0380-1330, https://doi.org/10.1016/j.jglr.2015.07.001.

CCME (Canadian Council of Ministers of the Environment). 2025. Water and Sediment Quality Guidelines for the Protection of Aquatic Life. Available at: https://ccme.ca/en/summary-table. Accessed September 2024.

COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2010. COSEWIC assessment and status report on the Dolly Varden Salvelinus malma malma (Western Arctic populations) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 65 pp.

DFO (Fisheries and Oceans Canada). 2016. *Government of Canada, Fisheries and Oceans Canada, Communications Branch*, www.dfo-mpo.gc.ca/species-especes/profiles-profils/lake-trout-touladi-eng.html.

Ellenor, J. 2020. Habitat use of young-of-year Arctic Grayling (Thymallus arcticus) in Barrenland streams of central Nunavut, Canada. Available at: https://uwspace.uwaterloo.ca/items/d98f419c-9266-46f4-b503-84defdd0d344. Accessed September 2025.

GBEEC (Grays Bay Engineering and Environmental Consultants). 2018a. Grays Bay Road and Port Project Proposal. Prepared for Nunavut Planning Commission and the Nunavut Impact Review Board.

GBEEC. 2018b. Grays Bay Road and Port Project – Fisheries Technical Data Report. Prepared for Nunavut Resources Corporation and Government of Nunavut.

GBEEC (Grays Bay Engineering & Environmental Consultants). 2018c. Grays Bay Road and Port Project Inuit Knowledge Workshop #1: March 2018. Report on file.

GBEEC. 2018d. Grays Bay Road and Port Project Inuit Advisory Group Workshop #2: October 2018. Report on file.

GLL (Gartner Lee Limited). 2008. Izok Project 2007 Fisheries Field Report. Prepared for Zinifex Canada Inc. 102 p.

GOA (Government of Alberta). 2025. Alberta Public Lands Glossary of Terms. January 22, 2025. Forestry and Parks. Available at: https://open.alberta.ca/publications/alberta-public-lands-glossary-of-terms. Accessed September 2025.

GOC (Government of Canada). 2022. Species at risk public registry. Available at: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html. Accessed August 2025.

Golder (Golder Associates Ltd.). 2013. Izok Corridor Project: Fisheries – Izok Lake Mine Site – 2012 Field Data Report. Prepared for MMG Resources, Vancouver, BC.

Grant, C.G.J., and Lee, E.M. 2004. Life History Characteristics of Freshwater Fishes Occurring in Newfoundland and Labrador, with Major Emphasis on Riverine Habitat Requirements. Can. Manuscr. Rep. Fish. Aquat. Sci. 2672: xii + 262p.

Gray, M.A., R.A. Curry, T.J. Arciszewski, K.R. Munkittrick, and S.M. Brasfield. 2018. The biology and ecology of slimy sculpin: a recipe for effective environmental monitoring. FACETS. 3: 103 – 127 pp.

Gunn, J.M. 1995. Spawning behavior of lake trout: effects on colonization ability. *Journal of Great Lakes Research*, *21*, pp.323-329.

Harris, L., Moore, J.-S., Dunmall, K., Evans, M., Falardeau, M., Gallagher, C., Gilbert, M., Kenny, T., McNicholl, D., Norman, M., Lyall, G. and Kringayark, L. 2022. Arctic char in a rapidly changing North, Polar Knowledge: Aqhaliat Report, Volume 4, Polar Knowledge Canada, p. 34–57. DOI: 10.35298/pkc.2021.02.eng

Health Canada. 2024. Guidelines for Canadian Drinking Water Quality—Summary Tables. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

Heim, K.C., Wipfli, M.S., Whitman, M.S., Arp, C.D., Adams, J., and Falke, J.A. 2015. Seasonal cues of Arctic Grayling movement in a small Arctic stream: the importance of surface water connectivity. Environ. Biol. Fishes 99(1): 49–65. doi:10.1007/s10641-015-0453-x.

Holst, L. 2023. Species status assessment cover sheet: round whitefish. New York State Department of Environmental Conservation. Available at: https://dec.ny.gov/sites/default/files/2024-08/roundwhitefish.pdf. Accessed: October 2024.

IAG (Inuit Advisory Group). 2025a. Grays Bay Road and Port Project What We Heard Report: Inuit Advisory Group Workshop #1 Summary – Inuit Knowledge Integration Methods and Mitigation Strategies. March 2025. Report on file.

IAG. 2025b. Grays Bay Road and Port Project What We Heard Report: Inuit Advisory Group Workshop #2 Summary – Understanding and Protecting Caribou. September 2025. Report on file.

Kissinger, B.C., Gantner, N., Anderson, W.G., Gillis, D.M., Halden, N.M., Harwood, L.A., and Reist, J.D. 2016. Brackish-Water Residency and Semi-Anadromy in Arctic Lake Trout (Salvelinus namaycush) Inferred from Otolith Microchemistry. Journal of Great Lakes Research, 42(2): 267-275.

Larocque, S.M., Hatry, C., and Enders, E.C. 2014. Development of habitat suitability indices and bioenergetics models for Arctic grayling (Thymallus arcticus). Can. Tech. Rep. Fish. Aquat. Sci. 3097: vi + 57 p.

Martin, N.V. and Oliver, C.H. 1980. The lake charr, Salvelinus namaycush. Á In: Balon, EK (ed.), Charrs: salmonid fishes of the genus Salvelinus. Dr. W.

McPhail, J.D. 1997. A review of burbot (*Lota lota*) life history and habitat use in relation to compensation and improvement opportunities. Can. MS Rep. Fish. Aquat. Sci. 2397: vii + 37p.

MMG (Minerals and Metals Group Resources). 2013. Izok Corridor Project – Fish and Fish Habitat Baseline Appendix Report.

NHC (Northwest Hydraulic Consultants). 2013. Izok Corridor Project – Flood Hydrology of Streams Along the All Season Road Corridor and Hydraulic Designs of Crossings. Prepared for MMG Limited, Vancouver BC.

Northcote, T.G. 1995. Comparative biology and management of Arctic and European grayling (Salmonidae, Thymallus). Rev. Fish Biol. Fish. 5(2): 141–194. doi:10.1007/BF00179755.

ONCS WWF DUC (Oceans North Conservation Society, World Wildlife Fund Canada, and Ducks Unlimited Canada). 2018. Canada's Arctic Marine Atlas. Ottawa, Ontario: Oceans North Conservation Society.

Priest, H. and Usher, P.J. 2004. Nunavut wildlife harvest study. Nunavut Wildlife Management Board, Iqualuit, Nunavut, Canada, p. 822.

RC Bio (RC Biosolutions Ltd.). 2012. Izok Corridor – Fisheries Field Report for the Road Corridor and High Lake Mine Site 2012. Prepared for MMG Resources, Vancouver, BC.

Redick, R.R. 1967. A review of literature on lake trout life history with notes on Alaskan management. Alaska Dept. of Fish and Game, Informational Leaftlet 111.

Scott, W.B., and Crossman, E.J. 1973. Freshwater fishes of Canada. Fisheries Research Board of Canada, Ottawa, Ontario. Available at: https://publications.gc.ca/site/eng/9.870340/publication.html

Stewart, D.B., Carmichael, T.J., Sawatzky, C.D., Mochnacz, N.J., and Reist, J.D. 2007. Fish life history and habitat use in the Northwest Territories: round whitefish (Prosopium cylindraceum). Can. Manuscr. Rep. Fish. Aquat. Sci. 2795: vi + 37 p.

Swanson, H.K., Kidd, K.A., Babaluk, J.A., Wastle, R.J., Yang, P.P., Halden, N.M., and Reist, J.D. 2010. Anadromy in Arctic Populations of Lake Trout (*Salvelinus namaycush*): Otolith Microchemistry, Stable Isotopes, and Comparison with Arctic Char (*Salvelinus alpinus*). Canadian Journal of Fisheries and Aquatic Sciences, 67(5): 842-853.

West, R.L., Smith, M.W., Barber, W.E., Reynolds, J.B., and Hop, H. 1992. Autumn migration and overwintering of Arctic Grayling in coastal streams of the Arctic National Wildlife Refuge, Alaska. Trans. Am. Fish. Soc. 121(6): 709–7

Wolfden (Wolfden Resources Inc.). 2006. High Lake Project Proposal. Prepared for Nunavut Impact Review Board, Cambridge Bay, Nunavut.

Appendix A Desktop Assessment Data

A.1 Master Watercourse Table

Table A.1-1: Master Watercourse Table

Crossing ID	Catchment Basin	Zone	NHC Location (NAD		Project Area	Stream Class	Channel Type	Crossing Type	Field Visit (Y/N)	Most Recent Field Visit Date (dd-mmm-yy)	Fish Bearing	Fish Bearing Rational	Historical Fish Species Caught	Fish Species Captured
			easting	Northing										
48	Burnside River	12	478945	7320903	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing	Y	31-Jul-25	Yes	Fish caught, fish habitat present	LKTR, RNWH, SLSC	n/a
49	Burnside River	12	478882	7321544	Road - LAA / Road - RAA	Intermittent	Primary	Not in engineer spatial file	Y	31-Jul-25	Yes	Fish caught, fish habitat present	LKTR	n/a
P025	Burnside River	12	478556	7322316	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	Y	2-Aug-25	No	No fish caught, no fish habitat	None	n/a
P026	Burnside River	12	478671	7322780	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	Y	2-Aug-25	No	No fish caught, no fish habitat	None	n/a
1002	Burnside River	12	479339	7325844	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	31-Jul-25	Yes	Fish caught, fish habitat present	ARGR, SLSC, BURB	n/a
WC-005	Burnside River	12	479257	7325986	Road - LAA / Road - RAA	Small Permanent	Secondary	Not in engineer spatial file	Y	31-Jul-25	Default Yes	No fishing completed, unknown fish habitat present	None	n/a
9	Burnside River	12	479180	7327003	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
8	Burnside River	12	479098	7327280	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	Y	31-Jul-25	Yes	Fish caught, fish habitat present	ARGR	n/a
7	Burnside River	12	478516	7327933	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
D111	Burnside River	12	477869	7328549	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
D112	Burnside River	12	478191	7328892	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
5	Burnside River	12	478180	7328959	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
60A	Burnside River	12	480570	7332386	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
61A*	Burnside River	12	480997	7334122	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
D115	Burnside River	12	481189	7335343	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	ARGR, NNST	n/a
62 (BURNSIDE)	Burnside River	12	481385	7335613	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Multi-Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	ARGR, SLSC	n/a
63	Burnside River	12	484853	7340163	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	ARGR, NNST	n/a
63c	Burnside River	12	484747	7340421	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
65	Burnside River	12	485318	7341732	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
66A	Burnside River	12	486784	7343983	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
67	Burnside River	12	488949	7346909	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	ARGR, BURB, SLSC	n/a
68	Burnside River	12	490338	7348989	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Multi-Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	ARGR, RNWH, NNST	n/a
69	Burnside River	12	491804	7350252	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing	N	None	Yes	Fish caught, fish habitat present	ARGR, NNST	n/a
70	Burnside River	12	494634	7351559	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
71	Burnside River	12	495088	7351872	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	ARGR	n/a
71b	Burnside River	12	496820	7353338	Road - LAA / Road - RAA	Intermittent	Primary	Minor Crossing	Y	2-Aug-25	No	No fish caught, no fish habitat	None	no fish habitat present
72	Burnside River	12	497044	7353694	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	ARGR	n/a
P023	Hood River	12	497310	7354375	Road - LAA / Road - RAA	Boulder Field	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
73A	Burnside River	12	497670	7355235	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
74	Burnside River	12	497915	7357930	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
76	Burnside River	12	497386	7361149	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
P022	Hood River	12	498031	7364348	Road - LAA / Road - RAA	Boulder Field	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
77A.1	Hood River	12	497523	7365508	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
77A	Hood River	12	497163	7365580	Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
78	Burnside River	12	497211	7366630	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
79	Burnside River	12	497602	7367808	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing	N	None	Yes	Fish caught, fish habitat present	ARGR, BURB, LKTR	n/a
80A	Hood River	12	498195	7371077	Road - LAA / Road - RAA	Boulder Field	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
81A	Hood River	12	498786	7371918	Road - LAA / Road - RAA	Ephemeral	Secondary	Major Culvert Crossing, Open Bottom Arch	Y	3-Aug-25	No	No fish caught, no fish habitat	NFC	n/a
81B	Hood River	12	498802	7371948	Road - LAA / Road - RAA	Ephemeral	Secondary	Major Culvert Crossing, Open Bottom Arch	Y	3-Aug-25	No	No fish caught, no fish habitat	NFC	n/a
81C	Hood River	12	498819	7371983	Road - LAA / Road - RAA	Small Permanent	Secondary	Major Culvert Crossing, Open Bottom Arch	Y	3-Aug-25	Default Yes	No fish caught but fish habitat present	NFC	NFC
81D	Hood River	12	498823	7371992	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	Y	3-Aug-25	Default Yes	No fish caught but fish habitat present	NFC	NFC
81	Hood River	12	498792	7372006	Road - LAA / Road - RAA	Small Permanent	Secondary	Major Culvert Crossing	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
82	Hood River	12	499218	7374287	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
83	Hood River	12	498927	7374989	Road - LAA / Road - RAA	Boulder Field	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
84	Hood River	12	498599	7375524	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
85	Hood River	12	498373	7376285	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	ARGR, SLSC	n/a
86	Hood River	12	498326	7379172	Road - LAA / Road - RAA	Boulder Field	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	No	No fish habitat present	None	n/a
87	Hood River	12	499820	7387654	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	2-Aug-25	Yes	Fish caught, fish habitat present	LKTR, BURB, SLSC	n/a

Table A.1-1: Master Watercourse Table

Crossing ID	Catchment Basin	Zone	NHC Location (NAD		Project Area	Stream Class	Channel Type	Crossing Type	Field Visit (Y/N)	Most Recent Field Visit Date (dd-mmm-yy)	Fish Bearing	Fish Bearing Rational	Historical Fish Species Caught	Fish Species Captured
			easting	Northing										
88	Hood River	12	499188	7392265	Road - LAA / Road - RAA	Boulder Field	Primary	Major Bridge Crossing, Single Span	Y	29-Jul-25	Yes	Fish caught, fish habitat present	SLSC	juvenile salmonids obser
88A	Hood River	12	498694	7393185	Road - LAA / Road - RAA	Boulder Field	Primary	Major Culvert Crossing, Closed Bottom	Y	3-Aug-25	No	No fish caught, no fish habitat	None	no fish habitat present
89	Hood River	12	498846	7393546	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
89A	Hood River	12	499383	7393565	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish caught, no fish habitat	NFC	n/a
90	Hood River	12	499672	7397662	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
91/D70	Hood River	12	499427	7399265	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
92A	Hood River	12	499230	7401301	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Fish habitat potential during high flows	None	n/a
92c	Hood River	12	499699	7403116	Road - LAA / Road - RAA	Small Permanent	Primary	Minor Crossing	Y	3-Aug-25	Yes	Fish observed, fish habitat present	None	NFC, dead SLSC observ
P020A	Hood River	12	499712	7403208	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	Y	3-Aug-25	No	No fish caught, no fish habitat	None	no suitable fish habitat
P020	Hood River	12	499756	7403360	Road - LAA / Road - RAA	Ephemeral	Secondary	Not in engineer spatial file	Y	3-Aug-25	Yes	Fish observed, fish habitat present	None	n/a
P019	Hood River	12	499993	7403849	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
92d	Hood River	12	499909	7404037	Road - LAA / Road - RAA	Small Permanent	Primary	Minor Crossing	Y	3-Aug-25	No	No fish caught, no fish habitat	None	n/a
92e	Hood River	12	500279	7404318	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
93	Hood River	12	500576	7406490	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
93c	Hood River	12	500451	7408031	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	27-Jul-25	Default Yes	No fish caught but fish habitat present	None	NFC
94 (HOOD)	Hood River	12	500228	7408343	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	27-Jul-25	Yes	Fish caught, fish habitat present	LKTR	n/a
95B	Hood River	12	500511	7408943	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing, Closed Bottom	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
97	Hood River	12	500834	7410272	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
98	Hood River	12	501278	7410612	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing	N	None	No	No fish habitat present	None	n/a
99	Hood River	12	503130	7413826	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
D68	Hood River	12	503088	7413924	Road - LAA / Road - RAA	Ephemeral	Secondary	Not in engineer spatial file	N	None	No	No fish caught, no fish habitat	None	n/a
P017	Hood River	12	503012	7414284	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	Y	27-Jul-25	No	No fish caught, no fish habitat	None	n/a
100	Hood River	12	502003	7417393	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
101	Hood River	12	502793	7421129	Road - LAA / Road - RAA	Boulder Field	Primary	Major Culvert Crossing, Open Bottom Arch	Y	26-Jul-25	Default Yes	No fish caught but fish habitat present	None	NFC
D67	Hood River	12	502299	7422999	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d67b	Hood River	12	502263	7423548	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
102/D66	Hood River	12	502269	7423687	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
103	Hood River	12	502260	7424220	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Open Bottom Arch	Y	26-Jul-25	Default Yes	No fish caught but fish habitat present	NFC	NFC
104 (FRAYED KNOTS)	Hood River	12	502804	7425638	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	27-Jul-25	Yes	Fish caught, fish habitat present	NFC	SLSC
105	Hood River	12	504624	7427498	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	26-Jul-25	Yes	Fish caught, fish habitat present	LKTR	n/a
106A	Hood River	12	505840	7430017	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	SLSC	n/a
107	Hood River	12	506549	7432201	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
108A	James River	12	506563	7432614	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
108c	James River	12	506699	7432932	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
P014	James River	12	506610	7434117	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
109	James River	12	507823	7439177	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
111A	James River	12	508050	7444861	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
113A	James River	12	507858	7445898	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Default Yes	Fish habitat potential, no fish sampling completed	None	n/a
114	James River	12	509046	7450351	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	25-Jul-25	Default Yes	No fish caught but fish habitat present	None	NFC
115 (JAMES)	James River	12	509616	7451367	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	25-Jul-25	Default Yes	No fish caught but fish habitat present	NFC	NFC
116	James River	12	509859	7452611	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
117A	James River	12	509817	7453103	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	SLSC	n/a
118	Kennartic River	12	510263	7459707	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
D61	Kennartic River	12	510876	7462408	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
121	Kennartic River	12	510345	7465099	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
122A	Kennartic River	12	509862	7465478	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D60	Kennartic River	12	509945	7465534	Road - LAA / Road - RAA	Ephemeral	Secondary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
123	Kennartic River	12	509246	7466274	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	25-Jul-25	Yes	Fish caught, fish habitat present	SLSC	n/a

Table A.1-1: Master Watercourse Table

Crossing ID	Catchment Basin	Zone	NHC Location (NAD		Project Area	Stream Class	Channel Type	Crossing Type	Field Visit (Y/N)	Most Recent Field Visit Date (dd-mmm-yy)	Fish Bearing	Fish Bearing Rational	Historical Fish Species Caught	Fish Species Captured
			easting	Northing										
124A	Kennartic River	12	508885	7467615	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
125	Kennartic River	12	508678	7468035	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
126	Kennartic River	12	507573	7470737	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
126A	Kennartic River	12	507516	7470905	Road - LAA / Road - RAA	Intermittent	Primary	Not in engineer spatial file	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
127A	Kennartic River	12	507468	7471113	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span or Open Bottom culvert	Y	28-Jul-25	Yes	Fish caught, fish habitat present	ARCH, SLSC, LKTR	n/a
130A	Kennartic River	12	507432	7472137	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Yes	Fish caught, fish habitat present	LKTR	n/a
133J	Kennartic River	12	507424	7473162	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133I	Kennartic River	12	507438	7474048	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Closed Bottom	N	None	No	No fish habitat present	None	n/a
133H	Kennartic River	12	507200	7475312	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133G	Kennartic River	12	507124	7475551	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133F	Kennartic River	12	506971	7476238	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D56	Kennartic River	12	506956	7476333	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133E	Kennartic River	12	506946	7476408	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133D1	Kennartic River	12	506802	7477192	Road - LAA / Road - RAA	Large Permanent	Secondary	Major Culvert Crossing, Closed Bottom	N	None	Yes	Fish caught, fish habitat present	ARCH, LKTR	n/a
133D2	Kennartic River	12	506799	7477209	Road - LAA / Road - RAA	Large Permanent	Secondary	Major Culvert Crossing, Closed Bottom	N	None	Yes	Fish caught, fish habitat present	ARCH, LKTR	n/a
133D3	Kennartic River	12	506794	7477229	Road - LAA / Road - RAA	Large Permanent	Secondary	Major Culvert Crossing, Closed Bottom	N	None	Yes	Fish caught, fish habitat present	ARCH, LKTR	n/a
133D	Kennartic River	12	506791	7477244	Road - LAA / Road - RAA	Large Permanent	Primary	Not in engineer spatial file	Y	25-Jul-25	Yes	Fish caught, fish habitat present	ARCH, LKTR	n/a
133D4	Kennartic River	12	506786	7477272	Road - LAA / Road - RAA	Large Permanent	Secondary	Major Culvert Crossing, Closed Bottom	N	None	Yes	Fish caught, fish habitat present	ARCH, LKTR	n/a
133C	Kennartic River	12	506761	7477560	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
133B	Kennartic River	12	506777	7478143	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	Y	25-Jul-25	Yes	Fish caught, fish habitat present	LKTR, SLSC	n/a
D55/133a	Kennartic River	12	506962	7478588	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D54	Kennartic River	12	506973	7480342	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D53A	Kennartic River	12	506877	7480901	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D52	Kennartic River	12	506933	7481322	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D51	Kennartic River	12	507182	7482157	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D50	Kennartic River	12	507206	7482179	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
DM3	Kennartic River	12	507251	7482219	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D48	Kennartic River	12	507339	7482359	Road - LAA / Road - RAA	Ephemeral	Secondary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
D47	Kennartic River	12	507551	7482753	Road - LAA / Road - RAA	Ephemeral	Secondary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D46	Kennartic River	12	507594	7482768	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
D45	Kennartic River	12	507773	7482825	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
d45b	Kennartic River	12	508013	7484683	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D44 (KENNARCTIC)	Kennartic River	12	508140	7485446	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Multi-Span	Y	25-Jul-25	Yes	Fish caught, fish habitat present	LKTR, SLSC	n/a
D43	Kennartic River	12	508796	7485924	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
D43A	Kennartic River	12	510026	7486826	Road - LAA / Road - RAA	Ephemeral	Primary	Major Culvert Crossing, Open Bottom Arch	Y	28-Jul-25	No	No fish caught, no fish habitat	None	no fish habitat present
D41	Kennartic River	12	510123	7486995	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Default Yes	No fish caught but fish habitat present	NFC	n/a
D42	Kennartic River	12	510168	7487059	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	28-Jul-25	Yes	Fish caught, fish habitat present	ARCH, SLSC	n/a
d42e	Kennartic River	12	510647	7491478	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d42f	Kennartic River	12	510767	7491992	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d42g	Kennartic River	12	510902	7492301	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d42h	Kennartic River	12	511460	7492848	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	30-Jul-25	No	No fish caught, no fish habitat	None	n/a
d42k	Kennartic River	12	512477	7493688	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d42l	Kennartic River	12	513112	7495136	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D39	Kennartic River	12	513380	7495639	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	No	No fish habitat present	None	n/a
DM2 (KENNARCTIC)	Kennartic River	12	514132	7497789	Road - LAA / Road - RAA	Large Permanent	Primary	Major Bridge Crossing, Single Span	Y	28-Jul-25	Yes	Fish caught, fish habitat present	ARCH, NNST, SLSC	n/a
dm2a	Kennartic River	12	514188	7497978	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
P009	Kennartic River	12	514238	7498214	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
DM2C	Kennartic River	12	514403	7500377	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	30-Jul-25	No	No fish caught, no fish habitat	None	NFC
D20	Kennartic River	12	514584	7501370	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	ARCH	n/a
P007	Kennartic River	12	514933	7502813	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
d20c	Kennartic River	12	515017	7504572	Road - LAA / Road - RAA	Small Permanent	Primary	Minor Crossing	Y	30-Jul-25	Default Yes	No fish caught but fish habitat present	None	NFC

Table A.1-1: Master Watercourse Table

Crossing ID	Catchment Basin	Zone	NHC Location (NAD		Project Area	Stream Class	Channel Type	Crossing Type	Field Visit (Y/N)	Most Recent Field Visit Date (dd-mmm-yy)	Fish Bearing	Fish Bearing Rational	Historical Fish Species Caught	Fish Species Captured
			easting	Northing										
D19	Kennartic River	12	515040	7504765	Road - LAA / Road - RAA	Intermittent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	NNST	n/a
D16.1	Kennartic River	12	513806	7508807	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	No	No fish habitat present	None	n/a
P005	Kennartic River	12	513155	7510039	Road - LAA / Road - RAA	Ephemeral	Primary	Not in engineer spatial file	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D15	Kennartic River	12	512820	7510491	Road - LAA / Road - RAA	Small Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	N	None	Yes	Fish caught, fish habitat present	LKTR, NNST, SLSC	n/a
d15a	Kennartic River	12	512620	7510759	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D14	Kennartic River	12	511990	7511276	Road - LAA / Road - RAA	Large Permanent	Primary	Major Culvert Crossing, Open Bottom Arch	Y	30-Jul-25	Yes	Fish caught, fish habitat present	NNST, SLSC	n/a
d13	Kennartic River	12	511376	7511466	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D12	Kennartic River	12	510687	7513188	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Yes	Fish caught, fish habitat present	ARCH, NNST	n/a
d12a	Kennartic River	12	510464	7513849	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	24-Jul-25	No	No fish caught, no fish habitat	None	n/a
d12b	Kennartic River	12	510447	7513878	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	24-Jul-25	No	No fish caught, no fish habitat	None	n/a
d11a	Kennartic River	12	509949	7514925	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	24-Jul-25	No	No fish caught, no fish habitat	None	NFC
D11b	Kennartic River	12	509849	7515107	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	Y	30-Jul-25	Default Yes	No fish caught but fish habitat present	None	n/a
d7a	Kennartic River	12	509490	7517003	Road - LAA / Road - RAA	Ephemeral	Primary	Minor Crossing	N	None	Default Yes	Not surveyed, no fish sampling completed	None	n/a
D7E	Arctic Ocean	12	509018	7518135	Road - LAA / Road - RAA	Small Permanent	Primary	Minor Crossing	Y	24-Jul-25	Default Yes	No fish caught but fish habitat present	None	NFC

Table A.1-1: Mas

Crossing ID	Habitat Potential				Gradient (%)	Average Channel Width (m)	Average Bankfull Depth (m)	Average Wetted Width (m)	Average Water Depth (m)	Channel Width at Crossing (m)	Bankfull Depth at Crossing (m)	Water Depth at Crossing (m)	Habitat Type		Substrate Composition (%)							Overhead Cover Types	Instream Cover Types	Potential Barrier Present?
	Spawning	Rearing	Migratory	Overwintering									Primary/ Dominant	Secondary	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock			
48	Poor	Poor	None	None	-	1.97	-	4.8	-	1.05	-	-	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
49	Poor	Poor	None	None	1	0.8	0.4	0.8	0.22	n/a	n/a	n/a	Flat	-	35	20	10	10	15	5	0	undercut banks, grasses	boulders	No
P025	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
P026	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
1002	Moderate	High	Moderate	Poor	2	29.5	0.92	28.7	0.37	14.2	1.11	0.5	Riffle	Pool 1 (>1.0 m), Run 2 (0.5 - 1.0m)	0	20	0	10	25	45	0	grasses, shrubs	boulders, water vis	No
WC-005	TBD	TBD	TBD	TBD	-	75	-	70	>1	70	-	>1	Run 1 (>1.0 m)	-	5	95	0	0	0	0	0		boulders	
9	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
8	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
7	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D111	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D112	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
5	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
60A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
61A*	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D115	Poor	Moderate	Moderate	None	-	1.2	0.16	1.38	0.19	1.2	0.18	0.18	Riffles	Runs	0	65	0	5	15	15	0		Boulders, Instream Veg	No
62 (BURNSIDE)	Moderate	High	High	Poor	1 to 2	67.4	1.65	55.4	0.55	34.2	1.15	0.47	Riffle	Run, Flat	0	0	0	0	10	70	20	grasses	SWD, boulders	No
63	Moderate	Moderate	Moderate	Poor	2	31.1	1.21	15	0.24	24.1	1.2	0.2	Riffle	Run	0	10	5	5	30	50	0	none	boulders	No
63c	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
65	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
66A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
67	Moderate	Moderate	Moderate	Poor	2	3.38	0.27	3.6	0.29	1.82	0.27		Riffle, Run	-	0	40	0	40	10	10	0			No
68	Poor	High	Moderate	None	1.5	44	0.69	36.7	0.29	45	0.45	0.24	Riffle	Run 2 (0.5 - 1.0 m)	0	0	0	5	20	75	0	grasses, shrubs	boulders	No
69	Moderate	Moderate	Moderate	Poor	2	3	0.45	3.1	0.49	1.4	0.45		Run	Riffle, Pool	0	30	0	30	20	20	0			No
70	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
71	Poor	Moderate	Moderate	None	1	14.4	0.76	12.9	0.39	12.1	0.41	0.1	Run	Riffle	10	0	5	10	15	20	40	undercut banks, grasses	SWD, water visibility	No
71b	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
72	Poor	High	Poor	None	1	12	0.68	11	0.3	15	0.54	0.11	Run 3 (<0.5 m)	-	0	0	0	10	25	55	10	shrubs	boulders	No
P023	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
73A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
74	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
76	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
P022	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
77A.1	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
77A	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
78	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
79	Moderate	Moderate	Moderate	Poor	2	1.3	0.41	0.98	0.41	1.4	-	-	Run, Riffle	Pool	0	5	0	0	5	90	0			No
80A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
81A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
81B	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
81C	Moderate	Moderate	Moderate	Poor	1	2.73	0.2	1.3	0.1	1.35	0.08	0.02	Run 3 (<0.5 m)	-	65	10	0	10	5	10	0	grasses, shrubs	boulders	No
81D	Moderate	High	Moderate	Poor	1	2.9	0.41	2.7	0.21	1.01	0.18	0.06	Run 3 (<0.5 m)	Pool	10	5	0	10	25	50	0	grasses, shrubs	boulders, water vis	No
81	Moderate	Moderate	Moderate	Poor	1	2.1	0.39	1.7	0.39	1.6			Run, Pool	Riffle	0	5	0	0	15	80	0			No
82	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
83	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
84	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
85	Moderate	Moderate	Moderate	Poor	1	4.4 to 4.6	0.33	4.1 to 4.7	0.33	1.1	0.33	to	Run, Pool	Riffle	0	20	0	0	20	60	0			No
86	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
87	Poor	High	Poor	Poor	1 to 3	14.3	0.71	11.1	0.28	9.5	0.57	0.2	Run 2 (0.5 - 1.0 m)	Riffle	0	0	0	0	30	50	20	none	boulders	No

Table A.1-1: Mas

Crossing ID	Habitat Potential				Gradient (%)	Average Channel Width (m)	Average Bankfull Depth (m)	Average Wetted Width (m)	Average Water Depth (m)	Channel Width at Crossing (m)	Bankfull Depth at Crossing (m)	Water Depth at Crossing (m)	Habitat Type		Substrate Composition (%)							Overhead Cover Types	Instream Cover Types	Potential Barrier Present?
	Spawning	Rearing	Migratory	Overwintering									Primary/ Dominant	Secondary	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock			
88	Moderate	Moderate	Moderate	Poor	1	60	1.67	60	0.56	40	0.51	0.21	Run	Riffle	0	0	0	0	5	65	30	none	boulders	No
88A	None	None	None	None	No visible channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
89	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
89A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
90	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
91/D70	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
92A	None	None	Poor	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
92c	Poor	Moderate	Moderate	Poor	2	1.58	0.3	1.14	0.14	92c), 1.75 (F	92c), 0.20 (	92c), 0.14 (	Flat	Run, Pool	40	20	15	15	5	4	1	grasses, shrubs, undercut banks	boulders, water vis	
P020A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
P020	Poor	Moderate	Moderate	Poor	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
P019	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
92d	Poor	Poor	None	None	4	0.57	0.2	0.37	0.06	0.36	0.22	0.09	Run 3 (<0.5 m)	Flat	70	20	6	2	1	1	0	grasses	none	
92e	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
93	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
93c	Poor	Moderate	None	Moderate	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
94 (HOOD)	Poor	Poor	Poor	Poor	7	28	3.8	24	3.8	31	3.8	-	Cascade/Rapid	Pool	0	0	0	0	0	30	70	none	boulders, water vis	No
95B	Poor	Poor	Poor	Poor	1	4	0.49	3.8	0.51	2.5	-	-	Run	Riffle, Pool	0	5	0	0	15	30	50	-	-	Yes
97	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
98	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
99	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D68	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
P017	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
100	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
101	Poor	Poor	Poor	Poor	1 to 2	35	0.5	35	0.5	-	-	-	Flat	-	0	0	0	0	0	100	0	n/a	boulders	Yes
D67	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d67b	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
102/D66	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
103	Poor	Poor	Poor	Poor	1	12 to 19	0.62	13 to 14.1	0.55	12	-	-	Run, Flat	-	0	40	0	0	30	30	0	n/a	boulders	Yes
104 (FRAYED KNOTS)	None	High	Moderate	Poor	2	37.3	1.42	33	0.5	36	1.25	0.5	Riffle	Pool, Run	0	5	0	5	5	70	15	none	boulders	No
105	Poor	Moderate	High	Poor	1	26.3	1.1	22.5	1.1	24	1.1	-	Run 1 (>1.0 m)	Flat	80	20	0	0	0	0	0	none	water visibility	No
106A	Poor	Moderate	Moderate	Poor	1	2.8	0.56	2.4	0.54	0.8	-	-	Run, Pool	Riffle	0	50	0	0	30	20	0			No
107	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
108A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
108c	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
P014	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
109	Poor	Poor	Poor	Poor	2	10.5	0.41	15.5	0.46	13	-	-	Riffle, Run	-	0	0	0	10	10	80	0	n/a	n/a	Yes
111A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
113A	None	None	None	None	-	0.663	-	1.1	-	0.6	-	-	Undefined Channel									n/a	n/a	No
114	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
115 (JAMES)	Moderate	Moderate	Moderate	Moderate	1 to 5.5	26	1.61	22	1.25	30	1.6	-	Cascade/Rapid	Riffle	0	0	1	8	31	55	5			No
116	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
117A	Poor	Poor	Poor	Poor	1	1.4	0.16	1.4	0.13	0.9	-	-	Run, Flat	-	0	50	0	0	20	30	0	n/a	n/a	Yes
118	None	Poor	None	Poor	1 to 2	11.4	0.26	11.4	0.25	variable	-	-	Flat	-	0	65	0	0	15	20	0	n/a	n/a	Yes
D61	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
121	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
122A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D60	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
123	None	Moderate	Poor	Poor	1.5 - 3	61.3	1.5	41.8	0.49	54	0.58	0.5	Run	Flat	0	0	0	5	5	80	10	none	boulders	No

Table A.1-1: Mas

Crossing ID	Habitat Potential				Gradient (%)	Average Channel Width (m)	Average Bankfull Depth (m)	Average Wetted Width (m)	Average Water Depth (m)	Channel Width at Crossing (m)	Bankfull Depth at Crossing (m)	Water Depth at Crossing (m)	Habitat Type		Substrate Composition (%)							Overhead Cover Types	Instream Cover Types	Potential Barrier Present?
	Spawning	Rearing	Migratory	Overwintering									Primary/ Dominant	Secondary	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock			
124A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
125	Poor	Poor	Poor	Poor	2 to 20	1.6	0.31	1.6	0.25	-	-	-	Flat	Riffle, Run	0	0	0	0	0	50	50			Yes
126	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
126A	Poor	Poor	Poor	Poor	1 to 2	2.5	0.29	3.4	0.29	10	-	-	Run	Pool, Flat	0	0	0	0	20	80	0			Yes
127A	Moderate	Moderate	Moderate	Poor	2 to 10	12.4	0.85	9.93	0.33	8.3	0.85	0.28	Riffle	Cascade/Rapid, Run 2 (0.5 - 1.0 m)	0	0	0	0	50	40	10	shrubs	boulders	No
130A	Poor	Poor	Poor	Poor	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133J	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133I	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133H	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133G	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133F	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D56	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133E	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133D1	Moderate	Moderate	None	Poor	>3	-	-	-	-	-	-	-	Runs	Riffles, Cascades	0	0	0	0	20	20	60	-	Boulders, Undercut Banks	Yes
133D2	Moderate	Moderate	None	Poor	>3	-	-	-	-	-	-	-	Runs	Riffles, Cascades	0	0	0	0	20	20	60	-	Boulders, Undercut Banks	Yes
133D3	Moderate	Moderate	None	Poor	>3	-	-	-	-	-	-	-	Runs	Riffles, Cascades	0	0	0	0	20	20	60	-	Boulders, Undercut Banks	Yes
133D	Moderate	Moderate	None	Poor	>3	12.9	1.22	9.81	0.27	19.2, 25	0.86, 0.75	0.18	Cascade/Rapid	Riffles, Pool	0	5	0	10	25	50	10	shrubs, undercut banks	boulders	Yes
133D4	Moderate	Moderate	None	Poor	>3	-	-	-	-	-	-	-	Runs	Riffles, Cascades	0	0	0	0	20	20	60	-	Boulders, Undercut Banks	Yes
133C	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
133B	Moderate	Moderate	Poor	None	0 to 6	2.17	0.31	1.8	0.13	1.7	0.5	0.17	Riffle	Run, Pool	5	5	10	40	30	10	0	shrubs, grasses	SWD, boulders	Yes
D55/133a	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D54	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D53A	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D52	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D51	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D50	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
DM3	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D48	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D47	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D46	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D45	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
d45b	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D44 (KENNARCTIC)	High	High	High	Moderate	1.5	63.3	1.5	38.3	0.57	70	1.5	0.71	Riffle	Run 2 (0.5 – 1.0 m)	0	0	0	10	30	50	10	-	Boulder	No
D43	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D43A	None	None	None	None	No visible channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
D41	None	Poor	Poor	None		0.66	0.36	0.56	0.32	0.53	0.2	0.15	Run	-	0	55	0	10	30	5	0	-	Undercut Banks, Boulder	Yes
D42	Moderate	Moderate	Moderate	Poor	2 to 6	10.87	0.85	10	0.38	12	0.75	0.42	Cascade/Rapids	Riffles	5	0	0	0	25	60	0	shrubs	boulders, water vis	No
d42e	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d42f	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d42g	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d42h	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d42k	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d42l	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D39	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
DM2 (KENNARCTIC)	High	High	High	High	1 to 3	57.2	1.9	44.2	0.72	50	1.5	0.65	Run 2 (0.5 – 1.0 m)	Riffle, Pool	5	5	0	0	40	50	0	grasses	Undercut Banks, Boulders, water vis	No
dm2a	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
P009	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
DM2C	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D20	Poor	Poor	Moderate	Poor	1 to 2	1.14	0.51	1.06	0.39	2.1	0.7	0.6	Runs		0	10	0	0	0	90	0		Undercut Banks, Overhanging and Instream Veg, Boulders	No
P007	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d20c	Poor	Moderate	Moderate	Poor		3.12	0.59	1.07	0.22	0.75	0.45	0.15	Run 3 (< 0.5 m)	Riffle, Pool, Flat	5	65	0	0	10	20	0	grasses, shrubs	water vis, boulders	No

Table A.1-1: Mas

Crossing ID	Habitat Potential				Gradient (%)	Average Channel Width (m)	Average Bankfull Depth (m)	Average Wetted Width (m)	Average Water Depth (m)	Channel Width at Crossing (m)	Bankfull Depth at Crossing (m)	Water Depth at Crossing (m)	Habitat Type		Substrate Composition (%)							Overhead Cover Types	Instream Cover Types	Potential Barrier Present?
	Spawning	Rearing	Migratory	Overwintering									Primary/ Dominant	Secondary	Organics	Fines	Sand	Gravel	Cobble	Boulder	Bedrock			
D19	None	Poor	Poor	None	1 to 2	1.33	0.17	0.87	0.12	0.62	0.11	0.06	Flats	-	0	100	0	0	0	0	0		Overhanging veg, small WD	Yes
D16.1	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
P005	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D15	Poor	Moderate	Moderate	Poor	1 to 2	2.02	0.56	1.96	0.5	0.78	0.46	0.41	Runs	-	0	100	0	0	0	0	0		Sparse Undercut Banks, Overhangng and Instream Veg	No
d15a	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D14	Poor	Moderate	Moderate	Moderate	0.5 to 6	19	0.95	15.9	0.61	29	1.55	1.17	Run 2 (0.5 – 1.0 m)	Pool, Riffle, Flat	20	55	0	5	5	15	0	shrubs, grasses	boulders	No
d13	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D12	Poor	Moderate	Moderate	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No
d12a	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d12b	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
d11a	None	None	None	None	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D11b	Poor	Moderate	Poor	None	-	3.71	0.12	2.08	0.06	2.3	0.15	0.05	Run 3 (< 0.5 m)	-	90	10	0	0	0	0	0	grasses, shrubs	water visibility	-
d7a	TBD	TBD	TBD	TBD	Undefined Channel										n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
D7E	Poor	Poor	Poor	Poor	3	1.64	0.35	1.41	0.08	0.95	0.3	0.07	Flat	Pool, Run	45	45	0	5	2	5	0	grasses, shrubs	water vis	

A.2 Historical Fish and Fish Habitat Results

Table A.2-1 Stream Habitat Characterisitics Found Within the Port and Road LAA, Historical Data (2001 to 2012)

Watershed	Stream Class	Channel Width (m)				Bankfull Max (m)				Wetted Width (m)				Water Depth (m)			
		n	Min	Max	Mean	n	Min	Max	Mean	n	Min	Max	Mean	n	Min	Max	Mean
Arctic Ocean	Ephemeral	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-
	Small Permanent	1	-	-	2.8	1	-	-	0.3	-	-	-	-	-	-	-	-
Kennartic River	Ephemeral	1	-	-	1.6	1	-	-	0.3	1	-	-	1.6	1	-	-	0.3
	Intermittent	3	1.3	11.4	5.1	3	0.2	0.3	0.2	3	0.9	11.4	5.2	3	0.1	0.3	0.2
	Small Permanent	7	0.7	12.1	2.9	7	0.2	0.7	0.5	7	0.2	12.1	2.7	7	0.1	0.6	0.4
	Large Permanent	5	9.9	78.5	33.3	4	0.5	1.3	0.8	4	9.8	60.4	29.3	4	0.3	0.8	0.5
	Boulder Field	1	-	-	10.0	1	-	-	0.4	1	-	-	10.0	1	-	-	0.3
James River	Ephemeral	1	-	-	0.7	5	-	-	-	1	-	-	1.1	5	-	-	-
	Intermittent	2	1.4	10.5	6.0	2	0.2	0.4	0.3	2	1.4	15.5	8.5	2	0.1	0.5	0.3
	Large Permanent	1	37.0	44.0	40.5	1	-	-	1.6	1	30.0	44.0	37.0	1	-	-	1.3
Hood River	Ephemeral	2	1.4	11.5	6.5	17	-	-	-	2	1.8	17.8	9.8	17	-	-	-
	Intermittent	1	-	-	4.0	1	-	-	0.5	1	-	-	3.8	1	-	-	0.5
	Small Permanent	4	2.1	19.0	7.5	4	0.3	0.6	0.5	4	1.7	14.1	6.7	4	0.3	0.6	0.5
	Large Permanent	5	6.5	52.0	28.5	5	0.5	1.1	1.5	5	16.0	53.8	34.0	5	0.6	3.8	1.5
	Boulder Field	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-
Burnside River	Ephemeral	13	-	-	-	13	-	-	-	13	-	-	-	13	-	-	-
	Intermittent	3	0.6	2.0	1.3	3	-	-	-	3	0.6	4.8	2.7	3	-	-	-
	Small Permanent	4	1.2	3.4	2.2	4	0.2	0.5	0.3	4	1.0	3.6	2.3	4	0.2	0.5	0.4
	Large Permanent	6	13.8	63.0	27.8	2	0.4	0.5	0.5	3	13.0	25.8	17.9	2	0.5	0.5	0.5

Notes:
n = sample size; min = minimum; max = maximum; "-" = indicates no available data.

Table A.2-2 Historical Fish Catch Summary and Catch Per Unit Effort in the RAA

Watershed	Crossing ID	Stream Class	Sampling Year	Effort (s)	Number of Fish Captured or Observed										CPUE (fish/min)										Species Composition (%)									
					ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total
Burnside	62	Large Permanent	All	1074	-	-	4	-	-	-	1	2	-	7	-	-	0.43	-	-	-	0.11	0.22	-	0.76	-	-	57.1	-	-	-	14.3	28.6	-	100
	63		All	1321	-	-	7	-	-	-	-	10	-	17	-	-	0.39	-	-	-	-	0.56	-	0.95	-	-	41.2	-	-	-	-	58.8	-	100
	63/64		2008	822	-	-	13	-	-	-	-	-	2	15	-	-	0.59	-	-	-	-	-	0.09	0.68	-	-	86.7	-	-	-	-	-	13.3	100
	68		All	1374	-	-	6	-	-	-	1	7	-	14	-	-	0.22	-	-	-	0.04	0.25	-	0.5	-	-	42.9	-	-	-	7.1	50	-	100
	71		All	1423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	72		All	1084	-	-	1	-	-	-	-	-	-	1	-	-	0.04	-	-	-	-	-	-	0.04	-	-	100	-	-	-	-	-	-	100
	1002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	67	Small Permanent	All	1665	-	-	1	-	-	-	-	-	-	1	-	-	0.07	-	-	-	-	-	-	0.07	-	-	100	-	-	-	-	-	-	100
	79		All	1207	-	-	10	-	-	-	-	-	-	10	-	-	0.55	-	-	-	-	-	-	0.55	-	-	100	-	-	-	-	-	-	100
	D115		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	Ephemeral	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		2001	335	-	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-	0.14	0.14	-	0.28	-	-	-	-	-	-	50	50	-	100
	13		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	48		2008	1385	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	49		2008	282	-	9	-	1	-	-	-	4	-	14	-	0.39	-	0.04	-	-	-	0.17	-	0.61	-	64.3	-	7.1	-	-	-	28.6	-	100
	60A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	61A*		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	65		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	66A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	70		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	73		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	74		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	76		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	78		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D111		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D112		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	69	Unknown	2008	651	-	-	17	1	-	-	-	-	1	19	-	-	0.74	0.04	-	-	-	-	0.04	0.83	-	-	89.5	5.3	-	-	-	-	5.3	100
Hood River	87	Large Permanent	All	1480	-	-	1	-	-	-	-	3	-	4	-	-	0.05	-	-	-	-	0.15	-	0.2	-	-	25	-	-	-	-	75	-	100
	88		All	854	-	4	-	-	-	-	2	13	-	19	-	0.16	-	-	-	-	0.08	0.53	-	0.77	-	21.1	-	-	-	-	10.5	68.4	-	100
	94		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	104		2007	668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	105		2012	411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	81	Small Permanent	All	1009	-	2	15	-	-	-	1	-	-	18	-	0.1	0.75	-	-	-	0.05	-	-	0.89	-	11.1	83.3	-	-	-	5.6	-	-	100
	81A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	81B		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	81C		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	81D		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	85		All	1199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	96		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	103		All	997	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	0.07	-	0.07	-	-	-	-	-	-	-	100	-	100
	106A		2012	1108	-	-	-	-	-	-	-	20	-	20	-	-	-	-	-	-	-	0.86	-	0.86	-	-	-	-	-	-	-	100	-	100

Table A.2-2 Historical Fish Catch Summary and Catch Per Unit Effort in the RAA

Watershed	Crossing ID	Stream Class	Sampling Year	Effort (s)	Number of Fish Captured or Observed										CPUE (fish/min)										Species Composition (%)									
					ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total
Hood River (cont'd)	77	Ephemeral	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	82		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	84		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	89		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	89A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	90		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	91		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	92A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	93		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	95B		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	97		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	98		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	99		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	107		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D66		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D67		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D68		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D70		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	80A	Boulder field (Other)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	83		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	86		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	88A	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
James River	115	Large Permanent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	108		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	109		2008	856	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	111A	Ephemeral	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	113A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	114		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	116		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	117A		2008	507	-	1	-	-	-	-	-	1	-	2	-	0.07	-	-	-	-	-	0.07	-	0.14	-	50	-	-	-	-	-	50	-	100
Kennartic River	123	Large Permanent	All	1036	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	0.47	-	0.47	-	-	-	-	-	-	-	100	-	100
	123		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	127A		2012	2130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D42		2012	2914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D44		2012	1511	25	-	-	-	-	-	-	9	-	34	0.51	-	-	-	-	-	-	0.19	-	0.7	73.5	-	-	-	-	-	-	26.5	-	100
	DM2		2012	681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	121A	Small Permanent	All	1330	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-	-	-	0.45	-	0.45	-	-	-	-	-	-	-	100	-	100
	133B		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133D		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133D1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133D2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133D3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133D4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D5		2012	805	-	1	-	-	-	-	-	2	-	3	-	0.04	-	-	-	-	-	0.08	-	0.12	-	33.3	-	-	-	-	-	66.7	-	100
	D6		2012	1153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D14		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D15		2012	997	6	-	-	-	-	-	-	-	9	15	0.65	-	-	-	-	-	-	-	0.98	1.63	40	-	-	-	-	-	-	-	60	100
	D20		2012	941	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	0.81	0.81	-	-	-	-	-	-	-	-	100	100
	D41		2012	870	1	-	-	-	-	-	-	-	-	1	0.06	-	-	-	-	-	-	-	-	0.06	100	-	-	-	-	-	-	-	-	100

Table A.2-2 Historical Fish Catch Summary and Catch Per Unit Effort in the RAA

Watershed	Crossing ID	Stream Class	Sampling Year	Effort (s)	Number of Fish Captured or Observed										CPUE (fish/min)										Species Composition (%)									
					ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total	ARCH	LKTR	ARGR	RNWH	CISC	LNSC	BURB	SLSC	NNST	Total
Kennartic River (cont'd)	118	Ephemeral	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	121		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	122A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	124		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	125		All	549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	126A		2012	251	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	0.06	-	0.06	-	-	-	-	-	-	-	100	-	100
	130A		2008	628	-	1	-	-	-	-	-	-	-	1	-	0.11	-	-	-	-	-	-	-	0.11	-	100	-	-	-	-	-	-	-	100
	133C		2012	450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133E		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133F		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133G		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133H		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	133I		All	684	1	2	-	-	-	-	-	13	-	16	0.03	0.06	-	-	-	-	-	0.37	-	0.45	6.3	12.5	-	-	-	-	-	81.3	-	100
	133J		2012	959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D11		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D12		2012	551	-	-	4	-	-	-	-	-	1	5	-	-	0.37	-	-	-	-	-	0.09	0.46	-	-	80	-	-	-	-	-	20	100
	D16		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D19		2012	614	-	1	-	-	-	-	-	11	1	13	-	0.06	-	-	-	-	-	0.66	0.06	0.78	-	7.7	-	-	-	-	-	84.6	7.7	100
	D39		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D45		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D46		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D47		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D48		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D51		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	126	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D43A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arctic	D2	Small Permanent	2012	741	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	100	100
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	148B		2012	354	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	0.26	-	0.26	-	-	-	-	-	-	-	100	-	100
	D1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes: CPUE = Catch Per Unit Effort; ARCH = Arctic Char; LKTR = Lake Trout; ARGR = Arctic Grayling; RNWH = Round Whitefish; CISC = Cisco; LNSC = Longnose Sucker; BURB = Burbot; SLSC = Slimy Sculpin; NNST = Ninespine Stickleback.
[1] Gill net effort, CPUE is described as $100m^2/12h$

Sources:
MMG 2013; Wolfden 2006

Table A.2-3 Water Quality Measurements Found within the LAA, 2012

Watershed	Crossing ID	Date (dd-mmm-yy)	Water Temperature (˚C)	pH	Dissolved Oxygen (mg/L)	Conductivity (µS/cm)	Turbidity (NTU)
Arctic Ocean	D2	14-Jul-12	19.9	7.4	9.6	479	60.9
Arctic Ocean	D2	17-Aug-12	13.5	7.2	10.6	280	11.0
Arctic Ocean	D5	14-Jul-12	14.9	7.0	7.9	705	21.0
Arctic Ocean	D5	17-Aug-12	11.0	7.6	8.7	353	17.0
Arctic Ocean	D6	14-Jul-12	17.8	7.3	9.2	654	17.4
Arctic Ocean	D6	17-Aug-12	7.1	7.5	10.9	351	16.7
Burnside	67	24-Aug-12	10.4	7.9	9.7	40	1.10
Burnside	D115	15-Aug-12	4.7	7.2	11.4	8	0.73
Hood	87	25-Aug-12	11.8	7.8	9.5	10	0.10
Hood	88	25-Aug-12	10.6	7.6	8.6	10	0.05
Hood	105	5-Jul-12	19.1	7.4	8.8	14	1.90
Hood	105	22-Aug-12	9.3	7.9	9.7	14	1.11
Hood	092A	22-Aug-12	9.0	**6.3**	11.6	10	0
Hood	095B	6-Jul-12	21.3	7.1	7.1	11	2.30
Hood	106A	5-Jul-12	18.5	7.5	9.8	33	0
Hood	106A	22-Aug-12	7.2	7.8	8.9	42	15
James	109A	8-Jul-12	17.9	6.8	6.5	54	-
Kennarctic	125	5-Jul-12	15.3	8.0	7.7	148	1.60
Kennarctic	125	21-Aug-12	7.3	7.8	8.6	311	0.80
Kennarctic	127A	5-Jul-12	13.7	7.1	8.8	71	0.05
Kennarctic	127A	21-Aug-12	9.5	7.6	10.1	87	0.50
Kennarctic	133B	4-Jul-12	17.4	7.4	8.9	36	1.30
Kennarctic	133B	23-Aug-12	8.2	8.0	10.6	65	0.46
Kennarctic	133D	4-Jul-12	15.3	7.5	9.6	26	0.75
Kennarctic	133D	23-Aug-12	9.1	7.3	10.3	34	0.58
Kennarctic	D12	14-Jul-12	16.0	6.7	**6.0**	35	2.91
Kennarctic	D14	14-Jul-12	14.4	7.3	10.0	48	3.52
Kennarctic	D14	17-Aug-12	11.2	7.4	11.2	85	3.60
Kennarctic	D15	14-Jul-12	14.0	7.1	9.2	96	111
Kennarctic	D15	17-Aug-12	11.2	7.5	9.6	83	6.50
Kennarctic	D19	15-Jul-12	6.3	6.9	7.3	126	19.9
Kennarctic	D19	18-Aug-12	6.9	7.4	10.1	127	18.0
Kennarctic	D20	15-Jul-12	9.8	6.9	8.3	49	11.0
Kennarctic	D20	18-Aug-12	7.0	7.3	9.8	79	5.50
Kennarctic	D39	18-Aug-12	11.7	**5.4**	**6.0**	131	0.57
Kennarctic	D41	15-Jul-12	17.6	7.2	8.4	58	1.54
Kennarctic	D41	18-Aug-12	3.8	6.9	9.4	87	0.33
Kennarctic	D42	15-Jul-12	13.1	7.2	9.5	19	1.12
Kennarctic	D42	18-Aug-12	13.4	7.6	9.7	17	0.55

Table A.2-3 Water Quality Measurements Found within the LAA, 2012

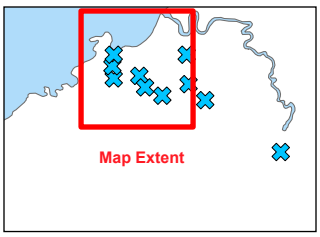
Watershed	Crossing ID	Date (dd-mmm-yy)	Water Temperature (˚C)	pH	Dissolved Oxygen (mg/L)	Conductivity (µS/cm)	Turbidity (NTU)
Kennarctic	D44 (Kennarctic)	15-Jul-12	17.0	7.5	9.0	51	0.15
Kennarctic	D44 (Kennarctic)	18-Aug-12	11.7	8.1	10.0	63	0.80

Notes:

Bolded text indicates an exceedance of CCME Freshwater Quality Guidelines for the Protection of Aquatic Life (CCME 2025).

Appendix B Watercourse Crossing Mapbook

B.1 Port and Aerodrome Watercourse Crossings



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Watercourse Crossing
- Water Quality
- Water Quantity
- Habitat Profile Transect
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Wind Turbine

Port Footprint
- Aerodrome
- Landside
- Marine
- Project Development Area
- Ocean

0 250 500 Metres
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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2026-02-02
TR by SA on 2026-02-02

Client/Project
123514868_113

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.1 1 of 3

Title
Grays Bay Port and Aerodrome Watercourse Crossings

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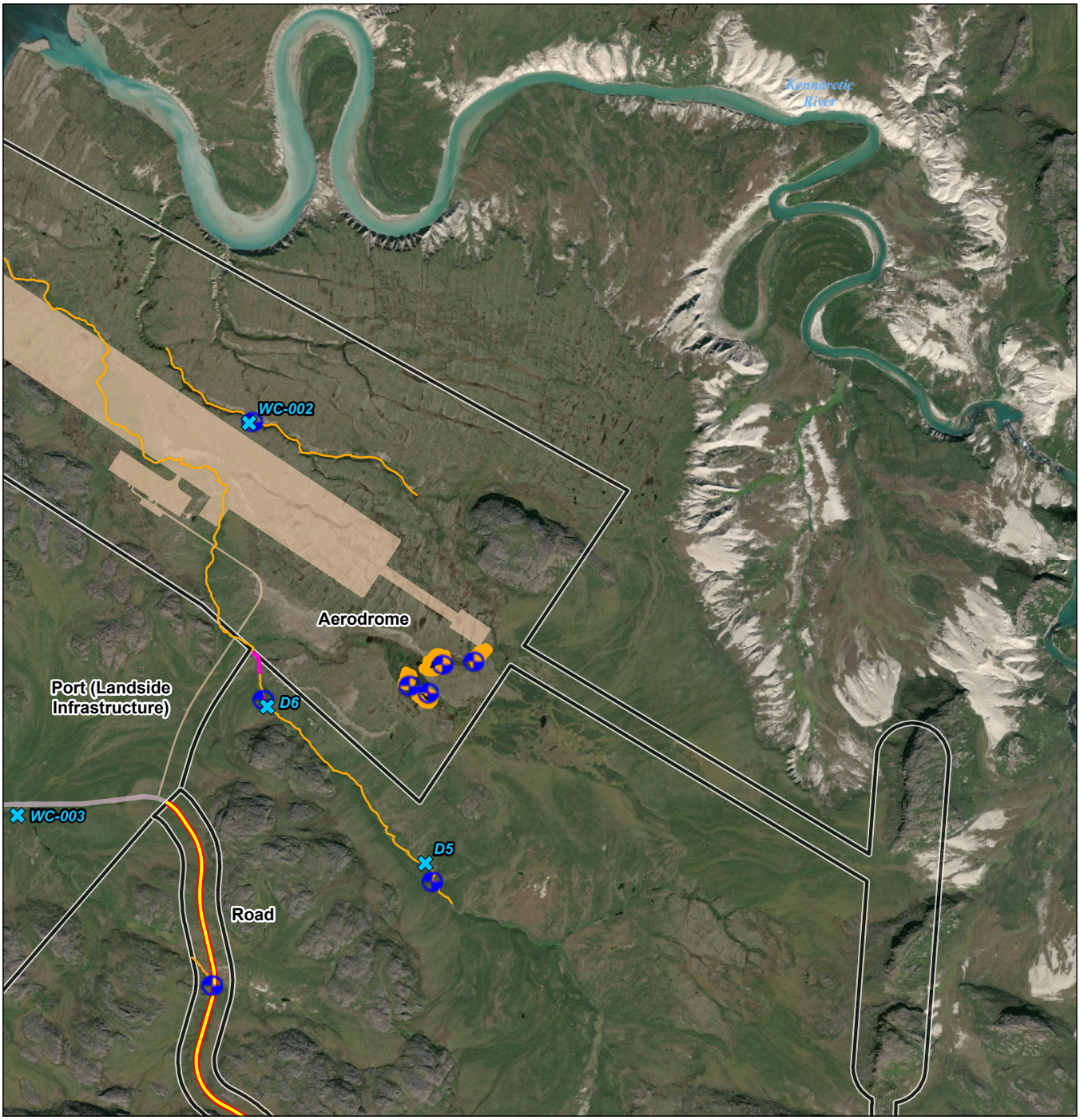

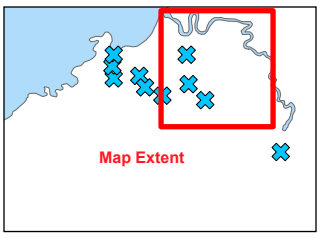

Watercourse Crossing
Water Quality
Water Quantity
Habitat Profile Transect
Fishing Station
Lake Habitat
Stream Habitat Profile

Grays Bay Road

Port Footprint

Aerodrome
Landside
Marine
Project Development Area
Ocean

0 250 500 Metres

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Notes

1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

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123514868_113

Figure No.
B.1 2 of 3

Title
Grays Bay Port and Aerodrome Watercourse Crossings

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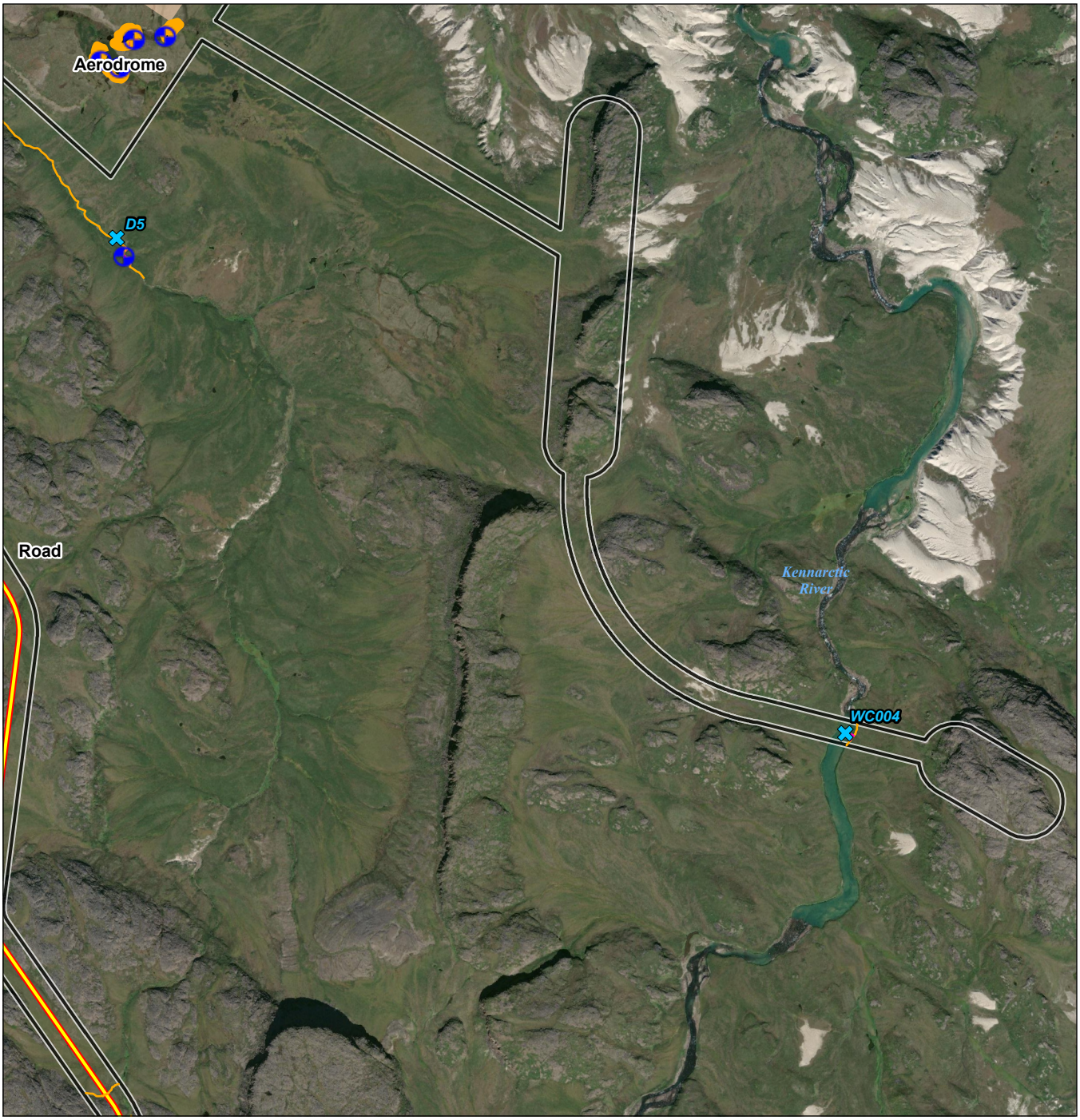

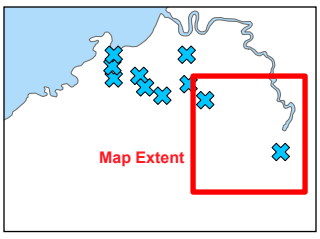

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

- Watercourse Crossing
- Water Quality
- Water Quantity
- Habitat Profile Transect
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road

Port Footprint
- Aerodrome
- Landside
- Marine
- Project Development Area
- Ocean

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Grays Bay Road and Port

Figure No.
B.1 3 of 3

Title
Grays Bay Port and Aerodrome Watercourse Crossings

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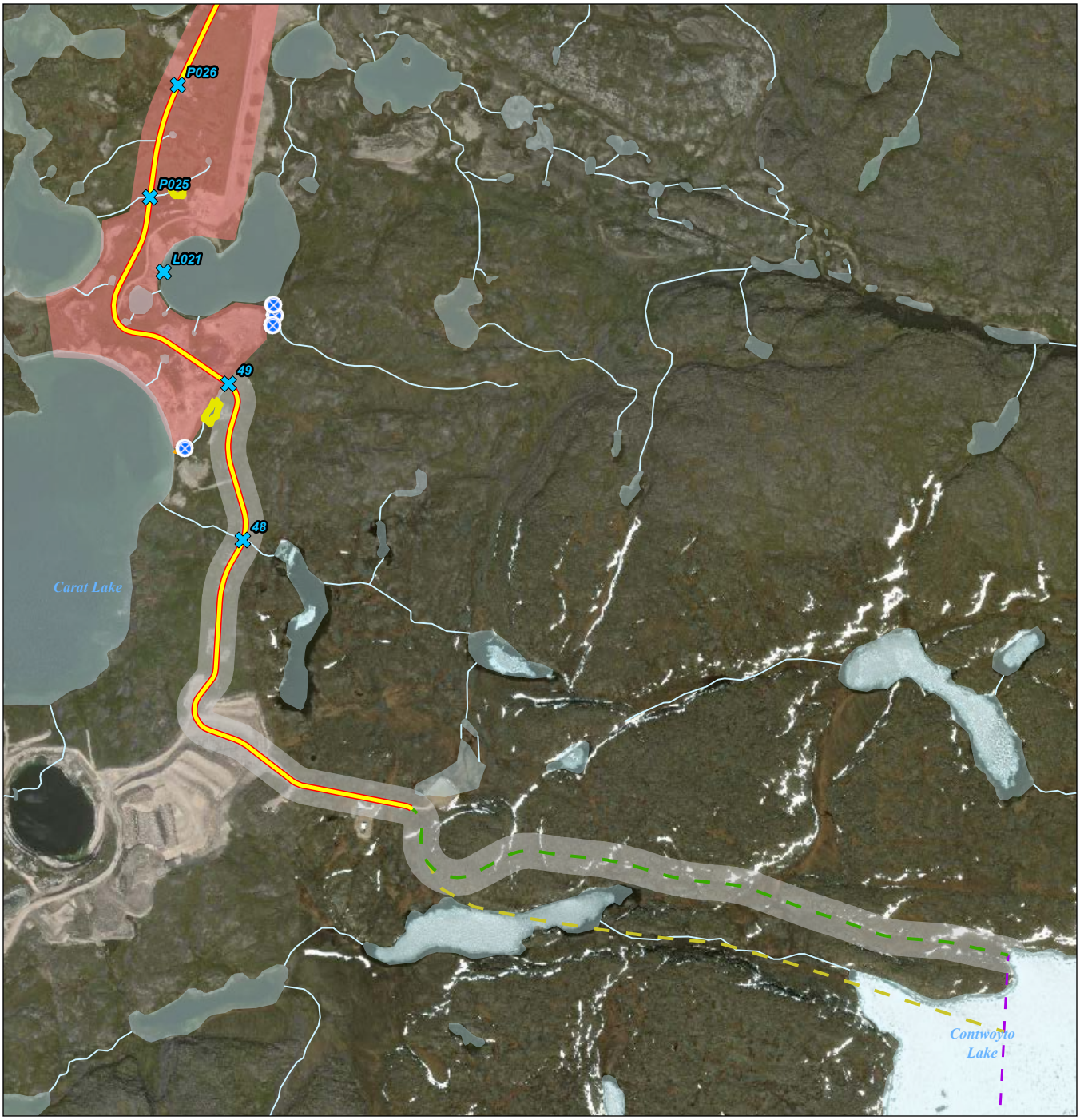
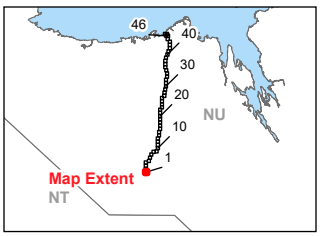
B.2 Road Watercourse Crossings





Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)
- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **1 of 49**

Title
Grays Bay Road Watercourse Crossings

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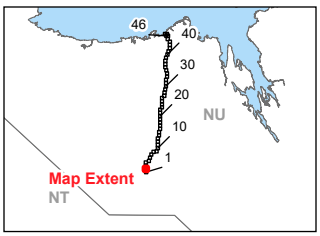

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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TR by SL on 2026-02-02

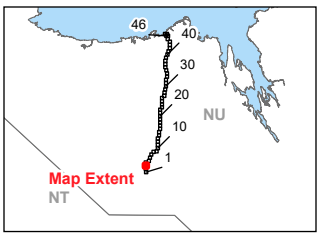
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **2 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



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- Habitat Profile Transect
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Project Development Area (PDA)

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- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **3 of 49**

Title
Grays Bay Road Watercourse Crossings

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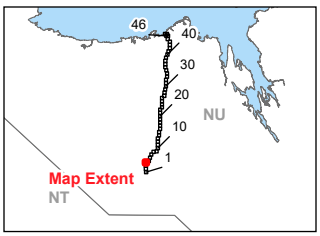

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
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- Stream Habitat Profile
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- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

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- Waterbody

0 250 500 Metres
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WEST KITIKMEOT RESOURCES CORP

Project Location
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Nunavut

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TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **4 of 49**

Title
Grays Bay Road Watercourse Crossings

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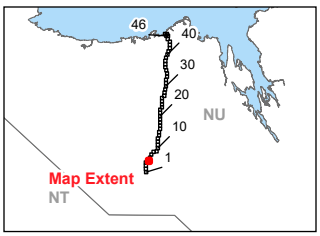

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
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- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **5 of 49**

Title
Grays Bay Road Watercourse Crossings

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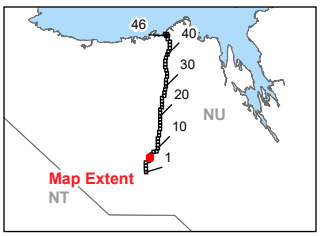

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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N

NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

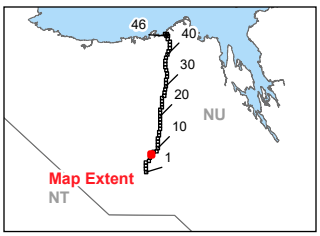
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **6 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

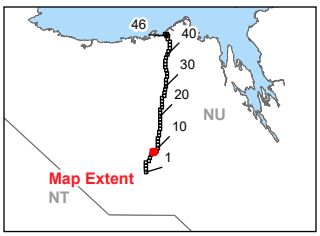
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **7 of 49**

Title
Grays Bay Road Watercourse Crossings

\\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres
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NUNAMI STANTEC LIMITED
WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **8 of 49**

Title
Grays Bay Road Watercourse Crossings

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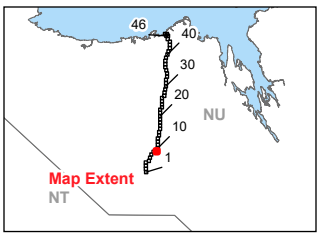

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **9 of 49**

Title
Grays Bay Road Watercourse Crossings

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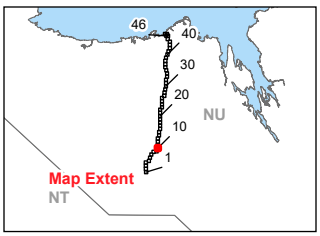

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
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Client/Project
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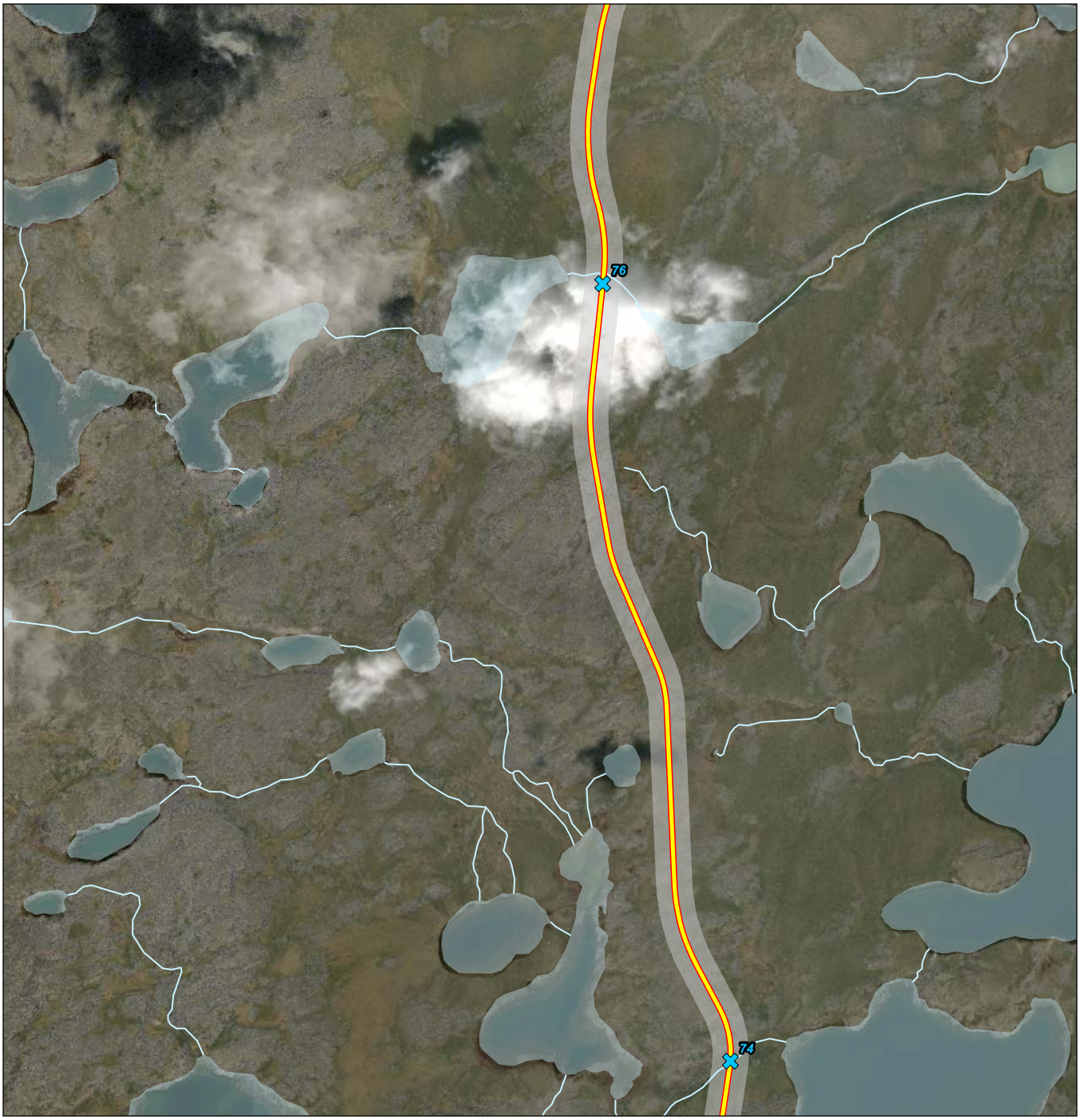
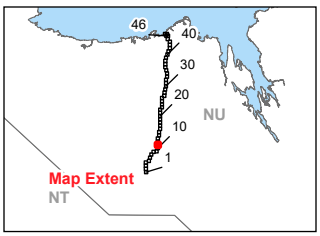
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **10 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry





Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **11 of 49**

Title
Grays Bay Road Watercourse Crossings

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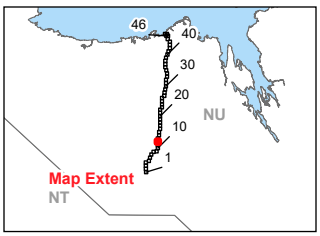

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **12 of 49**

Title
Grays Bay Road Watercourse Crossings

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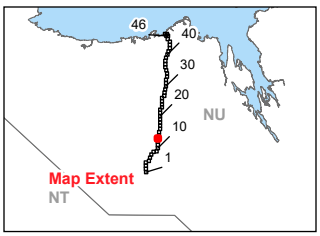

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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NUNAMI STANTEC LIMITED
WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **13 of 49**

Title
Grays Bay Road Watercourse Crossings

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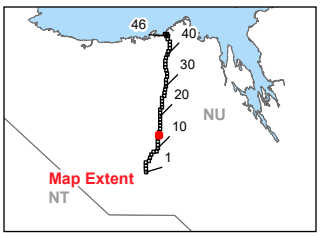

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **14 of 49**

Title
Grays Bay Road Watercourse Crossings

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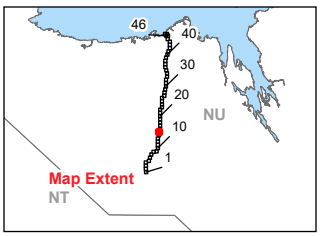

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

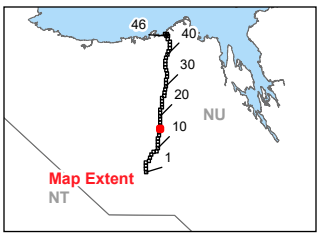
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **15 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

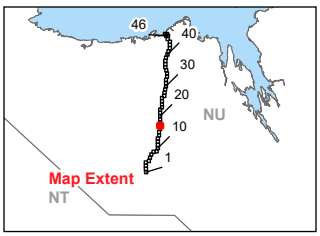
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **16 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **17 of 49**

Title
Grays Bay Road Watercourse Crossings

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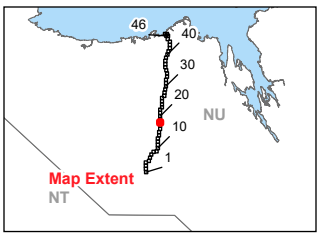

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

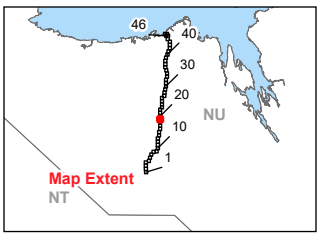
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **18 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **19 of 49**

Title
Grays Bay Road Watercourse Crossings

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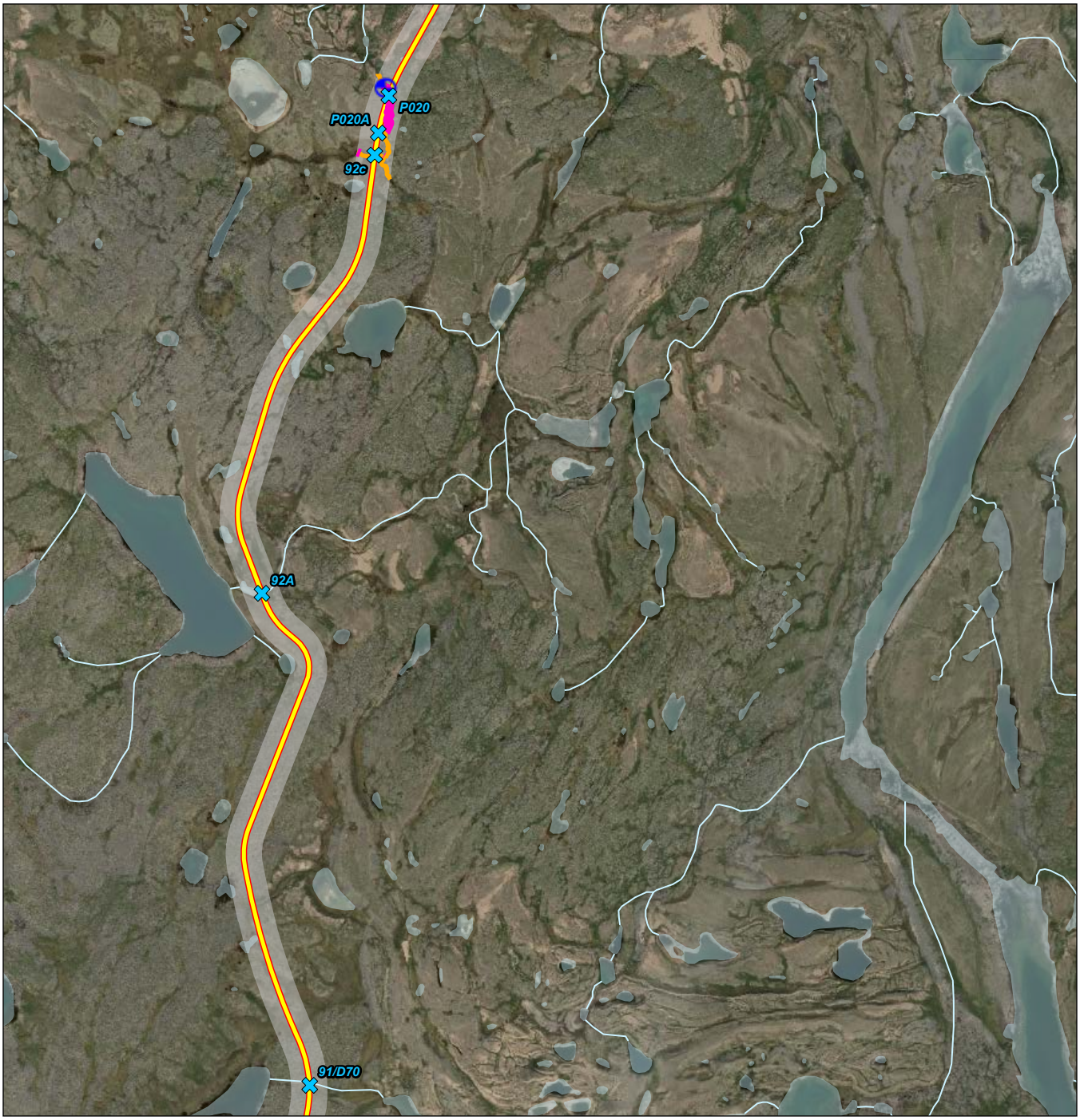

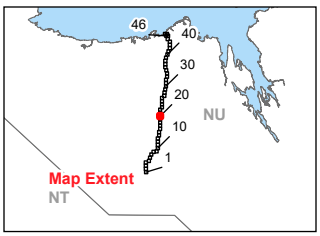

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **20 of 49**

Title
Grays Bay Road Watercourse Crossings

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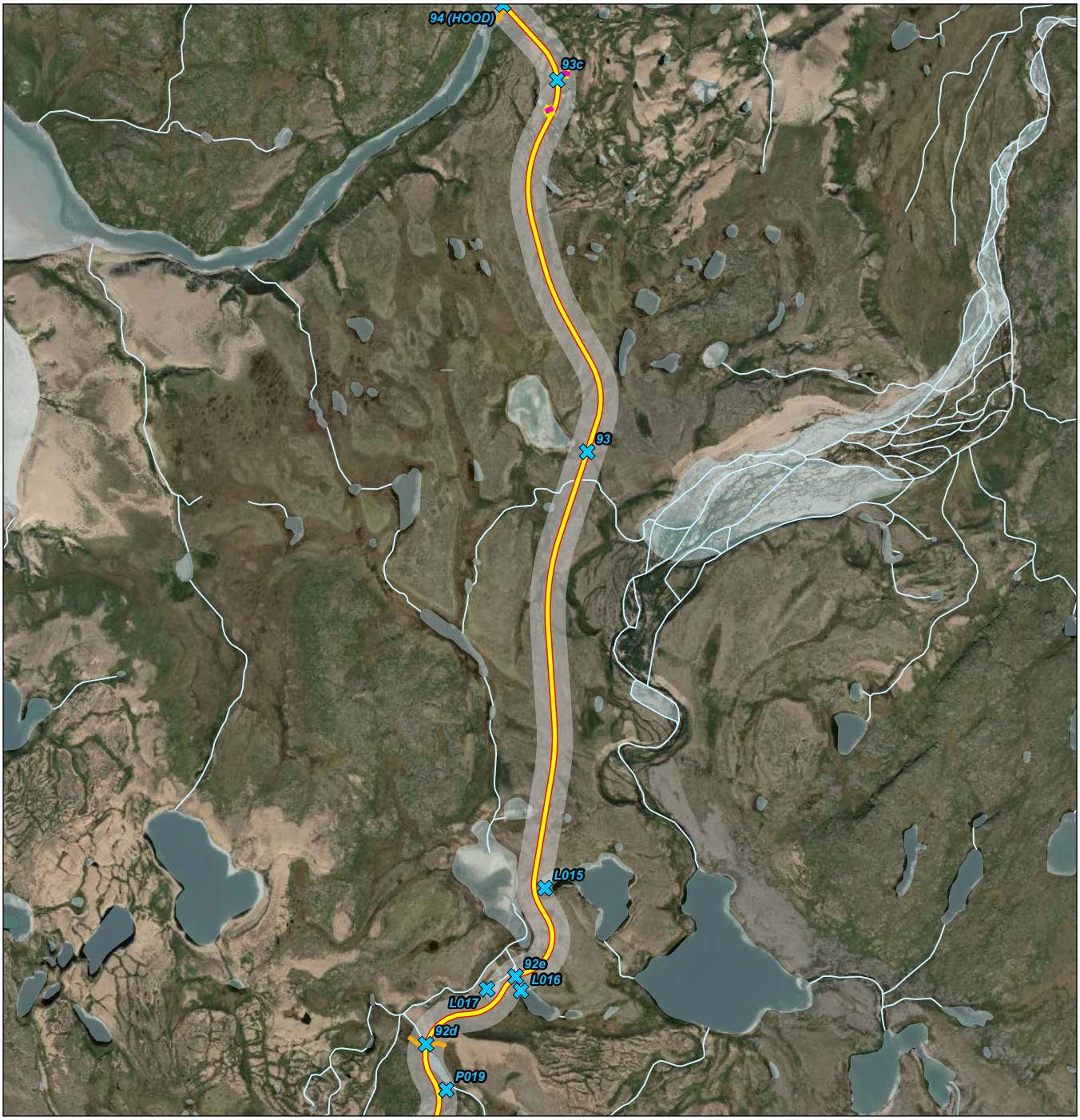

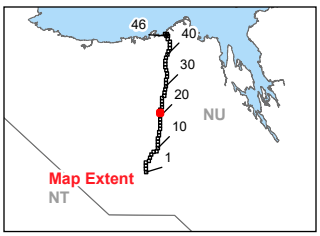

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres
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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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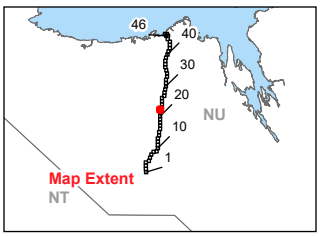
Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **21 of 49**

Title
Grays Bay Road Watercourse Crossings

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_114_Grays_Bay_Road_Watercourse_Crossings.pagx Revised: 2026-02-04 By: dcspry



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

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123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **22 of 49**

Title
Grays Bay Road Watercourse Crossings

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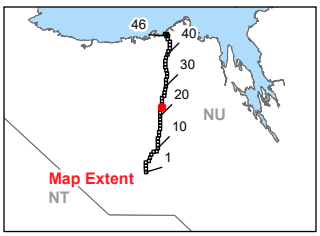

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **23 of 49**

Title
Grays Bay Road Watercourse Crossings

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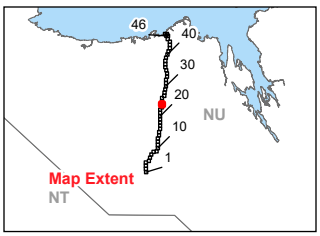

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

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Nunavut

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **24 of 49**

Title
Grays Bay Road Watercourse Crossings

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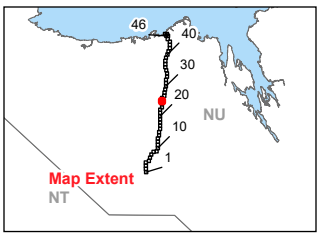

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **25 of 49**

Title
Grays Bay Road Watercourse Crossings

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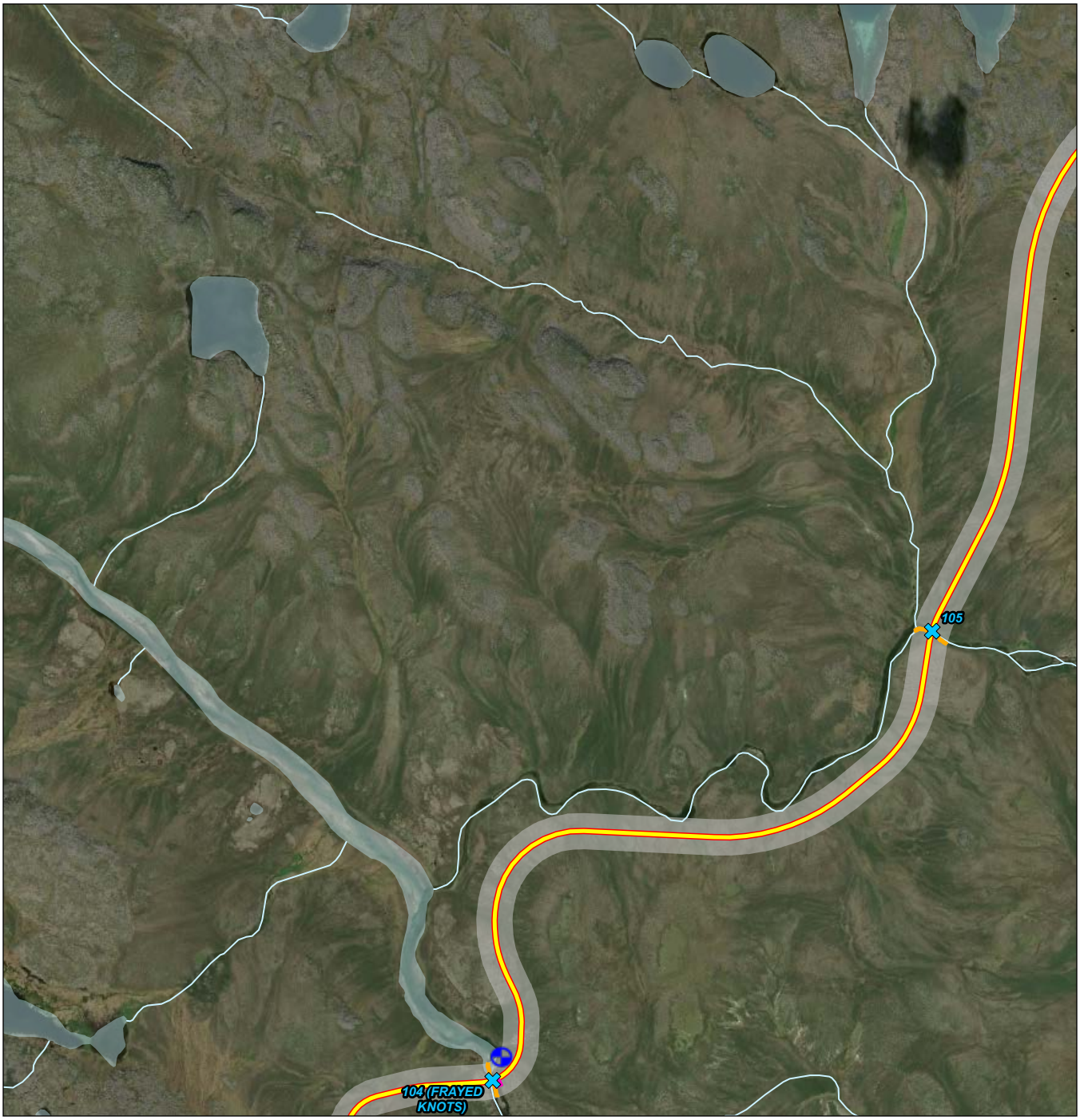

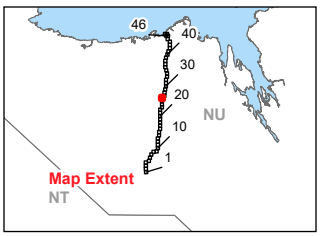

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **26 of 49**

Title
Grays Bay Road Watercourse Crossings

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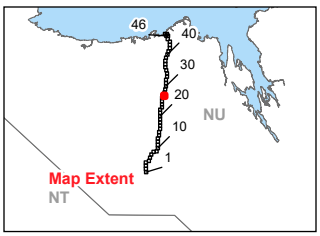

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **27 of 49**

Title
Grays Bay Road Watercourse Crossings

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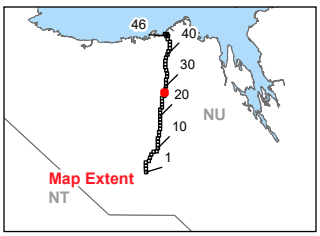

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **28 of 49**

Title
Grays Bay Road Watercourse Crossings

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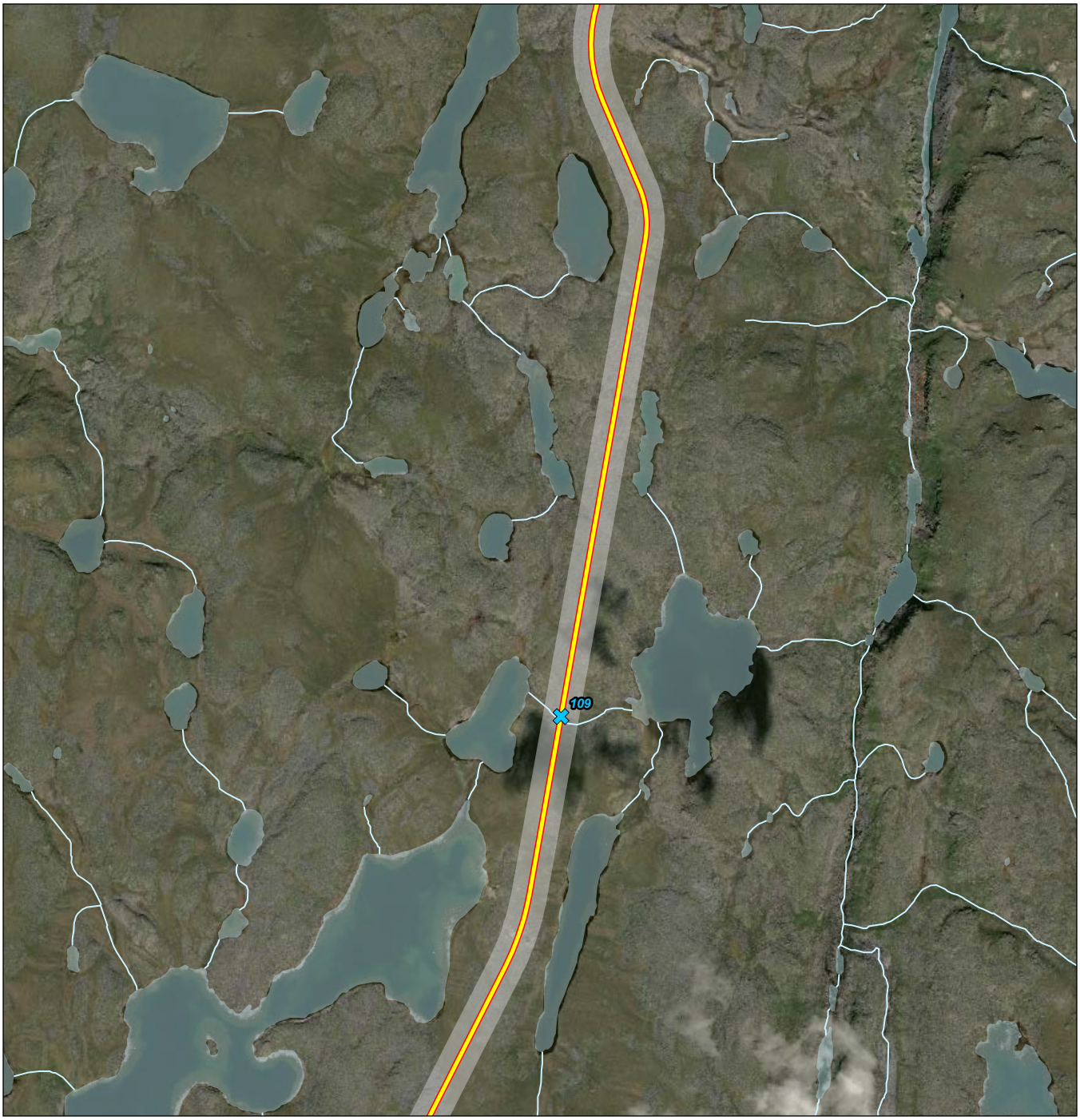

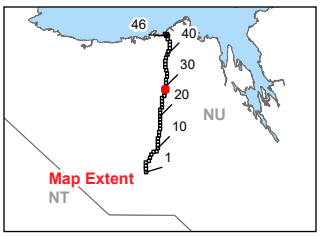

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **29 of 49**

Title
Grays Bay Road Watercourse Crossings

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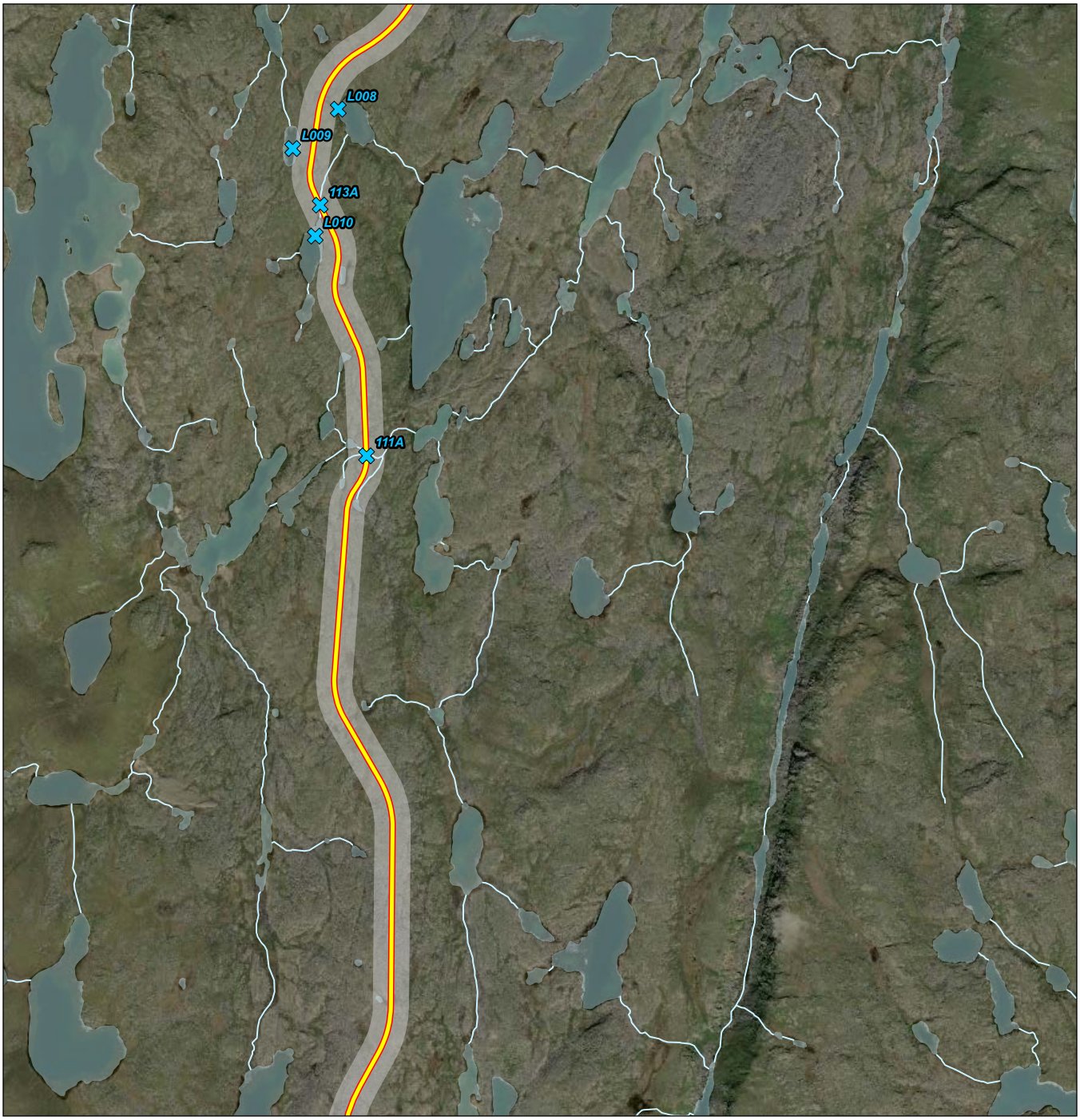

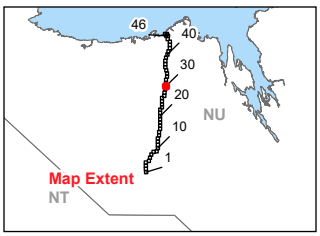

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **30 of 49**

Title
Grays Bay Road Watercourse Crossings

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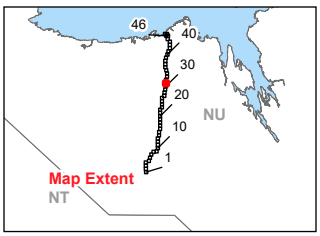

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)
- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

0 250 500 Metres
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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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Client/Project
123514868_114
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **31 of 49**

Title
Grays Bay Road Watercourse Crossings

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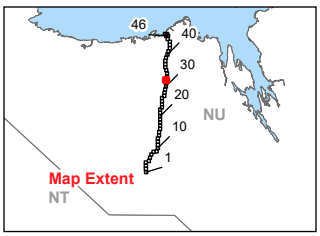

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
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Nunavut

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **32 of 49**

Title
Grays Bay Road Watercourse Crossings

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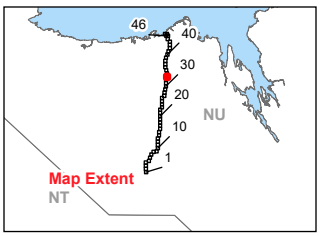

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
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- Port (Marine-based Infrastructure)
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- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **33 of 49**

Title
Grays Bay Road Watercourse Crossings

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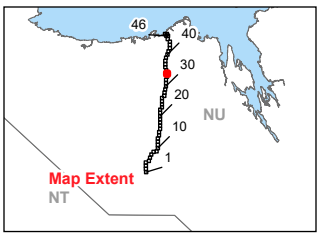

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

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- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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WEST KITIKMEOT RESOURCES CORP

Project Location
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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **34 of 49**

Title
Grays Bay Road Watercourse Crossings

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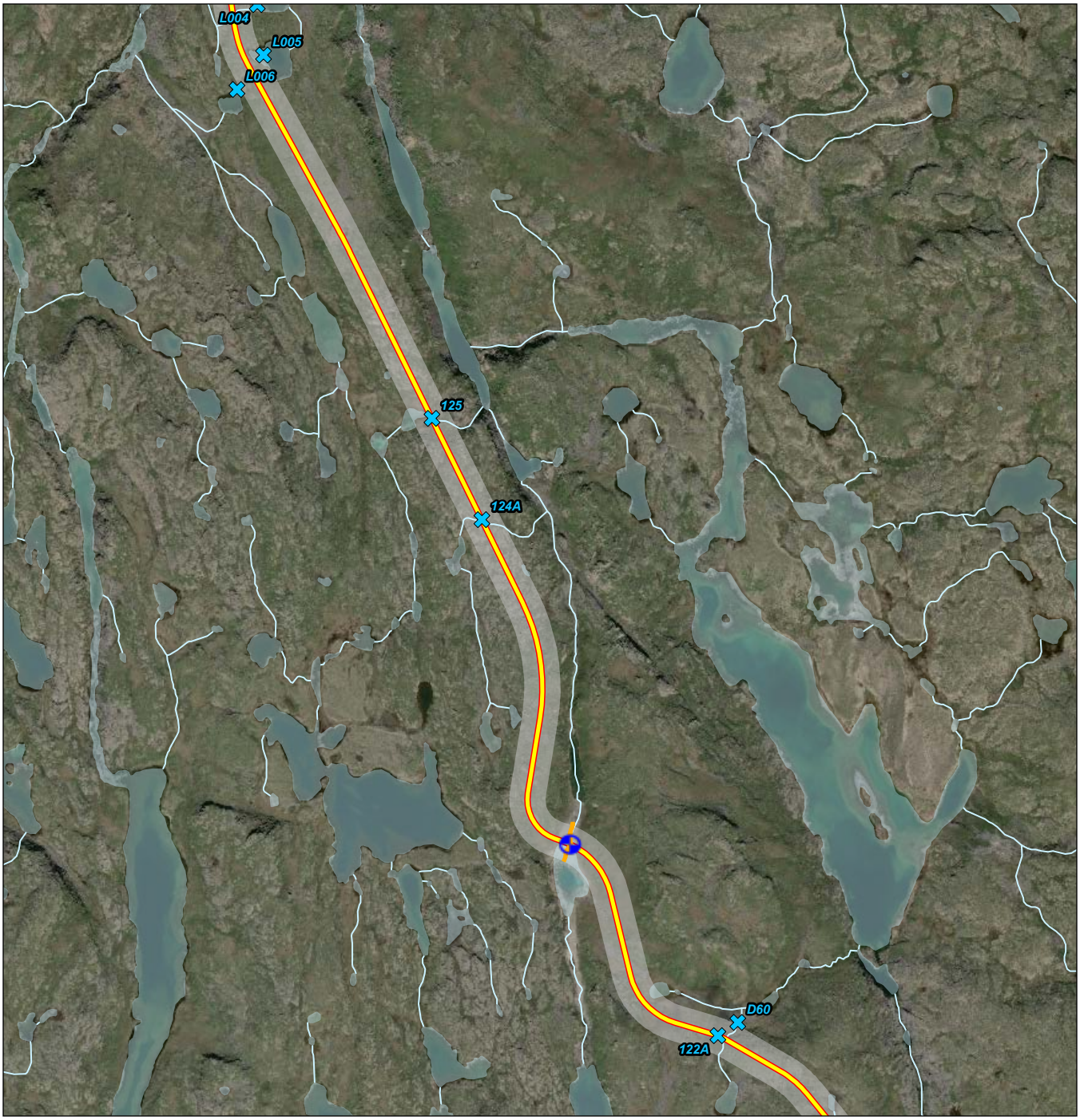

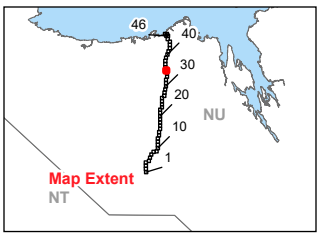

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
- Fishing Station
- Lake Habitat
- Stream Habitat Profile
- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
- Port (Landside Infrastructure)
- Port (Marine-based Infrastructure)
- Road
- Tibbitt to Contwoyto Winter Road
- Watercourse
- Waterbody

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NUNAMI STANTEC LIMITED
WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **35 of 49**

Title
Grays Bay Road Watercourse Crossings

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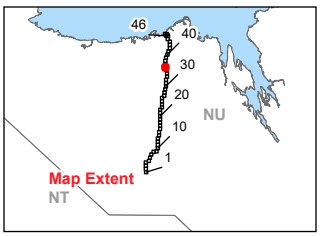

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
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Project Development Area (PDA)

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Nunavut

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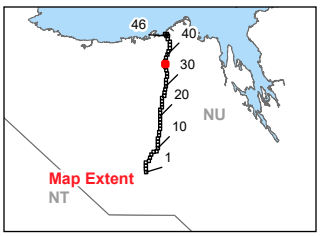
West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **36 of 49**

Title
Grays Bay Road Watercourse Crossings



Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
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Project Development Area (PDA)

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- Watercourse
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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
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Title
Grays Bay Road Watercourse Crossings

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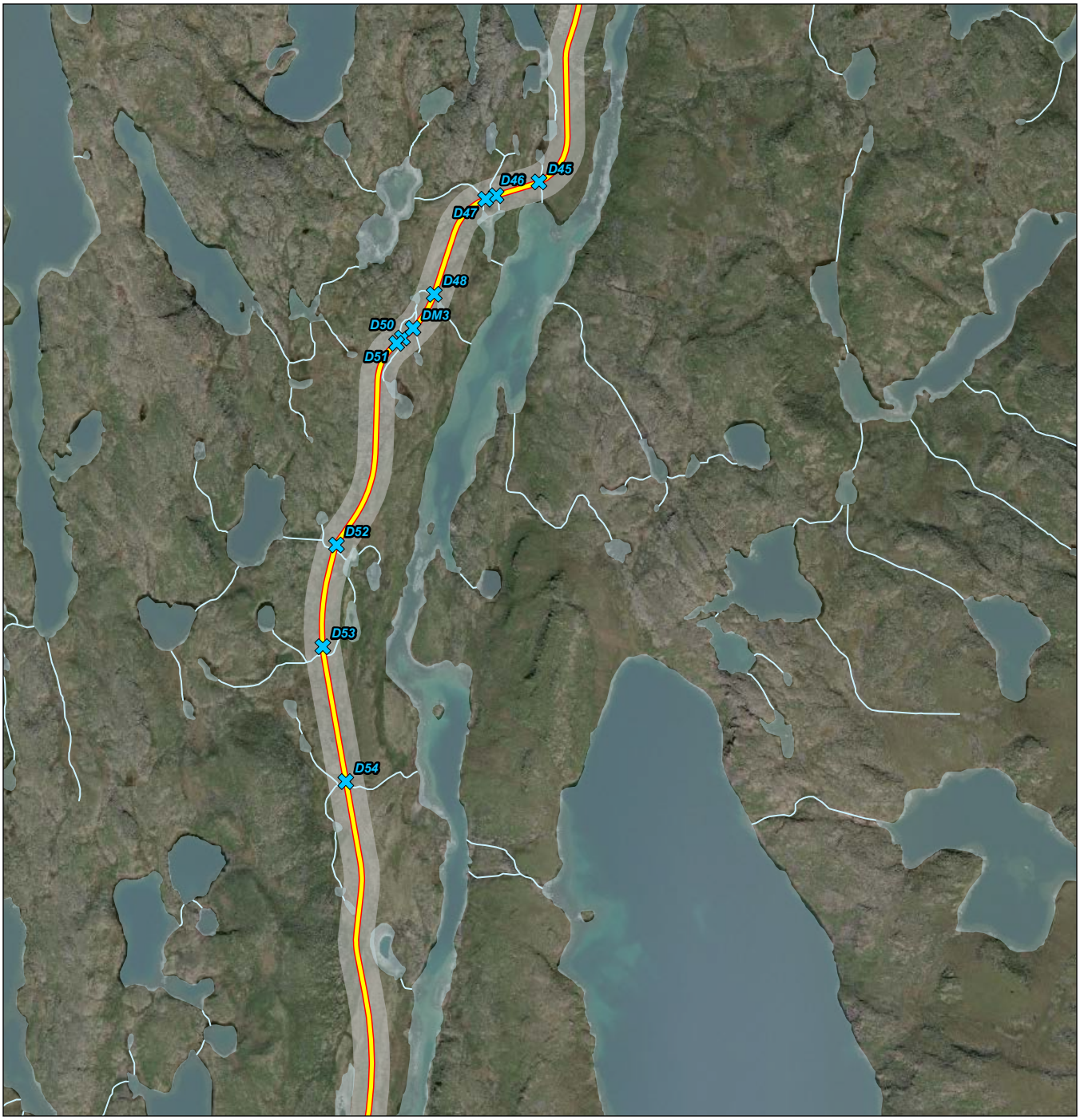

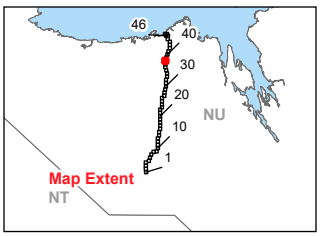

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
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- Grays Bay Road
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Project Development Area (PDA)

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
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Title
Grays Bay Road Watercourse Crossings

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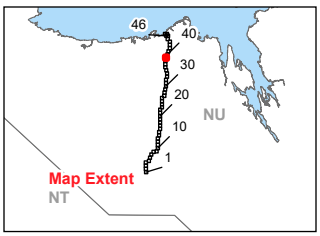

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
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Title
Grays Bay Road Watercourse Crossings

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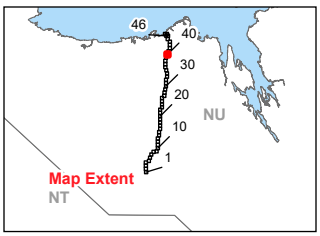

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
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Title
Grays Bay Road Watercourse Crossings

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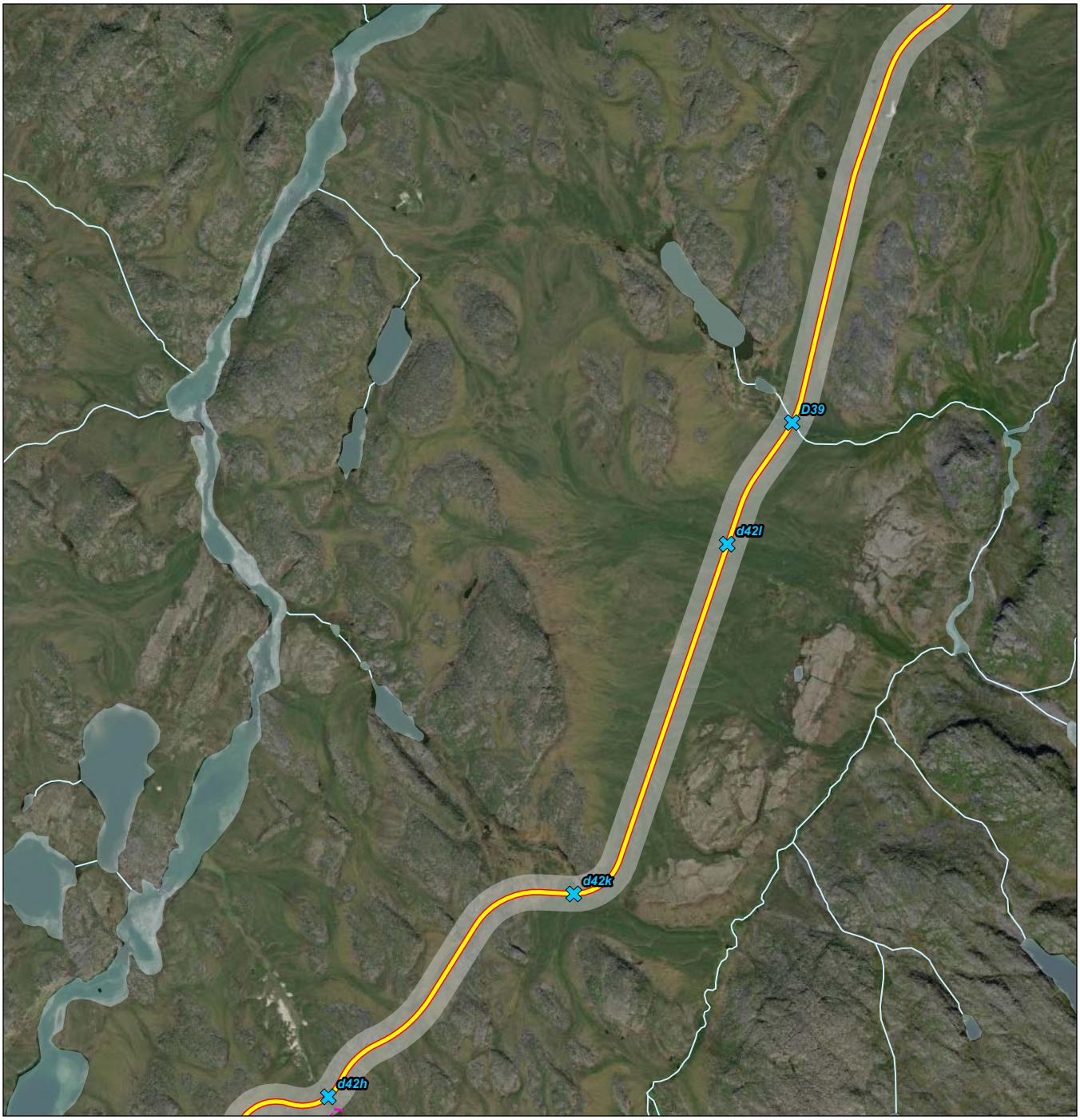

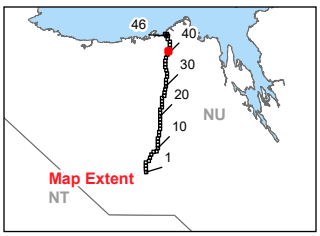

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

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WEST KITIKMEOT RESOURCES CORP

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **41 of 49**

Title
Grays Bay Road Watercourse Crossings

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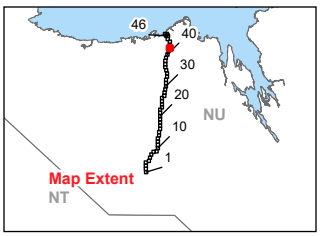

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
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- Water Quantity
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WEST KITIKMEOT RESOURCES CORP

Project Location
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Nunavut

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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **42 of 49**

Title
Grays Bay Road Watercourse Crossings

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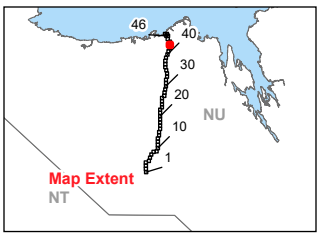

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
- Water Quantity
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- Lake Habitat
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- Grays Bay Road
- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

- Aerodrome
- Jericho Station
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- Port (Marine-based Infrastructure)
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- Watercourse
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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

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123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **43 of 49**

Title
Grays Bay Road Watercourse Crossings

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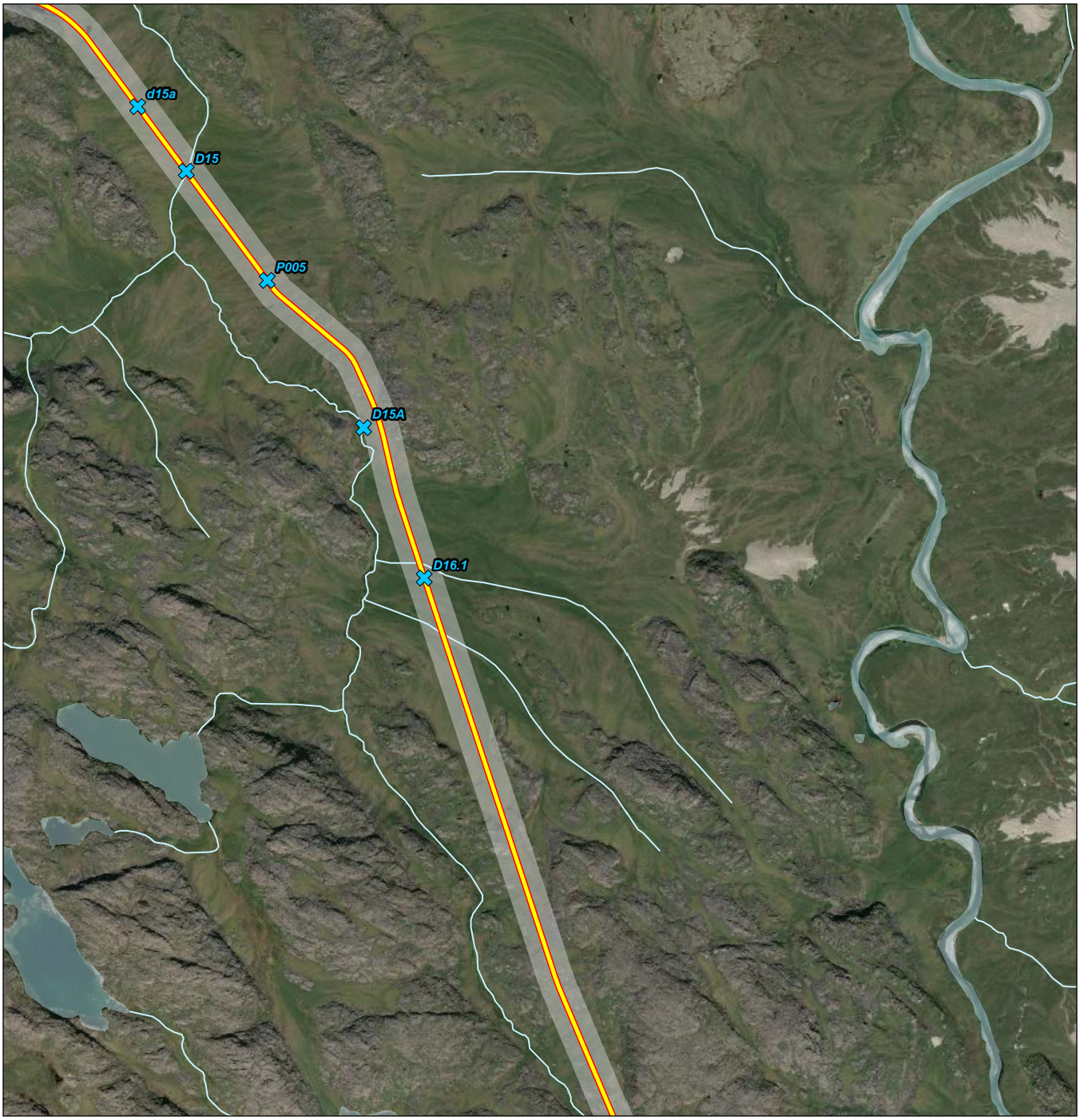

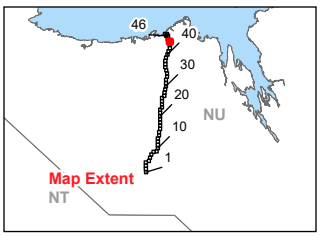

Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- Habitat Profile Transect
- Watercourse Crossing
- Water Quality
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- Grays Bay Winter Road
- Grays Bay Winter Road Optional Alignment

Project Development Area (PDA)

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by DS on 2026-02-02
TR by SL on 2026-02-02

Client/Project
123514868_114

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
B.2 **44 of 49**

Title
Grays Bay Road Watercourse Crossings

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