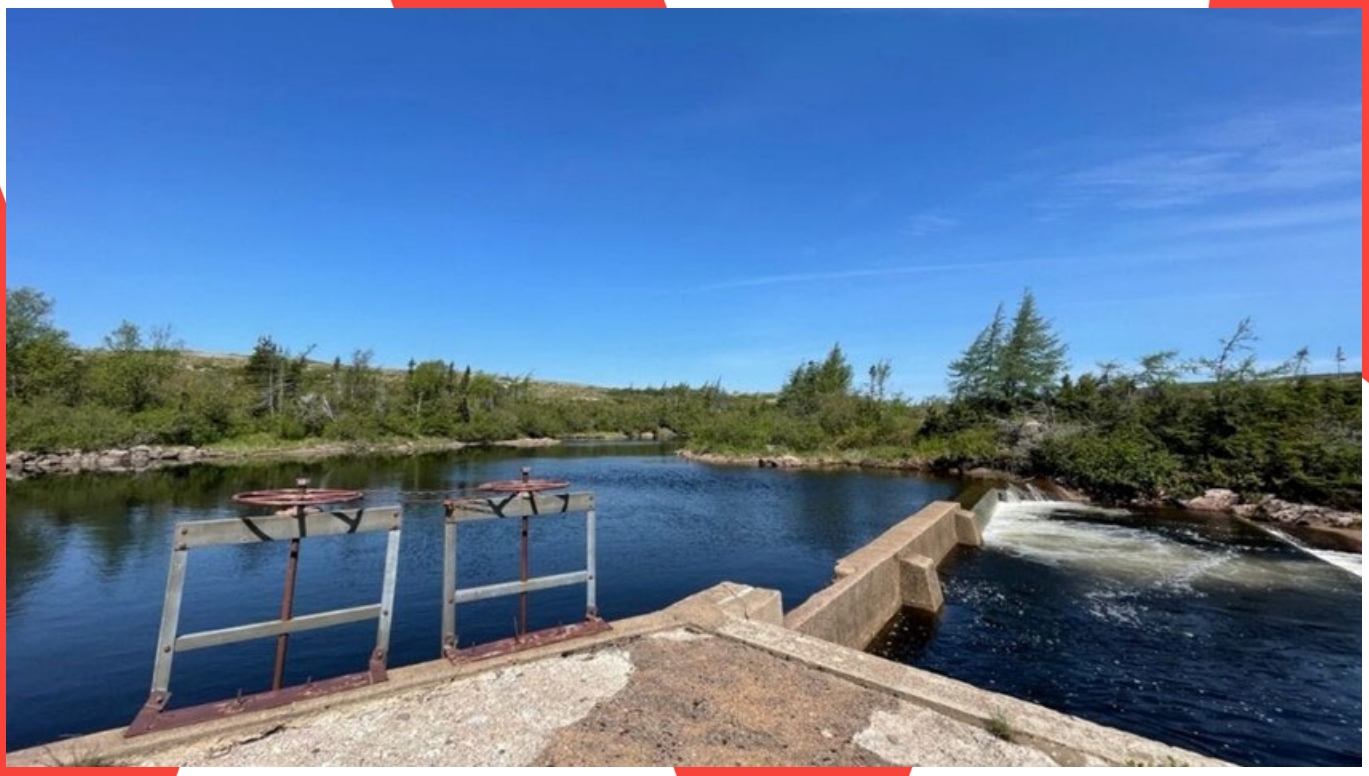
Town of L’Anse au Loup, Labrador
Watershed Dam Area Reconstruction

Environmental Assessment Registration Document

2026-01-20

WW22024101-0000-RPT-0001



Document distribution

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Prepared for

Town of L’Anse au Loup

11 Branch Road, PO Box 101, L’Anse Au Loup, NL A0K 3L0

Submitted to

The government of Newfoundland and Labrador, Canada at "EAProjectComments@gov.nl.ca"

Prepared by

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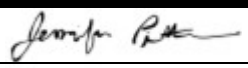
Prepared by:	Jennifer Pittman, M.MS.	2025-11-21	
Reviewed/Approved by:	James McCarthy	2025-12-19	

Revisions

Rev	Date	Details
A	2026-01-19	Issued for Approval

Rev	Date	Details
B	2026-01-20	Submitted

Table of contents

1. Name of Undertaking

Watershed Dam Area Construction, Town of L'Anse au Loup, Newfoundland and Labrador (NL).

2. Proponent

1. Town of L'Anse au Loup

   Dexter Linstead
   Mayor
   Town of L'Anse au Loup
   11 Branch Road, PO Box 101
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   WSP E&I Canada Limited
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   A1B 3X4
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3. The Undertaking

3.1 Name of the Undertaking

Watershed Dam Area Construction, Town of L'Anse au Loup, Newfoundland and Labrador (NL).

3.2 Purpose for the Undertaking

The proposed project will involve the reconstruction of a 3.6 m section of the dam structure and upgrades to the infrastructure housing the dam valve and debris screens located in L'Anse au Loup, NL. The existing dam is in place for the public water supply.

The existing dam, which serves as the public water supply, has sustained damage over time. Specifically, a 3.6-meter section has deteriorated, exhibiting cracks and material loss (Figure 3-1, Figure 3-2). These repairs are essential to restore the dam's structural integrity and ensure its continued safe operation. Additionally, removing and repairing the eroded sections will help prevent environmental impacts caused by deteriorating dam materials.

Figure 3-1 Deterioration to Existing Concrete Dam

Figure 3-2 Existing Dam With 3.6 m Deteriorated Section

4. Description of the Undertaking

The scope of this project includes the repair and replacement of damaged concrete on the dam located within the watershed of the Town of L'Anse au Loup. Deteriorated concrete sections will be removed and replaced with new concrete and reinforced steel. To facilitate these repairs, cofferdams and pumps will be installed to expose the affected areas. The process will involve removal of deteriorated concrete material, installation of formwork, and placement of new reinforced steel and concrete.

Additionally, the project will include the replacement of the chlorination building on its existing foundations, as well as the installation of two new sluice gates and a new intake control valve.

Work includes, but not necessarily limited to, the following:

1. Removal and replacement of a section of the concrete dam control structure.
2. Demolition and reconstruction of concrete slab at the headwall to the dam and fishway control structure.
3. Demolition of existing screen chamber building and construction of new building on existing foundation.
4. Removal of two existing sluice gates and installation of new. New sluice gates to be Fresno Series 6400 Model 20-10C or Hydro-gate by Mueller or approved equivalent.
5. Replace of 300 mm Gate valve in existing gate valve chamber.
6. The project will require extensive dewatering associated with the removal and replacement of the section of Dam structure.

See Figures 4-1 to 4-5 for the project design drawings.

The existing dam stands 3.15 meters high, with water levels reaching up to 2 meters on the dam. The proposed work will not alter the dam's footprint, flow rate, or height. Importantly, the existing fishway will remain unaffected by the reconstruction activities. The project is not expected to result in any changes to water flow, nor will it cause destruction or loss of fish habitat or fish mortality. Additionally, the adjacent fishway directs fish away from the proposed dam work area, further minimizing potential impacts.

Figure 4-1 Existing Dam With 3.6 m Deteriorated Section

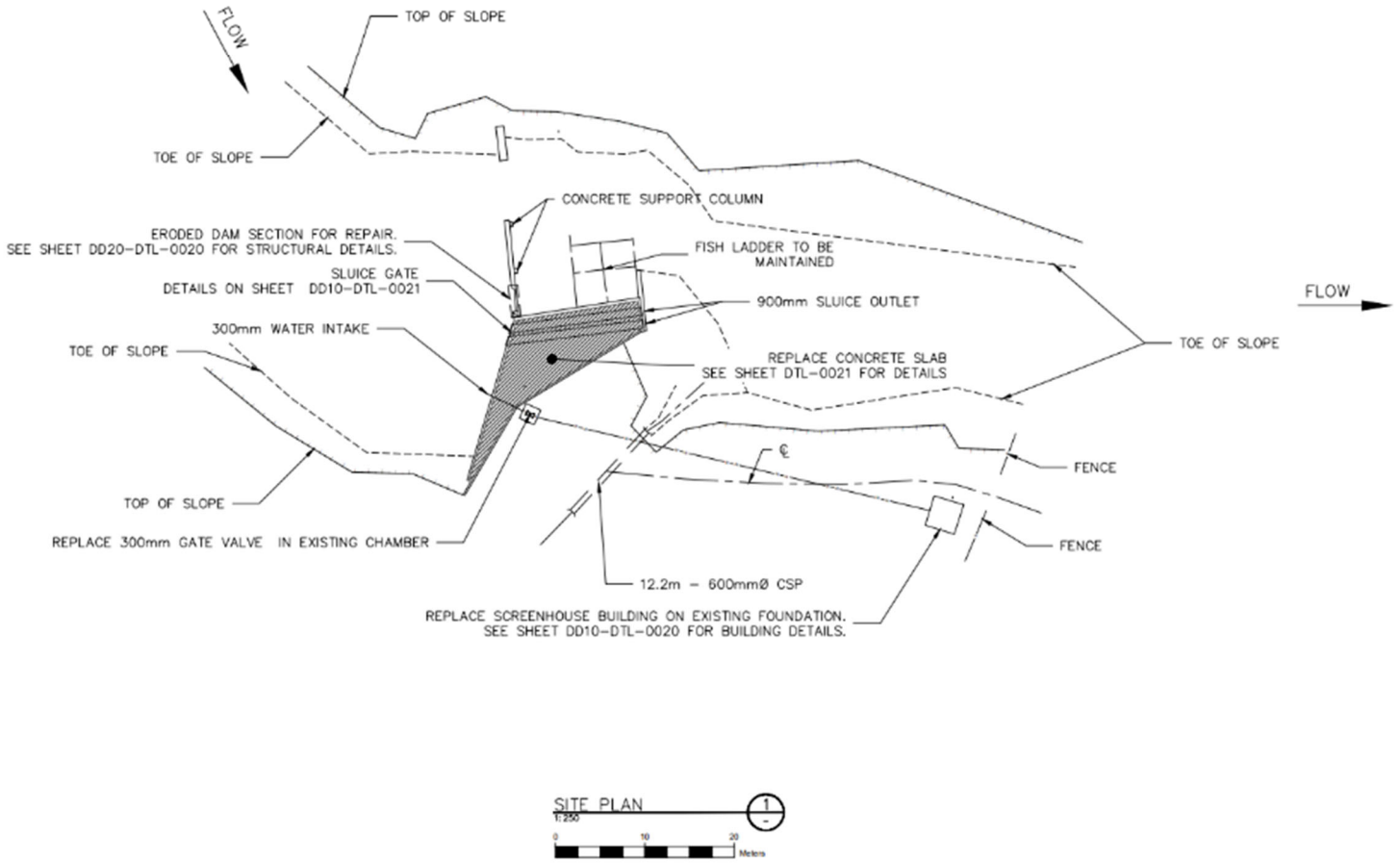


Figure 4-2 Screenhouse Design Plan

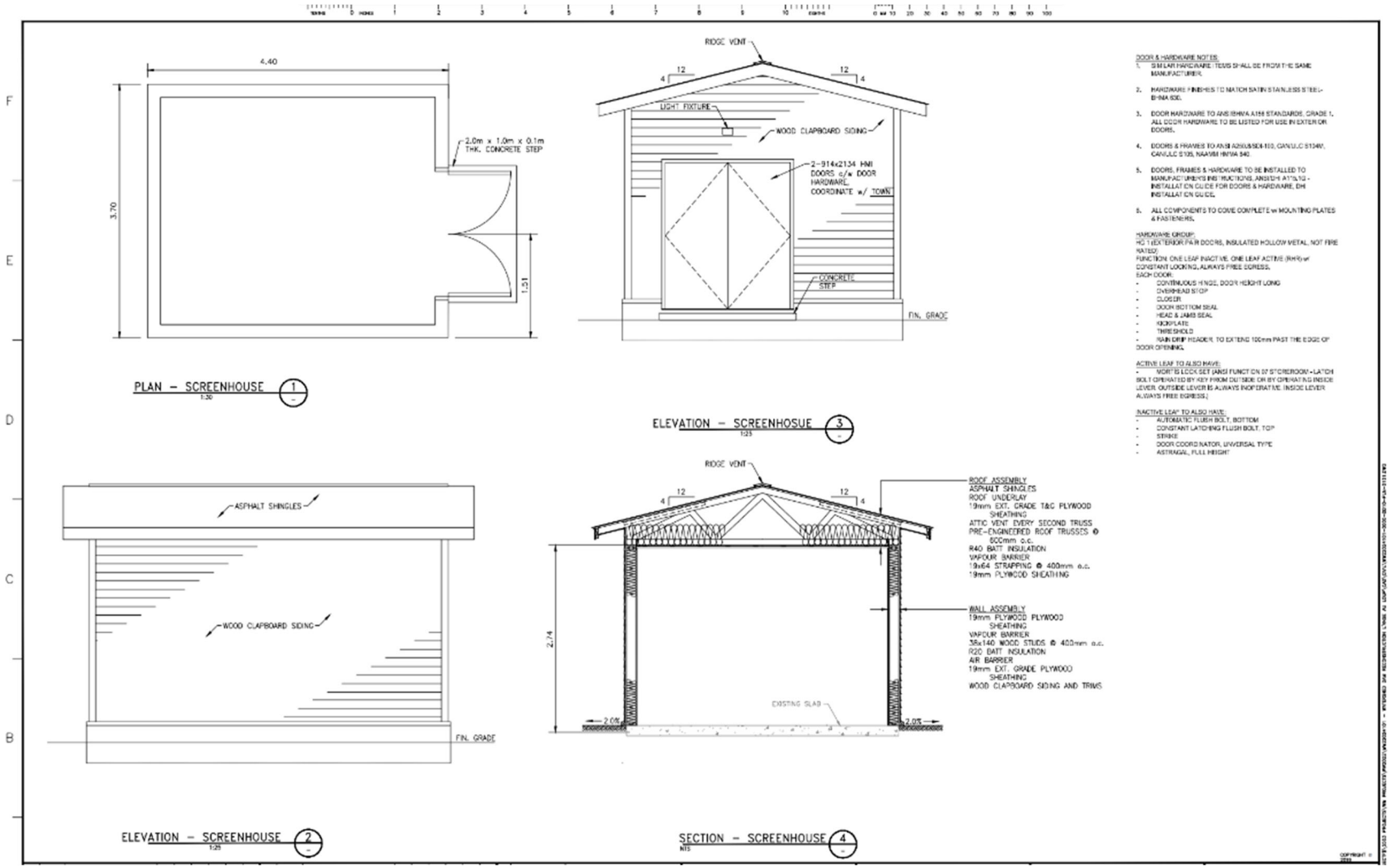


Figure 4-3 Sluice Gate and Dam Design

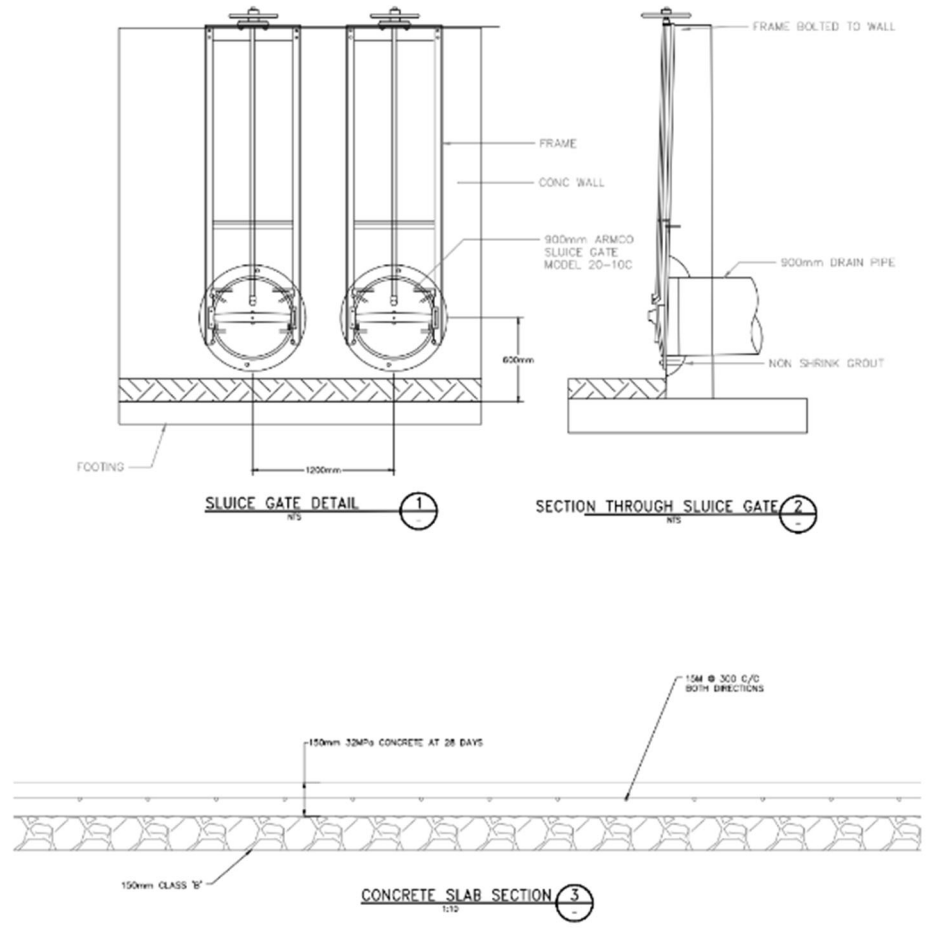


Figure 4-4 Valve Chamber Design

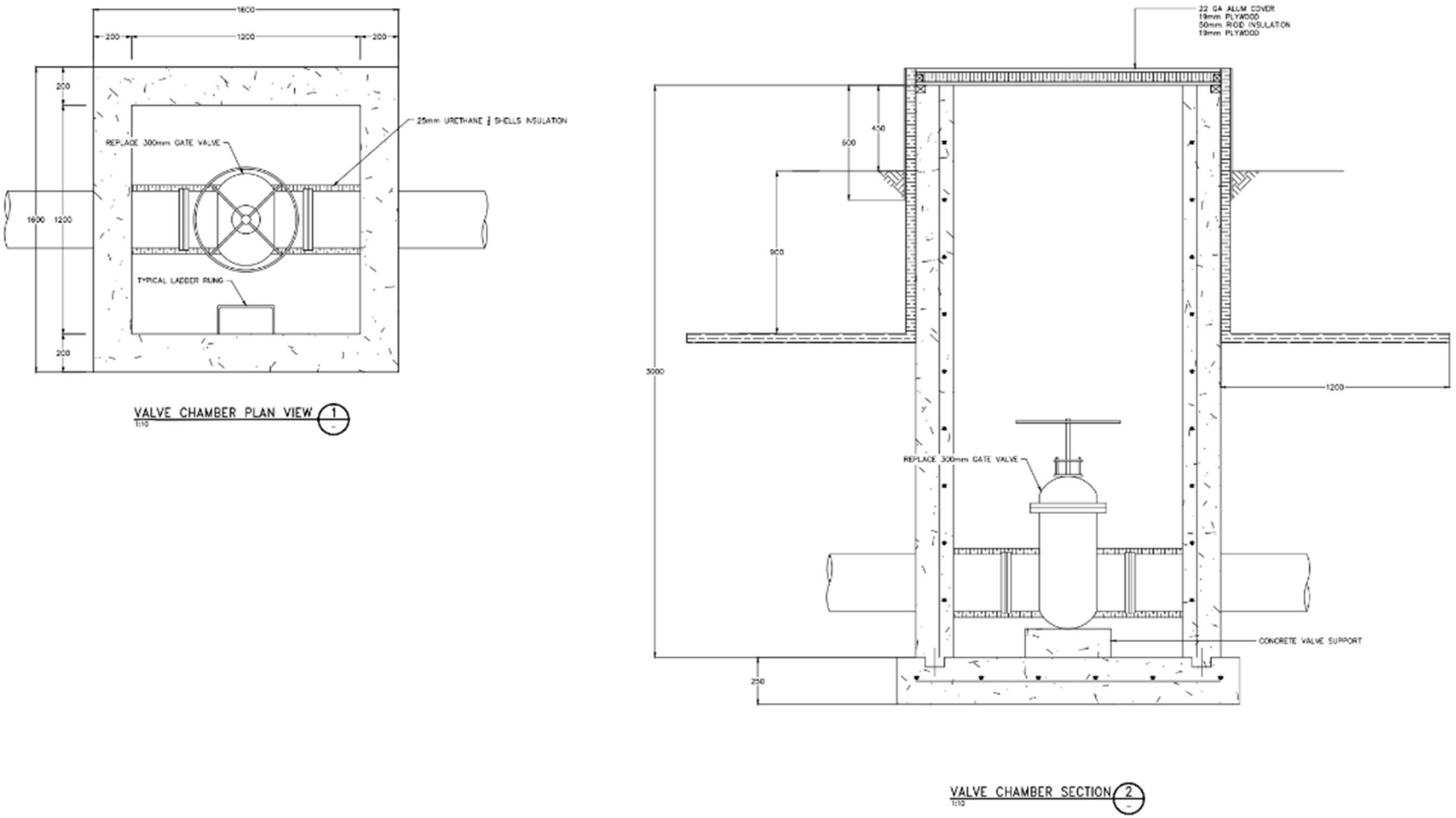
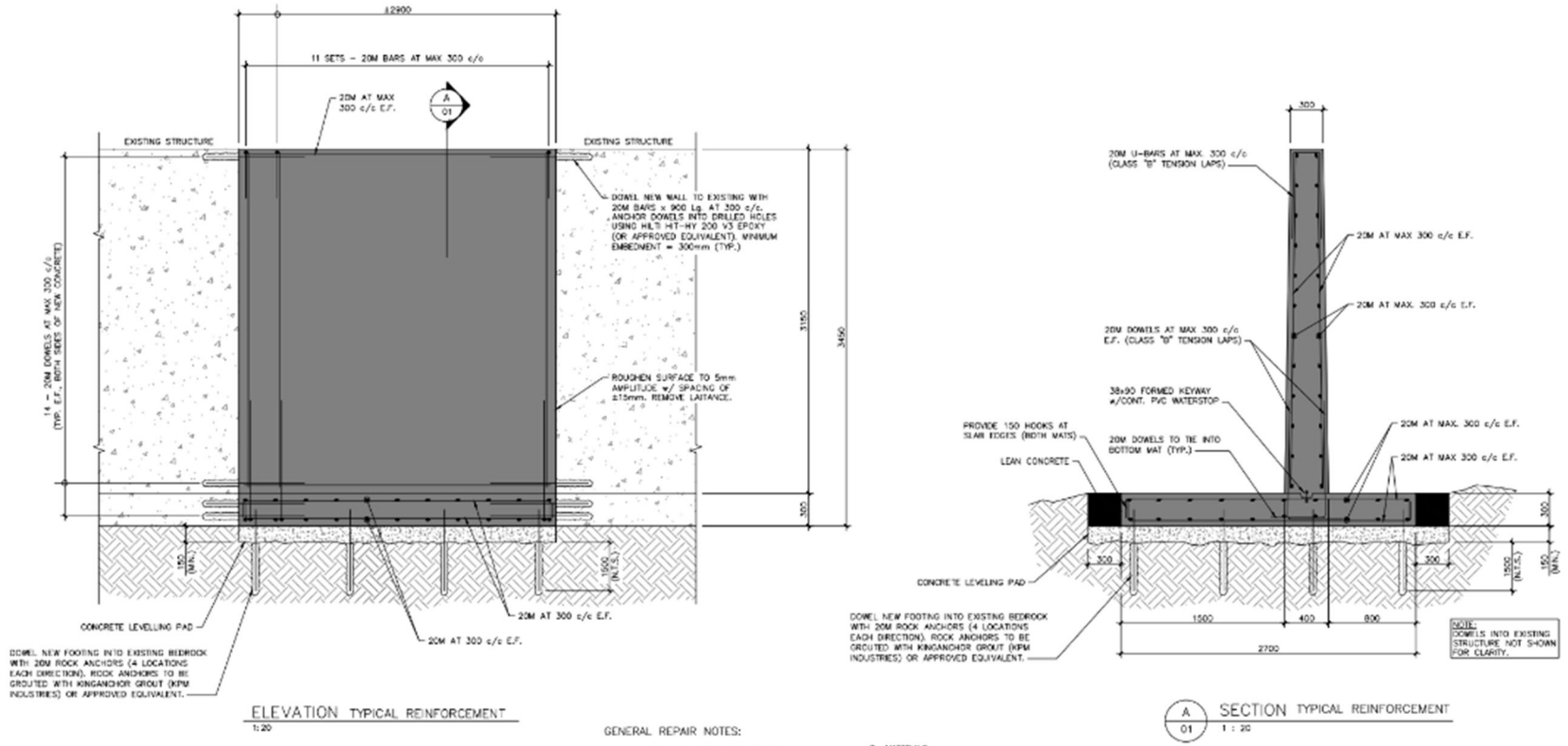


Figure 4-5 Repair and Reinforcement Design



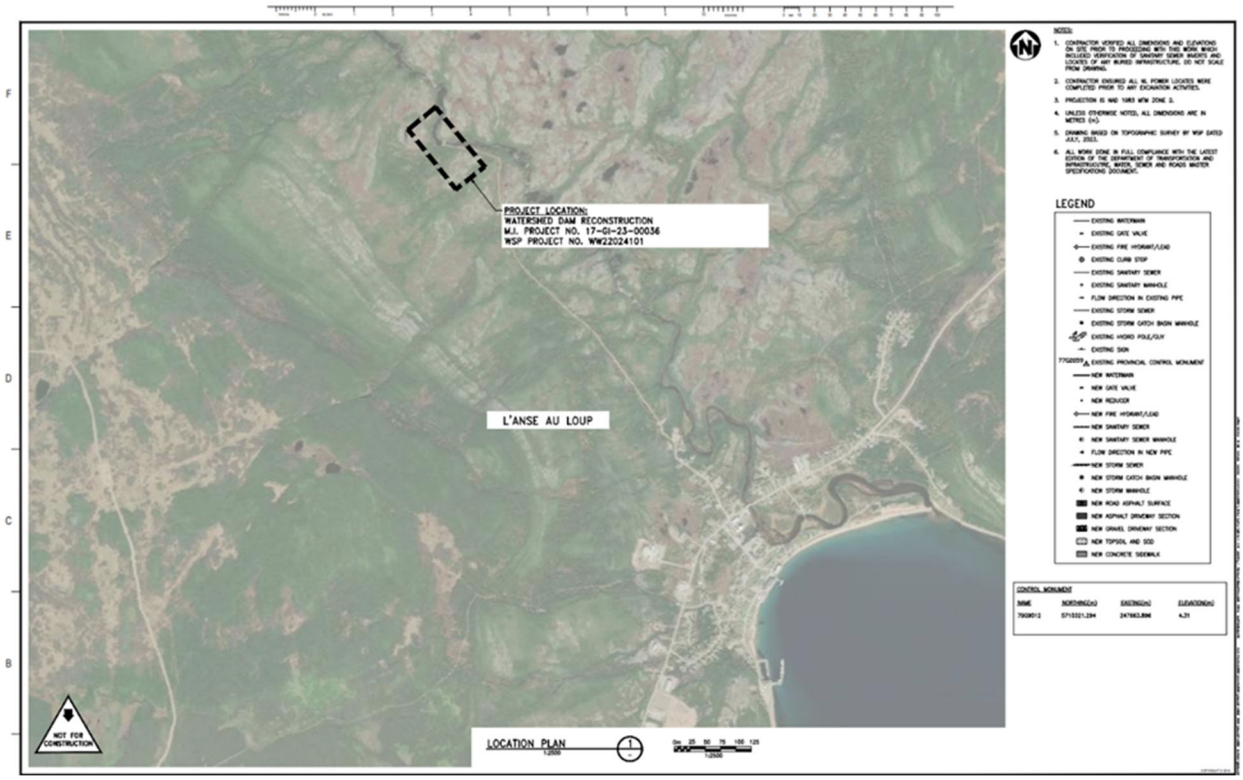
GENERAL REPAIR NOTES:

1. ALL DIMENSIONS ARE TO BE VERIFIED AND ANY DISCREPANCIES REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR TO REMOVE BY MECHANICAL MEANS ANY AND ALL AREAS OF CONCRETE INDICATED. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING REINFORCING STEEL.
3. THE AREA IS THEN TO BE WIRE BRUSHED AND AIR BLOWN WITH HIGH PRESSURE TO REMOVE ALL FINE DUST MATERIAL (PRESSURE WASHING NOT PERMITTED WITHOUT MEASURES TO CONTAIN AND REMOVE ALL DELETERIOUS MATERIAL FROM SITE SO AS NOT TO IMPACT THE ENVIRONMENT.
4. DURING DEMOLITION OF CONCRETE ANY EXISTING REINFORCING EXPOSED BY DEMOLITION TO BE EXPOSED FOR 20mm AROUND THE ENTIRE BAR. CLEAN BAR AND APPLY RUST INHIBITOR.
5. PROVIDE CLASS "B" LAPS FOR ALL REINFORCEMENT SPLICES.
6. ALL DEMOLISHED OR OTHERWISE DAMAGED AREAS SHALL BE RE-CAST TO ACCURATELY RESTORE FLUSH WITH ORIGINAL SURFACES TROWEL TO SMOOTH LEVEL SURFACE
7. MATERIALS:
   - 7.1. CONCRETE FORMWORK TO BE COMPLIANT WITH CAN/CSA A23.1 AND CAN/CSA S269.3
   - 7.2. REINFORCING STEEL: BILLET STEEL, GRADE 400 MPa, DEFORMED BARS TO CONFORM TO CAN/CSA-G30.18. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE REINFORCING INSTITUTE OF CANADA MANUAL AND CAN/CSA A23.1.
   - 7.3. CONCRETE WORKS SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND CAN/CSA A23.3, LATEST REVISIONS.
   - 7.4. CONCRETE CHARACTERISTICS:
     - A. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35 MPa.
     - B. AGGREGATES: ¾" (20mm) MAXIMUM.
     - C. SLUMP: 4" (102mm) ±½" (20mm).
     - D. AIR CONTENT: 5% to 8%.
     - E. EXPOSURE CLASS: F-1.
   - 7.5. CONCRETE LEVELLING PAD TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 20 MPa AT 28 DAYS.
8. MINIMUM COVER TO REINFORING: 100mm UNLESS NOTED OTHERWISE.

4.1 Geographical Location

The project site is situated on the L'Anse au Loup River within the watershed of the Town of L'Anse au Loup in southern Labrador, Newfoundland and Labrador. (See Figure 4-6). L'Anse au Loup borders the Strait of Belle Isle, the body of water separating Newfoundland and Labrador. It is the largest community in the Labrador Straits and is notable as one of the few rural towns in the province experiencing population growth (Welcome to L'Anse au Loup, n.d.). The watershed and dam is located approximately 2.8 km north of Route 510, accessible via Country Road. See Figure 4-8 for town boundaries.

Figure 4-6 L'Anse Au Loup Project Location Shown on Map



4.2 Physical Features

L'Anse au Loup is a rural community situated along the north shore of the Strait of Belle Isle (See Figure 4-7). The dam area on the L'Anse au Loup River is located upstream of the town and serves as the primary source of municipal water supply. The site includes an existing fishway, which will remain unaffected by the proposed activities (Figure 4-1).

Figure 4-7 Map of L'Anse Au Loup

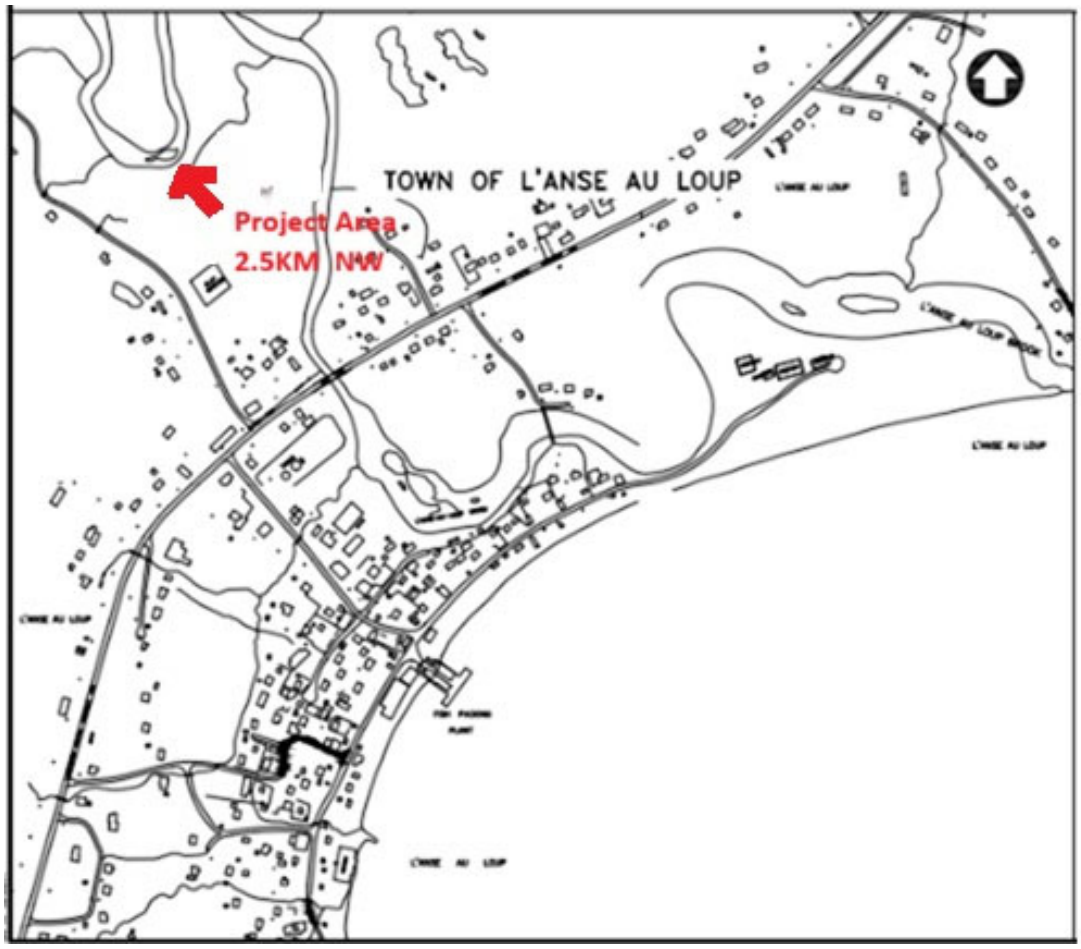
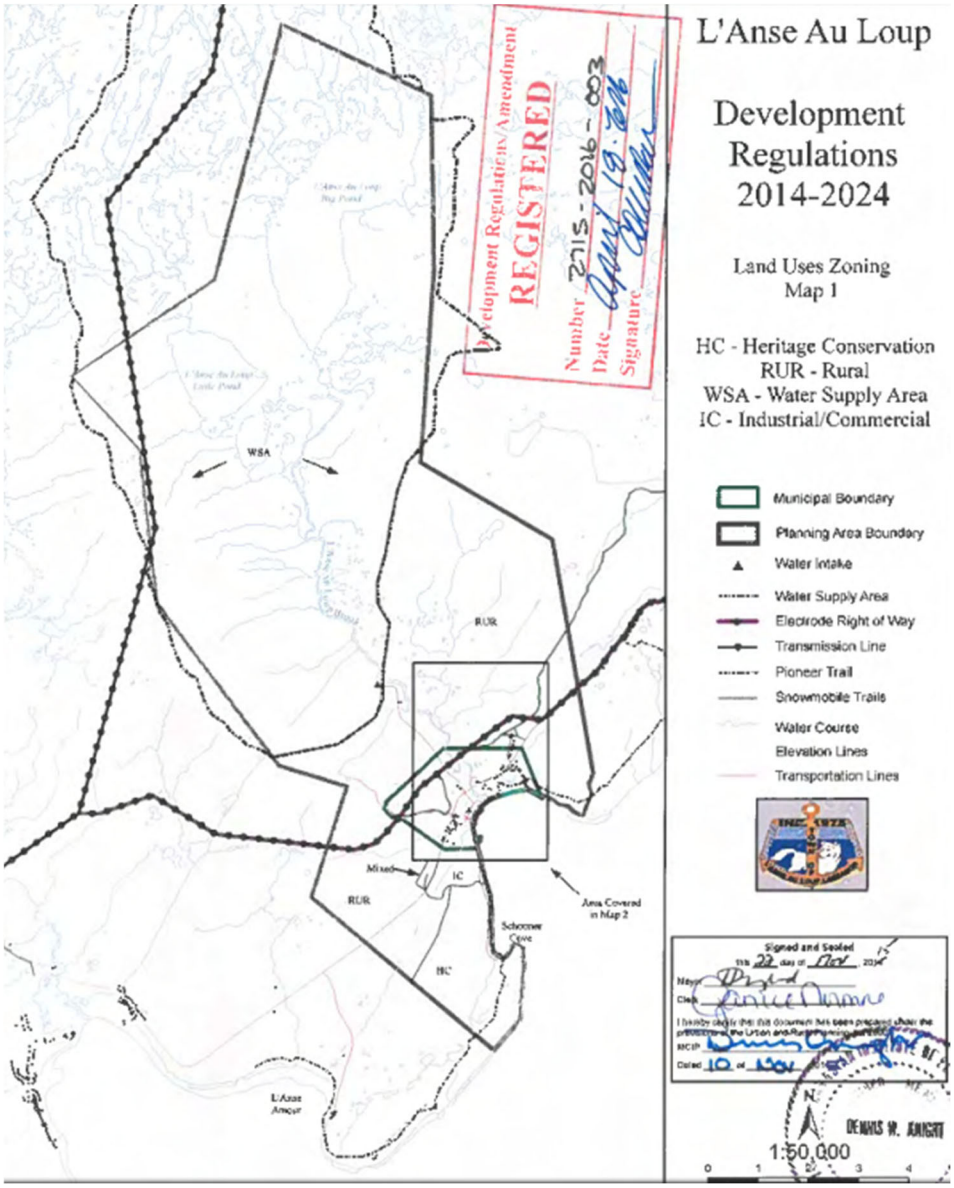


Figure 4-8 Map of Town of L'Anse au Loup Town Boundaries



4.2.1 Physical and Biological Environment

4.2.1.1 Physical

The project area is the watershed of the Town of L'Anse au Loup, NL. Located along the north shore of the Strait of Belle Isle. It is the largest of the seven communities making up the Labrador Straits, an 80 km stretch of highway at the southern-most edge of Labrador (SLDA, 2025). The town has a population of roughly 600 people and is one of the few rural towns in NL with an increasing population (SLDA,

2025). Its French name means “Cove of Wolves” and was established when the French initially settled in the area in the 1700s. The English, Scottish, and Irish later settled in L’Anse au Loup and fishing and sealing industries were established (SLDA, 2025).

4.2.1.2 Biological

Various wildlife species inhabit the L’Anse au Loup River region and are important to consider when planning watershed dam reconstruction. L'Anse au Loup Brook is a scheduled salmon river in management area 14B. Anglers are required to obtain a salmon license and can only fish during the salmon fishing season from June to September daily from one hour before sunset to one hour after sunset (DFO, 2025).

Atlantic Salmon (*Salmo salar*) are anadromous meaning they are born in freshwater and migrate to the ocean where they grow and mature, later returning to their natal river to spawn once they reach sexual maturity. Adult salmon return to rivers in Newfoundland and Labrador from May to August, with some returning in the fall as late as November. Spawning occurs from mid-October to early November in streams and rivers. Post-spawn adult salmon will either return to sea or remain in freshwater during the winter months. Eggs hatch in April or May and in Labrador the young salmon remain in freshwater for three to seven years before undergoing smoltification and migrating to the ocean during the spring months (DFO, 2020).

Brook trout (*Salvelinus fontinalis*) also inhabit the L’Anse au Loup River. They are a trout species that inhabit both stream and lake habitats. They spawn in clear headwater streams with clean, ventilated gravel. Spawning occurs from September to November; the egg will remain in the gravel and hatch in approximately 100 days. The larvae will then remain in the gravel util their yolk sac has been totally absorbed. Young brook trout typically prefer the shallow edges of streams and small brooks (GOV NL, 2020).

4.2.1.2.1 Species at Risk

Species at Risk are of special concern when assessing environmental impacts of the project. Species at Risk that may potentially occur within or near the project site were reviewed using the Atlantic Canada Conservation Data Centre (ACCDC). ACCDC identifies potential for species at risk occurrence based on their Expert Opinion maps.

A review of the ACCDC database for an area of 5 km around the proposed project site identified a total of 125 rare flora record and 34 rare fauna records. Of these, no rare flora (vegetation) records are species listed on the provincial Endangered Species Act (ESA), COSEWIC, or considered globally rare (See Table 4.1, Table 4.2, Figure 4-9) (ACCDC, 2025).

Of the rare fauna (animal) records within 5 km of the proposed project site, two were species at risk (ACCDC, 2025):

- 5 Gray-cheeked Thrush
- 2 Short-eared Owl

Additionally, Polar Bears, Common Nighthawks, Fernald's Milkvetch, breeding Harlequin Ducks and Ivory Gulls were listed as possible, while Peregrine Falcons were listed as possible, but unlikely. The project area also falls within the range of Barrow's Goldeneye (*Bucephala islandica*) for migration, nesting & molting (ACCDC, 2025).

A search within 1 km of the project site using the DFO Aquatic species at risk map online tool indicated that the range of spotted wolffish (Table 4.2) is near the project are but wolfish habitat does not extend into the freshwater river. No critical habitats are within 5 km of the project site.

Table 4.1 Species at Risk that may Potentially Occur Within 5 km of the Project Site

Name	Scientific Name	SARA	COSEWIC	Population
Birds				
Barrow's Goldeneye	*Bucephala islandica*	SC	SC	Eastern
Common Nighthawk	*Chordeiles minor*	SC	SC	-
Fernald's Milk-vetch	*Astragalus robbinsii var. fernaldii*	SC	SC	-
Gray-cheeked Thrush	*Catharus minimus*	-	T	-
Harlequin Ducks	*Histrionicus histrionicus*	SC	SC	Eastern
Ivory Gull	*Pagophila eburnea*	E	E	-
Peregrine Falcons	*Falco peregrinus anatum/tundrius*	-	-	-
Short-eared Owl	*Asio flammeus*	SC	T	-
Mammals				
Polar Bear	*Ursus maritimus*	SC	SC	-

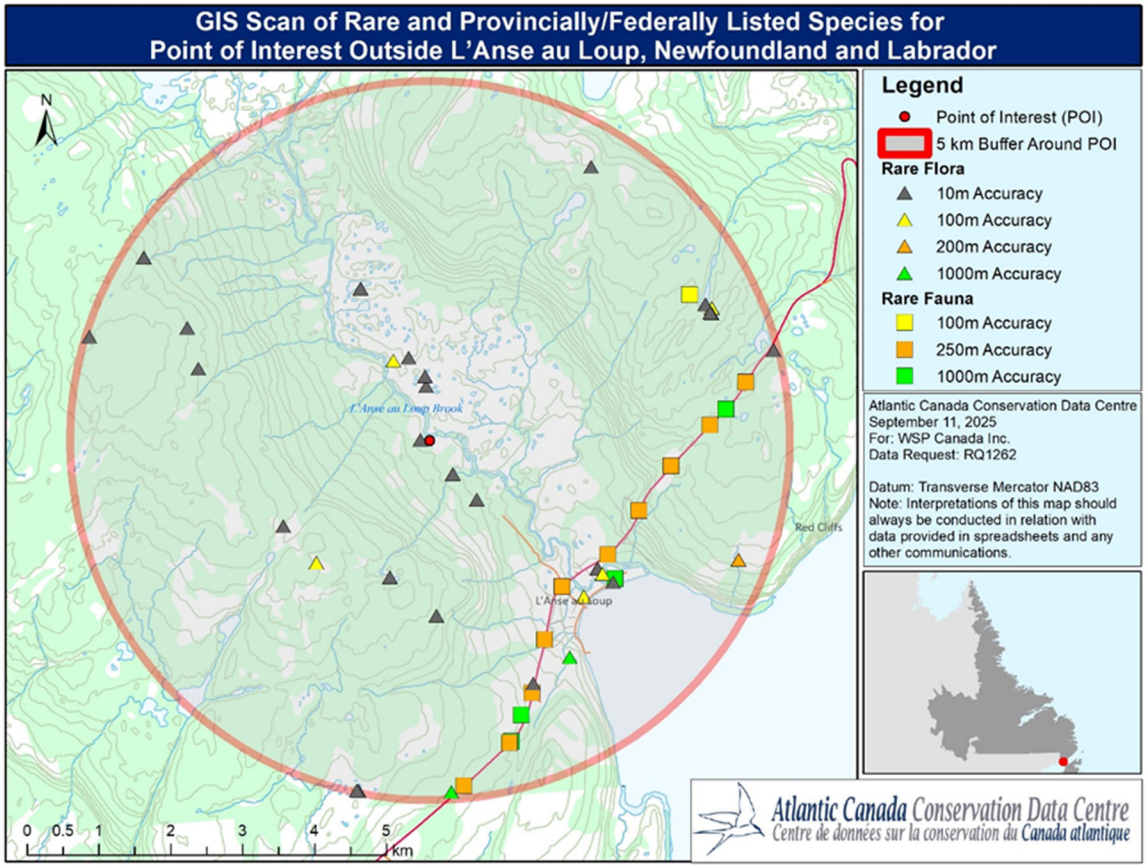
Notes:

Status: Special Concern (SC), Threatened (T), Endangered (E)

Table 4.2 Species at Risk that may Potentially Occur Within 1km of Project Site

Name	Scientific Name	SARA	COSEWIC	Population
Fish				
Spotted Wolffish	*Anarhichas minor*	T	T	-
Notes: Status: Special Concern (SC), Threatened (T), Endangered (E)				

Figure 4-9 Rare and Provincially/Federally Listed Species Within 5km of the L'Anse Au Loup Watershed Dam Reconstruction Project (ACCDC, 2025)



4.3 Construction

On-site activity is proposed to begin late summer 2026 and span a period of seven weeks. The reconstruction of the dam will involve the use of cofferdams to dewater and isolate the work area, the removal of eroded/damaged materials, and the placement of new concrete. Standard heavy civil equipment will be used to transport and lay the concrete.

Equipment to be used includes the following:

1 Excavator

2 Loaders

3 Dump trucks

4 Jackhammer

5 Dewatering pumps

6 Site generators (if needed)

Construction will be completed during daylight hours and will not require personnel to work throughout the night. The following sections detail the potential effects on environmental receptors and planned mitigations for the project. All construction work will be conducted in accordance with conditions associated with permits and conditions of release received for the project (see Section 5).

4.3.1 Wildlife

The reconstruction of the dam is not predicted to have any significant effects on wildlife including species at risk. The following mitigations will be implemented to minimize the potential interaction of the project with wildlife::

- Construction vehicles will adhere to local speed limits to minimize impacts on wildlife.
- Wildlife are not to be harassed, disturbed or fed by personnel for the project duration.
- Any areas disturbed by the construction will be stabilized and revegetated to match the existing environment.

4.3.2 Fish/Fish Habitat and Water

The dam repairs are not predicted to have any significant effects on fish and fish habitat including species at risk. No critical fish habitat is located within the L'Anse au Loup River. The dam construction activities will not be near, or interfere with, the existing fish ladder operations and therefore, fish migration (upriver and downriver) will not be obstructed. . The following mitigations will be implemented to minimize the potential interaction of the project with fish and fish habitat:

- Work will be completed during the set construction time to limit interactions.
- The existing fishway will be maintained during the completion of the project
- A Request for Review for the project has been submitted to DFO and all recommendations/actions provided will be implemented.
- As per recommendations from DFO the following mitigation measures will be implemented:
  - No in-water work will take place between May 1 and September 30
  - Waterways will be monitored for the presence of migrating fish species and works will be temporarily suspended if they are observed
  - Dewatered sections will be monitored for fish strandings
  - In-water work will be halted during any closures of the salmon river
  - Fish passage will be restored post-construction
  - The movement and migration of fish will not be obstructed
  - There will be no change to water flow or level
  - The killing of fish will be avoided excluding that from fishing
  - Fish within an isolated or enclosed area will be relocated within the same watercourse
  - Dewatering will take place gradually
  - Intake pipes will be screened
  - The introduction of sediment in the water will be avoided where possible and erosion and sediment controls and management measures will be installed/implemented
  - An erosion and sediment control plan will be prepared and followed
  - Cofferdams, diversion channels, flumes and elevated pipes or pumps will be used to work in the dry
  - A plan to prevent deleterious substances from entering the watercourse will be developed
  - All machinery on site will be well-maintained and kept free from fluid leaks
  - All building material used will be properly treated
  - All waste materials will be disposed of properly
  - Any gear used will be properly cleaned to protect against invasive species

4.3.3 Birds and Bird Habitat

Dam repairs are not predicted to have any significant effects on birds or bird habitat, including Species at Risk. During the in-water portion of the project, increased noise levels may act as a deterrent to the area. However, all work will be conducted during 10-hour workdays during daylight hours allowing for noise breaks outside of these hours. No bird habitat will be lost due to the repairs to the dam and infrastructure. The project area is not designated as an Important Bird Area (IBA, 2020). To mitigate any impacts the following actions will be taken:

- All work will take place during daylight hours to eliminate the need for spotlights which could increase bird strandings.
- Work will not extend past 10-hour periods to allow for noise breaks.
- Any areas disturbed by the construction will be stabilized and revegetated to match the existing environment.

4.3.4 Air Quality and Water Quality

Greenhouse gases will be emitted during the dam repairs due to the use of heavy machinery using diesel fuel. Emissions are not predicted to be high enough to require offsetting due to the short duration of the project and the limited equipment required.

No liquid effluents or solid waste materials are expected to enter the watershed environment. To mitigate the spread of construction material the following actions will be taken:

- Rock material will be placed using an excavator or similar equipment and will not be end-dumped.
- Heavy machinery will be operated from stable dry areas.
- Emergency plans will be developed and in place should an emergency spill occur.
- The entry of deleterious substances into the water will be prevented.

4.3.5 Resource Use and Socio-Economic Impacts

No conflicts with resource use are expected to arise due to dam repairs as repairs will be completed within 23 m of a fishway; where salmon angling is prohibited. On-site activities will be limited during salmon and trout spawning season and will not affect recreational catches of salmon. The work will not prevent the movement of fish up and down the river. Work will be enclosed by cofferdams and completed in the dry area, leaving the rest of the river unobstructed.

To mitigate any impacts the following actions will be taken:

- In-water work will be minimized during time periods where habitat is used for fish spawning, rearing, feeding, or migration. In-water work will not prevent fishing in the area.

- All construction will be undertaken in accordance with the Department of Transportation and Infrastructure's "Building near Highways Regulations", "Works, Services and Transportation Act" and departmental policies.

Waste Management

The following actions will be taken to manage project waste:

- All materials and waste will be removed from the project site and the area will be restored.
- All waste will be disposed of at proper waste disposal sites. The landfill located in Forteau, Labrador will be used.

Fuel Storage

- All fuel will be stored in appropriate containers.
- Designated gas stations will be used for refuel.
- Fuel will be handled and stores away from water banks and the watershed area.

4.3.6 Engagement

A public information session was scheduled virtually for October 8, 2025 to share information about the project and identify and address any concerns regarding the project. This was advertised to the public through the public posting of a flyer (See appendix A). This flyer was issued to the town of L'Anse au Loup for posting on September 19th, allowing two and a half weeks for residents to be notified of the session. There were no requests from the public who joined this information session and therefore no concerns from the public have been raised.

4.4 Occupations

A crew of 6-8 trained professionals will be utilized for construction (Table 4.3).

Table 4.3 List of Personnel to be Utilized in the Construction of the L'Anse au Loup Watershed Dam Reconstruction.

Occupation	NOC	No. of Personnel
Site Supervisor	72013	1
Carpenter	72310	2
Heavy Equipment Operator	73400	1
Labourers	75110	3-5
Total Personnel	-	8

Employment equity will be addressed through the hiring of skilled personnel. Crew will be selected based on qualifications and experience regardless of age and gender.

5. Approval of the Undertaking

Project-related permits already completed or anticipated are presented in Table 5.1. This document is to be submitted to the Department of Environment, Conservation and Climate Change to register the project. All construction work will be conducted in accordance with conditions associated with permits received for the project.

No Crown Land application is required for the undertaking.

Table 5.1 Approvals, Permits and Registration for the Project

Approvals/Permits	Legislation/Regulation	Activity	Regulatory Authority
NL Environmental Assessment Registration (this document)	Environmental Assessment Regulations 2003, *Environmental Protection Act*	Project permits and approvals	Department of Environment, Conservation and Climate Change, and Municipalities, Environmental Assessment Division
DFO – Request for Review (RFR)	Section 35, *Fisheries Act*	Dam reconstruction	Fisheries and Oceans Canada, Fish and Fish Habitat Protection Program
Permit to Alter a Body of Water	Section 48, *Water Resources Act*	Dam reconstruction including infilling and debris removal	Department of Environment, Conservation and Climate Change; Water Resources Management Division
Permit for Development Activity in a Protected Public Water Supply Area	Section 39 Water Resources Act	Dam reconstruction including infilling and debris removal	Department of Environment, Conservation and Climate Change; Water Resources Management Division

6. Schedule

Construction is set to take place in the summer and fall of 2026 with in-stream work beginning in October 2026. No in-water work will be completed between May 1 and September 30. The schedule of in-stream work is as follows:

- Week 1: Install Cofferdams
- Week 2 and 3: Demolition
- Week 4 and 5: Reform and pour new concrete
- Week 6 and 7: Strip forms and remove cofferdams

7. Capital Cost and Funding

The total project funding is $680,987.00 available through the investing in Canada Infrastructure Program (ICIP). This funding is to cover the entirety of the project, including but not limited to engineering, construction, and contingencies.

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Appendices

Appendix A – Public Consultation Flyer

PUBLIC CONSULTATION:

Water Shed Dam Area Reconstruction Project

DTI Project No. 17-GI-23-00036

The project consists of repairs to the existing water supply dam where concrete has degraded. Work also includes replacing the chlorination building on existing foundations, replacing two sluice gates and replacement of a control valve. The project aims to upgrade municipal infrastructure and provide reliable municipal services to residents.

You are invited to attend a virtual public consultation session.

The purpose of the virtual public consultation session is to share information about this project, including scope of work and timeline.

Date: Wednesday, October 8, 2025
Time: 11:00 AM

Register:
Please email susann.hickey@wsp.com to register to attend. The meeting will be held virtually, via Microsoft TEAMS.

If you are unable to attend the public consultation session and would like to provide input, or if you have any questions or comments, please contact: Susann Hickey, FEC, FCSCE, P. Eng.
susann.hickey@wsp.com

wsp.com