

**Fishway Refurbishment
Middle Brook, NL
Environmental Registration Document**

**Submitted to the Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Environmental Assessment Division**

Prepared For: **Fisheries and Oceans Canada
Real Property, Safety and Security Area**

Prepared By: **Public Services and Procurement Canada**

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1.0 NAME OF UNDERTAKING:

Fishway Refurbishment, Middle Brook, NL

2.0 PROPOSER:

- (i) Department of Fisheries and Oceans Canada
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- (ii) Northeast Atlantic Fisheries Center, 80 East White Hills Road
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- (iii) Robert Sullivan
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3.0 THE UNDERTAKING:

3.1 Nature of the Undertaking:

The proposed undertaking represents the refurbishment of a fishway in Middle Brook, Newfoundland and Labrador.

3.2 Purpose/Rationale/Need for the Undertaking:

The existing fishway located in Middle Brook, NL requires refurbishment to ensure continued long term dependable operation for the yearly salmon migration upstream to spawning grounds..

4.0 DESCRIPTION OF THE UNDERTAKING:

4.1 Geographical Location:

The proposed project site is located at the RPSS site on Middle Brook, NL. The Middle Brook fishway is located within the boundaries of the David

Smallwood Municipal Park in Gambo. The project site can be accessed through the main municipal park road, and then through a small gravel walking trail with a section of concrete stairs and railing. The approximate coordinates of the project site are 48°48'26.33" N and 54°13'24.32" W. A topographic map has been included in Appendix A.

4.2 Physical Features:

The proposed project site is located within David Smallwood Municipal Park in the community of Gambo, NL. Entrance to the fishway is through the main municipal park road, and then through a small gravel walking trail with a section of concrete stairs and railing. Substrate in the project area consists primarily of exposed bedrock and large boulder. A aerial photograph of the project site has been included in Appendix B.

The water control structures, and the diversion wall are believed to have been originally constructed in the 1960s. Despite ongoing repairs to the exiting fishway, the water control structures, and diversion wall are believed to have remained unchanged since they were constructed.

The site consists of two (2) main concrete water control structures which are located adjacent to the upstream fishway exit and run perpendicular to the river, along the top of the falls, to the north side riverbank. The walls are separated near the middle of the river by a bedrock outcrop that extends above the crest elevation of the control walls. The control walls terminate on the far side of the riverbank at a large rock outcrop that is surrounded by water during high flow conditions

This site serves as a salmon monitoring and counting station, with a fish trap installed during the salmon migration period. Equipment used to carry out the required project activities will likely include: excavator, backhoe, dump truck, boom truck, concrete truck, generators, and typical hand tools such as drills, hammers, cement mixers, etc. Waste material generated as a result of the project will be transported to an approved disposal location.

The general scope of work is as follows:

- Trimming of vegetation along the access road, as required for transportation of equipment and materials to site.
- Demolition and removal of existing pipe railing on the staircase.
- Construction of temporary access route to fishway for access to the upstream riverbank. This would include backfilling the existing staircase and making use of the existing trail and extending a temporary route along the fishway to the upstream pool area.
- Construction and maintenance of temporary dewatering devices and structures.
- Removal of loose rock debris on the upstream side of the existing control structures.
- Demolition and removal of damaged sections of existing water control structures.
- Demolition and removal of sections of existing control structure #2 behind stop log areas in new control structure #2. Demolition and removal of existing downstream diversion wall. Rock excavation and

- base preparation for new water control structures and new diversion wall.
- Drilling and grouting in rock anchors for new concrete control structures and diversion wall.
- Construction of two (2) new sections of reinforced concrete control structures with stop log guides and embedded pipe sleeves for counting fence installation.
- Construction of new reinforced concrete diversion wall with embedded pipe sleeves for counting fence installation.
- Removal of debris in fishway entrance pool and downstream pool with damaged weir wall.
- Removal of existing stop logs and replace existing concrete still with new.
- Removal of existing damaged weir wall and replacement with new.
- Removal of dewatering structures.
- Removal of temporary access road to fishway and reinstatement as per existing.
- Removal of any loose or damaged sections of the concrete along the stairs and landing areas.
- Resurfacing of staircase with new reinforced concrete topping.
- Installation of new galvanized, painted railing.
- Grading of existing material on the trail and around the refurbished staircase.
- Clean-up of site and demobilization.

A new site plan has been included in Appendix C. The proposed project is a refurbishment of an already existing structure; therefore alternative locations were not considered.

4.3 Construction:

Commencement of this project is subject to DFO-RPSS operational priorities and funding. Refurbishment of the fishway is expected to require 15 months to complete. Site preparation and construction work will commence in May 2022, and conclude in July 2023, for a total of 15 months. January, February, March, and April 2023 will no on-site activities for a winter shut-down. This brings the total construction time to 11 months, with a 4 month winter shut-down.

Construction activities will include:

- Installation of new water control structures, refurbishment of existing uplands, replacement of the damaged fishway weir wall and replacement of the existing concrete stop log sill. This will be accomplished using heavy equipment. Concrete for the new diversion wall will be poured on-site.
- Currently, construction is scheduled to be completed outside of the fish migration window (May 1st – September 30th). If construction is required to be maintained throughout the salmon migration period a fish relocation

plan will be developed and implemented, in consultation with DFO Fisheries Protection Program.

- Equipment and tools will be transported to the project site via local roads.
- Waste material will be transported off site and disposed of at an approved waste disposal location.

The most probable sources of potential pollutants are related to the use of heavy equipment. Accidental spills of heavy equipment fuel/oil and sedimentation from disturbances to riparian area are also a possibility. The project will be assessed pursuant to the IAA 2019 and all mitigations prescribed as part of that process will be implemented during project description. The following mitigation measures will be utilized to minimize potential interactions with the environment:

Fish / Fish Habitat and Water

- Fisheries and Oceans Canada provided a letter of Advice for the project outlining mitigation measures for the protection of fish and fish habitat (22-HNFL-00034).
- All instream work should take place during the appropriate timing window (October 1 – April 30). If this is not possible, a fish relocation plan must be developed and implemented in consultation with DFO Fisheries Protection Program.
- If at any time Atlantic salmon or sea-run trout are observed migrating upstream or downstream, all works must cease until the migration has ended to ensure there are no impacts to fish movement.
- Minimize duration of in-water work.
- Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.
- Plan activities near water such that materials such as rust solvents, degreasers, grout, or other chemicals do not enter the watercourse.
- Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance and keep an emergency spill kit on site.
- Ensure that building material used in the watercourse has been handled and treated in a manner to prevent the release of leaching of substances into the water that may be deleterious to fish.
- Develop and implement an Erosion and Sediment Control Plan for the site that minimizes risk of sedimentation of the waterbody during all phases of the project.
- If there is any run-off of concrete or associated water, it should be directed to a drainage control device such as a settling pond and appropriately managed. No concrete run-off is allowed to enter the water.
- Retain a qualified environmental professional to ensure applicable permits for relocating fish are obtained and to capture any fish trapped within an isolated/enclosed area at the work site and safely relocate them to an appropriate location in the same waters. Fish may need to be relocated again, should flooding occur on the site.
- As this is a scheduled salmon river, if at any time Atlantic salmon or Sea Run trout are observed migration upstream or downstream, all works must cease until the migration has ended to ensure that there are no impacts fish movements.

- Time works such that it does not interfere with the sensitive life stages of the fish species present. Ideally, the work should be carried out during low-flow periods.
- Clearly identify in the field sensitive habitats near the work site that are to be protected.
- Detonation of small scaring charges set off one minute prior to the main charge to scare fish away from the site.
- Use of noise generators to move fish out of the area.
- Environment Canada has provided advice on the concrete production which must be followed during activities. It should be noted that any release of a deleterious substance can result in harm to fish and migratory birds and may be in contravention of the Canadian Environmental Protection Act.

Birds and Bird Habitat

- Should migratory bird nests be encountered during project activities, work should be minimized to avoid any potential disturbance to any nest site and surrounding environment and EC should be contacted.
- All work to be conducted in accordance with the Migratory Birds Convention Act (MBCA), which outlines that no migratory bird nests or eggs will be moved or obstructed during the construction or operation phase of the project. It is recommended that vegetation clearing not take place during the breeding season until fledglings have left parental territories.
- Migratory birds, their eggs, nests and young are protected under the MBCA.
- The contractor is responsible to ensure a spill kit is on site. Equipment within the spill kit should be adequate for the proposed project. In case of a spill, the contractor should contact Environment Canada at 1-800-563-9089.
- All construction equipment must be fitted with standard and well maintained noise suppression devices. Appropriate dust suppression methods are to be employed when required. Air filters should be used to minimize exhaust emissions.
- Vegetation removal should be kept to a minimum.

Soil (surface and subsurface)

- Work should be scheduled to avoid periods of heavy precipitation. Erosion control structures (temporary matting, geotextile filter fabric) are to be used, as appropriate, to prevent erosion runoff or sediment laden water during the construction phase.
- Any exposed soil must be minimized by limiting the area exposed at any one time and by limiting the time that any one area is exposed. All stockpiled soil must be covered and/or dyked to prevent erosion or runoff of sediment-laden water from leaving the site. Whenever possible, exposed soil should be replanted or sodded to ensure soil stabilization.
- All wastes must be recycled where possible or otherwise disposed of appropriately.
- Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 100 m from any

waterbody. Basic petroleum spill cleanup equipment should be on site. All spills or leaks should be promptly contained, cleaned up and reported to the 24 hour environmental emergencies reporting system (1-800-563-9089).

- Containers of petroleum products or chemicals that may be required on site will be tightly sealed against corrosion and rust, and surrounded by an impermeable barrier in a dry, water-tight building or shed with an impermeable floor.
- Waste oils and used lubricating oil will be retained in a tank or closed container and disposed of by a company licensed for handling and disposing of used oil products.
- Mechanical inspections will be conducted routinely on equipment to search for leaks. Leaks will be repaired immediately.

Vegetation

- Areas that may require extensive grubbing will be stabilized as soon as possible to reduce potential for erosion.

Air Quality and Noise

- All construction equipment must be fitted with standard and well maintained noise suppression devices. Appropriate dust suppression methods are to be employed when required. Air filters should be used to minimize exhaust emissions.

4.4 Operation:

Routine maintenance and repair projects will be carried out on an as- required basis over the estimated thirty (30) year life of the structure.

Reasonably foreseeable pollutants occurring during the operational phase of the proposed project are limited to accidental discharges of fuel. The operation and maintenance of the site will be under the control of Fisheries and Oceans Canada, Real Property Safety and Security Branch. Potential resource conflicts are not anticipated as a result of the operation of the proposed project.

4.5 Occupations:

Reconstruction of the diversion wall is expected to require 7 months to complete. Commencement of the proposed project is scheduled for October 2019.

The following list outlines occupations which may be employed during the design and construction period. Please note that this list represents only an approximation of the number and type of occupations that may be produced as a result of the proposed project. Actual occupations created as a result of the proposed project will ultimately be determined by the successful contractor. Occupations are expected to be comparable to those created for similar construction projects throughout the Province.

1 - Project Manager – 0711 - Contractor/Construction
1 - Office Administrator – 1211 – Contractor/Construction
1 - Project Supervisor/Foreman - 7217– Contractor/Construction
1 - OHS Representative - 2263 – Contractor/Construction
2 - Carpenters – 7271 – Contractor/Construction
4 - Laborers – 7217 - Contractor/Construction
1 – Surveyor - 2113 – Contractor/Construction
2 - Truck Drivers - 7217 – Contractor/Construction
1 - Site Inspector - 2264 - Construction
1 - Professional Engineer – 0211 – Entire Project
1 - Engineering Technologist – 2231 - Construction Design (Engineering)
1 - Office Administrator – 1211 – Entire Project (Engineering)
1 – Heavy Equipment Operator – 7521 – Contractor/Construction

5.0 APPROVAL OF THE UNDERTAKING:

The following is a list of the likely permits, licenses and approvals required for this project.

Approvals/Certificates/Permits	Regulatory Authority
NL Environmental Assessment Registration ⁽¹⁾	NL Department of Municipal Affairs and Environment, Environmental Assessment Division
DFO–Request For Review (Serious Harm Determination; Aquatic Species At Risk) ⁽²⁾	Fisheries and Oceans Canada, Fisheries Protection Program
Permit to Alter a Body of Water ⁽³⁾	NL Department of Municipal Affairs and Environment, Water Resources Division

Notes: (1) This document; provincial permits are expected to be issued following release from further environmental assessment.

(2) An application was made to DFO – Fisheries Protection Program to determine if the Project as described herein would avoid Serious Harm to fish by following standard mitigations. Application No 22-HNFL-00034 was received.

(3) Application in progress, submission anticipated to occur following submission of the EA Registration.

6.0 ABORIGINAL CONSULTATION:

Aboriginal persons are not known to utilize the Middle Brook RPSS site, nor are there any known aboriginal groups in the surrounding area. As such, aboriginal consultation was not deemed necessary as part of this determination.

7.0 SCHEDULE:

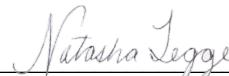
Construction is expected to begin in May 2022, and conclude in July 2023, for a total of 15 months, with January, February, March, and April 2023 having no on-site

activities for a winter shut-down. This brings the total construction time to 11 months, with a 4 month winter shut-down.

8.0 FUNDING:

The total cost estimate for all phases of the proposed project, as provided by the proponent, is approximately \$490,000.00 plus HST. Funds will be provided by Real Property, Safety and Security Branch, Fisheries and Oceans Canada.

April 5, 2022
Date



Environmental Assessment Representative

APPENDIX A

TOPO MAP

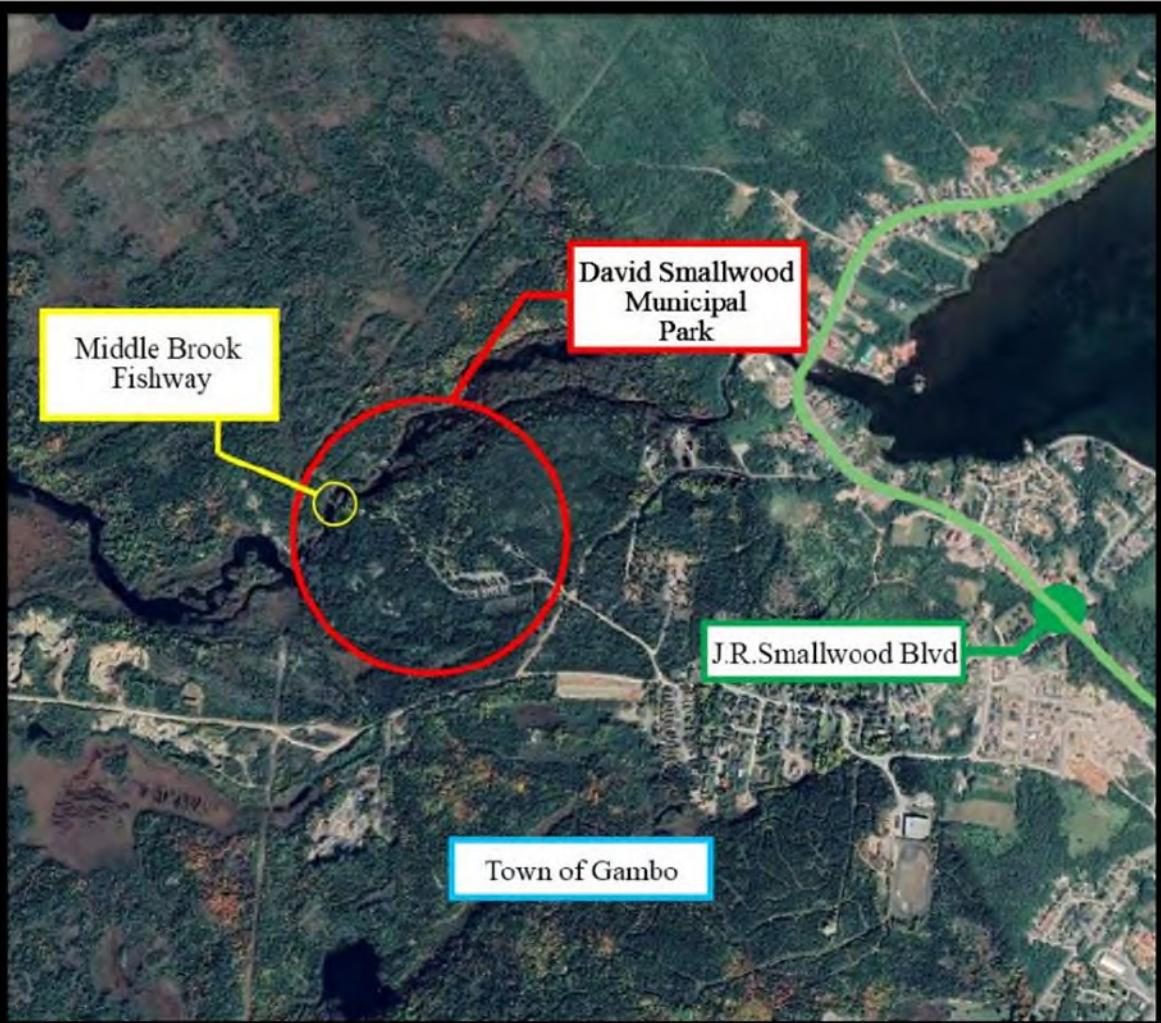
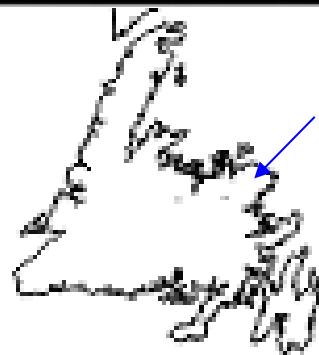


Figure 1: Topographic Map of Proposed Site

Location: Middle Brook, NL



APPENDIX B
AERIAL PHOTOGRAPH



APPENDIX C

SITE PLAN

