Fishway Reconstruction Northeast River, Placentia, 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		
Date:	June 24 th , 2019		

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1.0 <u>NAME OF UNDERTAKING:</u>

Fishway Reconstruction, Northeast River, Placentia, NL

2.0 **PROPONENT:**

- (i) Department of Fisheries and Oceans Canada Real Property, Safety and Security Branch (DFO-RPSS)
- (ii) Northeast Atlantic Fisheries Center, 80 East White Hills Road St. John's, NL A1C 5X1
- (iii) Taryn Baker Regional Engineer DFO, Real Property Safety and Security 80 East White Hills Road St. John's, NL A1C 5X1 Phone: (709) 772-4289 E-mail: <u>taryn.baker@dfo-mpo.gc.ca</u>
- (iv) Natasha Warren Environmental Services
 Public Services and Procurement Canada 10 Barter's Hill St. John's, NL A1X 7P4
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3.0 <u>THE UNDERTAKING:</u>

- <u>3.1</u> Nature of the Undertaking: The proposed undertaking represents the reconstruction of the pool and weir fishway in Northeast River, Placentia, Newfoundland and Labrador.
- 3.2 Purpose/Rationale/Need for the Undertaking:

The existing pool and weir fishway located in Northeast River, Placentia, NL is in a state of disrepair and requires replacement. Replacement of the existing fishway will restore/enhance the safe and continued passage of fish.

4.0 **DESCRIPTION OF THE UNDERTAKING:**

4.1 Geographical Location:

The proposed project site is located at the RPSS site in Placentia on the Northeast River. The project site can be accessed via a timber boardwalk from the Trans-Canada Highway, provincial Route 100, approximately 6.0 km east of Long Hill Road. The approximate coordinates of the project site are 47°17'17" N and 53°48'23" W.

4.2 Physical Features:

Substrate in the project area consists primarily of exposed bedrock and large boulder. A timber boardwalk, small cabin and storage area can be found North West of the existing fishway.

The scope of work includes demolition and reconstruction of the existing pool and weir fishway at the DFO-RPSS site in Northeast River, Placentia, NL (See Appendix A). The existing concrete structure will be dewatered, demolished and removed in its entirety. The new fishway will consist of approximately 6 concrete weirs, a concrete leveling slab, water stop log, 3 concrete aprons and extend an overall travel distance of approximately 50 m with a slope of 10 %. A travel restraint system may also be installed across the river bend to provide operators with fall protection when walking across the brook to access the fishway site. This system will consist of cable connected to a concrete anchor block on the western shoreline and the wall of the new fishway. The existing fishway site can be accessed via a timber boardwalk from the Trans-Canada Highway, provincial Route 100. The new pool and weir fishway will be reconstructed in the same footprint as the existing structure. Materials and equipment will be transported to the site via helicopter. Waste material generated as a result of the project will be transported via helicopter to an approved disposal location.

The proposed project is a reconstruction of an already existing structure; therefore alternative locations were not considered.

Physical and Biological Environment

Northeast River is a scheduled Atlantic Salmon River. The project site is located at a waterfall with a relatively large pool of water at the base of the falls and fishway. The river is bounded by green space containing mature trees along steep embankments. Substrate consists primarily of exposed bedrock and large boulder. A timber boardwalk, small cabin and storage area can be found northwest of the fishway. The Salmon Preservation Association for the Waters of Newfoundland reported 841 salmon in the Northeast River in 2018 up from 361 in 2017.

The project site is located within the Southeastern Barrens sub region of the Maritime Barrens Ecoregion. Like the rest of the ecoregion, the Southeastern Barrens is characterized by exposed bedrock and extensive barrens – especially on the northern half of the Burin Peninsula and the islands of Placentia Bay – with tree growth often limited to protected valleys and coves. Summers in this

subregion are typically cool – marked by frequent fog and strong southerly winds – and winters are relatively mild, considering the area's northern latitude. Slope bogs, basin bogs, and fens are scattered throughout the barrens, reflecting the poor drainage and wet climate of this ecoregion.

The topography of the sub region dramatically reflects glacial activity that occurred more than 10,000 years ago. Most of the area is covered by gently rolling ground moraine, but scattered throughout are gigantic boulders left by retreating glaciers (erratic's), and hundreds of lakes and ponds created by glacial gouging of the earth's surface. Forests are scarcer in the Southeastern Barrens sub region than in the two more northerly sub regions of this ecoregion, due to more fog and the lower summer temperatures that come with prevailing winds off the ocean. A scattering of yellow birch, which favors moist woodlands, is found in the forested areas, which also helps set this subregion apart from its northers subregion counterparts.

Moose, mink, snowshoe hare, and red fox live in the forest and shrub habitats of this subregion, while beaver and muskrat can be found in the vicinity of ponds and streams. Other mammals include the red squirrel, little brown bat, meadow vole, masked shrew, and eastern chipmunk. The Southeastern Barrens is home to the world's most southerly caribou herd – the Avalon herd – which lives in and near the 107,000 hectares protected by the Avalon Wilderness Reserve, on the southeastern portion of the Avalon Peninsula.

Fish in the region include Atlantic salmon, brook trout, brown trout, rainbow smelt, American eel, and three-spine and nine-spine sticklebacks. There is one amphibian – low numbers of the green frog – and no reptiles in this ecoregion.

A search of the Atlantic Canada Conservation Data Centre (ACCDC) database was conducted on June 13, 2019. The ACCDC provided a list of rare/unique species (i.e. plants and animals) within a 5 km buffer zone (standard ACCDC procedure) of the site. All species were cross-referenced with Schedule 1 of the Species at Risk Act (SARA) listed as extirpated, endangered, threatened, or special concern. The Red Crossbill (*percna subspecies*, Endangered) and Olive-sided Flycatcher (Threatened), though unlikely to be found within the project footprint, sightings are to be reported to ECCC-CWS.

4.3 Construction:

Commencement of this project is subject to DFO-RPSS operational priorities and funding. Replacement of the fishway is expected to require 6 months to complete. Site preparation may commence in September 2019 with in-water work commencing early October 2019.

Construction activities will include:

- Demolition, removal and reconstruction of the existing fishway structure. This will be accomplished using hand-held equipment (e.g. pneumatic jackhammers, sled hammers, etc). Temporary dewatering devices and structures will be utilized during demolition and construction activities. Concrete for the new fishway and associated structures will be poured onsite.
- Clearing of uplands to accommodate a temporary lay down area measuring approximately 20ft x 20ft (See appendix B). Trees will be cut down using chainsaws and associated equipment. Disturbances to surrounding vegetation is anticipated to be minimal as there will be no heavy equipment on site. A vegetated buffer will be maintained between the laydown area and the river bed. Post-construction, the laydown area will be revegated using a combination of native grass and mature tree seedlings.
- Currently, construction is scheduled to be completed outside of the fish migration window (June 1 – September 30). 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 helicopter.
- Waste material will be flown out of the site and disposed of at an approved waste disposal location

The most probable sources of potential pollutants are related to the use of equipment. Accidental spills of equipment fuel/oil, sedimentation from disturbances to riparian area and establishment of laydown area are also a possibility. The project will be assessed pursuant to the CEAA 2012 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.
- 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 paint, primers, blasting abrasives, 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.
- If explosives are used, ensure appropriate on-land set-back distance from the waterbody.
- Blasting should be undertaken at the time of least biological activity or biological sensitivity.
- Do not use ammonium nitrate based explosives in or near water due to the production of toxic by-products.
- Remove all blasting debris and other associated equipment/products from the blast area.
- 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.

Birds and Bird Habitat

- Environment Canada provided a letter of Advice for the project outlining mitigation measures for the protection of bird and bird habitat.
- 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.

- 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.

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.
- Fill material is to be free of contaminants and from an approved quarry site.
- 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

- Temporary laydown areas will be restored through manual re-seeding.
- Areas that may require extensive grubbing will be stabilized as soon as possible to reduce potential for erosion.
- A vegetated buffer will be maintained between the laydown area and the river bend at all times.

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 sued 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 fishway is expected to require 6 months to complete. Commencement of the proposed project is scheduled for September 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 Contractor/Construction
- 1 Office Administrator Contractor/Construction
- 1 Project Supervisor/Foreman Contractor/Construction
- 1 OHS Representative Contractor/Construction
- 2 Carpenters Contractor/Construction
- 4 Laborers Contractor/Construction
- 1- Helicopter Pilot Contractor/Construction
- 1 Surveyor Contractor/Construction
- 2 Truck Drivers Contractor/Construction
- 1 Site Inspector Construction
- 1 Professional Engineer Entire Project
- 1 Engineering Technologist Construction Design (Engineering)
- 1 Office Administrator Entire Project (Engineering)

5.0 <u>APPROVAL OF THE UNDERTAKING:</u>

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 has been 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 19-HNFL-00115 in progress.

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

6.0 <u>ABORIGINAL CONSULTATION:</u>

Aboriginal persons are not known to utilize the Northeast River 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 <u>SCHEDULE:</u>

The proposed project is expected to commence in September 2019 and construction would occur over a 6 month period.

8.0 <u>FUNDING:</u>

The total cost estimate for all phases of the proposed project, as provided by the proponent, is approximately \$475,000.00 plus HST. Funds will be provided by Real Property, Safety and Security Branch, Fisheries and Oceans Canada.

Natasha Hurcen

June 18, 2019 Date

Environmental Assessment Representative

APPENDIX A

TOPO MAP

SITE PLAN





ITEM	DESCRIPTION	REFERENCE
1	COMPLETELY REMOVE AND REPLACE EXISTING CONCRETE WEIR (INCLUDING EXISTING ROCK ANCHORS) WITH NEW REINFORCED CONCRETE, ROCK ANCHORED INTO UNDERLYING BEDROCK.	SHEET C3, C4 C5 AND SHEET C6 DETAILS 1, 2, 4, 5
2	COMPLETELY REMOVE AND REPLACE EXISTING CONCRETE LEVELING SLAB WITH NEW REINFORCED CONCRETE, ROCK ANCHORED INTO UNDERLYING BEDROCK.	SHEET C6 DETAIL 3
3	COMPLETELY REMOVE AND REPLACE EXISTING WATER STOP LOG WITH NEW REINFORCED CONCRETE, ROCK ANCHORED INTO UNDERLYING BEDROCK.	SHEET C8 DETAIL 3
4	RESURFACE/CAP EXISTING CONCRETE CONTROL STRUCTURE SURFACES ALONG ENTIRE PERIMETER.	SHEET C7 DETAILS 1, 2, 3, 4, 5, 6, 7
5	FILL ALL UNDERLYING CONCRETE CONTROL STRUCTURE VOIDS WITH CONCRETE ALONG ENTIRE PERIMETER.	SHEET C7 DETAILS 1, 2, 3, 4, 5, 6, 7
6	CAP AND FILL ALL UNDERLYING CONCRETE APRON STRUCTURE VOIDS WITH CONCRETE ON DOWNSTREAM END.	SHEET C8 DETAIL 4
$\overline{7}$	COMPLETELY REMOVE AND REPLACE EXISTING STEEL PIPE SUPPORTS ANCHORED TO EXISTING STOPPING FENCE CONCRETE BLOCKS.	SHEET C6 DETAIL 6
8	REMOVE ANY RIVER DEBRIS (STICKS, BRANCHES) LOCATED WITHIN THE FISHWAY CHANNEL. IN ADDITION, REMOVE ANY COBBLE STONES/LOOSE ROCK FRAGMENTS AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE.	SHEET C2, C3
9	CONSTRUCT NEW REINFORCED CONCRETE MASS BLOCKS TO SUPPORT NEW TIMBER GANGWAYS	SHEET C8 DETAIL 1
10	COMPLETELY REMOVE AND REPLACE EXISTING TIMBER GANGWAYS WITH NEW, C/W TIMBER HANDRAILS	SHEET C8 DETAILS 7, 8
(11)	CONSTRUCT NEW REINFORCED CONCRETE MASS BLOCKS TO SUPPORT FALL ARREST ANCHORS	SHEET C8 DETAIL 2
(12)	INSTALL NEW FALL ARREST PAD EYES	SHEET C8 DETAILS 6
13	REMOVE AND REPLACE EXISTING STOPPING FENCE BRACKETS WITH NEW GALVANIZED BRACKETS	SHEET C8 DETAIL 5
14	MASS ROCK STABILIZATION WITH ROCK ANCHOR BOLTS.	SHEET C7 DETAILS 8, 9
(15)	REFER TO CONTRACT SPECIFICATIONS REGARDING SITE RESTORATION REQUIREMENTS, INCLUDING HYDROSEEDING AND TREE/SHRUB REPLACEMENT	SHEET C2 AN SHEET C9

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