

**REGISTRATION PURSUANT TO CHAPTER E-14.2  
OF THE ENVIRONMENTAL PROTECTION ACT,  
SNL 2002**

**ENVIRONMENTAL ASSESSMENT**

**FOR THE DEMOLITION OF TWO EXISTING  
BRIDGES, ONE ON  
JUNCTION RIVER AND ONE ON LITTLE  
JUNCTION RIVER  
ROUTE 1 (OLD)**

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### Appendix A: General Project Details

**PROPONENT:**

**i. Name of Corporate Body**

Department of Transportation and Infrastructure  
Government of Newfoundland & Labrador

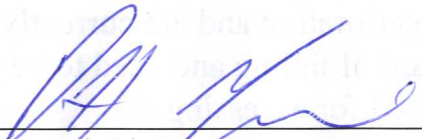
**ii. Address**

5<sup>th</sup> Floor, Confederation Building (West Block)  
St. John's, NL  
A1B 4J6

**iii. Chief Executive Officer**

Cory Grandy  
Deputy Minister  
729-3676

**iv. Approval for Environmental Assessment Submission**

  
\_\_\_\_\_  
Dan Michielsen  
Assistant Deputy Minister  
Transportation and Infrastructure  
729-3796

29-march-23  
Date

## **v. Principal Contacts for the Purpose of Environmental Assessment**

Clifford Smith  
Director,  
Highway Design and Construction  
729-6610

Ken Hannaford  
Senior Environmental Planner  
Highway Design and Construction  
729-5540

### **THE UNDERTAKING:**

#### **(i) Name of the Undertaking**

This submission is for the demolition of two current deteriorated bridges on the old Route 1. Their locations fall on Junction River and Little Junction River, both of which are tributaries of Exploits River, a scheduled salmon river, approximately 25.7 km and 25 km west of Grand Falls-Windsor, respectively and 1.2 km and 1.7 km east of Badger (Fig. 1).

#### **(ii) Nature of the Undertaking**

The demolition of old Junction River Bridge and old Little Junction River Bridge, which cross Junction River and Little Junction River between the TCH and Exploits River on the former Route 1, at km 454.98 and km 454.32, respectively (Fig. 3). The bridges are currently under an advanced state of deterioration and are currently being used by occasional ATV riders. They pose a hazard of falling and need to be removed as soon as possible. The old Route 1 will be used for accessing the bridges. The two bridges will be demolished, removed, and disposed of in an environmentally responsible manner.

#### **(iii) Purpose / Rationale / Need for the Undertaking**



The purpose of this project is to remove the aged and deteriorated bridges on Junction River and Little Junction River as they pose a hazard of collapsing. The two bridges need to be removed and access to the site made much less hazardous. On its approaches any sharp drop-off where the abutments were located will be removed, lowering the slope to give any potential ATV operator a line of sight to the river. Warning signs will be erected along both east and west approaches to the rivers.

## **Description of the Undertaking**

### **Geographic Location**

The project is divided into two locations, one for each structure. Old Junction River Bridge is located on the old Route 1, which crosses Junction River, approximately 94 meters south of the current TCH. The coordinates are Latitude 48.973106°, Longitude -56.020807°. Old Little Junction River Bridge is also located on the old Route 1, which crosses Little Junction River, approximately 158 meters south of the current TCH. The coordinates are Latitude 48.970784°, Longitude -56.015531° (Fig. 3).

### **Physical Features.**

Junction River and Little Junction River are both tributaries of Exploits River. For this reason, they are both Scheduled Salmon Rivers. The existing infrastructure at this project consists of two bridges, ~465m apart, which are bound by the TCH to the north and Exploits River to the south. Old Junction River Bridge is 330m upstream of Exploits River and 94m downstream of the TCH. Old Little Junction River Bridge is 950m upstream of Exploits River and 158 m downstream of the TCH.

The area needing for access to the bridges is within the existing Right Of Way of the original Trans Canada Highway and has been previously altered. It is currently

used as a throughway for occasional ATV operators.

## **Environment.**

This area is in part of the **Central Newfoundland Forest Ecoregion**, *North-central Subregion*. Fish species include Atlantic salmon, brook trout, three-spined stickleback, and American eel. Moose, snowshoe hare, muskrat, otter, mink, black bear, beaver and lynx occur throughout this subregion. Potential receptors include residents of Badger which is a little over 1 kilometer to the west, travelers on the TCH, a residential property between the two bridges, a residential property ~230m north of old Big Junction River Bridge, and a Highway Maintenance Depot, located ~250m north of old Big Junction River Bridge. Both bridges were built in 1936, have single spans of 13.72m, and are supported by concrete abutments on each end. The overall width of each bridge is 6.10m. Structural elements for both bridges include reinforced concrete abutments, concrete girders, concrete curbs, reinforced concrete wing walls, and concrete handrails. It should be noted that old Big Junction River Bridge is a concrete bowstring arch bridge, whereas old Little Junction River Bridge is not. The overall condition of both structures is reported as poor, considering the bridges are falling apart and are no longer in service. The most recent inspections, along with the evident deterioration of the structures, led to the decision to demolish them.

## **Habitat at Project Site.**

The habitat at both locations is characteristic of small rivers but different in their physical characteristics.

### **Junction River.**

The reach of the stream under the bridge at Junction River consists of rearing habitat (Fig. 4). Slope is approximately 1%. Substrate consists of 30% boulders, 20% cobble, 20% rubble, 25% pebble and 5% gravel. Some of this gravel came from the erosion of the old bridge as the fillers holding the gravels deteriorated and they fell into the river. Velocities are 0.3 – 0.4 m/s and depths range from 0.1m to 0.3m. Riparian vegetation is mainly shrubs and herbaceous plants. The east bank also contains substantial mature trees.



## Little Junction River

Under Little Junction River the reach is a steady as a result of a beaver dam 50m downstream (Fig. 5). Slope is less than 1%. The substrate consists of 10% boulders, 30% cobble, 30% rubble, 25% pebble and 5% gravel overlain with organic material. These gravels here seem to have predominantly come from the eroding bridge. Velocities are <1m/s. Riparian vegetation is composed of mature trees interspersed with shrubs.

Gravels found adjacent to the bridge have been added to from deterioration of the bridge as gravel is an important constituent of old concrete, and as the binding agents deteriorate the depositions are gradually adding to the gravel component of the substrate.

The Department of Transportation and Infrastructure will consult with the Water Resources Division of the Department of Environment and Climate Change to ensure that the best plan of action is followed for removing the two bridges and minimizing potential deleterious impacts on the existing aquatic habitats. The Water Resources Division's Environmental Guidelines for work around watercourses will be used during the design and construction phases.

- DFO's Guidelines for Protection of Freshwater Fish Habitat in Newfoundland and Labrador (1998);
- DFO's Measures to avoid causing harm to fish and fish habitat (<http://www.dfo-mpo.gc.ca/pnw-ppc/measures-mesures/measures-mesures-eng.html>) and
- Fish passage guidelines and other applicable guidelines and Fact Sheets

## Construction

The project will encompass three parts:

### 1) Temporary Access:

The first phase of the project is accessing the bridges from either side. This work will consist of widening the current old Route 1 to accommodate equipment. No clearing will occur outside the ROW.

## **2) Demolition and Disposal:**

The Contractor shall submit a demolition plan for the old bridges to the Owner's Representative for review and approval prior to commencing demolition work. Demolition and removal of the existing structures shall be carried out such that no significant debris enters the river. The Contractor shall ensure that all waste material from the bridge demolitions is disposed of in accordance with the *Environmental Protection Act, SNL2002 CHAPTER E-14.2* and prior approval by the Department of Environment and Climate Change. The Contractor's Demolition Plan shall clearly demonstrate that there is compliance with all environmental requirements for the project and adhere to the Contractor's Responsibilities – Regulatory Agencies Section 805.

## **3) Reinstatement:**

The final phase of the project is the reinstatement phase. This work will consist of grading the disturbed river banks to a 1.5:1 slope, installing hydraulic rip rap to combat erosion, and installing barriers and warning signage on either side of the removed structures. All residential land will be reinstated to its original condition.

The potential sources of pollution during construction would be limited to the possible siltation of the river during bridge demolition and stabilization. To prevent siltation within the river during construction, the Contractor shall use the mitigation in the Specification book, Sections 815, 816, 817, 818, and 845.

In addition, the potential exists for hydrocarbon spillage from temporary fuel storage facilities. Contractors will be advised of the environmental requirements for stream crossings, hydrocarbon spill reporting, and the necessity of strict compliance.



## **Owner's Policy (Division 8, General Specifications Book, 2011)**

*To ensure protection of the environment, the work at all times shall be subject to inspection by the staff of relevant municipal, provincial and federal agencies. Normally, all inspections other than by the Owner's Representative will be arranged in advance through the Owner's Representative. Any specific matters relating to environmental protection will be dealt with between the Contractor and the Owner's Representative.*

*Any violations of environmental permits or authorizations or any environmental related incidents which are observed by inspectors representing regulatory agencies are to be reported by them prior to leaving the site to the Owner's Representative. Except in emergency situations, environmental protection measures required by other agencies must be approved by the Owner's Representative prior to implementation by the Contractor.*

It is Owner's policy to protect the environment along the route of the project, in areas adjacent to the route, and in associated work areas such as pit or quarry sites. DTI is committed to cost-effective environmental protection measures that will prevent serious or irreversible environmental damage through the planning and implementation phases of the project.

### **Protection of Vegetation and Wetlands**

The Contractor shall be made aware that the work required in and around water crossings shall be performed with due care and caution so as to prevent undue disturbance to adjacent vegetation and the environment from construction activities and off Right Of Way travel (Section 850). Immediately following and during some construction activities, the Owner's Representative may identify areas requiring seeding/sodding or stabilization by a method to prevent erosion. Damage or disturbance of vegetation and/or wetlands outside the ROW shall be re-vegetated and/or restored to the satisfaction of the Owner's Representative at the Contractor's expense (Section 855).

### **Storage and Handling of Fuels and Other Hazardous, Toxic, or Dangerous**

## **Material**

There is no expected fuel or hydrocarbon storage at the project site. Fuel will be brought in by truck and maintenance will be carried out off-site. In the case of storage within the project site it will fall under GAP regulations as can be seen below.

All storage tank systems must be registered under and in compliance with Newfoundland Regulation 58/03, The Storage and Handling of Gasoline and Associated Products Regulations, 2003, before commencing operation. Registration does not apply to storage tank systems of a capacity less than 2500 liters that are connected to a heating appliance. Contractors shall supply verification of storage tank registration to the Owner's Representative prior to the commencement of work (Section 820).

## **Contractor Environmental Mitigation Plan**

A Contractor Environmental Mitigation Plan (**CEMP**), completed by the Contractor and approved by DTI before work commences, is required for this project.

Elements required in a **CEMP** are:

- Pre-construction planning, including the identification project-environmental interactions (e.g., Valuable Ecosystem Components including: public and worker safety, wildlife, habitat, plants, resource users, etc.);
- Detailed environmental mitigation measures to avoid negative or irreversible environmental impacts;
- Contingency plans for unplanned events;
- List of DTI and Contractor contacts and reporting numbers; and
- Decommissioning Plan that includes site rehabilitation measures.

The potential for adverse environmental impacts during construction will be minimized as all construction activities will be undertaken in accordance with the



environmental requirements of the Department of Transportation Specification Book for transportation projects.

## **Prohibitions**

The following are directives for the Owner and Contractor in carrying out this project. Reference is also provided to the Section where this prohibition is located in Division 8.

- Contractors, Subcontractors, and their personnel shall not harass wildlife or waterfowl or unduly disturb fish (Section 805);
- No pesticides or other products shall be used without prior approval of the Owner and the Department of Environment and Climate Change (Section 810);
- The Contractor shall not wash equipment or containers, nor dump herbicides in or near any fresh or salt water bodies, or at any location where the herbicide may enter a body of water (Section 810);
- No person shall discharge into a body of water any sewage or effluent (Section 815);
- The use of equipment or machinery in a watercourse or water body is not permitted (Section 815);
- The Contractor shall not ford a watercourse without prior approval from the Owner's Representative (Section 815);
- Silted or muddy water is not permitted to be released into any watercourse or water body or into any ditch or areas that lead directly to a watercourse or waterbody (Section 815.07);
- Smoking shall be prohibited within 10 m of a fuel storage area or during refueling operations (Section 820.03);
- Fueling or servicing of mobile equipment shall not be allowed within 100 m of a watercourse, water body, or designated wetlands (Section 820.03);
- The Contractor shall ensure that no servicing or washing of heavy equipment occurs adjacent to watercourses and designated wetlands. Fueling, servicing or washing of equipment shall not be allowed within 100 m of a watercourse (Section 820.04);
- No waste material shall be deposited in any watercourse or wetland (Section



825.01);

- There shall be no open burning of waste material, slash or grubbing material onsite. Rubber tires, waste oil, or similar material shall not be used to ignite slash or used to maintain the burning operation (Section 835);
- Unnecessary cutting of trees is to be avoided. Care will be taken during construction to prevent damage to trees and shrubs adjacent to the flagged clearing limits which are to remain after construction (Section 850);
- The Contractor shall not use living trees as survey marks and shall not cut blazes or otherwise mark live trees except with removable surveyor's tape and/or tags (Section 850);
- The Contractor shall limit equipment travel to the surveyed right-of-way and existing municipal and provincial roads. Use of equipment of any type is not permitted outside the clearing limits of the right of way without prior approval (Section 850); and
- Should any archaeological remains be encountered, such as stone, bone or iron tools, concentrations of bone, fireplaces, house pits and/or foundations, work in the area of the find shall cease immediately in accordance with the Historic Resources Act (RSNL1990 CHAPTER H-4) (Section 860).

## **Operation**

The removal the two bridges is a permanent operation. After the demolition phase, the river banks will be sloped and signs erected for safety. This measure is aimed at protecting recreational motorists that have become accustomed to the trail.

## **Occupations**

The various types of occupations anticipated for this project include:

- (a) Construction Estimators; 2234
- (b) Construction Managers; 0711
- (c) Structural Engineers; 2231
- (d) Heavy Equipment Operators; 7521
- (e) Heavy Equipment Mechanics; 7312
- (f) Labourers; 7621

- (g) Truck Drivers; 7511
- (h) Senior Environmental Planner 2121
- (i) Co-op Engineering Student

Contract completion is expected to be in the summer months of 2023. There is an estimate of approximately 10-20 general construction workers during the course of building. All of the above could change depending on the Contractor and when tender is awarded. Numbers and duration of employment of individuals can't be determined as the winning bidder, the Contractor, has the responsibility of choosing their own employees. This occurs after the project goes to tender, which takes place only after the project receives approval from the EA process.

**Project-related Documents**

- Contractor Environmental Mitigation Plan.
- Department of Transportation and Infrastructure Specifications Manual

**APPROVAL OF THE UNDERTAKING**

The following is a list of the permits, licences, approvals that may be necessary for this project:

**MAJOR REGULATORY APPROVALS BY TYPE AND AGENCY**

<b>Type of Permit</b>	<b>Agency</b>

1. Fuel storage & handling	Government Service Centre
2. Solid waste disposal	Government Service Centre
3. Commercial Cutting	Fisheries and Land Resources
4. Environmental Assessment	Municipal Affairs and Environment

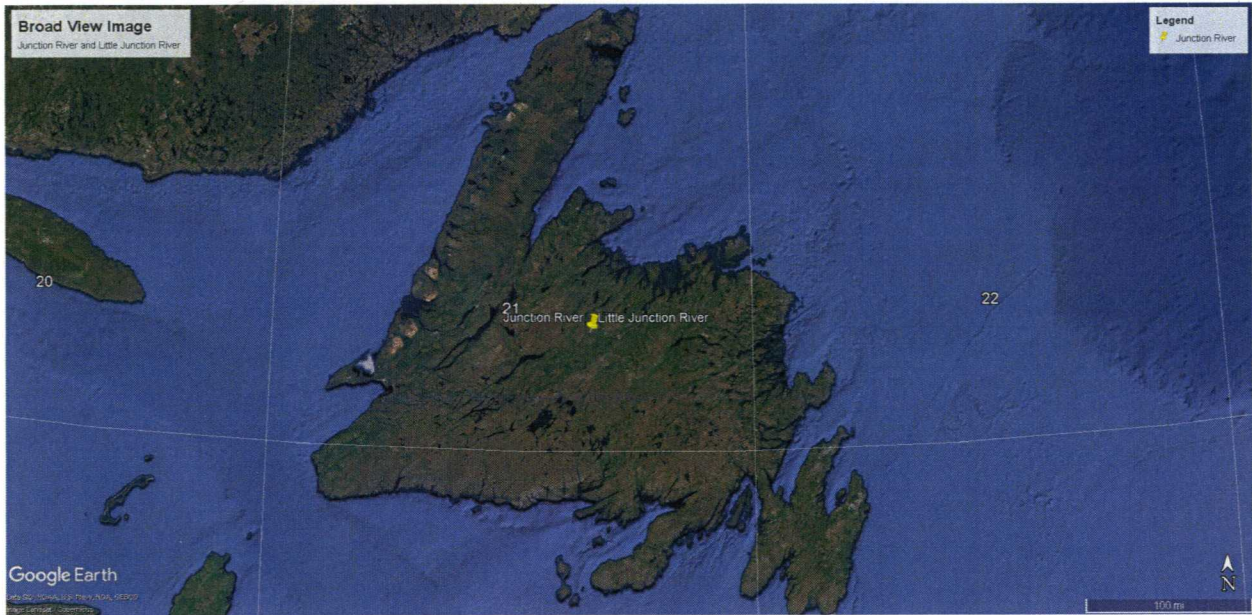
**SCHEDULE**

The Department of Transportation and Infrastructure would like to complete the requirements of the Environmental Assessment Act and seek approval for the project as soon as possible. A tender call could take place in April of 2023 with construction starting shortly after.

**FUNDING**

The project will cost approximately \$250,000 and will be funded by the Provincial Government under the Provincial Current Program.



**Fig. 1: Provincial Location of Project**

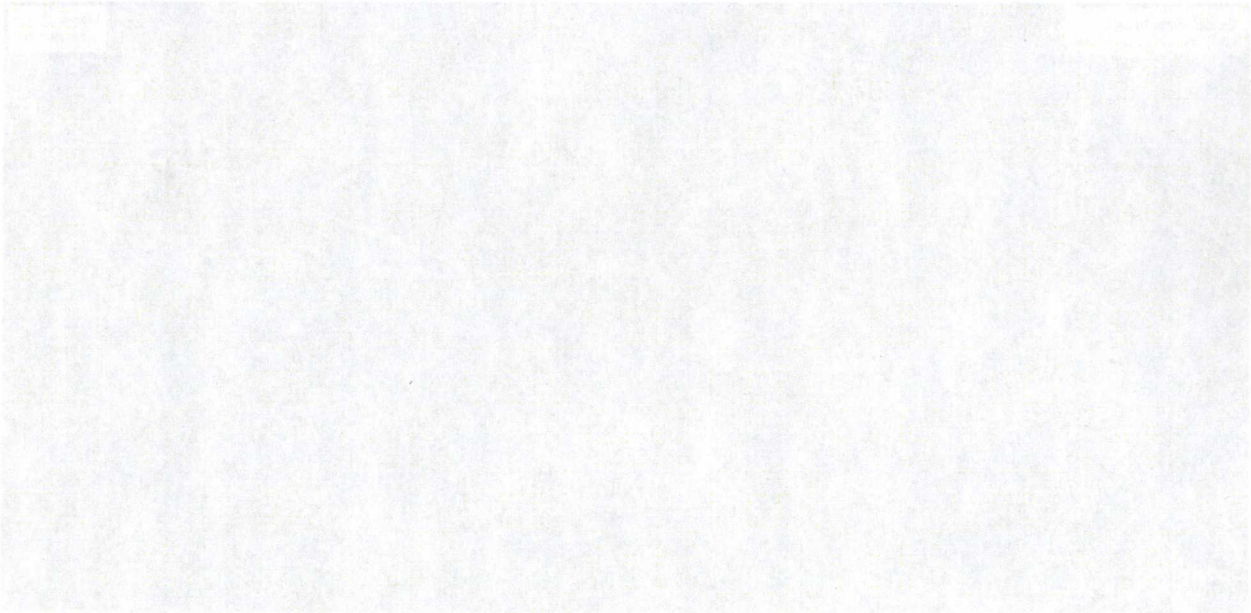


**Fig. 2: Broad View of Project Site**





Fig. 3: Close Up of Project Site







**Fig. 4: Junction River Bridge**





**Fig. 5: Little Junction River Bridge**