

Environmental Protection and Navigable Waters - Section 1650

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1 ACTS AND REGULATIONS TO BE OBSERVED

1.1 The Contractor shall observe and comply with all federal, provincial, municipal and local laws and regulations which seek to ensure that construction work does not adversely affect the environment including, but not necessarily limited to, the following:

1.1.1 Federal Acts (which include Associated Regulations not listed)

1.1.1.1 Canadian Environmental Protection Act, 1999

1.1.1.2 Canadian Navigable Waters Act

1.1.1.3 Canada Wildlife Act

1.1.1.4 Fisheries Act

1.1.1.5 Impact Assessment Act

1.1.1.6 Migratory Birds Convention Act, 1994

1.1.1.7 National Fire Code of Canada 2020

1.1.1.8 Species at Risk Act

1.1.1.9 The Pest Control Products Act

1.1.2 Provincial Acts (which include Associated Regulations not listed)

1.1.2.1 Environmental Assessment Act

1.1.2.2 Environmental Management and Protection Act, 2010

- 1.1.2.3 Fisheries (Saskatchewan) Act, 2020
- 1.1.2.4 Forest Resources Management Act
- 1.1.2.5 Heritage Property Act
- 1.1.2.6 Noxious Weeds Act
- 1.1.2.7 Pest Control Act
- 1.1.2.8 Pest Control Products (Saskatchewan) Act
- 1.1.2.9 Water Security Agency Act
- 1.1.2.10 Weed Control Act, 2010
- 1.1.2.11 Wildfire Act
- 1.1.2.12 Wildlife Act, 1998
- 1.1.2.13 Wildlife Habitat Protection Act

1.2 The Contractor shall comply with the conditions of all environmental approvals such as permits, authorizations, environmental protection plans, licenses, and letters of advice issued for the Project.

- 1.2.1 The Contractor shall have copies of the approvals on site during construction.
- 1.2.2 Notwithstanding the terms and conditions contained in an Aquatic Habitat Protection Permit, authorization and other environmental approval, work shall be done in an environmentally responsible manner and shall be completed in conformance with the requirements described within this specification.
- 1.2.3 The intent of the contract is that any requirements listed in the special provisions or supplemental agreements are mutually complimentary with issued permits, authorizations, environmental protection plans, licenses, and letters of advice. If a requirement of the special provisions or supplemental agreements is directly contrary to the intent and requirements of issued permits, authorizations, environmental protection plans, licenses, or letters of advice, the regulatory approval shall govern.

2 CONTRACTOR REQUIREMENTS

2.1 General Requirements:

- 2.1.1 The Contractor shall plan and schedule construction activities to minimize environmental impacts.
- 2.1.2 Prior to commencing construction on the Project, the Contractor and the Engineer shall inspect the worksite to identify environmentally sensitive areas. All necessary environmental protection measures shall be implemented prior to commencing work in these areas.
- 2.1.3 The Contractor shall minimize disturbance to wetlands, native vegetation and wildlife habitat. Existing vegetation shall be preserved outside the isolated work area or outside the Right-of-Way.
- 2.1.4 All works shall be undertaken in a manner that prevents the introduction or minimizes the spread of invasive species, including prohibited and noxious weeds.
- 2.1.5 All bridge and culvert materials to be replaced shall be removed from the site and disposed of in accordance with current legislation. No materials shall be burned or buried on site.

2.2 Machinery and Equipment:

- 2.2.1 All equipment shall arrive on site in a clean condition and shall be maintained to be free of fluid leaks, grease, oil and mud.
- 2.2.2 The Contractor shall wash, refuel and service equipment; and store fuel and other materials for the equipment at locations at least 100 m from the high water mark on each side of a water body in a location and manner that will not contaminate the bed, bank or boundary.
- 2.2.3 The Contractor shall not allow machinery or heavy equipment to enter the water body under any circumstances. The Contractor may be permitted to use necessary attached booms, buckets, other tools, or implements in the water with approval from the Engineer.

2.3 Spills, Hazardous Materials and Deleterious Substances:

- 2.3.1 Hazardous substances such as fuel, oil, grease, paint and solvents shall be stored in locations that prevent contamination of any water body or watercourse and shall be disposed of appropriately.
- 2.3.2 The Contractor shall not release, dump, spill or dispose of any waste substance(s) into the environment that may cause damage to the environment or human health.
- 2.3.3 The Contractor shall ensure that appropriately sized spill basins and spill kits are available on site and accessible at all times. All spills of harmful substances (e.g., petroleum products) shall be cleaned up and disposed of properly at approved sites.
- 2.3.4 Spills or releases of hazardous materials or deleterious substances that may harm the environment, pose a risk to human health, or exceed the quantities specified in Table 1 of the Saskatchewan Environmental Code-Discharge and Discovery Reporting Standard must be reported immediately to the Saskatchewan Environment Spill Control Centre (1-800-667-7525).
 - 2.3.4.1 All spills, regardless of quantity, shall be reported to the Engineer.
 - 2.3.4.2 If a fish-bearing water body or watercourse is affected, Fisheries and Oceans Canada shall also be contacted.
 - 2.3.4.3 The Contractor shall take all reasonable measures to contain the release and repair any damage at their expense.

2.4 Erosion and Sediment Control:

- 2.4.1 The Contractor shall ensure that erosion potential is minimized and the release of sediment into any waterbody is prevented.
- 2.4.2 The Contractor shall prepare and submit an Erosion and Sediment Control Plan where stipulated by regulatory approvals or the Contract.
 - 2.4.2.1 The Erosion and Sediment Control Plan shall be submitted to the Engineer in advance of the pre-construction meeting.
 - 2.4.2.2 The Engineer will review the Erosion and Sediment Control Plan for conformity with the regulatory requirements of the project. Work

shall not commence at any location until the Erosion and Sediment Control Plan has been reviewed and accepted by the Engineer.

- 2.4.2.3 Acceptance of the Erosion and Sediment Control Plan by the Engineer shall not relieve the Contractor of any of their obligations under this Contract. The Contractor shall be responsible for ensuring that any requirements outlined in the Aquatic Habitat Protection Permit or Letter of Advice are satisfied for the duration of construction.
- 2.4.2.4 The Engineer may, in their sole discretion and at any time during construction, rescind acceptance of the Erosion and Sediment Control Plan submitted by the Contractor due to changes in site conditions, or due to failure by the Contractor to adhere to the requirements of the plan.
- 2.4.2.5 The Contractor shall secure the site and immediately stop work until such time as any concerns raised by the Engineer have been rectified to the satisfaction of the Engineer.
- 2.4.3 The Contractor shall install, monitor and maintain all erosion and sediment control devices throughout construction and replace or upgrade devices as necessary to ensure they remain effective until the project site stabilizes and revegetates.
- 2.4.4 Sediment control measures shall be appropriate to site conditions including expected water depth, wind and wave action and must be installed around the perimeter of the work area before starting work to prevent resuspended sediment from spreading to adjacent areas.
- 2.4.5 Turbidity curtains shall be left in place following in-water activity until suspended sediment has settled and must be removed in a way that prevents the escape or re-suspension of sediments.
- 2.4.6 Cofferdam Construction and Removal:
 - 2.4.6.1 The Contractor shall construct cofferdams using clean, non-erodible materials such as sand bags, aquadam-type installations, steel or wood walls, concrete blocks, or clean riprap. Earthen fill material shall not be used. Once installed, cofferdams shall be properly sealed (e.g., lined with heavy gauge plastic, the bottom sealed with sand bags) to prevent leakage.

- 2.4.6.2 Material for cofferdams shall be obtained from outside the bed, bank or boundary of any watercourse or water body. Upon removal, cofferdam locations shall be restored and stabilized to approximately match the original width, depth, and substrate of the watercourse or water body.
- 2.4.6.3 The Contractor shall provide the Engineer with 48 hours notice prior to commencing the installation or removal of the cofferdams. The Engineer will be on site for both the installation and removal of the cofferdams.

2.5 Work in Water:

- 2.5.1 The Contractor shall maintain natural flow rates of downstream water at all times (e.g., via pumping) for the duration of the project.
- 2.5.2 Any pump intake used in fish bearing waters shall be equipped with a fish screen that meets Fisheries and Oceans Canada's 2024 "Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater".
- 2.5.3 The discharge areas for all pumps shall be armoured with clean rock, geo-textile fabric or another energy-dissipating device to prevent erosion and scouring of the watercourse bed and bank at the discharge points.
- 2.5.4 During dewatering, the Contractor shall release water into a well-vegetated area or settling basin and not directly into the watercourse. Water shall not be released into the watercourse until sediment has settled. The quality of the water entering the watercourse shall be equal to or better than that of the receiving water.
- 2.5.5 The Contractor shall implement measures, such as shrouding, to collect debris created during the demolition of wood box culverts and bridges. Debris shall be removed from the site prior to completion of the Work.
- 2.5.6 The Contractor shall not disturb areas of the streambed outside of the construction footprint, including riprap areas, for culvert and bridge work. Any areas that are disturbed shall be restored to the satisfaction of the governing regulatory agency at no direct expense to the Ministry.
- 2.5.7 In-stream work on bridge projects shall be limited to the replacement of new piles only. Piles from the existing bridge(s) shall be removed at or below the existing streambed elevation.

- 2.5.8 Rock riprap, gravel and other excavated materials shall be obtained from outside the bed, bank or boundary of any watercourse or water body, apart from materials that need to be relocated as part of the project. These materials shall be clean and free from fine sediments or other contaminants.
- 2.5.9 Excavated and stockpiled materials shall be located and stabilized above the bank, or at a location approved by the Engineer.
- 2.6 Migratory Birds:
 - 2.6.1 For bridge projects, the Contractor shall observe and comply with the following requirements:
 - 2.6.1.1 The Contractor is responsible for developing bird and wildlife management plans and scheduling construction accordingly.
 - 2.6.1.2 Construction activities that disturb active bird nests, on or near the bridge structure, shall not take place during the migratory bird nesting period. The Contractor shall follow the Government of Canada's general nesting periods of migratory birds guidance unless stated otherwise in the Special Provisions.
 - 2.6.1.3 The Contractor may install netting or other appropriate bird deterrent systems prior to the start of the nesting period to discourage nesting on or near the bridge structure.
 - 2.6.1.4 The Contractor shall submit details of any proposed deterrent system to the Engineer prior to installation. The details shall include a traffic accommodation plan, equipment usage, materials and attachment method(s).
 - 2.6.1.5 The Contractor shall arrange access to the bridge site with the Engineer prior to installing any netting or other appropriate deterrent systems.
 - 2.6.1.6 Deterrent systems may be attached but shall not have any portion of the system extend past the traffic face of the barriers or curbs.
 - 2.6.1.7 Deterrent systems shall be removed prior to completion of the Work. Final Completion of the Contract will not be granted prior to removal of the deterrent systems.

- 2.6.1.8 Any costs or delays associated with accommodating active bird nests shall be the responsibility of the Contractor.
- 2.6.1.9 Bird management will not be paid for directly but will be considered a subsidiary obligation of the Contractor under the Contract.
- 2.6.2 For all other projects which impact any area other than the travelled way and shoulders, the Contractor shall observe and comply with the following requirements:
 - 2.6.2.1 The Contractor shall provide the Engineer with 10 calendar days notice prior to the commencement of any clearing or grubbing or removal of topsoil between April 10 and August 31 of any year.
 - 2.6.2.1.1 The Engineer will arrange for an environmental monitor to inspect the Project for migratory birds if required.
 - 2.6.2.1.2 Work performed without 10 calendar days notice, or work performed within the 10 calendar day notice period, will be considered unauthorized work in accordance with General Provision 1400.7.3.
 - 2.6.2.1.3 The Engineer will provide the results of the migratory bird survey to the Contractor.
 - 2.6.2.1.4 The Engineer will give written authorization to proceed or make an alternate recommendation based on the results of the survey.
 - 2.6.2.1.5 The Contractor is required to comply with the Engineer's recommendation at no direct cost to the Ministry.
 - 2.6.2.2 The Ministry will not consider claims from the Contractor should the results of the migratory bird survey result in the Contractor moving within the Contract limits.
 - 2.6.2.3 The results of the migratory bird survey shall be valid for 7 days.

2.7 Treated Timbers:

- 2.7.1 Treated timbers shall be sourced, handled and disposed of in accordance with the Ministry's Preservative Treated Wood Management standard.
- 2.7.2 To minimize the leaching or migration of chemicals into the water, the Contractor shall:
 - 2.7.2.1 Ensure treated timber is cut at a minimum distance of 50 m from the high water mark of any watercourse;
 - 2.7.2.2 Where treated timber cannot be cut above the high water mark, collect and dispose of debris by use of plastic sheeting or other appropriate measure; and
 - 2.7.2.3 Ensure that all treated timber is thoroughly dried prior to being placed in water.
- 2.7.3 The Contractor shall remove all metal fasteners as required for acceptance by the disposal site.
- 2.7.4 Disposal of treated timbers shall be completed in accordance with Specification 2105 for Removal and Disposal of Framed Timber Culverts.

2.8 Navigable Water

- 2.8.1 Where applicable, the Ministry will be responsible for obtaining construction approvals for watercourses deemed navigable under the Canadian Navigable Waters Act.
- 2.8.2 The Contractor shall erect warning signs and install buoys to temporarily close the watercourse to navigation.
 - 2.8.2.1 Signs and buoys shall be placed and maintained during all periods of open and in-stream activity.
 - 2.8.2.2 Signs shall be legible at a minimum distance of 25 m.
 - 2.8.2.3 Signs shall be placed 25 m upstream and downstream of the site on each bank of the waterway until completion of the project.

- 2.8.2.4 Warning signs shall be at least 2.4 m by 1.2 m in size with 200 mm high black lettering on a yellow background displaying the following message:

Warning Construction Ahead
Stream Closed to Navigation
Phone (xxx) xxx-xxxx for information

- 2.8.2.5 Buoys shall be placed across the stream located 15 m upstream and downstream of the site. The maximum spacing of buoys shall be 5 m.

- 2.8.2.6 Buoys shall be “Keep Out Buoys” as described in Transport Canada Marine Safety Publication TP 10038E (2003).

- 2.8.3 During the winter freeze-up period, the Contractor shall delineate or clearly mark any potential hazards to accommodate safe passage of utility-terrain vehicles (UTVs), all-terrain vehicles (ATVs) and snowmobiles travelling on the frozen stream.

3 COMPLIANCE AND ENFORCEMENT

- 3.1 The Ministry reserves the right to suspend work, in whole or in part, where the activities of the Contractor adversely impact the environment or contravene the Contract, legislation or regulatory approvals.
- 3.2 If any environmental regulator or authority directs or requires the Contractor to halt or alter any activity because it is detrimental or potentially detrimental to the environment or contrary to the Contract, legislation or regulatory approvals, the Contractor shall immediately comply, document the directive, and immediately notify the Engineer.
- 3.3 If work is suspended or must be altered, the Contractor will be required to provide a corrective action plan to the Ministry for review and acceptance within 5 days of the incident, or any other timeframe as specified by the Ministry or regulator in writing.
- 3.3.1 If the Contractor fails to provide or comply with an approved corrective action plan within approved timelines, the Ministry reserves the right to take such steps as are required to prevent, mitigate or remediate any detrimental or potentially detrimental impact to the environment or comply with the Contract, legislation or regulatory approvals.

4 PAYMENT

- 4.1 All measures, including materials, equipment and labour, required to prevent, mitigate or remediate any detrimental or potentially detrimental impact to the environment or comply with the Contract, legislation or regulatory approvals, will not be eligible for extra compensation over and above the Contract Price but will be considered subsidiary obligations of the Contractor under the Contract, except where otherwise identified for separate payment.
- 4.2 No claims will be considered for costs resulting from the suspension of any activity that contravenes legislation or regulatory approvals or is deemed detrimental or potentially detrimental to the environment.