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Parks Canada National Best Management Practices

Roadway, Highway, Parkway and Related Infrastructure

Canada



Parks Canada National Best Management Practices for Roadway, Highway, Parkway and Related Infrastructure

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Introduction

The Parks Canada National Best Management Practices for Roadway, Highway, Parkway and Related Infrastructure will allow an identified suite of project activities to be undertaken in such a manner that there will not be resulting significant adverse environmental effects.

The Best Management Practice (BMP) pathway is applied when there is a suite of routine, repetitive projects (e.g. paving) or activities (e.g. de-watering), with well understood and predictable effects. This fulfils Parks Canada's obligations under the *Canadian Environmental Assessment Act 2012* as a manager of federal land, see the [Guide to the Parks Canada EIA Process](#). The BMP maximizes efficiency through creation of a pre-approved impact assessment for the defined suite of projects, to which standard mitigation and environmental management measures can be applied.

The impact assessment officer (IAO) will review a proposed project and advise the functional manager of the project if and how this BMP should be applied. The IAO's advice will be based on whether the project falls within the scope of the BMP, and whether application of the mitigation measures in the BMP will adequately address potential adverse effects of the project.

Project Managers are responsible to ensure all mitigation measures applicable to the project are added to the terms and conditions of any permits or contracts issued for the project.

The Impact Assessment Officers must ensure the project, EIA pathway applied and determination are recorded in the Parks Canada National Impact Environmental Assessment [Tracking System](#).

Scope of Application

This BMP outlines the impact assessment of repetitive and routine projects on roadways, highways and parkways. If a project involves some or all of below activities, and the initial assessment of site and project indicate "the project is unlikely to result in significant adverse environmental effects" the BMP can be applied. Projects that this BMP would likely be applied to include:

- The proposed maintenance or repair of an **existing** sidewalk, or parking lot.
- The proposed maintenance or repair of an **existing** road, including pull-off areas, that would be carried out on the existing right of way¹.

Activities included in the scope of this BMP are:

1. Project Design
2. General Activities
 - Worksite Conditions/Staging/Laydown
 - Equipment operations
 - Fuel storage and refueling

¹ Highway Footprint or Right of Way (ROW): The permanent physical intrusion of a highway or freeway, including the road surface, shoulders, side slopes, drainage ditches and/or storm drainage ponds (Transport Canada, 2008).



- Site Clean Up/Waste Disposal
3. Asphalt Production and Handling
 - Asphalt Plant Operation
 - Gravel Crushing and Washing
 - Oiling of Truck Boxes
 - Clean Up and Disposal of Waste Products
 4. Concrete Handling
 - Operation, maintenance and inspection of Onsite Temporary Concrete Washout Facility
 - Removal of Temporary Concrete Washout Facilities
 - Onsite concrete management
 5. Paving, Resurfacing and Grading
 - Grading
 - Paving and Resurfacing
 - Pavement Marking and Barrier and Guardrail Reinstatement
 6. Barriers and Guardrails
 - Repair, replacement and upgrades of barriers and guardrails
 7. Vegetation Removal
 - Vegetation Removal
 - Grubbing
 - Brushing
 - Disposal of Vegetation Debris
 - Integrated Pest Management
 8. Excavation, Soil Stripping and Overburden Removal
 - Excavation
 - Soil Stripping
 - Topsoil Salvage
 - Excavated Material Storage
 - Excess Material and Waste (overburden removal)
 9. Slope Stabilization, Drilling and Blasting
 - Slope stabilization-scaling, hydraulic hammers
 - Drilling and blasting for Slope Stabilization and Geotechnical Investigations
 10. Soil and Vegetation Restoration
 - Topsoil Replacement
 - Soil Amendments
 - Seedbed Preparation
 - Species Selection
 - Seed Lot Selection
 - Seed Mixture Composition
 - Seeding
 - Alternatives to Seeding
 - Reclamation Standards
 - Reclamation Plot Evaluation
 - Time Limits



10. Drainage Structures
 - Drainage structures
 - Culverts
11. Bridge Maintenance
 - Bridge Cleaning
 - Bridge Repairs Using Treated Wood Products
 - Bridge and Structure Painting
12. Water Withdrawal and Dewatering
 - Water Withdrawal
 - Pump Screens
 - Dewatering

Exceptions

This BMP is not suitable for the following project activities as they would require supplemental assessment and/or mitigations:

- Work that may impact aquatic or terrestrial wildlife habitat connectivity, such as fences or culverts;
- Elongation of culverts; realigning water courses; dredging; or work below the high water mark of a fish bearing water body;
- Bridge projects needing work to occur below the High-Water Mark¹, with permanent alteration to the water course, such as replacement of piers/abutments or permanent installation of structures on the bed of a water body;
- Greater than 10% increase in land use footprint (e.g. gravel pit expansion); and,
- Work which might adversely impact any potential or established Aboriginal and Treaty rights or traditional use².

If the project has the potential to have an adverse effect on the critical habitat of a species at risk (with endangered, threatened, or extirpated status) this BMP does NOT apply. The project will require a separate environmental impact analysis.

If the project has the potential for residual adverse effects on a listed species at risk (including effects to individuals and residence of the individuals) this BMP does NOT apply, the project will require a separate environmental impact analysis.

Note: If there is any uncertainty regarding potential adverse effects to species at risk, consult a member of the [National Office Species Conservation team](#).

¹ High-water Mark is the usual or average level to which a body of water rises at its highest point and remains for a sufficient time so as to leave a mark on the land. (Fisheries and Oceans, 2015). Upper Controlled Water Elevation (UCWE) is used as definition of High-water Mark in managed waterways.

² Parks Canada must engage in additional and separate consultations with Aboriginal groups if there is a possibility of a project adversely affecting established or potential Aboriginal or Treaty rights. This is required to fulfill federal government responsibilities in upholding the honour of the crown. If there is uncertainty regarding the need for Aboriginal consultation with respect to a project, refer the matter to Parks Canada Legal Services for advice. Guidance on consultation may be sought from the [Aboriginal Affairs Secretariat](#) and from the guidance document “[A Handbook for Parks Canada Employees on Consultation with Aboriginal Peoples](#)”.



Approved geographic area of application

This BMP is intended for use in all Parks Canada administered protected heritage places with roadways, highways and parkways.

Components of the environment that may be affected

Potential effects from projects of this type are well understood and predictable. They include:

Water Resources:

- Adverse modifications to surface drainage patterns
- Reduced water quality due to increased erosion, sedimentation, transportation of debris and contamination (i.e. from leaks and accidental spills, etc.)

Soil/Land Resources:

- Change in slopes, landforms, and landscape
- Soil compaction and rutting
- Slope instability, due to increased soil exposure and improper excavation and storage
- Soil contamination

Air quality:

- Decreased ambient air quality (i.e. from dust, equipment emissions, etc.)
- Increased ambient noise levels
- Temporary increased levels of CO₂ and other pollutants
- Temporary increased localized temperatures from paving and equipment operation.

Flora and Fauna:

- Damage to and/or removal of vegetation in immediate or adjacent areas
- Introduction of non-native species populations, or expansion of existing populations
- Wildlife sensory disturbance causing displacement/preferred habitat avoidance
- Wildlife habituation/attraction to artificial food sources
- Impeded/altered wildlife movement
- Damage to nests/disruption of nesting animals
- Mortality from project activities

Cultural Resources:

- Adverse effects on the heritage value or character-defining elements of a cultural resource
- Impacts to archaeological resources (known or potential)



Mitigation Measures

To use the document efficiently, keep the activity mitigation lists that apply to the project expanded and collapse the other activities by clicking on the section titles, print this as a pdf or paper document and include with the EIA determination record. This will reduce the overall size and scope of the mitigations to present to contractors and project managers.

Choose all that apply to project. Each title is hyperlinked to the related section.

Module

1.	Project Design
2.	General Activities
3.	Asphalt Production and Handling
4.	Concrete Handling
5.	Paving, Resurfacing, Grading
6.	Barriers and Guardrails
7.	Vegetation Removal
8.	Excavations, Soil Stripping and Overburden Removal
9.	Slope Stabilization, Drilling and Blasting
10.	Soil and Vegetation Restoration
11.	Drainage Structures
12.	Bridge Maintenance
13.	Water Withdrawal and Dewatering



1. Project Design

When upgrades to infrastructure are planned opportunities to decrease the environmental impacts of long term operation should be considered in the engineering design. Some examples are: directing runoff into vegetated areas rather than directly into surface waters to decrease pollution in surface waters, increasing the span length of bridges during replacements to allow for terrestrial wildlife passage underneath and converting smaller culverts to larger culverts or clear span bridges to allow for better fish passage and less restricted flows.

2. General Activities Mitigations Module

Construction activities involve the use of laydown/staging areas, equipment operations, storage and handling of hazardous materials. Potential adverse effects include: destruction of vegetation, erosion and sedimentation, constriction for wildlife movements and introduction/spread of non-native vegetation.

Work Site Conditions/Staging/Laydown

- 2.1. All employees must attend a briefing with an Impact Assessment Officer (IAO) or Surveillance Officer (SO) before beginning work at the site review and explain the mitigations that are conditions of the project approvals.
- 2.2. An Erosion and Sedimentation Management Plan shall be prepared for the components of the work undertaken in proximity to watercourses, wetlands or riparian environments. If sediment ponds are required, they shall be designed to settle all sediment particles 0.02 mm or larger. The ponds shall also be designed to handle 1:5 year storm events, with overflow spill capacity for 1:10 year storm events and emergency spillway capacity for 1:100 year storm events. All components require regular maintenance to ensure effectiveness.

3. Asphalt Production and Handling Mitigations Module

Asphalt is a common building material for transportation infrastructure. Its production requires the use of gravel, water, and petroleum products, and associated project activities include transportation, storage and handling of these materials. Installation of asphalt plants is common within the larger parks where gravel extraction is undertaken.

Timing of Works

- 3.1. Asphalt works are preferably undertaken during periods of dry weather as this allows easier control of contaminated runoff and sediment.
- 3.2. If the work schedule requires working in the rain, the area of work must be isolated and appropriate sediment controls must be installed to prevent the release of sediment-laden water or any other deleterious substances into surface waters, particularly for surface repair works requiring the application of patching and sealing compounds, tar, asphalt, and chemical surface sealants.



Oiling of Truck Boxes

Trucks for hauling asphalt mixture shall have tight, clean, smooth metal beds that have been sprayed with a minimum amount of thin fuel oil to prevent the mixture from adhering and causing waste asphalt.

- 3.3. Truck boxes may be oiled only when absolutely necessary.
- 3.4. Vehicle covers shall be securely fastened.

4. Concrete Handling Mitigations Module

Concrete is a common construction material used in transportation infrastructure. Its use ensures longevity of the infrastructure and safety for public use. One litre of concrete wash water or leachate in 1000L of water will kill fish. Cement-based products including grouts and concrete are lethal to fish and many other aquatic organisms. Raw product or leachate entering a watercourse will alter water chemistry, making it more basic or alkaline.

Onsite Temporary Concrete Washout Facility

- 4.1. Temporary concrete washout facilities shall be located a minimum of 30m from storm drain inlets, open drainage facilities, and watercourses.
- 4.2. Temporary concrete washout facilities shall be temporary pit or bermed areas constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- 4.3. Straw bales, wood stakes, and sandbag materials can be used to construct temporary containment walls or “barriers”.
- 4.4. Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
- 4.5. The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.
- 4.6. Perform washout of concrete mixer trucks in designated areas only.
- 4.7. Wash concrete from mixer truck chutes into approved concrete washout facility or collect in an impermeable bag for disposal.
- 4.8. Pump excess concrete in concrete pump bin back into concrete mixer truck.
- 4.9. Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed offsite.
- 4.10. Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of per federal and provincial regulations.



Maintenance and Inspection of Temporary Concrete Washout Facilities

- 4.11. Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 100 mm (4 inches) for above grade facilities and 300 mm (12 inches) for below grade facilities.
- 4.12. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition.
- 4.13. Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.
- 4.14. Temporary concrete washout facilities shall be inspected for damage (i.e. tears in PVC liner, missing sand bags, etc.).
- 4.15. Onsite concrete waste storage and disposal procedures should be monitored at least weekly or as directed by the ESO.

Removal of Temporary Concrete Washout Facilities

- 4.16. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and restored.

Onsite Concrete Management

- 4.17. Water contaminated in the placing of cement and curing of concrete shall be contained and removed from the site to an approved disposal facility.
- 4.18. The concrete batching plant must be operated pursuant to applicable dust, air emission, and water quality control regulations.

5. Paving, Resurfacing, Grading

Mitigations Module

Highway surface management activities are undertaken to ensure public safety on Parks Canada Agency highways by maintaining clean, level, and unbroken road surface conditions through activities such as pavement cleaning, patching, application of surface treatments, and pavement crack sealing. Grading is used to address drainage issues, vegetation encroachment, potholes and rough surfaces.

Grading

- 5.1. During grade construction conducted close to any watercourse, water body or wetland ensure materials are not pushed, fall or are eroded into the water or wetlands.
- 5.2. Materials shall be placed at storage sites or on the grade without spillage outside the work limits. Any material inadvertently falling outside the work limits will be removed promptly in a manner that does not damage trees or vegetation.
- 5.3. Retain a 30 metre vegetated buffer around water bodies or install runoff management structures.



- 5.4. Ensure gravel or road bed material is free of weeds and comes from an approved operational gravel source free of other contaminants.

Paving and Resurfacing

- 5.5. Minimize application of seal coats in wet conditions. Attempt to apply only to dry surfaces and not prior to (within 24 hrs.) or during rainfall. If unforeseen rain arrives ensure runoff from recently seal coated surfaces are prevented from entering surface waters.
- 5.6. For asphalt handling and management see the [Asphalt Mitigation Module](#) of the BMP.

6. Vegetation Removal Mitigations Module

Roadside vegetation management activities include mowing, brushing, and landscape maintenance activities undertaken to maintain clear sight lines for highway users, control noxious weeds, facilitate effective drainage, and reduce possible fire hazards. Mature timber may need to be removed for improving road alignments, improving sight lines or replacing or repairing associated infrastructure. Grubbing (stump and root removal) may be required to prepare the ground surface for other activities.

Timing Windows

- 6.1. Vegetation clearing can negatively impact nesting birds and/or bats in spring and summer. Avoid all vegetation removal during this time. If vegetation removal is scheduled to occur within these times a qualified professional biologist/ecologist should further clarify the species presence and timing particular to the work site and any occupied bird nests, eggs, or nests of species protected under the Migratory Bird Convention Act (MBCA). See [appendix on regulatory guidance for further detail on the MBCA and SARA](#).
- 6.2. If a nest is found during the pre-work surveys, the vegetated area will be left intact with a suitable sized buffer of shrubs/trees around it until the young have fledged and left the nest. Size of buffer species dependent, to be determined in consultation with professional biologist or park ecologist.

Vegetation Removal Mitigations

- 6.3. Minimize full removal and retain vegetation when possible to reduce erosion.
- 6.4. Prior to the commencement of any vegetation removal, the worksite must be surveyed for species at risk. If species at risk are found, work must be stopped until site-specific mitigations to address potential adverse effects are developed.
- 6.5. Survey vegetation for non-native species, clear vegetation areas with non-native vegetation in spring and early summer to avoid further spread and development of the non-native seed bank.
- 6.6. Clearing activities shall be avoided during nesting seasons for birds, reptiles and amphibian species in the project area.
- 6.7. If wildlife is observed during work, if possible, give animals the opportunity to escape the work area to the surrounding forest or elsewhere to seek new shelter.



- 6.8. Avoid ground vegetation removal during dry, windy periods to prevent erosion of topsoil and reduction of air quality with dirt/dust.
- 6.9. Retain 30 metre vegetated buffer around water bodies, where disturbance is necessary and unavoidable restoration is required.
- 6.10. Debris will not be deposited in water bodies.
- 6.11. Ensure tree limbs/stumps are flush cut as close to the ground or stem as possible.

Disposal of Vegetation Debris

- 6.12. All vegetation debris must be removed as soon as possible from the right-of-way, either by transporting off-site for disposal or piling and burning on-site.
- 6.13. All vegetation containing non-native species will be piled and burnt or bagged and removed off site to disposal facility.
- 6.14. Store removed vegetation on already disturbed areas to minimize disturbance area.
- 6.15. In appropriate areas re-establish native vegetation where it has been completely removed/damaged.

7. Excavations, Soil Stripping and Overburden Removal Mitigations Module

Construction projects often involve excavations. To successfully complete reclamation of disturbed areas, and protect areas from erosion proper soil handling and backfilling procedures must be followed. Post excavation and stripping soil and vegetation restoration mitigations should be applied. See section of this BMP for [Soil and Vegetation Restoration](#).

Excavation

- 7.1. Materials shall be placed at storage sites or on the grade without spillage outside the working limits. Any material inadvertently falling outside the work limits is to be removed promptly in a manner that does not damage trees or vegetation.
- 7.2. All sediment control measures must be in place before starting work in the vicinity of rivers, water bodies, watercourses, and wetlands.
- 7.3. If cultural resources (eg. archaeological resources) are discovered, immediately cease work, and alert SO.
- 7.4. All trenches or ditches left unattended overnight must be fenced or covered to prevent wildlife entrapment.

Topsoil Salvage

- 7.5. Salvage topsoil at all excavation sites for reclamation purposes.
- 7.6. Usually the upper 15 cm of soil, below the sod layer if present, is considered topsoil, where depths exceed 15cm salvage the entire depth of topsoil.
- 7.7. Remove stumps and woody debris from topsoil, wherever possible.



Excavated Material Storage

- 7.8. Allow space for separate storage of topsoil and spoil; where space is available separate stored topsoil from spoil by at least 1 m. Use appropriate material (e.g., geo-textile) to separate soil components where space is limited.
- 7.9. Topsoil may be stored on hardened surfaces, geo-textile material or directly on undisturbed vegetation. If storage occurs on vegetation, material recovery by hand may be required.
- 7.10. Cover all stockpiled material with heavy-duty plastic or filter cloth to prevent erosion during precipitation events.

8. Soil and Vegetation Restoration Mitigations Module

Almost all projects activities included in this BMP will require some ecological restoration- *the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed*. The restoration plan can be a simple application of the following mitigations and can be at the site or both at the site and in concert with another site designated to offset the permanent impact of a project. For disturbance areas greater than a hectare a restoration plan is required. The restoration works can be often be considered projects in and of themselves. Soil and vegetation restoration must apply the principles of effective, efficient and engaging solutions.

Timing Windows

- 8.1. Develop restoration plan as part of the project scoping and specifications prior to project approvals.
- 8.2. Vegetation restoration is most effective if seeded in the fall, this allows for full scarification of the seed over the winter and adequate moisture available. Spring and early summer will also work, consider using seed that requires shorter scarification times for these applications. Transplants will do best in the spring and summer and will require adequate watering.

Topsoil Replacement

- 8.3. Implement restoration plan for the disturbed area immediately following completion of construction.
- 8.4. Replace topsoil to all areas immediately following fine grading.
- 8.5. Do not compact topsoil.
- 8.6. Where insufficient topsoil is available imported soil may be used as a last resort. Imported topsoil must be certified completely free of non-native seeds and compost developed from sewage treatment plants. Methods of improving vegetation succession using locally sourced, weed and contaminant free materials are preferred.
- 8.7. Where remaining soils are unstable due to steepness or soil characteristics, immediate installation of sod or erosion control blanket is required.



Seeding

- 8.8. Use approved native seed mixes developed for site-specific conditions for various elevations.
- 8.9. Seed and stabilize (e.g. mulch/tackifier) bare areas as soon as possible after disturbance, preferably as soon as a significant area is graded and finished and before the next rain event. If there is a risk of seedling mortality as a result of fall frost stabilize until appropriate growing conditions exist.
- 8.10. Use sod in high traffic areas or places that need extra erosion control. Source sod grown from native species (often called fescue sod) and ensure adequate anchoring and watering is in place.
- 8.11. Use temporary seeding when outside the seeding dates for permanent vegetation
- 8.12. Apply a seed mixture which is appropriate for the climate, soil, and drainage conditions of the site.
- 8.13. Apply seed at a rate appropriate to the seed mixture, seeding method and existing vegetation conditions.
- 8.14. Conduct broadcast seeding under calm wind conditions. Hydro-seeding is acceptable where access is available.
- 8.15. Do not exceed 30 kg/ha for the broadcast method, ensure seed is integrated with the soil by light rake or harrow. Broadcast method seeding rate is 25 kg/ha (2.5g/m²) (e.g., 1x25 kg bag will cover 10,000m² or 1 hectare).
- 8.16. For hydro-seeding do not exceed 75 kg/ha with light mulch rates (500 kg/ha- of mulch with hydro-seeding) and 150 kg/ha with heavy mulch rates (1500 kg/ha of mulch with hydro-seeding).
- 8.17. Do not increase the seeding rate to compensate for poor seedbed conditions.
- 8.18. Monitor temporary erosion control measures to prevent seed loss.
- 8.19. Some seeding procedures may have to be completed or repeated in subsequent years.

9. Drainage Structures Mitigations Module

Drainage structures on roadway, highway and parkways are structures such as culverts, ditches and drains. Drainage structure management activities are undertaken to ensure that surfaces are safe and efficiently drained, water is efficiently channeled to ditches and watercourses, and erosion of highways and adjacent properties is prevented. These mitigations include the cleaning and maintenance of drainage structures and related hardware, as well as the repair or replacement of existing and installation of new drainage structures.

Drainage Structures

- 9.1. Isolate your work area from any flowing water that may be present. Ensure any flows are temporarily diverted around the portion of the ditch or watercourse where you are working.
- 9.2. Select appropriate equipment and work access routes to reduce damage to riparian vegetation and watercourse banks when using earth-moving equipment.
- 9.3. For smaller scale debris and sediment removal activities, remove materials by hand.



- 9.4. Maintain effective sediment and erosion control measures until complete re-vegetation of disturbed areas is achieved.

10. Water Withdrawal and Dewatering Mitigations Module

Construction often requires the use of water, many common methods of excavation and site isolation require dewatering. Temporary, short term water withdrawal provides an efficient uncontaminated water source for local project sites. Dewatering can allow sites to be effectively dry during construction, reducing the impact of sediment laden water entering fish bearing waters.

Dewatering

- 10.1. A site specific dewatering plan is required be provided before commencing a pump-out sump to dewater excavation sites with specific details on how and where the water will be discharge.
- 10.2. Site specific mitigations may be required depending on the conditions of the discharge area, freezing conditions operation, overflow avoidance, decanting and settlement pond reclamation.
- 10.3. Water containing suspended materials shall not be pumped into watercourses, drainage systems or on to land, except with the permission of the SO.
- 10.4. Soil and vegetation erosion protection is required for water pumped on to land.



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Appendix 1 Regulatory Guidance

Jurisdictions

While all projects on lands managed by Parks Canada must adhere to Federal law and regulation, it is considered best practice to refer to local community, regional, provincial regulation and best practices where federal guidance is silent and/or attempt to meet those targets if it can reduce the overall impact of the project.

Some of the project activities reviewed have potential environmental impacts that are addressed by various provincial, federal and territorial acts and regulations. All activities must meet current environmental law and regulations in their design and construction. The following is a brief description of some of the key federal acts and regulations. Further review, understanding and application of other federal, provincial and territorial environmental laws are part of a rigorous approach to project planning and execution.

Canada National Parks Act and Regulations-Parks Canada

All work inside National Parks and Protected Areas must be performed in accordance with the laws and regulations set out in the *Canada National Parks Act* and Regulations. This includes the requirement for most activities described to only be done under a permit such as: business licence for contractor, disturbance of natural objects, travel in restricted areas, special events or use of disposal sites.

Fisheries Act - Fisheries and Oceans Canada

If a project is to be conducted near water, it is the proponent's responsibility to ensure they avoid causing [serious harm to fish](#) in compliance with the [Fisheries Act](#). The [advice in on the Fisheries and Oceans website](#) will help a proponent avoid causing harm and comply with the Act.

If the water body in the project area has fish or is connected to waters at any time that have fish the project must meet the [self assessment criteria on the Fisheries and Oceans website](#), if not a project review can be made by Fisheries and Oceans Canada to assess whether the project requires authorization or authorization can be requested directly. Given the level of detail required for a review and/or authorization request the EIA officer may need to consider a more involved EIA pathway in those circumstances.

Migratory Bird Convention Act - Environment Canada

The purpose of this Act is to implement the Convention by protecting and conserving migratory birds - as populations and individual birds - and their nests. Section 6 - prohibits the disturbance, destruction, or taking of a nest, egg, or nest shelter of a migratory bird.

In Canada, the general nesting period may start as early as mid-March and may extend until end of August. This is a general nesting period that covers most federally protected migratory bird species. This period varies regionally across Canada mainly due to differences in species



assemblages, climate, elevation and habitat type. Generally, the nesting period is delayed in more northerly latitudes, corresponding to vegetation development and food availability. (Environment Canada, 2014). To help with determining regionally relevant periods where nesting is likely to occur, Environment Canada is publishing estimated regional nesting periods within large geographical areas across Canada referred as "nesting zones". These periods are estimated for each zone and consider the time of first egg-laying until the young have naturally left the vicinity of the nest. Field Units may wish to refine this section and add their known local nesting periods.

Species at Risk Act

If a species listed under the *Species at Risk Act* (SARA) is found within the project area, any potential adverse effects from the proposed project to the individuals of the species, their residences and/or their critical habitat must be understood. Species at risk considerations require specific expertise, due to additional legal requirements under the SARA and CEAA 2012. If the projects or activities to be addressed by the BMP could affect a listed species or its critical habitat, the EIA officer may need to consider a more involved EIA pathway in those circumstances.