



Preapproved Routine Impact Assessment Prefabricated Structures

Parks Canada National Office
IAA 2019

Preapproved Routine Impact Assessments (PRIA) are pre-determined environmental management and mitigation measures for a defined class of routine, repetitive projects or activities with well understood and predictable effects. Approved PRIAs are an acceptable Impact Assessment pathway as they fulfill Parks Canada's obligations as a manager of federal lands under the *Impact Assessment Act* (IAA).

This PRIA applies to the installation, maintenance, repair or replacement of prefabricated structures.

The creation of new site access routes or trails in order to install the prefabricated structure is not included in this PRIA. Construction or the process of using raw materials (e.g., sawing lumber) to build a structure from scratch at the installation site, is not considered to be installation. Complicated installation involving major excavation or increasing footprint in a fish-bearing waterbody such as culvert installation are not included in this PRIA.

Prefabricated structures have been fabricated off-site and transported to an area for installation. Examples include, but are not limited to, interpretive media (e.g., exhibits, panels, artwork), information and orientation signs, roadside/trail information signs, picnic tables, benches, fire pits, bear-proof garbage containers and food lockers, floating docks, floating moorings, automated park pass machines, play structures, activity station or prefabricated vault privies.

Prefabricated vault privies are latrines that have been assembled off-site and do not require the connection of plumbing to operate.

Conservation mooring systems (or eco-mooring system) have been developed to replace traditional moorings and substantially reduce or eliminate the impact on sensitive resources when the chain moves across the bottom. A typical conservation mooring consists of a helical screw anchor, elastic rode, a mid-water column buoyant float to keep all parts off the bottom and a surface float with moorage attachment point.

Water body includes a lake, a canal, a reservoir, an ocean, a river and its tributaries and a wetland, up to the annual high water mark, but does not include sewage or waste treatment lagoon, a mine tailings pond, an artificial irrigation pond, a dugout or a ditch that does not contain fish habitat as defined in subsection 2(1) of the *Fisheries Act*.

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 Canada, 2015). Upper Controlled Water Elevation (UCWE) is used as the definition of high water mark in managed waterways.

Scope of Application:

This PRIA includes:

- Installation, maintenance, repair or replacement of prefabricated structures and associated bases.

Conditions and Exceptions:

This PRIA does not apply under the following exceptions/conditions:

Location:

- When the project results in residual adverse effects to sensitive natural or cultural resources (e.g., nests, dens and roosts, fish spawning area, eelgrass bed, cultural resources, riparian areas, wildlife corridors, rare ecotypes, or areas of management concern).
- Installation of prefabricated vault privies within 50 meters of any wetland or watercourse.

Prefabricated structure:

- Installation of structures that would require a large amount of pouring/curing concrete or major excavation.
- Creation of new site access routes or trails.
- Installation of non-floating prefabricated structures that would increase the footprint on the bed of a fish-bearing waterbody.

General:

- The project permanently alters the characteristics of a water body (e.g., temperature, pH, turbidity, flow, water level, water body bed).
 - This includes, permanent fill placed in a water body or permanently increasing a physical work's footprint below the high water mark; dredging; and construction of a permanent diversion channel.
- The project results in **residual** adverse effects on migratory birds or their nests.
 - Refer to the draft- *Parks Canada Guidance on Reducing Risk to Migratory Birds* and associated draft- *Conservation Measures for Minimizing Impacts to Migratory Birds During the Nesting Period*.
- The project results in **residual** adverse effects on an individual, a residence or the critical habitat of a listed species at risk under the *Species at Risk Act*.
 - Determine if mitigations are needed to ensure no residual adverse effects to species at risk. Such mitigations should be included in the Supplementary Mitigations section.
- The project is likely to require an [approval](#) under the *Canadian Navigable Waters Act* (s. 5(1)). Check if your project is a Major Works in any Navigable Water or Works in Navigable Waters Listed on the [Schedule](#).
- The project is likely to require an [authorization](#) under the *Fisheries Act* (s.35(1) or 36(3)). Check if your projects needs a [review](#).
- The project involves the removal of or causes damage to cultural resources of heritage value, for example, heritage buildings designated by the Federal Heritage Buildings Review Office, archaeological sites, historical and archaeological objects, or cultural landscapes.
- The project involves the removal of or causes damage to paleontological resources.
- The project results in loss or reduction in size of a wetland.
- The project adversely impacts sites of significance to Indigenous peoples or current access and use of areas where hunting, fishing or gathering rights are exercised by Indigenous peoples

Other Considerations:

Use of the PRIA may not be appropriate in circumstances such as:

- The prefabricated structure is installed in a natural, previously undeveloped area that can attract visitors (e.g. picnic tables, Red Chairs) and create a new disturbance footprint.

Approved Geographic Area of Application:

This PRIA may be used within all Parks Canada administered protected heritage places, including national historic sites and canals.

Parks Canada Specialists:

Impact Assessment:

If there are any questions on how to apply this PRIA, consult a member of the Impact Assessment Team.

Species at Risk:

If there is any uncertainty regarding potential adverse effects to species at risk, consult a member of the Species Conservation Team.

Environmental Management:

If there are questions on environmental management issues (e.g., treated wood, contaminated sites, hazardous materials or greening operations), consult a member of the Environmental Management Team.

Cultural Resources:

If there is any uncertainty regarding potential adverse effects to known or potential cultural resources, consult a member of the Cultural Resource Management Protection Team, or, if applicable, the local Field Unit specialist.

Valued Components and Effects Analysis

Soil/Land Resources

- Soil contamination from hazardous materials (e.g., construction waste, fuel)
- Soil compaction and rutting
- Soil erosion, loss of topsoil and exposure of subsoils

Water Quality and Fish Habitat

- Reduced water quality due to increased erosion, sedimentation, transport of debris and contamination (e.g., from leaks and accidental spills)
- Contamination from concrete, leaching of paints or treated wood
- Contamination from a broken or un-tie floating prefabricated structure
- Introduction of fine sediments in a waterbody can have severe negative impacts on all life stages of fish and other aquatic life and their habitats

Wildlife and Vegetation

- Wildlife sensory disturbance causing displacement/habitat avoidance
- Wildlife habituation/attraction to artificial food sources
- Loss or fragmentation of habitat where development occurs in or adjacent to previously undisturbed areas (including nesting, roosting, feeding and resting areas)
- Disturbance or damage to nests, roosts and/or dens and disruption of nesting, roosting and/or denning animals
- Introduction of or spread of non-native and invasive plant species
- Damage to and removal of vegetation, disturbance of adjacent natural areas, root exposure and physiological distress

Cultural Resources

- Adverse effects to the heritage value or character defining elements of a cultural resource or a heritage place, including:
 - Impacts to archaeological resources (known or potential) from displacement or destruction, resulting in loss of heritage value
 - Impacts to cultural landscapes, buildings, objects, engineering works

Visitor Experience and Safety

- Visual impacts and landscape changes (noticeable cut/modified vegetation or prefabricated structure itself may be visually unappealing to visitors)

- Odor from privies
- Reduced quality of visitor experience due to noise and presence of equipment
- Reduced accessibility to portions of the site where work is taking place
- Hazard to visitors and staff due to construction activities
- Damage to buried utilities and disruption of service

Mitigation Measures

Pre-Project Planning:

- 1) Clearly identify and avoid sensitive environmental features and habitats in the work area and schedule work to avoid critical wildlife life stages. If useful, complete the Environmental Timing Windows Table.
- 2) Schedule operations to avoid wet, windy and rainy periods or very dry periods that may increase erosion and sedimentation.
- 3) Work within the vicinity of waterbodies or wetlands may require a site specific Erosion and Sediment Control Plan.
- 4) All work and activities will comply with Fisheries and Oceans Canada [measures](#) to protect fish and fish habitat and will not release deleterious substances into a waterbody.
- 5) Work with a Cultural Resource Management (CRM) Advisor and CRM specialists (archaeologists, historians, and built heritage advisors) to assess the impact of intervention to cultural resources and identify necessary mitigation measures.
- 6) Select locations that minimize need for vegetation removal, such as in existing impacted areas and close to existing roads/trails.
- 7) Location of prefabricated privies should provide safe access to and from the site by a vacuum truck or pump out truck or helicopter fly-out.
- 8) Prefabricated privies should be located downwind from visitor attractions and a minimum of 50 m from any water source. See Parks Canada Human Waste Management Planning Guide.
- 9) The use of treated wood is subject to restrictions depending on the preservative selected, the type of use and the receiving environment. It must be handled, installed, and disposed of according to current guidance prepared by Parks Canada.
- 10) Prefabricated floating structures should avoid polystyrene buoyancy billets, they are friable and deposit plastic particles into the receiving environment. If used, polystyrene floats must be fully enclosed in a protective coating to prevent breakdown of the material during use, seasonal removal, and reinstallation.
- 11) A Spill Response Plan should be developed prior to work starting.

Example: Environmental Timing Windows (to be deleted or adapted)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fish	AVOID INSTREAM WORK					Least risk window for work in and around freshwater, June 15 – Sept 15				AVOID INSTREAM WORK		
Birds	Reduced risk for harm to birds			AVOID VEGETATION REMOVAL Bird Nesting Period: April - Mid August				Reduced risk for harm to birds				
Bats	Bat in Hibernacula				Bats Nursing Pups						Bat in Hibernacula	
Turtles	Hibernation		Road Mortality	Nesting -avoid disturbance		Road Mortality		Hatchlings – avoid disturbing	Road Mortality	Hibernation		
Snakes	Avoid disturbance of Hibernacula			Road Mortality		Peak : breeding, live young Mitigate road mortality			Migration Road mortality	Avoid disturbance of Hibernacula		

Work Site Preparation/Staging/Laydown:

- 12) People working on the project/activities must review the mitigation measures and any site specific considerations with designated Parks Canada staff before work begins.
- 13) Clearly mark the work site and restricted areas with stakes, biodegradable flagging tape or other means to minimize the disturbance footprint; remove when the project is completed.
- 14) Staging areas, material/equipment drop sites, and parking areas must be identified, including duration of use, within an existing disturbed footprint (e.g., roadway, gravel surface, previously disturbed area with high resiliency) or approved by designated Parks Canada staff.
- 15) Use existing roadways, trails, disturbed areas or other areas as approved by designated Parks Canada staff for site access, travel within the site and construction activities.
- 16) Locate buried utilities before digging near roads or serviced infrastructure.

Wildlife:

- 17) When possible, conduct any clearing of vegetation outside critical wildlife timing windows such as bird nesting period and bat maternity season.
- 18) On-site workers must receive any required wildlife awareness training, according to field unit policy.
- 19) On-site workers must be made aware of and subsequently report any incidental sightings of species at risk immediately to designated Parks Canada staff.
- 20) If active nests, dens or roosts are discovered, stop work and contact designated Parks Canada staff immediately for direction.
- 21) When possible, conduct activities during daylight hours, avoiding critical foraging times (dusk and dawn). Consult with Parks Canada staff for site-specific advice.
- 22) Never approach or harass wildlife (e.g., feeding, baiting, luring). If wildlife is observed at or near the work site, allow the animal(s) the opportunity to leave the work area.
- 23) Designated Parks Canada staff must be alerted immediately to any potential wildlife conflict (e.g., aggressive behaviour, persistent intrusion), distress or mortality.

Vegetation:

- 24) Clear minimum area necessary; trees should be removed only if necessary for project completion or visitor/staff safety and vegetation must not be trimmed more than necessary.
- 25) When felling trees, precautions must be taken to minimize damage to surrounding vegetation.

- 26) Employ pruning techniques to minimize risk of tearing the bark and harming the tree; ensure that only branch tissue is removed and stem or trunk tissue is left undamaged (refer to Appendix 1)
- 27) Retain a 15-30 meter vegetated buffer, from the high water mark of waterbodies. In sloped areas, buffers should increase in width as the slope increases.
- 28) Removal of riparian vegetation should be kept to a minimum and undertaken only when absolutely required. Ensure the root structure and stability are maintained.
- 29) Protect roots of trees to drip line to prevent disturbance or damage. Avoid traffic, dumping and storage of materials over root zone.
- 30) Where re-vegetation is required, use native plants/soils/seed mix approved by Parks Canada staff.

Water Quality and Fish Habitat:

- 31) Ensure moorings and floating docks (including anchors and floats) are made of clean, inert material.
- 32) Do not use rubber tires as floatation system components for floating dock sections as they are known to release extracts toxic to fish and aquatic invertebrates.
- 33) Ensure plastic barrel floats are free of any chemicals inside and outside before they are placed in water.
- 34) Remove derelict or unused floats, lines, chains or cables and dispose of in accordance with appropriate legislation and standards.
- 35) Remove existing floating prefabricated structures in a manner that prevents foreshore disturbance and/or sediment generation. Remove debris by hand, where possible.
- 36) Space elevated floating decks and walkways to allow light penetration to the foreshore.
- 37) Decking on floating docks, floats, piers and gangways should use open grid material to allow light infiltration to the water column. This can be accomplished through spacing of deck materials, or by using porous deck materials which allows minimum of 40% of light to pass through the floating structure and enter the water column.
- 38) Locate moorings floating docks in depths that allow structures and vessels to remain afloat at the lowest possible water levels and prevent propellers from disturbing bottom sediments.
- 39) Select mooring anchors of an adequate size to secure vessels or structures and prevent the anchor from shifting or dragging along the bottom.
- 40) Size the length of mooring lines, chains or cables to avoid excess line, chain or cable accumulation on the bed of the waterbody.
- 41) Do not install or replace traditional mooring in sensitive substrate areas. Traditional mooring buoys consist of an anchor (mushroom anchor or large block of concrete or similar material), a length of chain, connecting chain tackle, buoyant rope or light chain and a surface float
- 42) Install conservation moorings at priority anchorage sites to protect vulnerable species or habitat and minimize anchor activities in sensitive areas.

Invasive Alien Species:

- 43) All construction equipment from outside the site must be washed outside the site prior to arrival to minimize risk of introducing invasive weed species. Proof that this mitigation was applied may be requested before equipment is permitted into the protected heritage place.
- 44) If invasive species are a serious issue, consider more effective cleaning methods such as pump and high pressure hose or high pressure water unit.
- 45) Work in uninfested sites before moving to infested sites.
- 46) Minimize ground disturbance, vegetation removal and bare soil exposure and stabilize and re-vegetate disturbed areas as soon as possible.

Cultural Resources:

- 47) The designated Parks Canada staff should ensure that on-site workers receive appropriate cultural resource awareness training.
- 48) Avoid known and potential cultural resources and archaeological sites.

- 49) Apply additional mitigation measures (in supplementary mitigation section) that may have been previously identified by a Parks Canada archaeologist or cultural resource advisor for the immediate area of work.
- 50) If cultural resources (i.e., structural remains and/or artifact concentrations) are encountered, work must cease in the immediate area, the site secured and the designated Parks Canada staff contacted for further direction.

Visitor Experience and Safety:

- 51) Close and mark the work site and safety hazard with appropriate signage while active construction, repair or maintenance is underway; consider temporary detours or reroutes as appropriate.
- 52) If closing the area is not possible, maintain a safe working distance between work activities and visitors.
- 53) Visitor access trails and roads outside the construction area must be free of construction materials, waste, machinery and equipment.

Equipment Operations:

- 54) Use low pressure or rubber tracked equipment or access matting where feasible to minimize soil compaction and ground disturbance.
- 55) Select equipment appropriate to the nature of work being conducted (e.g., avoid using large scale machinery when hand tools or smaller scale machinery could be used).
- 56) Heavy equipment operating on paved surfaces should be equipped with street pads; damage to paved surfaces must be restored to original conditions.
- 57) Equipment must be properly tuned, clean and free of contaminants, in good operating order, free of leaks (e.g., fuel, oil or grease), and fitted with standard air emission control devices and spark arrestors prior to arrival on site.
- 58) Machinery must be stored, maintained and refuelled on a flat surface, outside the dripline of trees (the area defined by the outermost circumference of a tree canopy where water drips from and onto the ground) and a minimum of 30m from waterbodies, as measured from the high water mark. Increase the buffer zone depending on the level of risk and site-specific conditions.
- 59) Refuelling must take place on an impermeable fuel mat with a berm or within a container. Leaks and spills during refuelling must be cleaned up and contaminated materials must be disposed of appropriately. Fuel must never be spilled or deposited into the environment or any water body.
- 60) Any required cleaning of tools and equipment should be done off-site. If it must be on-site, it must be in an appropriate area at least 30m from a waterbody.
- 61) Gas generators must be secured to prevent movement during the operation and set up on an impermeable fuel mat with a berm or within a container that can contain 110% of the volume of fuel in the generator.

In-water Equipment Operations:

- 62) Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the waterbody.
- 63) Boats, all materials and equipment with potential to come in contact with waterbodies, must be cleaned and inspected for aquatic invasive alien species (e.g., zebra mussels) before and following work. Proof this mitigation was applied may be requested before equipment is permitted into the protected heritage place.
- 64) If invasive species or parasitic disease (e.g., whirling disease) are a serious problem, consider more effective cleaning methods such as “Direction for permitted users conducting water-related activities in Banff National Park” for whirling disease.
- 65) Debris shall not enter waterbodies and must be retrieved to the extent possible if it does.
- 66) If a barge is used, minimize disturbance to the foreshore from the spuds and prop scour and ensure sufficient water is present to prevent the barge from grounding, be aware of the potential of submerged cultural resources.

Erosion and Sediment Control:

- 67) Select erosion and sediment control measures that correspond with the nature and duration of the project and install before starting work, especially within 30 meters of a waterbody.
- 68) Regularly inspect and maintain erosion and sediment control structures during all phases of the project and alter measures when necessary.
- 69) Use erosion and sediment control products that reduce potential for wildlife entanglement and are made of 100% biodegradable materials (e.g., jute, sisal or coir fibre) when possible. Ensure backing materials are also biodegradable. Use of hay or straw in erosion and sediment control must be approved by designated Parks Canada staff.
- 70) Limit duration of soil exposure; phase activities whenever possible and restore disturbed areas as soon as possible.
- 71) Contain and stabilize waste material above the high water mark or top of bank of nearby waterbodies and ensuring sediment re-entry to the watercourse is prevented.
- 72) Stockpiled material must not be permitted to damage or bury known cultural resources.
- 73) Reuse excavated material on site, unless there are any indicators of potential contamination.
- 74) Excavations must be drained (but not directly into a waterbody), backfilled and compacted as soon as possible.
- 75) Under thawed conditions, backfill material will be compacted prior to topsoil replacement; distribute topsoil evenly over the excavated area.
- 76) Under frozen ground conditions, material will be sufficiently spread over the excavated site to allow for a settlement under thawed conditions. Where practical, topsoil replacement will be postponed until the backfill has thawed, settled and dried out.
- 77) Maintain effective sediment and erosion control measures until any required re-vegetation of disturbed areas is achieved.
- 78) Remove temporary erosion and sediment control products, especially non-biodegradable materials, when they are no longer required.

Site Clean-up and Waste Management:

- 79) All wildlife attractants must be secured (e.g., petroleum products, human food, recyclable drink containers and garbage) in wildlife-proof containers, a secure building or vehicle. When possible, keep food waste separate from construction waste and remove daily.
- 80) Secure all waste materials (e.g., construction waste and materials, excavation, vegetation) above the high water mark of nearby waterbodies to prevent entry.
- 81) Contain wastes and transport to an approved waste landfill site outside the Parks Canada site unless otherwise directed; cover waste loads during transportation.
- 82) Dispose of contaminated materials at provincially or territorially certified disposal sites outside of Parks Canada site.
- 83) All construction materials must be removed from the site on project completion. Burning is not permitted unless approved by Parks Canada.
- 84) Concrete mixing activities must take place over tarps and a minimum of 30 meters from waterbodies. Fresh, wet, uncured concrete and concrete dust must not come into contact with waterbodies. Secondary containment measures such as collection/drip trays and berms lined with air and water-tight material such as plastic and a layer of sand, and double-lined fuel tanks are required.
- 85) Excess concrete must be disposed of at an appropriate facility outside of the Parks Canada protected heritage place. If excess concrete from pump trucks must be dumped prior to transport outside the protected heritage place, it must be deposited in a location approved by Parks Canada and removed following hardening for disposal at an approved facility.
- 86) If present, portable sanitary facilities must be serviced on a regular basis and accumulated waste disposed of at a sanitary waste disposal facility. The portable facilities must have sufficient capacity and be managed to ensure waste is not discharged to the receiving environment.

Spill Response Plans and Hazardous Material Management:

- 87) Ensure that all on-site workers receive a briefing about the Spill Response Plan and are aware of the location and use of spill kits and containment devices.
- 88) Follow all applicable regulations and codes for the management and handling of hazardous waste.
- 89) Spill containment equipment must be present on-site. A spill contingency response kit including sorbent material and berms to contain 110% of the largest possible spill related to the work must be available on site at each location of potential spills (sites where equipment is working and at refuelling, lubrication, and repair locations).
- 90) All spills must be contained and cleaned-up as soon as it is possible to safely do so. In the event of a major spill, all other work must stop until the spill has been adequately contained and cleaned up.
- 91) Notify the designated Parks Canada staff and the emergency contact immediately of any spill. In the event of a major spill, call the first contact authority.
- 92) Any material thought to pose a risk of contamination to soils, surface water or groundwater should be disposed of appropriately off-site according to applicable laws, policies and regulations and in consultation with the Environmental Management Team.
- 93) Petrochemical products, paints and chemicals must be used and stored in such a way as to prevent any deleterious substances from entering the water.
- 94) If hazardous waste or potentially contaminated material is uncovered during excavation / construction, work must stop and excavated materials must be secured onsite in a manner that prevents contamination of the surrounding environment, including leaching. The designated Parks Canada staff must be contacted for further direction.

Supplementary Mitigations:

- 95) A few supplementary mitigation(s) may be required to ensure all potential impacts are mitigated.

Approvals

Original signed by Julie Tompa

Dec 13, 2019

Julia Tompa
Director, Natural Resource Management Branch

Date

Original signed by Calvin Mercer

Dec 09, 2019

Kalvin Mercer
Director, Asset Management and Project Delivery
Branch

Date

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