

Addition of a line of floating pontoons and riprap to breakwater 301 at Grosse-Île harbour, Magdalen Islands

Mitigation measures
Air quality
Use heavy machinery and equipment that is well maintained and in good working order.
Inspect machinery regularly to ensure proper operation, and maintain in accordance with recommended use.
Whenever possible, turn off the engines of gasoline-powered vehicles and equipment when not in use.
Prohibit the burning of waste in or near the work area at all times.
Recover and dispose of cutting debris and residues (sawdust) in accordance with regulations in effect for this type of material.
Cover piles of fine or other materials with a tarpaulin to prevent wind dispersion.
Surface water quality
No debris from the demolition of infrastructure will be thrown into the water. Any floating debris from the work must be recovered immediately. In addition, debris must be stored more than 30 m from the water, and in such a way that it cannot be carried by the wind;
Avoid any sudden movement of machinery when working in an aquatic environment, to avoid clouds of suspended solids (SS);
Workers must be made aware of the need to avoid unnecessarily suspending sediments in the bed of the water environment during work by making sudden movements or levelling the bottom by pivoting the bucket/machinery;
During dredging, if a large cloud of turbidity is dispersed outside the work area, slow down dredging activities or space out dredging periods;
Keep machinery out of the water.
Mark out and limit to the strict minimum the circulation of machinery in the event that it has to pass below the level of high water of large tide (HWMT) when the area is exposed;
Store excavated material outside the level of high water at high tide. If required, contain or stabilize these materials (e.g., impermeable blanket, sediment barrier) to prevent sediment from entering the aquatic environment through leaching or wind transport.
Cease activities when weather conditions deteriorate (high winds, storms) to prevent dispersal or suspension of materials outside the work area;
Place stones and/or materials on the seabed, or as close to the seabed as possible, rather than dropping them from the surface, to limit further encroachment and sediment suspension;
If work is to be carried out below the level of the PMSGM, to do so when the work area is under water, and to stabilize the site before the tide returns;
Use dredging equipment that minimizes sediment resuspension.
In the case of mechanical dredging, choose a cycle time that reduces the upward speed of the loaded excavator through the water column.
Machinery must not be stored within 30 m of the shoreline or a watercourse, nor must it travel over waterbeds;
Vehicle maintenance, refuelling and the storage of fuel or other hazardous materials must, wherever possible, take place at least 30 m from the shore. If this distance cannot be respected, containment measures will have to be applied;
Keep machinery clean and free of leaks;

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Cleaning, maintenance and refuelling of machinery, as well as storage of hydrocarbons and other products, must be carried out more than 30 m from the watercourse to prevent the introduction of harmful substances into the water;

Use biodegradable lubricating oil for machinery components that will be in contact with surface water;

Stones imported to the site and placed must be clean (i.e. uncontaminated) when they arrive on site. In addition, stones must come from authorized quarries;

Do not discharge any debris into the aquatic environment. All accidentally introduced debris must be removed as quickly as possible;

Whenever possible, locate the storage area at least 30 m from environmentally sensitive areas and watercourses, and at least 3 m from drainage ditches. Choose a flat site or one with a slope of less than 10%.

Use of wood treated with CCA (chromated copper arsenate)

Require CCA-treated wood to have undergone a chromotropic acid test to ensure that the product has set properly;

Require treated wood to be delivered under canvas;

Inspect treated wood for surface deposits and dryness at time of construction. Do not use non-compliant material;

Size and prefabricate wood parts to desired specifications before pressure treatment;

Consider incorporating a water repellent when treating wood with a water-based agent;

Examine with the supplier the possibility, for CCA-treated wood, of carrying out an industrial immersion period in a tank for 24 or 48 hours, to eliminate surpluses and avoid the major releases that occur at the start of water placement;

Wood treatments must not be applied in situ. In the case of finishing adjustments that can only be made on site, wood treatments should not be applied in situ when the wood is in direct contact with the water. Give preference to periods of low water, low tide and no precipitation;

Recover and dispose of debris and sawdust according to the regulations in force for this type of material. If these materials are temporarily stored on site, they should be placed between tarpaulins or in a watertight container.

Soil and sediment quality

Select a storage site, where appropriate, based on the characteristics of the surrounding environment (accessibility, size of site, distance from sensitive areas, etc.);

Whenever possible, locate the storage area at least 30 m from environmentally sensitive areas and watercourses, and at least 3 m from drainage ditches. Choose a flat site or one with a slope of less than 10%;

If necessary, manage dredged and excavated material in accordance with the analytical results obtained and the MELCCFP's Guide d'intervention - Protection des sols et réhabilitation des terrains contaminés;

If materials are released during loading and transportation, they must be recovered and the area cleaned up.

Benthic and ichthyological fauna

For excavated material stored or work carried out above the PMSGM, implement effective measures to limit the input of fine particles or sediment from the worksite into the aquatic environment, and ensure their maintenance (e.g., sediment barrier, berms, sediment trap, sedimentation basin, temporary slope stabilization, water detour to vegetated areas). Measures must remain effective during temporary closure of the worksite and during periods of flooding or heavy rainfall;

Use clean materials (stones), free of fines and contaminants to build breakwaters;

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Design and stabilize temporary structures, where applicable, to withstand environmental conditions (e.g. tides, waves) that may arise during the construction period;

After the work, restore the shoreline affected by the temporary structures to its original state, respecting the original beach profile, elevation and granulometry.

Design the stabilization using riprap to limit the end effect. To achieve this, stabilization must gradually follow the natural profile of existing slopes on either side of the structure.

Species at risk

If an endangered cetacean (blue whale, fin whale or right whale), great white shark or leatherback turtle is observed within 200 m of the aquatic work area, stop work and wait for the animal to move more than 200 m away;

Avoid carrying out work associated with the breakwater during the nesting period of the piping plover, a protected species, i.e. between April 15 and August 25;

If work cannot be carried out outside the piping plover nesting period, apply the following measures:

- Ensure that workers are informed of the presence of piping plovers in the vicinity of the work and on the beaches on either side of the harbour, and ;
- Develop a management plan that includes appropriate preventive measures to reduce the risk of impact on the species (e.g., conduct a nesting inventory beforehand);
- Ensure that access to the beach is secure and that workers and machinery remain within the work zone.

Invasive species

Ensure that work equipment and machinery are clean and free of invasive species as soon as they arrive on site, and maintain them in this condition thereafter.

For equipment that has been cleaned and stored on land just prior to work being carried out, the contractor is only required to provide, in writing, to the Ministry representative:

1. A list of such equipment

2. The storage location

3. Planned launch date.

4. The Ministry's representative must be able to verify that the equipment was clean and stored on land before the work was carried out.

For equipment already in the water, the contractor must demonstrate that the floating equipment is free of invasive species before mobilization to the work site.

The contractor must provide a written inspection report, immediately prior to mobilization to the work site, certifying that the equipment is free of invasive species.

The release of aquatic invasive species found on equipment, machinery or artificial structures is prohibited.

Waste management

Provide facilities to receive residual and recyclable materials.

Dispose of non-recyclable and recyclable waste separately.

Ensure that no waste is left on site.

Dispose of all waste and residual materials in accordance with current regulations, and ensure that no residual materials are burned, buried or submerged on site.

Accidents and malfunctions

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It is forbidden to discharge hydrocarbons, solvents, thinners or any dangerous substances into waterways, storm drains or sanitary sewers.
No discharge of hazardous materials (oils, waste water, etc.) into water will be tolerated. They must be disposed of in accordance with current regulations so as not to harm the environment.
Ensure that all hazardous materials destined for disposal are managed in compliance with current regulations (wood preservatives, empty containers, sawdust and wood residues, soiled soils, etc.).
The contractor must ensure that machinery is in good working order (trucks and any other machinery used) and well maintained, to avoid oil, grease and fuel leaks.
The contractor must identify the risks of spills of toxic substances that will be used or stored during the work. He must provide for prevention and safety measures, as well as an emergency plan in the event of a spill.
Petroleum hydrocarbons must be handled with care, stored carefully (at least 30 metres from the shore) and disposed of in accordance with current regulations to prevent accidental spills into the water or onto the ground.
Vehicle maintenance, refuelling and the storage of fuel or other hazardous materials must be carried out, wherever possible, at a minimum distance of 30 metres from the shore. If this distance cannot be respected, containment measures must be applied.
The contractor must have an easily accessible emergency spill kit on site at all times.
In the event of equipment breakdown / accidental spillage, appropriate emergency measures will be applied to control the situation and, if necessary, the breakdown will be repaired immediately. The area affected and contaminated by toxic substances will be contained, cleaned and the contaminated material removed and transported to an authorized site via a specialized firm.
The incident must be reported immediately to the Environment Canada emergency line at 1-866-283-2333, to the Coast Guard alert network at 1-800-363-4735 and to the site supervisor.
Hydrocarbons must be recovered and contaminated soil disposed of in accordance with current regulations. The numbers must be communicated to the contractor in charge of the work and posted on the site.
Accidental spills must be reported to the MPO-PPB representative as soon as possible.
Should an accidental spill occur, contaminated soil or backfill material must : <ul style="list-style-type: none">- be placed in piles on watertight cloths and covered with watertight cloths.- be sampled according to the methods recommended in CEHQ's Guide d'échantillonnage à des fins d'analyses environnementales, Cahier 5 : Échantillonnage des sols.- be subjected to chemical laboratory analysis for C10 to C50 petroleum hydrocarbons, metals, polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs).- be managed in accordance with current regulations and sent to an authorized site.