



Beaver Dam Removal

Beaver dams can cause flooding and other drainage-related problems on agricultural and forestry lands, roads and other infrastructure. Beaver dams need to be removed or breached periodically to protect, maintain, or construct infrastructure, or to avoid the flooding of private and public land. Removal is normally accomplished using hand tools, or equipment such as backhoes. However, other fish and wildlife also use these water bodies for their habitat, so beaver dam removal must be done in a way that minimizes the impact to water quality, shorelines, and protects fish and wildlife.

Beaver dams have environmental benefits including: reducing channel scouring and erosion, the reduction of sediment transport and increasing habitat diversity for fish and waterfowl. While removal of dams is sometimes required, an improperly removed beaver dam can negatively affect aquatic habitat by de-watering the upstream pond too quickly, stranding fish, and releasing sediment to downstream areas. In winter the water within beaver dams may contain very little oxygen. Dam removal in winter could cause water with low oxygen to enter the lower reaches of the stream and may harm aquatic life. It is also important to exercise caution when performing beaver dam removal due to the possibility of causing downstream flooding and damage. The breaching or removal of a beaver dam may not prevent future beaver activity in the area. Dam removal may only function as a temporary measure in addressing beaver activity on a watercourse.

An individual who removes beaver dams is liable for damages that occur downstream.

Environmentally Friendly Practices to consider BEFORE Removing Beaver Dams

- Whenever possible remove beaver dams by hand.
- Any fish that become trapped in isolated pools, or stranded in newly flooded areas, need to be safely relocated to the main channel of the watercourse. A Special Collection Permit must be obtained from the Ministry of Environment prior to relocating any fish.
- Avoid winter removal of beaver dams.
- Remove dams when there are no impacts to agricultural operations (e.g. harvest, haying).
- Remove beaver dams after peak of spring run-off and follow the restricted activity periods for in-water work.
- Dams at the outlet of a lake should not be removed without first discussing the work with a specialist at the Water Security Agency. Removing dams in these situations may have a significant effect on lake levels, affecting landowners, wildlife and other infrastructure.
- When more than one dam must be removed, start at the downstream dam and remove dams in an upstream direction. This will help to reduce severe flooding and damage to aquatic habitat (or other properties) that may be associated with several dams releasing water at once.
- Remove the dam gradually to allow the water to release slowly and prevent sediment at the bottom of the pond from being released downstream. As the water levels drop in the upstream pond, increase the size of the opening to drain the pond to the desired level. Use existing trails, roads or cut lines whenever possible to avoid or minimize disturbance to riparian vegetation.
- Hazardous substances such as fuel, oil, grease, paint and solvents must be stored where they will not contaminate any water body or watercourse and must be disposed of appropriately.
- Removal operations should be done in a manner that minimizes disturbance to the banks or bed of the waterbody or watercourse and reduces the suspension of sediments in the water column.

- Adequate precautions must be taken to prevent debris and sediment from entering the water. Any project debris entering the water must be removed as soon as practical and disposed of in approved sites. It is unacceptable to bury or burn any debris on site.
- Cover spoil piles with biodegradable mats or tarps, or plant them with grass or shrubs.

Blasting

- ANFO (ammonium nitrate/fuel oil or fertilizer bombs) are not to be used as a type of explosive in or near water.
- You must also comply with DFO's measures to avoid harm to fish if you are using explosives near water (<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html>). Fisheries and Oceans Canada website – Measures to Avoid Harm/Fish Protection).

Section 5(c) of the *Environmental Management and Protection (General) Regulations* state you do not need to obtain an Aquatic Habitat Protection Permit (AHPP) from the Water Security Agency (WSA) if you:

Remove beaver dams by use of hand tools or dynamite.

Remove beaver dams by mechanical means, but only if:

- The removal does not result in the alteration of the bed, bank or boundary, including noticeable impact to the soil caused by vehicles and equipment; and
- The material removed is placed in a way that it cannot be washed back into the watercourse.

If you are unable to follow all of the conditions below an Aquatic Habitat Protection Permit Application must be submitted to the WSA for review.

Beaver Dam Removal Approval

Pursuant to Section 6 of the *Environmental Management and Protection (General) Regulations, 2010*, permission is hereby granted to any individual or organization to proceed with beaver dam removals, subject to and restricted to the following conditions:

1. In water work must not proceed within the restricted activity period for your project location. Saskatchewan timing windows can be found at <http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/sk-eng.html>.
2. Removal of the above ground portion of select plants is permitted for site; however, the root structure must remain intact and the vegetation removal must be limited to the minimum amount necessary to safely operate the required machinery.
3. Removal activities are limited to removing or breaching the beaver dam, and must not involve channel or shoreline modifications downstream (e.g., widening, straightening, ditching, etc.).
4. Notwithstanding the condition above, failed and/or unstable watercourse banks adjacent to or in the immediate vicinity of the beaver dam may be re-contoured and re-stabilized. Stabilization measures must comply with the applicable conditions outlined below.
5. When re-contouring or re-stabilizing banks, effective sediment and erosion control measures must be installed, monitored, maintained and replaced or upgraded as necessary prior to, during and following project completion to ensure they remain effective until the project site stabilized and re-vegetates. This includes areas that might be impacted by machinery operation or other activities that disturb the bank during the removal project.
6. Excavated materials or debris will be located above the bank and must be stabilized or located so they will not erode into any water bodies or watercourse.
7. No rock is removed from the bed, bank or boundary of any water body or watercourse.
8. Any rock rip-rap used for bank rehabilitation must be obtained from outside the bed, bank or boundary of any watercourse or water body. These materials must also be clean and free from dirt, mud, oil, grease or other contaminants.
9. Disturbed or exposed areas must be re-vegetated by planting or seeding, preferably with native trees, shrubs or grasses. If there is insufficient time remaining in the growing season, the site must be stabilized (e.g., cover exposed areas with erosion control blankets to keep the soil in place and prevent erosion) and re-vegetated the following spring. Maintain effective sediment and erosion control measures until re-vegetation of disturbed areas is achieved.
10. All project debris, must be removed and disposed of appropriately so that they cannot re-enter any watercourse. Any instream litter or garbage encountered in the project area while removing the beaver dam must also be removed.
11. Banks will be restored to original condition if any disturbance occurs (i.e., if rutting has occurred or if machines have caused banks to become unstable).

12. No machinery or heavy equipment will enter the water under any circumstances. The only exceptions are the use of necessary attached booms, buckets, other tools or implements.
13. Machinery and heavy equipment must arrive at the project site clean and free of fluid leaks or accumulations of external contaminants that may include, but are not limited to: oil, fuel, grease, other lubricants, soils, mud or plant materials.
14. Machinery and heavy equipment must be cleaned, fueled, serviced and stored in a manner that will not contaminate the bed, bank or boundary of any water body or watercourse. During winter, machinery and equipment must not be fueled or serviced on ice or in drainage ditches to prevent hazardous substances from contaminating water bodies or watercourses later in the year.
15. Effective measures must be used to minimize any damage to the bed, bank or boundary of water bodies and watercourses from the transport and operation of heavy equipment. Machinery and heavy equipment must be located and operated from a stable location above the natural bank.
16. All spills of any oil, fuel, hydraulic fluids or other hazardous substances must be immediately contained and reported to your local Ministry of Environment Field Office. All spills meeting or exceeding the quantities specified in the *Environmental Spill Control Regulations* must be reported and handled according to the regulations. The Provincial Spill Control Centre (Spill Line) is 1-800-667-7525.
17. Written land owner consent must be obtained prior to commencing any removal activities.

Please ensure all persons working on the beaver dam removal are aware of the requirements of this document and that they receive copies of all other required permits (Municipal, District, Village, etc.) before they begin removal of a beaver dam. Fisheries and Oceans Canada has criteria and measures that must be followed for Beaver Dam Removal – consult their website <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html> ; Other Activities/Beaver Dam Removal.

Contact Information:

Water Security Agency, Aquatic Habitat Protection
420-2365 Albert Street
Regina, SK S4P 4K1
306.787-0726

<https://www.wsask.ca/Water-Programs/Aquatic-Habitat-Protection/>

Also Contact: Municipal authority for your area.

Definitions:

Bed: That portion of the water body typically (but not always) covered by water.

Bank: The rising ground bordering a water body that serves to confine the water to a channel or bed.

Boundary: The line or elevation contour surrounding a water body or watercourse where the aquatic vegetation and terrestrial plant species known to tolerate water saturated soils change entirely to terrestrial vegetation tolerating little or no soil saturation and includes a minimum surrounding area of five metres measured outward from the top of the bank.