

Constructed Ditch FACTSHEET

BEAVER DAM MANAGEMENT

Beavers prefer slow moving low gradient watercourses that have ample access to herbaceous and woody materials. Ditches that are constructed as interceptor channels at the edge of a property are often prone to beaver activity. Beaver impoundments often cause flooding and other drainage related conflicts on adjacent lands, especially during fall, winter and spring.

Pursuant to Section 9 of the Wildlife Act, it is an offence to disturb, molest or destroy a beaver den or dam except where that person is a trapper licensed under the act or under "lawful authority" for the protection of property where the action is authorized by regulation.

Alteration or removal of a beaver dam is permitted under the *Wildlife Act* "to provide irrigation or drainage under lawful authority for the protection of property" and under the *Water Act* for drainage purposes with specific restrictions.

Beaver dams less than one year old on a constructed ditch may be removed by a landowner as required. If the beaver return an authorization to trap the beaver can be obtained from the Ministry of Water, Land and Air Protection.

However if the dam has been in place for a number of years, then the pond, adjacent riparian areas and the downstream channel are often considered valuable fish and wildlife habitat. The Ministry of Water Land and Air Protection must be notified at least 45 days prior to removal of the dam in these circumstances. In most cases other management decisions will need to be considered before dam removal is authorized.

Complete dam removal should only be considered when:

- All other management tools have been exhausted.
- An emergency situation has arisen.
- Where measures can be taken to ensure that no harmful alteration to fish habitat can occur.
- Where downstream harm will not result from dam removal.



Beaver Management Plan

Prior to dam removal, a beaver management plan should be developed to ensure that activities taken will be effective in the short and long term. The management plan should include:

- Dam modification and debris management
- Population management
- Dam removal only if absolutely necessary

Dam management options should be considered where unacceptable flooding is affecting property or roads. While dam removal is an option, it can be very frustrating and ineffective if the beaver repair the breach very quickly.

It is important to consider that not all beaver problems can or should be handled the same way. The following examples of replacement and isolation techniques can

be used to avoid repeated maintenance of beaver dams or the outright removal of beavers and their dams. The important feature of these techniques is to reduce the dam building response of beaver to the sound of running water.

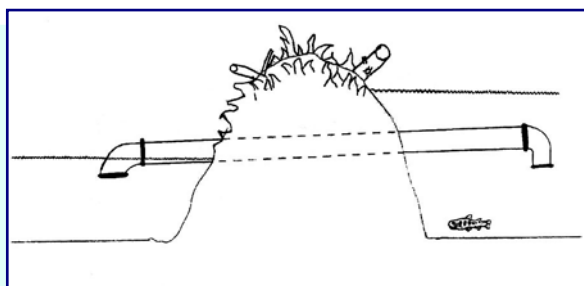


Figure 1 Beaver Dam Siphon

Beaver baffle structures such as a dam siphon (Figure 1), a perforated culvert (Figure 2) or a log culvert (Figure 3) can be used to move water through a beaver dam. To ensure optimum effectiveness of a baffle structure, it is recommended that the following criteria be used in their design and construction:

- The culvert length should extend through the dam into the upstream pond at least 1 m but as far as possible. See Figure 2.
- The end of the culvert should have a wire cage installed. The cage should remain submerged to prevent the beaver from plugging the wire mesh.
- The cage should be suspended at least 0.5 m from the bottom of the pond to deter the beaver from anchoring dam materials to the bed of the pond.
- The wire mesh should have openings of about 15 cm to allow fish passage but hinder attempts by the beaver to plug the gaps.
- The wire mesh should enclose the intake completely.

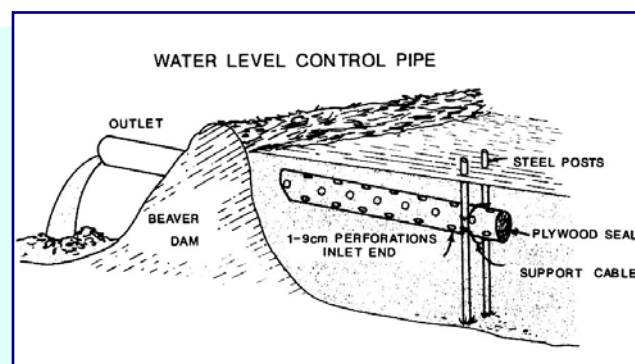


Figure 2 Perforated Culvert

Another option is to construct a drainage passage by lashing together water soaked logs. (See Figure 3). The logs should be covered with sheet metal and then installed through the dam. This type of culvert is only effective if small flows through the dam is required. They will not provide effective drainage where large flows are required.

If beaver dam removal is required, sediment control procedures should be followed. Refer to Factsheet No. 8 *Sediment Control*.

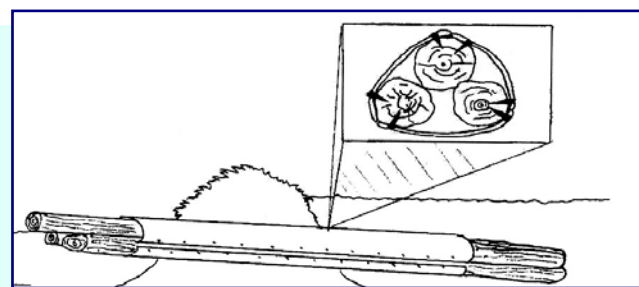


Figure 3 Log Culvert

Contact Information

Agency Contacts, Factsheet No. 19 in this series contains a list of local agency contacts and other organizations that may be able to provide some assistance for locations throughout British Columbia.

References

Beaver Dam Management Environmental Stewardship Standards and Recommended Best Practices. - BC Ministry of Water, Land and Air Protection. February 2002

Beaver Dam Removal – Fisheries and Oceans Canada Operational Statement

Instream Standards and Best Practices for Instream Works - BC Ministry of Water, Land and Air Protection. March 2004