

Beavers and Agricultural Drainage

Although not based on empirical data, anecdotal evidence suggests that beaver populations in King County have been rising since the early 2000s. Currently no public agency is responsible for removing beavers that are impacting private property.

In general, King County encourages property owners to find ways to live with beavers rather than removing them. Beaver dams create habitat for many animals and plants and provide essential habitat for juvenile salmon, particularly coho. In addition, beaver ponds collect and slowly release stormwater and are a natural means of flood control and groundwater recharge. In many situations, it may make more sense to accommodate beavers and their dams rather than attempt to remove them. Property owners can minimize beavers' impacts by using beaver deceivers or flow levelers to regulate water levels.

King County does not consider trapping to be a long-term solution to beaver problems. If beavers are removed from preferred habitat, it is usually just a matter of time before another beaver moves in. However, if property owners choose removal for their method of control, they need to hire a licensed trapper to perform the removal. Landowners can contact the local office of the Washington State Department of Fish and Wildlife to find licensed trappers in their area. If beavers are removed from an area, their dams can be notched according to BMPs below to lower water levels to prevent unacceptable flooding while maintaining beneficial fish and wildlife habitat.

In some cases when beaver dams cause unacceptable flooding to agricultural fields, dam removal may be necessary. For effective removal of beaver dams, follow the BMPs below.

General Best Management Practices (BMPs)

- These beaver dam removal BMPs apply only to beaver dams that have been in place for one year or less. An individual HPA outside the streamlined ADAP is needed for removing older beaver dams.
- These beaver dam removal BMPs apply only to hand removal of beaver dams. Hand tools such as saws may be used but no mechanized equipment.
- These beaver dam removal BMPs should only be implemented in low-flow periods of the year so gradual removal of the dam does not cause peak flow rates above the capacity of the downstream conveyance system.
- The time window when dam removal can occur is based on waterway classification. Dams needing removal outside the work window require prior contact with the WDFW Area Habitat Biologist and DDES. Dams removed outside the work window should also be performed according to these BMPs.
- Prior to lowering any part of the dam and creating turbulence or velocity in the water, remove as much dirt and sediment from the upstream face of the dam as possible.
- Begin dam removal by creating a two-foot wide by six-inch to one-foot deep notch in the dam, depending on the size of the dam. Wait for water level behind dam to fall to the bottom of the notch before continuing.
- After water level has dropped to the bottom of the notch, deepen the notch another foot.

While the water level is dropping to the new level of the notch, remove the top foot of the dam.

- Because of the way beaver dams are built with sticks intertwining with each other, removal of only one foot is difficult. The goal, however, is to only remove that portion of the dam that is above the upstream water surface.
- Repeat above sequence until the dam is removed to the original stream bed.
- The sound of running water and the velocity of water trigger a beaver's damming instincts. Remove a wide enough section of dam so water does not accelerate as it passed through the removed section.
- A good tool to remove a beaver dam is a potato fork that has three or four tines.
- Material removed from the dam should not be placed in the water. Material should be placed on the bank above the high water mark or removed from the area.
- Removal of existing riparian vegetation should be minimized.
- Wait for the water to drain and the land behind the dam to dry out before removing material from the formerly submerged areas. Use sediment control BMPs as needed.
- When removing multiple beaver dams, start with the most upstream dam first to utilize the sediment control benefits of the downstream dams.
- If beavers are not removed prior to dam removal, it is typical for the beaver to rebuild the dam within a day or two. It may take several cycles of removal and rebuilding before the beaver does not rebuild the dam and then it is typical for the beaver to just move upstream or downstream to a new location to build a dam.

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