



The Benefits of Beavers

Beaver dams and beaver ponds provide many benefits to our ecosystem and communities, including:

Connecting habitats

Improving habitat complexity

Reconnecting floodplains

Reducing downstream flooding

Improving water quality

Climate Change Resilience:

Recharging groundwater

Improving stream flows

Storing surface water

Reducing stream steepness

Slowing high winter flows

**Storing organic carbon,
Providing water during
drought/ low stream flows,
Reducing wildfire severity**

Beavers and Salmon:

Adult salmon start returning to Kitsap streams in late summer/early fall and continue their migration through late winter. Some species return earlier when stream flows are still low from summer drought. Beaver dams help provide water for these early-returning species such as Chinook and chum.

Some salmon and trout species, such as coho, steelhead, and cutthroat, spend a year or more of their youth in freshwater. Beaver ponds provide year-round wet areas and safe, complex habitat with plenty of food and hiding places for young salmon to thrive. During winter flows, beaver dams help slow down the water so baby salmon do not get flushed out to sea before they are ready.

Different salmon species have different leaping capabilities. Beaver dams throughout a stream may help reduce salmon spawning on top of other species' redds (nests), improving egg survival.

How can you help beavers?

Avoid removing/ modifying beaver dams or trapping beavers where possible.

Avoid building close to streams and wetlands. Leave extra buffer for beavers to expand habitat.

Protect suitable habitat for beavers to re-colonize.

Remove structures close to streams and wetlands.

Obtain permits, up-size water crossing structures (bridges, culverts) to accommodate beavers and their dams.

Obtain permits for any work to modify a dam or install an exclusion or pond leveling device.

Only hire licensed trappers to remove beavers.

**If you are concerned about fish passage at a beaver dam, contact WDFW to assess.
WDFW Region 6 Office:
360-249-4628**

Beaver Dams and Fish Passage

Beavers and salmon have co-existed for millions of years. When squeezed against man-made infrastructure, beaver dams occasionally become fish passage barriers, but in a natural setting, salmon can typically navigate beaver dams to reach their spawning grounds.

Beaver dams hold and slowly release water that provides streamflow for salmon migrating upstream. When people notch or remove beaver dams, water levels drop, often stranding salmon. Removing dams can send a false signal to salmon that there is enough water upstream to spawn, as salmon are attracted to the sudden gush of water.

Salmon will wait below a beaver dam until flows increase enough for them to pass. Salmon can go over, around, and even under beaver dams when there is enough stream flow.

A thriving beaver family typically builds a series of dams. Rather than one large mega-dam, many smaller dams help break up the water drop into a series of smaller “steps” that are easier for salmon to pass. Beavers also have a harder time maintaining many dams at once- the dams in disrepair are easier for salmon to navigate.

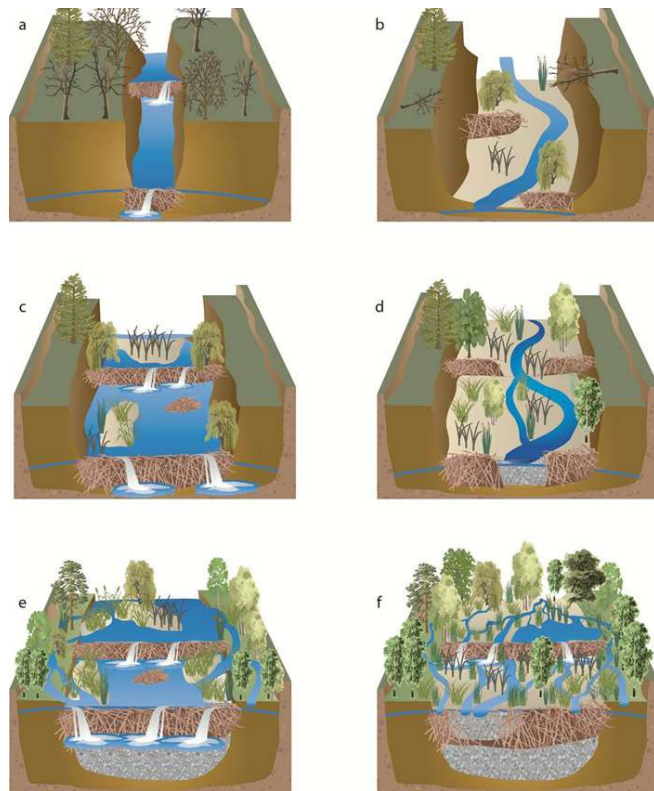


Figure source: *Using Beaver Dams to Restore Incised Stream Ecosystems* (Pollock et al 2014)

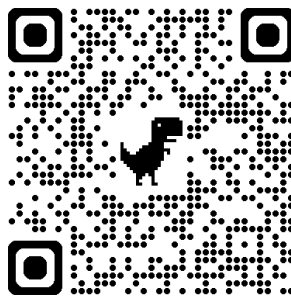
Over time, beaver dams improve the connection between streams, floodplains, and the groundwater table and improve habitat complexity which is critical for salmon, especially young coho and steelhead. As streams cut around, over, and under beaver dams and as more small dams are built, fish passage is improved.

Managing Conflicts

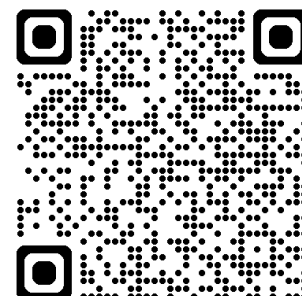
When roads, homes, and other human infrastructure is built near beaver habitat, conflict can occur such as flooding, hazard trees, vegetation damage, and clogged water crossing structures (culverts and bridges).

The most sustainable long-term solution is to move structures away from beaver habitat to prevent conflicts. When that is not possible, there are more intrusive ways of managing conflict. Permits are required for most conflict management solutions.

For more information about options to manage beaver conflicts, visit these resources:



Beavers NW



WA Fish & Wildlife