



Photo: Jennifer Vanderhoof

Beaver Management in King County

By Jennifer Vanderhoof

Prior to the arrival of the fur trade in the Pacific Northwest, the North American beaver, *Castor canadensis*, was a common denizen of lakes, ponds, and riparian areas. But in the 1800s, beaver trapping throughout the West very nearly eradicated the species. Many people now think of them as invaders, as opposed to a native species slowly filling in all the spaces left empty 150 years ago. And their return has been so gradual that it is easy to forget they were historically an integral part of the landscape.

By building dams on streams, beavers formed networks of wetlands, increased ecosystem complexity, and contributed to increased biodiversity. Beaver ponds are well-documented to:

- maintain stream flow during summer;
- reduce downstream flooding and erosion by storing rainwater during high-flow events;
- trap sediment and pollutants;
- raise groundwater levels/replenish aquifers;
- help create diverse plant communities; and
- create habitat for coho salmon and other fish, birds, amphibians, mammals, and invertebrates.

However, there are also negative impacts from beavers in King County. Although no one in Washington state tracks beaver population numbers, there is a great amount of anecdotal evidence that population sizes continue to

increase. As beavers reclaim their former habitat, their ponds impact human infrastructure that was built without beaver ponds present. The absence of considering potential beaver impacts combined with the beavers' proclivity for creating dams at the narrowest points in streams – which tend to be culverts – may result in the backwater flooding of roads, farmland, and other private property. If the dams are removed, beavers build new dams. If beavers are removed, more beavers take their place.

Ideally, workable solutions can be found so that beavers can remain on the landscape and provide their ecological benefits while not negatively impacting private property and infrastructure. “Beaver deceivers” and pond levelers are excellent examples of engineered solutions for co-existing with beavers. However, such devices are not always effective in flat locations such as agricultural areas.

Further, because of the trees planted at riparian restoration projects, these projects can become attractive to beavers, whose activities may subsequently impact the trees as well as potentially affect neighboring properties by flooding. And as King County continues to build restoration projects, plant trees, maintain roads, maintain and steward parks and natural areas, perform levee setbacks, provide assistance to farmers, and attempt to be good neighbors (all of which can impact, and be impacted by, beavers), the need is ever-increasing to find and adopt workable solutions to living with beavers.

King County Department of Natural Resources and Parks has convened stakeholder groups in the past to try and address emerging beaver issues. But over the years, the number of beaver related drainage complaints and beaver related inquiries have continued to increase. Therefore, in 2016 a “beaver management program” was approved, and in Spring 2017 the program was kicked off.

KING COUNTY BEAVER MANAGEMENT PROGRAM

Until now, many groups and individual King County employees working on beaver issues have been using a variety of tools. Not all tools have been equally effective, and some may have even exacerbated problems. The over-arching goal of the beaver management program is to find the best, most effective and science-based solutions for humans and beavers to co-exist in King County. The following tools will help agencies and landowners find ways to live with beavers:

- A summary of beaver biology, life history, and ecology, to help better understand and predict behavior.
- A summary of current management techniques such as beaver deceivers, pond levelers, and tree protection, plus the pros and cons of each and required permits.
- A summary of state and local laws and policies.
- Educational materials, including information for landowners.
- New policies establishing when, where, and how King County engages in beaver management issues.
- Ongoing monitoring of beaver activity and pilot projects to test effectiveness of new management techniques.

King County’s beaver website will soon be re-vamped and updated, and these written summaries and other newly developed tools will be placed online as they become available. ■



Contributors to King County’s SciFYI

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