

Effects of beaver on the ecosystem and new plantings

Beavers are a component of our natural ecosystem. They significantly affect the environment around them by constructing lodges and dams from mud, plant material, rocks or other material on hand. The deeper water created by these dams provides habitat for other animals, including fish, waterfowl, reptiles and amphibians. Insectivorous birds forage on dead wood created by beaver feeding on the stems and bark of trees and shrubs. Because they prefer younger plant material, beavers can decimate new restoration plantings. Beaver also eat herbaceous plants including aquatics. Beaver are common throughout western Washington, even in urban areas, and do not hibernate, thus are out there feeding all winter long.

Beaver deterrents

If a planting is comprised of just a few individuals, surround plants with hardware cloth or other small wire mesh 4' high. Affix to the ground with landscaping staples and attach to a perpendicular stake with about 6" between the cage and tree. Wrapping tree trunks with hardware cloth rather than building a cage is also pretty effective but make sure the tree has room to grow. And don't forget to come back and remove or adjust it after a year or so! The entire planting can be fenced off with similar material, 4' high, but the fence must be attached to the ground so beavers cannot push their way under. Because neither of these approaches is cost-effective for large-scale plantings, consider fencing off just the established beaver paths leading into the planting area. Often if the path traverses through reed canarygrass or other dense vegetation, individual beaver will not quickly form new paths allowing new plantings time to become established.

Another approach to deterring beavers is to treat plant stems. However, Plantskydd (a commercial animal repellent made of vegetable oil and blood meal), other big game repellents and a mason sand/latex paint mixture have had variable results. Anecdotal reports have deemed both Plantskydd and the mason sand/paint mix effective. Some formal experiments comparing Plantskydd, other commercial repellents and mason sand/latex paint have shown no significant differences between treatments and the control. In our experience, the mason sand/paint mix is effective if these steps are followed: paint the plant with an exterior latex paint (that is of a similar color to the bark) and then immediately rub sand onto the painted area (if mixed prior to application it can be hard to keep the sand in solution). Paint 4–5' up the stem. If the planting area experiences prolonged flooding, painting even higher may be necessary. Apply at least once per year, or frequently enough to maintain a solid layer of sand on the trunk.

Species selection and beavers

Perhaps the most effective approach is to select plant species that beaver do not prefer. Beaver love willow (*Salix* spp.), especially willow live stakes, black cottonwood (*Populus balsamifera*), western red cedar (*Thuja plicata*) and vine maple (*Acer circinatum*). Beavers may eat or use the following species, but do not prefer: cascara (*Rhamnus purshiana*); Indian plum (*Oemleria cerasiformis*); Sitka spruce (*Picea sitchensis*); ninebark (*Physocarpus capitatus*); and elderberry (*Sambucus* spp.). Beavers avoid eating conifers unless other food sources are scarce. If you know beaver is a problem in the area and you must include willow species in your planting, consider planting container-grown willow rather than live stakes.

More information

For more information on protecting culverts from beaver activity visit Snohomish County's excellent website on their beaver management program (http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SWM/Work_Areas/Outreach/Stewardship/Beavers/). King County also maintains a good website on beaver management (<http://dnr.metrokc.gov/wlr/Dss/beavers/beaverintro.htm>). If you have a particular method of deterring beavers that has worked for you, please let us know!