

CONNECTING WITH WILD NEIGHBORS:

NORTH AMERICAN BEAVERS

GETTING ACQUAINTED

A pair of perpetually growing incisors make the American Beaver the largest living rodent in North America. Weighing 40-80 pounds and measuring more than three feet in length, these wetland engineers are known for their gnawing and construction skills. Beavers are semi-aquatic mammals that have webbed hind feet and a broad flat tail. They have poor eyesight, but excellent hearing and sense of smell. Beavers are herbivores that eat a wide range of plant species, from the inner bark of deciduous trees such as willow and poplar, to herbaceous matter such as grasses, leaves and bulbs. They have a life span of 10-12 years.

Once widely found across the continent, beavers were trapped virtually to extinction in the 1800s to meet demand for beaver pelts. Beavers have become reestablished in much of their former range from Northern Canada to Northern Mexico.

While some landowners are appreciative of beavers' presence, others are frustrated by their modifications to the landscape. Beaver activity can be managed with economical, long-term strategies that prevent property damage, avoid the need to kill beavers and retain the many benefits beaver bring.

BEAVER DAMS

Beavers build dams to create deep water for protection from predators, for access to their food supply and to provide underwater entrances to their den.

Beaver dams slow and redirect flood waters across adjacent lowlands. This encourages riparian vegetation, which also works to accumulate new soils and hold existing soils in place, reversing the effects of channel erosion.

Additional benefits of dams include:

- More dependable water for cities, towns, farms and ranches and improved stream flows during drought.
- Natural water filtration systems that trap sediment and improve water quality.
- Recharge of ground water due to slower, expanded water flow.
- More abundant, healthy salmon. Young salmon thrive in beaver ponds, due to protection from predators and increased food sources.
- Natural firebreaks and refuges for wildlife during wildfires.
- Expanded wetland habitat that draws down more atmospheric carbon.



(*Castor canadensis*)

Photo: Tim Lumley

FARMER PERSPECTIVE

From Rick Cook, JP and Susie Family Farm

The Cook family has stewarded land in Oregon—on the ancestral land of peoples just south of Oswego Lake—for over 120 years. They currently grow grapes primarily, operating as the JP and Susie Family Farm. They have lived next to many wild neighbors over the years, but only recently welcomed a family of beavers to their farm.

Rick Cook, the great grandson of JP and Susie Cook, was thrilled to see evidence of beavers along Pecan Creek, which runs through part of their property. Though the family didn't observe the beavers themselves, they were happy to see a beaver dam made of several plant species, including willow, along the Pecan Creek. The nearly dry creek began to slowly improve and increase flow. Rick also appreciated the beavers as evidence that wildlife was using the land and it needed to be preserved. He hoped that the presence of beavers might persuade a neighboring park to include a plan to better protect the wildlife corridor as the park area was developed.

The initial excitement over having the new residents on their land was soon tempered, however, as the beavers moved on from chewing willows to the grape vines themselves. Rick and his family knew that beavers had been part of the landscape for thousands of years and their presence was providing value to the ecosystem. They felt it was important to find a way to co-exist rather than trap or relocate the beavers.

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HOW TO BE A GOOD NEIGHBOR

- Beaver stewardship requires varying degrees of coexistence, restoration and relocation.
- Do not remove beaver dams. Removal may alleviate a damage situation temporarily, but generally dam removal is a futile effort because beaver will quickly rebuild the dam, sometimes overnight.
- Prevent flooding by installing a flow device that extends upstream and downstream of the dam. The flow device keeps the rise in water level in the pond at a minimum by using one or more plastic pipes to continually drain the pond area. [Read about flow devices here.](#)
- Protect a culvert from damming by installing a diversion fence on the upstream side of a culvert. [Read more here.](#)
- Protect trees either individually or in groups. In most places, wrapping trees with 3-foot high galvanized welded wire is sufficient. Make sure the wire completely surrounds the tree, and leave a 12-inch space all the way around the tree to allow for growth.
- Another method for protecting specific trees is to paint the trunks with a mixture of latex paint and sand. Beavers don't like the gritty texture and will leave them alone.
- Electric fences surrounding tree stands or crops, placed low to the ground, will keep beavers out.
- Plant some areas with species that beavers don't prefer. In the west, this includes Sitka spruce, elderberry, cascara, osoberry, ninebark, and twinberry. Densely plant aspen, cottonwood, willow, spirea (hardhack), and red-twig dogwood because once their roots are well established the plants often resprout after being eaten.
- Lethal management should be considered as the last resort and is ineffectual in the long run. No matter how many beavers you kill, if the habitat is favorable, they will continue to return.

FUN FACTS

1. Beavers have a nose and ears that seal out water. Their sharp incisors, which are used to cut trees and peel bark while eating, are harder on the front surface than on the back, creating a sharp edge for cutting through wood.
2. Beavers mate for life and are fiercely protective of their family.
3. Beavers mark their territory by creating small mounds of mud, leaves, and sticks, which they then cover with pungent oil called castoreum.
4. Beavers living on water bodies that maintain a constant level (lakes or large rivers) do not build dams.

MORE BEAVER RESOURCES:

Project Beaver: <https://projectbeaver.org/>

[Beaver in California: Creating a Culture of Stewardship](#)

From Occidental Arts and Ecology Center

WATER Institute: <https://oaec.org/>

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Photo: Tom Kelly

This piece is part of the Connecting with Wild Neighbors series featuring species that play an important role on our farms and in nature. See more at www.wildfarmalliance.org/wildneighbors