



Beaver Resources for a Better Environment

How to help beavers and benefit from them at the same time.





What are beavers?

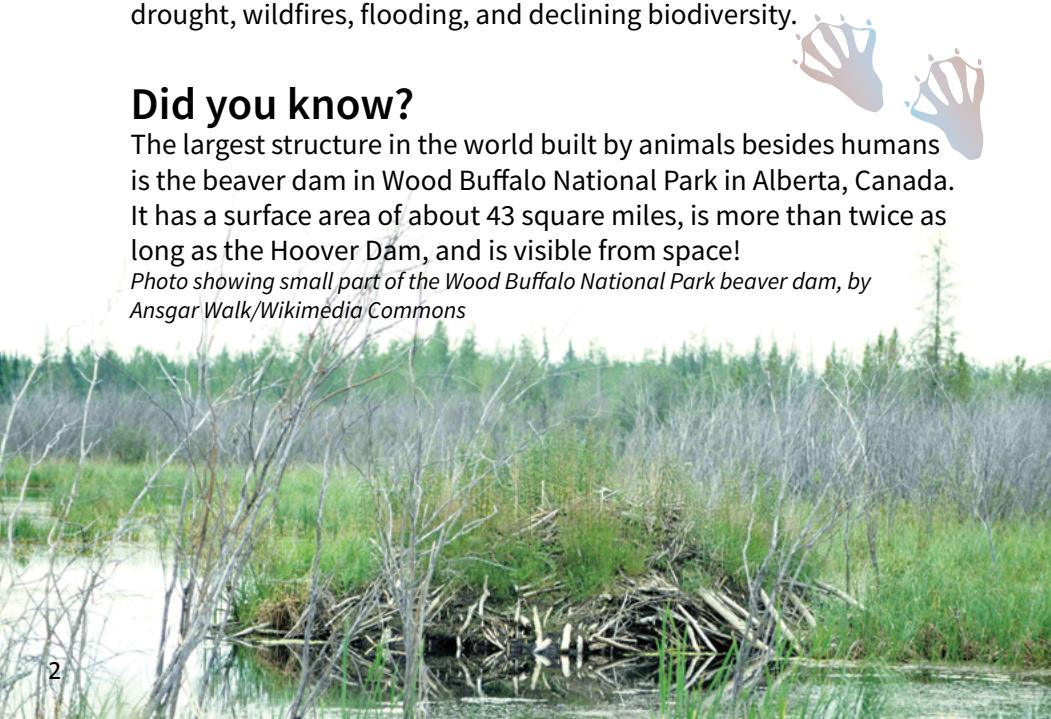
Beavers are a critically important keystone species. **They are highly intelligent, social, and family-oriented animals with exceptional engineering skills.** In fact, after humans and elephants, beavers arguably shape our environment more than any other animal. They do this by felling trees and building dams and home lodges, which slow the flow of water and create ponds and wetlands that benefit almost half of all species on Earth, including threatened and endangered species.

Before beaver populations were decimated during the fur trade in the 1700s and 1800s, our continent was a more lush and wet place. Without beavers, thousands of miles of North America's wetlands dried up. This is why beavers are essential partners in our efforts to mitigate and reverse adverse effects of climate change such as drought, wildfires, flooding, and declining biodiversity.

Did you know?

The largest structure in the world built by animals besides humans is the beaver dam in Wood Buffalo National Park in Alberta, Canada. It has a surface area of about 43 square miles, is more than twice as long as the Hoover Dam, and is visible from space!

Photo showing small part of the Wood Buffalo National Park beaver dam, by Ansgar Walk/Wikimedia Commons



So many beaver benefits!

Scientific and visual evidence show that the benefits of beavers are numerous and that they are one of the most cost-effective, sustainable solutions for ecological restoration and climate-change resilience.

Beaver dams foster resilience against drought by soaking the ground with water and spreading it across the landscape.

Beaver wetlands create resistance against wildfires by functioning as fire breaks that slow wildfire spread, increasing soil moisture that reduces drying and burn intensity, trapping ash and debris, and acting as refuges for wildlife to take shelter.

Beavers increase biodiversity by providing habitat for a variety of wildlife, including salmon, trout, elk, migratory birds, and insects.

Beaver dams keep water in an area longer, repairing eroded riparian areas by irrigating the land and providing habitat for willows, cottonwoods, and other riparian plants.

Beaver dams increase water availability for all by raising the water table, increasing water storage, and recharging aquifers.

Beaver dams filter stream water, which improves water quality by causing accumulation of debris on the pond floor (which in turn provides more soil for plants to grow in) and decreasing the amount of fine sediments flowing downstream.

Beaver dams and ponds reduce stream-bank erosion and retain sediment, giving riparian plants more places to grow.

Beaver ponds and dams mitigate the effects of flooding by slowing down the flow of water and runoff.

Beaver wetlands remove pollutants and sequester carbon, helping the environment heal from adverse effects of human-driven activities.

Are beavers re-engineering your land?



The extraordinary benefits of beavers come from their ability to profoundly alter the landscape. However, sometimes structures or roads become flooded, culverts become blocked, or cottonwoods or fruit trees are cut down by beavers.

To mitigate these problems, we urge those affected by these issues to use **nonlethal solutions such as fencing trees and building flow devices.**

Flow Devices

Flow devices create a “leak” in beaver dams and blocked culverts, allowing water to continue to flow downstream, protecting culverts from being dammed up completely, and allowing beavers to remain.

To ensure an effective and successful flow device, we recommend that landowners first seek assistance from a professional (see *our list of suggested resources on page 6*). There are many technical details to consider regarding each specific beaver situation and location. By working with someone trained in building flow devices, you’ll have the best chance of successful results.



Fencing Trees

Protecting trees that you want to keep is relatively easy. Use 12-gauge wire mesh fencing that is 3 to 4 feet tall, with 2 inch by 4 inch holes in the mesh, placed at least 12 inches from the tree trunk. You will also need wire cutters and something to secure the fencing into the ground. Trees can be wrapped individually or in groups.



Let's help you find coexistence solutions!

Start here..... ➤ Can you accept beavers on your property?

yes

Is a beaver dam causing the water level to increase, threatening to flood—or flooding—roads or structures or blocking a culvert?

no

yes

Build a flow device. Contact one of the beaver conflict-resolution specialists listed on page 6 for professional consultation tailored to your specific issue. Contact wildlife@apnm.org if you have other questions.

yes

Do you want to prevent beavers from cutting down certain trees?

yes

Wrap trees with 12-gauge wire mesh fencing that is 3 to 4 feet tall, with 2 inch by 4 inch holes in the mesh, placed at least 12 inches from the tree trunk. You will also need wire-cutters and something to secure the fencing into the ground. If you need further assistance, contact one of the beaver conflict-resolution specialists listed on page 6 or email us at wildlife@apnm.org if you have other questions.

Coexistence Consultation and Solutions

Van Clothier

Stream Dynamics Watershed

Restoration

Silver City

575-590-0549

van@streamdynamics.us

Provides consultation and construction related to beaver conflict resolution and stream and watershed restoration.

www.streamdynamics.us

John David Blagg

Private Contractor

Northern New Mexico

505-660-6645

jdblagg@cybermesa.com

Provides consultation on beaver conflict resolution and habitat assessment in northern New Mexico.

Seventh Generation Institute

Santa Fe

505-216-1150

admin@seventh-generation.org

Assists with site assessment, beaver management plans, flow-device construction, live beaver workshops, and other efforts.

www.seventh-generation.org/beaver-resilience

Rio Grande Return

Santa Fe

505-231-5484

Consults with communities and implements coexistence strategies in public areas.

www.riograndereturn.org

WildEarth Guardians

Santa Fe

505-988-9126

info@wildearthguardians.org

Can help identify potential mitigation strategies and marshal volunteers to help install coexistence structures.

www.wildearthguardians.org

Defenders of Wildlife

Santa Fe

505-395-7330

southwest@defenders.org

Consults about beaver conflicts to design mitigation actions that work for specific situations and can reimburse for at least 50% of the implementation cost.

www.defenders.org/regions/southwest

Hermit's Peak Watershed Alliance

San Miguel/Mora Counties

505-617-1360

hpwa@hermitspeakwatersheds.org

Works on instream and wetland restoration that improves beaver habitat with their staff and other contractors to install flow devices and other remediation structures.

www.hermitspeakwatersheds.org

Skip Lisle

Beaver Deceivers International

(802) 289-2899

skip@beaverdeceivers.com

Offers habitat evaluation and consultation, high-quality flow devices (Beaver Deceivers), and flow device workshops.

www.beaverdeceivers.com

Coexistence Consultation and Solutions

General Information

The Beaver Institute

Learn about beavers, and browse detailed information about coexistence and conflict resolution.

www.beaverinstitute.org

New Mexico Beaver Project

Learn about the benefits of beavers to New Mexico, and browse information about coexistence and conflict resolution.

www.nmbeaverproject.org

US Fish & Wildlife Service

Beaver Conservation Strategy

Includes USFWS's beaver conservation strategy, Beaver Restoration Guidebook, and Beaver Conservation Library Collection.

www.fws.gov/project/beaver-conservation-strategy

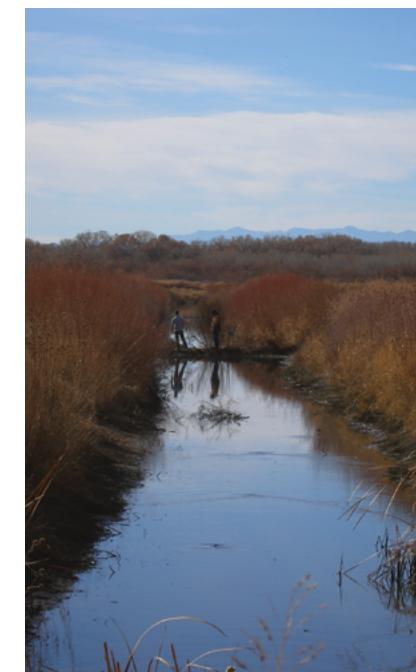
Possible Financial Assistance

US Fish & Wildlife Service

Partners for Fish & Wildlife Program

Assists with restoration projects; nonlethal alternatives could be considered within the Partners program as water-control devices may provide opportunity to protect desired aquatic and wetland resources.

www.fws.gov/program/partners-fish-and-wildlife/what-we-do





Animal Protection New Mexico is a statewide nonprofit that protects animals by creating social change resulting in the humane treatment of all animals. We create policies, infrastructure, and services that protect animals and strengthen our communities, and we design and implement humane and pragmatic solutions to seemingly intractable problems involving animals.

To learn more, *[visit apnm.org](http://apnm.org)*.

