

Wildlife Services

Protecting People
Protecting Agriculture
Protecting Wildlife

Factsheet

January 2011

Beaver Damage Management



Wildlife Services (WS), a program of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS), provides Federal leadership and expertise to resolve wildlife conflicts that threaten the Nation's agricultural and natural resources, human health and safety, and property.

Recognizing and respecting the importance of beaver throughout the United States, WS assists in reducing local damage caused by this large native rodent.

As the largest North America rodent, the American beaver (*Castor canadensis*) can be found everywhere in the United States except the Florida peninsula and the desert Southwest. Beaver create their own habitat or alter habitats to meet their needs. They create ponds by building dams made of sticks, mud, and rocks across small streams. These ponds provide valuable aquatic habitats for many species and provide beavers with protection from predators.

Once considered a valuable economic resource for their fur, beaver are no longer trapped in significant numbers, which has resulted in a growing population throughout the Nation's watersheds. Today, large beaver tend to weigh around 70 pounds. While they do eat some crops (corn and soybeans) and aquatic plants, beaver mainly eat the cambium layer just under the bark of woody plants.

While American beaver can produce significant environmental benefits, they can also create safety hazards and cause significant damage. Beaver activity jeopardizes millions of dollars in transportation infrastructure and can also cause significant damage to timber resources. Alabama alone estimates \$19 million in lost timber annually due to beaver.

WS assists in reducing local damage while recognizing and respecting the beaver's importance in the environment.

Damage from Dam Building, Flooding, and Tree Cutting

American beaver are well-known for their dam-building skills. For beaver, culverts under highways can provide an engineering shortcut. When

By consulting with wildlife professionals, individuals can help gauge whether a water leveling system will be effective in preventing damage.



beaver build small dams across culverts, they convert the highway's foundation into a dam. These dams save the beaver significant time and effort; however, most highways are not designed to withstand the water's force, so such conditions can lead to the road's total collapse.

Flooding from beaver ponds can cover large areas, depriving property owners of their use. Athletic fields, yards, croplands, timberlands, and access roads are just some of the locations where beaver ponds can



create access and use problems. Utility companies often are negatively impacted by beaver pond flooding, which damages infrastructure and limits access to sites.

Beaver cut down trees for food and for building materials. On large trees, beaver will feed by removing all the bark within easy reach around the tree. This prevents moisture and nutrients from moving from roots to leaves and causes the tree to die. Other trees are lost due to rising water levels behind the beaver dam. Some species of trees can thrive in such conditions, but most cannot. When beaver remove large numbers of even small trees from a shoreline, the result can be erosion of stream banks and a rise in water temperature from exposure to sunlight. Increased water temperatures can change the ecological dynamics of a stream. Additionally,

fallen trees and beaver ponds can alter the spawning of native fish. The headwaters of streams can be blocked completely, preventing fish from reaching their traditional spawning grounds.

Management Techniques

State fish and wildlife agencies regulate the legal harvest and control of beaver. Some States classify beaver as nuisance wildlife, while others classify them as furbearers and regulate the seasons and methods by which beavers can be harvested.

To reduce the negative effects of beaver activity, WS conducts beaver management as necessary, but only at the request of State or local agencies, industries, or private groups affected by the damage.

Exclusion can be a first step to management. Wrapping valuable landscape trees and shrubs with hardware cloth can prevent loss to beavers. The wrapping of plants, however, should be completed *before* beaver arrive.

Habitat management is another method for addressing beaver damage. Such management efforts can range from removing trees and other woody vegetation that attract beaver, to managing the water level of an existing beaver pond.

Various methods—all of which involve moving collected pond water through a beaver's dam and out the other side—can be used to **control water levels** at beaver ponds. By their nature, beaver are very good at detecting leaking dams. The sound of running water and the current produced by the leak prompt a beaver to repair the dam.

This repair response sometimes can be prevented by having multiple intake ports in PVC pipe(s) pushed through a dam. Multiple ports reduce

Beaver can damage single trees or acres of agricultural lands and transportation infrastructure.

or eliminate the sensation of current flow and the associated sound of running water. The outflow or downstream end of the pipe can be fitted with a 90 degree elbow fitting that can be rotated to raise or lower the level of the pond.

Leveling systems cannot be used in every dam-pond damage situation. Consulting with wildlife professionals can help gauge the potential for success.

Beaver Dam Removal

Although they are very sturdy structures, beaver dams can be removed through the use of hand tools, heavy equipment, or explosives. State wildlife regulations may limit or prohibit these techniques so check with your State wildlife agency before taking any action.



WS biologists are experts in beaver damage management, including the removal of dams with hand tools or, when appropriate, with explosives.

WS personnel are trained and certified in the safe and effective use of explosives. However, unless the beaver are also removed, they will quickly repair the dam.

Population Control

Beaver can be very persistent once they decide upon a dam location. When dam removal or modification efforts fail or become impractical, removal of the beavers may be the only way to address the problem or control damage. Where legal, beaver may be shot or trapped. A wide variety of traps are available for capturing beaver. Some are designed for live capture, and some are lethal devices.

Many States prohibit the transport and relocation of wildlife. The State wildlife agency should be consulted before any population control methods are attempted. State regulations may limit the types of traps, trapping methods, and seasons in which beaver may be trapped or shot.

Additional Information

For more information about WS and managing beaver damage, contact

1-866-4USDA-WS (1-866-487-3297) or visit the Web site www.aphis.usda.gov/wildlife_damage.



United States Department of Agriculture
Animal and Plant Health Inspection Service

The U.S. Department of Agriculture is an equal opportunity provider and employer.

Mention of companies or commercial products does not imply recommendation or endorsement by the USDA over others not mentioned. The USDA neither guarantees nor warrants the standard of any product mentioned. Product names are mentioned solely to report factually on available data and to provide specific information.