

A family matter

Trapping and relocating beavers can have long-lasting benefits for habitat and wildlife

By Robert Gagliardi



Dams built by beavers can help store water, maintain consistent stream flows and provide habitat for wildlife. (Adobe Stock Photo)



Jerry Altermatt, Wyoming Game and Fish Department terrestrial habitat biologist, observes a beaver temporarily housed in the trailer he built. Altermatt uses the trailer to keep nuisance beavers before relocating them to other areas in the Cody Region. (Photo by Chris Martin/WGFD)

Jerry Altermatt has several responsibilities as a terrestrial habitat biologist for the Wyoming Game and Fish Department, but keeping families together wasn't something he thought would come with the job. But now, when he gets a call about a colony causing trouble, he responds in a way that helps everyone involved.

These offenders aren't humans, though, but broods of beavers. Landowners in the Cody Region contact Altermatt when a group of these industrious mammals cause problems on their property, and he relocates the toothy troublemakers to areas where they will do good.

Most nuisance beavers calls come from private landowners who notice beavers plugging culverts and irrigation structures and gnawing down valuable trees.

But when in the right location, beavers can be a benefit. When beavers erect dams along streams they store water, improve water quality, reduce erosion, increase late season flows and create habitat for a wide range of wildlife.

A lot goes into the process of trapping and relocating beavers, and Altermatt has tried over the years to refine that process.

FAMILY FIRST

In most cases, efforts are made to relocate an entire beaver colony from a specific location. A colony consists of male, female and between two and five kits. The young stay with the family for two years, so kits from more than one litter are in the group. The average size of a beaver colony is six.

"Beaver are familial and social animals. Take one from the family and put it in a strange place, the first thing it will likely do is look for its family. It is unlikely it will stay where you relocate it," Altermatt said. "If you transport entire beaver colonies, chances are better they will stay in the new location."

The challenge is housing beavers before putting them in a new area. To solve this dilemma, Game

and Fish utilizes a handful of small, portable trailers to temporarily keep trapped beavers before relocating them. The concept dates back to the 1990s when Mark McKinstry studied and conducted beaver transplant work around the state and had papers published about his work while he was at the University of Wyoming.

Altermatt isn't the only Game and Fish biologist doing this work around the state. When first starting the effort, he borrowed equipment from Travis Cundy, Game and Fish aquatic habitat biologist in Sheridan. But when Altermatt got the equipment, he saw a need for some trailer tweaks.

"When Jerry borrowed my equipment he remarked, 'Boy, there's a lot of room for improvement'," Cundy said.

Beavers need three things from their temporary housing until being relocated: water, food and a protective lodge. With these things in mind, Altermatt set out to design and build his trailer so it would reduce stress on the animals and make them as comfortable as possible until they were relocated in the wild.

Altermatt made a few modifications to his 5-by-10-foot trailer. Much of it has a cage-like look. The trailer is made of aluminum, which is expensive but lighter, more portable and resistant to corrosion. He made the feeding area level with the top of the 100-gallon water tank for easier access. The tank is hinged on one side so that it can be flipped over the side of the trailer to dump out debris and waste after draining the water each day. Next to the feeding area is a lodge box beavers use for shelter. Altermatt said it duplicates a bank den or stick lodge in the wild, which is enclosed. That box can be removed and put in the back of his work truck for relocation.

"It is lower stress for the beaver when you don't have to handle them as much," Altermatt said.

Despite the modifications to his trailer compared to others, there remain some constants with this temporary beaver home such as feeding the beavers and changing the water each day.

The beavers taught Altermatt some things about the trailer, too. During a trapping effort along an irrigation canal near Byron in the fall of 2020, Altermatt captured an adult nuisance beaver. He kept the trailer at the site overnight and tried to catch more of the colony, but the beaver chewed through the wire mesh and got away. Altermatt replaced it with teeth-proof chain-link mesh instead.

Altermatt said beavers do "fairly well" in trailers between 10-14 days, which provides time to capture other members of the family, although it's uncommon to trap an entire beaver colony.

"Catching the first beaver is usually easy and often happens the first night of trapping. Catching additional members of the family becomes increasingly difficult because they get more and more trap shy," Altermatt said.



Jerry Altermatt checks a Comstock trap for beavers on a private ranch near Cody. (Photo by Chris Martin/WGFD)



Jerry Altermatt prepares to release a beaver from a Hancock trap into his custom-designed trailer until he can relocate the beaver to a different area. (Photo by Chris Martin/WGFD)

The best times to trap and relocate beavers are spring and fall. Midsummer is avoided because beavers raise kits at that time, and high temperatures can stress beavers when captured. In the fall, beavers also have to be relocated early enough to build their dams and cache food for the winter. Altermatt also curtails trapping in periods of extreme high and low temperatures to avoid stressing the animals when they are in traps.



Beavers are alert creatures who use their large tails to splash in water to warn of potential dangers. (Photo by Greg Bergquist)



See more kid-friendly content about beavers in the spring issue of *Wild Times* released next month. *Wild Times* is a Wyoming Game and Fish Department quarterly publication for kids, families and educators found online at <https://wgfd.wyo.gov/Education/Conservation-Education/Wild-Times>.

ALL ABOUT WATER

The biggest benefit of beavers — and their handy work — is they help store water. Beavers build dams to create ponds that give them protection from predators, but those ponds provide wetland habitat for birds, deer, moose, amphibians, fish and other wildlife. They also replenish groundwater, filter sediment and excess nutrients from the water and irrigate stream-side vegetation. Ponds also improve an area's resilience to wildfires. Stream segments with beaver-created wetlands are less likely to burn and provide crucial habitat for wildlife following wildfires.

"When a beaver builds a dam it raises the water table. It raises the level of water underground on each side of the stream," Altermatt said. "That's what enables riparian plants like willows and cottonwoods to increase."

Altermatt described a beaver pond as a giant sponge. Ponds absorb water. You see the water in a beaver pond, but Altermatt said most of the water being stored is in the ground between soil particles.

Wyoming typically has spring/early summer runoff from snow melt, and most of that water goes down a stream and eventually out of the state. Beaver ponds help spread water out when flows are high in the spring and low in late summer. Not only does that help reduce stream bank erosion, it also can benefit private landowners.

"From a rancher's standpoint, it provides water for cows as well as water for irrigation," Altermatt said.

Over the last two years, Altermatt has relocated 14 beavers to the LU Ranch near Meeteetse. Donny Love is the manager of the LU Ranch, which is spread across 150,000 acres and includes land along the Gooseberry, Enos, Grass and Little Grass creek drainages. Love said Altermatt contacted him about relocating nuisance beavers to the higher stretches of the creeks on the ranch.

"Whenever we lose our beaver population we'd like to restore them to keep our stream heads healthy, hold back some flood water and get some sediment out of the stream," Love said. "We were more than happy to accommodate the beavers he brought."

"Any time in this country you can hold water back, keep it on the land, improve your riparian areas and raise your water table, those are huge benefits to all wildlife and the cattle business."

Altermatt said success rates of relocating beavers has improved since the 1990s, but it is not 100 percent. Kevin Spence, Game and Fish habitat biologist in Green River, said a lot of thought goes into moving beavers to a new location.

"One thing I've learned is if there are not beavers in a particular location and historically they were, take a close look and make sure there is not a habitat variable keeping them out," Spence said. "Beavers sometimes can use up the available woody vegetation in the first year, and then you're back to square one. If a stream is not in real good shape, not stable and somewhat degraded, you can push that into a situation where you make it worse than it is by putting beavers there. Those dams can breach and create instability in the stream."

Biologists also consider if beavers will stimulate more willow and aspen growth in an area compared to what they use.

"There is more of an art than a science to that," Spence said.

LOOKING AHEAD

Altermatt said one thing that would help in Game and Fish's work with beaver relocations is a permanent facility to keep beavers until they can be put in a new area.

"The trailer works but, by itself, it is not ideal," he said. "With the trailer you are limited to trapping one family at a time. Beavers are very territorial. You can't catch a beaver from one family, put it in the trailer and then catch a beaver from a different family



Beavers not only eat willow and parts of trees, they use them to construct their dams and lodges. (Photo by Dawn Wilson)

and put it in the trailer. They'll fight, and probably to the death."

That limits Game and Fish personnel to trap in one area, put beavers in their trailers and then release them before going to another area. "I can't trap anywhere else because I have no place to put them," Altermatt said.

He said a permanent facility big enough to hold beavers from different families would improve beaver relocation efficiency. It also would allow the possibility to create a pair of male and female beavers from different colonies prior to relocation.

"A permanent facility allows to trap multiple families at a time, and allows you to release more pairs. If you can't catch a pair, you can create a pair," Altermatt said.

Other states have used similar facilities. Washington has used an old fish hatchery for more than a decade to temporarily house trapped beavers before relocation. The Oregon Department of Fish and Wildlife started a pilot program last year to keep trapped beavers at the Oregon Zoo in Portland.

Altermatt has been tasked to help draft protocol for beaver trapping and relocation for Game and Fish, with detailed information on trapping and holding methods, suitable habitat and proper procedures if transmitters are attached to beavers.

Beaver trapping and relocation will continue to be an important part of Game and Fish's work, although there are challenges. It may always be a juggling act for Game and Fish in terms of time, execution and finding suitable habitat. But habitat, and the chance to improve it, remains the key.

"From a habitat perspective, that's about the most important thing we can do with far-reaching benefits to numerous wildlife," Cundy said.

— Robert Gagliardi is the associate editor of *Wyoming Wildlife*.



Game and Fish employees build a beaver dam analog, which simulates the function of a beaver dam. These structures help to store water and can make the area more appealing to beavers and other wildlife. (WGFD photo)

Beaver dam analogs

Beaver dams, when in the right place, provide a habitat boost for wildlife and riparian areas. However, beavers aren't the only ones who can do this.

Wyoming Game and Fish Department habitat biologists often build beaver dam analogs, which are structures that raise stream-side water tables, promote greater riparian vegetation development and entice dam-building by beavers.

"Analogues are intended to make the area more attractive for beavers and increase riparian, woody vegetation such as willow," said Travis Cundy, Game and Fish aquatic habitat biologist in Sheridan. "Our hope is to detain water on the land longer and get more riparian habitat acreage in the long run."

Biologists build analogs by installing a line of posts with a woven lattice of willow branches between. This creates a semi-permeable barrier that is sealed in some areas with sod and mud. They are intended to slow — but not stop

— water movement in small streams, which over time creates conditions that will hopefully attract beavers to naturally populate the area.

In some cases, biologists transplant beavers at analog sites. Experience has shown to keep beavers in these areas, it is best to have a mated pair or several members of a beaver colony.

Cundy said ideal sites for beaver analogs are found along high headwaters of streams on public land, and streams that have been depleted and in need of a boost.

In the summer of 2019, Game and Fish personnel in the Sheridan region teamed with the U.S. Forest Service to construct 10 beaver dam analogs along Grommund and Sourdough creeks west of Buffalo. Game and Fish recently used beaver dam analogs for the Bolton Creek Riparian Restoration Project in the Casper region, which helped minimize sediment dumping into the North Platte River.

— Robert Gagliardi, WGFD