



Better Habitat  
Naturally!

## Beaver: Nuisance or Opportunity ?

**Beaver** are a "Keystone" species that maintain, and are an essential component of, a healthy and productive aquatic ecosystem. The key is - to find ways to alleviate problems beaver may sometimes cause, so they can stay in the habitat where their benefits are many.

If you're having problems with beaver, please read the following information, so you can make a fair, balanced and informed decision before you decide to take action.

### A Bit of History

There were between 60 to 400 million beaver before Europeans immigrated to North America; roughly the equivalent of 10-60 beaver per-mile of stream and river! By the late 1800's, beaver had been trapped and killed to the brink of extinction, which caused the quantity and quality of riparian habitat to decline.

This caused many western states not only to start protecting beaver, but to start relocating beaver back into the exploited areas to improve and restore degraded habitats.

**Note:** It's estimated the West still has only 10% of the beaver it had historically.

**Did you know.** Some hydrologists consider the near extirpation of beaver to be this country's greatest environmental disaster.

### Vital Statistics

**Beaver:** *Castor Canadensis* is the largest rodent in North America. The average weight is 45 to 50 lbs. It's believed beaver mate for life and are monogamous. Beaver have one litter a year; the average is two to four kits. When the kits are born, sometime in May, they weigh a few ounces, their eyes are open, and they are fully furred. Kits nurse about 6 weeks, however, they stay with their parents for two years before they leave home to find a mate, and create a habitat of their own.

**Note:** Four to fourteen days after the kits are born, they start eating tender shoots and leaves; brought to them most often by their father!



Above, beaver kit feeds on willow.

### Let's Do Lunch

Beaver are vegetarians. They will eat a variety of trees including: alder, apple, birch and box elder, but when available, they seem to prefer willow, as well as aspen and cottonwood, which are fast growing. In fact, as beaver prune these trees with their sharp incisors, plant hormones kick in; sending a message to the root system so there's lots of new growth the following spring.



Above, Adult beaver munching on willow.

**Note:** Once beaver have their dams and lodge finished, their tree felling activity slows down; except for in the spring, when they're repairing dams or adding on to their lodge, and in the fall when they gather food to make a cache, (food supply) for winter. During the summer, beaver eat forbs (terrestrial herbaceous plants), shrubs, even algae, as a major part of their diet.



**Myth:** Beaver do not carry mud on their tail, or use their tail to pat mud on their dams. They use their hands; which are almost as dexterous as ours.



### Benefits of Beaver!

They create wetlands, help prevent soil erosion, promote biodiversity, and, improve water quality and quantity, which provides fish and wildlife habitat while enhancing forage and cover for livestock and wildlife. Water quality is also improved when the rich soil/sediment, that would otherwise wash down stream, instead settles to the bottom of the pond, and is trapped behind the dam. A network of beaver dams can help reduce high flows and downstream flooding.

**Did you know.** . . . It's estimated that 85% of wildlife in the West, at some point in their lives, depend on the habitat that beaver create.

### Solutions. . . that are more than a band-aid.

**Protecting trees:** Use 4 x 4 inch, *heavy gauge* - welded wire, never chicken wire, to create a cylinder/cage, at least 2½ to 3 ft. high, around the trunk of the tree. Give the tree room to grow, by leaving at least a foot between the wire and the tree. Fasten the sides of the cylinder together: use the prongs on one side, bend them into hooks, connect them to the other side, then pinch them tight with pliers. For extra stability, if needed, cut the horizontal wire from the bottom of the cylinder, which creates prongs. Using your foot, push the prongs/cylinder into the ground to stabilize it.

**Note:** Beaver and trees have evolved together over thousands of years. Many trees benefit from the pruning action of the beavers' teeth; it causes the trees to come back faster, healthier and stronger. Therefore, it's recommended that only the large, aesthetically valuable trees be wrapped.

**Fact!** The largest beaver on record was captured in Wyoming, in 1938, and weighed 115 lbs.!



### Is a flow device the answer?

"What it comes down to is. . .who's smarter, you or the beaver? An effective flow device takes commitment. But the beaver, the water they provide, and the rich habitat they create, represent a great ecological opportunity and are worth that commitment". . . Skip Lisle, Beaver Deceivers International.

There are two basic forms of flow devices: pipe systems and fence systems. Each requires quality materials and a site specific design to be successful.



Each fence system or "Beaver Deceiver" is different because each *site* is unique! That's *one* of the reasons they work!



Skip Lisle, Beaver Deceiver inventor, sits on the Beaver Deceiver he installed in Rocky Mountain National Park in 1999.

Perhaps a pipe system, pictured below, or as Skip calls it, a "Castor Master," will do the trick. These devices will maintain water level in a beaver pond, and help prevent flooding.



**Important.** . . If you try to cut corners when building a flow device, you'll be setting yourself up for failure. It's important to recognize that not only is the environment harsh, but streams are in a dynamic state of equilibrium, and each site is unique. This means a good flow device is never "cookie cutter", and using quality materials is a must! And, if you've had one installed, or tried to do it yourself, and it's *not* working, it either *wasn't* done correctly, or, it might simply need a little tweaking. **The fact is.** . . not only do flow devices work, they're cost effective!

To get it right, call Skip Lisle @ (802) 843-1017, e-mail, [skiplisle@vermontel.net](mailto:skiplisle@vermontel.net). Or, contact Tippie, @ (303) 935-4995, email, [wildlife2000@comcast.net](mailto:wildlife2000@comcast.net)



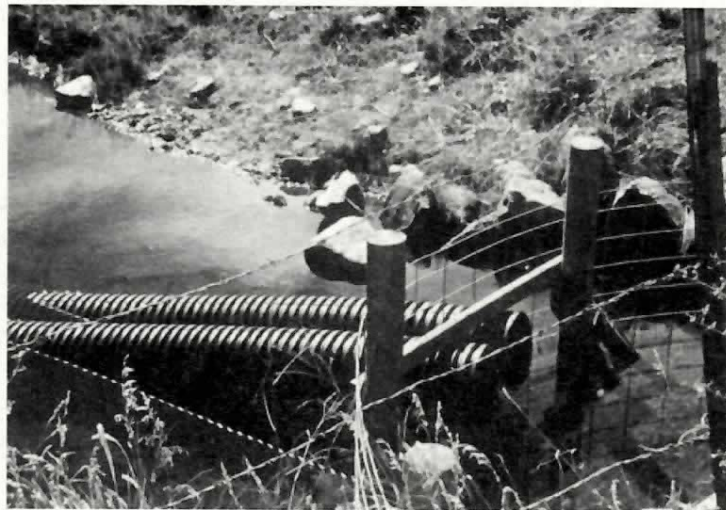
**Be Aware!** To prevent future problems when solving wildlife conflicts, be sure to consider the ecosystem, and the wildlife, so whatever you decide, they can function and live as nature intended. When we try to change natural processes or influence needs of wildlife to fit human "tastes," problems eventually arise that you, or someone else, will eventually have to pay for - one way or another.



### *Live-trapping vs Kill-trapping?*

As far as effectiveness, they're the same: removing beaver from a natural habitat simply creates a void that other beaver will eventually fill; it's a "band-aid" approach. If done correctly, however, live-trapping is humane. **Note:** Kill-trapping is not only cruel, it's a *self-perpetuating* way to manage furbearers: as harvest rates increase, the number of kits born also increases (Kafcas 1987); when a beaver population is highly exploited, the reproductive rates are the greatest! For this reason, Wildlife 2000 works to provide a variety of solutions for wildlife conflicts.

Kafcas, E.N. 1987. Census and exploitation of a discrete beaver population in Michigan. Master's thesis. Central Michigan University, Mount Pleasant.



It's the placement of the pipe, or pipes, pictured above, that dictates the level of the water. The Castor Master can also be used in beaver dams to control the level of the water in a pond.

*If* relocation is the only option, you must have approval from the Colorado Division of Wildlife if you want to do it yourself. Wildlife 2000 has a "Letter of Authority" from the CDOW to live-trap and relocate beaver. However, there are live-trapping ethics we adhere to, also the rules in the "Letter of Authority" we must follow. Our live-trapping season is between June 1st and September 1st. If it's a family we're relocating, however, we wait until the second or even third week of June to start; to give the kits time to be weaned. We always try our best to live-trap the whole family so they can be relocated together. This is not only the right thing to do for the beaver, but there's a better chance the beaver will stay where you put them when the family is together.

## *Please, do it right or, don't do it!*

**Wildlife 2000** only relocates beaver to places where they're wanted and needed; for the benefits they provide for the landowner, habitat and other wildlife. And, only to locations that have been approved by the CDOW. We avoid relocating beaver to sites where beaver are already living. Beaver are very territorial, and we wouldn't want to impose new beaver into a habitat already occupied. That wouldn't be fair to the resident beaver, or to our beaver. It's our ethics that probably contribute most to our success.

Once the beaver are removed, **Wildlife 2000** will work with the land owner to create a site where beaver don't want to live. This usually involves something as simple as wrapping trees or if there's a culvert, installing a flow device.

**For** more information on beaver, live-trapping and relocating, or flow devices call: Tippie, (303) 935-4995 e-mail: wildlife2000@comcast.net or, Skip Lisle, Beaver Deceivers International at: (802) 843-1017, e-mail: skiplisle@vermontel.net. Or go to: beaverdeceivers.com

## *Let's Recap. . .*

### **Common Conflicts and Solutions:**

- Beaver plugging a culvert: A correctly built and installed flow device should solve the problem.
- Water in a beaver pond causing flooding: Here we suggest the flow device called "Castor Master," This lets you control the water level.
- Beaver taking trees: Wrap esthetically valuable trees using a heavy gauge wire mesh.

### **Benefits of Beaver:**

- Beaver-created dams slow down water velocity and help prevent soil erosion.
- Beaver dams recharge groundwater storage.
- Beaver dams reduce sedimentation and improve water quality.
- Beaver create wetlands and improve riparian habitat, not just for all kinds of wildlife including birds, fish, insects and other mammals, but livestock!
- Beaver create habitat for endangered wildlife and plants and promote biodiversity.
- 85% of all wildlife, at some point of their lives, depend on beaver created habitat.

## **Nuisance or Opportunity - It's All Perception!**

Please remember, beaver are limited by the parameters of the very important and specific niche they've been given to fill. Only humans have free will, or the ability to be flexible in our behavior and building practices. And, our *only* limitations are our imagination and inventiveness. It's imperative, when we decide to move to a natural area, that we educate ourselves, so we don't ruin and destroy the natural processes and wildlife habitat most of us are moving there to enjoy.

**The fact is. . .** you can prevent most beaver conflicts by being proactive, and taking the animals' behavior/needs into consideration when building homes, roads and culverts, or planting landscapes. The goal in preventing and solving conflicts with beaver is to eliminate the need to relocate or kill them, so the integrity of the aquatic/riparian habitat can be maintained in an optimum state; for the benefit of the wildlife and land owner. Remember, however, in an optimum state, things are never static; they ebb and flow and change. That's what makes natural areas so vitally alive, interesting, intriguing and wondrous. Beaver make it happen!



After being live-trapped with other members of her family, Sherri Tippie, President of **Wildlife 2000**, gives the beaver above a hug before releasing her into new habitat. Wouldn't it be wonderful if all beaver conflicts had such a happy ending!

*"The only thing constant in Nature is change"*

For more in-depth information call: Tippie, (303) 935-4995 e-mail: wildlife2000@comcast.net