



What Good Are Beavers?

Most people only become aware of beavers when they are a nuisance, but beavers play an important role in the ecology of wetlands, and biologists classify beavers as a Keystone species? Beaver ponds create wetlands which are among the most biologically productive ecosystems in the world. They increase plant, bird and wildlife variety, improve water quality, and raise fish populations. This one species supports hundreds of others.

How is this possible? By opening the tree canopy, sunlight reaches the water and triggers an explosion of biological activity. Algae and aquatic plants grow in the sun drenched, nutrient rich water. This organic material supports microscopic organisms, which are eaten by a variety of invertebrates. These become food for fish, birds and mammals. An entire food chain is created in a beaver pond.

While infamous for killing trees, beaver dams actually create diverse habitats. Grasses, sedges, bushes and saplings grow on the perimeter of the pond. These plants provide food and cover for foraging animals.

Beaver ponds become magnets for a rich variety of wildlife. From important game species like wood duck, mink and otter, to vulnerable anadromous fish like rainbow smelt, steelhead and salmon, biodiversity thrives due to beaver ponds. Beaver dams also protect downstream spawning areas from sedimentation, and create cool, deep pools which increase fish populations.

How do dams affect water quality? They actually *improve* flow and quality. By functioning as natural sponges that store runoff water and slowly release it, they reduce downstream flooding and erosion. The algae and plants in the pond improve water quality by absorbing dissolved nutrients, processing organic wastes, and detoxifying runoff toxins (e.g. heavy metals, pesticides and fertilizers). These wetlands serve as the "Earth's Kidneys".

Beaver ponds also recharge our drinking water aquifers, stabilize the water table, and better maintain stream flows during droughts. Beavers are even being reintroduced around the country to improve arid lands.

Beavers are sometimes regarded as pests, but the in truth there isn't a single species that will better benefit your watershed. Although they can present a challenge, by using flow devices you can control problematic flooding and reap countless environmental rewards. Beavers really are "Worth A Dam".



Pond Control



Where flooding from a free-standing beaver dam threatens human property, health or safety, a pipe system, such as a Flow Device can be an extremely effective solution. If properly designed and built, a flow device will create a permanent leak/flow through the beaver dam that the beavers cannot stop. They eliminate the need for repeated trapping despite the presence of beavers.



There are various systems that control the flow of water in a stream or river, and in order for these pipe systems to work, they must be designed so that a beaver cannot detect the flow of water into the pipe. Some flow devices work by surrounding the submerged intake of the pipe with a large cylinder of fencing to prevent the beavers from getting close enough to the intake to detect water movement. As a result, the beavers do not try to clog the pipe, and maintenance is rarely needed. Usually a pond depth of at least three feet is required for this type of device to function properly.

The height of the pipe in the dam determines the pond level (see diagram). Water will flow through the pipe unless the pond level drops below the peak of the pipe. The pipe is set in the dam at the desired pond level, and can be adjusted up or down if desired.

When installing a pipe system it is very important to lower a pond only enough to protect human interests. The more a pond is lowered the more likely it is beavers will build a new dam downstream to render the pipe ineffective. Lowering a beaver pond by up to one vertical foot is generally not a problem.