

What Good Are Beavers?

Most people only become aware of beavers when they are a nuisance, but biologists classify beavers as a keystone species. The wetlands they create are among the most biologically productive ecosystems in the world¹. Beaver ponds increase plant, bird and wildlife variety², improve water quality³, and raise salmon and trout populations⁴. This one species is the key to supporting hundreds.

How is this possible? While infamous for killing trees, beaver dams actually create diverse habitats. By opening the tree canopy, sunlight is able to reach the water and triggers an explosion of biological activity. Grasses, sedges, bushes and saplings grow on the perimeter of the pond. These plants provide food and cover for foraging animals. Meanwhile, 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, and a host of birds and mammals. An entire food chain is created by a beaver pond.

Beaver ponds then 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, all these creatures and more thrive due to beaver ponds. Beaver dams protect downstream spawning areas from sedimentation, and create cool, deep pools which have been proven to increase salmon and trout populations.

Don't dams affect water quality? They actually *improve* flow and quality, functioning as natural sponges that store runoff water and slowly release it. This allows suspended particles in the water to settle, and reduces downstream flooding and erosion. They function as "Earth's kidneys", where 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). 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 have long been regarded as pests, but the in truth there isn't a single species that will better benefit your watershed. Although they might be a challenge, by using the tools in this DVD, you can control problematic flooding and reap countless environmental rewards. Beavers really are "Worth A Dam".

¹ Baker, B. W., and E. P. Hill. 2003. Beaver (*Castor canadensis*). Pages 288-310 in G. A. Feldhamer, B. C. Thompson, and J. A. Chapman, editors. *Wild Mammals of North America: Biology, Management, and Conservation*. Second Edition. The Johns Hopkins University Press, Baltimore, Maryland, USA.

² Cooke, H., Zack, S. (2008) Influence of beaver dam density on riparian areas and riparian birds in shrubsteppe of Wyoming. *Western North American Naturalist* Vol (6) No 3.

³ P. Collen & R.J. Gibson (2001) The General Ecology of beavers. *Reviews in Fish Biology and Fisheries* vol(10) 439-461

⁴ Langcore, T., Rich, C. & Müller-Schwarze, D. (2006) Management by Assertion: Beavers and Songbirds at Lake Skinner (Riverside County, California) *Environmental Management* Vol 39 (4).

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