

## WHAT BEAVERS DO FOR WATERWAYS<sup>a</sup>

Beavers are as much a part of the waterways as the water itself. There is no need to defend their niche in nature, but if one feels compelled to do so, the following provides some of the benefits to all.



### **1. CONSERVE WATER**

Beavers make many small dams, each based on hydrological principles and maintained regularly so that they hold back water while allowing excess to seep through or flow over. Water impounded behind their dams in rainy times is held in reserve for times when there is no rain.

### **2. PREVENT FLOOD AND DROUGHT**

Water held back along the course of the stream descends in steps over a series of baffles, thus avoiding flooding during sudden or prolonged rains or periods of rapid snow melting. Floods are thus prevented, and the droughts that follow (because the water has all rushed away) are minimized.

### **3. CONTROL SOIL EROSION**

The reservoirs created by beaver dams slow the flow of water, lessening erosion. In addition, beavers spend much time shoring up the banks of streams by dredging mud and debris from the bottom, swimming with it one double handful at a time, and, after squeezing out excess moisture, depositing it on the bank. These shoreline chores are carried on continuously and persistently.

### **4. KEEP WATERWAYS OPEN**

Beavers constantly deepen their underwater channels. Their work maintains the waterways in a condition of openness so that flow is not impeded by silting. They must have deep water for safety and are tireless in this aspect of their work.

### **5. CONTROL OF AQUATIC GROWTH**

Beavers not only eat the bark and leaves of certain trees, they also feed on aquatic growth, including algae. Pickerel weed is a favorite food, and they also enjoy roots, stems, leaves and flowers of waterlilies and other plants. They slurp up algae like green spaghetti and graze on streamside plants such as marsh purslane. Often their food is alders and other shrub-like plants that tend to clog streams.

### **6. THIN OUT TREES**

The favored food trees of beavers are poplar and aspen. Beavers also feed on swamp magnolia, swamp maple, birch, sweet and sour gum and other trees, including an occasional oak, cherry or pine. They prefer to cut trees close to water, thus keeping trees along the waterways thinned, while keeping the water table high for neighboring forests. Because the poplar has long been considered by people as a “trash tree”, it has become scarce in many places. If allowed to grow, re-introduced if necessary, it would furnish food for the beavers.

### **7. PREVENT FOREST FIRES**

Because beavers convert trickling water into a generous body of deep water, they contribute to its availability for fighting forest fires. The width of the water itself may in some cases halt a fire which could otherwise spread to a farther shore.

<sup>a</sup> Revised 29 December 2016

## **8. ENHANCE HABITAT FOR OTHER WILDLIFE**

Beaver ponds are wonderful habitat for other animals. Wood ducks not only live in the streams beavers provide, they nest in cavities created by large trees girdled and left standing by beavers. Deer and other mammals, as well as a host of bird species, come to ponds and streams to drink. Beavers keep water present in times when streams without them are dry, thus providing constant living conditions for aquatic or semi-aquatic life such as frogs, fish, turtles and snakes.

## **9. KEEP WATER TABLES HIGH**

Not only is the visible water an asset, but the water stored underground as a result of beaver engineering provides a high water table for the entire drainage area.

## **10. PROVIDE AN OPPORTUNITY FOR STUDY AND COMPANIONSHIP**

Beavers are intelligent, gentle and trusting, and to watch their family life can be an enthralling experience. This is the consensus of many people in the US and Canada who have had the privilege of living near beavers and becoming acquainted with them.

While we bemoan the high cost of education, flood and drought insurance and dam maintenance, beavers are being squeezed out of their habitat by development for human homes, businesses, roadways, etc. When they try to live near these places, they are considered a nuisance if they cut down a tree or create a flooded area for their homes.

Trapping beavers is currently legal in New Jersey through the NJDEP Fish and Wildlife permit system. In this enlightened age, trapping should not be a solution to a beaver location problem. Beavers mate for life, love their extended families and mourn their dead. Beavers suffer agonies, both mental and physical, if caught in traps to struggle and drown. If they cannot escape from the trap, or fail to drown, their fate is death at the hands of the trapper.

Beavers maintain the floodplain, which protects us all. They are as much a part of the waterways as the water itself. We human beings are created with a sense of thirst because our bodies need water. It is the same with other

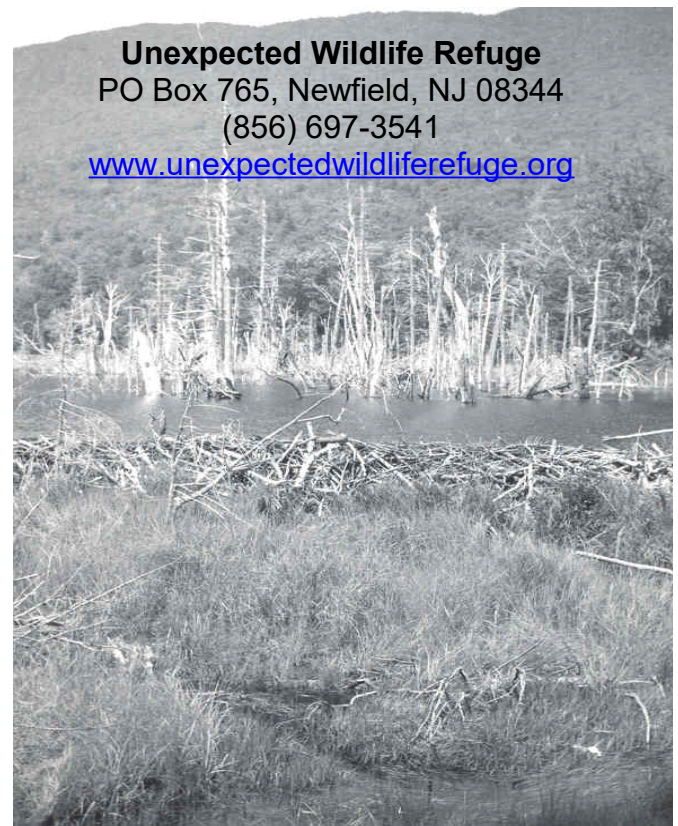
animals, but in addition, beavers are born with a hydrological engineering ability because they need water for safety and to reach food. The streams, in turn, need their care.

For centuries, beavers stood between the birthplace of streams in the mountains and the oceans to which water by its nature flows. Beavers managed the water all along the way, providing for themselves while contributing to the welfare of their total environment and its inhabitants.

In 1911, Enos A. Mills, a pioneer naturalist, wrote<sup>b</sup>:

*"...I hope and half believe that before many years every brook that is born on a great watershed will, as it goes swiftly, merrily singing down the slopes toward the sea, pass through and be steadied in a poetic pond that is made and will be maintained by our patient, persistent, faithful friend the beaver."*

With your help, we can make Mills's dream come true.



<sup>b</sup> Mills, Enos A. 2013. "The Spell of the Rockies." Project Gutenberg Ebook. Accessed 28 December 2016. <https://www.mirrorsservice.org/sites/gutenberg.org/4/2/0/4/42042/42042-h/42042-h.htm>