

A Closer Look: Beavers as Superheroes of Water Quality

Basic beaver facts



Primarily wake at dusk and are active at dawn—occasionally seen during the day.



Like all rodents, beavers have large front teeth that are always growing—they must keep them trimmed by gnawing wood!



Beavers eat bark and cambium (the softer growing tissue under the bark of trees). Their favorites include willow, maple, poplar, beech, birch, alder, and aspen trees.



The lodge can have several underwater entrances to keep out predators, with a large, dry, well insulated room inside that is used as a nursery and haven.



Not good climbers.



Form monogamous pairs and usually live in family groups of up to 8 related individuals called colonies.



To warn of danger, beavers slap their tails against the water, creating a powerful noise.



Challenges of beavers on the landscape

- Tree damage
- Reduced stormwater drain and culvert function
- Flooding concerns
- Loss of designed water body function

Key to success – Work with beavers, not against them!

- Destruction of the dam does not work since beavers will simply rebuild it.
- Non-lethal options (shown on next page) allow for beaver colonization and improved ecosystem services.

Benefits of beavers on the landscape

Increased water storage **increases resiliency** to extreme weather events

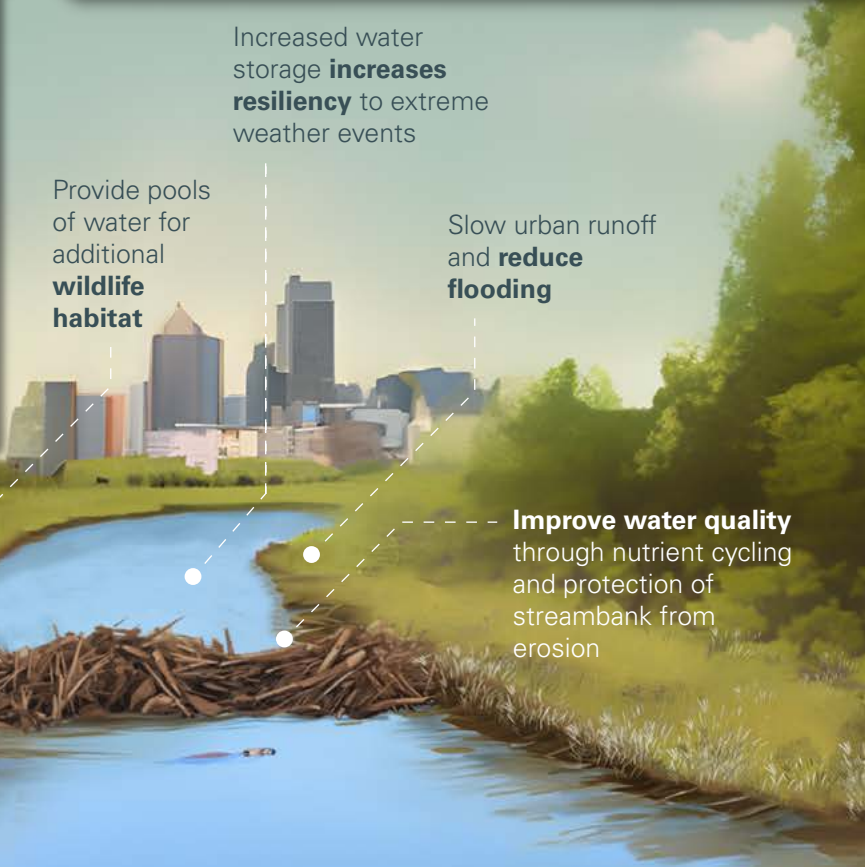
Provide pools of water for additional **wildlife habitat**

Slow urban runoff and **reduce flooding**

Improve water quality through nutrient cycling and protection of streambank from erosion

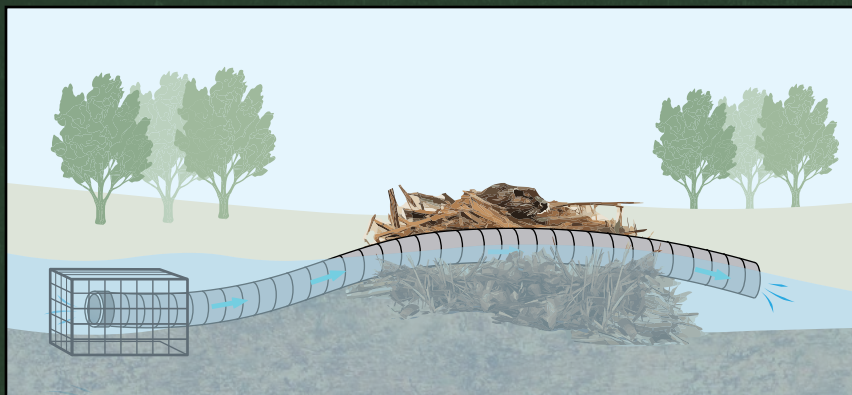
Did You Know?

Most Iowa beavers establish dams but not lodges due to river structure

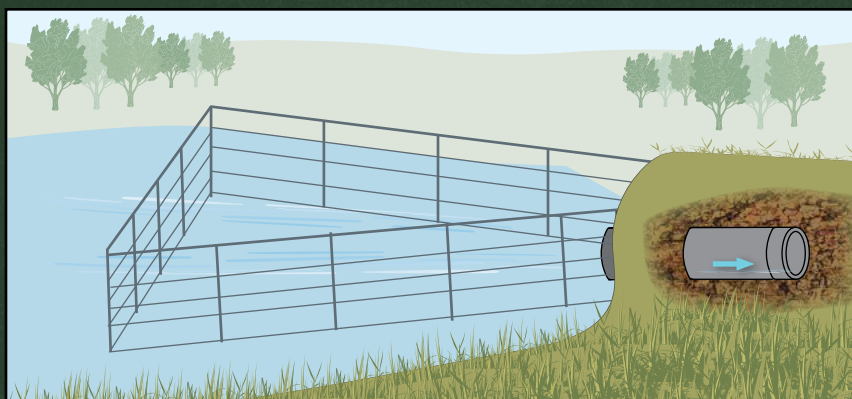


Best management practices

Keep storm culverts and storm drains clear to limit flooding.



Deceiver on upstream main dam (shown above) allows water to flow through dam



Exclusion devices (shown above) – constructed fencing to keep beaver activity away from culverts and storm drains

High flow events (precipitation $>1.5''$ in 24hr) will likely drive sufficient stream power to breach the chain of dams

Protect trees:



Frequently monitor trees for damage—larger or more desirable trees should be protected before damage occurs:



20 oz bottle mason sand or 1 gallon tree paint



Spicy pepper in oil



Fencing – welded wire, NOT chicken wire



Iowa Wildlife Conflict Resolution Contacts by County

naturalresources.extension.iastate.edu/contacts/wildlife-conflict-resolution

Additional Resources:

Iowa Learning Farms Webinar: Beaver on the Des Moines Lobe: Impacts on Water Quality and Sediment Transport: vimeo.com/showcase/10108315/video/823480295

Iowa Learning Farms Virtual Field Day: Beavers: Superheroes for Water Quality?: iowalearningfarms.org/resources/field-day-beavers-superheros-for-water-quality