

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

- Crop and tree damage
- Tile drainage backflow
- 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

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

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

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

Did You Know?

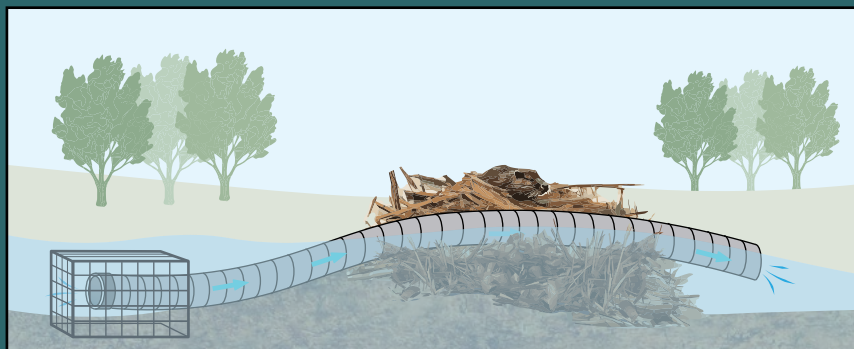
Most Iowa beavers establish dams but not lodges due to river structure



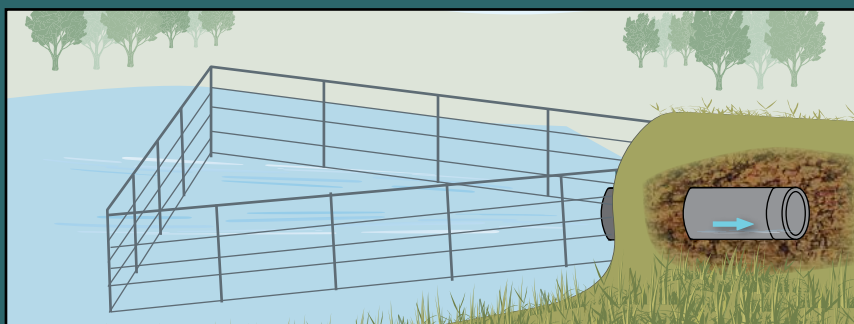
Best management practices

Reduce crop damage: Strategic tree planting/riparian buffer to support beaver habitat and amplify environmental benefits

Limit flooding potential and tile drain backflow:



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 tile outlets

High flow events (precipitation >2" 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