

Beaver Impacts, Management Options, and Regulatory Considerations

NYS Federation of Lake Associations



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Wildlife Services:

Our Mission: To provide Federal leadership and expertise to resolve wildlife conflicts and create a balance that allows people and wildlife to coexist peacefully.

We are:

1. Non-regulatory (we don't enforce laws, just warn you about them)
2. Federal
3. A Cooperative, User Fee Agency
4. Develop Wildlife Management Programs

General Biology

- *Castor canadensis*
- New York State mammal
- Average 25-65lbs, world record beaver is 110lbs from Michigan

Beaver Social Groups

- Females have between 2 and 7 kits every year in early summer
- Kits live with the parents for 2 years
- Colonies can have 10+ individuals

Importance of Beavers to the Environment

- Ecosystem Engineers and Keystone Species
 - They pond water which is used by a multitude of species
 - Their ponding slows down and holds floodwaters
 - They can change the forest composition



World's largest beaver dam in Alberta
Over 17 acres of water
Dam is 775 meters long, over 2500 feet

Beaver Damage

- Gnawing on trees or crops
- Flooding trees, crops, property, or transportation corridors (roads, airports, railways) through dam building
- Degrading and destabilizing banks

Issues they can cause



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Regulatory- Permits

- NYSDEC issues permits for nuisance beavers
 - Beaver Removal permit allows for the lethal removal of beaver on the permittee's property outside of the regulated trapping season
 - Dam Removal permit also allows for lethal removal of beavers, plus the breaching or removal of a beaver dam no more than 2 years old.
 - Culvert Maintenance permit allows the permittee to address flooding concerns by removing dams and other beaver-related materials that are immediately adjacent to culverts and bridges. This permit type is only available to certain organizations and allows for work to be done on any property the permittee owns or maintains a right-of-way on
 - Dams over 2 years old require a special permit
- Recreational trappers must get a trapping license

NYSDEC Nuisance Beaver Permit Application

While beaver are a valuable wildlife resource, they also cause significant problems. DEC strives to balance the costs and benefits of beaver by regulating beaver population levels according to the intensity of human land use. If you are experiencing property damage related to beaver (including but not limited to: flooding of land, trees killed or damaged, flooding of roadways, contamination of water supplies, major debris problems, etc.), use this application to see if you may be eligible for a Nuisance Beaver Permit.

Permit Information ▾

Applicant Info ▾

First & Last Name. For organizations, please put the name of the main contact person.*

First & Last Name

Castor Canadensis

Mailing Address*



Phone Number*

123-456-7890

Email*

Beaverproblems@gmail.com

Confirm Email*

Confirm Email*

Beaverproblems@gmail.com

Organization*

Other Organization ▾

Private Landowner

Town, County, or State Agency

Other Organization

Which type of nuisance beaver permit is your organization applying for?*

Which statement best describes the work your organization would like to do?

- ☐ Dam alteration: I would like to remove or breach a beaver dam or install a water level control device (this permit type also authorizes lethal removal of nuisance beavers).
- ☐ Culvert maintenance: I would like to remove beaver-related materials (sticks, mud, dams, etc.) immediately adjacent to culverts and/or bridges and/or completely within the maintained road ditch (no more than 100 ft from the shoulder of the road and within the legal ROW) to maintain and protect human health and safety threatened by flooded roads or property. This permit type also authorizes lethal removal of nuisance beavers.
- ☐ Beaver removal: My organization would like to lethally remove nuisance beavers.

Submit

Non-Lethal Methods of Mitigating Damage

- Leaving beavers alone
- Water Control Devices
- Tree fencing/protection

Tree Protection

- Fencing or flashing are the most effective
- Research has shown that textural repellents (e.g., masonry grade sand and latex paint) may reduce tree damage.
- Treating trees with red maple extract inhibited feeding by beavers
- Predator odors have also been shown to have some effect at deterring beaver



APHIS/WS/NWRC



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Water Flow Device Designs

- Deceiver Fence
- Fence and Pipe
- Pond Leveler
- *Monitoring & Maintenance*

Deceiver Fence

- Ideal for shallow water (3' or less), fence should extend 2' above water surface
- 40' minimum of linear fence to protect culvert
- Floor or apron
- Shape – trapezoid, long rectangle, other
 - Discourage damming
- Maintenance (*clean debris annually on some*)





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Fence and Pipe

- Combines a culvert protection fence and a pond leveler
- Site should be able to handle a beaver pond of at least 3' water depth
- Stream channel/pond should be over 5' wide to fit the intake cage
- Pipe size





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Pond Leveler

- Water in pond/stream where intake cage is located:
 - 3' deep or more
 - 5' wide or more
- Lowering water depth
 - 1 foot – usually safe
 - 2 feet – round of trapping may be necessary prior to installation
- Pipe size





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Maintenance

- Annual inspections
- Maintenance
- Repair
- Modification
- Replacement



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Materials

- Concrete wire mesh (epoxy coated or galvanized)
- Metal posts (U-channel or T-posts)
- Plastic culverts (12-18" diameter, 20 or 30' long, sometimes doubled)
- 9-14 gauge wire (hog rings an option)
- Hand/power tools
- PPE



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Fort Drum Beaver Levelers



Removing Dams



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Relocation of Beavers

- NYSDEC does not issue permits for relocation of live beavers
 - Territorial, existing beavers will chase out new beaver
 - Cannot be relocated near roadways where they could cause new flooding
 - Generally, they travel to find new territory, and usually are killed on the way by cars or predators

Lethal Removal

- Shooting
- Trapping
 - Live Traps
 - Body Grip Traps
 - Foothold Traps
 - Cable Restraint Traps
- NYSDEC prefers any beavers trapped are done during recreational trapping season

Shooting

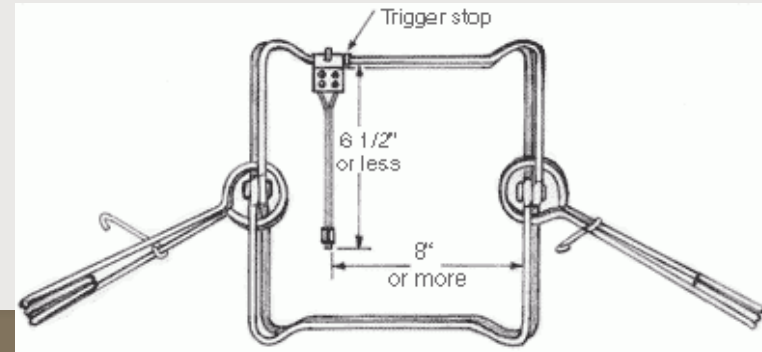
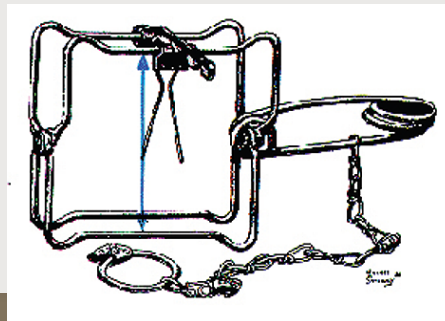
- No hunting season for beavers
 - Can only be done under a Nuisance Beaver Permit
- Firearms may not be lawfully discharged within 500 feet of a farm, building, or dwelling without the consent of the owner; within 500 feet of any school or playground; over any public highway; or in a municipality with a law forbidding it.
- A shotgun with non-lead #4 buck shot is recommended by NYSDEC

Recreational Beaver Trapping in NY



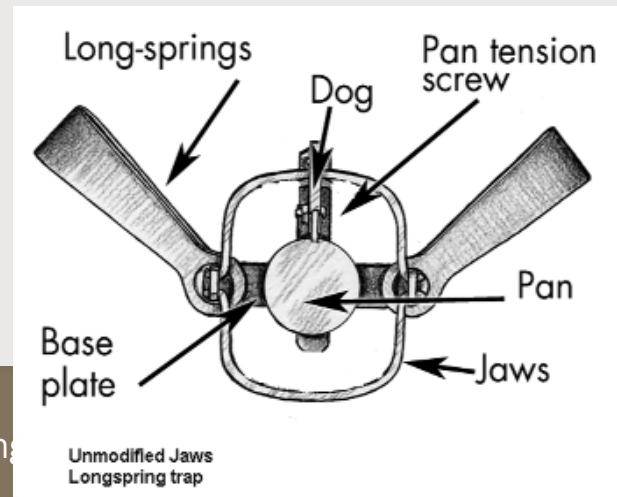
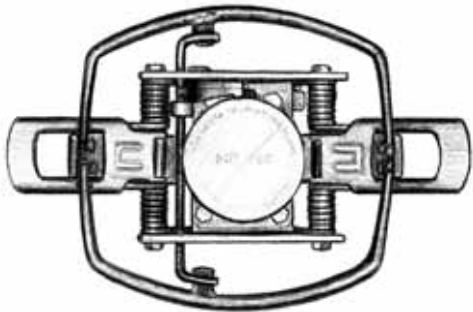
Body Grip Traps

- Body-gripping traps over 7.5in used to capture beavers must be set in water and cannot be used on land
 - They do not have to be fully submerged, but care must be taken not to set these traps in areas frequented by pets or children.
- In Southern Zone, traps over 8.5in must have offset triggers to avoid otter capture outside of otter season



Foothold Traps

- Beaver's have an extra-large hind foot, most beaver trappers use foothold traps with an inside jaw spread of $6\frac{1}{2}$ – $7\frac{1}{4}$ in
- $7\frac{1}{4}$ inches being the maximum foothold trap allowed under NY state law
- Traps larger than $5\frac{3}{4}$ inches may only be set underwater



Live Traps

- Beavers cannot be relocated
- Used when non-target species or pets are at risk of capture



Cable Restraints

- In NY, cannot be used to recreationally trap
- May only be used under a Beaver Damage Permit from NYSDEC
- User must attend a NYSDEC Cable Restraint Training



Useful Websites

- <https://dec.ny.gov/nature/animals-fish-plants/nuisance-wildlife-species/beaver>
 - Beaver Damage Control Techniques Manual
 - Beaver Nuisance Permits
- <https://www.aphis.usda.gov/wildlife-services/publications/technical>
 - Beaver WDM Technical Series
- [https://www.fishwildlife.org/application/files/2615/2105/0542/Beaver BMP 2016.pdf](https://www.fishwildlife.org/application/files/2615/2105/0542/Beaver_BMP_2016.pdf)
 - BMP for Trapping Beavers in US, Association of Fish and Wildlife Agencies

Questions?

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