



Living with Beavers on Private Lands - Mitigation Strategies

Jakob Shockey







1. Deal with the issue yourself

Landowner with beavers



Landowner with beavers

1. Deal with the issue yourself
2. Hire a private company
(ODFW-licensed Wildlife Control Operators)



Landowner with beavers

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2. Hire a private company
(ODFW-licensed Wildlife Control Operators)
3. Ask for help from the State or Feds
(ODFW or USDA Wildlife Services)



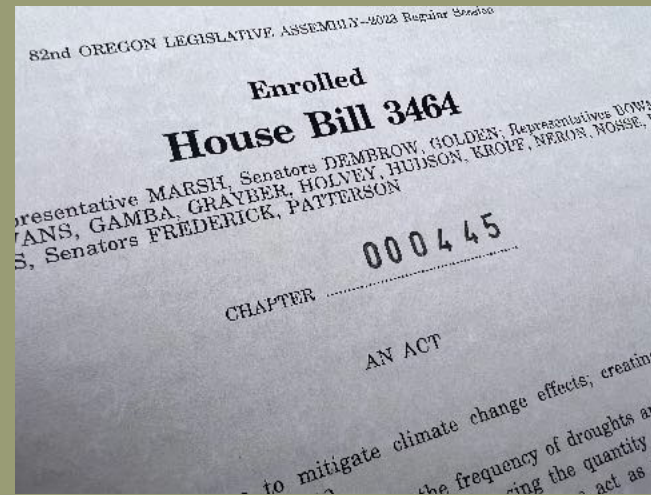
Landowner with beavers

1. Deal with the issue yourself
2. Hire a private company
(ODFW-licensed Wildlife Control Operators)
3. Ask for help from the State or Feds
(ODFW or USDA Wildlife Services)
4. Inquire with a place-based organization
(local watershed council, SWCD, or other NGO)



Landowner with beavers

Agents of the landowner



Assistance with

- coexistence solutions
- authorization to trap





Landowner with beavers

Agents of the landowner

Coexistence solutions

Tree Protection:

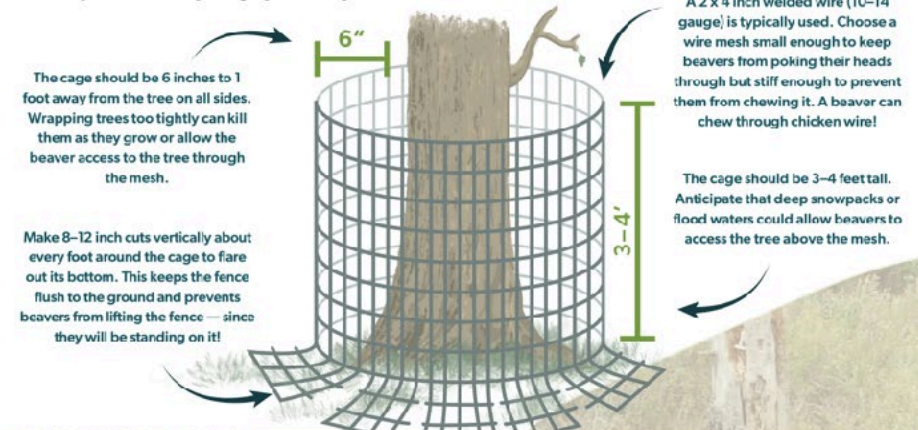
A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are special to us. Tree wrapping with wire mesh cages is an immediate and cost-effective solution that can protect mature trees along waterways while allowing beavers to remain in their habitat.

The specifications for wire mesh cages can vary, but all involve wrapping a heavy gauge wire around mature trees to prevent beavers from accessing the trunk. The goal of tree wrapping is to block access to certain trees and should not be used to stop beavers from taking any trees at all. Wrapping too many trees can deprive beavers of enough food to survive the winter, resulting in death, abandonment of the site, or more persistent attempts to get past the cages.

Innovative new approaches

Tree wrapping is not the only tree protection method available. Alternative approaches involve coating the lower portion of the tree trunk with either a sand paint or sand adhesive. Although these methods are generally less reliable, they can be more aesthetic. Use only paints or adhesives that aren't toxic to life.



Will tree wrapping work for you?

Tree wrapping works best in places near water sources where a few large, key trees are prioritized for protection. Certain tree species, like willows and aspen, have co-evolved with beavers. They are well-adapted to being cut and quickly regenerate, often sending up many new shoots in response. For the best chance at success, wrap only a selection of large trees with a focus on ornamentals or species that do not regenerate easily. For situations where every tree requires protection (like in orchards), refer to the crop protection infosheet.

For more information and references visit: projectbeaver.org





Landowner with beavers

Agents of the landowner

Coexistence solutions

Tree Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are valuable to you. Tree wrapping with wire mesh provides an immediate and cost-effective solution that can protect trees near waterways while allowing beavers to remain in their habitat.

The specifications for wire mesh wraps vary by tree size. Wrapping a tree trunk with wire mesh is a proven method for protecting trees from beaver damage. The goal of tree wrapping is to keep beavers from cutting trees and should not be used as a long-term solution for tree protection. Wrapping temporary trees can degrade beaver's ability to maintain the river, resulting in bank erosion and the loss of their natural habitat.

Innovative new approaches

The wrapping is not the only tree protection solution available. Other approaches include installing a guard rail or a wire mesh cage around the tree trunk, or using a wire mesh cage around the tree trunk. These methods are generally more expensive and require more maintenance than tree wrapping.

Will tree wrapping work for you?

Tree wrapping works best in places where beavers are most active and where trees are most valuable. It is most effective for protecting trees from beaver damage. It is not a long-term solution for tree protection. It is most effective for protecting trees from beaver damage. It is not a long-term solution for tree protection.

The more information you have about beaver damage, the better you can protect your trees.

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Crop Protection:

A beaver coexistence tool

Beavers provide many ecological benefits but can be frustrating for landowners if they start feeding on nearby crops. Crop protection using electric fencing is an immediate and cost-effective solution that can protect crops near waterways while allowing beavers to remain in their habitat.

Electric fences can be installed temporarily using step-in posts with built-in insulators or permanently using a system of t-posts with plastic insulators. They require both a simple grounding system and a power source—and will function well on either car batteries or a solar panel if AC power is not available.

Understand the risks!

- The low-laying wire can be a trip hazard to people, livestock, and other wildlife. Tie white flagging tape along the top wire to increase visibility.
- During hot and dry summers, electricity can easily start grass fires. Ensure that grass is well trimmed during these periods or consider turning off the fence during active fire bans.
- Consider whether solar panels have a high risk for theft in your area and plan accordingly.

Will crop protection work for you?

Crop protection with electric fencing works very well. In many cases, beavers will not try and return after a single encounter with the fence. Temporary fences can be used for rotating crops or to protect restoration planting. Permanent fences are recommended for orchards and vineyards. Steel mesh fences are also effective at excluding beavers from crops, though more costly. For situations where only certain trees require protection, refer to the tree protection infosheet.

For more information and references visit: projectbeaver.org

PROJECT BEAVER



Landowner with beavers

Agents of the landowner

Coexistence solutions

Tree Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are valuable to you. Tree wrapping with wire mesh provides an immediate and cost-effective solution that can protect trees from beaver damage while allowing them to remain on the landscape.

Innovative new approaches

The wraparound is not the only new approach to tree protection. The wraparound approach is a new method of tree protection that uses a wire mesh wrap to protect trees from beaver damage. This approach is a new method of tree protection that uses a wire mesh wrap to protect trees from beaver damage. This approach is a new method of tree protection that uses a wire mesh wrap to protect trees from beaver damage.

Will tree wrapping work for you?

Tree wrapping works best in places where beavers are a problem, but trees are not protected by the wrap. The wrap is made of wire mesh and is applied to the trunk of the tree. The wrap is made of wire mesh and is applied to the trunk of the tree. The wrap is made of wire mesh and is applied to the trunk of the tree.

Crop Protection:

A beaver coexistence tool

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Pond levelers:

A beaver coexistence tool

The many benefits of beaver ecosystems are harder to appreciate while their dams are flooding roads, crops, homes, or other infrastructure. With coexistence tools, human property can be protected while allowing beavers to remain on the landscape. Pond levelers are an immediate and cost-effective solution that prevent flooding by controlling the maximum water height of the beaver pond. During high flows, excess water moves downstream but during low flows or drought, water is stored in the pond.

The goal of a pond leveler is to set a maximum water height for the pond while minimizing disruption to the beaver family and their habitat. Pond leveling devices use a plastic culvert pipe to create a permanent leak in the dam. The pipe is linked to a caged intake located upstream within the beaver pond. A cage around the intake of this pipe keeps beavers at arm's length, so they do not sense the leak in their pond.

Why use a pond leveler?

- Cost:** The installation and maintenance of a pond leveler can be less expensive than repeatedly removing dams and trapping beavers.
- Ecosystem benefits:** Beavers and their dams improve watershed health and are important for numerous other species including many fish and birds.
- Longevity:** Pond levelers can last 5-10 years or longer if properly maintained.

Will a pond leveler work for you?

Every site with beaver activity is unique. Pond leveler designs can be adapted for different situations, including shallow or narrow sites. However, in all situations, pond levers are most effective when every effort is made to keep the beaver pond as big as possible. Capping the water level too low will force the beavers to move out and create a new beaver dam. For more information, access the *Best Management Practices for Pond Levelers and Culvert Protection Systems: A guide for using flow devices to coexist with beavers* on the Project Beaver website.

For more information and references visit: projectbeaver.org



Landowner with beavers

Agents of the landowner

Coexistence solutions

Tree Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are valuable to you. Tree wrapping with wire mesh cages can be a cost-effective solution. The cages protect trees from being gnawed while allowing sunlight to reach the crown.

Innovative new approaches

The wrap is made of a soft, white, plastic material that is easy to install. It is made of a soft, white, plastic material that is easy to install. It is made of a soft, white, plastic material that is easy to install.

Will tree wrapping work for you?

Tree wrapping works best in places where beavers are active. It is most effective when used on trees that are 1-2 inches in diameter. It is most effective when used on trees that are 1-2 inches in diameter.

For more information and references visit: projectbeaver.org

Crop Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they damage crops. Crop protection using electric fencing can be a cost-effective solution. The fences protect crops from being gnawed while allowing sunlight to reach the crown.

Understand the risk!

Beavers are attracted to crops that are easy to eat. They are attracted to crops that are easy to eat. They are attracted to crops that are easy to eat.

Will crop protection work for you?

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Pond levelers:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they dam up ponds. Pond levelers can be a cost-effective solution. The levelers protect ponds from being dammed while allowing sunlight to reach the crown.

Why use a pond leveler?

Pond levelers can be used to protect ponds from being dammed. They are used to protect ponds from being dammed. They are used to protect ponds from being dammed.

Will a pond leveler work for you?

Pond levelers work best in places where beavers are active. They are most effective when used on ponds that are 1-2 inches in diameter. They are most effective when used on ponds that are 1-2 inches in diameter.

For more information and references visit: projectbeaver.org

Culvert protection systems:

A beaver coexistence tool

The many benefits of beaver ecosystems are harder to appreciate while their dams are flooding roads, crops, homes, or other infrastructure. With coexistence tools, human property can be protected while allowing beavers to remain on the landscape. Culvert protection systems are immediate and cost-effective solutions that can be used to prevent beavers from blocking culverts.

Beavers are attracted to culverts because they are easy to dam. Culvert protection systems can either physically exclude beavers from the culvert or make other damming locations more appealing. They allow beavers to still use the stream as habitat while ensuring the culvert can continue to function normally. Some common designs include the trapezoidal culvert fence, anchor fence, and anchor dam.

Why use a culvert protection system?

- Cost:** Can save money over time compared to repeatedly cleaning blocked culverts and trapping beaver.
- Ecosystem benefits:** Beavers and their dams improve watershed health and are important for numerous other species including many fish and birds.
- Longevity:** Culvert protection systems can last 5-10 years or longer if properly maintained.

An anchor fence prevents beaver from damming the culvert directly but still allows them to dam along the fence.

An anchor dam involves starting a beaver dam at a controlled location, inviting beaver to continue building on it instead of at the culvert.

The trapezoidal culvert fence works by making the culvert a difficult place to dam, promoting beaver to choose a different location.

Will a culvert protection system work for you?

Every site with beaver activity is unique, and culvert protection designs can be adapted for many different situations. In situations where dam height also needs to be controlled, the anchor fence and anchor dam systems can be paired with pond levelers. Depending on the ecology of the location, designs may need modification to facilitate the safe passage of fish and wildlife. For more information, access the *Best Management Practices for Pond Levelers and Culvert Protection Systems: A guide for using flow devices to coexist with beavers* on the Project Beaver website.

For more information and references visit: projectbeaver.org



Stakeholder engagement with place-based “lead entities” on the Oregon Coast:



Landowners, Beavers, and Salmon on the Oregon Coast: Lead Entities Stakeholder Inquiry and Engagement Report¹

Michelle Y. Janning, Ph.D.²
March 2023

Landowner with beavers Agents of the landowner Coexistence solutions

“Resource barriers amidst deep dedication”

Tree Protection: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are profitable or iconic. Tree wrapping with wire mesh helps to create barriers and can be effective against beaver damage to trees and shrubs.

Innovative new approaches

The wrapping is not the only new approach to tree protection. The use of wire mesh to wrap trees is a new approach to tree protection. The use of wire mesh to wrap trees is a new approach to tree protection.

Will tree wrapping work for you?

The wrapping works best in places where water is not a large factor, but it can be used in places where water is a large factor. The wrapping works best in places where water is not a large factor, but it can be used in places where water is a large factor.

Crop Protection: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are profitable or iconic. Crop protection with wire mesh helps to create barriers and can be effective against beaver damage to crops and shrubs.

Understand the risk!

Beavers are known to be a threat to crops. They can be a threat to crops. They can be a threat to crops. They can be a threat to crops.

Will crop protection work for you?

Crop protection works best in places where water is not a large factor, but it can be used in places where water is a large factor. Crop protection works best in places where water is not a large factor, but it can be used in places where water is a large factor.

Pond levelers: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are profitable or iconic. Pond levelers help to create barriers and can be effective against beaver damage to ponds and shrubs.

Why use a pond leveler?

The installation and maintenance of a pond leveler can be a challenge. The installation and maintenance of a pond leveler can be a challenge. The installation and maintenance of a pond leveler can be a challenge.

Will a pond leveler work for you?

Pond levelers work best in places where water is not a large factor, but it can be used in places where water is a large factor. Pond levelers work best in places where water is not a large factor, but it can be used in places where water is a large factor.

Culvert protection systems: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are profitable or iconic. Culvert protection systems help to create barriers and can be effective against beaver damage to culverts and shrubs.

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Will a culvert protection system work for you?

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Pilot Project in Southwest Oregon:



- Capacity to provide technical assistance
- Implement coexistence solutions

Landowner with beavers Agents of the landowner Coexistence solutions

Tree Protection: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they cut trees that are valuable to you. Tree wrapping with wire mesh cages can be a cost-effective solution that can protect trees from beaver damage while allowing them to remain in place.

Innovative new approaches

The wrapping is not the only new approach to protect trees. Other approaches include using plastic sheeting to wrap trees, using wire mesh cages, and using other materials to protect trees.

Will tree wrapping work for you?

Tree wrapping works best in places where beavers are a problem, but it is not a solution for all trees. It is most effective for trees that are 1-2 inches in diameter and are not in contact with water. It is also most effective for trees that are in contact with water, but are not in contact with the ground.

Project Beaver

Crop Protection: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they damage crops. Crop protection with wire mesh cages can be a cost-effective solution that can protect crops from beaver damage while allowing them to remain in place.

Understand the risk!

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Project Beaver

Pond levelers: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they damage ponds. Pond levelers can be a cost-effective solution that can protect ponds from beaver damage while allowing them to remain in place.

Why use a pond leveler?

Cost: The installation and maintenance of a pond leveler can be a significant expense. However, it can be a cost-effective solution that can protect ponds from beaver damage while allowing them to remain in place.

Will a pond leveler work for you?

Pond levelers work best in places where beavers are a problem, but it is not a solution for all ponds. It is most effective for ponds that are 1-2 inches in diameter and are not in contact with water. It is also most effective for ponds that are in contact with water, but are not in contact with the ground.

Project Beaver

Culvert protection systems: A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they damage culverts. Culvert protection systems can be a cost-effective solution that can protect culverts from beaver damage while allowing them to remain in place.

Why use a culvert protection system?

Cost: The installation and maintenance of a culvert protection system can be a significant expense. However, it can be a cost-effective solution that can protect culverts from beaver damage while allowing them to remain in place.

Will a culvert protection system work for you?

Culvert protection systems work best in places where beavers are a problem, but it is not a solution for all culverts. It is most effective for culverts that are 1-2 inches in diameter and are not in contact with water. It is also most effective for culverts that are in contact with water, but are not in contact with the ground.

Project Beaver



Pilot Project in Southwest Oregon:



- Capacity to provide technical assistance
- Implement coexistence solutions



Tree Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they eat trees that are profitable or important. Tree wrapping with wire mesh helps to protect trees from beaver damage and can be effective against beaver damage caused by beaver teeth.

Innovative new approaches

The wraparound wire mesh is a new approach to tree protection. It is made of a heavy-duty wire mesh that is wrapped around the trunk of the tree. The mesh is made of a heavy-duty wire mesh that is wrapped around the trunk of the tree. The mesh is made of a heavy-duty wire mesh that is wrapped around the trunk of the tree.

Will tree wrapping work for you?

Tree wrapping works best in places where beavers are a problem. It is most effective when used on trees that are valuable to the landowner. It is most effective when used on trees that are valuable to the landowner.

Crop Protection:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they eat crops that are profitable or important. Crop protection with wire mesh helps to protect crops from beaver damage and can be effective against beaver damage caused by beaver teeth.

Understand the risk!

Beavers are a risk to crops. They can eat crops and cause damage. They can eat crops and cause damage. They can eat crops and cause damage.

Will crop protection work for you?

Crop protection works best in places where beavers are a problem. It is most effective when used on crops that are valuable to the landowner. It is most effective when used on crops that are valuable to the landowner.

Pond levelers:

A beaver coexistence tool

Beavers provide many ecological benefits, but it can be frustrating when they eat trees that are profitable or important. Pond levelers help to level ponds and can be effective against beaver damage caused by beaver teeth.

Why use a pond leveler?

Pond levelers are used to level ponds. They are used to level ponds. They are used to level ponds.

Will a pond leveler work for you?

Pond levelers work best in places where beavers are a problem. They are most effective when used on ponds that are valuable to the landowner. They are most effective when used on ponds that are valuable to the landowner.

Culvert protection systems:

A beaver coexistence tool

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Why use a culvert protection system?

Culvert protection systems are used to protect culverts. They are used to protect culverts. They are used to protect culverts.

Will a culvert protection system work for you?

Culvert protection systems work best in places where beavers are a problem. They are most effective when used on culverts that are valuable to the landowner. They are most effective when used on culverts that are valuable to the landowner.



Pilot Project in Southwest Oregon:

- Capacity to provide technical assistance
- Implement coexistence solutions

We learned:

- Most landowners needed technical assistance
- Coexistence solutions can be cost-prohibitive for some, but landowners are willing to cost-share

Landowner with beavers

Agents of the landowner

Coexistence solutions

[illegible][illegible][illegible][illegible]





Landowner with beavers

- Cost-share success



Landowner with beavers

- Cost-share success

Wildlife Control Operators

- Primarily trapping



Landowner with beavers

- Cost-share success

Wildlife Control Operators

- Primarily trapping

Place-based organizations

- “Resource barriers amidst deep dedication”



Landowner with beavers

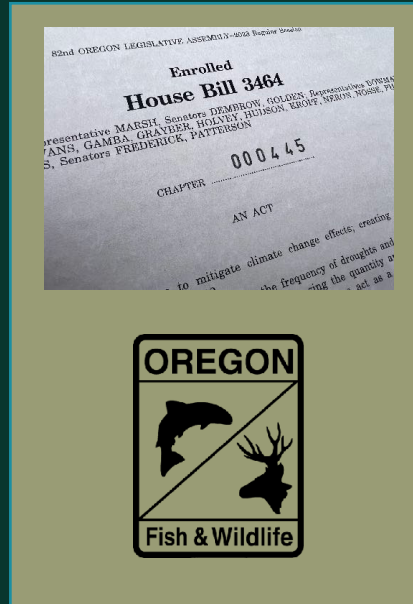
- Cost-share success

Wildlife Control Operators

- Primarily trapping

Place-based organizations

- “Resource barriers amidst deep dedication”



Assistance with

- coexistence solutions
- authorization to trap



Landowner with beavers

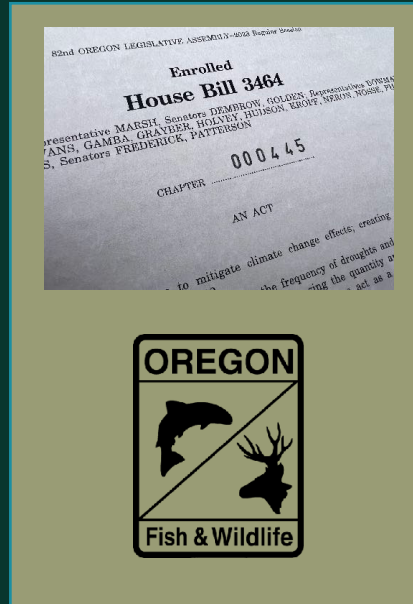
- Cost-share success

Wildlife Control Operators

- Primarily trapping

Place-based organizations

- “Resource barriers amidst deep dedication”



Assistance with

- coexistence solutions
- authorization to trap
- living with beavers grant program fund



Thank you





Questions?



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