

Support for Funding a Nonlethal Beaver Conflict Mitigation Program

The undersigned write to request new federal funding to help states, tribes, agencies, local governments, landowners, conservation organizations, and others invest in effective, nonlethal solutions to reduce property damage caused by beavers. Specifically, we request the establishment of a five-year pilot program that would provide \$1 million in grant funding annually to mitigate beaver conflicts in communities across the United States.

Like humans, beavers survive by manipulating their environments. They fell trees for food and building materials, and construct dams to create ponds that offer protection from predators and serve as pantries to store food. These activities, however, sometimes damage property. Shade and ornamental trees can be destroyed, and impounded water can flood roads, bridges, railways, timber resources, and crops. This damage may cause local governments and property owners to incur significant repair costs.

Thousands of beavers are trapped, snared, and shot each year across the country in an effort to prevent such damage.¹ However, this killing is often unnecessary due to the availability of cost-effective, nonlethal devices that can successfully prevent such damage. For example, trees can be shielded by encircling them with wire mesh fencing or coating their trunks with a mixture of paint and sand that deters beavers from chewing.² Infrastructure and property can be protected from flooding by installing water flow control devices, which allow water to pass through the dam, thus maintaining acceptable water levels.³ Fencing has also proven effective at preventing beavers from blocking culverts, which can damage roads.⁴

These measures are not only dependable, they can also be less expensive than lethal control. For example, a study in Virginia compared the costs of repairing road damage caused by beavers at 14 sites before and after the use of flow devices. The state transportation department saved hundreds of thousands of dollars per year when nonlethal measures were implemented.

Specifically, the “before” costs were more than \$300,000 per year, which included preventive road maintenance, damage repairs, and lethal removal of beavers. By contrast, the cost of installing flow devices was less than \$45,000 and maintenance costs thereafter were \$277 per year.⁵



BEAVER INSTITUTE

Pond leveler



BEAVER INSTITUTE

Culvert-protective fencing

Similarly, a 20-year collaboration between the Town of Billerica, Massachusetts, and Beaver Solutions LLC found that, on average, the cost of trapping and dam breaching was \$409 per beaver conflict site per year, while the cost of installing and maintaining flow devices was \$229 per site per year. By investing in flow devices at sites where they were feasible, Billerica saved its taxpayers \$7,740 per year.⁶

If \$1 million in federal grant funding were made available annually for a five-year pilot program, it could help cover the costs of installing and maintaining mitigation measures in urban and rural areas experiencing beaver conflicts throughout the country—helping to not only protect property, but also save taxpayers and landowners the expense of repairs.

Replacing traps with nonlethal measures would also provide numerous ecological benefits. Beaver-created ecosystems provide habitat for a wide variety of fish, birds, amphibians, reptiles, insects, and mammals, including threatened and endangered wildlife,⁷ and species designated by states as being in greatest need of conservation.⁸ Beaver-dammed riparian areas are three times more resistant to fire than surrounding areas and can provide refuges for wildlife during and immediately after wildfires.⁹ Beaver ponds mitigate the negative effects of climate change by providing deep pools with cooler water,¹⁰ replenishing groundwater and aquifers,¹¹ and storing water to mitigate drought.¹² Beaver dams can also improve water quality by reducing sedimentation and removing toxins from streams.¹³

Further, restraining traps and snares used to capture and kill beavers can cause prolonged pain and unintentionally injure and kill nontarget animals.¹⁴ They are also rarely, if ever, a long term- solution; beavers dispersing in search of suitable habitat can quickly recolonize trapped areas. By contrast, flow devices can provide long-term relief and typically last 10 years before they need to be replaced.¹⁵

Nonlethal measures to mitigate beaver conflicts are effective, cost-efficient, long-lasting, and ecologically beneficial. These devices can protect transportation infrastructure, buildings, agricultural lands, and other property. Despite these benefits, no federal programs currently exist to promote or facilitate the use of these techniques. For these reasons, we request and strongly support federal funding to assist local governments and communities with implementing conflict-mitigation projects as needed in beaver-occupied streams across the nation.

Sincerely,



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Beaver Deceivers International
Grafton, VT

Beaver Institute, Inc.
Southampton, MA

Beaver Leavers, LLC
Harsens Island, MI

Beavers Forever
Sparks, NV

Beavers Work
Youngsville, NY

Born Free USA
Silver Spring, MD

Cahaba Riverkeeper
Birmingham, AL

Cascadia Wildlands
Eugene, OR

Catawba Riverkeeper Foundation
McAdenville, NC

Center for Biological Diversity
Minneapolis, MN

Center for Large Landscape Conservation Bozeman, MT	Geomorphic Science Solutions Ithaca, NY	Midwest Beaver Management, LLC Beecher, IL
Central Oregon Bitterbrush Chapter- Great Old Broads for Wilderness Bend, OR	Grande Ronde Model Watershed Enterprise, OR	Milwaukee Riverkeeper Milwaukee, WI
Central Oregon LandWatch Bend, OR	Great Lakes Wildlife Alliance Madison, WI	MSPCA-Angell Boston, MA
Christian Council of Delmarva Wilmington, DE	Greater Hells Canyon Council La Grande, OR	National Wildlife Federation Missoula, MT
Clark Fork Coalition Missoula, MT	Greater Yellowstone Coalition Bozeman, MT	Natural Resources Defense Council Bozeman, MT
Coastal Plains Institute Crawfordville, FL	Heartwood Tell City, IN	New Hampshire Audubon Concord, NH
Collier County Waterkeeper Naples, FL	HFF Nature Trust Atlanta, GA	North Bay Bear Collaborative Occidental, CA
Colorado Headwaters Salida, CO	Howling For Wolves Hopkins, MN	Northeast Oregon Ecosystems Joseph, OR
Confederated Salish and Kootenai Tribes of the Flathead Reservation Pablo, MT	Hudson Valley Beaver Strategies Cross River, NY	Northern California Chapter of the Society for Environmental Toxicology and Chemistry San Francisco, CA
Connecticut Wildlife Rehabilitators Association Woodbridge, CT	Human-Beaver Coexistence Fund Oakton, VA	Northwest Center for Alternatives to Pesticides Rochester, WA
Conservation Council for Hawaii Honolulu, HI	Humane Action Pittsburgh Pittsburgh, PA	NY4WHALES Yonkers, NY
Defenders of Wildlife Washington, DC	Illinois Beaver Alliance Glenview, IL	Occidental Arts & Ecology Center WATER Institute Occidental, CA
Ecotone, LLC Forest Hill, MD	Institute for Historical Ecology Los Altos, CA	Orange County Coastkeeper Huntington Beach, CA
Endangered Habitats League Los Angeles, CA	International Fund for Animal Welfare Washington, DC	Oregon Wild Portland, OR
Endangered Species Coalition Washington, DC	International Marine Mammal Project of Earth Island Institute Berkeley, CA	Potomac Valley Audubon Society Shepherdstown, WV
Environmental Action Committee of West Marin Point Reyes Station, CA	Klamath Forest Alliance Arcata, CA	Project Coyote Larkspur, CA
Environmental Protection Information Center Arcata, CA	Lake Pend Oreille Waterkeeper Sandpoint, ID	Protect Our Wildlife Stowe, VT
Environmental Stewardship Bastrop, TX	Lightning Canyon Ranch San Antonio, TX	Resource Renewal Institute Fairfax, CA
FOUR PAWS USA Boston, MA	Methow Beaver Project Twisp, WA	Russian Riverkeeper Healdsburg, CA

San Luis Obispo County Beaver Brigade Atascadero, CA	The Humane Society of the United States Washington, DC	Waterkeeper Alliance New York, NY
Satilla Riverkeeper Waycross, GA	The Rewilding Institute Albuquerque, NM	WaterWatch of Oregon Portland, OR
Save Our Seashore Inverness, CA	The Tulalip Tribes of Washington Tulalip, WA	Western Nebraska Resources Council Chadron, NE
Sierra Wildlife Coalition Tahoe City, CA	The Wetlands Conservancy Bend, OR	Western Watersheds Project Hailey, ID
South Umpqua Rural Community Partnership Tiller, OR	Trap Free Montana Hamilton, MT	Wild Farm Alliance Watsonville, CA
South Yuba River Citizens League Nevada City, CA	Trap Free Montana Public Lands Hamilton, MT	WildEarth Guardians Santa Fe, NM
Southern Plans Land Trust, Inc. Lamar, CO	True Grass Farms Valley Ford, CA	Wildlands Network Salt Lake City, UT
Superior Bio-Conservancy River Hills, WI	Tualatin Riverkeepers Tualatin, OR	Worth A Dam Martinez, CA
Sustainable St. Helena St. Helena, CA	Turtle Island Restoration Network Olema, CA	Wynwood Wildlife Rehabilitation Elizabethton, TN
Tennessee Riverkeeper Decatur, AL	Umpqua Watersheds Roseburg, OR	Wyoming Untrapped Jackson, WY
The Beaver Coalition Jacksonville, OR	Upper Missouri Waterkeeper Bozeman, MT	Wyoming Wildlife Advocates Wilson, WY
	Washington Wildlife First Seattle, WA	Zero Waste California San Francisco, CA

¹ See, e.g., Program Data Report G- 2020, U.S. Department of Agriculture. Available at: https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/pdr/?file=PDR-G_Report&p=2020:INDEX:

² Pollock, M.M., G.M. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Editors). 2017. The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 2.0. United States Fish and Wildlife Service, Portland, Oregon ("Beaver Restoration Guidebook"), 118. Available at: https://www.fws.gov/oregonfwo/Documents/BRGv.2.0_6.30.17_forpublicationcomp.pdf.

³ *Id.* at 120-122.

⁴ *Id.* at 122-125.

⁵ Boyles, S.L. and B.A. Savitzky. 2008. An Analysis of the Efficacy and Comparative Costs of Using Flow Devices to Resolve Conflicts with North American Beavers Along Roadways in the Coastal Plain of Virginia. Proc. 23rd Vertebrate Pest Conf. (R.M. Timm and M.B. Madon, Editors). University of California, Davis, 37-52.

⁶ Callahan, M., R. Berube, and I. Tourkantonis. 2019. Municipal Beaver Management: 20 Year Study in Billerica, MA. Association of Massachusetts Wetland Scientists No. 107, 16-19. Available at: <https://www.beaverinstitute.org/wp-content/uploads/2019/02/Billerica-Beaver-Study-AMWS-2019.pdf>.

⁷ Beaver Restoration Guidebook, 13-19, 60, 146; see also, e.g., National Marine Fisheries Service. 2016. Final ESA Recovery Plan for Oregon Coast Coho

Salmon (*Oncorhynchus kisutch*), 3-28. Available at <https://www.beaverinstitute.org/wp-content/uploads/2017/08/NMFS-ORCohoRecoveryPlan2016.pdf>.

⁸ See, e.g., Idaho State Wildlife Action Plan 2015, Idaho Department of Fish and Game (2017) 244; Mississippi State Wildlife Action Plan 2015-2025, Mississippi Department of Wildlife, Fisheries, and Parks (2015) 187. Available at: <https://idfg.idaho.gov/sites/default/files/state-wildlife-action-plan.pdf>.

⁹ Fairfax, E. and A. Whittle. 2020. Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western United States. *Ecological Applications* 30(8):e02225.

¹⁰ Beaver Restoration Guidebook, 8-9, 38-39.

¹¹ *Id.* at 6.

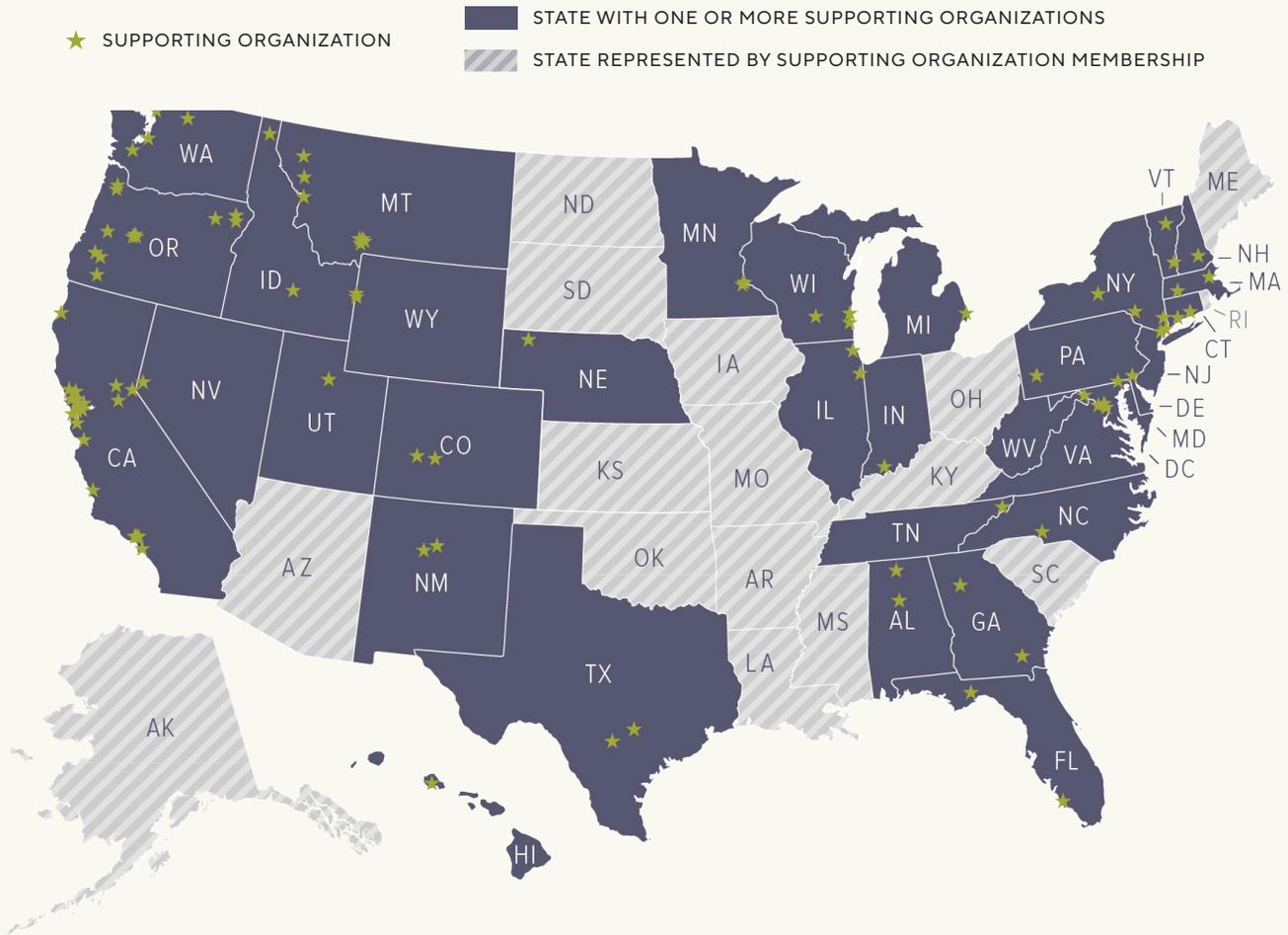
¹² Fairfax, E. and E.E. Small. 2018. Using remote sensing to assess the impact of beaver damming on riparian evapotranspiration in an arid landscape. *Ecohydrology* DOI:10.1002/eco.1993.

¹³ Beaver Restoration Guidebook, 10.

¹⁴ See, e.g., Iossa, G. 2007. Mammal trapping: a review of animal welfare standards of killing and restraining traps. *Animal Welfare* 16:335-352.

¹⁵ Callahan, M., R. Berube, and I. Tourkantonis. 2019. Municipal Beaver Management: 20 Year Study in Billerica, MA. Association of Massachusetts Wetland Scientists No. 107, 17. Available at: <https://www.beaverinstitute.org/wp-content/uploads/2019/02/Billerica-Beaver-Study-AMWS-2019.pdf>.

STATES REPRESENTED BY SUPPORTING ORGANIZATIONS



To view an interactive version of this map, go to awionline.org/nonlethal-beaver-map.

SUPPORTERS BY STATE

ALABAMA

1. Cahaba Riverkeeper
2. Tennessee Riverkeeper

CALIFORNIA

3. American River Conservancy
4. Animal Defenders International
5. Animal Legal Defense Fund
6. Arroyo Seco Foundation
7. Endangered Habitats League
8. Environmental Action Committee of West Marin
9. Environmental Protection Information Center
10. Institute for Historical Ecology
11. International Marine Mammal Project of Earth Island Institute

12. Klamath Forest Alliance
13. North Bay Bear Collaborative
14. Northern California Chapter of the Society for Environmental Toxicology and Chemistry
15. Occidental Arts & Ecology Center WATER Institute
16. Orange County Coastkeeper
17. Project Coyote
18. Resource Renewal Institute
19. Russian Riverkeeper
20. San Luis Obispo County Beaver Brigade
21. Save Our Seashore
22. Sierra Wildlife Coalition
23. South Yuba River Citizens League
24. Sustainable St. Helena
25. True Grass Farms
26. Turtle Island Restoration Network

27. Wild Farm Alliance
28. Worth A Dam
29. Zero Waste California

COLORADO

30. Arable Earth, LLC
31. Colorado Headwaters

CONNECTICUT

32. Beaver & Wildlife Solutions
33. Connecticut Wildlife Rehabilitators Association

DELAWARE

34. Christian Council of Delmarva

DISTRICT OF COLUMBIA

- 35. Animal Welfare Institute
- 36. Defenders of Wildlife
- 37. Endangered Species Coalition
- 38. Humane Society Legislative Fund
- 39. International Fund for Animal Welfare
- 40. The Humane Society of the United States

FLORIDA

- 41. Coastal Plains Institute
- 42. Collier County Waterkeeper

GEORGIA

- 43. HFF Nature Trust
- 44. Satilla Riverkeeper

HAWAII

- 45. Conservation Council for Hawaii

IDAHO

- 46. Lake Pend Oreille Waterkeeper
- 47. Western Watersheds Project

ILLINOIS

- 48. Illinois Beaver Alliance
- 49. Midwest Beaver Management, LLC

INDIANA

- 50. Heartwood

MARYLAND

- 51. Born Free USA
- 52. Ecotone, LLC

MASSACHUSETTS

- 53. Beaver Institute, Inc.
- 54. FOUR PAWS USA
- 55. MSPCA-Angell

MICHIGAN

- 56. Beaver Leavers, LLC

MINNESOTA

- 57. Center for Biological Diversity
- 58. Howling For Wolves

MONTANA

- 59. Center for Large Landscape Conservation
- 60. Clark Fork Coalition
- 61. Confederated Salish and Kootenai Tribes of the Flathead Reservation
- 62. Greater Yellowstone Coalition
- 63. National Wildlife Federation
- 64. Natural Resources Defense Council
- 65. Trap Free Montana
- 66. Trap Free Montana Public Lands
- 67. Upper Missouri Waterkeeper

NEBRASKA

- 68. Western Nebraska Resources Council

NEVADA

- 69. Beavers Forever

NEW HAMPSHIRE

- 70. New Hampshire Audubon

NEW MEXICO

- 71. The Rewilding Institute
- 72. WildEarth Guardians

NEW YORK

- 73. Beavers Work
- 74. Geomorphic Science Solutions
- 75. Hudson Valley Beaver Strategies
- 76. NY4WHALES
- 77. Waterkeeper Alliance

NORTH CAROLINA

- 78. Catawba Riverkeeper Foundation

OREGON

- 79. Cascadia Wildlands
- 80. Central Oregon BitterBrush Chapter- Great Old Broads for Wilderness
- 81. Central Oregon LandWatch
- 82. Grande Ronde Model Watershed
- 83. Greater Hells Canyon Council
- 84. Northeast Oregon Ecosystems
- 85. Oregon Wild
- 86. South Umpqua Rural Community Partnership
- 87. The Beaver Coalition

- 88. The Wetlands Conservancy
- 89. Tualatin Riverkeepers
- 90. Umpqua Watersheds
- 91. WaterWatch of Oregon

PENNSYLVANIA

- 92. Humane Action Pittsburgh

TENNESSEE

- 93. Wynwood Wildlife Rehab

TEXAS

- 94. Environmental Stewardship
- 95. Lightning Canyon Ranch

UTAH

- 96. Wildlands Network

VERMONT

- 97. Beaver Deceivers International
- 98. Protect Our Wildlife

VIRGINIA

- 99. Human-Beaver Coexistence Fund

WASHINGTON

- 100. Methow Beaver Project
- 101. Northwest Center for Alternatives to Pesticides
- 102. The Tulalip Tribes of Washington
- 103. Washington Wildlife First

WEST VIRGINIA

- 104. Potomac Valley Audubon Society

WISCONSIN

- 105. Great Lakes Wildlife Alliance
- 106. Milwaukee Riverkeeper
- 107. Superior Bio-Conservancy

WYOMING

- 108. Wyoming Untrapped
- 109. Wyoming Wildlife Advocates

