



Helping the Water Flow Free in New Hampshire

FREE FLOWING WATER

Water Water quality is essential for aquatic organisms to eat, grow, and reproduce. For anadromous species like river herring, which migrate from saltwater to freshwater to spawn, streams and rivers must be clean and free-flowing. When newly hatched young emerge from their eggs, they rely on high quality habitat including ample food and nursery areas to avoid predators.

Obstacles The migration route from sea to streams has many obstacles. Dams, bridges, and roads prevent river herring from accessing suitable habitat where they can reproduce. In coastal New Hampshire, 33 of the 118 tidal stream crossing areas contain barriers to migration, and 80% highly restrict the natural flow of water. In addition, sediment can easily build up on the barriers, increasing the risk of flooding and pollution in the streams. Climate change effects including sea level rise and increased storm intensity have already flooded some of these crossings, creating safety hazards to local communities as well.

Successes The New Hampshire Department of Environmental Service, in partnership with The Nature Conservancy, recently undertook an assessment of the state's tidal crossings to help identify the most urgent projects for fish passage. This fall, at one of the highest priority crossings, a 3-foot culvert was successfully replaced with a 16-foot span along Lubberland Creek in Newmarket. The design is focused on fish migration, expansion of salt marsh, boosting plant growth, and improving the resiliency of the infrastructure. Because of this, it could be considered the 'gold standard'.

Our Goals As of now, \$156,000 of the necessary \$273,000 has been raised to apply the successes from Newmarket to other blockages in the state. Our goal is to support The Nature Conservancy in developing structural improvements for four culverts in the most need of attention.



P. Steckler, The Nature Conservancy

WHY DO WE NEED HEALTHY FISH HABITAT? Healthy habitats provide native fish with abundant oxygen, food, and shelter to grow and reproduce. Habitats can help filter pollutants and maintain water quality, protect our coastlines from erosion and sea level rise, and combat climate change by absorbing carbon dioxide.

RIVER HERRING



Onne van der Wal

STATUS
Vulnerable

THREATS
Overfishing, development, habitat access

LIFESPAN
12 years

MAXIMUM SIZE
10-12 inches

RANGE
Nova Scotia to Florida

FISHING
River herring are critical prey for larger fish and have been fished along the Atlantic coast for centuries. Through middle of the last century, crowds of people would watch their annual spring migration through rivers and catch herring for dinner. However, populations began to crash in the 1960s and 1970s from overharvesting and construction of dams that obstructed their migration routes.

DID YOU KNOW?
River herring are actually two species: blueback herring and alewife. They spend their first spring and summer in freshwater and then migrate to the ocean. Once a year, herring return to their freshwater birthplaces in rivers to spawn. This is called natal homing.

For more information visit:
<http://www.asmfcr.org/species/shad-river-herring>
<https://www.iucnredlist.org/species/201946/2730890>

Fundraising Goals

We need you!

Raise the remaining **\$117,000** for restoring fish passages and habitat quality assessments

DONATE FOR THE FUTURE OF OUR HERRING & CLEAN WATER

It Costs Approximately \$60,000 To Assess And Design One Tidal Crossing Safe For Thousands Of River Herring To Swim Through

Want to help ACFHP raise funding for this project?

Contact Dr. Lisa Havel, our Coordinator at lhavel@asmfc.org

Make a Connection in Your Community: Support Local Projects

ACFHP's Focus + Expertise + Network + Funding = Healthy Habitat

We rely on people like *you*. With your contribution, our growing partnership can have an even greater impact on improving fish habitat – including habitats in your favorite waterway!

To learn more about ACFHP, visit our website

www.atlanticfishhabitat.org



FOCUS

Our work uses science, data, outreach, communication, and conservation projects to protect the Atlantic coast's vital fish habitats, including rivers, coastal waters, coral reefs, shellfish beds, and seagrasses.

EXPERTISE

We capitalize on the extensive expertise of our partner scientists and managers to ensure that the projects we undertake, and fund will have marked and long-lasting impacts to fish habitat conservation.

NETWORK

ACFHP's 75 project partners and counting *make the connection* among rivers, oceans, fishes, and humans.

FUNDING

Over the past decade, ACFHP has helped to restore 1,340 acres of fish habitat and counting, having an economic impact of over \$116 million.