**Our Impact**

30 years of pioneering land-based aquaculture technology

200+ peer-reviewed research articles available through Open Access publication

1,000’s of pounds of fish protein donated to food banks and hunger programs each year

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By 2050 we will need to double the global food supply to feed the world’s population. To meet that challenge, the Freshwater Institute specializes in the technology and design of aquaculture systems, and in solutions to the water quality constraints and impacts presented by our farms and communities.

We focus our research on aquaculture, food and water to achieve mutually reinforcing goals of environmental sustainability, human health and economic vitality. We share our research and advances through advisory services, science publications, targeted workshops and by partnering with allied organizations.

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**Our Approach**

For more than three decades, we have been one of the nation’s premier research and development facilities dedicated to sustainable water use and reuse. We focus on water as a natural resource asset important to ecological function, cultural heritage and economic opportunity.

From our campus in Shepherdstown, West Virginia, we combine applied research, engineering, and economic development skills to show how freshwater resources achieve environmental, economic and nutritional security goals. We serve as a trusted source of knowledge, leadership and consulting acumen, working with government, industry, nonprofits and individuals to shape sustainable, environmentally responsible solutions to water resource management.
Projects at a Glance

Leaders in Sustainable Aquaculture. As the seafood industry seeks to find solutions to overfishing and meet growing consumer demand for fish, the Freshwater Institute demonstrates an innovative way to sustainably produce salmon that consumers can feel good about purchasing, while minimizing environmental impact and waste. Our success in improving land-based, recirculating aquaculture systems has made us a trusted source of knowledge and experience for leaders in the seafood industry—from companies such as Marine Harvest to research initiatives like the Research Council of Norway’s CtrlAQUA project. And the Institute’s Atlantic salmon are rated Best Choice by Monterey Bay Aquarium’s Seafood Watch.

Reviving a Deadzone in the Gulf of Mexico. Runoff of nutrients from farmland into the Mississippi River is contributing to a hypoxic zone, or “deadzone,” in the Gulf of Mexico, an area that with oxygen levels so low, it can no longer support life. We are working with landscape conservation cooperatives, state and federal agencies, and NGOs to provide data and mapping of the area. This will inform a comprehensive, landscape-scale conservation strategy to reduce nutrients flowing into the Gulf to sustain wildlife, water and agriculture.

Restoring Salmon in the Pacific Northwest. In Washington State, where two hydroelectric dam projects impact anadromous wild salmon populations in the Columbia River, the Chelan County Public Utility District (PUD) is tasked with rearing fish for restoration. When the PUD had to dramatically increase its juvenile fish production to meet conservation commitments, the Freshwater Institute conducted an analysis of its hatchery facilities to model fish growth, rearing requirements and infrastructure needs, helping the PUD maintain and enhance its water efficiency while ensuring the restoration of wild salmon populations.

About The Conservation Fund
At The Conservation Fund, we make conservation work for America. By creating solutions that make environmental and economic sense, we are redefining conservation to demonstrate its essential role in our future prosperity. Top-ranked for efficiency and effectiveness, we have worked in all 50 states since 1985 to protect more than 8 million acres of land.

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The Fund’s data and mapping support has been critical to developing a Precision Conservation Blueprint for the Mississippi River Basin/Gulf Hypoxia Initiative. Their expertise allowed stakeholder groups to visualize an objectives-driven conservation design that can guide alignment of conservation investments for dozens of agencies and organizations in the Basin.

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