

Oregon's Fish Screening Program

2021-2023 Biennial Report

Background

Oregon's fish screening program is highly effective and successful. It provides substantial benefits for fish and people. The program's directive is to share the cost of installing fish screens with water users. This popular and cost-effective program includes monetary, major maintenance, technical and design assistance, and a tax credit to qualifying water users. The fish screening program was adopted in 1995 and is directed by ORS 496.141 to report biennially to the Joint Committee on Ways and Means.

What is a Fish Screen?

Water from streams and rivers is redirected for irrigation, power, drinking water, and other uses. Diversions used to redirect water also pull fish into pumps, reservoirs, irrigation canals, and fields – reducing survival and preventing migration. Fish that reside in streams for their entire lifecycle (resident) and fish that migrate to and from the ocean (anadromous) are susceptible to entrainment into diversions. Fish screens are fish-friendly devices placed at diversion intakes that allow water to pass through while preventing fish from entering.

Program Success

- 37 fish screens installed so far in 2021-2023, protecting fish in 73.46 cfs of water. An additional 20 projects planned for installation by the end of June 2023. Water users cooperating on these projects have contributed over \$134,000 in matching funds.
- Projects are located throughout the state, benefiting both small and large water users. Because Oregon laws do not require the majority of diversions to be screened, most screens are installed voluntarily. Valuable partnerships have been forged with water users who volunteer to cost share projects.

Benefits of Fish Screens

- *Prevent fish from entering diversions.*
- *More than 98% of young salmon survive an encounter with a properly designed screen.*
- *Improves the protection, survival, and restoration of native fish.*
- *Allows clean and efficient diversion of water for farms, cities, and businesses.*
- *Protects restoration investments in watersheds by protecting the fish produced by increased habitat quality or quantity.*
- *Juvenile and adult fish continue their up and downstream migration.*
- *Deliver socially and economically valuable water for irrigation, drinking, and power.*
- *As fish populations increase, anglers are provided with more fishing opportunities.*

Incentives

- Cost sharing and a tax credit encourage water users to screen their diversions. Over 1,500 fish screens have been installed throughout Oregon since 2000.
- ODFW can provide financial help to install fish screens when water users apply for cost sharing.
- Water users may be eligible for a tax credit of 50%, up to \$5,000, of the cost of installing a new screen (does not need to be cost shared or installed by ODFW).
- Screen projects can be installed by ODFW or the water user. ODFW ensures that state and federal fish screening criteria are met by reviewing project designs, providing technical assistance, inspecting, and certifying the project once it has been installed.



A three-bay rotary drum screen installed in the John Day River.

Program Oversight

A seven-member citizen task force is appointed by the Oregon Fish and Wildlife Commission to advise ODFW regarding fish screening policy, funding, and technology issues.

Fish Screening Task Force Members 2022		
Task Force Member	Representing	Location
Darin Olson	Agriculture	Salem
Kristin Bishop	Fishing and Fish Conservation	McMinnville
William Freeland	Fishing and Fish Conservation	Springfield
Judith Barkstedt	Fishing and Fish Conservation	Portland
Greg Harris	Agriculture	Hermiston
Alexis Vaivoda	Public-at-Large	Hood River
Marc Thalacker	Agriculture	Terrebonne

Fish Screens Maintenance

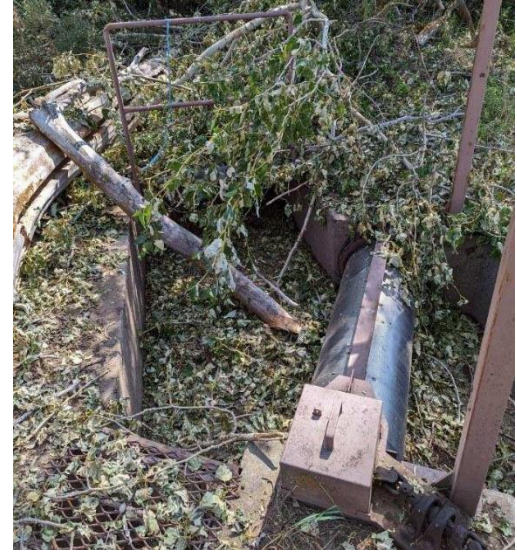
The Program maintained over 1,300 fish screens during the 2021-2023 biennium. While most water users that enter the cost share program are responsible for minor maintenance, screens that are not maintained by the Program are often inadequately maintained – increasing major maintenance costs, reducing the effective lifespan, diminishing the State’s return on investment, and leaving fish vulnerable to loss. In addition, ODFW is responsible for all major maintenance at fish screens installed through our cost share program that are under 30 cfs.



As funds allow, ODFW staff maintain fish screening structures to ensure they adequately protect fish. Typical maintenance includes the following:

- inspection to determine maintenance needs
- remove accumulated sediment and debris
- lubricate moving parts
- replace worn or damaged parts, including seals, screen material, power systems, and other parts
- adjustment to ensure proper operation

As the Program continues to fund and install new screens, the required maintenance responsibility and costs also increase. As a result, proportionally more money goes to maintenance over time.



This screen was repaired after a windstorm dropped significant debris.

Funding for Maintenance

Funding for maintenance varies throughout the state. In the Columbia Basin, Bonneville Power Administration provides operation and maintenance funding. In areas with anadromous fish, Pacific Coast Salmon Recovery Funds provide some funding. ODFW uses license and general funds to address additional maintenance needs.

Budget Analysis

Budget information provided is for the entire Fish Screening and Passage Program. Fish Passage projects and associated costs implemented through that program are not included in this fish screen report.



Federal Funding

- **Bonneville Power Administration**
 - **Operations and Maintenance.** BPA is a major source of funds for screen maintenance in the Columbia River Basin and is critical to continued fish protection
 - **Implementation Funding.** BPA funds are used to install new screens and replace some fish screens in the Columbia River Basin. The screens being replaced are worn out, damaged, or do not meet current fish protection needs.
- **Pacific Coast Salmon Recovery Funds.** The majority of the cost share program is funded by PCSRF. Funds are used toward engineering and construction of fish screens, project development, and some maintenance. These funds are only eligible for projects that benefit anadromous fish.

State Funding

State funds fluctuate every biennium; the sport fishing license surcharge depends on license sales.

- **General Fund.** General funds support project construction, maintenance, and program implementation.
- **Sport Fishing License Surcharge.** A 75-cent surcharge on Oregon sport fishing licenses is dedicated to the Fish Screening Program. These funds are used for fish screen maintenance, construction, the Fish Screening Task Force, and program support.

Funding Challenges

PCSRF funds can only be used to benefit anadromous fish. This is the Program’s primary funding source for new construction and replacement screens. This limits funding to projects in specific areas of the state primarily streams on the coast, Willamette Valley, John Day River and Snake River basins. Other funds are needed to support resident fish protection.

Screens Installed July 2, 2021 to December 31, 2022

Screens Installed by Senate District			Screens Installed by House District		
District	# Installed	CFS	District	# Installed	CFS
5	16	0.328	9	16	0.328
8	1	1.06	15	1	1.06
12	4	4.85	23	4	4.85
16	1	8.9	31	1	8.9
29	4	5.94	57	4	5.94
30	11	52.38	60	11	52.38
Total	37	73.46	Total	37	73.46

Fish screens come in a wide range of types and sizes including pump, cone, rotary drum, traveling belt, and panel screens. The amount of water screened and number of projects installed are used to track Program success. The projects featured here represent the challenges posed by various locations and the diverse nature of fish screen designs.

