

Oregon's Fish Screening Program

2019-2021

Biennium Report



Prepared by the Oregon Department of Fish and Wildlife
January 2021

Greetings!

Thank you for reading the Fish Screening Program's 2021 legislative report. Since 1991, the Program has provided cost share incentives and technical assistance to encourage water users to voluntarily install fish screens at their water diversions. Fish screens prevent fish from entering irrigation diversions, municipal systems, or industrial intakes.

The Program's cost share opportunities and tax credit are very successful. The cost share assists water users with the expense of installing a fish screen. Water users may also qualify for a tax credit of up to \$5,000. Since 2000, these incentives have resulted in the voluntary installation of over 1,400 fish-friendly screens throughout the state.

The cost share program has completed 30 screening projects to date in the 2019-21 biennium. These projects leveraged over \$419,000 in match funds. Fish Screen Projects are located throughout the state and benefit both small and large water users. Valuable partnerships have been forged with soil and water conservation districts, watershed councils, irrigation districts, municipalities, nonprofit organizations, and individual water users who volunteer to cost share projects.

More than ninety-eight percent of young salmon and steelhead survive an encounter with a properly designed and operated fish screen. Fish screens are a critical component of native fish restoration and help improve sport and commercial fisheries. Fish screens help achieve both sustainable agriculture and sustainable fisheries.

Thousands of water diversions remain unscreened in Oregon, placing fish at risk. While the Fish Screening Program has made great progress, there is still a lot of work to do. This report reflects the cooperative efforts of many partners to address the issue. Please join us in celebrating their accomplishments.

Sincerely,

A handwritten signature in blue ink that reads "Curtis E Melcher".

Curtis E. Melcher, Director

Benefits & Accomplishments

Oregon's fish screening program is highly effective and successful, providing strong benefits for both fish and people. Its directive is to share the cost of installing fish screens with water users. This popular and cost-effective program includes monetary, technical and design assistance, and a tax credit. The fish screening program was adopted in 1995 and is directed by ORS 496.141 to report 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, 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.

Benefits

- 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.
- Juvenile and adult fish are allowed to continue their up and downstream migration.
- Achieves sustainable agriculture and fisheries.
- As fish populations increase, anglers are provided more fishing opportunities.
- Fish screens help deliver socially and economically valuable water for irrigation, drinking, and power.

Program Success

So far during the 2019-2021 biennium, 30 fish screens have been installed protecting 105.66 cfs of water. An additional eleven projects are planned for installation by the end of June 2021. The water users cooperating on these projects have contributed over \$419,000 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.

Cost Share

Incentives

Incentives in the form of cost share and a tax credit encourage water users to voluntarily screen their diversions. As a result, over 1,400 fish screens have been installed throughout Oregon since 2000.

Cost Share Grants

Water users can apply for cost share funding and receive financial help to install a fish screen by cost sharing their project with ODFW. Water users can provide cash, materials, or in-kind services for their portion of the project.



This screen utilizes a Gantry system to remove large drum screens from the screen box.

Installation, Review, and Inspection

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.
- ODFW inspects and certifies the project once it has been installed.

Oregon State Tax Credit

Water users may be eligible for a tax credit of 50%, up to \$5,000, of the cost of installing a new screen. The screen does not need to be cost shared or installed by ODFW. Since 1995, \$791,140.18 in State tax credits have been granted.

*During the report period,
14 tax credits were issued
totaling \$21,457.07*

Fish Screens Maintenance

The Program has maintained over 1200 fish screens during the 2019-2021 biennium. Maintenance of fish screening structures is an important part of the Screens Program. 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 operate to 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.



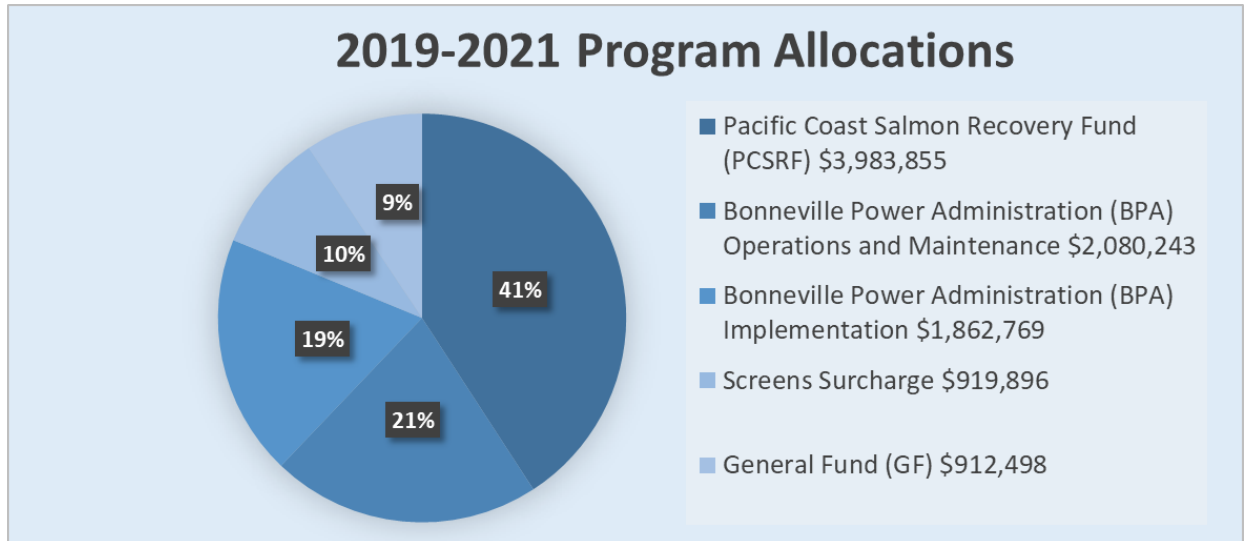
This screen was repaired after a tree fell and caused major damage.

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 utilizes 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 Funding

BPA is a major source of funds for screen maintenance in the Columbia River Basin and critical to continued fish protection

Implementation Funding

BPA funds are used for the installation of new screens and replacement of 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 is dependent upon license sales.

General Fund

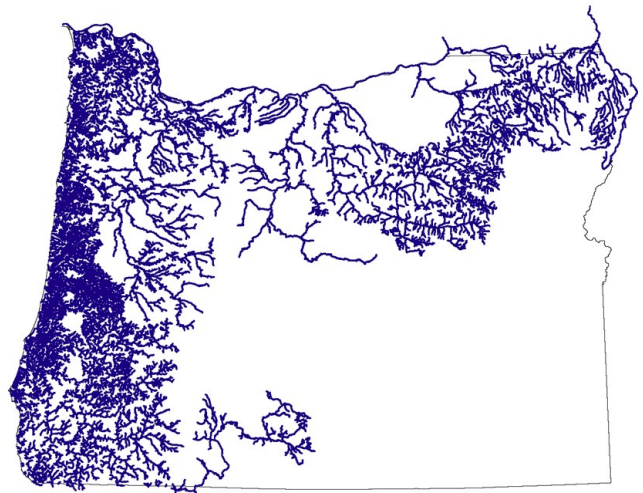
General funds support project construction, maintenance, and program implementation.

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. Other funds are needed to support resident fish protection.
- ❖ Costs have greatly risen, which reduces the amount of work that can be completed.



PCSRF funds can only be used in the areas shown in blue above.

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. The Task Force members represent agriculture, fishing and fish conservation, and the public-at-large. Members can serve up to six years on the Task Force.

Fish Screening Task Force Members 2021		
Task Force Member	Representing	Location
Barry DelCurto	Agriculture	Halfway
Kristin Bishop	Fishing and Fish Conservation	McMinnville
Nathaniel Olken	Fishing and Fish Conservation	Portland
Vacant	Public-at-Large	
Greg Harris	Agriculture	Hermiston
Ted Taylor	Fishing and Fish Conservation	La Grande
Marc Thalacker	Agriculture	Terrebonne

Research and Development

ODFW remains committed to developing innovative fish screen technology, improving effectiveness, and decreasing costs to implement and maintain projects. During the current reporting period, a lack of staff and resources has reduced the ability of the program to continue research and development of new technologies.



Screens Installed July 1, 2019 to December 31, 2020

Fish screens come in a wide range of types and sizes including pump, cone, rotary drum, traveling belt, and panel screens. So far this biennium, 30 fish screens have been installed protecting 105.66 cfs of water. An additional eleven projects are planned for installation by the end of June 2021.

The amount of water screened and number of projects installed are used to track Program success.

The number of screens installed and the amount of water flow being screened are the two primary measurements used to track Program success. Flow rates are measured in cubic feet per second (CFS). 1 cfs = 448.83 gallons per minute.

The projects featured here represent the challenges posed by various locations and the diverse nature of fish screen designs.

Screens Installed by Senate District		
District	# Installed	CFS
5	3	12.71
6	1	0.44
10	1	4.46
12	2	1.8
13	1	1.34
16	1	0.04
21	1	0.07
28	7	65.12
30	13	19.68
Total	30	105.66

Screens Installed by House District		
District	# Installed	CFS
9	1	0.25
10	2	12.46
11	1	0.44
20	1	4.46
23	2	1.8
26	1	1.34
31	1	0.04
41	1	0.07
55	7	65.12
59	4	2.04
60	9	17.64
Total	30	105.66

Screens Installed July 1, 2019 to December 31, 2020

County	House District	Senate District	Basin	Project Title	Stream	CFS	Project Number
CLACKAMAS	41	21	Willamette	Aldercrest #2 pump TC	Kellogg Creek	0.07	S-02-0488
COLUMBIA	31	16	North Coast	Taylor Farms Pump Screen	Tide Creek	0.04	S-02-0549
GRANT	60	30	John Day	Prairie Wood Products Pump Screen	John Day River	1.93	S-06-0604
GRANT	60	30	John Day	Reynolds #7	Reynolds Creek	3	S-06-0393
GRANT	60	30	John Day	John Day River -- Overton Pump Screen	John Day River	0.76	S-06-0588
GRANT	60	30	John Day	Fox Creek -- Hanson Pump Screen	Fox Creek	6.03	S-06-0592
GRANT	60	30	John Day	Fields Creek #2	Fields Creek	0.36	S-06-0352
GRANT	60	30	John Day	Fields Creek #3	Fields Creek	0.5	S-06-0353
GRANT	60	30	John Day	South Fork John Day River -- Tobin Pump Screen	South Fork John Day River	0.25	S-06-0596
GRANT	60	30	John Day	NFJDR -- Smith Pump Screen	North Fork John Day River	1	S-06-0598
GRANT	60	30	John Day	JDR -- Clausen Pump Screen	John Day River	1.46	S-06-0578
JACKSON	55	28	Rogue	Brophy Ditch Replacement	North Fork Big Butte Creek	3	S-15-0231
JACKSON	55	28	Rogue	B Bar K Ranch - Lost Creek	Lost Creek	3.16	S-15-0434
JEFFERSON	59	30	Deschutes	Upper Amity Creek	Amity Creek	0.11	S-05-0152
KLAMATH	55	28	Klamath	Annie Creek #1	Annie Creek	2.58	S-14-0126
KLAMATH	55	28	Klamath	Annie Creek #2 - east	Annie Creek	2.61	S-14-0127
KLAMATH	55	28	Klamath	Annie Creek #2 - west	Annie Creek	5.55	S-14-0128
KLAMATH	55	28	Klamath	Upper Sevenmile Ditch	Sevenmile Creek	21.42	S-14-0081
KLAMATH	55	28	Klamath	Pump Ditch Screen	Wood River	26.8	S-14-0090
LANE	9	5	Willamette	Deck Family Farm Pump	Owens Creek	0.25	S-02-0558
LINCOLN	10	5	Mid	Sterling Grant Pump #2 Tax Credit	Big Elk Creek	0.31	S-18-0017
LINN	11	6	Willamette	Oak Park Farm Pump	Muddy Creek	0.44	S-02-0540
POLK	20	10	Willamette	ACMPC Oregon 2, POD F	Willamette River	4.46	S-02-0529
TILLAMOOK	10	5	North Coast	Little Nestucca W.A.-Upton Slough	Upton Slough	12	S-01-0047
WASCO	59	30	Hood	Taylorville Ditch Screen	Fifteenmile Creek	0.4	S-04-6054
WASCO	59	30	Hood	Zurlinden	Mill Creek	0.16	S-04-0016
WASHINGTON	26	13	Willamette	Hoffman Farms Pump- POD B	Tualatin River	1.34	S-02-0561
WHEELER	59	30	John Day	JDR -- Williams Pump Screen #2	John Day River	1.37	S-06-0597

Screens Installed July 1, 2019 to December 31, 2020

YAMHILL	23	12	Willamette	Christensen Farms T-12250 Pump	South Yamhill River	0.24	S-02-0528
YAMHILL	23	12	Willamette	Christensen Farms Pump #4	South Yamhill River	1.56	S-02-0520

Contact Information

Salem Headquarters

4034 Fairview Industrial Drive SE
Salem, OR 97302

Program Manager, Alan Ritchey

503-947-6229

Statewide Screening Coordinator, Vacant

503-947-6259

Fiscal Analyst, Ron Hendrickson

503-947-6251

Central Point Screen Shop

1495 E Gregory Road
Central Point, OR 97502
541-826-8774

John Day Screen Shop

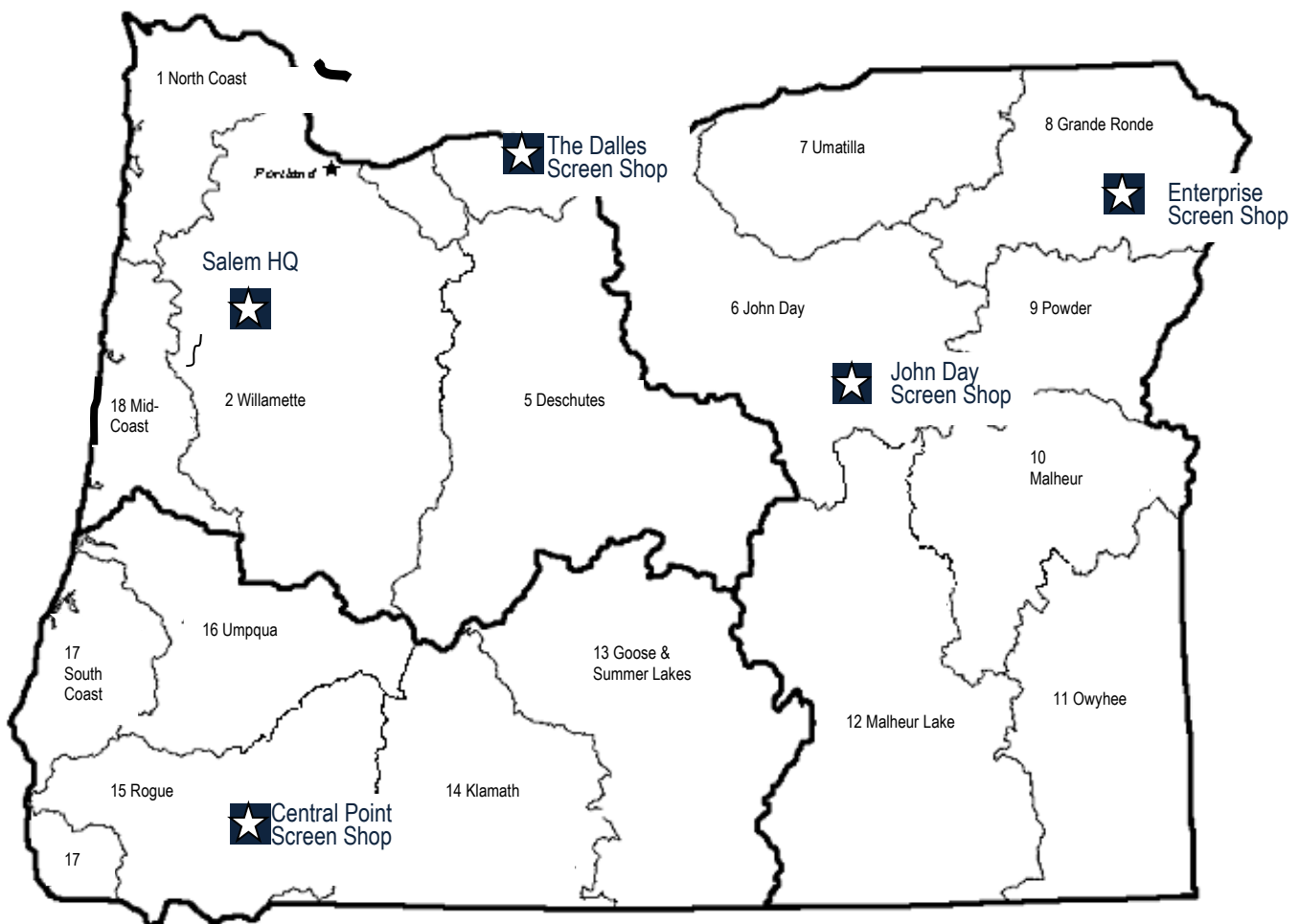
357 Patterson Bridge Road
John Day, OR 97845
541-575-0561

The Dalles Screen Shop

3561 Klindt Drive
The Dalles, OR 97058
541-296-8026

Enterprise Screen Shop

65495 Alder Slope Rd
Enterprise, OR 97828
541-426-0311



Prepared by:
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive, SE
Salem, OR 97302