Fish Screening Program

Economic Incentives for Water Users to Protect Fish

2009-2011

Report to the Legislature

Prepared by the Oregon Department of Fish and Wildlife

Letter from the Director

Roy Elicker, Director

Oregon Department of Fish and Wildlife

Greetings!

Welcome to the Fish Screening Program's 2011 legislative report. Since 1991, the Program has provided cost share incentives and technical assistance to encourage water users to voluntarily install fish-friendly screens at their water diversions. Fish screens prevent fish from entering irrigation diversions, municipal systems, or industrial intakes.

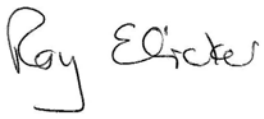
The Program's cost share opportunities and tax credit are very successful and popular. The cost share assists the water user with the expense of installing a fish screen. The water user may also qualify for a tax credit of up to $5,000. Since 2000, these incentives have resulted in the voluntary installation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

The cost share program's $3.9 million Measure 66 funds have leveraged nearly $1.4 million in match to date in the 2009-2011 biennium. Projects are located throughout the state and benefit both small and large water users. Valuable partnerships have been forged with water users who volunteer to cost share projects.

The benefits of fish screens are clear. Over ninety-eight percent of young salmon and steelhead survive an encounter with a properly designed fish screen. Oregon's sport and commercial fisheries are improved and fish screens are a critical component of native fish restoration. 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,



Roy Elicker, Director

Background

History

Highly popular and cost-effective, this is one of the top fish screening programs in the nation. Its directive is to share the cost of installing fish screens with water users. The cost share includes monetary, engineering, and design assistance, as well as a tax credit.

The Fish Screening Program was adopted in 1995 after a 4-year pilot program and is directed by ORS 496.141 to report to the Joint Committee on Ways and Means. A fish passage component of the Program reports to the Legislature separately.

This report covers the time period of July 1, 2009 to December 31, 2010.

How The Fish Screening Program Benefits Water Users, Fisheries and Anglers

- Water users receive financial incentives to install fish screens.
- Juvenile and adult fish are not prevented from upstream and downstream migration.
- Fish populations increase providing anglers with more fishing opportunities.

What is a Fish Screen?

Water from streams and rivers is redirected for irrigation, power, drinking water and other uses. Diversions used to redirect the water also pull fish into pumps, irrigation canals and fields — reducing survival and preventing migration. Fish screens are fish-friendly devices placed at the diversion entrance. They allow diverted water to pass through while preventing fish from entering.

The Benefit of Fish Screens at Water Diversions

- Over 98% of young salmon survive an encounter with a properly designed screen.
- Prevents fish from entering places they should not be (like an irrigation system).
- Improves the protection, survival, and restoration of native fish.
- Achieves both sustainable agriculture and sustainable fisheries.

The Fish Screening Program has installed over 1,000 screens throughout Oregon since 2000.

Cost Share Program

Incentives

Incentives in the form of cost share and a tax credit encourage water users to voluntarily screen their diversions. As a result, nearly 1,000 fish screens have been installed throughout Oregon since 2000.

Cost Share Grants

Water users can receive financial help to install a fish screen by cost sharing their project with ODFW. Water user match can include cash, other grants or in-kind services. There are two cost share opportunities:

- *Measure 66 Lottery Funds (M66)* Used to cost share up to 60% up to $75K for a new fish screen or up to 100% for replacement.
- *Fisheries Restoration and Irrigation Mitigation Act (FRIMA)* Provides 65% cost share to irrigation diversion projects that have a local, state, tribal or federal sponsor or co-applicant. The 35% matching funds must be non-federal. FRIMA has provided more than $4 million in federal cost share funds to Oregon for screening and passage projects since 2001.

M66 and FRIMA can be combined as long as the water user contributes at least 10% of the costs. While FRIMA has been authorized by the U.S. Legislature, no new funding has been allocated since 2007.

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; any newly installed fish screen may be eligible. The water user is allowed to take the tax credit over a five-year period.

Application Process

Approval

Water users apply for cost share funding to install a screen at their pump or gravity diversion. Once approved, the water user and ODFW enter into a grant agreement. Costs incurred before approval are not eligible for reimbursement.

Review and Inspection

Screen projects can be installed by ODFW or the water user.

- ODFW ensures that state and federal criteria are met by reviewing project designs.
- ODFW inspects and certifies the project once installed.

Reimbursement

After the project is inspected and certified the applicant is reimbursed for their portion and may be eligible for a tax credit up to $5,000.

$599,772 in State tax credits have been granted since 1995.

Budget Analysis

Summary

Budget information provided is for the Fish Screening and Passage Program. A fish passage component of the Program reports activities to the Legislature separately.

- General Funds (GF) used for screen maintenance have been eliminated, greatly reducing the Agency's ability to repair and maintain fish screens.
- The FRIMA Program was reauthorized in 2009; however, the Federal Legislature has not appropriated any new funds.
- $1.4 million additional funds were leveraged through the Program's cost share funds.

Key to Program Funding	
Fund	Name
BOR	Bureau of Reclamation
BPA	Bonneville Power Administration
FRIMA	Fisheries Restoration & Irrigation Mitigation Act
M66	Measure 66 Lottery Funds
MA	Mitchell Act
Passage Surcharge	ODFW Sport Fishing License Surcharge for Fish Passage Activities
Screens Surcharge	ODFW Sport Fishing License Surcharge for Fish Screening Activities
USFWS	US Fish & Wildlife Service

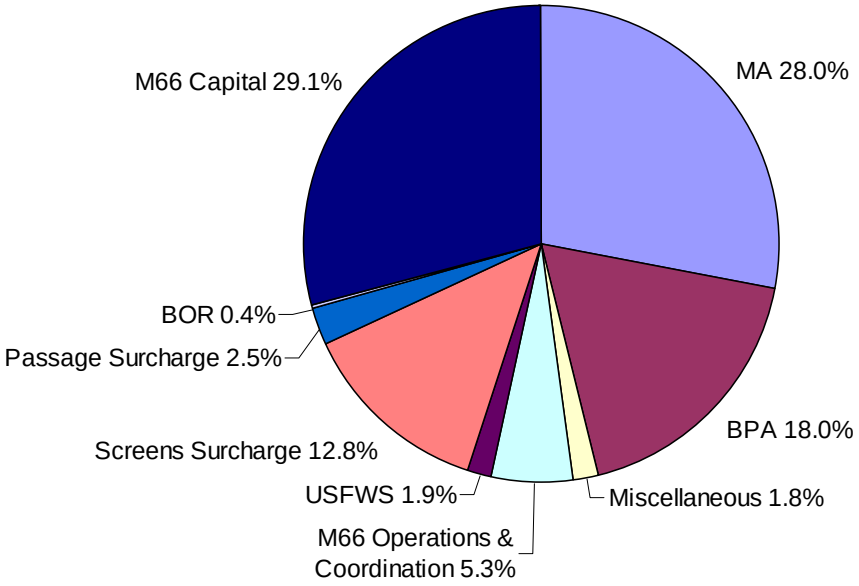
Funding Cycles

The Program's state and federal funding cycles vary and overlap, resulting in a complex budget.

Funds Received						
OR Biennium		**2007-09**		**2009-11**		
M66 Capital		$4M		$3.3M		
M66 Operations & Coordination		$838K		$608K		
Passage Surcharge		$0		$289K		
Screens Surcharge		$621K		$1.4M		
Miscellaneous		$0		$206K		
Calendar Year	**2007**	**2008**	**2009**	**2010**	**2011**	
BPA	$1M	$1M	$1M	$1M	Unknown	
Federal Fiscal Year	**2007**	**2008**	**2009**	**2010**	**2011**	
BOR	$250K	$250K	$0	$49K	Unknown	
FRIMA	$383K	$676K	$0	$0	Unknown	
MA	$1.7M	$1.4M	$1.6M	$1.6M	Unknown	
USFWS	$0	$175K	$196K	$23K	Unknown	

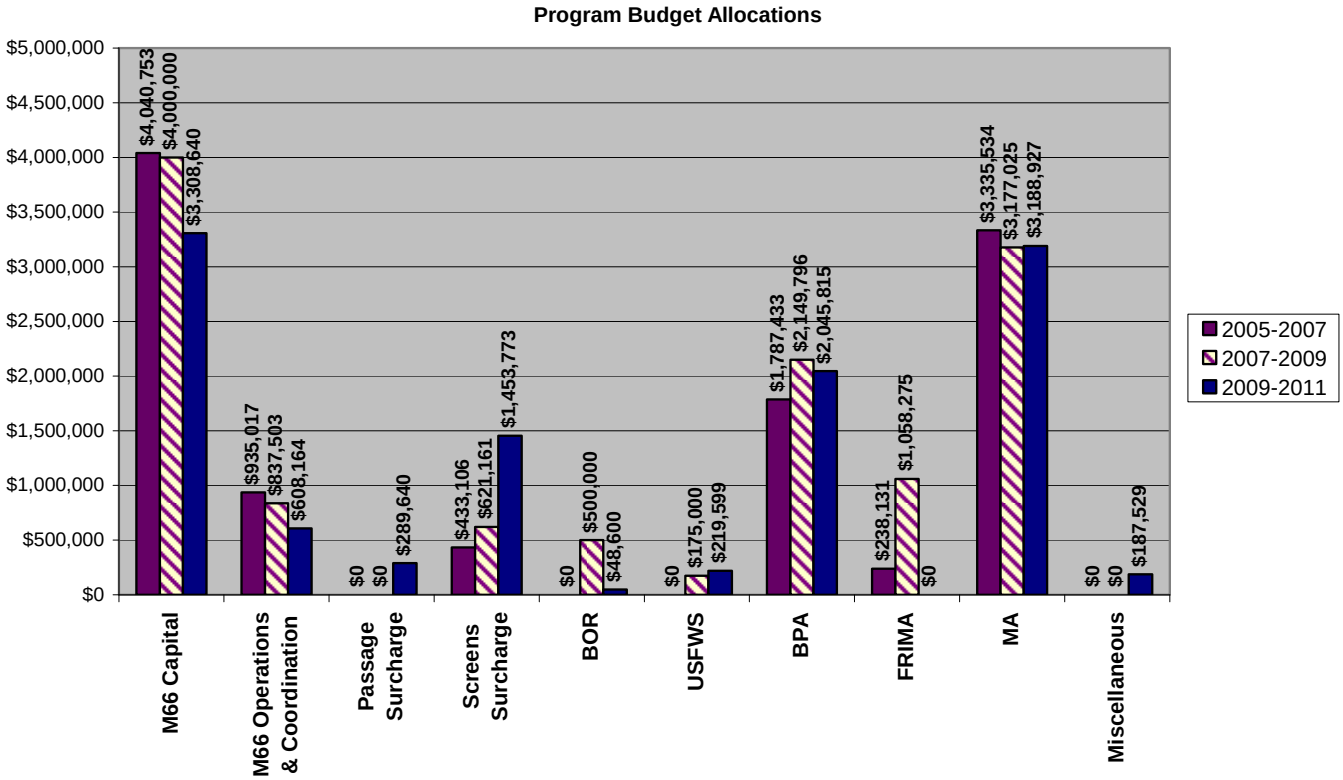
2009-2011 Fish Screening and Passage Program Allocations

Allocations total $11,383,859.



Comparison of 2005-2007, 2007-2009 and 2009-2011 Allocations

This comparison of the current and previous biennia illustrates where funding was decreased and increased.



Budget Analysis

State Funding

State funds fluctuate every biennium. Sport fishing license surcharge is dependant upon license sales; lottery funds are revenue dependant, and general fund dollars were eliminated.

Measure 66 State Lottery Funds (M66) Administered by Oregon Watershed Enhancement Board (OWEB)

Capital	$3,930,945
Operations	$656,619
Total	**$4,587,564**

The majority of the Program's cost share is funded by M66. Funds are used toward engineering and construction of fish screens and limited program support.

Although M66 allows for up to 35% operational funds along with 65% capital construction funds, the cost share program receives far less than the 35% allowed. This biennium, the cost share Program received just 15.5% M66 operational funds. Originally this was not an issue since GF made up the difference, but GF has been eliminated resulting in a lack of operational funds.

75-Cent Sport Fishing Surcharge (Surcharge) $1,453,773

A 75-cent surcharge on Oregon sport fishing licenses is dedicated to carrying out the provisions of the Fish Screening Program. This includes project supplies, fish screen maintenance, administrative assistance, inventory work, and the Fish Screening Task Force.

Federal Funding

Federal funding is dependant on the renewal of grants. Funds are allocated in a federal fiscal year cycle with the exception of BPA, which is granted per calendar year.

Mitchell Act (MA)

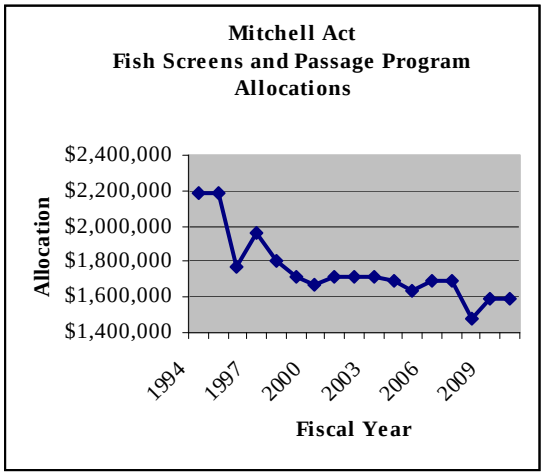
Administered by National Oceanic & Atmospheric Administration (NOAA) Fisheries

$3.2 million

Mitchell Act provides the major source of funding for fish protection through screening in the Columbia River Basin. In Oregon, MA funds have funded over 750 fish screens and provided for their maintenance. All of these screens are located on streams where ESA protected fish are located.

MA funding has decreased significantly since 1993. Meanwhile, costs for personnel, materials and transportation have increased substantially.

Due to the reduction of MA funding, the Program is having a difficult time merely maintaining the existing MA facilities. The construction of new screening and passage facilities with MA funds has been eliminated. Most of the screens have been put on a reduced maintenance schedule resulting in considerable loss of fish at some diversion sites.



Bonneville Power Administration (BPA)

$1 million

BPA funds are used for the installation of new screens and replacement of some fish screens in the Columbia River Basin constructed under the MA program (see above). The screens being replaced are worn out or do not meet current criteria.

Fisheries Restoration and Irrigation Mitigation Act (FRIMA)

Administered by U.S. Fish and Wildlife Service (USFWS)

$0

FRIMA provides up to 65% cost share to irrigation diversion projects that have a local, state, tribal or federal sponsor or co-applicant. The 35% matching funds must be non-federal.

FRIMA is authorized through 2014, but no new funding has been allocated since 2007.

Since 2001, FRIMA provided $4 million to Oregon for 17 screening, 14 passage, and 2 inventory projects. More than 2,500 cfs of water has been screened.

FRIMA provides critical funding for larger screening projects that otherwise would not be completed due to limited state, local, and private funding. Funds are often combined with state funds to increase the assistance available to water users. An important benefit of FRIMA is the ability to use FRIMA funds to conduct much needed inventory work to identify diversions needing fish screening.

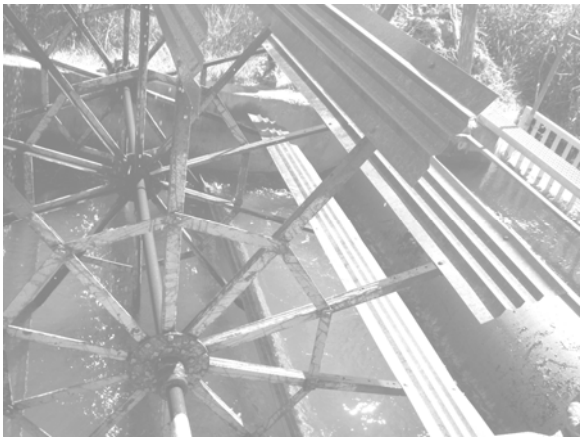
The FRIMA Program was reauthorized by the Federal Legislature in 2009, but no new funding has been allocated since 2007.

Budget Analysis

Program Allocations and Expenditures

Figures represent Fish Screening and Passage Program limitation (including carryover funds), funds obligated to specific projects, and expenditures for the 2009-2011 biennium as of December 31, 2010.

Expenditures and Obligations				
Source of Funds	**Allocated**	**Expended**	**Obligated**	**Remaining**
M66 Capital	$3,930,945[1]	$2,751,534[2]	$1,179,411	$ -
M66 Operations	$ 656,619[3]	$ 409,691[4]	$ -	$ 246,928
Passage Surcharge	$ 289,640	$ 92,781	$ -	$ 196,859
Screens Surcharge	$1,453,773	$ 753,219	$ -	$ 700,554
BOR (Upper Klamath Lake Screens)	$ 337,933	$ 307,057	$ 30,876	$ -
BOR (Willamette Screening Assessments)	$ 48,600	$ 31,710	$ 16,890	$ -
USFWS (Lamprey Passage)	$ 23,000	$ -	$ 23,000	$ -
USFWS (Upper Klamath Lake Screens)	$ 160,596	$ 118,460	$ 42,136	$ -
USFWS (Malheur Screens & Passage)	$ 196,599	$ 118,847	$ 77,752	$ -
BPA	$2,045,815	$1,107,125	$ 470,300	$ 468,390
USFWS (FRIMA)	$ 335,552	$ 208,039	$ 127,513	$ -
NMFS (Mitchell Act)	$3,188,927	$1,615,356	$ -	$1,573,571
Miscellaneous	$ 206,560	$ 173,197	$ 33,363	$ -



1. Includes $3,308,640 of new funding and $622,305 carryover funds.

2. Includes $2,129,229 of new funding and $622,305 of carryover funds.

3. Includes $608,164 of new funding and $48,455 of carryover funds.

4. Includes $361,236 of new funding and $48,455 of carryover funds.

Budget Analysis

Contractor and Supplier Expenditures

The Program uses private contractors when possible during all phases of a project: inventory and assessment work, engineering and design, fabrication, and construction. They generate work and income in communities throughout the state and help the Program install more fish screens than is possible with limited staff.

- Screens designed by Program engineers are constructed by private contractors.
- Program engineers review plans prepared by private consultants
- Water users are encouraged to purchase pump screens and components directly from their local irrigation vendors and contractors.

Water User Match

In-kind

Water User match can be in-kind construction or installation related materials, equipment or labor included in the cost of the project. $157,414 worth of in-kind was contributed by 20 water users toward the installation of 30 screens.

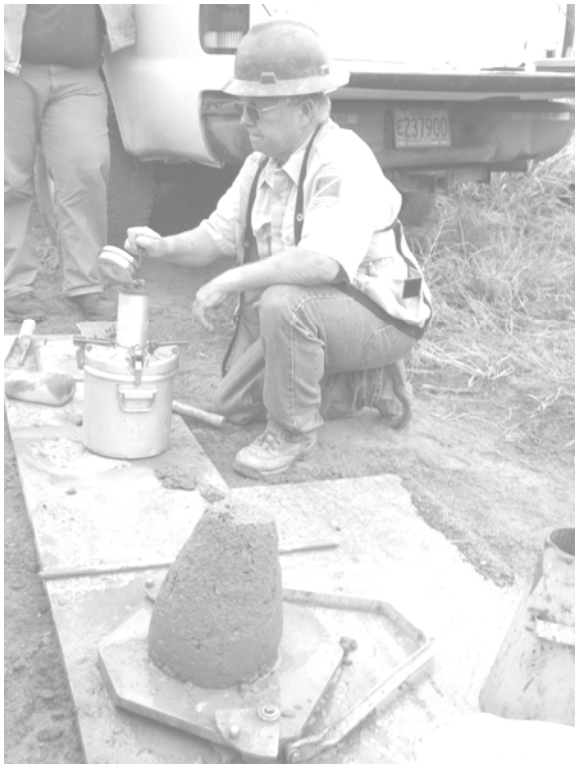
Cash

Water users can also provide match by purchasing materials, hiring contractors or paying ODFW for their portion of the project.

Personnel

Personnel are located in Salem headquarters and at four screen shops where projects are constructed. The challenge is to install and maintain fish screens throughout Oregon through the management of multiple funding streams. $4,979,493 in Personal Service was expended as of December 31, 2010.

Personnel FTE	
Location	FTE
Central Point	11
Enterprise	6
John Day	28
The Dalles	11
Salem	14
Total	**70 FTE**



Other Program Activities

Research and Development

Program engineers and fish screen technicians continue to develop innovative fish screen technology, improving effectiveness and efficiency. Providing power for screen operation and adequate cleaning is key to screen effectiveness.

Alternative Power Sources

Program engineers continue to investigate the potential use of alternative power sources for fish screens including paddle wheel, hydrogen fuel cell, and solar technologies.

Control System Electrical Panel

User Interface

Water Intake Control System

An electrical control system was installed to allow up to 60 cfs of water to be diverted from Upper Klamath Lake through three head gates and six fish screens. The water user inputs the amount of water needed for operations, and the head gates automatically adjust to allow that amount of water to flow through the intake pipes. The system adjusts to ensure uniform water flow which helps the screens operate within fish screening criteria.

The system is able to monitor for water level, flow, and temperature. It is also able to detect if a problem exists with the head gate, debris is caught on a screen, or the water is freezing. If an issue is detected, the system will notify the user with a message on the input screen; however, the system could be upgraded to notify the user in a variety of ways including sounding an alarm, sending an e-mail, or sending a page.

With minimal training, the water user has been able to operate the system allowing them to get the water they need to irrigate their fields while protecting fish.

The control system was developed for this large traveling belt screen facility, but the system could be customized for future use at a variety of screen types and sizes.

Traveling Belt Fish Screens

Other Program Activities

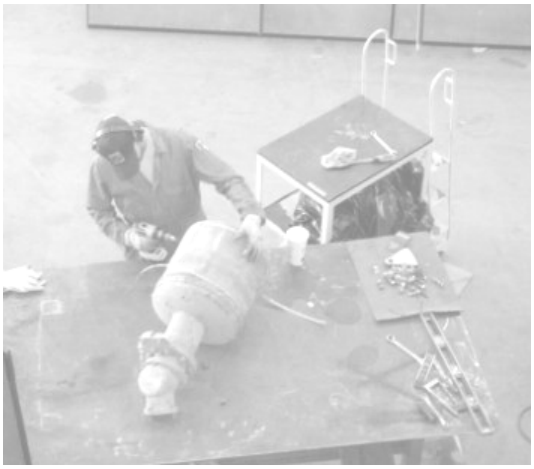
Maintenance

Maintenance of fish screens and passage structures is an important part of the Program. Screens that are not maintained by the Program are often left un-repaired, reducing their effective lifespan and diminishing the State's return on investment.

ORS 498.306(5) requires that ODFW provide major maintenance for screens it cost shares on diversions less than 30 cfs.

Measure 66, the Program's major funding source for new screen construction, cannot be used for maintenance. The Program does not receive enough major maintenance funding, and past elimination of General Fund dollars has worsened the problem.

The situation will only intensify as the Program continues to cost share additional screens.



The Role of the Fish Screening Task Force

The Fish and Wildlife Commission appoints a seven-member citizen task force to advise the Department regarding fish screening policy, funding and technology issues. The Task Force is made up of one public-at-large, three agriculture, and three fishing and fish conservation representatives.

Task Force Members

Representing Agriculture

- **Gordon Summers** is a retired physician who now resides at his family ranch in Halfway. He has worked with fish screens, on his property and others, for more than 10 years. Dr. Summers has been involved with irrigation ditch companies and the Eagle Valley SWCD.
- **Mike Britton** is Manager of the North Unit Irrigation District. He works with the agricultural and natural resources communities to improve fisheries while sustaining irrigated agriculture.
- **Reed Stewart** has over 25 years of experience in the irrigation industry and is the Irrigation Division Manager for Pendleton Grain Growers, Inc. He is active in several agricultural organizations throughout Oregon.

Representing Fishing and Fish Conservation

- **Jeff Oveson** is the Executive Director of the Grande Ronde Model Watershed. He brings together diverse stakeholders to complete habitat projects on private and public lands.
- **Lynden Brown** is a retired high school biology teacher. She is interested in fish issues and wants to insure viable fisheries for the future.
- **Tony Brauner** is a retired high school education and CEO of an intrastate trucking firm. He is a licensed fishing guide and is actively involved with fish habitat and conservation work.

Representing Public-at-Large

- **Mark Wharry** is an engineer with over 10 years experience working on fish screening and passage projects in the Pacific Northwest.

Other Program Activities

Program Success

So far this biennium, 127 fish screens have been installed protecting 301.16 cfs of water. An additional 35 projects are planned for installation by the end of June 2011. The cooperative water users installing these projects have contributed nearly $1.4 million in matching funds.

Fish screens come in a wide range of types and sizes including pump, rotary drum, traveling belt, and panel screens. The projects featured here represent the challenges posed by various locations and the diverse nature of fish screen designs.

CFS or 'cubic feet per second' refers to the amount of water being screened. 1 cfs = 448.83 gallons per minute. The amount of water screened and number of projects installed are the primary measurements used to track Program success.

Projects are located throughout the state benefiting both small and large water users. Valuable partnerships have been forged with water users who volunteer to cost share projects.

1 cfs = 448.83 gallons per minute.

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

Screens Installed by Senate District

District	# Installed	cfs
1	11	22.99
2	3	2.05
3	1	8.70
4	2	1.05
5	1	0.22
6	4	2.22
8	5	8.77
9	14	7.77
12	25	31.31
13	2	1.34
16	2	2.86
26	1	2.00
27	2	7.11
28	10	84.89
29	10	29.02
30	34	88.86
Total	**127**	**301.16**

Screens Installed by House District

District	# Installed	cfs
1	7	6.34
2	4	16.65
3	1	0.60
4	2	1.45
5	1	8.70
7	2	1.05
10	1	0.22
11	4	2.22
15	3	4.32
16	2	4.45
17	10	5.04
18	4	2.73
23	22	27.84
24	3	3.47
25	2	1.34
32	2	2.86
51	1	2.00
53	1	1.12
54	1	5.99
55	9	24.89
56	1	60.00
57	10	29.02
59	20	29.04
60	14	59.82
Total	**127**	**301.16**

Fish Screens Installed July 1, 2009 to December 31, 2010

County Name	House District	Senate District	Basin	Project Title	Stream	Flow Rate	Project #
Baker	60	30	Powder	Nash Ditch Company	Eagle Creek	21.76	09-0028
Baker	60	30	Powder	Melhorn	Clear Creek	17.00	09-0033
Benton	16	8	Willamette	Hathaway Pump #1	Willamette River	2.01	02-0282
Benton	23	12	Willamette	Smith Pump #1	Middle Channel	1.78	02-0285
Benton	23	12	Willamette	Smith Pump #2	Booneville Channel	1.78	02-0286
Benton	23	12	Willamette	Smith Pump #3	Middle Channel	1.78	02-0287
Benton	23	12	Willamette	Smith Pump #4	Booneville Channel	1.78	02-0288
Benton	23	12	Willamette	Smith Pump #5	Clark Slough	1.78	02-0289
Benton	23	12	Willamette	Smith Pump #6	Clark Slough	1.78	02-0290
Benton	23	12	Willamette	Smith Pump #7	Clark Slough	1.78	02-0291
Benton	23	12	Willamette	Smith Pump #8	Clark Slough	1.78	02-0292
Benton	23	12	Willamette	Deer Haven Pump #1	Willamette River	0.67	02-0300
Benton	23	12	Willamette	Deer Haven Pump #2	Long Tom River	0.88	02-0301
Benton	23	12	Willamette	Funke Pump #1	W.F. Booneville Channel	0.89	02-0304
Benton	23	12	Willamette	Funke Pump #2	W.F. Booneville Channel	0.94	02-0305
Benton	23	12	Willamette	Deer Haven Pump #3	Long Tom River Slough	1.67	02-0313
Benton	23	12	Willamette	Horning W. Buxbaum	Long Tom River	1.30	02-0321
Benton	23	12	Willamette	Horning N. Buxbaum	Long Tom River	0.78	02-0322
Benton	23	12	Willamette	Horning Crist Pump	Willamette River	1.07	02-0323
Benton	23	12	Willamette	Stroda Pump #1	Long Tom River	1.67	02-0329
Clackamas	51	26	Willamette	Patterson Nursery Pump	Eagle Creek	2.00	02-0281
Clackamas	18	9	Willamette	Schmid Pump	Pudding River	0.33	02-0284
Clackamas	18	9	Willamette	Shadrin Pump	Butte Creek	0.44	02-0328
Coos	1	1	South Coast	Groves	Elk Creek	0.58	17-0041
Coos	1	1	South Coast	Geaney	Coquille River	0.43	17-0044
Crook	55	28	Deschutes	Teaters Pump Site	Crooked River	1.50	05-0080
Crook	55	28	Deschutes	Downing Pump	Mill Creek	0.55	05-0092
Crook	55	28	Deschutes	Wolf Creek #2	Wolf Creek	1.20	05-0094

Fish Screens Installed July 1, 2009 to December 31, 2010

County Name	House District	Senate District	Basin	Project Title	Stream	Flow Rate	Project #
Crook	55	28	Deschutes	River Run Ranch #2	Crooked River	0.95	05-0096
Curry	1	1	South Coast	McKenzie #3	Floras Creek	1.10	17-0047
Deschutes	54	27	Deschutes	Old Mill Screen	Deschutes River	5.99	05-0079
Deschutes	53	27	Deschutes	Leithauser Ditch	Whychus Creek	1.12	05-0095
Douglas	2	1	Umpqua	Cow Creek Irrigation Company	Cow Creek	8.90	16-0051
Douglas	2	1	Umpqua	Tri-City Water & Sanitary Authority	South Umpqua River	4.87	16-0118
Douglas	1	1	Umpqua	Epp/Kalmen	Morgan Creek	0.67	16-0134
Douglas	7	4	Umpqua	Wassom	North Umpqua River	0.16	16-0143
Douglas	2	1	Umpqua	Johns	Cow Creek	2.60	16-0147
Douglas	1	1	Umpqua	Smith (Richard)	Lookingglass Creek	0.29	16-0148
Douglas	1	1	Umpqua	Heinze #1	Lookingglass Creek	1.38	16-0174
Douglas	1	1	Umpqua	Heinze #2	Lookingglass Creek	1.89	16-0175
Grant	60	30	John Day	Upper Mchaley	John Day River	5.55	06-0152
Grant	59	30	John Day	Granite Boulder #2	Granite Boulder Creek	1.20	06-0216
Grant	59	30	John Day	Granite Boulder #3	Granite Boulder Creek	1.20	06-0217
Grant	59	30	John Day	Granite Boulder #4	Granite Boulder Creek	0.85	06-0218
Grant	60	30	John Day	Larson	Berry Creek	1.20	06-0244
Grant	60	30	John Day	Mills	Little Pine Creek	1.56	06-0279
Grant	60	30	John Day	Ellison	Little Pine Creek	1.98	06-0280
Grant	60	30	John Day	Winegar	Jeff Davis Creek	2.03	06-0294
Grant	59	30	John Day	Warm Springs Tribes	Vincent Creek	1.20	06-0297
Grant	60	30	John Day	Hilliard	Little Pine Creek	1.00	06-0301
Grant	60	30	John Day	Reed #1	Canyon Creek	0.71	06-0303
Grant	60	30	John Day	Stimac Pump	Canyon Creek	0.43	06-0306
Grant	59	30	John Day	Blanchet Pump	John Day River	0.62	06-0309
Grant	60	30	John Day	Lassen	East Fork Canyon Creek	0.69	06-0310
Grant	59	30	John Day	Rixen Pump	South Fork John Day River	0.36	06-0332
Grant	59	30	John Day	Johnson Pump	South Fork John Day River	0.72	06-0443
Grant	59	30	John Day	Vote Pump #3	Cupper Creek	0.05	06-0446

Fish Screens Installed July 1, 2009 to December 31, 2010

County Name	House District	Senate District	Basin	Project Title	Stream	Flow Rate	Project #
Grant	59	30	John Day	Durkheimer Pump	John Day River	0.84	06-0462
Grant	60	30	Malheur	Burns Paiute Tribe	Lake Creek	1.20	10-0031
Harney	60	30	Malheur	Van Drewsey Grazing Association	Wolf Creek	4.00	10-0033
Jackson	5	3	Rogue	Offenbacher-Fowler Ditch	Applegate River	8.70	15-0025
Jackson	4	2	Rogue	Rose	Rogue River	0.85	15-0369
Jackson	2	1	Rogue	Edwards	Evans Creek	0.28	15-0404
Jackson	55	28	Rogue	Bowers	Rogue River	0.06	15-0432
Josephine	4	2	Rogue	Gaither	West Fork Williams Creek	0.60	15-0430
Josephine	3	2	Rogue	Mackenzie	Applegate River	0.60	15-0495
Klamath	56	28	Klamath	Running Y - Geary	Caledonia Canal	60.00	14-0008
Lake	55	28	Goose & Summer Lakes	Farr #2	Deep Creek	2.90	13-0036
Lake	55	28	Goose & Summer Lakes	Taylor Ranch #2	Honey Creek	7.50	13-0041
Lake	55	28	Goose & Summer Lakes	Taylor Ranch #3	Honey Creek	3.23	13-0042
Lake	55	28	Goose & Summer Lakes	Williams Ditch	Cottonwood Creek	7.00	13-0049
Lane	17	9	Willamette	Byler Pump	Coast Fork Willamette River	0.48	02-0273
Lane	11	6	Willamette	Schluckebier Pump	Unnamed slough	1.00	02-0295
Lane	11	6	Willamette	Schutte Pump #1	Middle Fork Willamette River	0.44	02-0316
Lane	11	6	Willamette	Schutte Pump #2	Middle Fork Willamette River	0.44	02-0317
Lane	10	5	Willamette	Evans Timber Pump	Eber Creek	0.22	02-0318
Lane	7	4	Willamette	Kintigh Pump	Row River	0.89	02-0326
Lane	11	6	Willamette	Lamont Pump	McKenzie River	0.34	02-0330
Linn	17	9	Willamette	Van Essen Pump #1	South Santiam River	0.47	02-0274
Linn	17	9	Willamette	Van Essen Pump #2	South Santiam River	0.12	02-0275
Linn	17	9	Willamette	Van Essen Pump #3	South Santiam River	0.40	02-0276
Linn	17	9	Willamette	Van Essen Pump #4	South Santiam River	0.50	02-0277
Linn	17	9	Willamette	Van Essen Pump #5	South Santiam River	0.16	02-0278
Linn	17	9	Willamette	Van Essen Pump #7	South Santiam River	1.00	02-0279
Linn	16	8	Willamette	Hathaway Pump #2	Willamette River	2.44	02-0283

Fish Screens Installed July 1, 2009 to December 31, 2010

County Name	House District	Senate District	Basin	Project Title	Stream	Flow Rate	Project #
Linn	15	8	Willamette	Gray Pump #1	Willamette River	1.44	02-0306
Linn	15	8	Willamette	Gray Pump #2	Willamette River	1.44	02-0307
Lane	11	6	Willamette	Schluckebier Pump	Unnamed slough	1.00	02-0295
Lane	11	6	Willamette	Schutte Pump #1	Middle Fork Willamette River	0.44	02-0316
Lane	11	6	Willamette	Schutte Pump #2	Middle Fork Willamette River	0.44	02-0317
Linn	15	8	Willamette	Gray Pump #3	Willamette River	1.44	02-0308
Linn	17	9	Willamette	Steagall Pump	South Santiam River	0.13	02-0311
Marion	18	9	Willamette	Netter Pump	Pudding River	1.55	02-0280
Marion	18	9	Willamette	DeSantis Pump	Powers Creek	0.41	02-0293
Marion	23	12	Willamette	McGill Pump #1	Marion Creek	0.17	02-0309
Marion	23	12	Willamette	McGill Pump #2	Sidney Ditch	0.45	02-0310
Marion	23	12	Willamette	Meyer Pump #1	Unnamed Stream	0.89	02-0314
Marion	23	12	Willamette	Meyer Pump #2	Sidney Ditch	1.00	02-0315
Marion	25	13	Willamette	Niehus Pump	Willamette River	0.67	02-0319
Marion	25	13	Willamette	Niehus Trust Pump	Willamette River	0.67	02-0320
Marion	17	9	Willamette	Koenig Pump #1	Alder Creek	0.89	02-0324
Marion	17	9	Willamette	Koenig Pump #2	North Santiam River	0.89	02-0325
Marion	23	12	Willamette	Meyer Pump #3	Sidney Power Ditch	1.22	02-0327
Morrow	57	29	John Day	Anson Wright Park	Rock Creek	1.65	06-0323
Sherman	59	30	John Day	Weedman Pump	John Day River	0.72	06-0307
Tillamook	32	16	North Coast	Pacific City Screen	Horn Creek	2.70	01-0035
Tillamook	32	16	North Coast	Sliman Pump	Little Nestucca River	0.16	01-0036
Union	57	29	Grand Ronde	Ladd Marsh Wildlife Area	Ladd Creek Pickup Ditch	2.03	08-0040
Union	57	29	Grand Ronde	Galloway Pump	Indian Creek	3.58	08-0041
Union	57	29	Grand Ronde	West Pump	Grande Ronde River	4.72	08-0043
Union	57	29	Grand Ronde	Rudd Pump #1	Grande Ronde River	4.17	08-0044
Union	57	29	Grand Ronde	Rudd Pump #2	Grande Ronde River	3.30	08-0045
Union	57	29	Grand Ronde	Huber Pump	Willow Creek	1.14	08-0046

Fish Screens Installed July 1, 2009 to December 31, 2010

County Name	House District	Senate District	Basin	Project Title	Stream	Flow Rate	Project #
Union	57	29	Grand Ronde	Delint #1	State Ditch	1.70	08-0047
Union	57	29	Grand Ronde	Delint # 2	Grande Ronde River	4.45	08-0048
Union	57	29	Grand Ronde	Delint # 5	Grande Ronde River	2.28	08-0050
Wheeler	59	30	John Day	007 Ranch Pump #1	John Day River	2.50	06-0018
Wheeler	59	30	John Day	007 Ranch #3	Unnamed Stream	1.60	06-0059
Wheeler	59	30	John Day	Hash Knife Ranch # 1	Bridge Creek	4.85	06-0126
Wheeler	59	30	John Day	Vanier #1	Birch Creek	1.20	06-0258
Wheeler	59	30	John Day	Vanier #2	Birch Creek	1.20	06-0259
Wheeler	59	30	John Day	Marks	Mountain Creek	3.00	06-0292
Wheeler	59	30	John Day	Perry	Bridge Creek	1.13	06-0318
Wheeler	59	30	John Day	Polvi	Gable Creek	2.70	06-0319
Wheeler	59	30	John Day	007 Ranch Pump #2	Bridge Creek	1.30	06-0431
Wheeler	59	30	John Day	007 Ranch Pump #3	Bridge Creek	1.80	06-0439
Yamhill	24	12	Willamette	Christensen Pump	South Yamhill River	1.47	02-0294
Yamhill	24	12	Willamette	Rohde Pump #1	Lambert Slough	1.00	02-0331
Yamhill	24	12	Willamette	Rohde Pump #2	Lambert Slough	1.00	02-0332
127	Total Projects				Total CFS	301.16	

Project Summary

Project Number: S-05-0079 Project Name: Old Mill Screen

Project Type: 5.99 cfs vertical panel wiper screen
Completion Date: September 2009
Stream: Deschutes River
Basin: Deschutes Basin
Water Use: Water from this diversion is used for irrigation, fire suppression & aesthetic value.

Located near the Old Mill District in Bend, this screen protects redband trout from being diverted into a storage pond.

Project Description:

This project installed a fish screen at a previously unscreened diversion near the Old Mill District on the Deschutes River in Bend.

The landowner provided the concrete work, handrails, and electrical hookups. The screen was fabricated and installed by the Program's The Dalles Screen Shop.

Project Location:

The site is located in Bend, in Deschutes County, Oregon.

Cost Breakdown:

ODFW:	$ 9,515
Water User:	$ 6,343
Total:	**$15,858**

Fish Species Affected:

Redband Trout and other non-game native fish

Project Number: S-05-0094 Project Name: Wolf Creek #2

Project Type: 0.72 cfs solar rotary drum screen
Completion Date: October 2009
Stream: Wolf Creek
Basin: Deschutes Basin
Water Use: Water from this diversion is used for irrigation.

This photo was taken just after construction, prior to the irrigation season. Once the screen is operational, the drum will be solar powered.

Cost Breakdown:

ODFW:	$ 9,098
Water User:	$ 6,065
Total:	**$15,163**

Project Description:

This project screened a previously unscreened diversion that delivers water for irrigation.

The District Biologist identified this as a high priority project because the Wolf Creek watershed hosts the strongest population of an important population of redband trout in the Beaver Creek subbasin.

The screen was fabricated and installed by the Program's The Dalles Screen Shop.

Project Location:

The site is near Paulina, in Crook County, Oregon.

Fish Species Affected:

Redband Trout and other non-game native fish

Project Summary

Project Number: S-05-0095 Project Name: Leithauser Screen

Project Type: 1.12 cfs vertical passive panel screen
Completion Date: October 2009
Stream: Whychus Creek
Basin: Deschutes Basin
Water Use: Water from this diversion is used for irrigation.

When the water in Whychus Creek rises, water will flow thru this screen into an irrigation ditch.

Project Description:

This project installed a passive panel screen on a previously unscreened diversion within the City of Sisters.

Screening at this site was a priority to protect native resident redband trout and contributed to ongoing efforts to successfully reintroduce summer steelhead and spring chinook into Whychus Creek.

The new screen was fabricated and installed by the Program's The Dalles Screen Shop.

Project Location:

The site is in Sisters, in Deschutes County, Oregon.

Cost Breakdown:

ODFW:	$2,070
Water User:	$1,302
Total:	**$3,372**

Fish Species Affected:

Redband Trout; Steelhead; Chinook, Salmon, and other non-game native fish

Project Summary

Project Number: S-06-0126 Project Name: Hash Knife Ranch #1

Project Type: 4.85 cfs paddle wheel driven rotary drum screen
Completion Date: August 2010
Stream: Bridge Creek
Basin: John Day Basin
Water Use: Water from this diversion is used for irrigation.

The screen was fabricated in the John Day Screen Shop and delivered onsite ready for installation.

Project Description:

This was part of a larger project to consolidate two water diversions, replace two non-criteria fish screens, and install a fish passage structure. Both of the old style rotary drum screens that were replaced were undersized and did not meet current fish screening criteria. The new dual bay screen provides water for irrigation. This was a high priority project that protects threatened summer steelhead and other fish. The project was fabricated and installed by the Program's John Day Screen Shop.

Project Location:

The site is near Mitchell, in Wheeler County, Oregon.

Cost Breakdown:

ODFW:	$31,538
Bonneville Power Administration:	$ 4,358
Total:	**$35,896**

Fish Species Affected:

Steelhead, Redband Trout, Pacific Lamprey, and other non-game native fish.

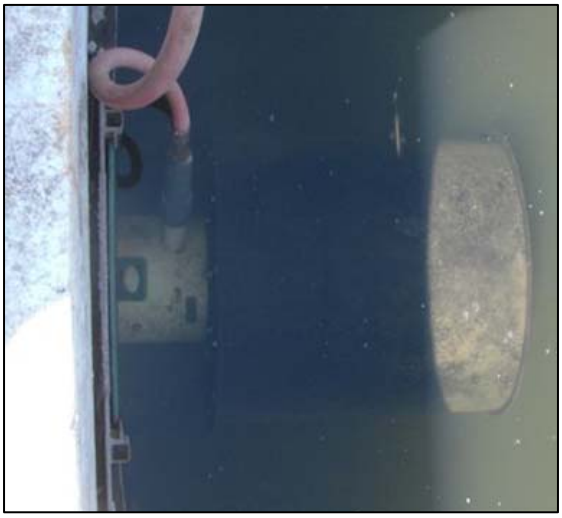
Project Summary

Project Number: S-08-0041 Project Name: Galloway Pump Replacement
Project Type: 3.58 cfs pump screen
Completion Date: August 2010
Stream: Indian Creek
Basin: Grande Ronde Basin
Water Use: Water from this diversion is used for irrigation.

Project Description:

In 1997, the Program installed a concrete diversion structure to prevent the need for an annual push up dam and installed a pump screen.

The diversion structure is still in good condition, but the screen had worn out. The bearings, rollers, and baffle systems were worn and there were several three inch holes in the screening material. The Program's Enterprise Screen Shop replaced the worn screen with a new Sure-Flo brand pump screen, which was purchased from a local supplier.



This pump screen replaced a worn out screen that had fish inside.

Project Location:

The site is located near Elgin, in Union County, Oregon.

Cost Breakdown:

ODFW:	$ 2,612
Total:	**$ 2,612**

Fish Species Affected:

Spring Chinook, Summer Steelhead, Bull Trout, and other non-game native fish.

Project Summary

Project Number: S-09-0033 Project Name: Melhorn
Project Type: 17 cfs rotary drum screen
Completion Date: July 2010
Stream: Clear Creek
Basin: Powder Basin
Water Use: Water from this diversion is used for domestic, irrigation, and stock water.

Project Description:

This screen was installed at a large unscreened diversion. A triple bay rotary drum screen was constructed by the Program's John Day shop. ODFW partnered with the landowner and Eagle Valley Soil and Water Conservation District to complete the installation.

Fish are protected from entering the large diversion by this three bay rotary drum screen.

Project Location:

The site is located northeast of Halfway, in Baker County, Oregon.

Cost Breakdown:

ODFW:	$40,624
Water User:	$27,082
Total:	**$67,706**

Fish Species Affected:

Redband and Bull Trout and other non-game native fish.

Project Summary

Project Number: S-10-0031 Project Name: Burns Paiute Tribe

Project Type: 1.2 cfs rotary drum screen
Completion Date: August 2009
Stream: Lake Creek
Basin: Malheur Basin
Water Use: Water from this diversion is used for irrigation.

The head gate structure provides important flow adjustment to the screen. Proper flows are important for screens to work properly.

Project Description:

The Burns Paiute Tribe diverts water for irrigation. The diversion site is located on US Forest Service property in the Malheur National Forest. The diversion was previously unscreened.

This high priority new screen was installed in a habitat area occupied by ESA listed bull trout. Partnering with the Tribe and US Forest Service, ODFW's John Day Screen Shop fabricated and installed the screen and head gate structure.

Project Location:

The site is approximately 30 miles from John Day, in Grant County, Oregon.

Cost Breakdown:

ODFW:	$15,012
Water User:	$10,008
Total:	**$25,020**

Fish Species Affected:

Brook, Bull, and Redband Trout and other non-game native fish.

Project Summary

Project Number: S-10-0033 Project Name: Van Drewsey Grazing Association

Project Type: 4 cfs horizontal flat plate screen
Completion Date: August 2009
Stream: Wolf Creek
Basin: Malheur Basin
Water Use: Water from this diversion is used for irrigation.

Project Description:

This project screened a previously unscreened diversion with a Farmers Conservation Alliance (FCA) horizontal fish screen. Horizontal fish screens have no moving parts. All of the diverted water flows over the screen. Bypass water, fish, and debris stay on top of the screen and are returned to the river while the irrigation water drops thru the screen.

Horizontal Fish Screen

This project was phase 6 of a much larger project to protect fish in the Wolf Creek Drainage. The larger project included placement of large woody debris, head cut stabilization, culvert replacement, and riparian fencing.

This diversion, located within the Malheur National Forest, provides water for two different water users.

This project was installed by the Program's John Day Screen Shop in partnership with FCA, US Forest Service, and the water users.

Project Location:

The site is near Drewsey, in Harney County, Oregon.

Cost Breakdown:

ODFW:	$19,029
Water User:	$12,686
Total:	**$31,715**

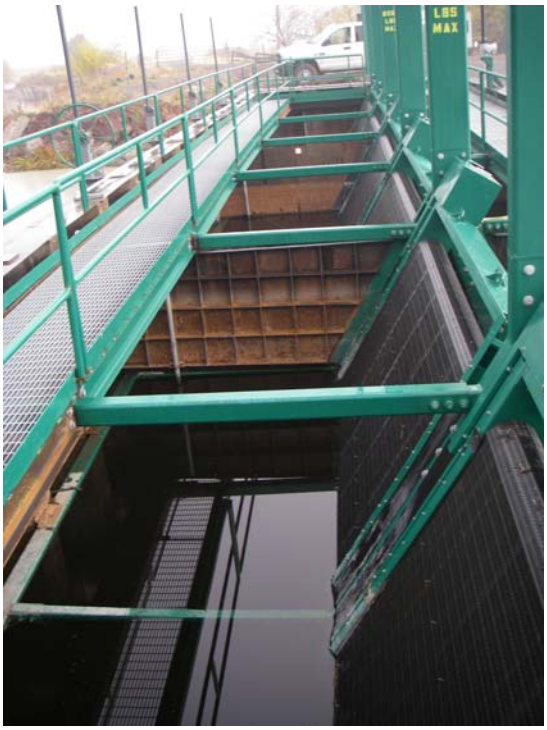
Fish Species Affected:

Redband trout and other non-game native fish.

Project Summary

Project Number: S-14-0008 Project Name: Running Y - Geary

Project Type: 60 cfs traveling belt screens
Completion Date: November 2010
Stream: Caledonia Canal at Klamath Lake
Basin: Klamath Basin
Water Use: Water from this diversion is used for irrigation.



Six traveling belt screens provide water needed for irrigation.

Project Description:

This project installed a state of the art screen system at a previously unscreened diversion at the confluence of Caledonia Canal and Klamath Lake. The screen system includes six traveling belt screens, head gates, and an electronic control system.

The Program's Central Point Screen Shop; US Bureau of Reclamation; US Fish and Wildlife Service; and Running Y Ranch, the water user, were all instrumental in the design and construction of this project.

Project Location:

The site is near Klamath Falls, in Klamath County, Oregon.

Cost Breakdown:

Water User:	$ 91,187
ODFW Measure 66:	$ 199,986
ODFW License Surcharge	$ 15,447
US Fish & Wildlife Service	$ 118,000
Bureau of Reclamation	$ 433,134
Total:	**$ 857,754**

Fish Species Affected:

Klamath Largescale, Lost River, and Shortnose Sucker; Redband Trout; and other native fish.

Contact Information

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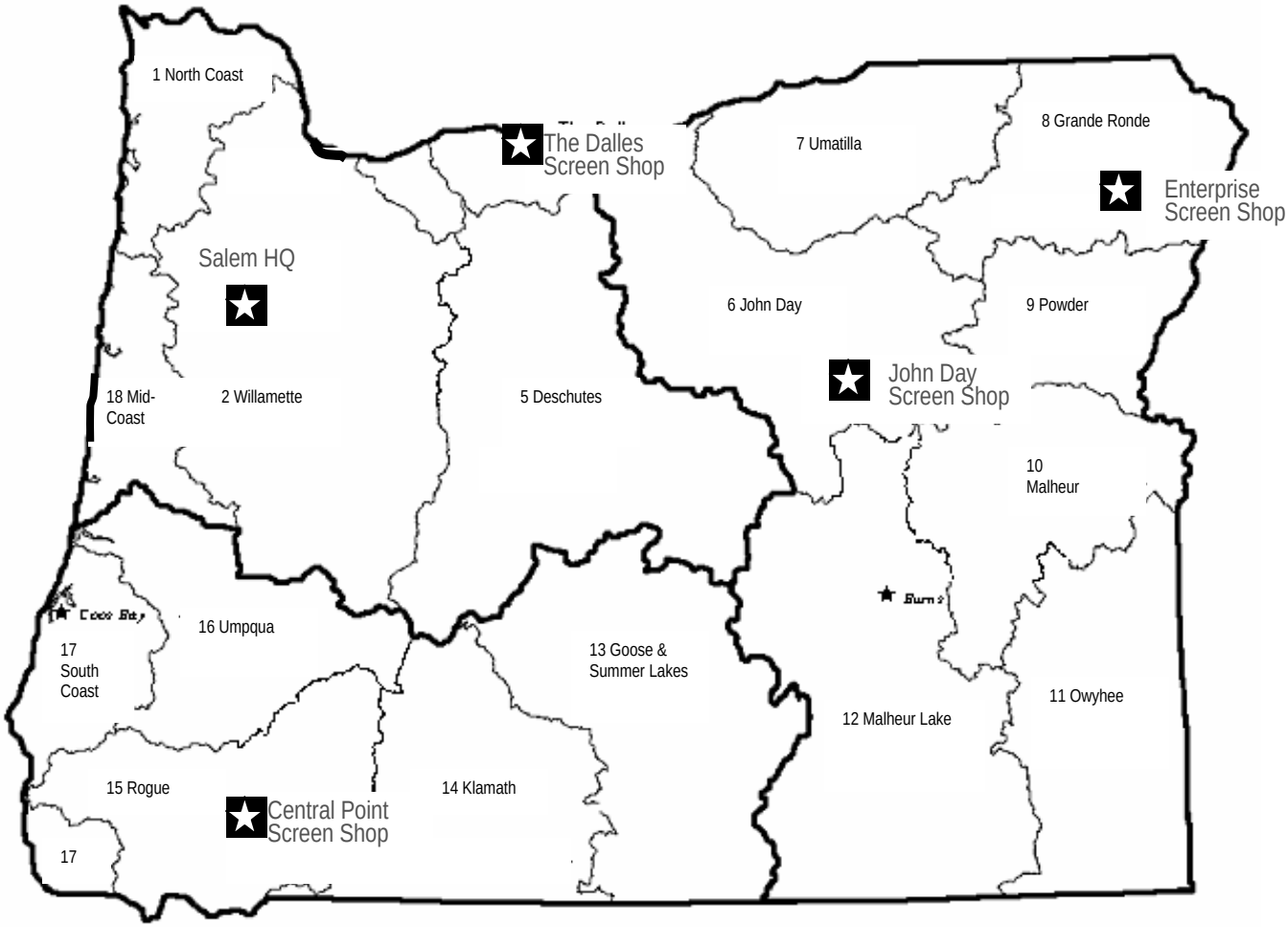

Oregon Department of Fish and Wildlife

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