



Clackamas Partnership

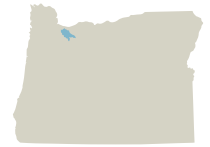
Restoration for Native Fish Recovery



Over-wintering habitat for Coho Salmon in Abernethy Creek

AQUATIC HABITAT FOR NATIVE FISH SPECIES

The Clackamas Partnership's Restoration for Native Fish initiative is built on the Lower Columbia River Conservation and Recovery Plan for Oregon Populations of Salmon and Steelhead (2010) and contributes to the goals and objectives associated with the Clackamas Population area.



The Clackamas Partnership collaborates on coordinated aquatic, riparian and floodplain restoration, conservation, and habitat protection actions to enhance watershed health, support the recovery and sustainability of native fish populations, and contribute to the region's economic and social vitality.

Upper Clackamas River and Floodplain Reach:

Clackamas River headwaters downstream to Oak Grove Fork (31.7 miles)

Middle Clackamas River and Floodplain Reach:

Confluence of Oak Grove Fork downstream to River Mill dam (29.3 miles)

Lower Clackamas River and Floodplain Reach:

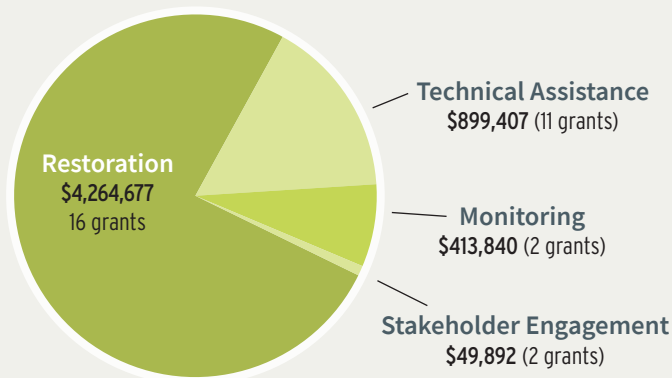
River Mill Dam downstream to the confluence of the Willamette River (23.3 miles)

Lower Willamette River and Floodplain Reach:

Willamette Falls downstream to and including the confluence of Johnson Creek (9.2 miles)

Funding

OWEB awarded \$5,627,516 in funding that leveraged \$4,727,326 in matching funds



Benefits

- Fish rearing and migratory habitat complexity and water quality in river corridors – channel floodplain, off channel, and tributary junctions improves
- Survival of downstream juvenile migrants increases
- Core native fish population performance at freshwater life stages improves
- Increase habitat diversity and salmon population resilience in the face of climate change

ABOUT THIS REPORT

The Focused Investment Partnership (FIP) grant program supports high-performing partnerships to implement strategic restoration actions and measure ecological outcomes through coordinated monitoring. In January 2019, the Oregon Watershed Enhancement Board (OWEB) awarded a FIP grant to the Clackamas Partnership. This report documents cumulative progress since the FIP was initiated in 2019. Work completed under the FIP grant program is part of a much larger on-going collaborative effort of federal, state and local agencies, tribes, private landowners, and non-governmental organizations in the Clackamas River Basin. Accomplishments included in the report only reflect actions completed with OWEB FIP funding.

CORE PARTNERS

Clackamas River Basin Council • Greater Oregon City Watershed Council • North Clackamas Watersheds Council • Johnson Creek Watershed Council • Clackamas Soil and Water Conservation District • Metro

OTHER PARTNERS

Clackamas Water Environment Services • Clackamas River Water Providers • Confederated Tribes of Warm Springs • North Clackamas Parks & Recreation • Oregon Department of Environmental Quality • Oregon Department of Fish & Wildlife • Oregon Parks & Recreation Department • Portland General Electric • USFS – Mt Hood, Clackamas Ranger District • Oregon Parks & Recreation Department

GOAL

The goal of the initiative is to achieve targets specified by the Lower Columbia River Conservation & Recovery Plan by increasing rearing and migratory habitat complexity and improving water quality in the river corridors.

The Partnership's actions fall within three main integrated strategic programs:

STRATEGIES

- 1 Habitat Restoration
- 2 Habitat Protection
- 3 Promoting Land Use and Landowner BMPs

IMPLEMENTATION

Restoration

182

LARGE WOOD
STRUCTURES
PLACED

65

POOLS
CREATED

110

RIPARIAN ACRES
TREATED

11.91

TOTAL MILES TREATED
WITH LARGE WOOD

5.15

ACRES OF
WETLAND
HABITAT
CONNECTED

98,780

STEMS
PLANTED

Monitoring

100.7

STREAM
MILES
MONITORED

32.2

MILES OF IMPROVED
SIDE CHANNEL HABITAT
SNORKEL-SURVEYED

Outreach & Engagement

346

LANDOWNERS/
LAND MANAGERS
CONTACTED ABOUT
RESTORATION

1

STAKEHOLDER
PLAN
COMPLETED

1

VIDEO
TO ENCOURAGE
LANDOWNERS'
PARTICIPATION

33

IN-PERSON
WORKSHOPS/
TRAINING EVENTS

Technical Assistance

2

WATERSHED
ACTION PLANS
CREATED

1

PROJECT
TRACKER
DATABASE
DEVELOPED
FOR USE

44

HABITAT
IMPROVEMENT
PROJECTS
IDENTIFIED

OUTCOMES

Near Term 0-10+ YEARS

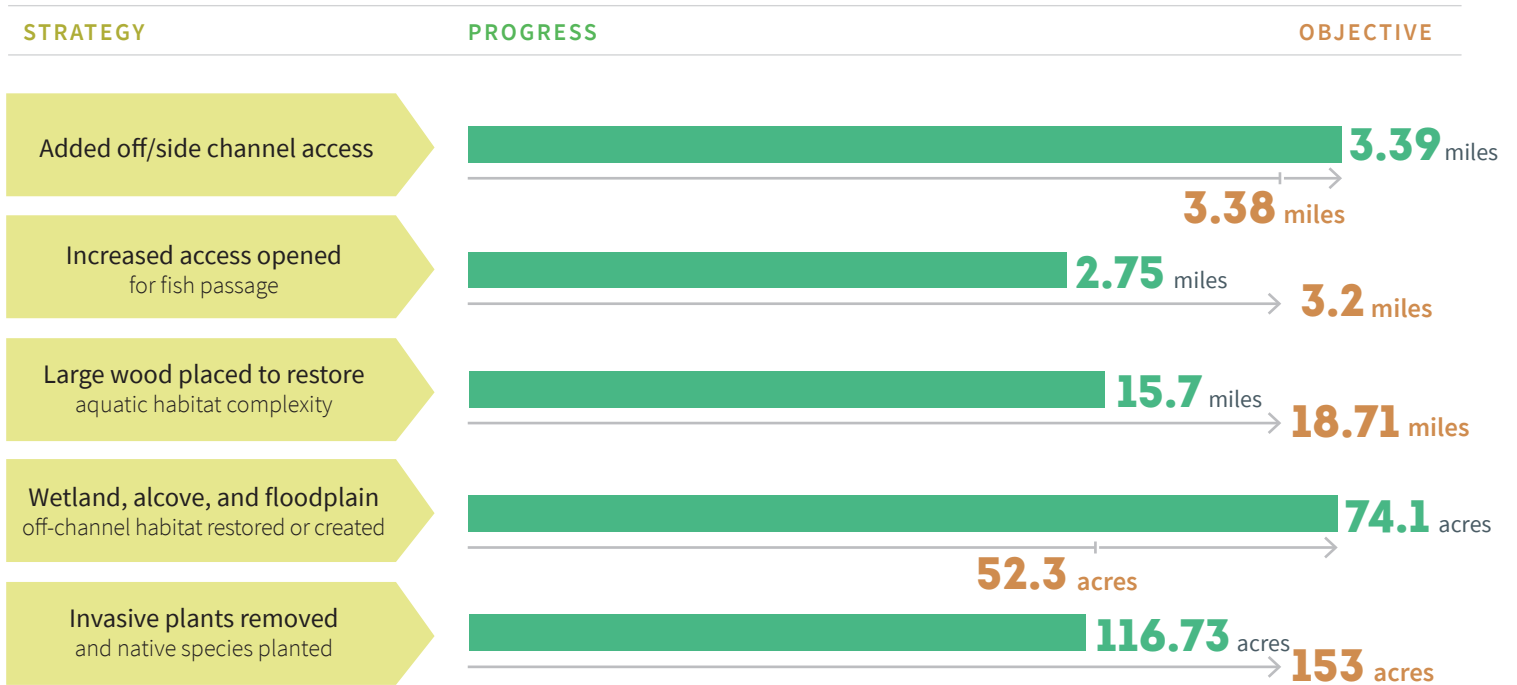
- Increased accessible habitat through enhanced passage at road crossings, small dams, and diversions
- Channel structure and complexity including large wood is improved
- Reconnection of side and off-channel habitats
- Reduction of invasive plant species in riparian and upland habitats

Long Term 20+ YEARS

- Floodplain connectivity and function increases
- Increased large wood recruitment
- Enhance climate resilience of native habitats

FIP Initiative Progress, Biennia 1-2

Progress on metrics includes actions completed as well as actions proposed through obligated OWEB grants. Progress reflects implementation supported by OWEB funding, and does not represent all progress achieved via other funding sources.



Monitoring Approach

The Partnership's restoration and conservation project outputs are tracked through established measures (e.g., volume of large wood placed, area planted with native vegetation). Implemented restoration project outputs, also called performance measures, are documented in the Clackamas Project Tracker database.

ODFW and the Johnson Creek Watershed Council are leading effectiveness monitoring efforts to understand how restoration actions are improving fish habitat and macroinvertebrate communities. To further help the Partnership understand habitat conditions, a contractor developed a macroinvertebrate sampling design, data collection approach, and data analysis methods.

The Partnership plans to monitor restoration sites beyond 1 year after the project is completed. The plan is to evaluate the monitoring protocol for the final year of the FIP and consider several options to accomplish monitoring sites longer-term, beyond one year post-restoration.



Macroinvertebrate monitoring



Christmas tree installation event

North Newell large wood helicopter placement

Adaptive Management

Restoration

CHALLENGES

Wildfires in 2020 and 2021 impacted progress. The anticipated use of salvage logs was delayed.

Partnership capacity was a challenge (e.g., 2 organizations did not have a Project Manager).

Turnover and capacity in partnering agencies slowed processes.

Additional permitting requirements and rising application fees.



LESSONS LEARNED

Government agencies held meetings to address hazard/danger trees, generating opportunities for salvage log use for restoration projects.

There will be turnover in staff positions and our organizations need to build succession planning into our project management.

New staff learned from the collective expertise from the Partnership while attending meetings, participating on tours, and reviewing project proposals as part of the Technical Advisory Committee.

It is important to continually be aware of permitting requirements, changes, and fees.



ADAPTATIONS

Identified a point of contact to work with agencies for use of salvage logs in future restoration projects.

FIP funding increased capacity. Facilitation assistance through contracting was helpful.

A return to project tours with the technical review team presented learning opportunities when observing other partners' projects and hearing reviewers' comments. Contracting with consultants also helped adjust capacity issues.

Reducing other expenses or identifying funding from other sources needed to make up the gap presented by increases in permitting requirements.

Information about new fees was added to new project proposals.

Engagement

CHALLENGES

Reaching landowners during the pandemic and wildfires was challenging.

Multiple owners for single tax lots require more engagement.

Landowner skepticism of external attention to property use (e.g., government intrusion).



LESSONS LEARNED

Creative meeting and communication arrangements.

Planning for appropriate amount of time and staff attention for areas with multiple owners.

Building trust through landowner relationships led to incorporating landowner interests in project planning.



ADAPTATIONS

Arranging outdoor tours and meetings helped to provide safe social distancing.

Build on established relationships.

Maps and graphic displays used to clarify project scope and incorporation of landowner interests. Providing access to initial agreements during the design and assessment phase helped with landowner acceptance prior to a completed project agreement.

Adaptive Management

Monitoring

CHALLENGES

Changes in monitoring plans occur when projects are delayed, cancelled, or altered significantly and lead to inefficient use of monitoring funds.

Monitoring reporting requirements were time consuming to learn.

Different definitions for large wood habitat installations exist.

First post-project monitoring occurred during the 2021 Heat Dome.

Land access restrictions occurred due to the Covid pandemic and 2020 wildfire, delaying monitoring activities.



LESSONS LEARNED

Unpredictability exists in restoration projects from concept to implementation. For example, post-fire emergence of cultural artifacts changed a project site, requiring a new approach for pre-project monitoring.

Learning curve for required reporting was steep, but the partners hit their stride in second biennium.

Differences in ODFW monitoring protocols compared with other guidance for habitat structure installation are better understood.

Multiple years of monitoring are needed to show more accurate ecological response over time.

Flexibility in timing of monitoring was required, including contract arrangements.



ADAPTATIONS

Identified potential source for additional monitoring funding.

Considered new approaches to pre-project monitoring.

Adjusted reporting per requirements.

Using the ODFW benchmark for large wood volume for prioritizing Biennium 3 projects

Anticipate additional post-project monitoring.

Adapted monitoring schedules.

Partnership

CHALLENGES

Integrating projects identified from biennium 1 Technical Assistance grants.

The full suite of identified projects required additional sources of funds to implement proposed work plans.

Partnership processes were incomplete in addressing emerging issues.



LESSONS LEARNED

Unanticipated new projects were identified.

As designs progressed, a greater detail of project costs became apparent.

Partnership governance documents needed review and updating to include input from new members.



ADAPTATIONS

Project prioritization process was reviewed and refined to determine biennium 2 and 3 work plans.

The Partnership worked to expand funding opportunities for restoration projects identified by partners, resulting in more on-the-ground projects.

Improvements to project prioritization and governance procedures were developed with a contracted facilitator.