

FUNDING & RESOURCES FOR FISH PASSAGE PROJECTS

April 5th, 2024



CALIFORNIA FISH PASSAGE FORUM

Neefus Gulch Coho Salmon Barrier
Removal Project Design at Appian Way



AGENDA

10:00am

Welcome & Introductions

10:10am

Overview of the California Fish Passage Forum

10:20am

Overview of some federal and state funding opportunities opening in FY24 and FY25

Funding Databases, NOAA NMFS, USFWS, BOR, CDFW FRGP, DWR

11:40am

30-minute Lunch Break

AGENDA

- 12:10pm** **Resources available through EPIC**
- 12:20pm** **Putting Together Cost-Share Packages**
- 12:40pm** **Exploring Options for Simplified Permitting**
- 1:00pm** **North Coast Salmon Project- Salmon Habitat Restoration
Priorities (SHaRP) Program**
- 1:20pm** **Monitoring SONCC Coho and Floodplain Habitat Restoration
Projects in Prairie Creek and Humboldt Bay**
- 1:40pm** **Summarize Next Steps, Wrap Up**



CALIFORNIA FISH PASSAGE FORUM

**Mission: To protect and revitalize
anadromous fish populations in
California by restoring connectivity of
freshwater habitats throughout their
historic range.**



A 2019 Project lead by Trout Unlimited to install a large bottomless culvert at the Skunk Train crossing of Noyo River, east of Fort Bragg.

Signatories



**CALIFORNIA FISH
PASSAGE FORUM**



**NOAA
FISHERIES**



Our Objectives

Seven strategic objectives including:

- Funding removal/remediation of barriers, assessment and research work.
- Improving collaboration/information sharing of agencies/organizations.
- Collating and elevating resources for practitioners.
- Increasing access to simplified permitting options.
- Outreaching successes of fish passage restoration across our geographic scope.



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STRATEGIC FRAMEWORK

2023-2028

Updated December 2023



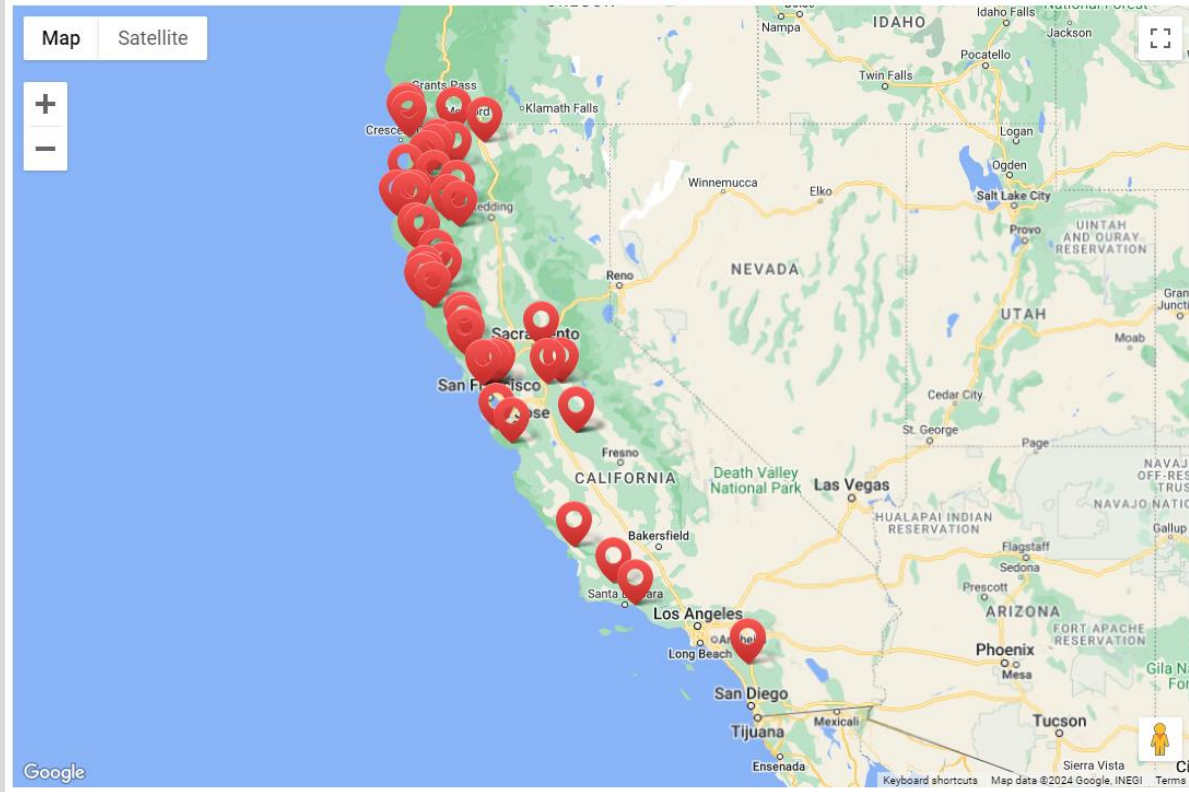
WWW.CAFISHPASSAGE.ORG

WWW.CAFISHPASSAGEFORUM.ORG

Our Work



CALIFORNIA FISH PASSAGE FORUM



Barriers to Tidal Connectivity | Symposium | BTC Map Viewer | PMEP | CFPF | PLCI

- BTC - Culverts**
Publicly available culvert datasets
- BTC - Tidegates**
Publicly available tidegate datasets
- BTC - Levees and Dikes**
Publicly available levee and dike datasets
- BTC - Railways**
Publicly available datasets on railroads
- BTC - Roads**
Publicly available road datasets
- BTC - Areas Behind Tidal Barriers**
Dataset identification of deluged areas

Forum Map of Funded Projects



57 PROJECTS SUPPORTED



50+ BARRIERS REMEDIATED



295+ MILES OF ACCESS



1.7M+ IN FUNDING

Barriers to Tidal Connectivity Hub site 

Upcoming Events



**CALIFORNIA FISH
PASSAGE FORUM**

Passage Assessment Database (PAD) Expert Review Webinar- CDFW Region 1 Coastal

**Wednesday, May 15th
10AM-12PM**

The California Fish Passage Forum invites agencies, non-profits, restoration practitioners, RCDs, and engineers with interest and/or knowledge of fish passage barriers in CDFW Region 1 COASTAL, Northern Region (Del Norte, Humboldt, and Mendocino counties).

Friday May 24th 3:30-4:30PM

The poster features the California Fish Passage Forum logo and the World Fish Migration Day logo at the top. The main title is "FREE-FLOWING CALIFORNIA VIRTUAL TRIVIA AND HAPPY HOUR" in large blue letters. Below the title, it says "FRIDAY MAY 24TH, 2024 3:30PM-4:30PM" in red and black. The text describes the event as a way to finish the work week and celebrate World Fish Migration Day 2024. The bottom of the poster shows illustrations of various fish species, including a brown trout, a steelhead, a salmon, and a sturgeon. At the bottom, it says "GET THE LINK AT WWW.CAFISHPASSAGEFORUM.ORG" and includes the Zoom logo.

**CALIFORNIA FISH
PASSAGE FORUM**

**WORLD FISH
MIGRATION DAY**

FREE-FLOWING CALIFORNIA VIRTUAL TRIVIA AND HAPPY HOUR

FRIDAY MAY 24TH, 2024 3:30PM-4:30PM

Finish your work week with your colleagues in the restoration field and celebrate World Fish Migration Day 2024 by flexing your knowledge on anadromous species, connectivity, restoration and dam busting!

GET THE LINK AT WWW.CAFISHPASSAGEFORUM.ORG

Our Work



CALIFORNIA FISH PASSAGE FORUM

Fish Passage Monitoring Methods

Prepared for the California Fish Passage Forum

By
Ross Taylor and Associates

July 20, 2015

Fish Passage Monitoring Methods Report

California Fish Passage Forum
Fish Passage Barrier Removal Monitoring Worksheet

Page 1 of 3

A General Info

Project Name		
Barrier name and GPS Coordinates	Lead organization	
Monitoring Contact	Phone	Email

B Project Timing

PRE-IMPLEMENTATION		POST-IMPLEMENTATION	
Anticipated Start Date	Anticipated End Date	Construction Start Date	Construction End Date

C Basic information

Date final project design was completed:

Anticipated stream miles restored	miles	Actual stream miles restored	miles
-----------------------------------	-------	------------------------------	-------

Description of barrier

Verification methods

Landowner:

D Site "Passability"

Describe the following physical parameters of the project

Channel Width in Project Area:	Channel Slope / Gradient in Project Area:	Channel Width in Project Area:	Channel Slope / Gradient in Project Area:
Baseline ft.	Baseline %	As-Built Condition ft.	As-Built Overall Slope %
Target Range to ft.	Target Range to %	As-Built Maximum Channel Slope %	
Maximum Channel Slope %			
Maximum Jump Height:	Maximum Jump Height:		
Baseline ft.	As-Built Condition ft.		
Target Range to ft.			
Does the project design meet regionally appropriate fish passage criteria? <input type="checkbox"/> Yes <input type="checkbox"/> No	Does the as-built conditions fall within the target ranges listed at left? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Provide reference sources used to develop target ranges.

Comments

Fish Passage Barrier Removal Performance Measures & Monitoring Worksheet



Forum Meeting in November 2023 with field tour of the Jackson Family Wines yellowjacket creek project

Passage Assessment Database

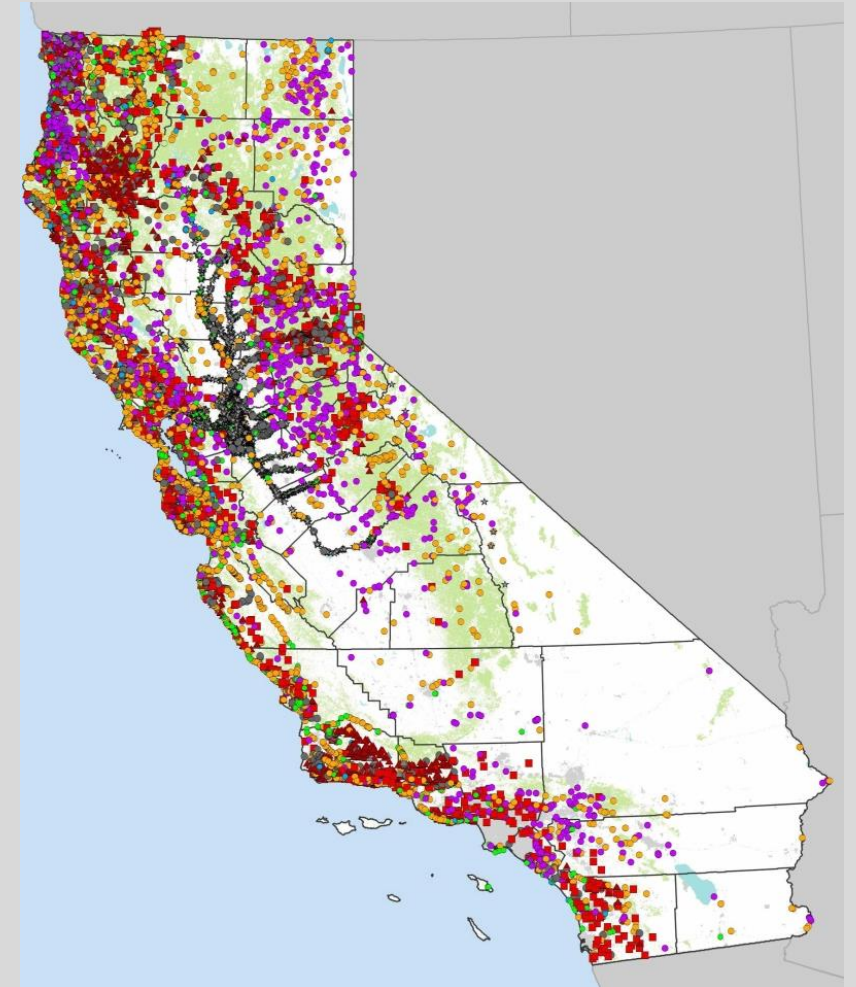


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The Passage Assessment Database (PAD) is an ongoing map-based inventory of known and potential barriers to anadromous fish in California, compiled and maintained through a cooperative interagency agreement. The PAD compiles currently available fish passage information from many different sources, allows past and future barrier assessments to be standardized and stored in one place, and enables the analysis of cumulative effects of passage barriers in the context of overall watershed health.

Available on CALfish

<https://www.calfish.org/ProgramsData/HabitatandBarriers/CaliforniaFishPassageAssessmentDatabase.aspx>



Opportunities for Partnership



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FISHPass is a decision support tool that uses an optimization model (OptiPass™) to assist in identifying and prioritizing the treatment of migration barriers. FISHPass uses barrier information from the California Passage Assessment Database (PAD); the model also accounts for spatial layout of the barriers in the stream/road network, **cumulative barrier passability, potential upstream habitat, and optionally, estimated treatment costs.**

In 2020, the Forum partnered with Ross Taylor & Associates to apply FISHPass to hundreds of PAD listed barriers in the Smith River Watershed, resulting in a list of priority barriers based on FISHPass outputs.

Developing a Foundation for Fish Migration Barrier Removals in
California's Largest Undammed River: an Application of FISHPass in
the Smith River

Prepared for the CA Fish Passage Forum

By Ross Taylor and Associates

FINAL VERSION: August 26, 2022



Impassible culvert on a tributary to Knopti Creek, Middle Fork Smith River



Fish Passage Barrier Removal Performance

Measures & Monitoring Worksheet

Funding



CALIFORNIA FISH PASSAGE FORUM

- The forum awards about 250-350K in funding annually through NFHP. Required 1:1 non-federal match. Good source of funding for covering cost increases, monitoring, assessments, and leveraging additional funds. Closed for this year, releases each spring.
- Many sources of funding available each year, both federal and non-federal. Visit the Fish Passage Portal for federal opportunities. Notable state sources include CDFW FRGP, DWR, SCC, and others.

A screenshot of the Fish Passage Portal website. The header includes a navigation menu with links for "Fish Passage Portal", "View Projects", "Find Funding", "Resources", "Content Library", and "Image Library". The main content area features a large landscape photograph of a river flowing through a forest with yellow autumn foliage. Overlaid on the image is the text "Fish Passage Portal" and a subtitle: "A resource for all stakeholders of fish passage and aquatic connectivity projects. Presented by the Federal Interagency Fish Passage Task Force". Below the image, there is a "Welcome to the Fish Passage Portal" section with a brief description of the portal's purpose and a mention of the Bipartisan Infrastructure Law (BIL) funding.

Interagency Fish Passage Portal

Klamath Funding Spreadsheet

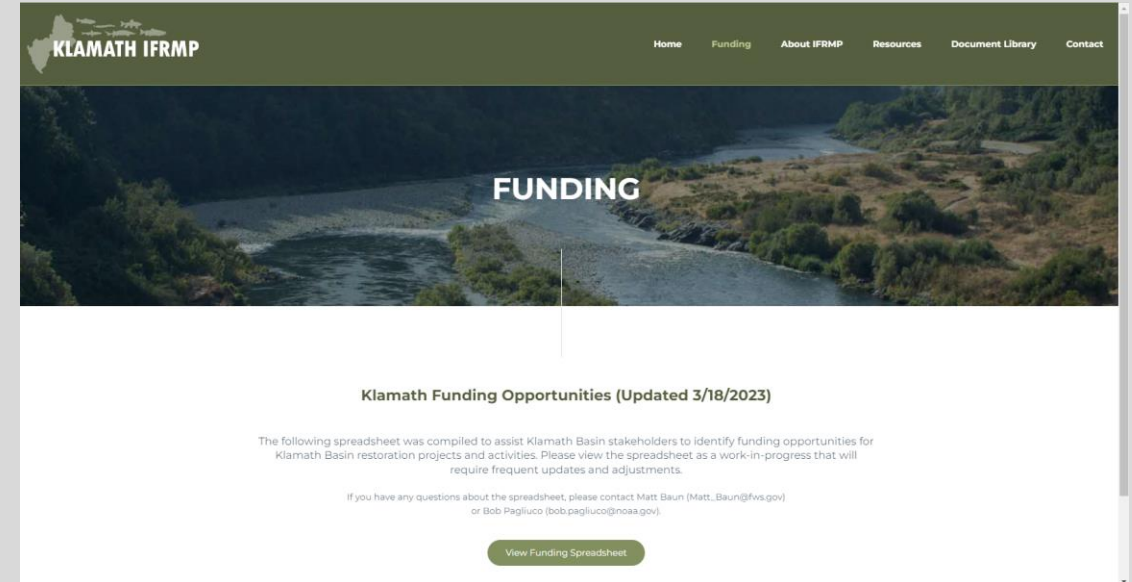


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Klamath Funding Opportunities (Updated 3/18/2023)

The following spreadsheet was compiled to assist Klamath Basin Integrated Fisheries Restoration & Monitoring Plan stakeholders identify funding opportunities for Klamath Basin restoration projects and activities.

The sheet was updated in 3/23, so many ops have closed, but it can be a starting point for funding research and has a lot of entries.



<https://ifrmp.net/funding/>

AutoSave OFF Klamath-Funding-Opportunities-3-18-2022... Saved to this PC

File Home Insert Draw Page Layout Formulas Data Review View Help

Clipboard Font Alignment Number Styles Cells Editing Add-ins

Q1 Notes

Projects		Conservation/Storage	Irrigation	groundwater storage techniques. In order to be eligible for funding under this NOFO, the project must meet the following:	Public and state controlled Nonprofit 501(c)(3) organization, Federally Nonprofit 501(c)(3) organization, Federally 501(c)(3) nonprofit, Public Agency, Federally recognized Indian Municipalities, non profits, special districts, watershed Public Agency, Tribal Government, County governments, Independent school districts, County governments, Independent school districts, Public housing authorities/Indian housing authorities.						
Department of Transportation Sponsorship of Cooperative TMDL Implementation Projects for California Water Boards CWA 319 Nonpoint Source Solicitation	Department of Transportation	Water Quality Improvement	pollution prevention, pollution reduction, habitat restoration	Proposals must include projects in impaired watersheds in which the Department has been assigned a waste load allocation or otherwise has responsibility for implementation of a total maximum daily loads. Funding is to reduce NPS pollution within the state's NPS priority watersheds that lead to reduction and/or prevention of pollutants that threaten or impair surface and ground waters. The State Water Resources Control Board (State Water Board) will administer \$670 million to prevent and cleanup contamination of groundwater that serves (or has served) as a source of drinking water. The funds are available as grants.	Nonprofit, Public Agency, Federally recognized Indian Municipalities, non profits, special districts, watershed Public Agency, Tribal Government	Dependent	Not Required	Continuously Open	Continuously Open		
Proposition 1 Groundwater Grant Program	CA Water Board	Water Quality Improvements	pollution prevention, pollution reduction, Post-Fire Recovery, disadvantaged groundwater, water quality, contaminant reduction	Grant proposals must address implementation of Watershed Based Plans	Public Agency, Federally recognized Indian Municipalities, non profits, special districts, watershed Public Agency, Tribal Government	Planning projects - \$50,000 - \$250,000	25%, can be waived for eligible applicants	Sept 2022	Dec 2022	2023	Sept - Dec 2023
Oregon Nonpoint Source Implementation 319 Grants	ODEQ	Water Quality Improvements	watershed magement	The Water Recycling Funding Program (WRFP) promotes the beneficial use of treated municipal wastewater (water recycling) in order to augment or offset fresh water supplies in California. The purpose of the WRFP Planning Grant is to The BLM California Wildlife Program helps ensure self-sustaining populations and a natural abundance and diversity of wildlife on public lands for the enjoyment and use of present and future generations. The program is responsible for increasing our understanding of the resources present on BLM lands and the effectiveness of BLM's resource management decisions. The program seeks to develop and BLM California has an opportunity to work with partner organizations to assist with fuels management and community fire assistance program activities to reduce the risk and impact of catastrophic wildfires to local	Public Agency, Federally recognized Indian Municipalities, non profits, special districts, watershed Public Agency, Tribal Government	Dependent	0%	6/6/2021	Now Closed		
Water Recycling Funding Program (WRFP) - Planning Grant	CA Water Board	Water Recycling	waste water treatment, water recycling.	The BLM California Wildlife Program helps ensure self-sustaining populations and a natural abundance and diversity of wildlife on public lands for the enjoyment and use of present and future generations. The program is responsible for increasing our understanding of the resources present on BLM lands and the effectiveness of BLM's resource management decisions. The program seeks to develop and BLM California has an opportunity to work with partner organizations to assist with fuels management and community fire assistance program activities to reduce the risk and impact of catastrophic wildfires to local	Public Agency, Federally recognized Indian Municipalities, non profits, special districts, watershed Public Agency, Tribal Government	270K in 2022	40% non federal	March	May		
Bureau of Land Management California Wildlife Resource Management	BLM	Wildlife Management	species monitoring, habitat restoration, wildlife conservation, ecological biodiversity, land management, climate change solutions, natural resources management	The National Conservation Lands financially supports studies aimed at increasing our understanding of the resources present on BLM lands and the effectiveness of BLM's resource management decisions. The program seeks to develop and BLM California has an opportunity to work with partner organizations to assist with fuels management and community fire assistance program activities to reduce the risk and impact of catastrophic wildfires to local	County governments, Independent school districts, County governments, Independent school districts, Public housing authorities/Indian housing authorities.	\$75,000 - \$150,000	50%		Always Open		
FY22 BLM Bureau-Wide National Landscape Conservation System	BLM	Wildlife Management	fuel management, fire resilience, risk reduction, outreach	The goals of the Stamp Project, as described in legislation, are to protect, preserve, restore, enhance, and develop migratory waterfowl breeding and wintering habitat, evaluate habitat projects, and conduct waterfowl resource assessments and	County governments, Independent school districts, County governments, Independent school districts, Public housing authorities/Indian housing authorities.	\$20,000 - \$300,000	0%	2/1/2022	Now Closed		
Bureau of Land Management California Fuels Management and Community Fire Assistance	BLM	Wildlife Management	waterfowl, habitat resotration, wintering grounds, breeding ecology, land	The goals of the Stamp Project, as described in legislation, are to protect, preserve, restore, enhance, and develop migratory waterfowl breeding and wintering habitat, evaluate habitat projects, and conduct waterfowl resource assessments and	County governments, Independent school districts, County governments, Independent school districts, Public housing authorities/Indian housing authorities.	\$5,000 - \$40,000	0%	11/8/2021	Now Closed		
California State Duck Stamp Project	CDFW	Wildlife Mangement			Nonprofit, Public Agency	\$100,000 - \$25,000,000	0%	4/6/2022	Now Closed		

Sheet1

Ready Accessibility: Good to go

<https://ifrmp.net/funding/>

SF Bay Joint Venture



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Funding for projects often requires a combination of sources including federal budget appropriations, state bonds and propositions, regional funding measures, city coffers and private foundations. **We strive to keep our funding table up to date and highlight grants with upcoming deadlines as well as those that are ongoing and have no deadlines.** You can sort grants by using the name of the grant, provider, or deadline.

The screenshot shows the "Funding" page of the San Francisco Bay Joint Venture website. The page features a navigation menu with "ABOUT US", "CONSERVATION", "KEY INITIATIVES", "FUNDING", and "STAY CONNECTED". A large image of a duck in flight is on the right. A dark teal box contains the heading "Funding" and the text: "We help our partners find and apply for the money they need to fulfill their mission and achieve their goals." Below this, a paragraph explains that funding for projects often requires a combination of sources and that the organization strives to keep the funding table up to date. Another paragraph mentions a monthly "Funding Working Group (WG)" that meets every second Thursday from 3-4 PM. At the bottom, there are two buttons: "View Available Funding" and "Sign up for Funding Working Group".

<https://sfbayjv.org/funding/>

Meeting Information - Zoom | Funding - San Francisco Bay Area | SFBJV Funding WG_Grants FY 23-24

docs.google.com/spreadsheets/d/1MWAKadRbPOFFxMHH_kNXXw_zYIQBp68bvdJ5LokGQgQ/edit#gid=558949425

SFBJV Funding WG_Grants FY 23-24

File Edit View Insert Format Data Tools Extensions Help

View only

E3 2024 - 05 - 10

Document Last Updated	4/2/24	Updated by:	NR						
Grant Name	Area (State or National)	Agency /Org	Categories (see Metadata tab)	Grant Deadline (YYYY-MM-DD)	Amount \$	Grant Info Last Updated	Match required ?	Grant Details (abbreviated)	Website
Community Stewardship Grants	State (local)	Alameda County - Clean Water Program	EJ/Watersheds	2024 - 05 - 10	\$6,000	4/2/2024	No	The Alameda Countywide Clean Water Program is inviting grant applications for community-based projects that prevent stormwater pollution, enhance the health of local watersheds, creeks and the San Francisco Bay, and have a public outreach element. • Grants are awarded for amounts between \$500 and \$6,000 per project. The total available budget is \$30,000. • Projects must be implemented in Alameda County. • Eligible applicants include teachers and student groups, service clubs, community and environmental groups, youth organizations, homeowner associations and non-profit organizations. For-profit organizations and public agencies are not eligible.	http://www.alameda.org
SB 1 SLR Adaptation Planning Grant	State	Ocean Protection Council	Resilience & Adaptation	2024 - 06 - 28 (2nd round)	Varies depending on track - \$200k - 10M	3/27/2024	No (encouraged)	The overall goal of the SB 1 SLR Adaptation Planning Grant Program is to support the implementation of SB 1 for local, regional, and tribal governments, and specifically to support SLR adaptation planning for local governments. Track 1 is SLR Adaptation Planning; Track 2: SLR Implementation Projects	https://www.sb1-funding.com/email/vdeliver
Liberated Paths GrantMaking	State	Justice Outside/Ocean Protection Council	EJ	2024 - 04 - 05	up to \$25,000/year	3/27/2024	NA	Your work is eligible for funding if: Projects and programming engage people in ocean/coastal conservation and/or in equitable access to the California Coast. Liberated Paths Grantmaking will prioritize: Organizations or projects led by and engaging Black, Indigenous, and/or Communities of Color People and projects rooted within their communities, with the lived experiences they need to understand what approaches will work best for the young people in their communities Organizations or projects with an annual budget of less than \$1 million People or projects that have limited relationships with and/or funding streams from the larger philanthropic community	2024 Lib Grants Coast
Environmental and Climate Justice	National	EPA	EJ	2024 - 11 - 21	up to \$20M	3/27/2024	NA	The Environmental and Climate Justice Community Change Grant program (Community Change Grants), created by the Inflation Reduction Act, offers an unprecedented \$2 billion in grants under this Notice of Funding Opportunity (NOFO). The Community Change Grants will fund community-driven projects that address climate challenges and reduce pollution while strengthening communities through thoughtful implementation. Track II will fund approximately 20 meaningful engagement grants of \$1 million - \$3 million. Grants cannot exceed 3 years in duration.	Environ Climate Commu Grants F

Funding Sources | Metadata | Contacts | Resources | Archived Grants | Applications | Funded Projects

<https://sfbayjv.org/funding/>

PS RAFT Tool



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Puget Sound Partnership (.gov)

<https://www.psp.wa.gov> › psraft



Puget Sound RAFT - Recovery Acceleration Funding Tool

Dec 7, 2023 — The Puget Sound **RAFT tool** is a service of the Puget Sound Partnership's Strategic Funding Team. Established in 2023, this team assists Tribes, ...



PS RAFT collects information about national, state, and regional funding opportunities in one central location. This tool makes it easier to find and apply for funding and helps to align funding opportunities with funding needs.



PUGET SOUND
PARTNERSHIP

<https://www.psp.wa.gov/psraft.php>

Puget Sound Recovery Acceleration Funding Tool

PS RAFT collects information about national, state, and regional funding opportunities in one central location. This tool makes it easier to find and apply for funding and helps to align funding opportunities with funding needs.

PS RAFT also provides a space to encourage collaboration and alignment among partners so that grant applications integrate multiple priorities and have a greater chance for success. To do this, please click the "I am interested in connecting with others" button on the bottom of each funding opportunity.

For assistance, more information about available funding opportunities, or to submit an announcement, contact StrategicFunding@psp.wa.gov or visit [The Strategic Funding website](#)

SIGN UP

FOR EMAIL ALERTS

Links for Contributors:

[Submit](#) 

[Edit or Review](#) 

Filters

Fund Name

- All -

Activity Type

- All -

Other Activity Types

- All -

Strategy Topic

- All -

Other Strategy Topics

- All -

Organization

- All -

22 Active Announcements

Sort by Announcement Date



ew science, synthesis, and analysis for improved protection and restoration of kelp and eelgrass in Puget Sound.

Washington Department of Fish and Wildlife *Habitat Strategic Initiative Lead (HSIL)*

Proposals due by: May 22, 2024 5:00 PM Pacific Time

This funding opportunity, through DNR and WDFW, supports activities that address key Puget Sound kelp or eelgrass knowledge gaps needed to advance policy, decision-making, and management.

<https://pspwa.box.com/v/HSILPriorityCSolicitation2024>

Funding Available: Available Funding: Up to \$2,000,000 with a minimum of \$200,000 and a maximum \$500,000 per application.

Types of Projects: To address the challenges facing kelp and eelgrass, a holistic and inclusive approach to research is needed. Proposals are encouraged from diverse fields of study to include (but not limited to) biophysical science, social science, and Indigenous science.

Webinar: HSIL Spring 2024 RFP Informational Webinar: 1pm – 3pm on April 3, 2024.

Contact: Matt Lurie at Matthew.Lurie@dfw.wa.gov

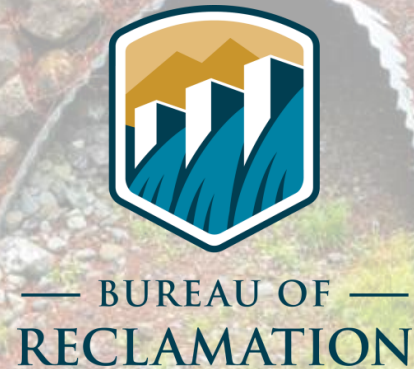
March 26, 2024

FUNDING OPPORTUNITIES

Representatives from federal agencies and state agencies outline the funding opportunities, project eligibility, and match requirements opening in FY24 and FY25.



**NOAA
FISHERIES**





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Update on Office of Habitat Competitive Funding Opportunities

Bipartisan Infrastructure Law & Inflation Reduction Act

September 2023

30+ Years of Partnering on Habitat Conservation

- NOAA has a long history supporting our partners' habitat conservation efforts through funding opportunities and expert technical assistance
- Unprecedented opportunities to bring that expertise to transformational projects that make an impact for coastal communities and ecosystems



Additional Resources - Bipartisan Infrastructure Law and Inflation Reduction Act

- Approximately **\$891 million** over 5 years of BIL funding:
 - **\$491 million** for habitat restoration
 - **\$400 million** for fish passage, with up to 15 percent reserved for tribes
- Additional **\$484M** of IRA funding
- At least three rounds of funding competitions - Fish Passage; Tribal Fish Passage; Transformational Habitat Restoration; Tribes & Underserved Communities



What's Next? Let's Get Ready for Round 2!

- Four Competitions:
 - National Fish Passage
 - Tribal Fish Passage
 - Transformational Habitat Restoration
 - Habitat Restoration for Tribes and Underserved Communities
- Each incorporates feedback from Round 1 including larger caps on projects and greater tribal emphasis
- Learn more:
fisheries.noaa.gov/habitat-BIL-IRA



Funding Opportunity: National Fish Passage

- Up to **\$175M** available to support a broad range of fish passage projects in coastal ecosystems, including the Great Lakes
- Award range: \$1M - \$20M
- Application deadline: October 16
- Broad eligibility
- Contact:
Fish.Passage.Grants@noaa.gov



Credit: Chesapeake Bay Program

Funding Opportunity: Tribal Fish Passage

- Up to **\$85M** available to support tribal fish passage work and building tribal organizational capacity
- Award range: \$300K - \$12M
- Application deadline: November 8
- Limited eligibility for federally recognized tribes, tribal organizations, and Alaska Native Corporations
- Contact:
Infrastructure.Tribal@noaa.gov



Credit: Penobscot River Restoration Trust

Funding Opportunity: Habitat Restoration for Tribes and Underserved Communities

- Up to **\$45M** available for projects that advance the habitat restoration and climate resilience priorities of tribes and underserved communities
 - **\$20M** for federally recognized tribes, through direct awards or subawards
 - **\$25M** broad eligibility; tribes and underserved communities, or entities that partner with tribes or underserved communities
- Award range: **\$75K - \$3M**



Funding Opportunity: Habitat Restoration for Tribes and Underserved Communities, continued

- Projects can include several types of activities:
 - **Capacity building**, such as resilience planning, project planning and feasibility studies, stakeholder engagement, or proposal development for future funding.
 - **Actionable science support**, such as the collection or analysis of climate, habitat, or other data that informs planning, decision making, or future restoration.
 - **Restoration**, such as demonstration projects, engineering and design, permitting, or on-the-ground habitat restoration.
- Contact: Underserved.Community.Grants@noaa.gov

Get in Touch to Learn More

- Visit our website:
fisheries.noaa.gov/habitat-BIL-IRA
- Tune into a webinar - details on our website
- Reach out for technical assistance
- Links to NOFO specific web pages for each competition are available from above website:
 - Restoring Fish Passage
 - Restoring Tribal Priority Fish Passage
 - Transformational Habitat Restoration
 - Tribes and Underserved Communities



Credit: Erika Nortemann



— BUREAU OF —
RECLAMATION

WaterSMART

Funding Opportunities for Planning, Design,
and Implementation

California Fish Passage Forum

April 5th, 2024

What is WaterSMART?

- WaterSMART is an “umbrella” initiative that has several associated funding opportunities.
- These opportunities cover a wide array of water management concerns- but a growing subset focus on restoration, fish passage, and projects with environmental benefits.
- Today we will focus on this subset of WaterSMART opportunities.



WaterSMART Program

General Program Information

- Most WaterSMART activities are grant programs
- Eligible applicants typically include entities such as states, Tribes, cities, water districts, irrigation districts, watershed groups, non-profits, and flood control districts within the 17 Western United States, Alaska, Hawaii, the Insular Areas, and Puerto Rico. *
- Applications are solicited through Notice of Funding Opportunities (NOFO) and projects are selected through a competitive selection process.
- Generally, a 25-50% non-Federal cost share is required



WaterSMART Program Grants

Building a Foundation

Planning

- Drought Contingency Plans
- Cooperative Watershed Management Program
- Water Strategy Grants
- Project Design Grants
- Basin Studies
- Aquatic Ecosystems Restoration Projects
- Water Recycling and Desalination Planning

Science and Tools

- Applied Science Tools
- Drought Resiliency Projects
- Basin Studies

On-the-Ground Projects

- Drought Resiliency Projects
- Water and Energy Efficiency Grants
- Small-Scale Water Efficiency Projects
- Environmental Water Resources Projects
- Title XVI
- Large Scale Water Recycling
- Water Desalination
- Aquatic Ecosystems Restoration Projects



What Program Is Right For Your Project?

Conceptual Planning

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program

Design

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program
- WaterSMART Aquatic Ecosystem Restoration Projects (Task A)

Construction

- WaterSMART Environmental Water Resources Projects
- WaterSMART Aquatic Ecosystem Restoration Projects (Task B)



What Program Is Right For Your Project?

Ask yourself, where in the development process is my project?

Conceptual Planning

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program

Design

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program
- WaterSMART Aquatic Ecosystem Restoration Projects (Task A)

Construction

- WaterSMART Environmental Water Resources Projects
- WaterSMART Aquatic Ecosystem Restoration Projects (Task B)



What Program Is Right For Your Project?

My watershed has a problem. We are not sure what to do yet.

Conceptual Planning

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program

Design

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program
- WaterSMART Aquatic Ecosystem Restoration Projects (Task A)

Construction

- WaterSMART Environmental Water Resources Projects
- WaterSMART Aquatic Ecosystem Restoration Projects (Task B)



What Program Is Right For Your Project?

Conceptual Planning	Design	Construction
<ul style="list-style-type: none">• WaterSMART Planning and Project Design Grants• WaterSMART Cooperative Watershed Management Program	<ul style="list-style-type: none">• WaterSMART Planning and Project Design Grants• WaterSMART Cooperative Watershed Management Program• WaterSMART Aquatic Ecosystem Restoration Projects (Task A)	<ul style="list-style-type: none">• WaterSMART Environmental Water Resources Projects• WaterSMART Aquatic Ecosystem Restoration Projects (Task B)

We have studied and prioritized projects, now we need to do site-specific design.



What Program Is Right For Your Project?

Conceptual Planning

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program

Design

- WaterSMART Planning and Project Design Grants
- WaterSMART Cooperative Watershed Management Program
- WaterSMART Aquatic Ecosystem Restoration Projects (Task A)

Construction

- WaterSMART Environmental Water Resources Projects
- WaterSMART Aquatic Ecosystem Restoration Projects (Task B)

*Yay! We are at 60% Design.
Ready to do compliance and
implement.*





— BUREAU OF —
RECLAMATION

Overview of Funding Opportunities for Fish Passage Projects

Planning & Project Design

Eligible Projects

- **Water Strategy Grants**

Initial or early-stage planning activities, including outreach and collaboration, technical analyses and assessments, project scoping activities to develop a strategy that identifies and prioritizes potential water supply projects, water conservation projects, water marketing, drought resiliency, and/or river restoration activities.

- **Project Design Grants**

Final design of water supply, water conservation, water management, and river restoration projects. Should result in a 60% final design package that could be used to apply for construction funding under other WaterSMART programs.

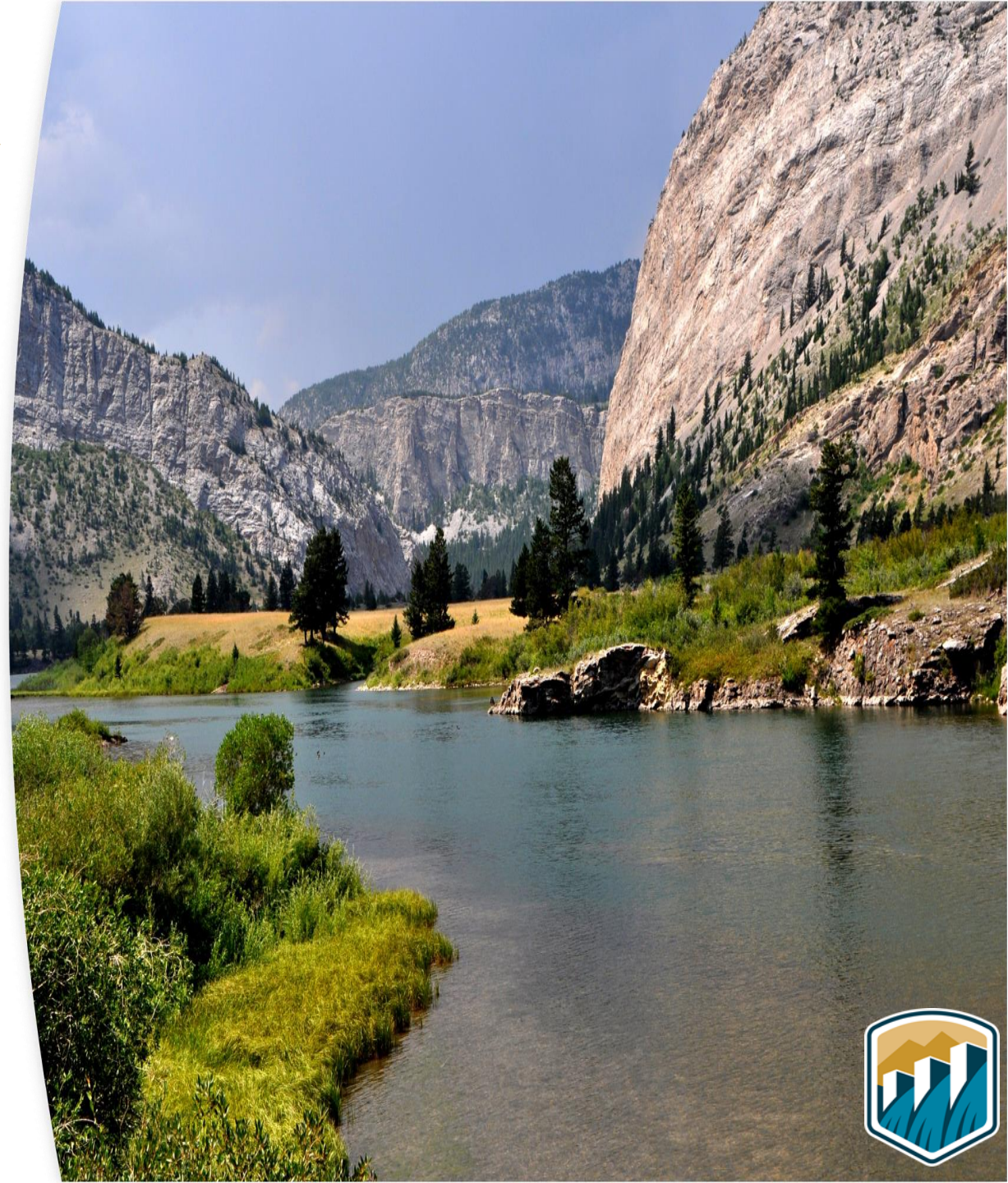
- **Drought Contingency Planning**

Develop or update comprehensive drought plans that when implemented, will increase water reliability and improve water management through the use of expanded technologies and improved modeling capabilities.

Funding

- Up to \$400,000 for projects that can be completed in 2-3 years
- Non-Federal Cost Share: 0%, 25% to 50%, dependent on project type

Funding Opportunity Closes May 21, 2024



Cooperative Watershed Management Program

Eligible Project Types

Watershed Group Development

- Develop mission statement and bylaws
- Outreach and Stakeholder Engagement
- Coalition and Consensus Building
- Gathering information about restoration needs in the watershed

Watershed Restoration Planning

- Studies, mapping, monitoring
- Creating or updating a watershed restoration plan

Watershed management project design

- Site-specific project design and engineering

Funding

- Up to \$300k in Reclamation funds for a project lasting three years
- Can include salary support in your budget, as is applicable to the management of the project
- Cost share is not required

Funding Opportunity closes September 3, 2024



Aquatic Ecosystem Restoration Projects

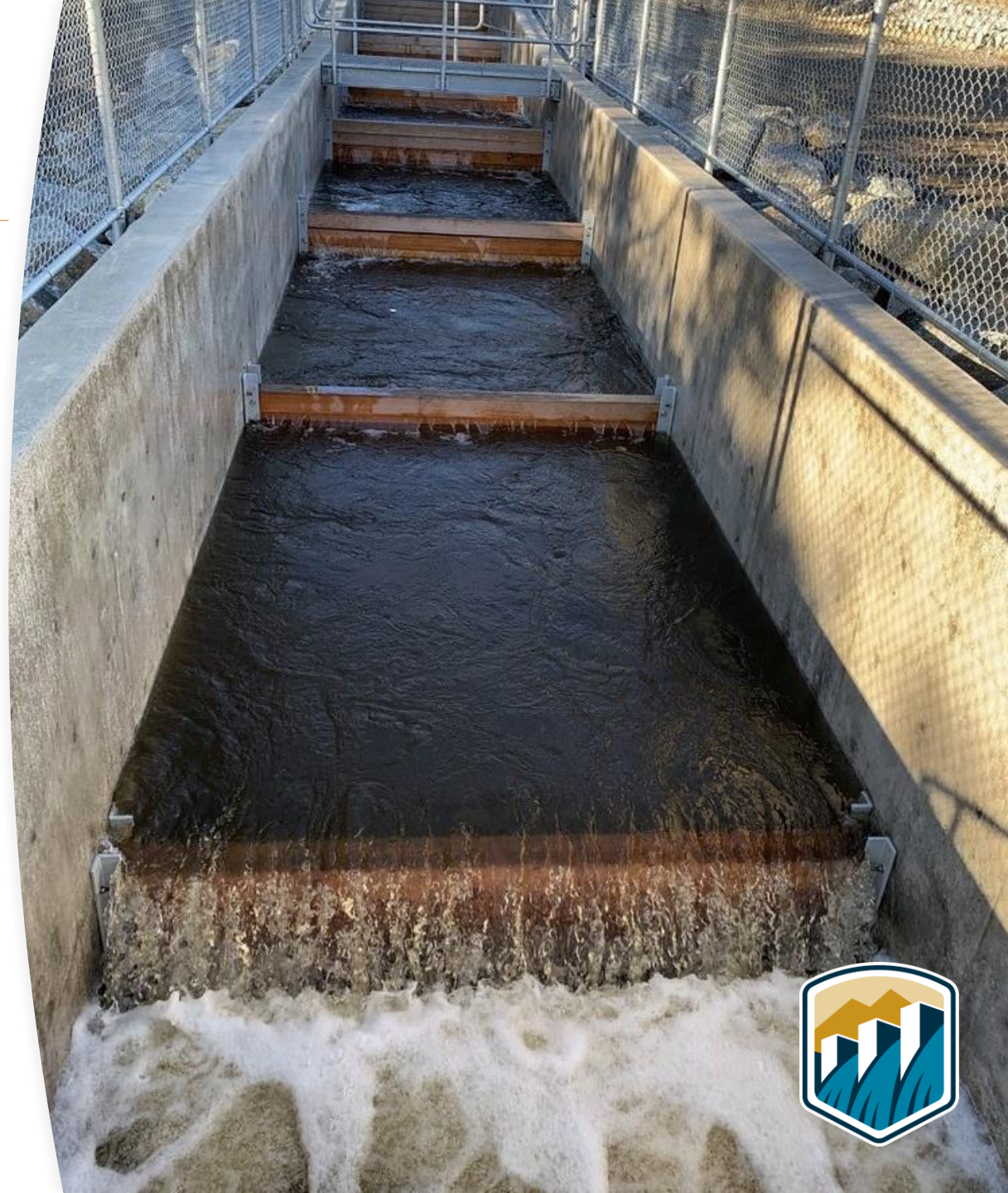
Program Information

- Funds the study, design, and construction of large-scale aquatic ecosystem restoration and protection projects
- Projects should improve habitat or fish passage, including through the removal or bypass of fish barriers
- Prioritizes projects that provide regional benefits (across multiple basins), are a component of an aging infrastructure strategy, or benefit an underserved community

Funding Levels

- *Task A: Study and Design:* \$500,000-\$2 million
- *Task B: Construction:* \$3 million-\$20 million
- Minimum 35% Non-Federal Cost Share required for both Task areas.

Funding Opportunity expected August 2024!



Aquatic Ecosystem Restoration Projects (Task A: Study and Design)

Eligible Project Activities

- *Stakeholder Outreach*
- *Analysis of restoration project design Alternatives*
- *Project site studies and selection*
- *Site-specific design and engineering of the restoration project to reach a target 60% level of design*
- *Preparation of project cost estimates and development of project construction plan*
- *Legal and institutional requirements research*

Result of Task A Grant: A 60% Project Design

Funding

- \$500,000- \$2 million Federal Funding range
- 35% Non-Federal cost-share required



Aquatic Ecosystem Restoration Projects (Task B: Construction)

Eligible Project Activities

- *Completion of Final Design for Aquatic Ecosystem Restoration Construction Project*
- *Outreach to Affected Stakeholders*
- *Restoration Activities and Construction:*
 - *Removal or Modification of Barriers to Fish Passage*
 - *Restoration of Connectivity*
 - *Restoration of Aquatic Habitat*
 - *Improvement of Water Availability, Quality, and Temperature*
 - *Other Related Activities*
- *Monitoring Plan Development, Baseline Assessment, and Equipment Installation.*



Environmental Water Resources Projects

Funds the implementation of on-the-ground projects that provide strong benefit to ecological values, including water conservation for in-stream use, fish passage, habitat, and water quality projects.

Task A: Ecologically Focused Water Conservation and Efficiency Projects

- Improvement of water conveyance or storage infrastructure paired with a formal mechanism (MOU or Water Right) to ensure the conserved water is dedicated to instream use

Task B: Ecologically Focused Water Management and Infrastructure Improvements

- Installation of fish passage infrastructure, or strategic exclusionary fish screens, modification of water infrastructure to optimize co-benefits for wildlife

Task C: Restoration and Nature Based Solutions Projects

- River or wetland restoration, floodplain reconnection, in-stream/ in-channel work, placement of gravel, rock structures, LTPBR mechanisms, etc.



Environmental Water Resources Projects

Applicant Eligibility

Category A: States; Indian tribes; irrigation districts; water districts; state, regional, or local authorities, whose members include one or more organizations with water or power delivery authority; and other organizations with water or power delivery authority. All Category A applicants must be located in the 17 western states, Alaska, Hawaii, American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, or Puerto Rico.

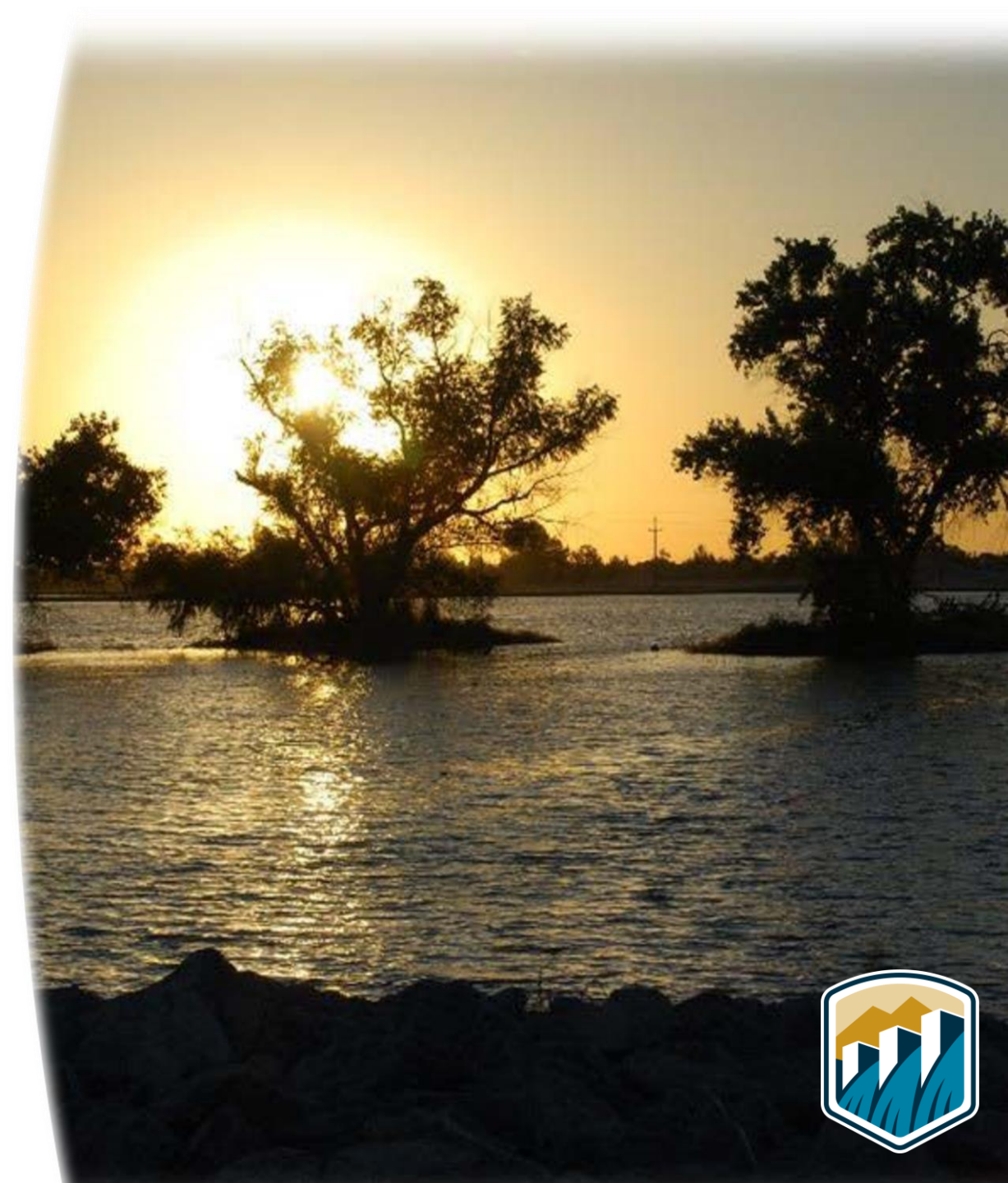
Category B: Non-profit conservation organizations, including watershed groups as defined in the Cooperative Watershed Management Act, Section 6001, that are acting in partnership with, and with the agreement of, an entity described in Category A.

Category C: Non-profit conservation organizations submitting an application for a project to implement a nature-based solution on Federal land may submit an application without a Category A partner, if they demonstrate that entities described in Category A from the applicable service area have been notified and do not object to the project.

Funding

- Applicants may request up to \$3 million in Reclamation funding, (or, *up to \$5 million for a watershed group*). Total project costs are capped at \$6 million.
- Non-Federal Cost Share: 25%*

***Funding Opportunity Opening Next Week!
Applications due by June 11th***





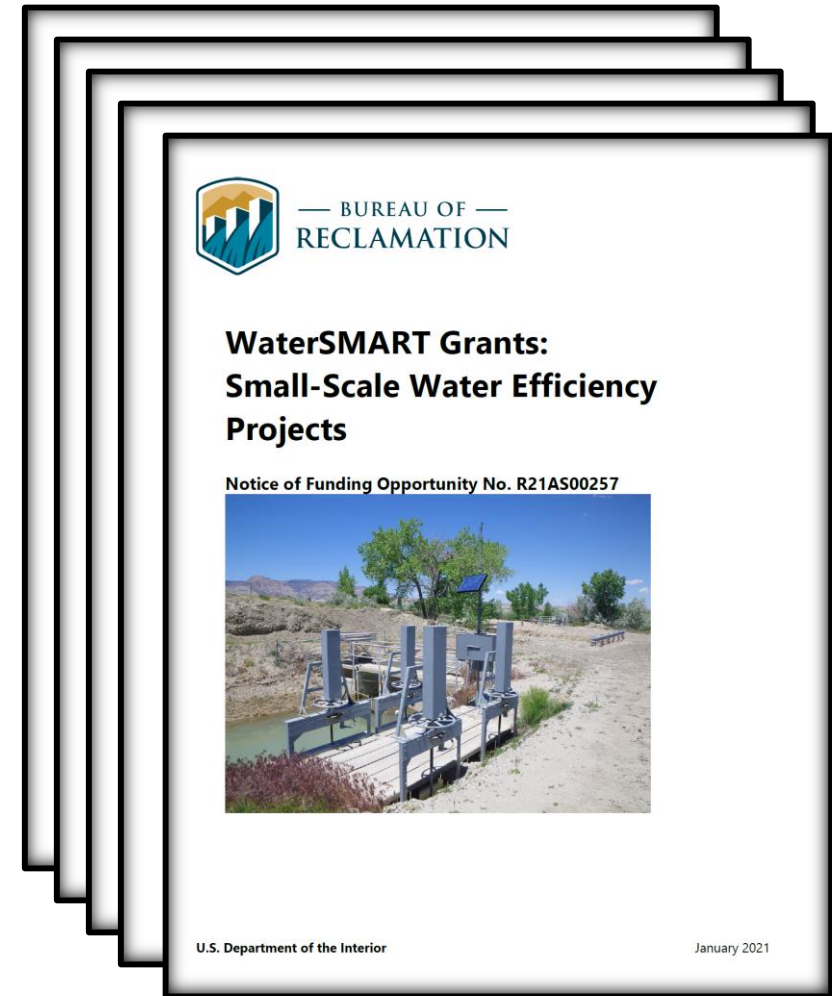
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Application Tips and Common Pitfalls to Avoid

Application Tips

Which WaterSMART NOFO is right for me?

- The most successful projects are those that fit well with the Notice of Funding Opportunity (NOFO).
- Review the objective of the NOFO, the eligible project types and the evaluation criteria carefully to choose the right NOFO.
- Make sure you present your project in a way that aligns with the NOFO. You may want to make minor revisions. E.g., if you will conserve more water by piping over lining, maybe your project could be revised.
- **Application Tip:**
 - Schedule a meeting with the Program Coordinator to discuss your project – <https://outlook.office365.com/book/ReclamationWaterSMARTProgram@doimspp.onmicrosoft.com/>
 - Look at past successful applications at www.usbr.gov/WaterSMART



Application Tips: Polishing Your Proposal

- Assume the people reviewing your application **KNOW NOTHING.**
- ***Paint a picture of your problem-*** and back it up with data.
- Mind the **page limit**
- Maps, site photos, and relevant studies or articles are useful to include (and can be an attachment if you are running out of space)
- **Letters of Recommendation** are key to showing us there is support for a proposed project.



Application Tips: Grants.gov & SAM.gov

- **START EARLY-** Register for these systems as soon as you know you intend to submit a grant application.
- **Cross-check what is required in Grants.Gov and the Notice of Funding Opportunity.** Make sure all required documents identified in the NOFO are submitted with your Grants.gov package.
- If you have any questions, **reach out to us.**
- **Submitting early** (by a few days at least) is always a good idea.

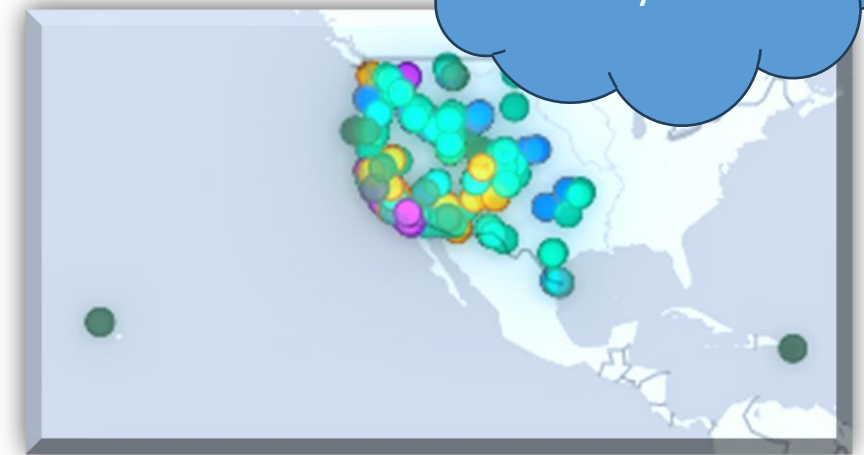


Bipartisan Infrastructure Law Funding for WaterSMART

Get in on the BIL Funding while you can!

WaterSMART Programs Receiving Infrastructure Funding

Program Area	Funding Amount (Over Five Years)	Activities Funded
WaterSMART Grants	\$400 million	Water conservation and efficiency, renewable energy, natural and nature-based features, drought, water scarcity
Title XVI Water Reclamation and Reuse Program	\$550 million	Water Recycling
Cooperative Watershed Management Program	\$100 million	Watershed planning and restoration projects for watershed groups
Aquatic Ecosystems Restoration and Protection Projects	\$250 million	Aquatic ecosystem restoration and protection projects to improve habitat
Multi-Benefit Projects to Improve Watershed Health	\$100 million	Restoration projects to improve watershed health



BIL Funded Projects to Date

208 Projects

\$553.8M in BIL Funds

\$1.9B in total Project Costs





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Water Resources & Planning Office

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2024 PROPOSAL SOLICITATION NOTICE

Fisheries Restoration Grant Program

Tim Chorey – FRGP Statewide Coordinator, California Department of Fish and Wildlife

Agenda

- Introduction to FRGP
- 2024 PSN/Guidelines Timeline
- NOAA Priorities and Funding
- Eligible Project Types
- Online Application to WebGrants
- Questions and Answers

Please Ask Questions at Any Time



FRGP



FRGP Provides funding to restore anadromous salmonid habitat with the goal of ensuring the survival and protection of the species in California.

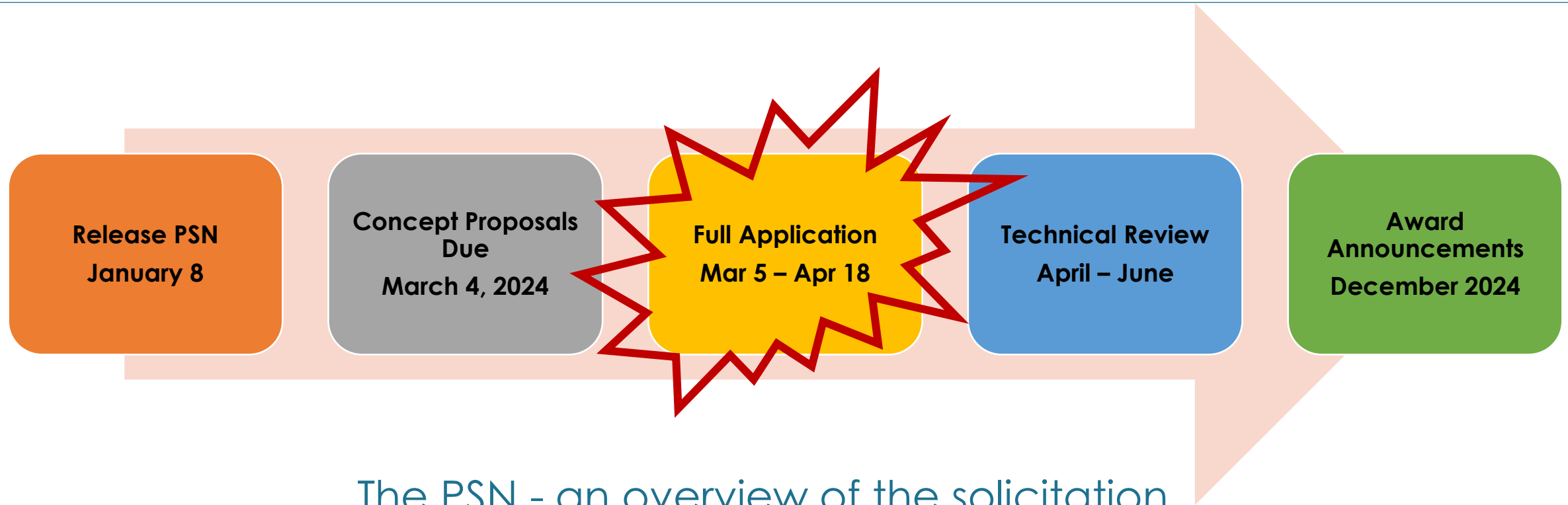
2024 PSN/Guidelines

The Guidelines: Key Parts

- ~\$18 M Available.
- No minimum or maximum application amounts
 - ~\$2M is upper limits.
- Projects Start March 2025
- Projects Must End March 2029



2024 PSN Timeline



The PSN - an overview of the solicitation.

The Guidelines - proposal requirements.

www.wildlife.ca.gov/Grants/FRGP/Solicitation

NOAA Priorities and Funding

Priority One	Priority Two	Priority Three
65% of Funding Implementation Projects and 100% Design Projects ~\$12 Million Available	25% of Funding Watershed-Scale Planning (PL) or Watershed- Scale Effectiveness Monitoring (MO) Population Monitoring Funding ~\$1 Million Available	10% of Funding Planning to less than 100% Design, Outreach, and Education Project-Scale Effectiveness Monitoring (MO) ~\$1.4 Million Available

Eligible Project Types.

- PD Project Design (100% design)
- PD Project Design (Feasibility study)
- PL Watershed Evaluation, Assessment, and Planning (Project-Scale)
- FP Fish Passage at Stream Crossings
- HB Instream Barrier Modification for Fish Passage
- HI Instream Habitat Restoration
- HR Riparian Restoration
- HS Instream Bank Stabilization
- HU Watershed Restoration (Upslope)
- SC Fish Screening of Diversions
- MO Monitoring Watershed Restoration
- OR Watershed and Regional Organization
- PI Public Involvement and Capacity Building (Includes AmeriCorps projects)
- TE Private Sector Technical Training and Education
- WC Water Conservation Measures
- WD Water Measuring Devices (Instream and Water Diversion)
- RE Cooperative Rearing

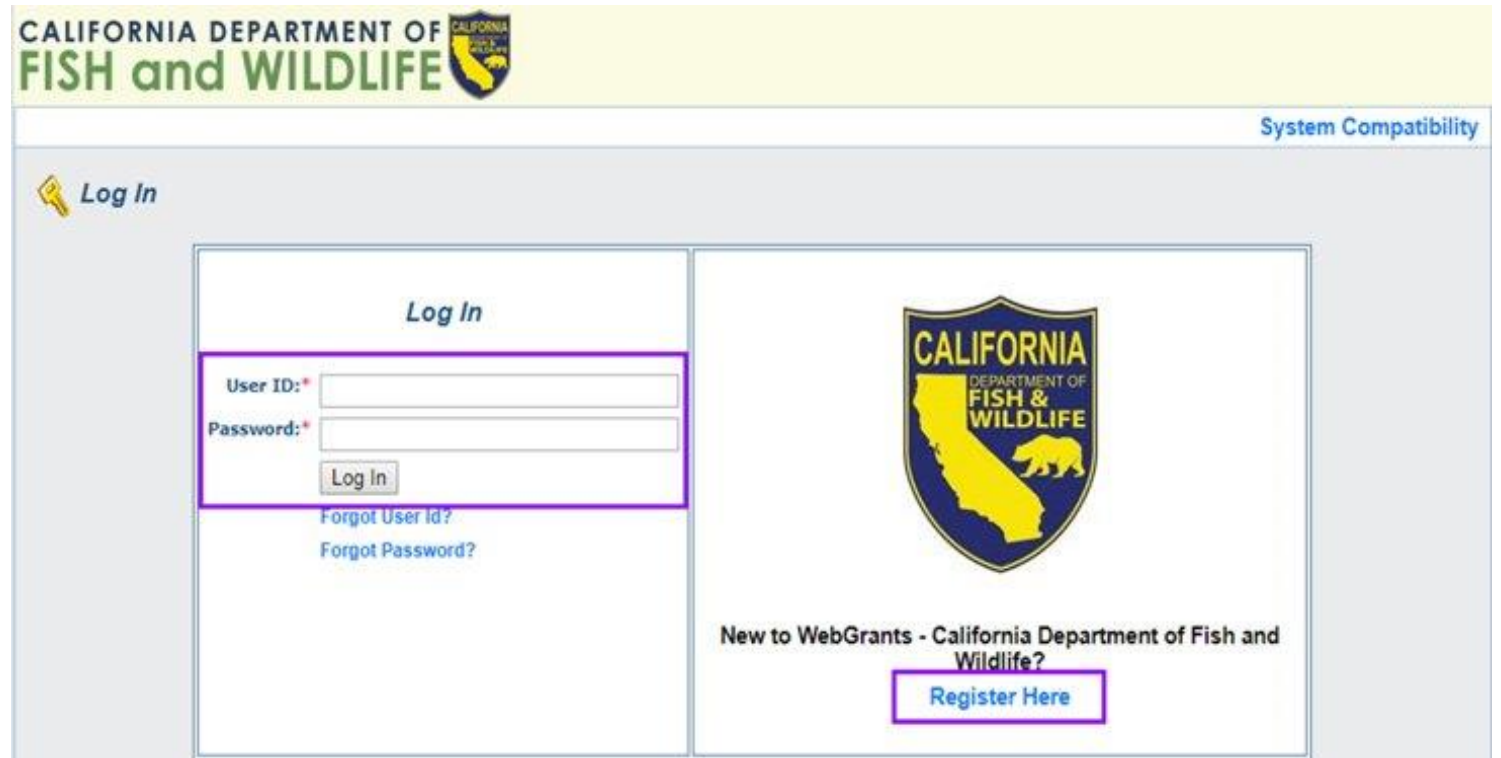
Permits

If following CDFW's Restoration Manual and other approved manuals FRGP provides permits for:

- CA Environmental Quality Act (CEQA)
- Section 404 Clean Water Act (ACOE)
- Section 401 Clean Water Act (SWRCB)
- California Coastal Commission (CCC) Coastal Development Permit (CDP)

Online Application -WebGrants

- WebGrants
- Log in or Register
- Online Instruction (PDF) Available
- All WebGrants Related Issues email with Screenshots to:
CDFWebGrants@wildlife.ca.gov



The screenshot shows the login page for the California Department of Fish and Wildlife WebGrants system. At the top, the header reads "CALIFORNIA DEPARTMENT OF FISH and WILDLIFE" with the state logo. A "System Compatibility" link is in the top right. Below the header, there is a "Log In" link with a key icon. The main content area is divided into two columns. The left column contains a "Log In" form with fields for "User ID:*" and "Password:*", a "Log In" button, and links for "Forgot User Id?" and "Forgot Password?". The right column features the department logo and a "Register Here" button for new users.

Questions?

Thank You.

CA Department of Water Resources Riverine Stewardship Grant Program

Program Lead - Josh Black, Senior Environmental Scientist



Agenda

- Riverine Stewardship Program history and overview
- Program priorities
- Eligible projects/costs
- GRanTS application submittal
- Review criteria
- Grant administration
- Questions



Riverine Stewardship Grant Program (RSP) History

- Established by CA Water Code section 7049 in 2022
- Funded by CA Water Code Section 79205.2, Proposition 13, 2000 Costa Machado Water Act
- Focus on implementing riverine/riparian improvements and technical/financial assistance from the state to the grantees
- Restoration of native fish populations and habitat (especially special status salmonids), water quality, climate change benefits



Program Overview

- **Geographic scope:** Delta export service area for State Water Project and Central Valley Project and/or located within the Association of Bay Area Governments (ABAG) counties
- **Funding amount:** \$12 Million
- **Max:** no cap
- **Single applicant:** local public agency
- Projects must support water quality and supply consistent with CA Water Code section 79205.6



Program Priorities

- Fish passage improvements
- Restoration and enhancement of riparian systems/areas
- Innovative green infrastructure to improve fish migration and enhance aquatic species habitat
- Reconnection of aquatic habitat to help fish and wildlife endure drought and adapt to climate change.



Eligible Project Types

- **Examples of Eligible Projects**

- Innovate green infrastructure that enhances water availability for the benefit of fish and wildlife
- Fish friendly intakes
- Fish passage/migration improvements
- Habitat and water quality improvements for the benefit of aquatic species
- Floodplain creation/restoration

- **Examples of Projects Not Eligible**

- Planning only
- Lake or reservoir enhancements
- Mitigation
- Long term maintenance only
- Post-construction fish/aquatic habitat/population monitoring only
- Endowments



Examples of Eligible and Ineligible Costs

Eligible

- Reasonable costs of planning.
- Engineering, design, and project implementation.
- Environmental compliance and permitting.
- Project completion monitoring during development and construction of project


Ineligible

- Grant application preparation expenses.
- Indirect costs that are not attributable to the project.
- Costs incurred outside of the grant agreement.

**for a more detailed list of eligible and ineligible costs see guidelines*



GRanTS Concept Submittal

 Department of Water Resources
GRANTS REVIEW AND TRACKING SYSTEM

[Home](#) [PSPs](#) [Projects](#) [Contracts](#)

Active PSPs

Program Name	PSP Name	Released On	Due Date	Action	Attachments
Integrated Regional Water Management	P1R2IG	05/17/2022	8/19/2022 5:00 PM	Start Proposal	No Attachments
Riverine Stewardship Program	Riverine Stewardship Concept Proposal	06/01/2022	6/30/2022 5:00 PM	Start Proposal	No Attachments

Navigation: [⏪](#) [⏩](#) [1](#) [⏪](#) [⏩](#) Page size: 10 [▼](#) 2 items in 1 pages



Review Criteria

Criteria	RSP
1. Project Purpose and Strategic Fit	13
2. Organizational Capacity and Project Sustainability	22
3. Project Readiness	22
4. Project Characteristics and Benefits	6
5c. Riverine Stewardship Improvements, Water Quality and Water Supply	22
Total Points Possible	85

- Each application scored 3x
- Take average on scores within 10 points of each other
- Technical Review Team discusses reviews and decides on final score for each application
- Technical Review Team presents findings to Management Review Team
- Draft award list determined, public comment period



Grant Administration

- Enter into contract with DWR
- Standard contract deliverables
 - Environmental documents (required permits/site assessments)
 - Deed Restriction/Conservation Easements
 - Engineering plans
 - Progress reports
 - Construction
 - Quarterly Invoices
- Project monitoring
- 3-5 year limit on contracts



Lagunitas Creek, National Park Service



GRanTS Application Submittal

- Questions about GRanTS?
 - Email: GRanTSadmin@water.ca.gov or call (888) 907-4267
- Questions about concept application?
 - Email: RSP@water.ca.gov or joshua.black@water.ca.gov

Most questions can be answered by looking at the guidelines

www.water.ca.gov/rsp/grants



Questions? Thank You!





ENVIRONMENTAL POLICY
INNOVATION
CENTER

Fish Passage Resources

Garrett Altmann, Western Restoration Program Manager, EPIC

Funding and Resources for Fish Passage Projects
California Fish Passage Forum - April, 5 2024

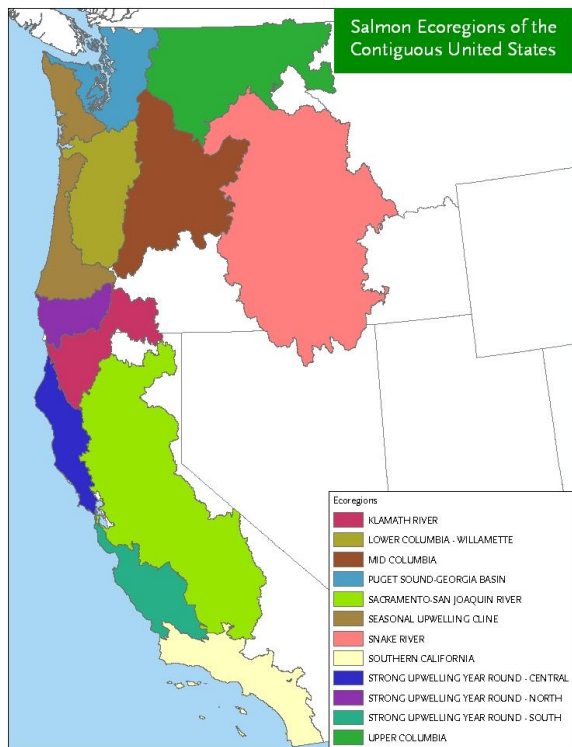
Environmental Policy Innovation Center (EPIC)



Our mission is to increase the pace and scale of environmental progress.

EPIC's Western Restoration Program is focused on supporting widespread implementation of fish passage projects.

Western Restoration Program



Map Source: Salmon Stronghold Program,
(Wild Salmon Center) via CalTrout.org

- ❑ Program focus is on culvert and weir replacement to support anadromous fish species in the western U.S.
- ❑ Geographic footprint
 - Primarily CA, OR, WA, ID
 - Also interior western states
- ❑ Coordinate with federal, state, Tribal, NGO, and private partners to leverage assistance

EPIC Western Restoration Program



Prioritize assistance for tribes, Environmental Justice Communities

- ❑ Direct engagement with communities seeking assistance.
- ❑ Identify applicant limitations, projects, and overcome challenges.
- ❑ Provide Technical Assistance- project identification, application assistance, best practices, communication/storytelling
- ❑ Coordinate & leverage resources, partnerships, fiscal sponsorship
- ❑ Advocate policy, program, and permitting reform



Best practices promotion

- ❑ Collaborate to leverage support, expertise, and funding
- ❑ Prioritize natural processes and ecosystem services
 - Promote natural bottom passage
 - Maximize co-benefits (floodplain connectivity, public access)
 - Incorporate restoration with infrastructure projects
 - Terrestrial wildlife crossing considerations
- ❑ Integrate Indigenous Knowledge & Nature-based Solutions
 - Utilize local, natural materials
 - Limit introduction of foreign materials (concrete)
- ❑ Community Engagement

Policy Reform & Program Improvements



- ❑ 404/Nationwide-27 permit reform
 - Remove PJD requirements for voluntary restoration
 - Reduce stipulations for habitat type conversion that result in ecological uplift

- ❑ FEMA No-Rise Rule
 - Highlight case studies; advocate for national NbS exemption

- ❑ Program improvements: Culvert AOP, BRIC, NFPP, WaterSmart, BIA

Funding source:



National Culvert Removal, Replacement, and Restoration Grant Program (Culvert AOP Program)

- ❑ Competitive grant program for the replacement, removal, and repair of culverts or weirs that improve or restore fish passage for anadromous fish.
- ❑ \$1 Billion (\$200M/year) to improve or restore anadromous fish passage through the replacement, removal, repair, or improvement of culverts or weirs.
- ❑ Award range: \$10K to \$20M



Funding source:



Forest Service

U.S. DEPARTMENT OF AGRICULTURE

America the Beautiful Challenge (ATBC)

- ❑ Set the nation's first-ever goal to conserve 30 percent of U.S. lands and waters by 2030. Locally led and nationally scaled initiative lifts up efforts to conserve, connect, and restore the lands, waters, and wildlife over 10-years.
- ❑ \$141M of projects awarded in 2023
- ❑ Criteria: Expand aquatic habitat connectivity, conservation of at-risk species, large collaborative projects
- ❑ Tribal cost-share reduced from 25% to 3% (NAP covering).



Funding source:



Forest Service

U.S. DEPARTMENT OF AGRICULTURE

USFS: Legacy Roads and Trails Remediation

- ❑ ~65,000 road-stream crossings exist, with 50-90% inaccessible to fish & aquatic species. Mostly culverts.
- ❑ \$250M over five years (\$50M/yr). Average culvert cost = ~\$60K
- ❑ Criteria: Aquatic passage, Sediment reduction, Climate resilience
Source water protection
- ❑ Projects: AOP, road decommissioning, road/trail relocation



Funding source:



Forest Service

U.S. DEPARTMENT OF AGRICULTURE

Collaborative Aquatic Landscape Restoration Program (CALR)

- ❑ \$80M over five years (\$16M/yr)
- ❑ Criteria: Fish passage, Miles of water quality improved, cost-effective implementation on federal, tribal and non-federal lands (connectivity)
- ❑ Projects: dams, irrigation weir retrofits, culverts, habitat & water condition class improvements
- ❑ Multiple application openings each year



Funding source:



USFWS: National Fish Passage Program (NFPP)

- ❑ \$200 million available to implement AOP
- ❑ No cost-share requirement! (>50% match suggested)
- ❑ Great application process- starts with 1-2 page letters of intent (LOI)
- ❑ Preference for projects led by tribes, or tribal partnerships



Conclusion

- ❑ There's a once-in-a-generation funding opportunity available now to pursue fish passage projects.
- ❑ EPIC's Western Restoration Program is here to support partners, Tribes and EJC's pursue fish passage projects.

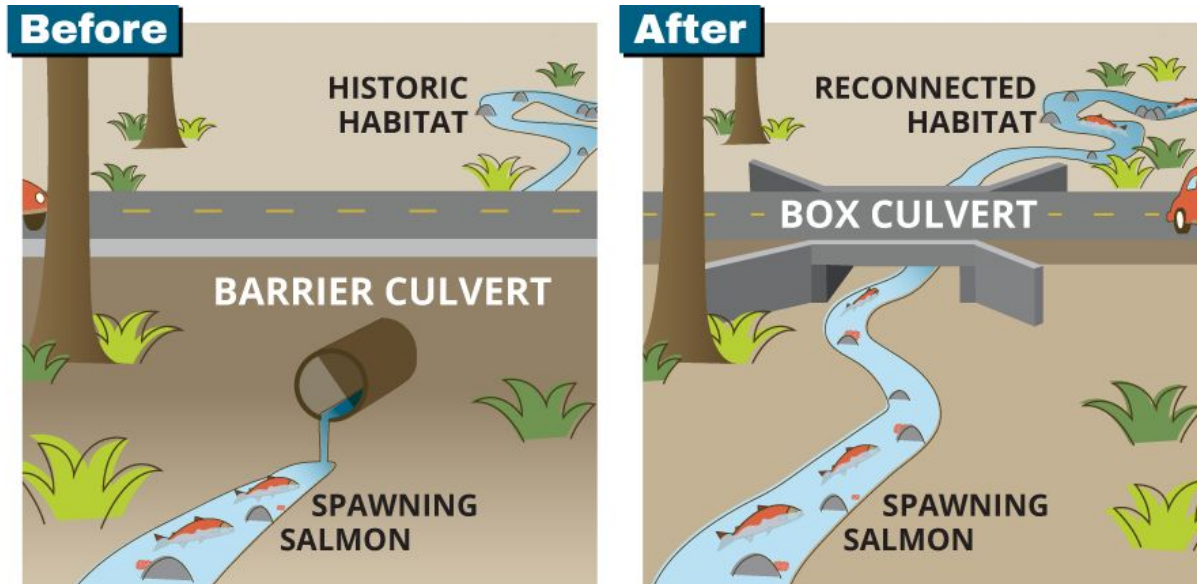
“If it's good for the planet, it's ultimately good for us”

Santiago Naranjo, Forestry Tech and Tribal Member, Santa Clara Pueblo



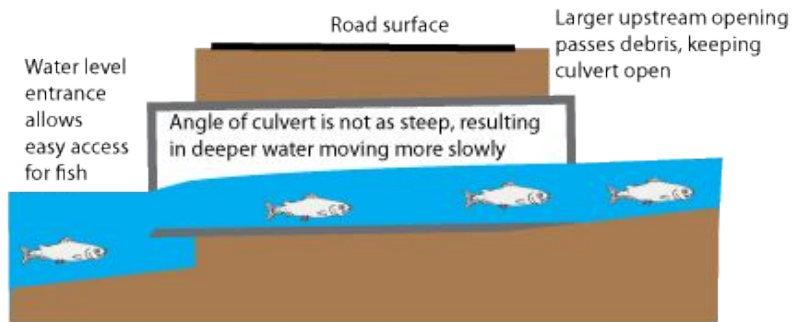
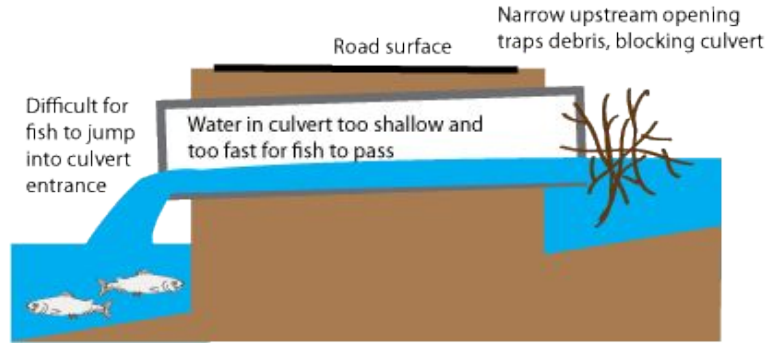
Why Culverts?

- ❑ Transportation networks often limit biodiversity and habitat connectivity to critical spawning waters and juvenile foraging habitat





Culvert mitigation



Culvert baffles <https://www.ats-environmental.com/>



Culverts can vary greatly in type, material, design, and style



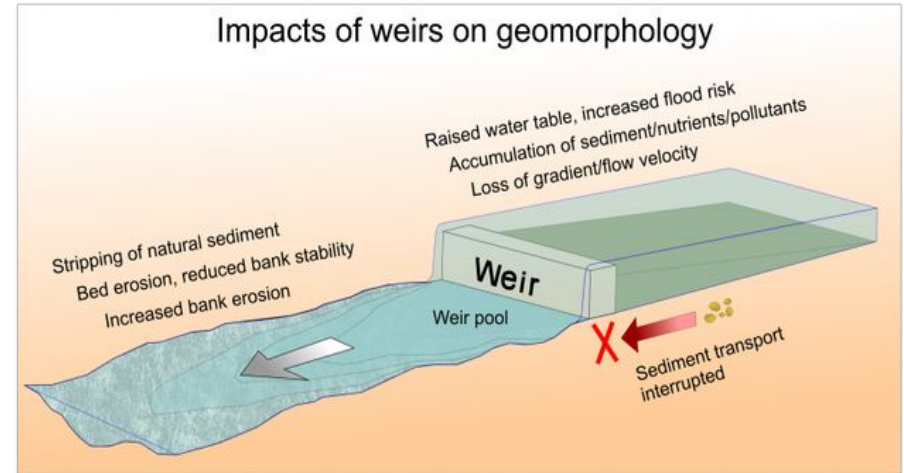
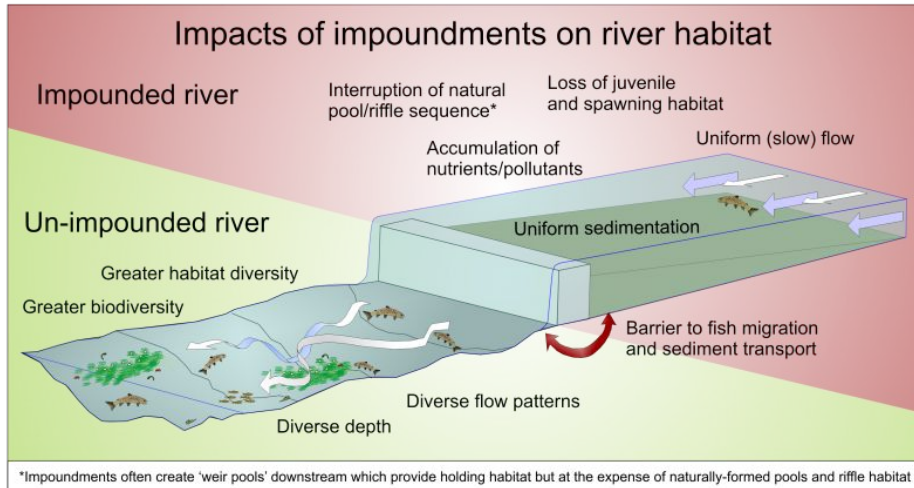


Arch type 'bottomless' culverts





Why Dams and Weirs?



- ❑ Weirs significantly impact fish passage, water velocity, sediment load and habitat
- ❑ Weir upgrades may include structural improvements, or infrastructure to allow fish to move over or around the weir.

Image source: wildtrout.org



Cost Share Strategies for Fish Passage Projects

Sandra Jacobson, Ph.D.
California Trout
Director – South Coast and Sierra



COST SHARE CONSIDERATIONS

Cost Share Considerations:

- Project has multiple funders
- Agencies typically fund along priority areas
- Clearly identify and cluster line items for clarity in budget
- Budget: align match by task, contract and funder
- Structure budget mindful of funding expiration timelines



COST SHARE VS MATCH - DEFINITION

Match funding:

- some funders have 1:1
- tracked along with expenses,
- can be cash or in-kind,
- not fungible; must be used in same time frame as grant,
- used only once

Cost share:

- more loose definition & usage
- quantified body of work,
- in-kind or cash to benefit project

Consider retention in budgeting;

Cash Flow: Federal vs state



COORDINATE
FUNDING SOURCES



ALIGN BUDGET
STRUCTURE



ELEVATE RISK
MATRIX

THE CHALLENGE





NATURE-BASED
SOLUTIONS



LANDSCAPE
IMPACT



CALIFORNIA
LEADERSHIP

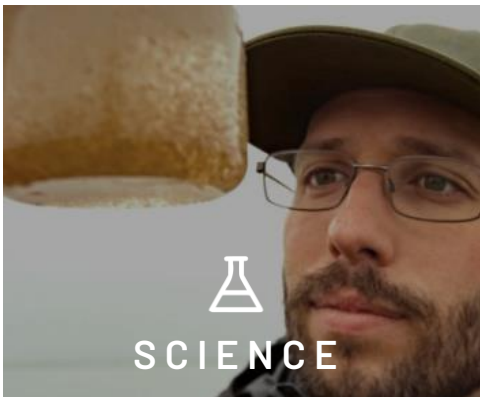
& THE OPPORTUNITY





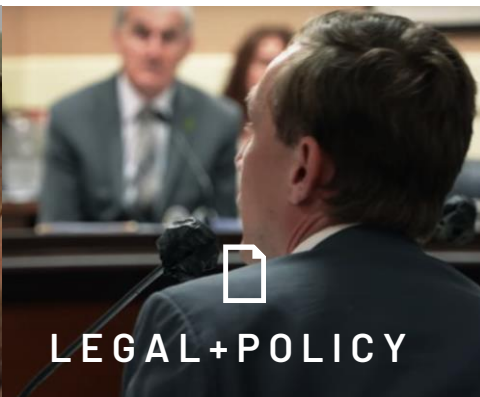
They're worth it...





SCIENCE

BEST SCIENTIFIC
RESEARCH &
ANALYSIS



LEGAL+POLICY

BUILDING
PARTNERSHIPS &
RESOLVING CONFLICT



RESTORATION

ENGINEERING
INNOVATION
CONSTRUCTION



COMMUNITY

COLLABORATION
LEARNING
LEADERSHIP

PROJECTS COME IN ALL SHAPES AND SIZES



Caltrout Projects Statewide

- Obsolete Dams: Klamath, Eel, Battle Creek, Searsville, Matilija, Rindge
- Coastal Estuaries
- Central Valley Floodplains
- Endangered Southern Steelhead Protection
- Sierra Nevada Meadows
- Northern CA Source Water & Aquifers
- Klamath Basin Farming Landscapes
- Bay Area Salmon Streams: Walker, Alameda
- Science, Policy, & Advocacy



PROJECTS
READY FOR ACTION

7 REGIONS
75 PROJECTS
120 PARTNERS

CALTROUT STATEWIDE PROJECTS – MOST HAVE COST SHARE





EXISTING CONDITION

Barrier to fish passage



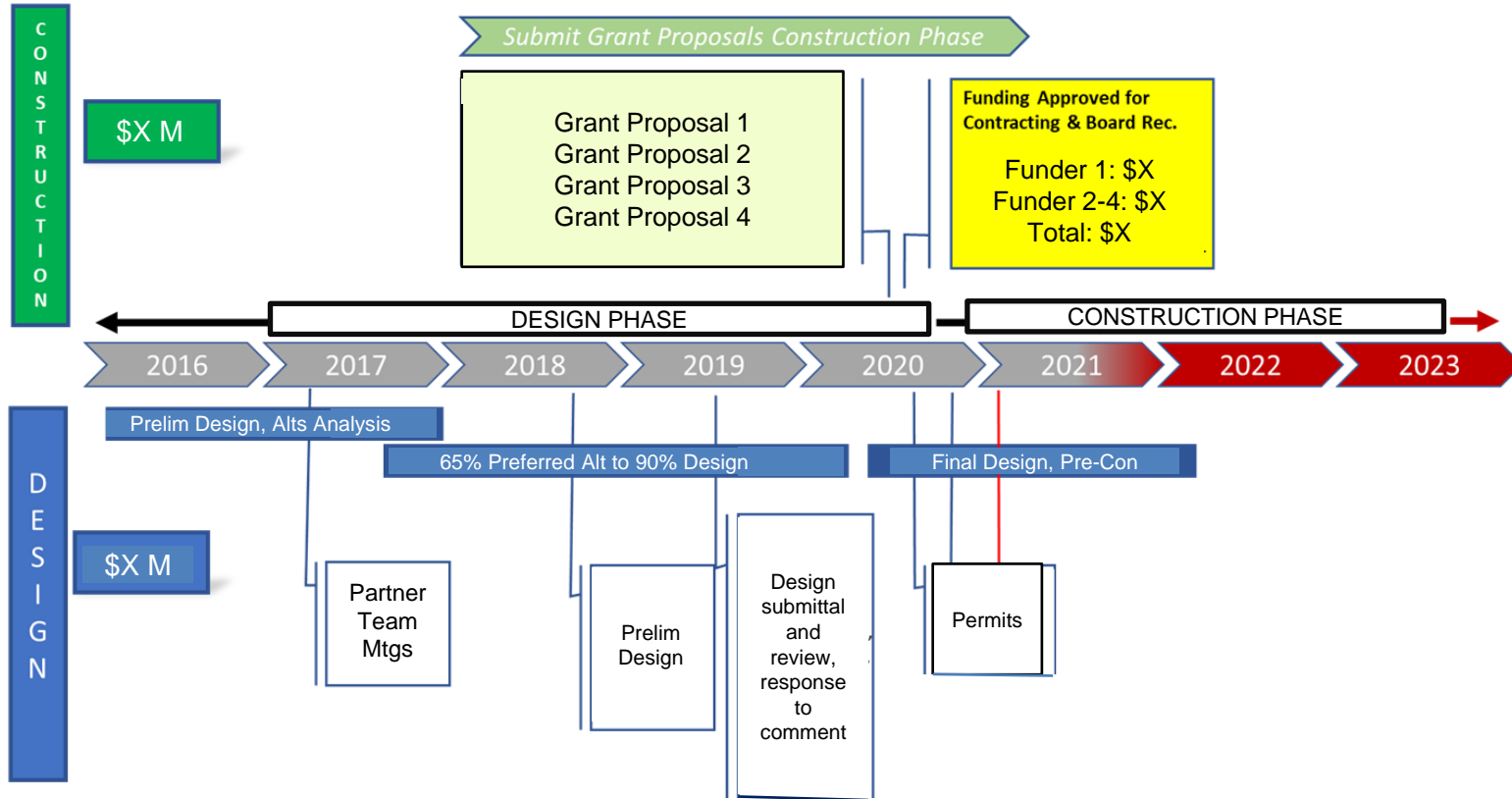
NEW STEEL BRIDGE - CONSTRUCTION

Restore fish passage

SANTA MARGARITA RIVER BRIDGE REPLACEMENT

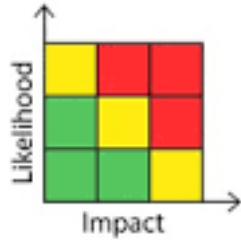


Fish Passage Project – Timeline and Funding Sequence



Risk Identification, Analysis and Mitigation

Risk Matrix



- Funding Risks
- Organizational Risks
- Operational Risks

		Likelihood of Occurrence			
		Low	Med	High	
FUNDING RISKS					MITIGATION
Multiple funders; funding shortfall	Impact			HIGH	Raise up to 1.5X needed; adjust contingency as needed through process, have backup plan if funding source has issues.
Multiple funders; funding timeline not match	Impact		HIGH		Plan for delays in 1+ funder; see #1; communicate frequently with funder cohort to keep them updated
Contractual Issues - delay	Impact		MED		Legal and grants review early; process



Fish Passage Portal

A resource for all stakeholders of fish passage and aquatic connectivity projects
Presented by the Federal Interagency Fish Passage Task Force

<https://interagency-bil-fish-passage-project-1-fws.hub.arcgis.com/>

FUNDING SOURCES, REQUIREMENTS AND FUNDER PRIORITIES





	Funder 1	Funder 2	Funder 3	Funder 4	Funder 5
Project Management	x	x	x	x	x
Construction Technical Support	x	x			
Construction Permitting Support		x	x		
Tribal, Bio, Cultural, Archael Monitoring			x	x	
Construction Tasks - Sequence	x	x	x	x	x
Contingency	x				x
Restoration				x	
Outreach					x
Pre/Post Monitoring	x				
Indirect	x	x	x	x	x
Total	\$	\$	\$	\$	\$

BUDGET COST SHARE TRACKING





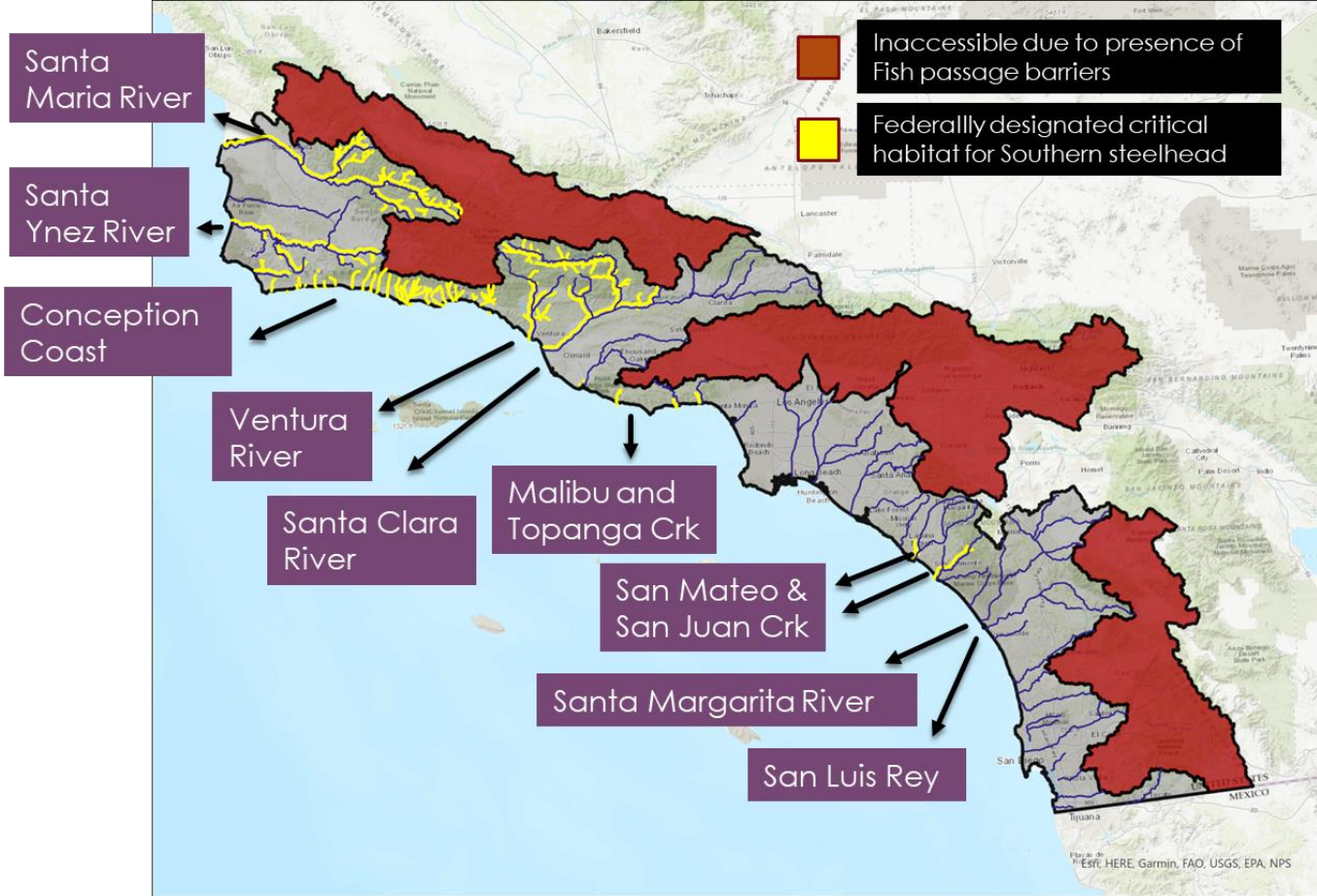
& THE FINISH





CESA SOUTHERN STEELHEAD LISTING





CESA STEELHEAD LISTING – HABITAT ACCESS ISSUES



CESA SOUTHERN STEELHEAD PETITION



Submit comments directly to FGC at Virtual Meeting
4/18/2024





COMMUNITY ENGAGEMENT
MAKES IT HAPPEN

GOAL DIVERSITY • INCLUSION • ACCESS TO NATURE



Thank You!



Exploring Options for Simplified Permitting



Before and after, Fish Passage Improvement on Crossing 9, Quiota Creek. Photos provided by Cachuma Operations and Maintenance Board

Stephanie Falzone | Senior Project Manager
Accelerating Restoration, Sustainable Conservation

April 5, 2024 | Fish Passage Forum Webinar



Sustainable Conservation

setting
restoration
on a separate
path from
development



STATEWIDE SIMPLIFIED PERMITTING TOOLBOX

Small Projects

CEQA

CatEx 15333



Order for Small Projects (SHRP)



Habitat Restoration and Enhancement Act (HREA)

Larger Projects

CEQA

SRGO PEIR or CDFW SERP



Statewide Restoration General Order (SRGO)



Restoration CD or Restoration Management Permit



Programmatic BOs



CDs for NOAA Programmatic BOs



Statewide Programmatic BO



Federal ESA Coverage

Options for Small Projects

How big can a small project be?



CEQA

CatEx 15333



Must be ≤ 5 acres, but no linear foot limit



Order for Small Projects



Must be ≤ 5 acres and 500 cumulative linear feet



Habitat Restoration and Enhancement Act (HREA)

Project area = impacts to Waters + upland disturbances (temporary and permanent)

Linear feet = cumulative linear feet of disturbance to stream segment or coastline



Categorical Exemption 15333 – Small Habitat Restoration Projects

- Can be used with other Categorical Exemptions
- Can be used with SRGO for projects ≤ 5 acres and > 500 feet
- CEQA lead agency files a Notice of Exemption
- Use of mechanized equipment or the presence of special-status species does not preclude using it (per Sec. Crowfoot 1/7/21 memo)



Water Board Order for Small Habitat Restoration Projects

AKA the SHRP

- Must be \leq 500 cumulative linear ft and 5 acres
- Must qualify for, but do not have to use CatEx 15333
- Faster/simpler than individual 401
- Opens the door to the HREA



Habitat Restoration and Enhancement Act (HREA)

- Must be \leq 500 cumulative linear ft and 5 acres
- For voluntary projects where the primary purpose is habitat restoration
- Must qualify for CatEx 15333 and SHRP, but does not have to use them.
- Single approval for LSAA and CESA
- 30-day (1653) or 60-day process (1652)
- Guidance documents and videos available
- Pre-consultation is key \rightarrow engineering design
- Apply for the full 5-year term in case implementation takes longer than planned

Options for Larger Projects



SRGO PEIR or
CDFW Statutory Exemption for
Restoration Projects (SERP)



Statewide Restoration General
Order (SRGO)



Restoration CD or
Restoration Management Permit
(RMP)

CEQA Options - State Water Board SRGO PEIR or SERP



SRGO PEIR

- CEQA cost/time savings by using analysis in PEIR (e.g., memo to file/findings, addendum, supplemental EIR)

Statutory Exemption for Restoration (SERP)

- CDFW CEQA Statutory Exemption for Restoration Projects (SERP) is another great option (contact CDFW CGT team)
- SERP trailer bill



Water Board - Statewide Restoration General Order (SRGO)



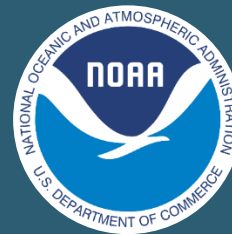
- Covers federal (401 Water Quality Certification) and state (WDRs) waters
- Can be used with any CEQA pathway
- Faster process/more regulatory certainty for larger projects outside Small Project 401 Cert
- Access through Regional Boards, or State Board for cross-jurisdictional projects
- Request pre-application meeting



CDFW Species Permitting

Restoration Consistency Determinations (CD)

- ✓ Best for dually listed species, not fully protected
 - ✓ Can be used with individual project BO, FWS PBO and NMFS PBOs (except the SoCal NMFS PBO)
 - ✓ No fee; 30-day timeline for determining consistency
 - ✓ Pre-consultation is crucial!
- Contact CGT team at restorationpermitting@wildlife.ca.gov



CDFW Species Permitting



Restoration Management Permit (RMP)

- ✓ “Umbrella” permit that consolidates two types of take authorizations – CESA and FPS
- ✓ Best option for fully protected species or if the CD doesn’t cover all your CESA listed species
- ✓ No fee, financial assurances or full mitigation
- ✓ Flexible timeline and application process
- ✓ Can use measures from USFWS and NMFS PBOs
- Contact CGT team at restorationpermitting@wildlife.ca.gov

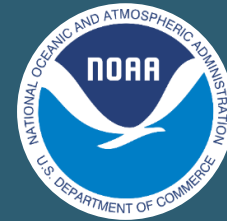


AB-1581

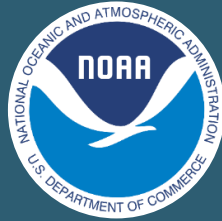


National Marine Fisheries Service (NMFS) PBOs

- Northern CA/Arcata
- Central CA/Santa Rosa
- Southern CA/Long Beach
- Central Valley/Sacramento



NOAA RC/CA Coastal Commission Consistency Determination (CD)

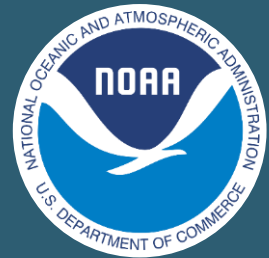


- Alternate pathway for a coastal development permit
- **Northern and Central Coast CD** – Covers Oregon Border to San Luis Obispo County line
- **Southern CA CD** – Covers Santa Barbara to Mexican Border



US Fish and Wildlife Service Programmatic Biological Opinion (PBO)

- Checklist application form – biological assessment /opinion is already completed!
- 30 – 60 day approval time
- Simplified post-construction form
- Includes birds, reptiles, amphibians, etc.
- Use through NOAA RC and/or USFWS as funders, or Corps permits
- Process for late-arriving action agencies (e.g. USFS, BLM, BoR, NPS, etc.)



Eligible Categories of Project Types

1. Improvements to stream crossings and fish passage
2. Removal of small dams, tide gates, flood gates, and legacy structures
3. Bioengineered streambank stabilization
4. Restoration and enhancement of off-channel and side-channel habitat
5. Water conservation projects
6. Floodplain restoration
7. Removal or remediation of pilings and other in-water structures
8. Removal of nonnative invasive species and revegetation with native plants
9. Establishment, restoration, and enhancement of tidal, subtidal, and freshwater wetlands
10. Establishment, restoration, and enhancement of stream and riparian habitat and upslope watershed sites





Tools and resources for restoration project permitting



Find Pathways by Agency

Find efficient permitting options listed by the issuing agencies or authorities here.

SEE AGENCIES



Introduction to Permitting

New to restoration project permitting? Start with these tips for success.

GET STARTED



Our Essential Guide

Download our PDF table of permits, agencies, eligibility, and benefits.

DOWNLOAD

Essential Permitting Guide

Sustainable Conservation's ESSENTIAL GUIDE for Accelerated Restoration Permitting

Agency/ Authority	Permit/ Approval	Project Size Limits	Activities Covered	Location	Benefits/ Details
California Environmental Quality Act (CEQA)	Categorical Exemption 15333* - Small Habitat Restoration Projects and 15304 – Minor Alterations to Land	<ul style="list-style-type: none"> • ≤ 5 acres for Sec. 15333 • No acreage limit for Sec. 15304 	<ul style="list-style-type: none"> • Fish, plant, and wildlife habitat restoration. • Minor alterations to land, water, and/or vegetation. 	Statewide	<ul style="list-style-type: none"> • Faster/lower cost alternative to preparing a CEQA document (e.g., Initial Study/Negative Declaration) • CEQA lead agency must file a Notice of Exemption (e.g., state or local government, Resource Conservation District, etc.) • Per Sec. Crowfoot's 1/7/21 memo, the presence of endangered, rare, or threatened species, or the use of mechanized equipment, respectively, does not preclude the use of CatEx 15333 per se.
	State Water Resources Control Board Program Environmental Impact Report (PEIR) for the Statewide Restoration General Order (SRGO)*	For projects exceeding size limits for Categorical Exemption 15333 - Small Habitat Restoration Projects (see above)	Aquatic and riparian habitat restoration and related water quality improvement projects; may include multiple benefits (e.g., recreation, groundwater recharge, flood protection) if the overall project meets the definition of a restoration project in the General Order	Statewide	<ul style="list-style-type: none"> • Can utilize PEIR to help with CEQA compliance for projects within its scope; reduced effort for CEQA compliance. • See Figure ES-2 CEQA Process Flow Chart for a summary of how the PEIR can be used. • CEQA lead agency must file a Notice of Determination • This PEIR could be utilized to satisfy the CEQA requirement of other CEQA lead agencies (in addition to the Water Board), as long as the project meets the definition of a restoration project and meets all other applicable assumptions in the SRGO PEIR.
	Statutory Exemption for Restoration Projects (SERP) Administered by California Department of Fish & Wildlife (CDFW)	No size limits	Projects that exclusively conserve, restore, protect, or enhance, and assist in the recovery of fish and wildlife, and habitat upon which they depend or that restore or provide habitat for fish and wildlife	Statewide	<ul style="list-style-type: none"> • Faster/lower cost alternative to preparing a CEQA document, for projects that don't qualify for a categorical exemption (see above) • The CEQA Lead Agency must first determine independently that the SERP qualifying criteria apply and then seek concurrence from the CDFW Director • The CEQA Lead Agency may contact restorationpermitting@wildlife.ca.gov to discuss whether SERP or SRGO PEIR is the best pathway for your project

* Sustainable Conservation provided technical assistance on the development of this or earlier versions of this authorization.

**This table with hyperlinks to permits/authorizations can be found at acceleratingrestoration.org

To schedule a free permitting consultation with Sustainable Conservation, email restoration@suscon.org

(updated 12/8/2023)

PROTECTION MEASURES SELECTION TOOL

[↩ Back to Accelerating Restoration](#)

A resource website by



Sustainable Conservation

Select a Permitting Pathway ▾

About the Tool

The [Accelerating Restoration](#) Protection Measures Selection Tool was designed to help restoration project proponents in California select applicable environmental protection measures (or “protection measures”) for their aquatic and riparian habitat restoration projects from the lists of measures included in the programmatic permitting pathways shown below.

Protection measures are fundamental to minimize impacts associated with project implementation and are required for obtaining coverage or enrollment under the permitting pathways. Applicable measures must be incorporated into the project design. Modified measures may also be proposed due to site-specific constraints or technological advances.

Protection measures have been coordinated between permitting agencies for consistency among the different agency restoration programmatic permits. The purpose of the protection measures is to incorporate best management practices (often referred to as BMPs) into the design of projects submitted for review and approval to avoid and/or minimize potential short-term, long-term, and cumulative adverse effects. These standards and practices represent sound and proven methods to reduce potential adverse effects of an action.

How It Works

1

Select a Permitting Pathway

Choose one of the permitting pathways by clicking on one of the icons below or by using the drop-down menu on the top right of this website.

Note: Review eligibility criteria for these permitting pathways and discuss your project with agency staff as needed before using this tool. A permitting pathway is not final unless verified by the permitting agency.

2

Filter Protection Measures and Download Results

Answer questions about your project to narrow which measures apply to your project.

Download a CSV that can be viewed in Excel. Each permitting pathway will generate its own file.

3

Review and Refine Results

Evaluate and further refine the results for applicability to your project and for when a modified measure may be appropriate. When using this tool for more than one permitting pathway, compare measures that are in the same category for consistency. An effort has been made to coordinate measures; however, each agency has its own requirements.

Disclaimer

The outputs of the selection tool (list of measures) should **not be considered final**. Agency review and assessment are required to ensure that measures are appropriate for project-specific conditions.

This tool is provided by a nongovernmental organization working in partnership with state and federal agencies. Specific measures may be modified, added, or removed in final permits on a project-level basis. The project proponent should **discuss proposed modifications** with the applicable agency.

Further, it is important to note that additional protection measures pertaining to resources outside of the applicable agency's jurisdiction may be recommended and/or required on a project-by-project basis. This may include measures addressing impacts to special-status wildlife, fish, and plant species, air quality, noise, cultural resources, and other areas. These additional measures would typically be incorporated into projects as part of California Environmental Quality Act (CEQA) review or required by other agencies during their permitting processes.

Permitting Pathways



State Water Board Statewide Restoration General Order (SRGO) – General Protection Measures (GPMs)



State Water Board SRGO Program Environmental Impact Report (PEIR) – Species Protection Measures



USFWS Statewide Restoration Programmatic Biological Opinion (PBO) – GPMs



USFWS Statewide Restoration PBO – Species Protection Measures



North Coast NMFS PBO



Central Coast NMFS PBO



Central Valley NMFS PBO



South Coast NMFS PBO

Photo credits: Top row from left to right – Stephanie Falzone, [California Department of Fish and Wildlife](#), Stephanie Falzone, [Bureau of Land Management](#). Bottom row from left to right – Stephanie Falzone, [U.S. Fish and Wildlife Service/Steve Martarano](#), [California Department of Water Resources \(DWR\)/Paul Hames](#), [DWR/Paul Hames](#).



[← Back to Full List of Permits](#)

USFWS Statewide Restoration Programmatic Biological Opinion (PBO) – General Protection Measures



What this permitting pathway covers

The [USFWS Statewide Restoration Programmatic Biological Opinion \(PBO\)](#) was developed as part of Sustainable Conservation's Statewide Permitting Initiative and was issued in 2022.

All projects must meet the definition of a restoration project and be consistent with USFWS recovery plans or recovery-related documentation for Covered Species.

A restoration project is defined as "...an eligible project type and relevant protection measures that will result in a net increase in aquatic, riparian, floodplain, wetland, or coastal dune resource functions and/or services through implementation of the eligible project types, **relevant protection measures**, and design guidelines."

Protection measures, including species work windows for state/federal listed species, were coordinated with CDFW for consistency with state requirements. Contact CDFW at restorationpermitting@wildlife.ca.gov about eligibility for a [Restoration Consistency Determination](#) or other restoration permit to save time an expense

[Download CSV](#)

42 measures found

Questions

Clear Answers

1 Does your project involve the use of mechanized equipment or ground disturbance?

Yes No

Does your project involve in-water concrete use?

Yes No

2 Does your project involve in-water work?

Yes No

Does your project involve cofferdams and/or dewatering?

Yes No

Does your project involve pile driving?

Yes No

Does your project involve dredging operations and/or dredging materials reuse?

Yes No

3 Does your project involve vegetation disturbance?

Yes No

Will this project be using herbicides?

Yes No

List of Measures

Show all measures

33 measures found

USFWS - GPM - 01

Receipt and Copies of All Permits and Authorizations

USFWS - GPM - 02

Construction Work Windows

USFWS - GPM - 03

Construction Hours

USFWS - GPM - 04

Environmental Awareness Training

USFWS - GPM - 05

Environmental Monitoring

USFWS - GPM - 06

Work Area and Speed Limits

USFWS - GPM - 07

Environmentally Sensitive Areas and/or Wildlife Exclusion

USFWS - GPM - 08

Prevent Spread of Invasive Species

USFWS - GPM - 09

Practices to Prevent Pathogen Contamination

USFWS - GPM - 10

Equipment Maintenance and Materials Storage

USFWS - GPM - 11

Material Disposal

USFWS - GPM - 12

Fugitive Dust Reduction

USFWS - GPM - 13

Trash Removed Daily

Download CSV

33 measures found



USFWS Statewide Restoration Programmatic Biological Opinion (PBO) – Species Protection Measures



How to use this tool for the [USFWS Statewide Restoration PBO](#)

- Obtain an Official Species List from the [USFWS Information for Planning and Consultation \(IPac\)](#) online tool to identify the listed species of interest and evaluate their potential to occur on the project site.
- Click the “**Filter for your needs**” button below and use this tool to generate a list of measures relevant to the guilds/species that will be affected by the project from [Attachment to Appendix A: Protection Measures](#) of the PBO.
- Once downloaded, closely review and further refine the list of species protection measures, along with the list of [General Protection Measures](#) generated by this web tool to propose which measures you plan to implement, which may not be applicable, and proposed modifications to any measures. Take the species work windows into consideration when planning your project.
- In coordination with your [Lead Agency](#), initiate Technical Assistance with the appropriate USFWS Ecological

[Download CSV](#)

155 measures found

Questions

[Clear Answers](#)

- 1 Select the species guilds that have the potential to be present on the project site. Then select which specific species from the selected guilds that have the potential to be present on the project site.

Amphibians Reptiles Birds

Mammals Invertebrates Fish

Vernal Pool and Non-Vernal Pool Plants

Fish

Tidewater Goby

Unarmored Threespine Stickleback

Delta Smelt Lahontan Cutthroat Trout

List of Measures

[Show all measures](#)

10 measures found

USFWS-SPM-ASP-01	Qualifications of the Qualified Biologist and USFWS-Approved Biologist
USFWS-SPM-ASP-02	Preconstruction Surveys
USFWS-SPM-ASP-03	Species Capture, Handling, and Translocation
USFWS-SPM-ASP-04	Covered Species Entrapment Prevention
USFWS-SPM-ASP-05	Airborne Noise Reduction
USFWS-SPM-FISH-01	Habitat Disturbance Avoidance and Minimization
USFWS-SPM-FISH-02	Habitat Assessment and Surveys
USFWS-SPM-FISH-03	Fish Capture and Relocation
USFWS-SPM-FISH-04	Reporting
USFWS-SPM-TIGO-01	Capture and Relocation

[Download CSV](#)

10 measures found

An aerial photograph of a forest stream. The water is dark and reflects the surrounding green trees. A large, bleached, dead tree trunk lies across the stream, partially submerged. The forest is dense with various shades of green, and some bare branches are visible. The overall scene is a natural, somewhat somber landscape.

Use these **tools and resources!**

acceleratingrestoration.org

Contact us for Technical Assistance

ACCELERATING RESTORATION

A resource website by



Sustainable Conservation

HOME

FIND PERMITTING PATHWAYS ▾

EXAMPLE PROJECTS ▾

MORE RESOURCES ▾

ABOUT US ▾

Contact us

The Accelerated Permitting Website is an informational resource created by [Sustainable Conservation](#).

Email our team at restoration@suscon.org for free permitting strategy advice and technical assistance.

If you are interested in receiving the overall permitting strategy for a project or multiple projects, please include as much information about your project(s) as possible, including project size, project type(s), and project activities. If you have a question about a specific permitting pathway or are running into a particular challenge, the more specific your questions are and the more information you provide, the better we can assist you.

If you have questions or comments about this website, or an example restoration project you would like to have featured on the website please email us at restoration@suscon.org.

Sign up for our email-newsletter!

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Email address

First name

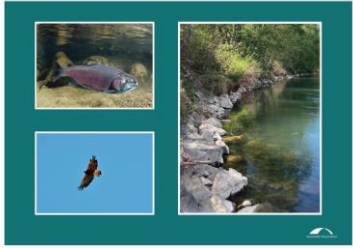
Last name

Affiliation (if none, enter 'none')

SUBSCRIBE

Restoration Round-Up: Kopta Slough Multi-Benefit Project

September 21, 2023



Restoration Round-Up: Butano Creek Floodplain and Streamflow Enhancement Project

November 24, 2023



Restoration Round-Up: Kern Plateau

August 17, 2023



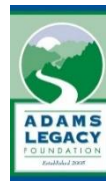
Restoration Round-Up Map

Locations of the 3 restoration projects featured in the blog series



Tell us about your projects!

Funders



THANK YOU!

Stephanie Falzone

Senior Project Manager

Email: sfalzone@suscon.org

Phone: 415-977-0380 x350

Email the team at: restoration@suscon.org



Sustainable Conservation

North Coast Salmon Project

Trevor Kumec
trevor.kumec@wildlife.ca.gov
ncsp@wildlife.ca.gov



Overview



1. North Coast Salmon Project (NCSP)
2. SHaRP process
3. SHaRP in action – utility to practitioners
4. Next steps

NCSP

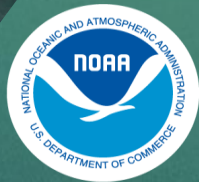
- Created in 2018
- Support Coho restoration
- Collaborative
- Salmon Habitat Restoration Priorities (SHaRP)



What is SHaRP?

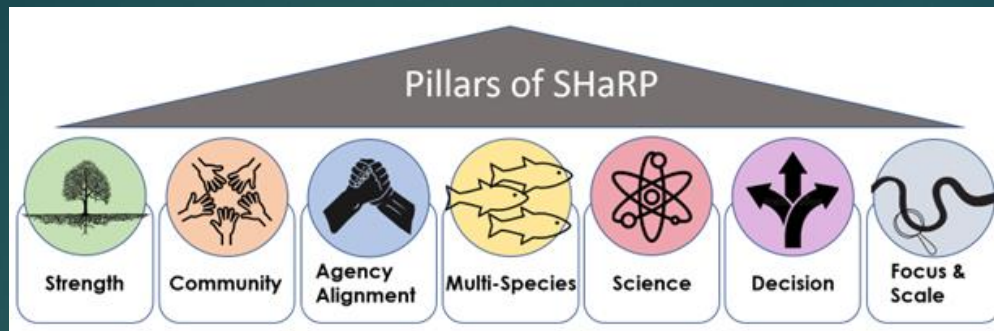


SALMON
HaBITAT
RESTORATION
PRIORITIES



NOAA
FISHERIES

- Process to identify and prioritize restoration needs in key watersheds
- Guided by a set of principles: Pillars of SHaRP



- **Strength:** Focusing on protecting and restoring strongholds
- **Community:** SHaRP is a collaborative community planning effort
- **Agency Alignment:** Practitioners understand agency goals
- **Multi-Species:** All salmonids are explicitly considered
- **Science:** Driven by best available science
- **Decision:** Decisions should be made while acknowledging data gaps
- **Focus and Scale:** Focus efforts where effect will be highest, restore at an appropriate scale



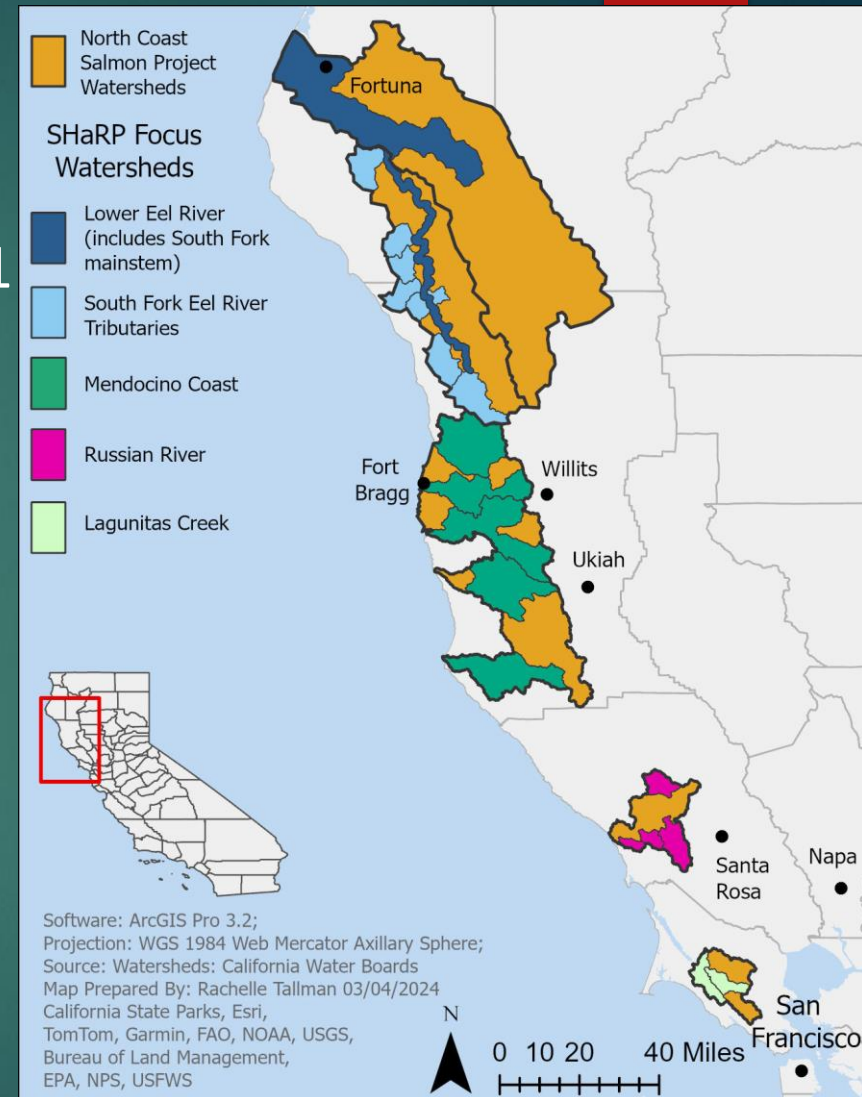
What about existing Recovery Plans?

- Specific
- Reflects current landscape
- Collaborative and creates buy-in



SHaRP Focus Areas

- SF Eel Tributaries: Published 2021
- Lagunitas Creek: Published 2022
- Russian River: Report in-progress
- Mendocino Coast: Report in-progress
- Lower Eel River: Planning



SHaRP Focus Areas

SF Eel Tributaries: Published 2021

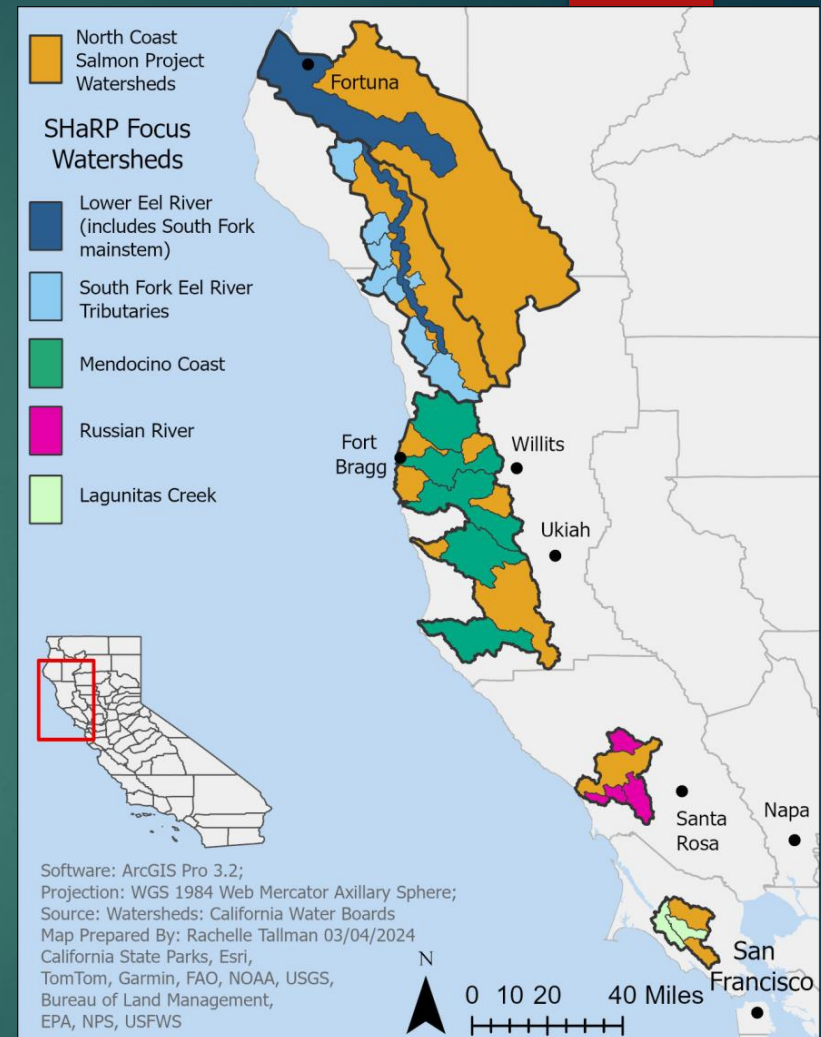
Lagunitas Creek: Published 2022

Russian River: Report in-progress

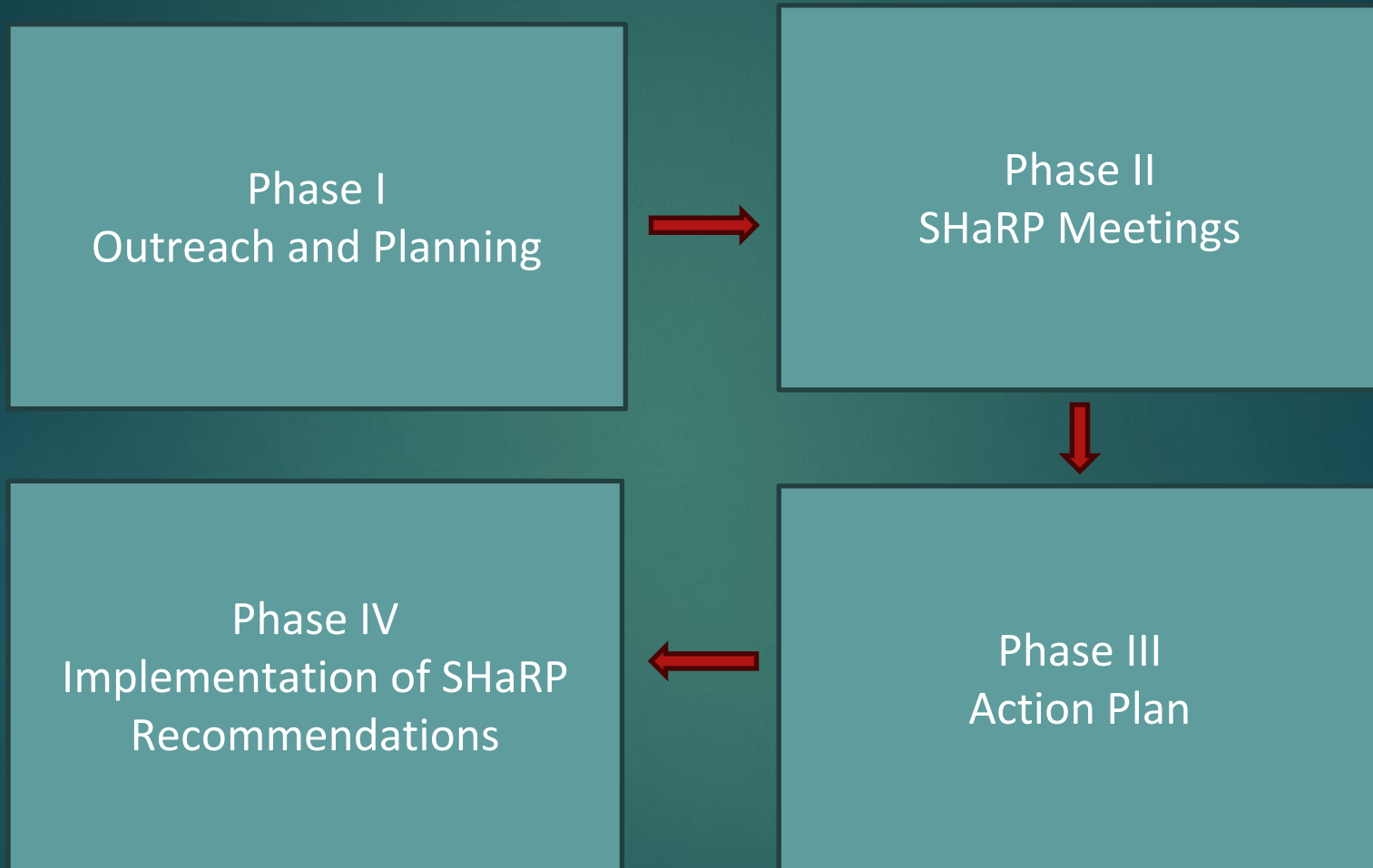
Mendocino Coast: Report in-progress

Lower Eel River: Planning

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SHaRP Process



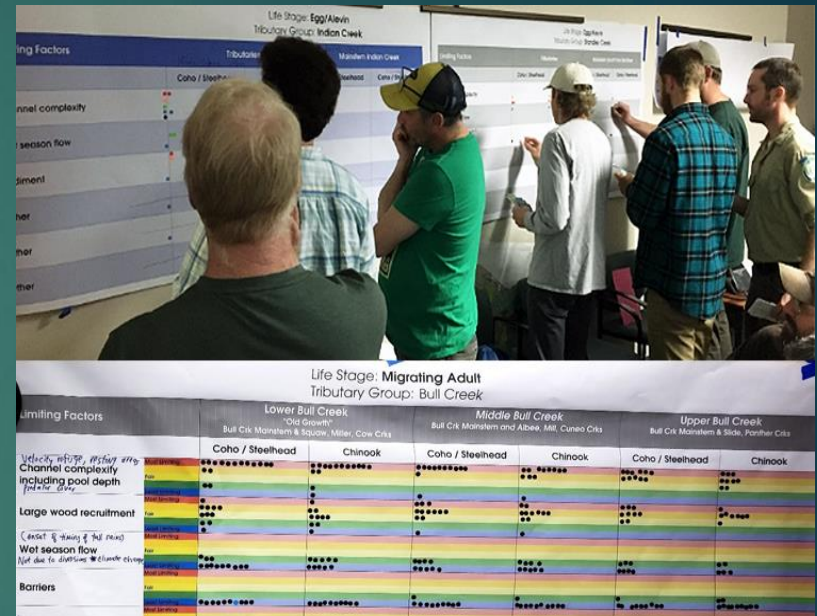
Phase I Outreach and Planning

- Who: identify interested parties, build the team
- Focus: rank watersheds by potential, fish status, local support, etc.
- Data and Science: gather best available data and experts



Phase II SHaRP Meetings

- 2-3 days per watershed
- Expert presentations
- Limiting Attribute Ranking
- Identify recommended actions



Credit: NOAA Fisheries

Phase III Action Plan

- Action Plan for each focus watershed
- Outlines specific recommendations
- Reviewed by participants



Salmonid Habitat Restoration Priorities

Restoration Actions - Barrier Points

Upper Green Valley & Purrington Creek

Phase III Action Plan



Barrier Key

1. Millsite Loop US
PAD# 765180
2. Millsite Loop DS
PAD# 765179
3. Private Driveway
PAD# 716536
4. Private Culvert
PAD# 716535
5. Private Culvert
PAD# 716534
6. Two In-Channel Dams
PAD# 716533
7. Splashboard Dam
No PAD#
8. Dam with Three Cement Weirs
PAD# 716532
9. County Road Xing
PAD# 712108
10. Road Xing Barrier
PAD# 716527
11. Private Driveway
PAD# 712107

0 0.25 0.5 1 Miles

Software: ArcGIS Pro 2.9
Projection: NAD 1983 California (Tieck) Albers (Meters)
Source: Streams (CDFW (after U.S. Geological Survey))
Map Prepared by Suzanne Lewis (CDFW) - Dec 08, 2021
Map Update by Martin Anderson (CDFW, PSM&C) - Oct 06, 2022
California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, California State Parks, Esri, HERE, Garmin, PAD, NOAA, USGS, Bureau of Land Management, EPA, NPS, Esri, NASA, NGA, USGS, FEMA, Esri, USGS

Phase IV

Implementation of Recommendations

- Participants are using SHaRP to guide projects and grants
- NCSP staff engage with SHaRP participants to highlight recommendations
- Available to discuss SHaRP, connect practitioners with resources
- Public map “SHaRP Tracker”



Phase IV

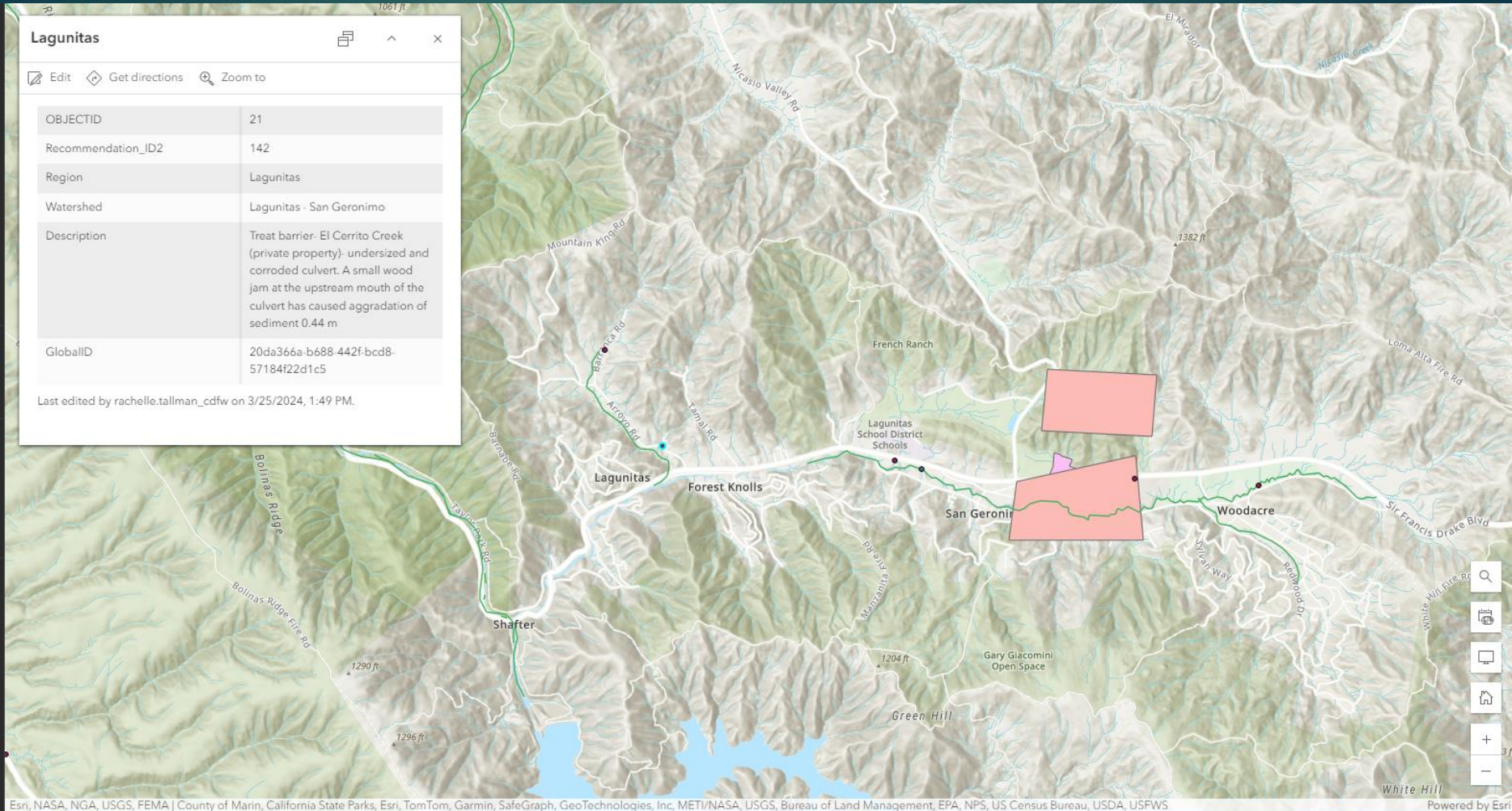
Implementation of Recommendations

Lagunitas

Edit Get directions Zoom to

OBJECTID	21
Recommendation_ID2	142
Region	Lagunitas
Watershed	Lagunitas - San Geronimo
Description	Treat barrier- El Cerrito Creek (private property)- undersized and corroded culvert. A small wood jam at the upstream mouth of the culvert has caused aggradation of sediment 0.44 m
GlobalID	20da366a-b688-442f-bcd8-57184f22d1c5

Last edited by rachel.le.tallman_cdfw on 3/25/2024, 1:49 PM.



Next Steps

- Continued engagement in focus watersheds
- Possible expansion
- Improving the process
- SHaRP Tracker



Acknowledgments



- Mary Olswang
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- Charlotte Peters
- Arthur Barros
- Julie Weeder
- Erin Seghesio
- Joe Pecharich
- Ruth Goodfield

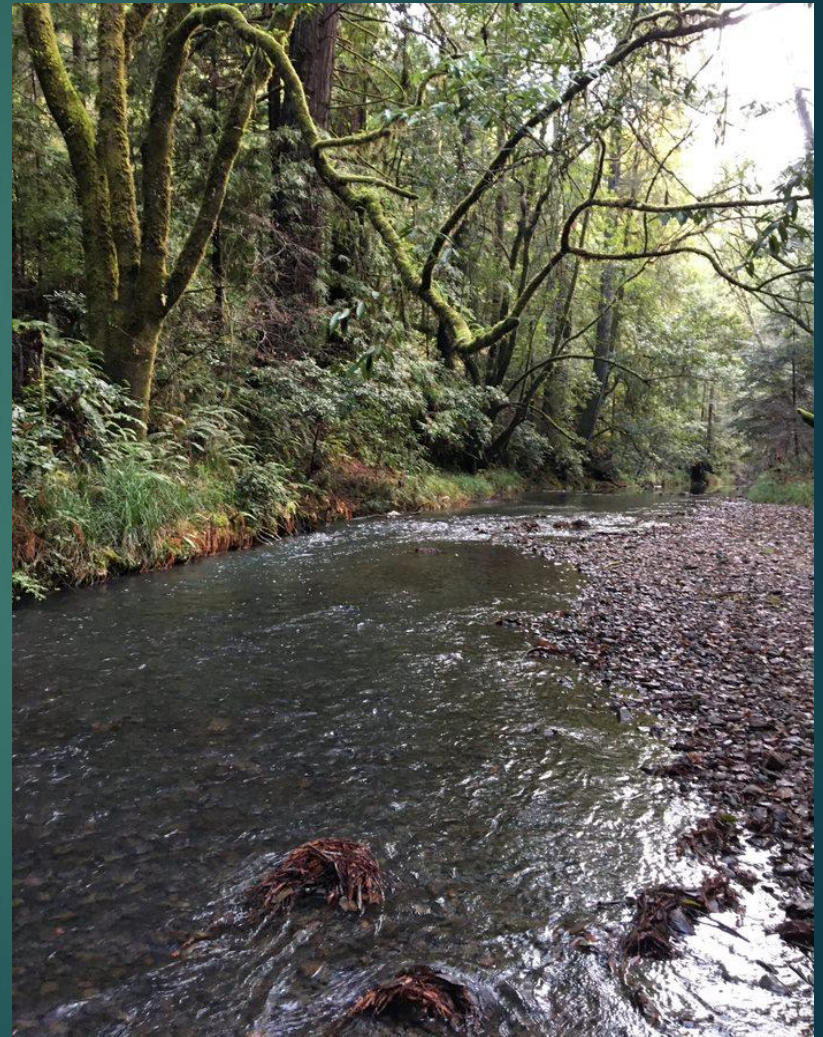
Additional thanks to our Steering Teams and many collaborators: NGOs, Tribes, timber companies, and landowners

Thank you

Trevor Kumec

trevor.kumec@wildlife.ca.gov

ncsp@wildlife.ca.gov



Monitoring SONCC Coho and Floodplain Habitat Restoration in Prairie Creek

Katherine Stonecypher

Prairie Creek Life Cycle Monitoring Project



Overview

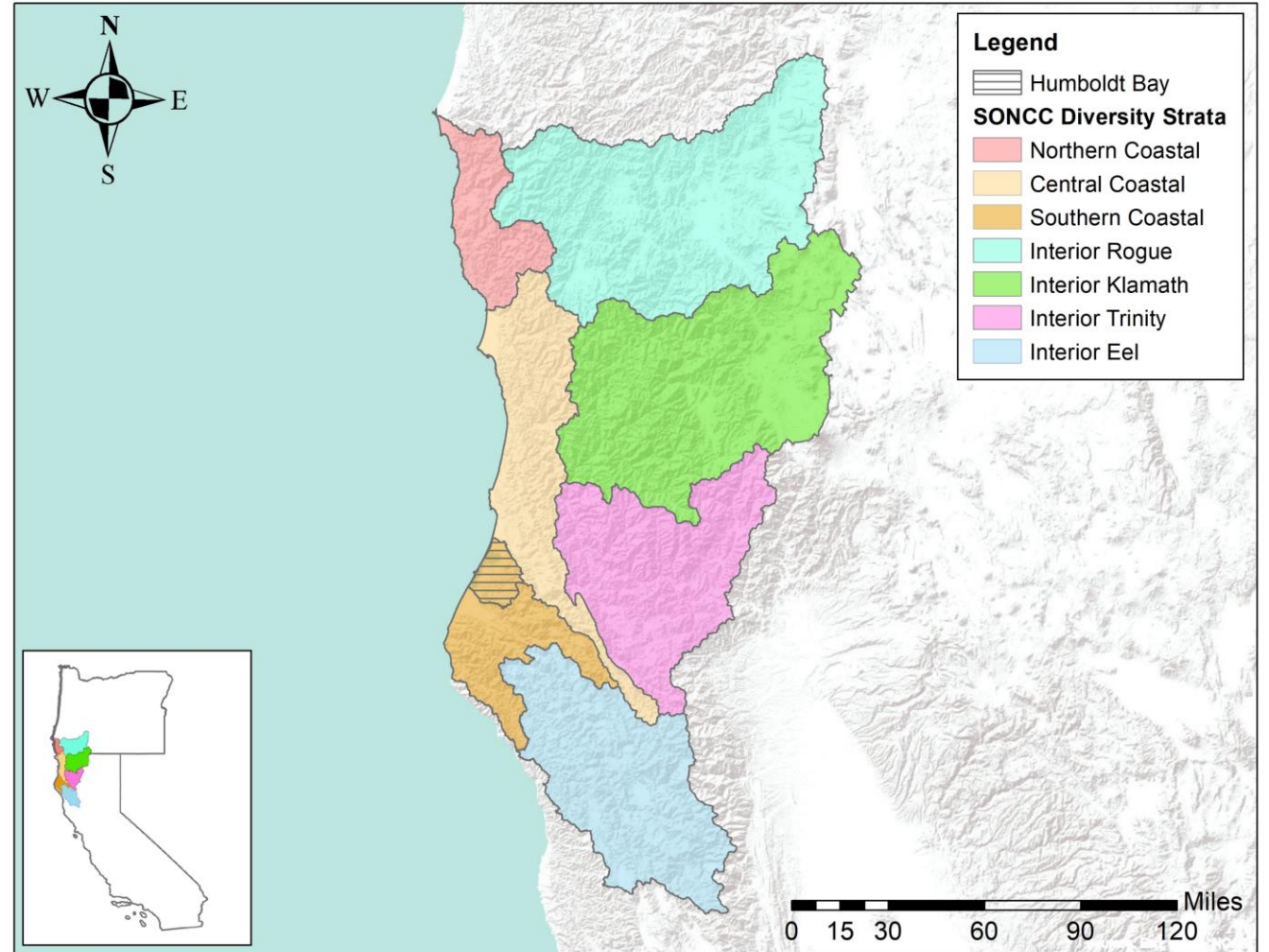
Coho Salmon (*Oncorhynchus kisutch*)

Southern Oregon-Northern California Coast
Evolutionary Significant Unit (SONCC)

Listed as Threatened under the Endangered
Species Act (ESA) in 1997

Lack of floodplain habitat is a key limiting stress
in all coastal populations and half of interior
populations

Off-channel habitats provide velocity refugia
from high winter flows



Investment in Floodplain Restoration

\$1 billion is spent on stream restoration annually in the US (Bernhardt et al. 2005)

<7% of restoration projects are monitored and fewer are evaluated for efficacy (Katz et al. 2007)

Do restoration projects help meet recovery objectives or do they just concentrate fish (abundance vs survival)? (Roni et al. 2018)

Monitoring juvenile and adult abundance and diversity at basin appropriate scale can help evaluate response (Roni et al. 2015)



Evaluating Restoration Within LCM Framework

Long term population monitoring datasets help evaluate appropriate biological parameters (Roni et al. 2015)

Life Cycle Monitoring:

What proportion of the population uses the restoration site?

How does growth and survival of fish using the site compare to the larger population?

What causes differences in performance across sites (habitat, prey, predators)?



Methods

PIT telemetry

Mark-Recapture

- Abundance
- Movement
- Growth
- Survival

Life Cycle Monitoring

CMP Surveys



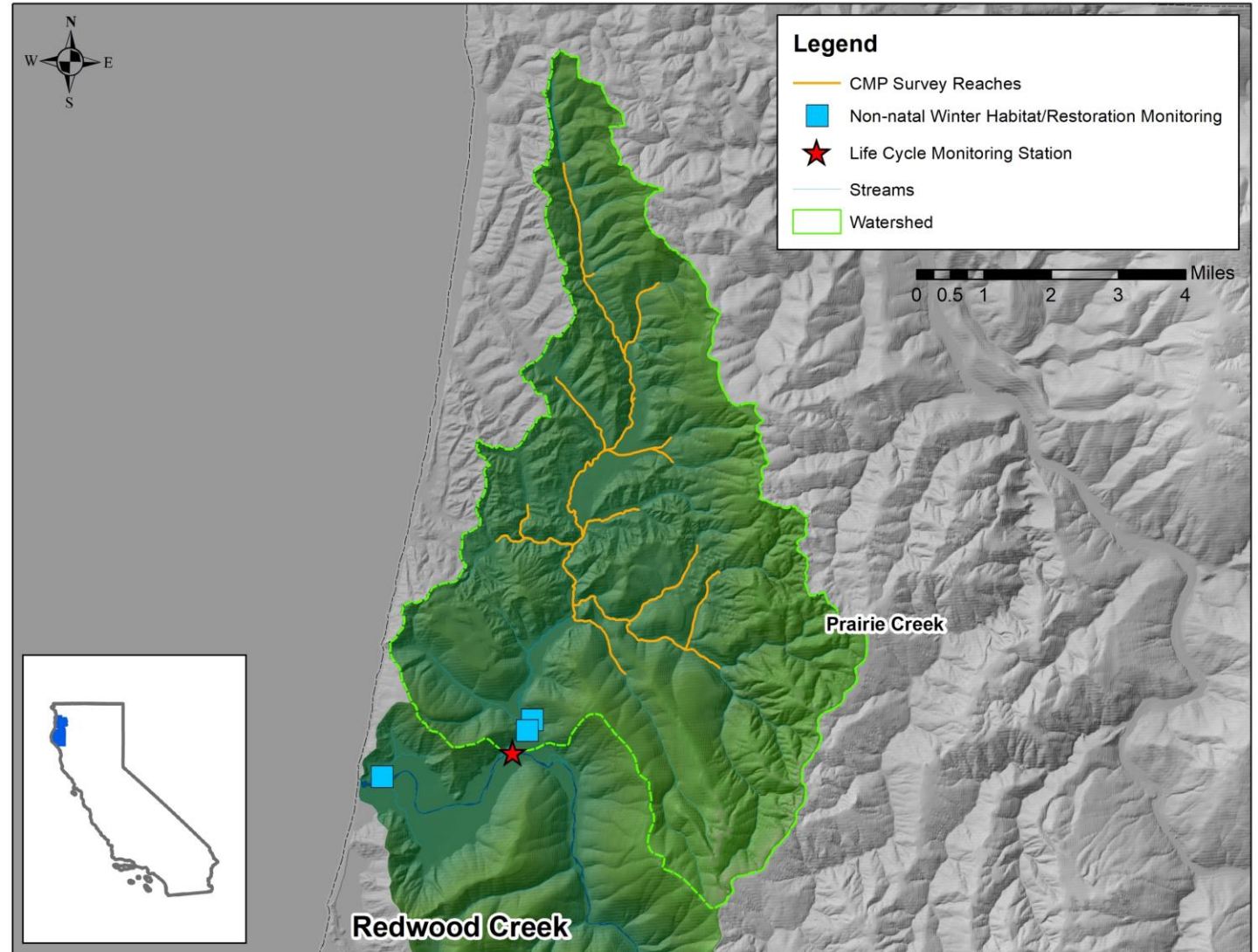
Life Cycle Monitoring on Prairie Creek

California Monitoring Program (CMP) Surveys

- Spawning Ground Surveys (SGS)
- Downstream Migrant Trapping (DSMT)
- Spatial Structure Snorkel Surveys
- Overwinter Survival (OWS)

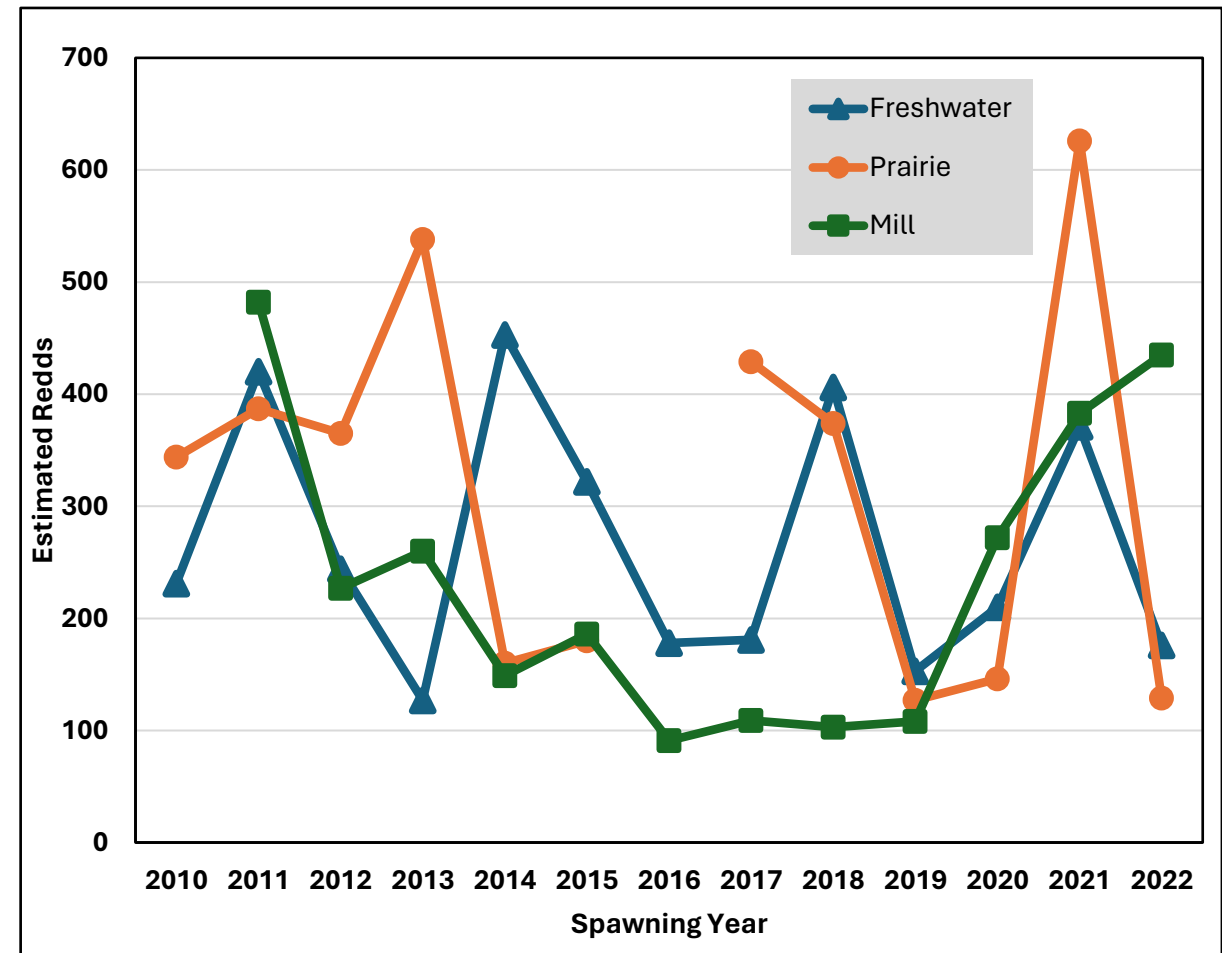
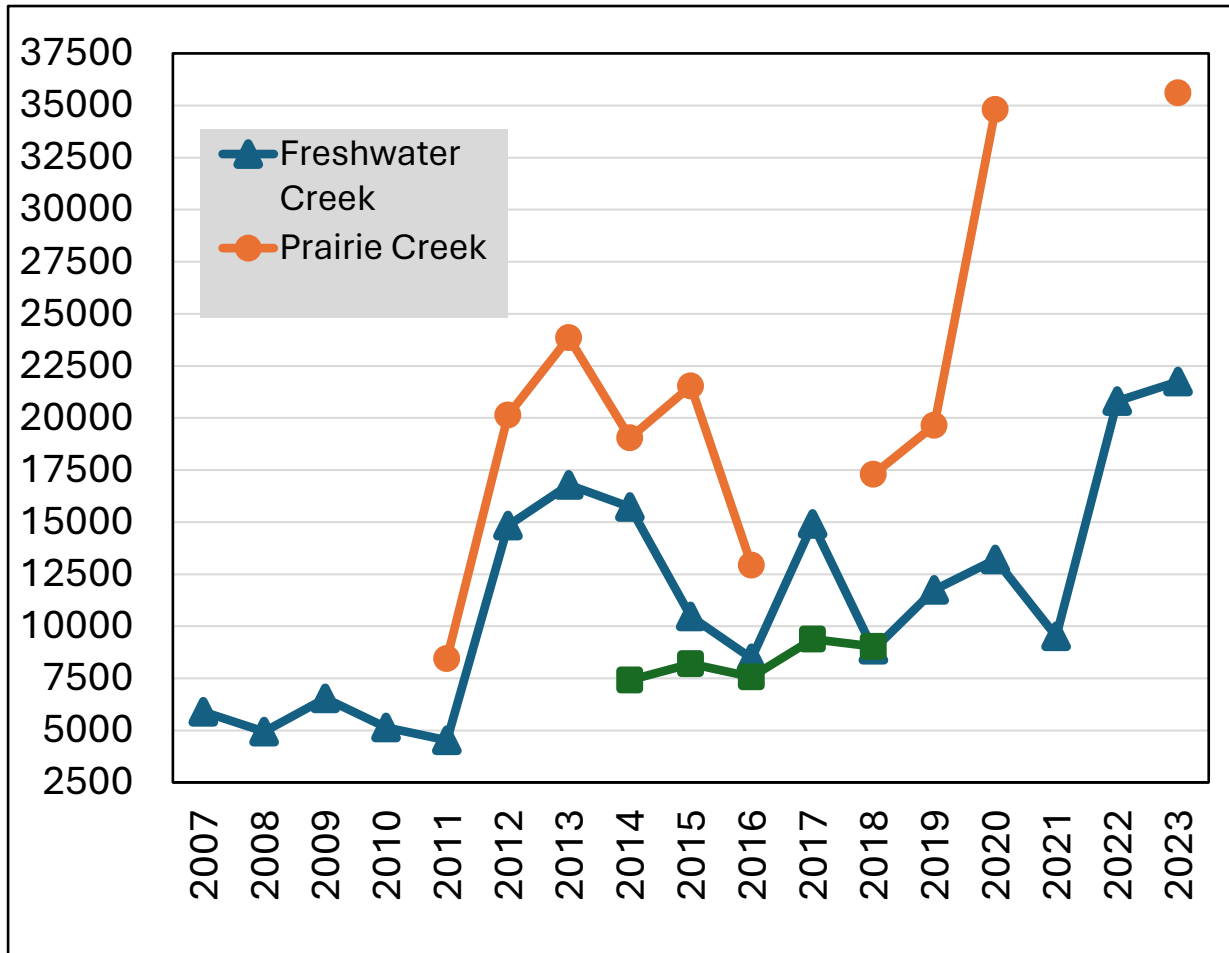
Validation Monitoring

Effectiveness Monitoring



Life Cycle Monitoring on Prairie Creek

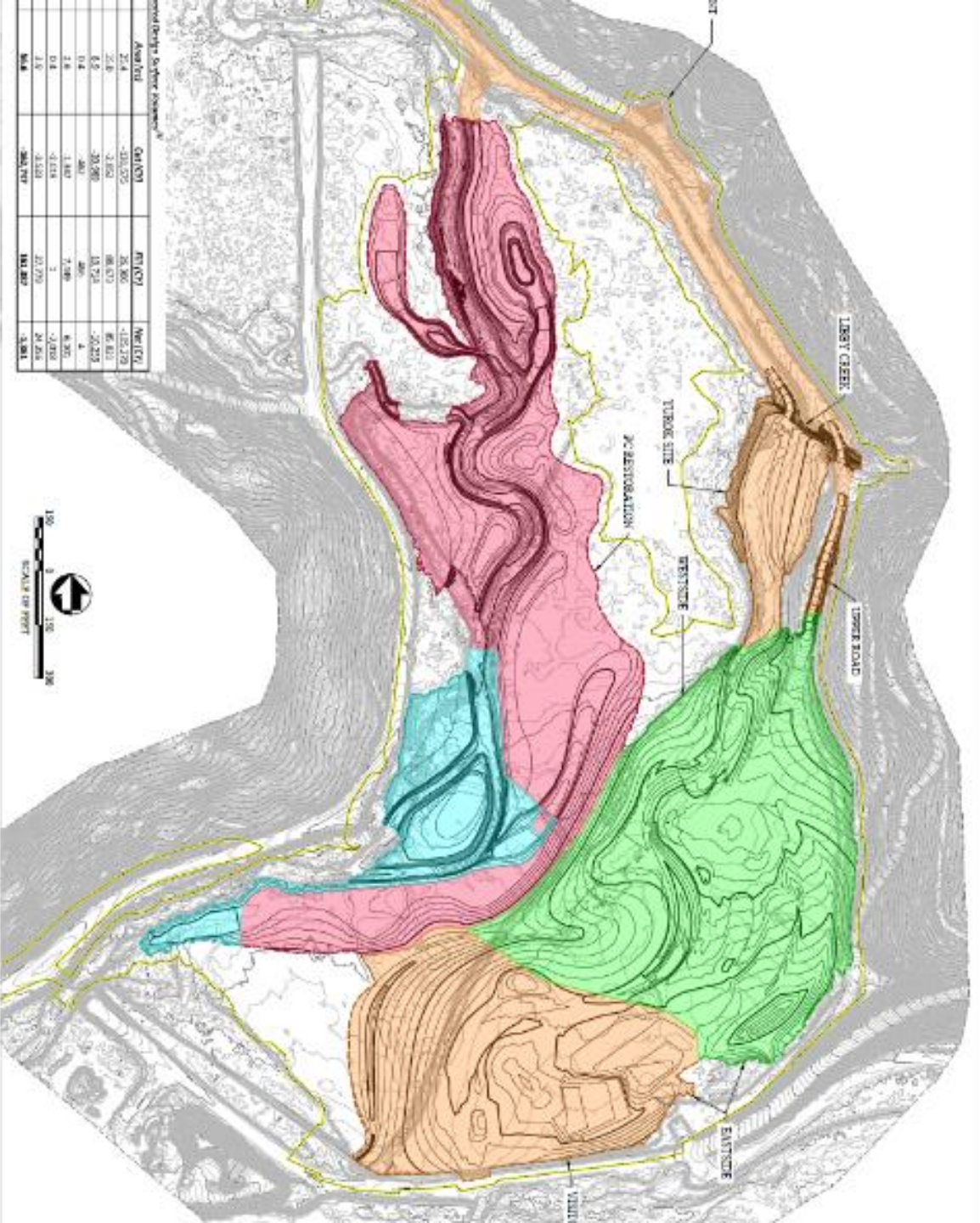
Long term dataset of coho smolt abundance and redd estimates





Validation Monitoring of Prairie Creek Floodplain Restoration





Proposed Design Surface Elevation*

Area/Foot	Old Elevation	Prop. Elevation	Quantity
27.4	-10.075	26.800	-150,270
22.8	2.800	08.075	86,812
8.8	-20.980	13.275	-2,232,315
0.4	4.00	4.00	4
2.8	1.400	7.000	6,300
0.4	-1.120	1	-2,000
1.6	-1.120	21.275	20,256
TOTAL	-984,777	181,002	-803,775



PROJECT NO.	03/02/21 INTERCART
DATE	03/02/21
SCALE	AS SHOWN
DESIGNER	DRAFT PHAM
CHECKER	& VOLUME
DATE	
SCALE	
PHILLIPS CONSULTANTS, INC.	
1000 N. UNIVERSITY AVENUE, SUITE 100, GAITHERSBURG, MD 20878	
TEL: 301-251-1000 FAX: 301-251-1001	

Validation and Life Cycle Monitoring on Prairie Creek

2022-2023 monitoring season

1442 coho tagged upstream Fall 2022

422 coho tagged in project site Winter 2023

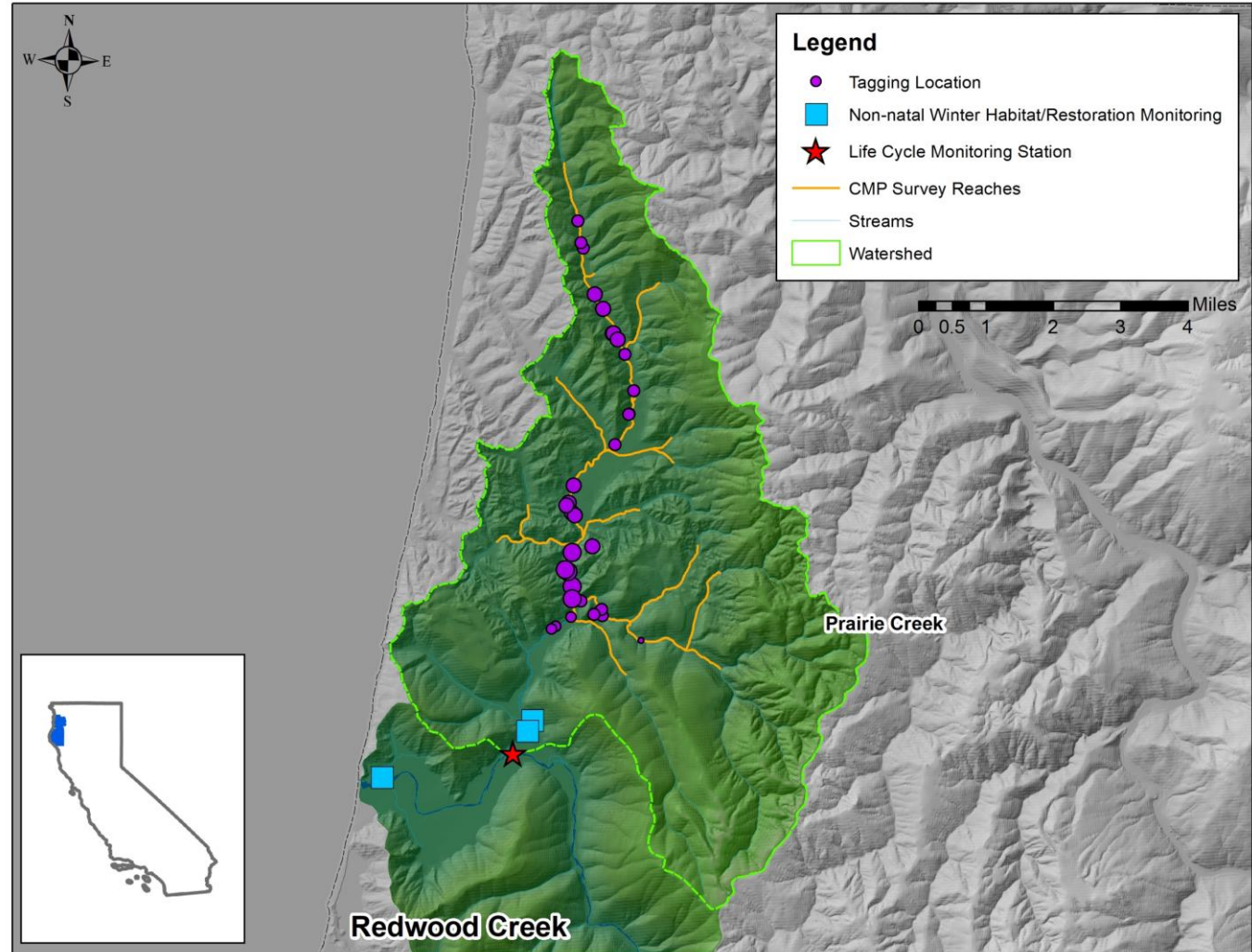
3242 coho tagged at outmigrant trap Spring 2023

Coho throughout Prairie Creek use restored floodplain habitat downstream

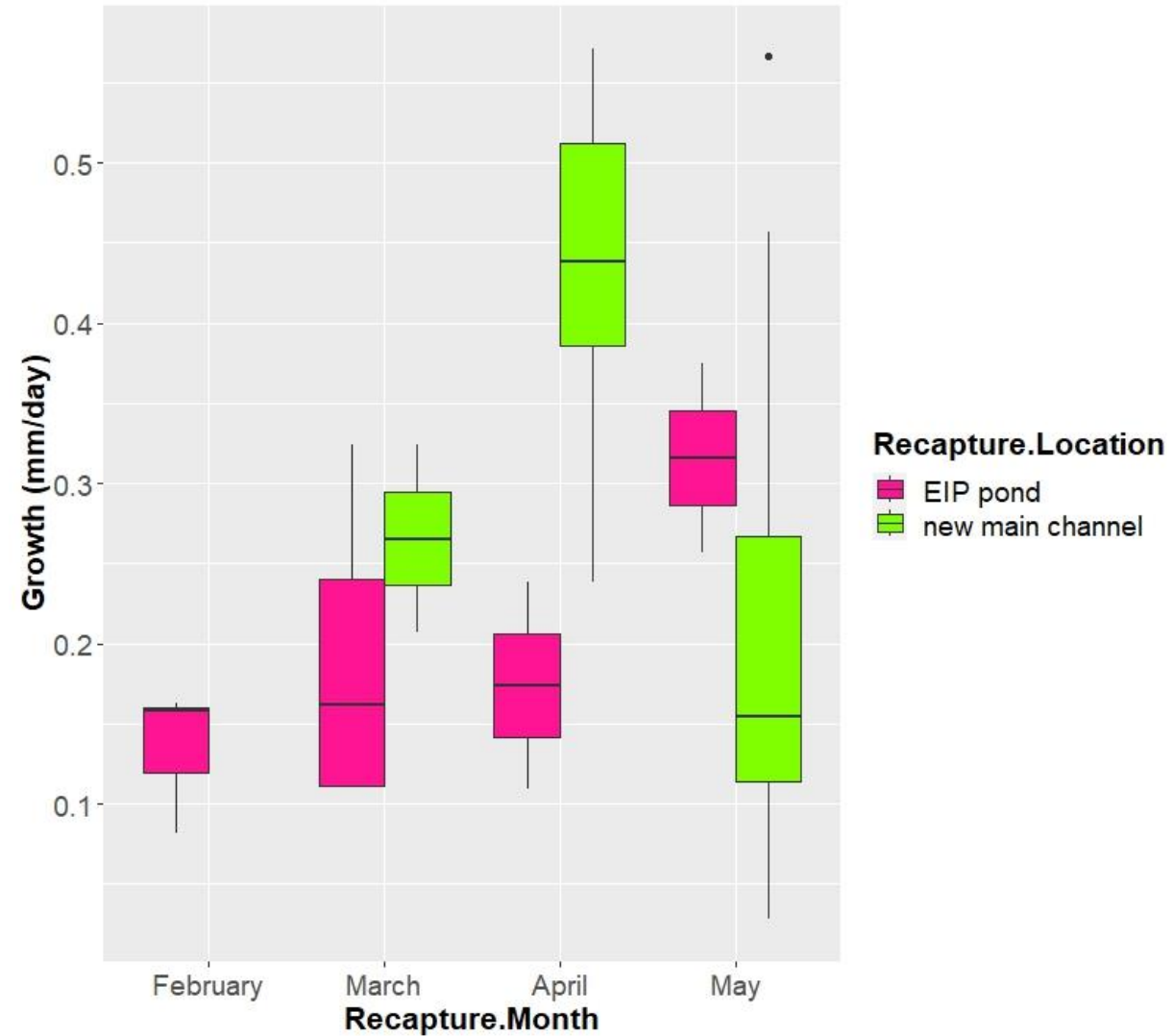
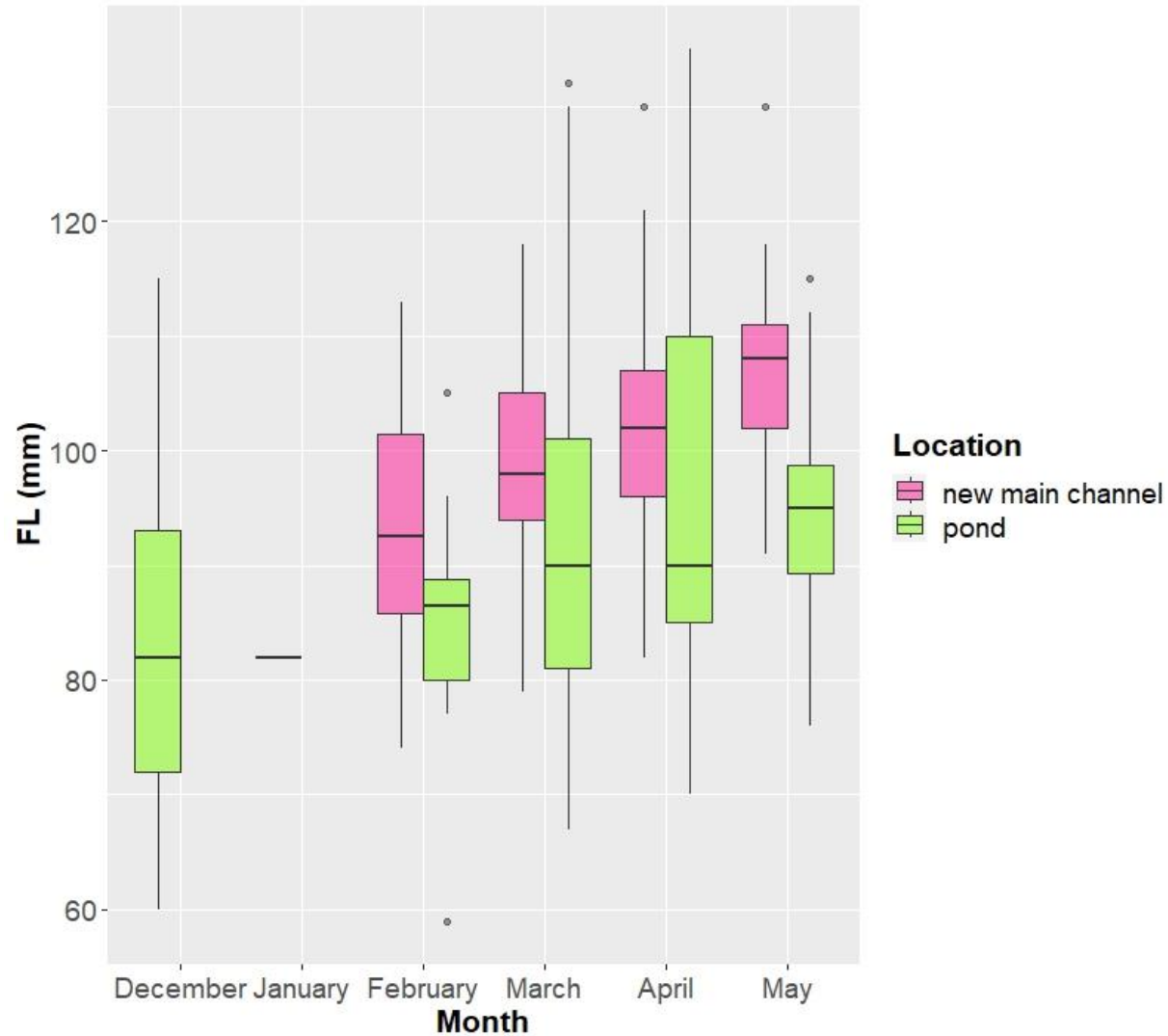
Most coho seem to use site briefly as velocity refuge (~3 days)

15% use site for more than 20 days

Fish used the site for up to 113 days



Size Distribution and Growth of Juvenile Coho



Lessons Learned: Emergency Fish Rescue

Disconnection of temporary habitat feature

Isolated salmonids in warm water with low dissolved oxygen

Monitoring triggered emergency fish rescue

Coordination between project partners

Seining more effective way to remove fish in this habitat

141 fish rescued and relocated to mainstem Prairie



Table 3. Depletion estimate of abundance of coho stranded in the new main channel as of 5/26/2023 with 95% confidence levels, where T is the total number of coho caught during k passes with seine/electrofisher combined.

\hat{N}	Variance	95% LCL	95% UCL	T	k
142	7.037	141	153	141	4

Validation and Life Cycle Monitoring on Prairie Creek

2023-2024 monitoring season

1516 coho tagged upstream Fall 2023

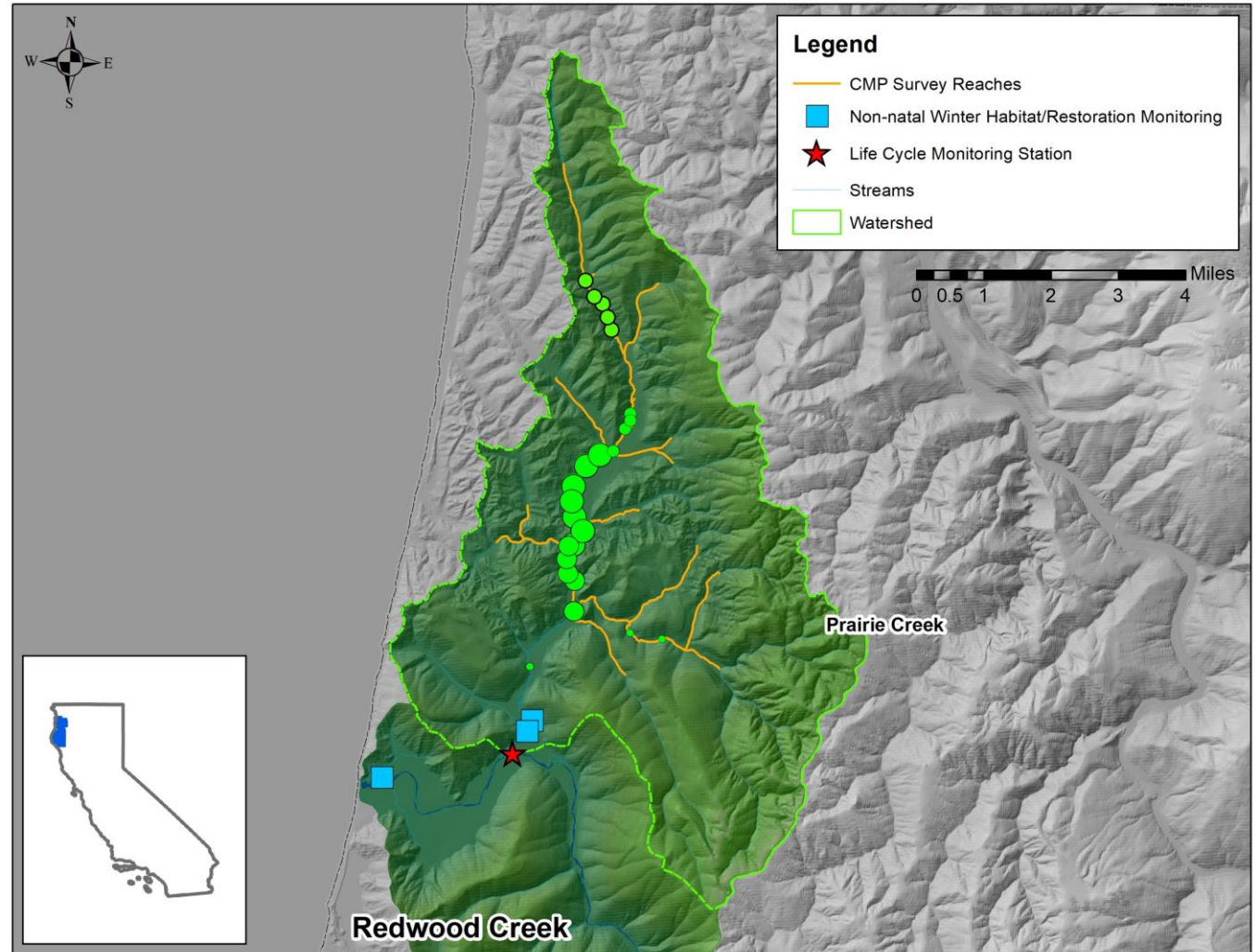
275 coho tagged in project site Winter 2023-2024

157 coho tagged in other non-natal winter habitats

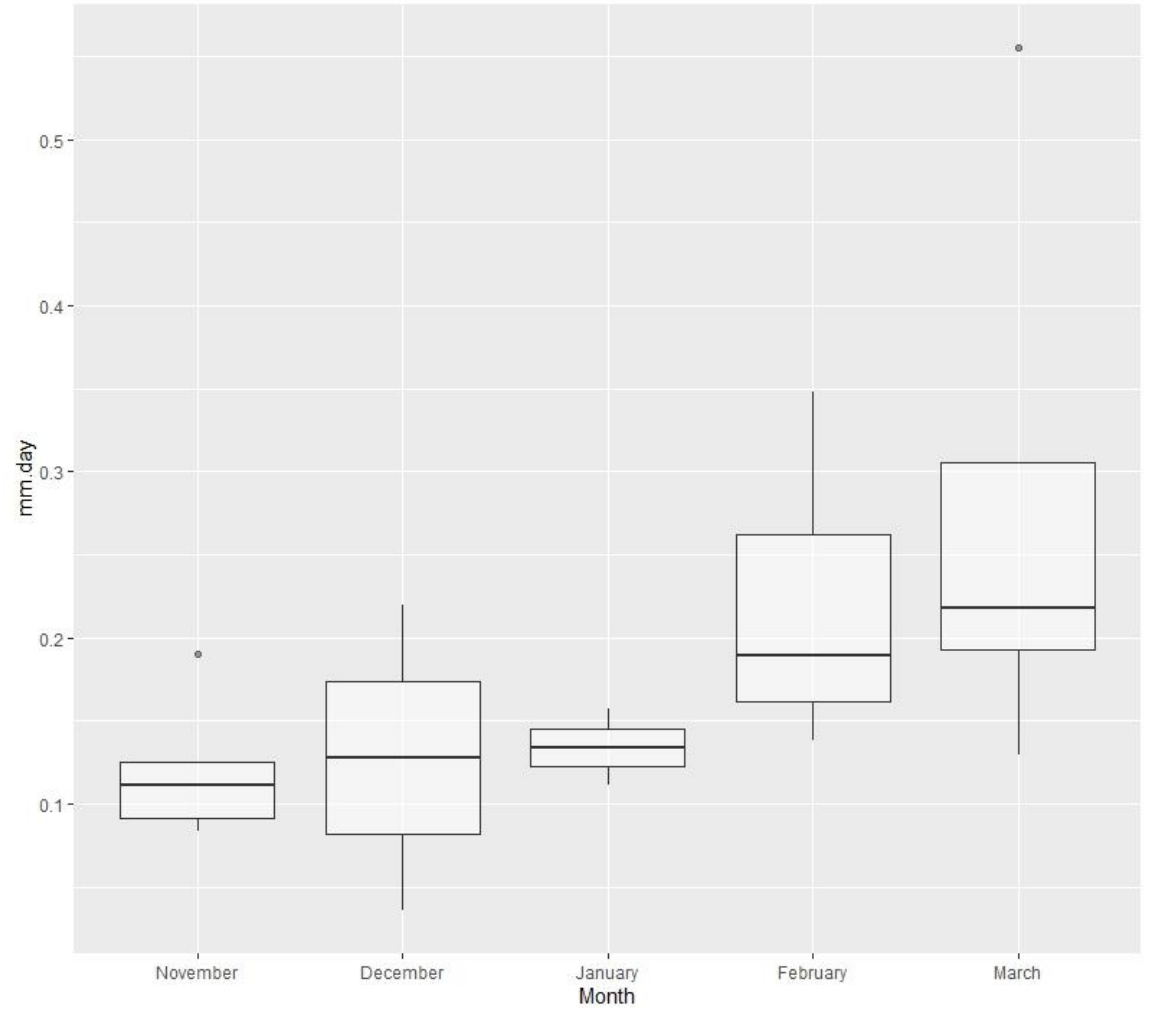
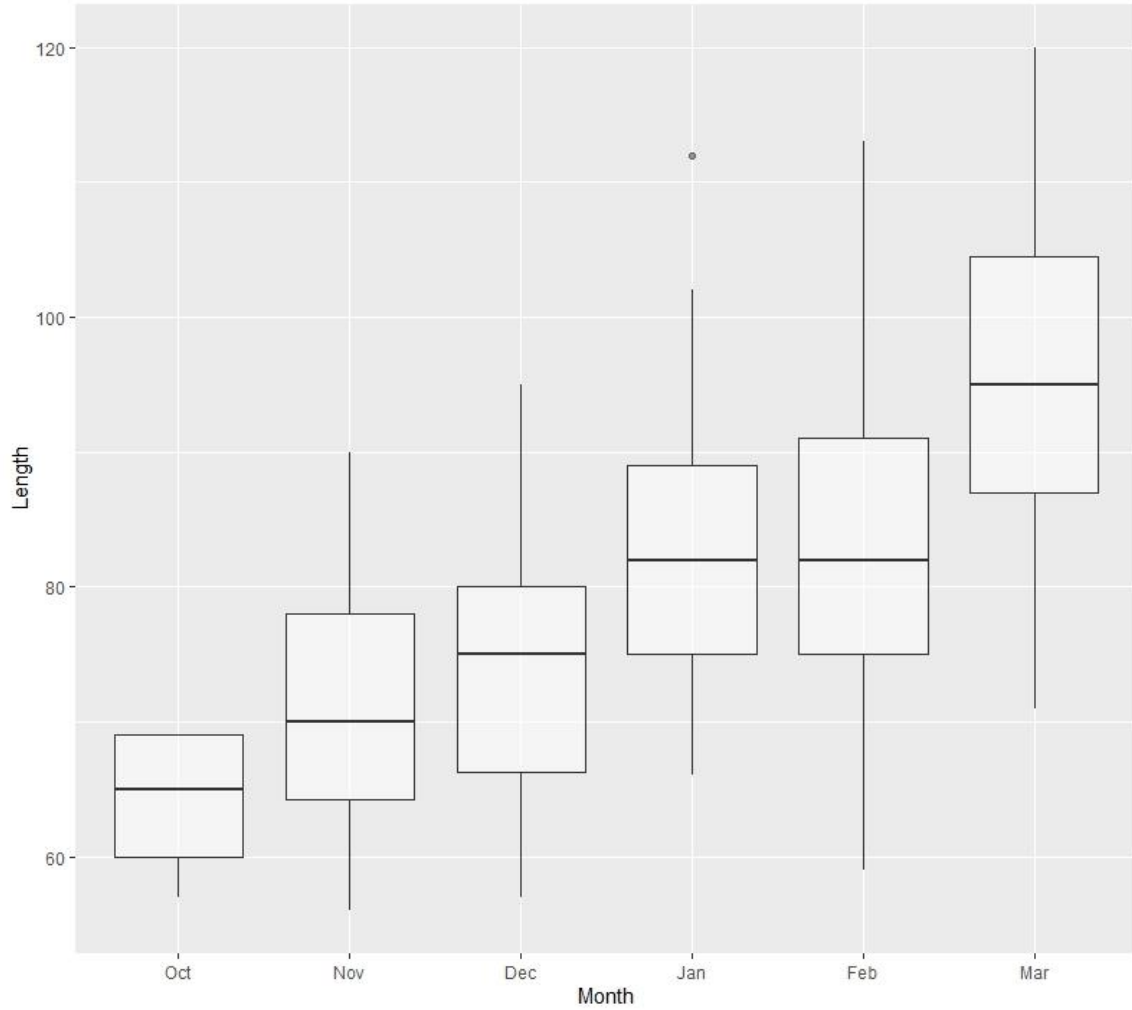
Coho throughout Prairie Creek use restored floodplain habitat downstream

New sites being monitored at the restoration site

Estuarine sampling to facilitate pre-restoration monitoring



Size Distribution and Growth of Juvenile Coho



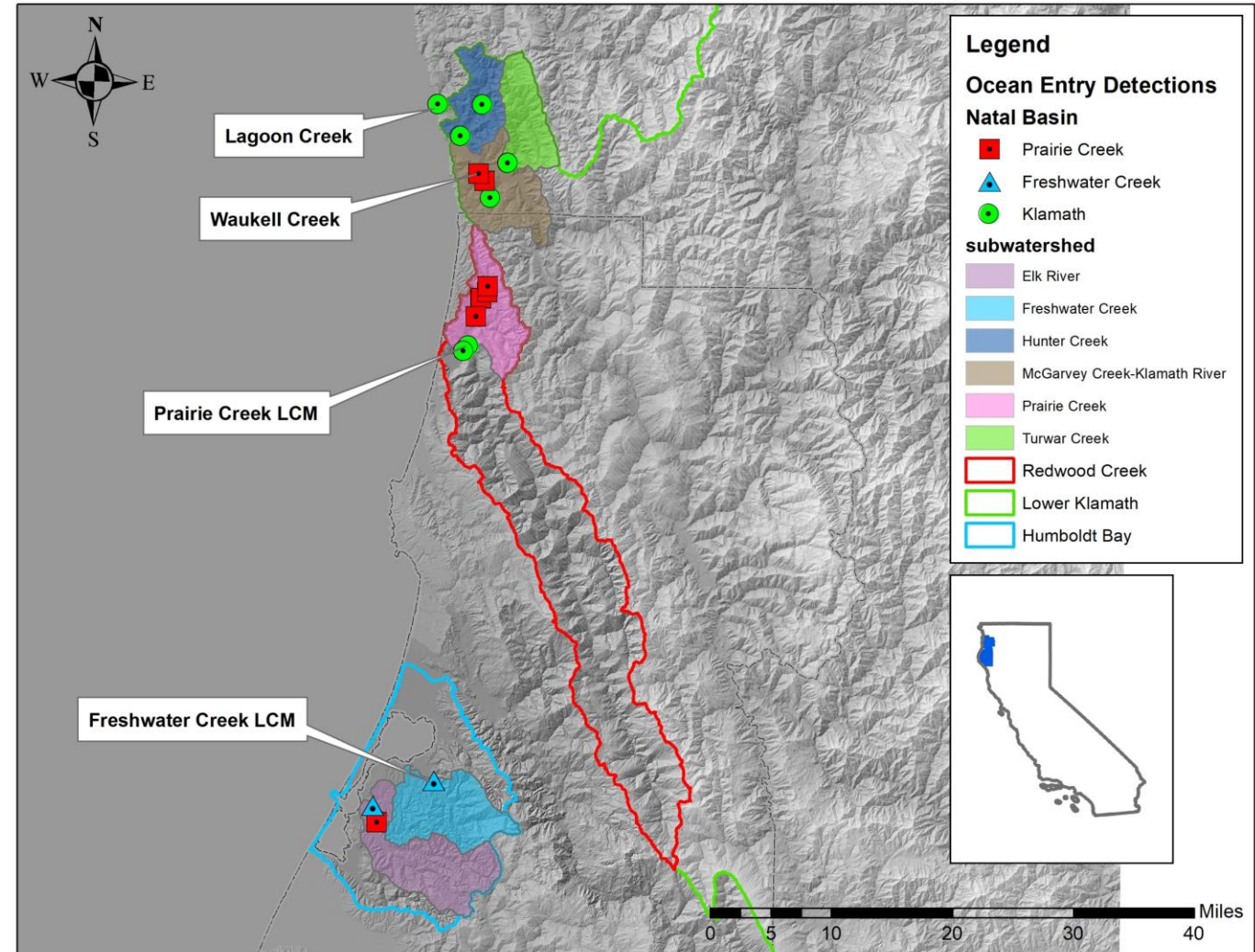
Ocean Entry and Non-natal Rearing Across Basins

10 fish documented rearing across Klamath-Redwood Creek watersheds since 2012

More intensive monitoring = more detections of this life history

Coho from Prairie Creek and Freshwater Creek recaptured in Martin Slough (Elk River) in Spring 2023

Four Coho from Prairie Creek recaptured in the Klamath in 2023-2024 season so far



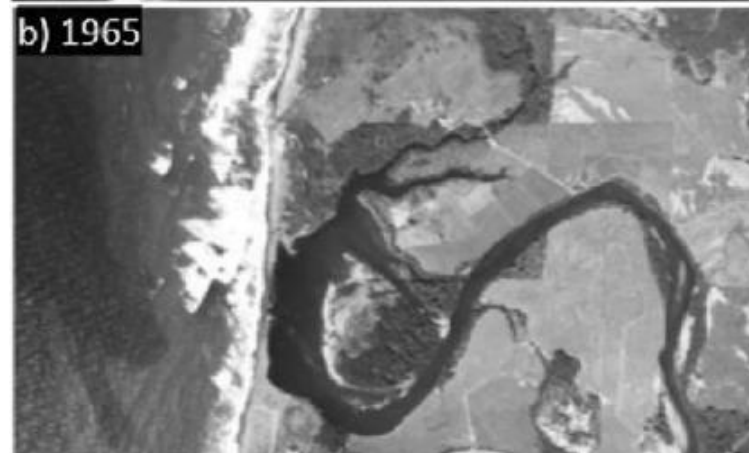
Estuarine Monitoring

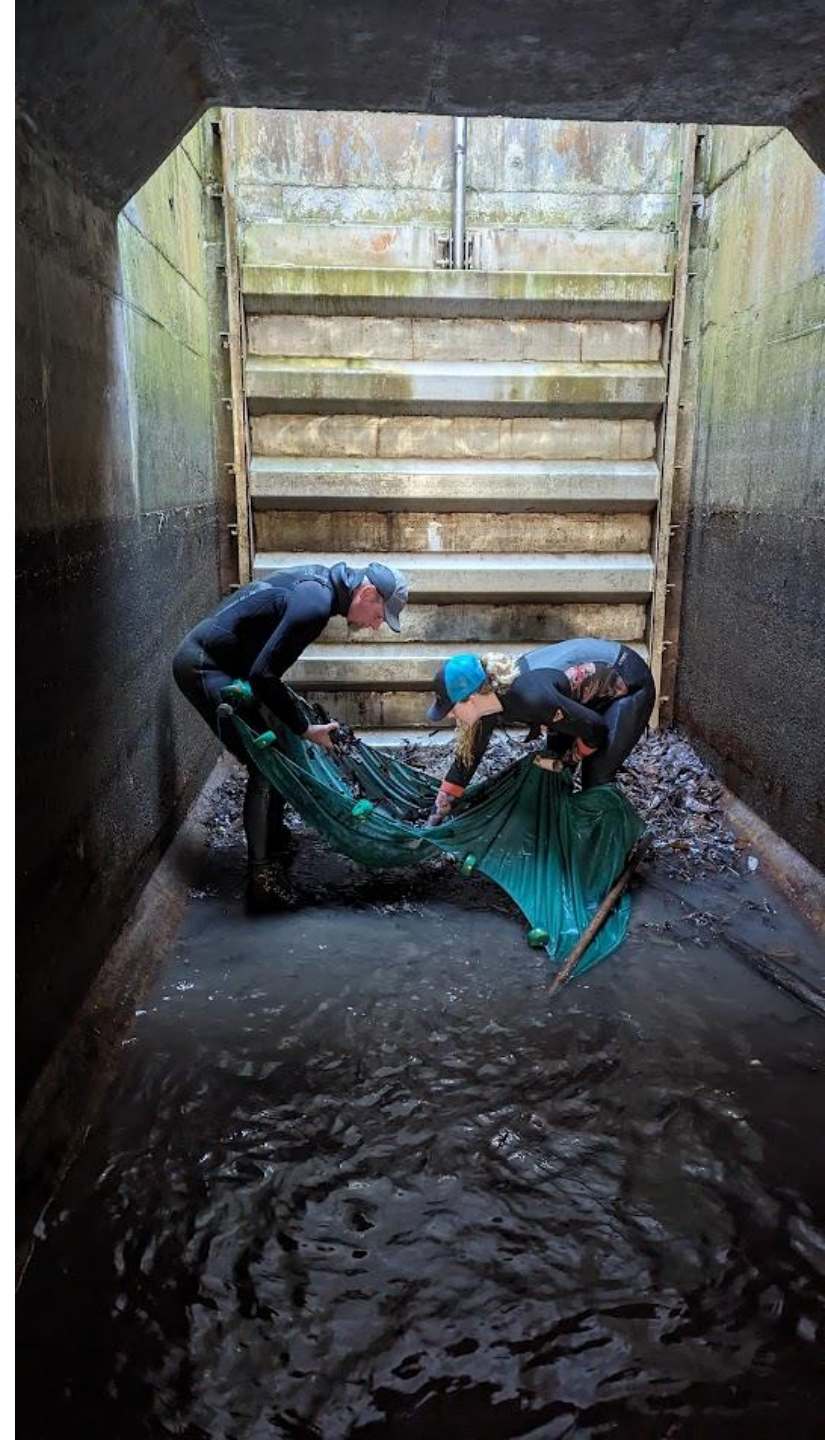
Redwood Creek estuary impaired by levees installed following 1955 and 1964 floods

Disconnection of estuarine floodplain habitat critical to overwinter survival and life history expression of juvenile salmonids

Little access to restored habitat upstream in Strawberry Creek

Sampling can inform tide gate operations and increase passage into estuarine habitat prior to levee removal





Estuarine Monitoring

7 coho captured in tide gate

None detected on portable antenna in
Strawberry Creek

2 coho captured in South Slough prior to
tide gate opening

5 coho detected on portable antenna in
Strawberry Creek after tide gate was
opened



Data Management

CMP Aquatic Surveys Database

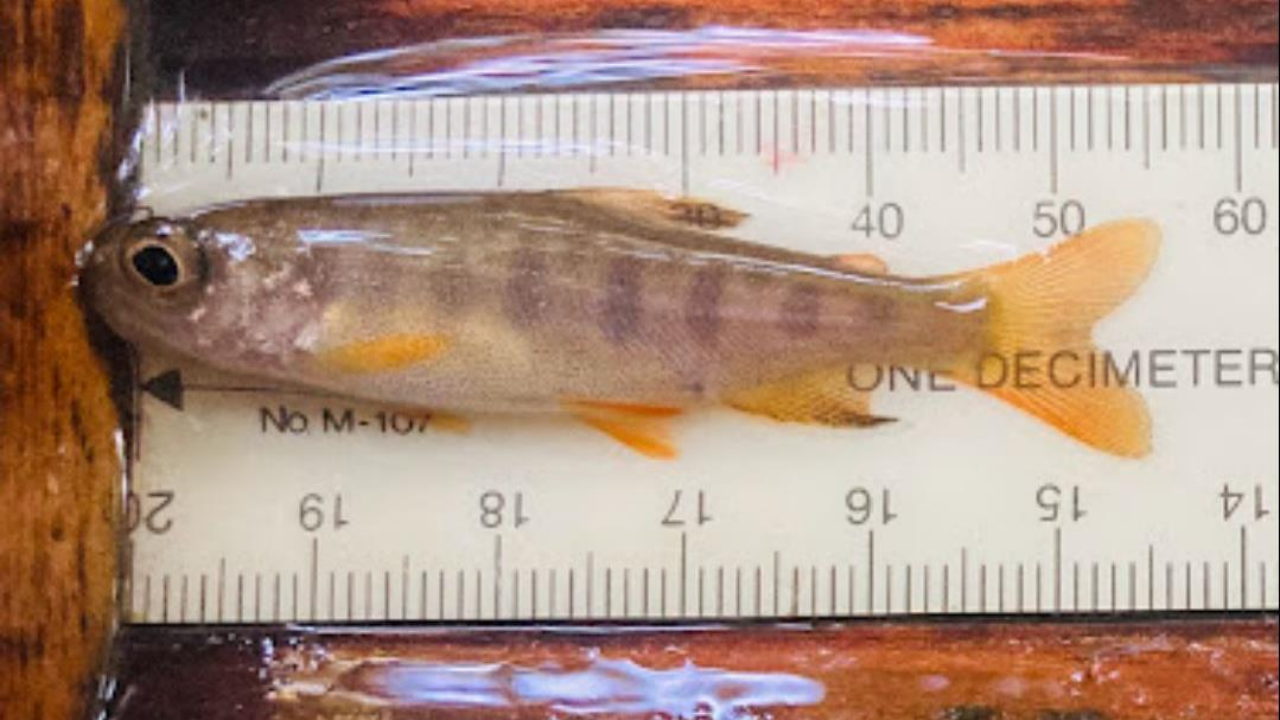
Standardizing tag-based mark recapture data

Expand opportunities for future research

Developing Geodatabase of CMP and validation monitoring data

Data sharing with tribes and other agencies for restoration planning





Thank you to our
project partners

- Cal Poly Humboldt
- California Department of Fish and Wildlife
- National Park Service
- NOAA Restoration Center
- AmeriCorps Watershed Stewards Program
- NOAA VetCorps
- Yurok Tribe
- California Trout
- Save the Redwoods League

AGENDA

- 12:35pm** **Resources available through EPIC**
- 12:45pm** **Putting Together Cost-Share Packages**
- 1:05pm** **Exploring Options for Simplified Permitting**
- 1:25pm** **North Coast Salmon Project- Salmon Habitat Restoration
Priorities (SHaRP) Program**
- 1:55pm** **Monitoring SONCC Coho and Floodplain Habitat Restoration
Projects in Prairie Creek**
- 2:05pm** **Summarize Next Steps, Wrap Up**

Final Thoughts

- **Even a few years after the passage of BIL, IRA, etc, still unprecedented levels of funding for restoration. However, need still outpaces availability.**
- **Due to competitive nature of funding, important to use resources available to develop your projects. Tell a good story, develop support, read funding NOFOs and Docs, and meet early and often.**
- **Work with your project team to do a risk-analysis and put together a detailed budget justification.**

Final Thoughts

- **Putting restoration on its own permitting paths is key to removing barriers to implementing on-the-ground projects.**
- **Use available tools to help know your to-do list to permit your projects.**
- **Planning your projects based on agency restoration plans + priorities and plans for your region, such as SHaRP helps justify and elevate your projects based on the best science and data.**
- **Validation monitoring demonstrates the success of restoration and use of spawning and rearing habitat opened as a result of increased connectivity.**

Final Thoughts

And finally..... Even though this is a complicated and long process...

they are worth it!





**CALIFORNIA FISH
PASSAGE FORUM**

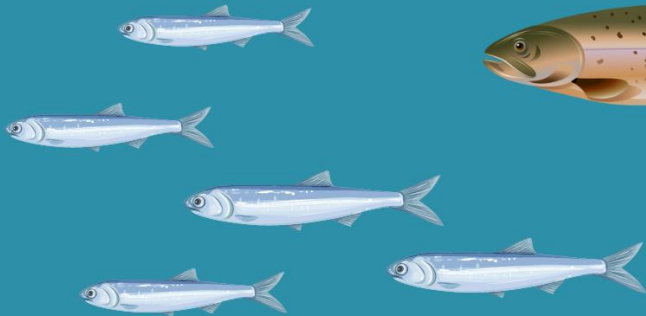
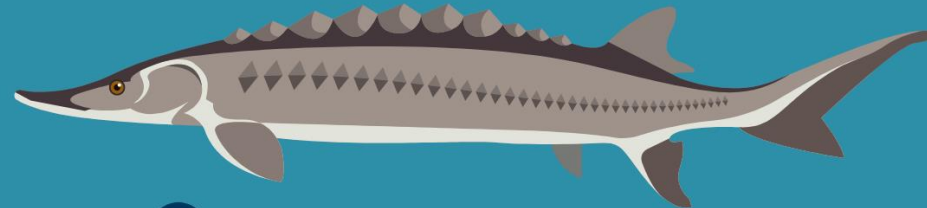
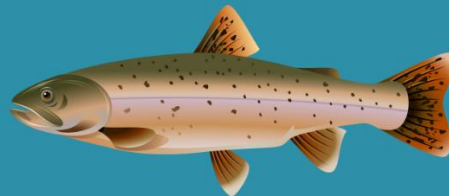
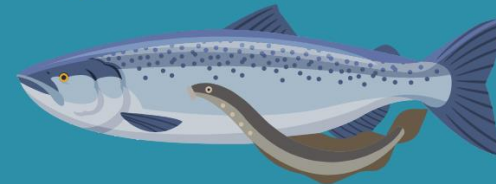
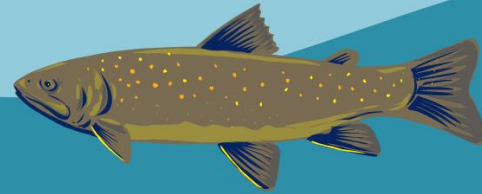


**WORLD FISH
MIGRATION DAY**

FREE-FLOWING CALIFORNIA VIRTUAL TRIVIA AND HAPPY HOUR

FRIDAY MAY 24TH, 2024 3:30PM-4:30PM

Finish your work week with your colleagues in the restoration field and celebrate World Fish Migration Day 2024 by flexing your knowledge on anadromous species, connectivity, restoration and dam busting!



GET THE LINK AT WWW.CAFISHPASSAGEFORUM.ORG

