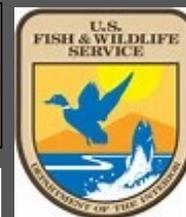


Can We Keep Track of All Landscape Actions in a River Basin and Manage them on a Single Public Planning Platform?

Rich Osborne, Rebekah Brooks, Kim Clark,
Kirsten Harma and Jessica Helsley

UW Olympic Natural Resources Center,
Chehalis Basin Lead Entity, and
Coast Salmon Partnership



<http://hws.ekosystem.us/>

<http://wcssp.org>

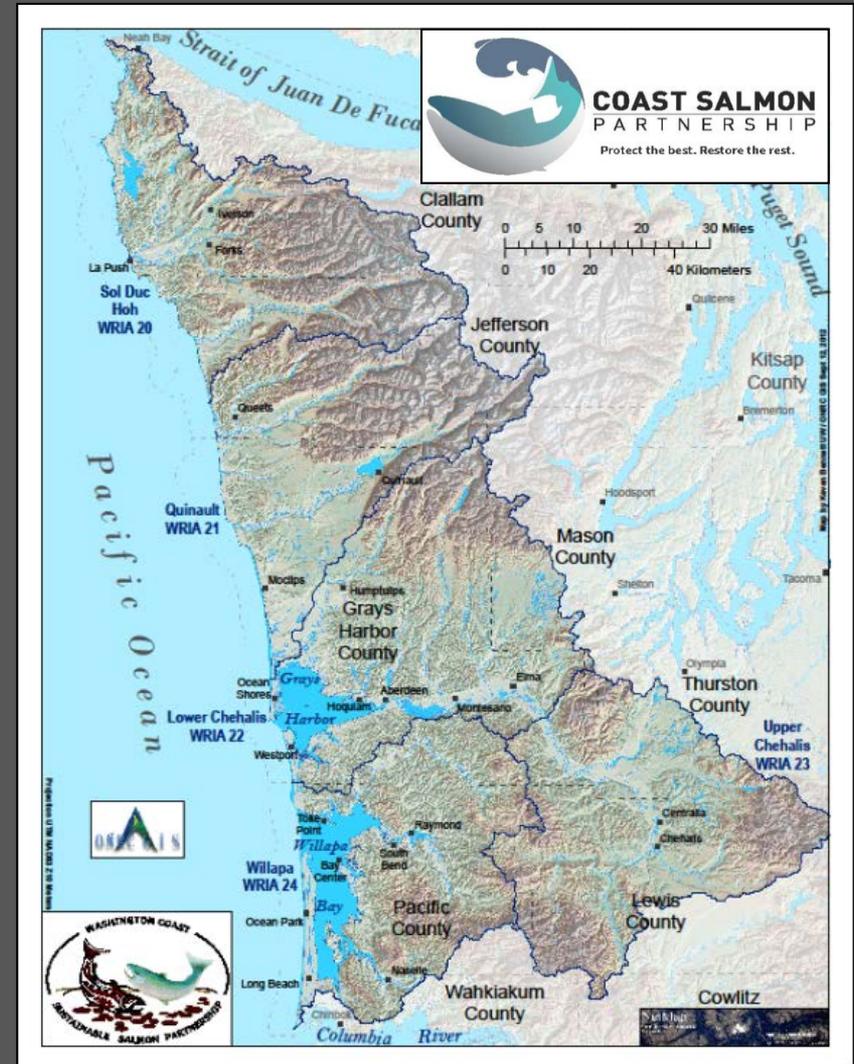
Coast Salmon Partnership

North Pacific Coast
Lead Entity

Quinault Indian Nation
Lead Entity

Chehalis Basin
Lead Entity

Willapa
Lead Entity

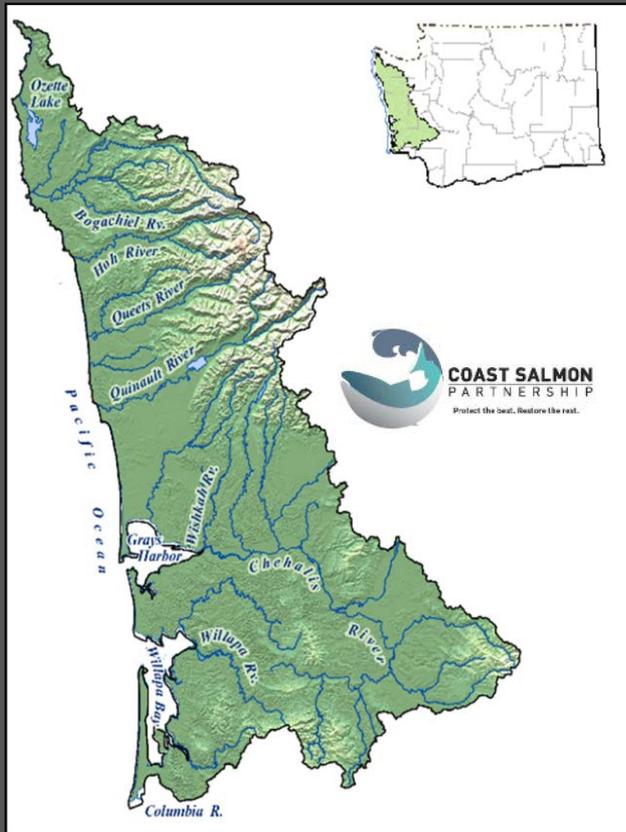


Formed out of the Coastal Lead Entities in 2007 & completed its Salmon Restoration Strategy in 2013

Formerly: *Washington Coast Sustainable Salmon Partnership*

Coast Region Marching Orders:

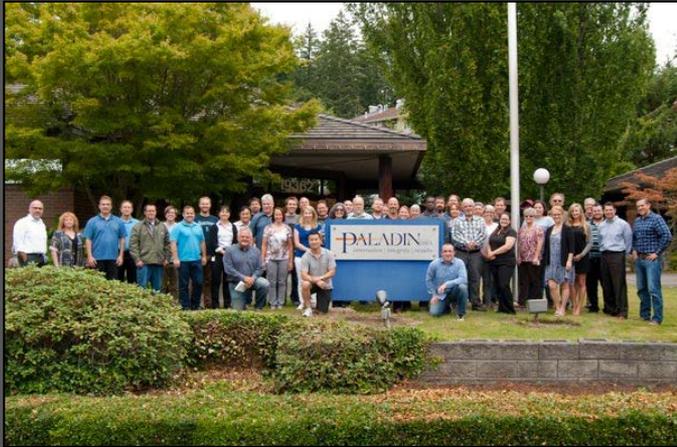
RCO / GSRO 2015 Vision for Regional Integration on the Coast



“A regional implementation tracking database will be developed in conjunction and integrated with Lead Entity data management, strategy implementation and reporting in the Habitat Work Schedule (HWS). “

“Numeric goals and objectives will be identified and adopted based upon metrics ... that are consistent with or at least directly comparable with metrics used by state data systems. “

The Tool: Habitat Work Schedule



Habitat Work Schedule

Panoramic tracks data and manages the public portal for the Pacific Coastal Salmon Recovery Fund.

Initiated in 2006, Citizens can access reports from State agencies and local organizations.

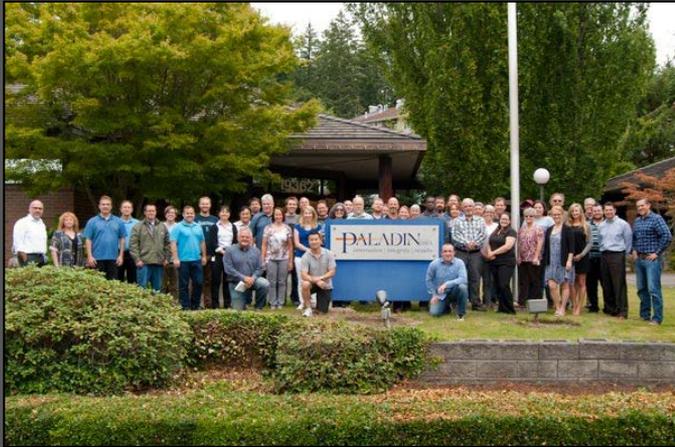
Agencies collaborate, share data, and report their successes in salmon recovery.



Panoramic uses web-services to extract, aggregate, manage and report on data from any source and enables governance and seamless collaboration at the project, program or portfolio level.



The Tool: Habitat Work Schedule



Habitat Work Schedule



Panoramic uses web-services to extract, aggregate, manage and report on data from any source and enables governance and seamless collaboration at the project, program or portfolio level.



Panoramic tracks data and manages the public portal for the Pacific Coastal Salmon Recovery Fund.

Initiated in 2006, Citizens can access reports from State agencies and local organizations.

Agencies collaborate, share data, and report their successes in salmon recovery.

HWS Opening Page for Chehalis Basin

(Screen Shot)

Mail - rebalynn@uw.edu Home x +

hws.paladinpanoramic.com/Home.aspx

Add to the favorites bar by selecting ☆, or by getting them from another browser. [Import your favorites](#)

Habitat Work Schedule

Tracking salmon recovery throughout Washington State

Hi, **Rebekah** [Sign Out](#) [Change Password](#) [Edit Profile](#)

Current Site: **Chehalis Basin Lead Entity**

[Projects](#) [Places](#) [Funding](#) [Files](#) [Advanced Search](#)

Enter search text...

Home

- Projects
- Files
- Places
- Map
- Reports
- Settings



Chehalis River Basin

WRIAs 22&23 Grays Harbor County LE

420 Howanut Rd
Oakville, Washington 98568
United States of America

Contact **Kirsten Harma**
[Send Email](#) | [Visit Website](#)

Documents/Files

- [Panoramic User Manual](#)
- [Grays Harbor LE Top Priority Fish Passage Culvert Barrier Projects](#)
- [Panoramic New User Form](#)

Chehalis Basin Lead Entity

SRFB Documents: [Application Materials and Comment Forms: \(Password Required\)](#)

Recent Activity



Projects

- Richards' Lost Creek Barrier Removal- HRP
- Unnamed Tributary to Stearns Creek Barrier Removal
- Upper Middle Fork Wildcat Creek Restoration
- (new) Lower Reach Berwick Creek Barrier Removals
- Berwick Creek Barrier Removal and Realignment

Files

- Chehalis Req Field
- Chehalis LE Habitat Projects Final
- Barrier Eval Form
- Subbasin Map
- Conceptual Drawing

[Get Help](#) | [Report a Problem](#) | [User Manual](#)

Powered by [Paladin Panoramic](#)
[License Agreement/Terms of Use](#)
Version 15.4.0 Last update: Feb 03, 2017 13:07



HWS Multi-Level View for Chehalis Basin "Management Units" (Screen Shot)

Mail - rebalynn@uw.edu | Projects

hws.paladinpanoramic.com/projects

Add to the favorites bar by selecting ☆, or by getting them from another browser. [Import your favorites](#)

Habitat Work Schedule

Tracking salmon recovery throughout Washington State

Hi, Rebekah [Sign Out](#) [Change Password](#) [Edit Profile](#)

Current Site: **Chehalis Basin Lead Entity**

Projects | Places | Funding | Files | [Advanced Search](#)

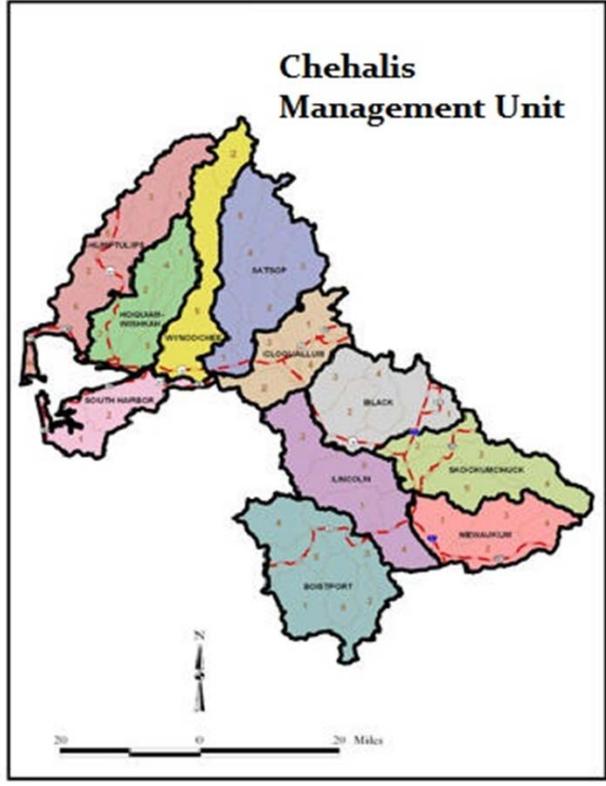
Enter search text...

Home | **Projects** | Files | Places | Map | Reports | Settings

Projects | Funding Instruments | Tasks | Reports

[Add Project](#) [Reload](#) Active Completed Conceptual Dormant Proposed

- Habitat Protection & Restoration
 - [Create a project here](#)
 - Black River Management Unit
 - Boistfort River Management Unit
 - Chehalis Mainstem Management Unit
 - Cloquallum River Management Unit
 - Grays Harbor Estuary Management Unit
 - Hoquiam-Wishkah Management Unit
 - Humtulpis Management Unit
 - Lincoln Creek Management Unit
 - Nearshore Management Unit
 - Newaukum River Management Unit
 - Satsop River Management Unit
 - Skookumchuck River Management Unit
 - South Bay Management Unit
 - Wishkah River Management Unit
 - Wynoochee River Management Unit
 - Outreach and Education



Chehalis Management Unit

The map displays the Chehalis Management Unit, divided into several sub-units: HUMTULIPS, BOISTFORT, WYNOCHEE, CLOQUALLUM, SOUTH HARBOR, SATSOP, BLACK, LINCOLN, SKOOKUMCHUCK, WISHKAH, and NEWAUKUM. A scale bar indicates 20 miles, and a north arrow is present.

- [Add Category](#)
- Summary
- Schedule View
- Multi Level View**
- Recently Added
- Project Templates
- All Projects
- Project by Category

Type or talk to search

4:09 PM 4/4/2017

HWS Example Project Page

(Screen Shot)

The screenshot shows a web browser window with the address bar displaying `hws.paladinpanoramic.com/Search.aspx?m=Projects`. The page content includes a navigation menu with options like 'Acquisition Projects', 'Tasks (0)', and 'Shared with everyone'. The main heading is 'Chehalis Basin Lead Entity Hoquiam Surge Plain Habitat Acquisition (#09-1348)', with a status of 'Completed'. A progress bar indicates 100% completion for 664 acres. A large photograph of a river is featured on the right side of the page.

Options ▾ Acquisition Projects ▾ Tasks (0) Shared with everyone ▾ Get Link Validation ▾

Top Funding Related Projects People and Organizations Reporting Codes Places Notes More

Chehalis Basin Lead Entity

Hoquiam Surge Plain Habitat Acquisition (#09-1348)

Completed (Edit)
Started on Dec 10, 2009 | Ends on Sep 30, 2011 | Priority: 1

[Edit summary](#) | [Hide detailed description](#) | [Edit description](#)

This project is the final phase towards acquisition of a total of 1358 acres, nearly ten river miles, including high quality surge plain and riparian habitats critical to rearing depressed salmon stocks of Hoquiam Fall Chinook and Hoquiam Winter Steelhead, as well as Coho, Chum and Coastal Cutthroat. Phase I was 714 acres and phase II will be 644 acres. The Chehalis Basin Salmon Habitat Restoration and Preservation Work Plan four primary goals, two of which emphasizes the preservation and restoration of important riparian areas and protection of Grays Harbor. The Hoquiam River Surge Plain contains tidally influenced channels and sloughs in a wetland matrix supporting a diversity of anadromous and resident fish species as well as avian species. The Hoquiam River spills into Grays Harbor approximately 2.5 miles south of the project area and its fresh waters flow across estuarine lands critical to several state sensitive species.

Goals and Objectives

[Manage goals/objectives](#)

Description

Protect intact habitat from degradation

 100%

664 Completed

Goal: 664 Acres Actual: 664 Acres Progress: 100% Completed

Funding

[Manage funding](#)



Habitat Preserved

[+ Add photo](#) | [Manage photos](#)

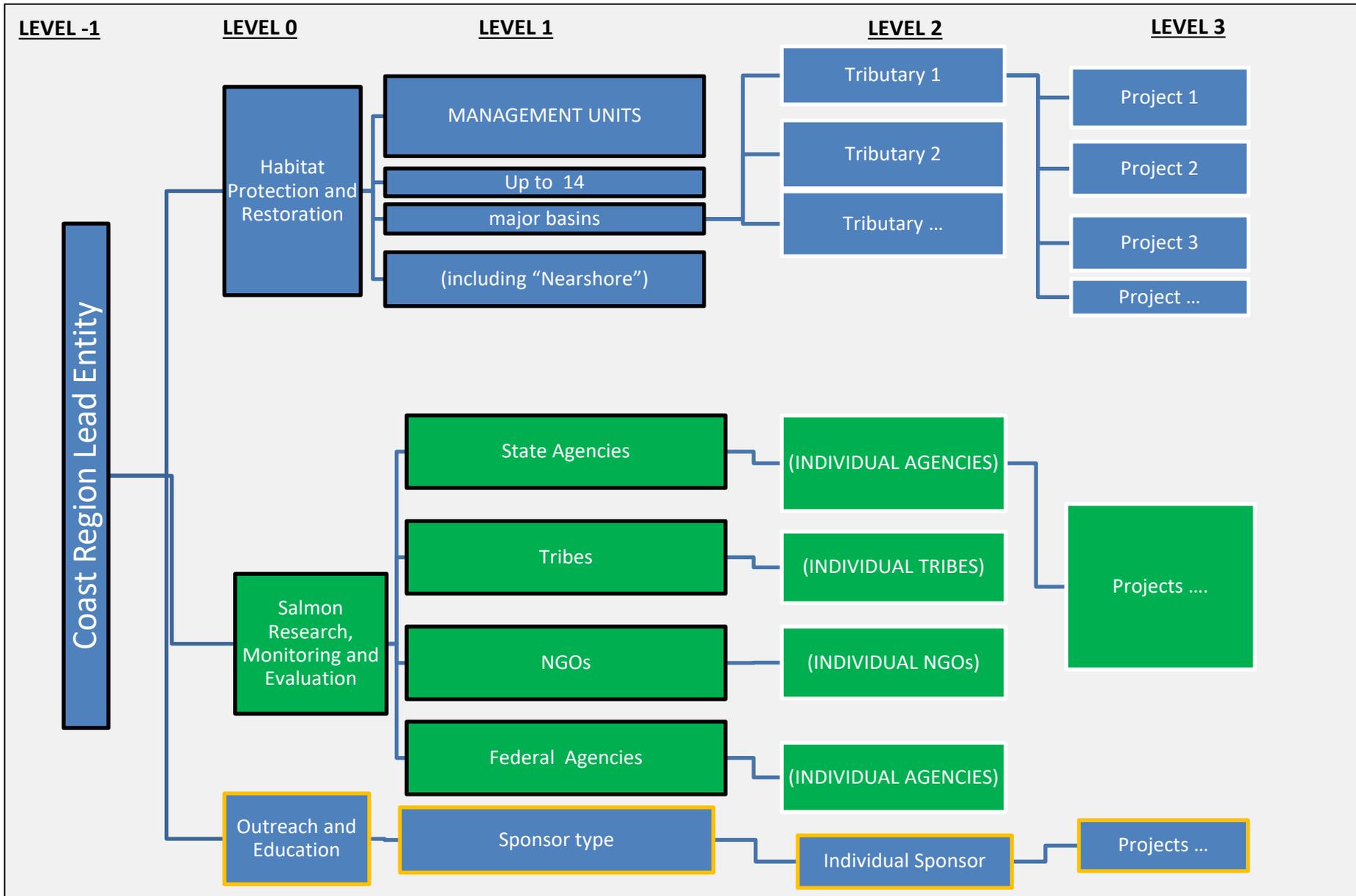
Click the link above to add photos



[Manage project map](#)

4:16 PM
4/4/2017

Washington Coast Region Habitat Work Schedule Hierarchy





Chehalis Basin Habitat Work Schedule

Phase 1 Final Report

Building the Project Data Archive

Rich Osborne, Rebekah Brooks, Kimberly Clark, Kirsten Harma and Jessica Helsley

3/20/2018

The Coast Salmon Foundation, working with their Habitat Work Schedule (HWS) team at the UW Olympic Natural Resources Center, was contracted by the Chehalis Basin Flood Authority to work with Chehalis Basin interests including landowners, conservation districts, Washington Department of Fish and Wildlife (WDFW) the Flood Authority, the Office of Chehalis Basin, Tribes, and other stakeholders to comprehensively update project documentation in HWS. The project objective was to extend and utilize HWS as a capital budget coordination, planning, and development tool for the Chehalis Basin. This approach was applied in the Chehalis Basin as a pilot study and is anticipated to be expanded to other watersheds throughout the state where appropriate. This report documents lessons learned from the first phase pilot effort of setting up project data framework and incorporating project information from multiple sources into HWS.

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Core lessons learned so far:

- Select Uniform Metrics across all project data.
- Select an “independent” numbering system.
- Find an “independent” indicator of past projects.
- Bring all partners together face-to-face ... regularly.



Homogenizing Tracking Metrics

“Numeric goals and objectives will be identified and adopted based upon metrics ... that are consistent with or at least directly comparable with metrics used by state data systems. “

Coast Region Watershed Planning Metrics

1. Number of Barriers Removed/Replaced (culverts, bridges, abandonments ...)
2. Number of instream structures added (wood structures, dolos, hardening points ...)
3. In-Stream miles opened up.
4. In-Stream miles treated.
5. Riparian stream miles treated.
6. Riparian acres treated.
7. Upland acres treated (off-channel).
8. Upland acres opened up (off-channel).
9. Estuary acres treated.
10. Estuary acres opened up.

Select an "independent" numbering system

Coast Region HWS Auxiliary Numbering System

WRIA #	Source Code	Start Year	Project Count
20	WCRRI	14	01
21	ECOL	15	02
22	CBFA	16	03
23	WDFW	17	04
24	NRCS

Figure 8: Coast Region HWS Numbering System.

Find an Independent Indicator of ALL past projects in the landscape

What do all or almost all restoration and flood protection projects have as a common record of their existence?

Hydraulic Permit Applications (HPAs) &/or JARPAs



Hydraulic Project Approval (HPA)

- for projects in or near water -



We are currently working with WDFW staff to find the most efficient way to use the HPA permit records as an independent benchmark for identifying missing landscape actions in our watersheds and to integrate them in HWS.

WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form^{1,2}
USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

AGENCY USE ONLY
Date received: _____
Agency reference #: _____
Tax Parcel #(s): _____

Part 1—Project Identification
1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [\[help\]](#)

Part 2—Applicant
The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle) _____

2b. Organization (if applicable) _____

2c. Mailing Address (Street or PO Box) _____

2d. City, State, Zip _____

2e. Phone (1) _____ 2f. Phone (2) _____ 2g. Fax _____ 2h. E-mail _____

¹Additional forms may be required for the following permits:
• If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 964-3462.
• If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIP) or prepare a Biological Evaluation. Forms can be found at <https://www.wa.gov/water/programs/EndangeredSpecies/Permit/Guidebook/EndangeredSpecies.aspx>.
• Not all cities and counties accept the JARPA for their local shoreline permits. If you need a shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [help] screens, go to [http://www.ecpermits.wa.gov/shalalalal_resourcecenter/arpa_jarpa_form/9984jarpa_form.aspx](http://www.ecpermits.wa.gov/shalalal_resourcecenter/arpa_jarpa_form/9984jarpa_form.aspx).

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ofria.wa.gov.

ORA-16-011 Page 1 of 14

Core lessons learned so far:

- Select Uniform Metrics across all project data.
- Select an “independent” numbering system.
- Find an “independent” indicator of past projects.
- Bring all partners together face-to-face ... regularly.



Compilation of Data Sources

(Assembling all players the "Washington Way")

Municipal Partners

- Grays Harbor County
- Lewis County
- Mason County
- Thurston County
- Port of Centralia
- Port of Grays Harbor
- City of Aberdeen
- City of Centralia
- City of Chehalis
- Hoquiam
- McCleary
- Montesono
- Napavine
- Ocean Shores
- Thurston PUD
- Grays Harbor Water District



Tribal Partners

- Chehalis Tribe
- Quinalt Indian Nation

Agency Partners

- WA Dept. of Ecology
- WA Dept of Fish and Wildlife
- WA Dept of Natural Resources
- US Fish and Wildlife Service
- Recreation and Conserv. Office

Implementation Partners

- Capitol Land Trust
- Chehalis River Basin Land Trust
- The Nature Conservancy
- Center for Natural Lands Management
- Heermet Foundation/ Creekside Conservancy
- Chehalis Small Forest Landowners Program
- Chehalis Basin Education Consortium
- Forterra
- Lewis County Conservation District
- Thurston Conservation District
- Mason Conservation District
- Grays Harbor Conservation District
- Chehalis Basin Fisheries Task Force
- Chehalis River Council



- Marine Resources Committee
- Wild Fish Conservancy
- Grays Harbor Stream Team
- Westport Aquarium
- Ducks Unlimited
- Trout Unlimited
- Grays Harbor College Fish Lab
- Grays Harbor Historical Seaport



Chehalis Basin Lead Entity & Habitat Work Group



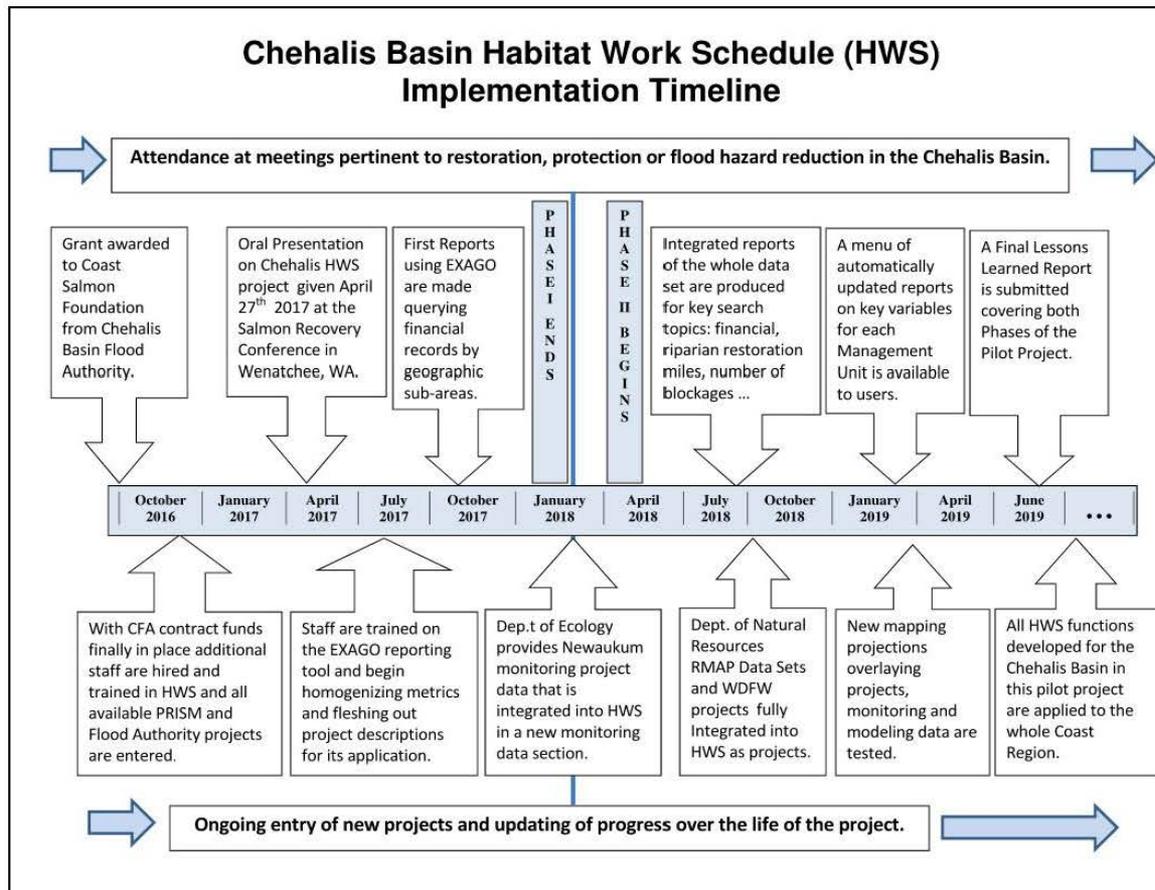
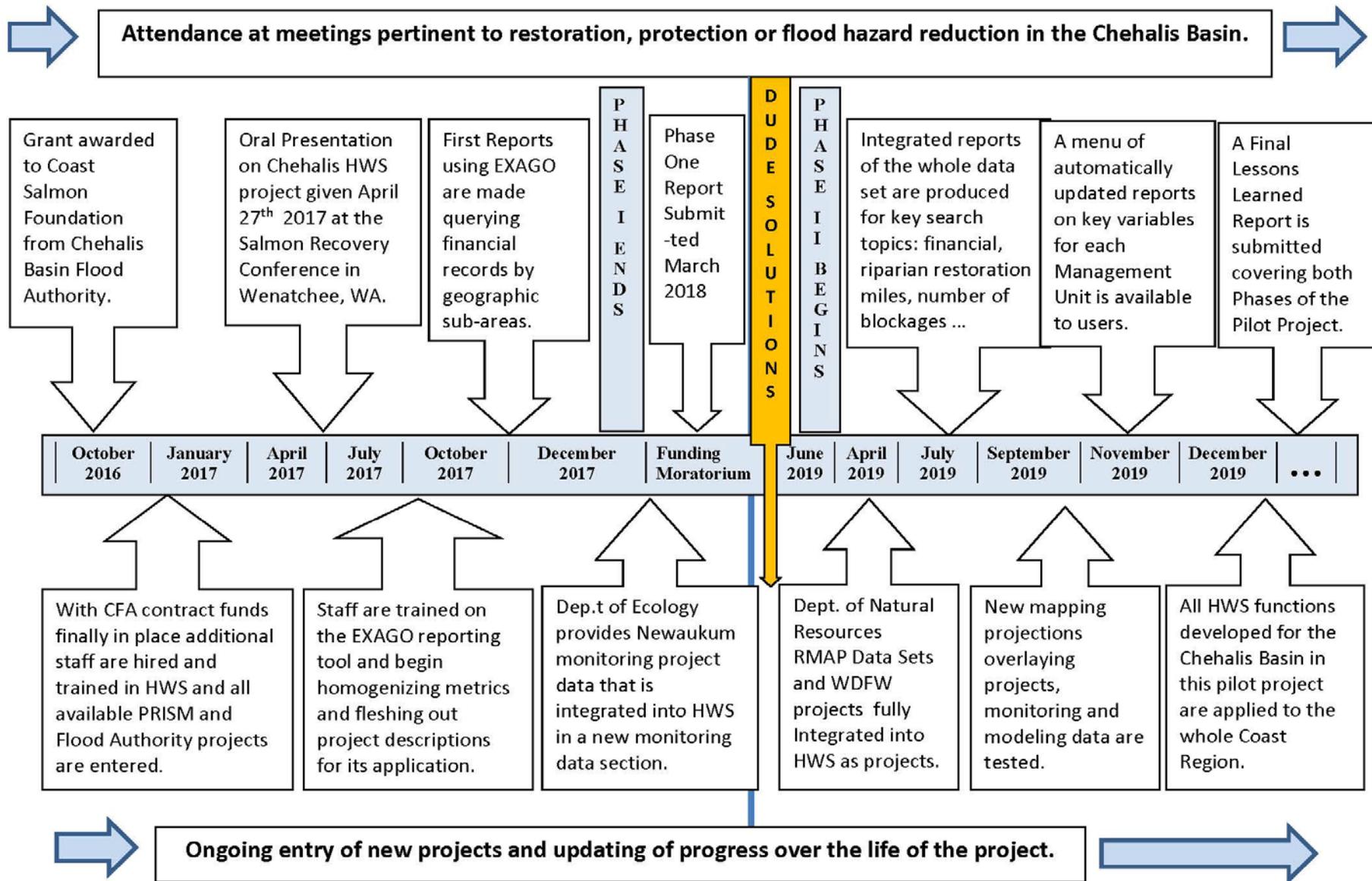


Figure 10: Chehalis Basin HWS Pilot Project Timeline.

Phase II of this project will continue to add new projects and update progress on active projects, but the primary focus will be on integrating large agency data sets and improving the mapping and reporting interface for the end user. With those improvements in place, the Chehalis Basin HWS should only require adding new projects and updating active projects over the long-term to remain functional into the future and to achieve our objective of providing a tool to assess all factors of restoration projects across the landscape.

Chehalis Basin Habitat Work Schedule (HWS) Implementation Timeline



Grant awarded to Coast Salmon Foundation from Chehalis Basin Flood Authority.

Oral Presentation on Chehalis HWS project given April 27th 2017 at the Salmon Recovery Conference in Wenatchee, WA.

First Reports using EXAGO are made querying financial records by geographic sub-areas.

PHASE I ENDS

Phase One Report Submitted March 2018

DUDE SOLUTIONS

PHASE II BEGINS

Integrated reports of the whole data set are produced for key search topics: financial, riparian restoration miles, number of blockages ...

A menu of automatically updated reports on key variables for each Management Unit is available to users.

A Final Lessons Learned Report is submitted covering both Phases of the Pilot Project.

With CFA contract funds finally in place additional staff are hired and trained in HWS and all available PRISM and Flood Authority projects are entered.

Staff are trained on the EXAGO reporting tool and begin homogenizing metrics and fleshing out project descriptions for its application.

Dept. of Ecology provides Newaukum monitoring project data that is integrated into HWS in a new monitoring data section.

Dept. of Natural Resources RMAP Data Sets and WDFW projects fully Integrated into HWS as projects.

New mapping projections overlaying projects, monitoring and modeling data are tested.

All HWS functions developed for the Chehalis Basin in this pilot project are applied to the whole Coast Region.

QUESTIONS ?



<http://hws.ekosystem.us/>

