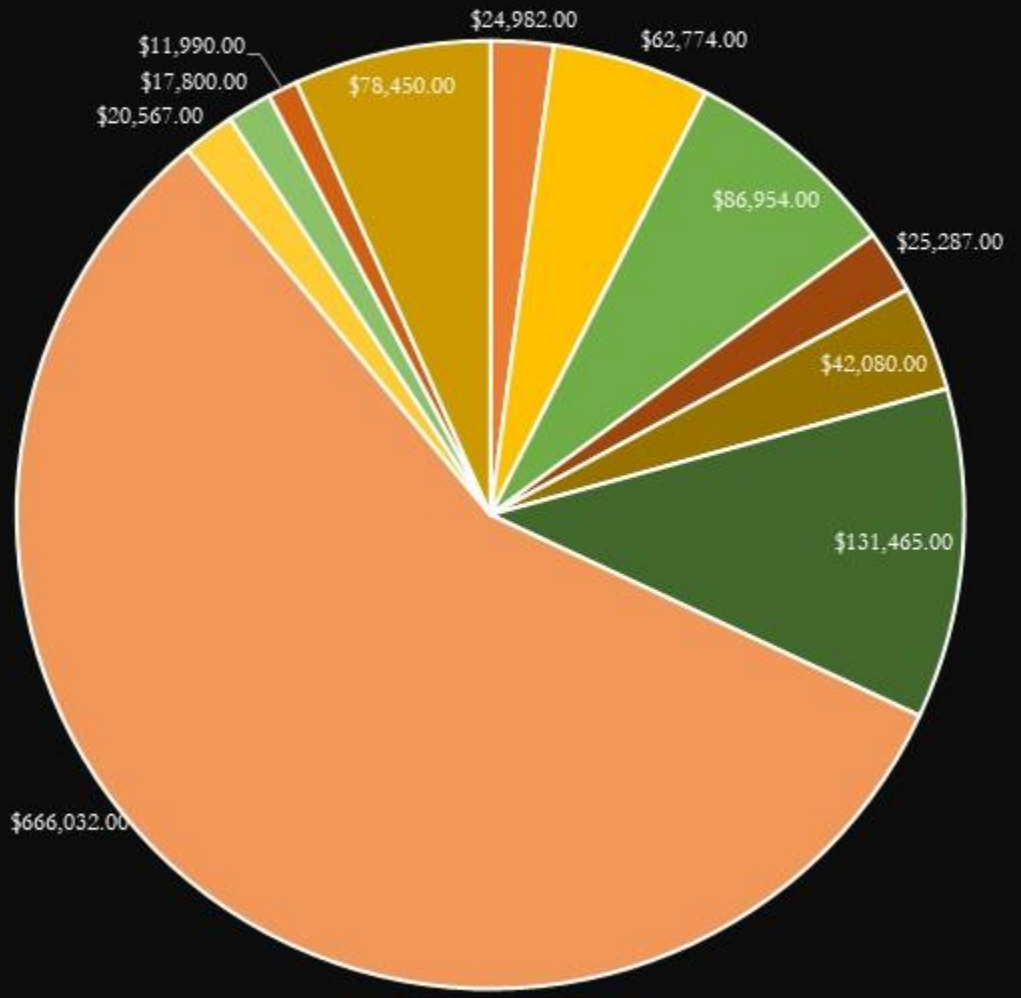
Walla Walla Basin Watershed Council

Umatilla County Commissioners Update

3/2/2022

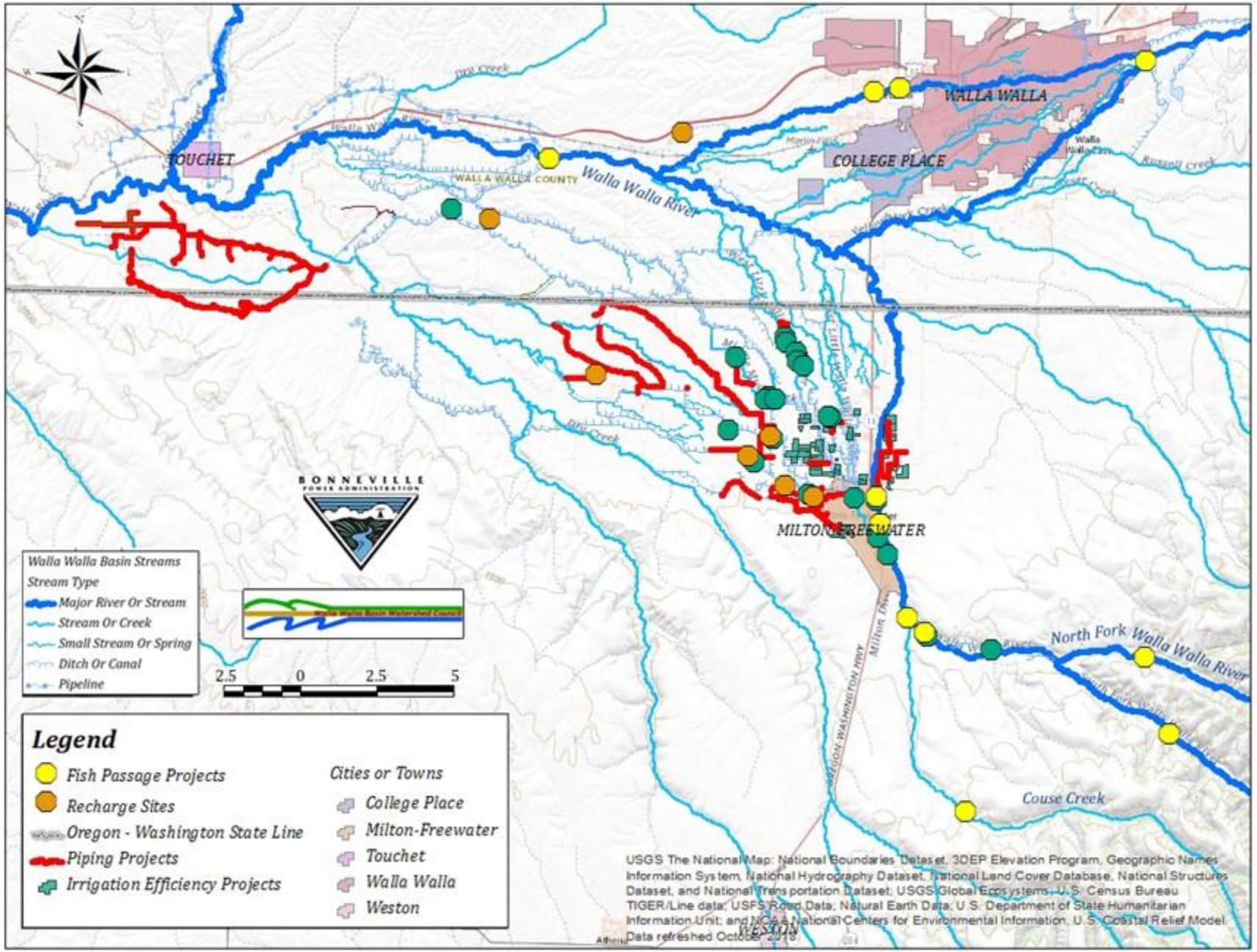
WALLA WALLA BASIN
WATERSHED COUNCIL

WWBWC 2021 Secured Funding



- OWEB South Fork Walla Walla River Base Flow Assessment
- OWEB Couse Creek at Blue Mountain Station Fish Passage
- OWEB Hydrological Trend Monitoring in the Walla Walla Basin
- OWEB North Fork Walla Walla River Effectiveness Monitoring
- OWEB Walla Walla Basin Stakeholder Engagement
- OWEB Walla Walla Basin Watershed Council 2021-2023 Council Capacity
- BPA Walla Walla Basinwide Tributary Passage and Flow
- ODA PSP Surface Water Sampling & Strategic Plan Activities
- DEQ Remote Sensing & source water inventory
- DEQ Water Quality Education and Outreach
- ODFW Couse Creek at Blue Mountain Station Fish Passage

TOTAL 2021 SECURED FUNDING $1,168,381



Walla Walla Basin-wide Tributary Passage and Flow

Completed projects to date

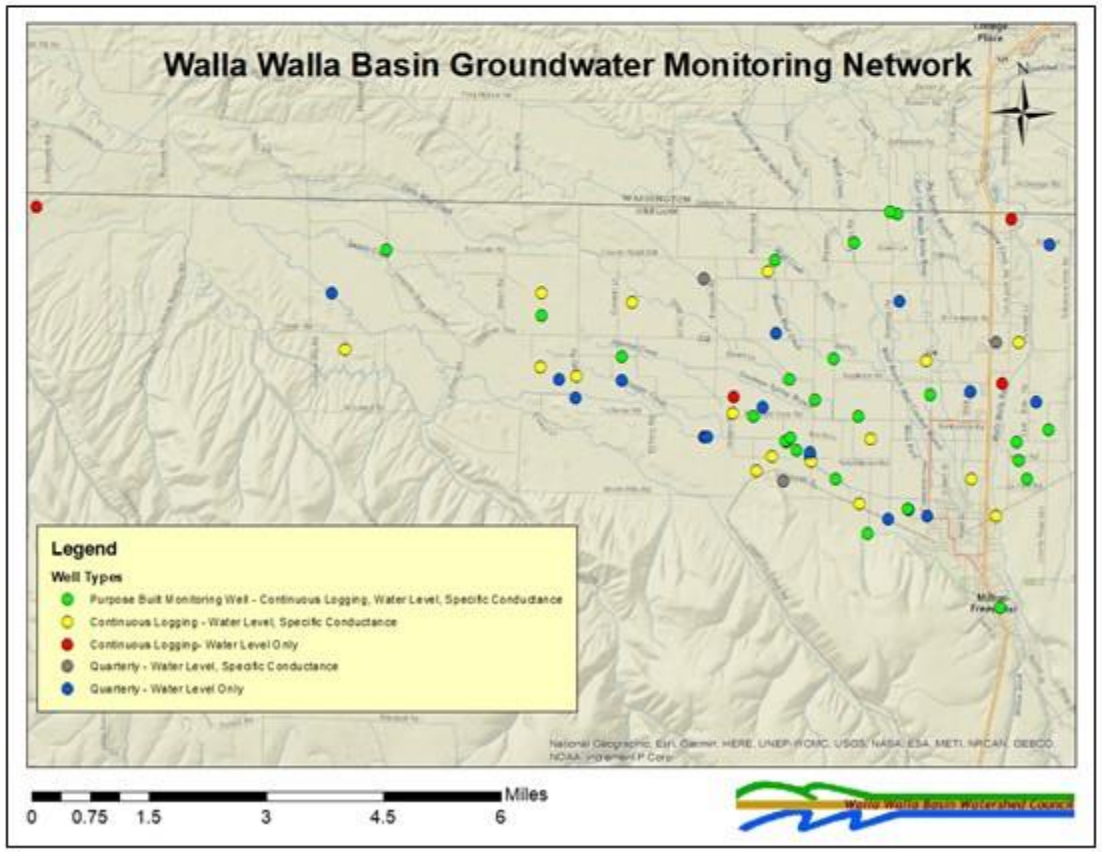
2021 Managed Aquifer Recharge Operation

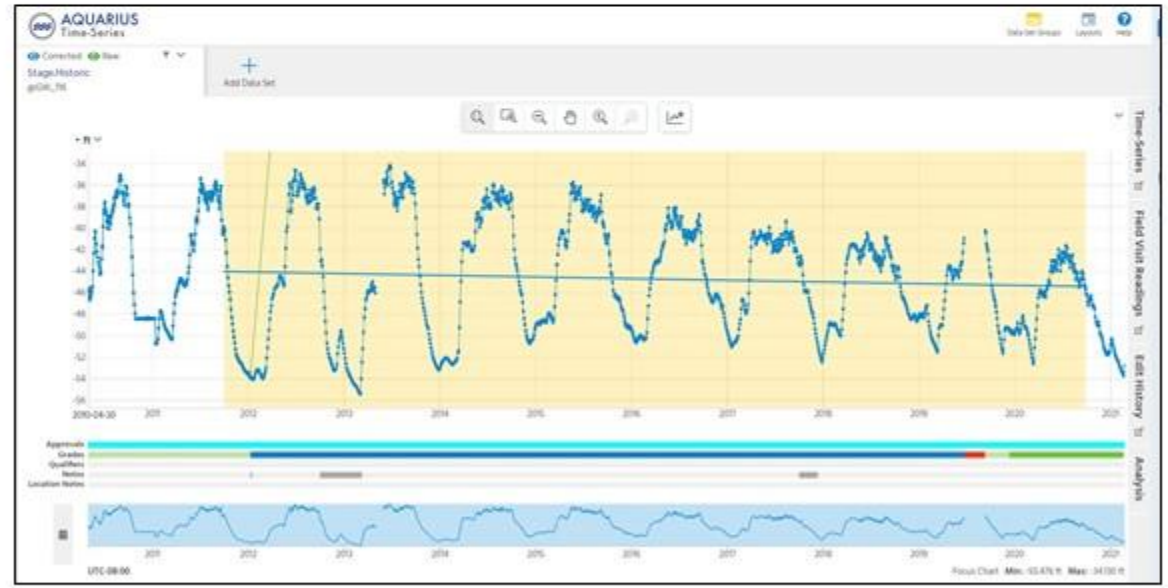
- In 2021 8,121 acre/ft recharged into the gravel aquifer
- Funded locally through donations

Recharge Year	Anspach	Barrett	Chuckhole	East Trolley	Fruitvale	Gallagher	Johnson	LeFore	Locust	Miller Road	Mud Creek	NW Umatilla	Ruby Lane	Sunquist	Triangle Rd	Trumbull	Ringer Rd	Conveyance Losses	Sum
2004	--	--	--	--	--	--	409	--	--	--	--	--	--	--	--	--	--	714	*1,123*
2004-05	--	--	--	--	--	--	1,871	--	--	--	--	--	--	--	--	--	--	1,277	*3,148*
2005-06	--	--	--	--	--	--	2,813	--	--	--	--	--	--	--	--	--	--	2,342	*5,155*
2006-07	--	--	--	--	--	--	3,234	--	--	--	--	--	--	--	--	--	--	2,739	*5,973*
2007-08	--	--	--	--	--	--	2,739	--	--	--	--	--	--	--	--	--	--	2,406	*5,145*
2008-09	--	--	--	--	--	--	2,840	--	--	--	--	--	--	--	--	--	--	2,667	*5,507*
2009-10	--	--	--	--	--	--	3,734	--	--	--	--	--	--	--	--	--	--	not estimated	*3,734*
										--	--	--	--	--	--	--	--		*3,700*
										--	--	--	--	--	--	--	--		*3,974*
										--	--	--	--	--	--	84	--	1,175	*5,827*
										--	--	499	--	--	--	421	--	1,385	*7,157*
										--	--	190	--	--	--	116	--	696	*2,785*
										--	--	170	--	--	--	262	--	1,021	*6,230*
										--	8	183	--	--	13	170	--	968	*5,147*
										--	32	233	--	--	103	67	--	3710	8,339
										--	45	111	--	--	72	45	111	2,631	6,321
										--	65	103	--	--	67	92	68	1,601	5,173
										152	238	417	1	0	105	297	262	2183	8121
										152	388	1,906	1	0	360	1,554	441	27,515	92,559

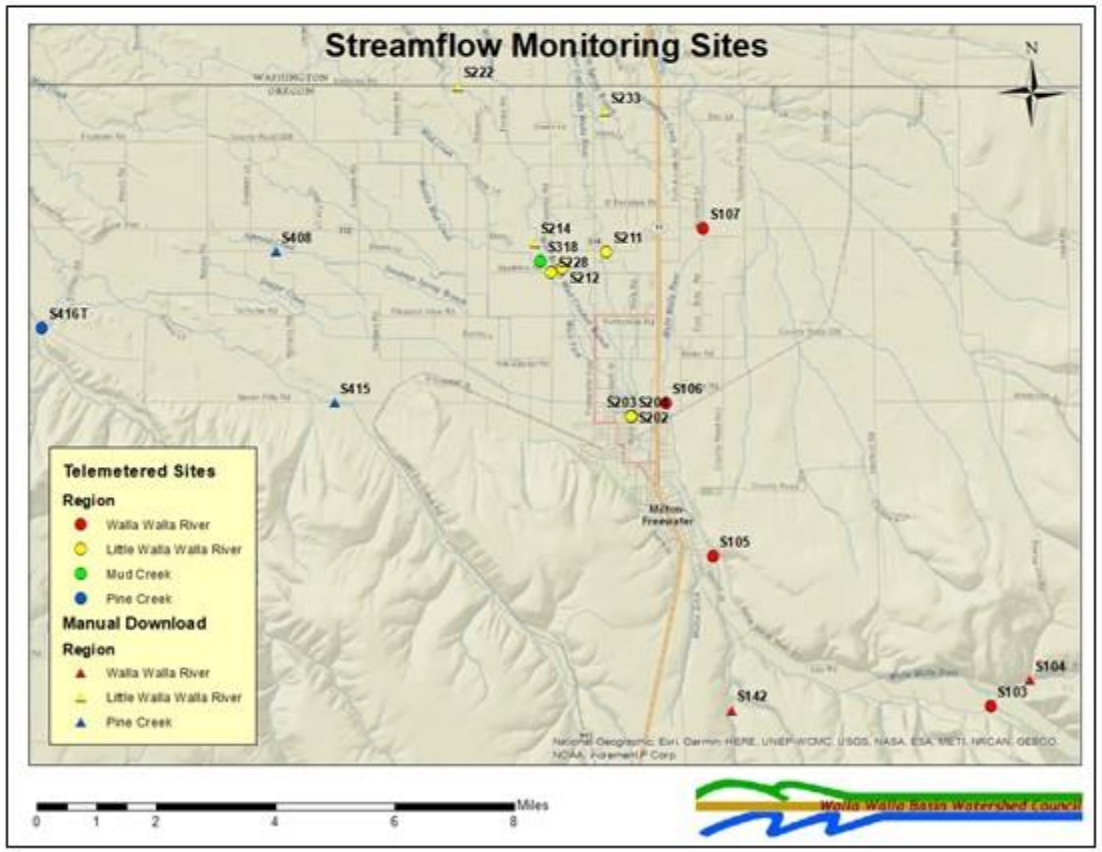
To date the program has recharged 92,559 acre/ft into the gravel aquifer

Groundwater Monitoring





Surface Flow Monitoring



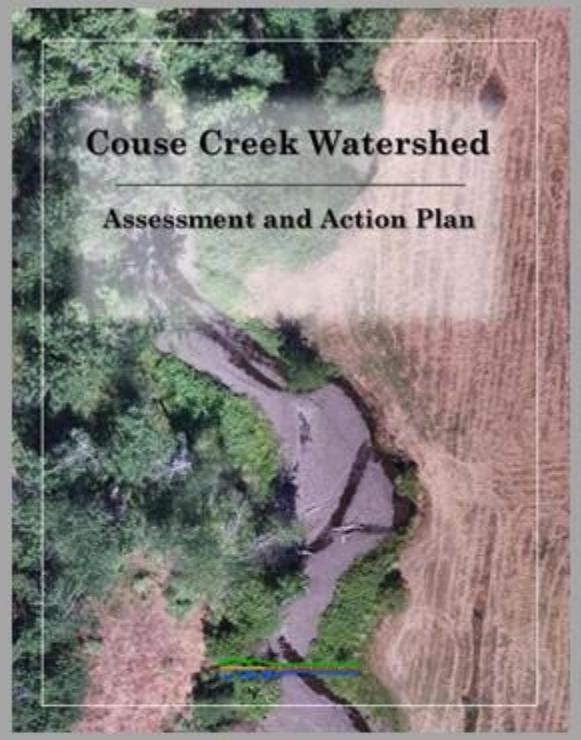
Walla Walla River Temperature

Summary:

- 10-15 year trend was flat-ish
- 2020 summer was notably warmer – even the upper watershed
- 2021 summer was even warmer

Funding:

- BPA
- OWEB
- ODEQ



SECTION I: INTRODUCTION

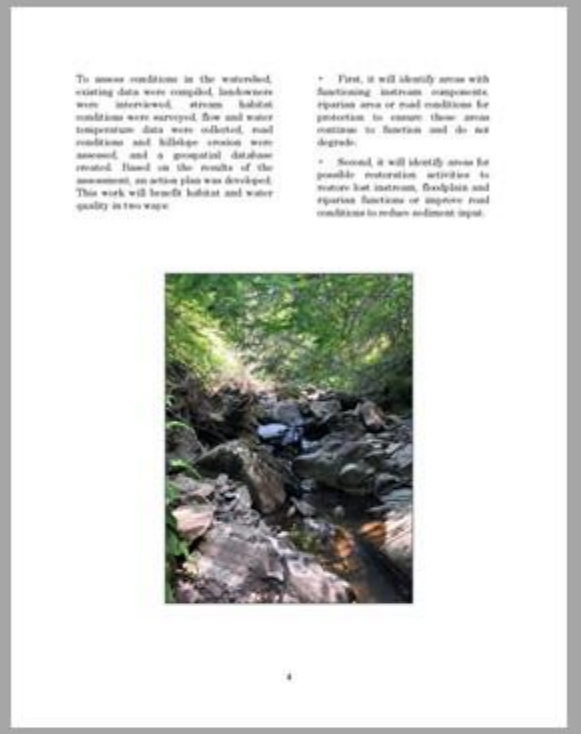
Purpose and Background

Couse Creek is identified as an important area for steelhead production within the Walla Walla Subbasin, and degradation of this system could have a particularly harmful impact on the Walla Walla population (NWPCC, 2004). The 2020 Couse Creek Watershed Assessment and Action Plan provides the framework to protect and restore ecological function within the Couse Creek watershed for the benefit of native fish and wildlife while maintaining sustainable agricultural practices.

A tributary to the Walla Walla River, Couse Creek drains an area of approximately 25 square miles. Its headwaters are in the Blue Mountains just west of Tollgate, Oregon at an elevation of 4,300 feet. It enters the Walla Walla River just upstream of the City of Milton-Freewater, Oregon at 1,150 feet (Figure 1). Couse Creek has a rain, snow-melt and groundwater-based hydrology. Once the winter precipitation and spring freshet season ends, the almost exclusive source of water is groundwater entering the stream as springs or hyporheic (subsurface) flows. The watershed once supported a strong historic run of chinook salmon (personal communication, 1899) and is currently home to ESA-listed Mid-Columbia Basin summer steelhead. Major land uses include recreation (cabins and roads) in the uppermost portion of the watershed, logging and grazing at slightly lower elevations, dryland agriculture at mid-elevations, and rural residences at low elevations adjacent to the stream.

In collaboration with private landowners, the Couse Creek Watershed Assessment and Action Planning process was conducted by the Walla Walla Basin Watershed Council (WWBWC), a non-profit organization led by local stakeholders including water users, municipal leaders, business interests, landowners, citizens, water resource professionals, and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). WWBWC was formed in 1994 in response to pressing local watershed issues and continues operating with the mission to "enhance, restore and protect the Walla Walla Basin's native aquatic populations, watersheds, fish and wildlife habitat and water quality, while sustaining a healthy economy." Project partners include private landowners, the Oregon Department of Fish and Wildlife (ODFW), CTUIR, Oregon Department of Agriculture, and other basin stakeholders. Funding was provided by the Oregon Watershed Enhancement Board (OWEB) and the Oregon Department of Environmental Quality (ODEQ).

Previous assessments of the Walla Walla Basin, including the 2004 Walla Walla Subbasin Plan (NWPCC) and the 2005 Walla Walla Stream Temperature TMDL (ODEQ), have broadly documented limiting factors for Walla Walla River tributaries and some specifically related to Couse Creek but not with enough resolution to identify and prioritize areas for protection and for restoration. Watershed issues identified for Couse Creek include limited flow, elevated water temperatures, high sediment loads, reduced floodplain connectivity (including incised channels), reduced riparian vegetation, and fish passage obstructions.



To assess conditions in the watershed, existing data were compiled, landowners were interviewed, stream habitat conditions were surveyed, flow and water temperature data were collected, road conditions and hillslope erosion were assessed, and a geospatial database created. Based on the results of the assessment, an action plan was developed. This work will benefit habitat and water quality in two ways:

- First, it will identify areas with functioning instream components, riparian area or road conditions for protection to ensure these areas continue to function and do not degrade.
- Second, it will identify areas for possible restoration activities to restore lost instream, floodplain and riparian functions or improve road conditions to reduce sediment input.

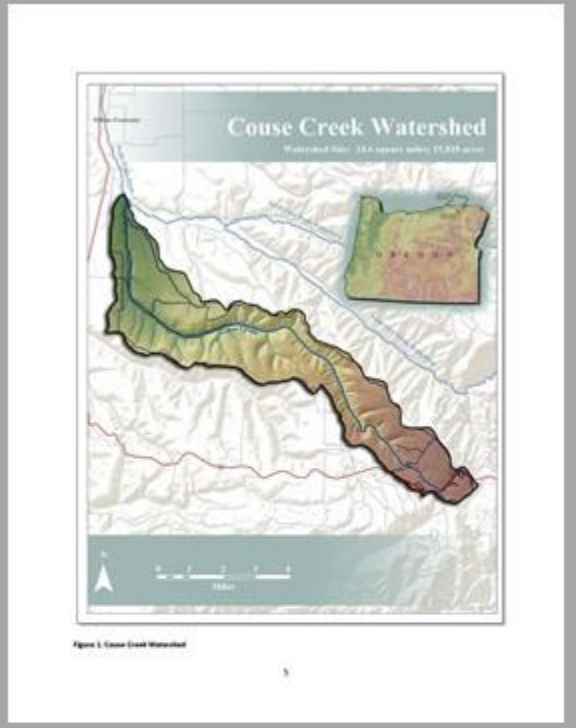


Figure 1. Couse Creek Watershed

Couse Creek Assessment

Couse Creek Passage Project

Confluence with the Walla Walla River

2021 Supplemental Planting

2019

- Adaptive Management
- Monitoring, Maintenance, Action
- Supplemental Plantings
  - Achieve a mosaic of self-sustaining riparian and instream attributes

2021

Couse Creek at Blue Mountain Station Fish Passage Project

Final Impediment - Passage to 10 Miles Critical Habitat

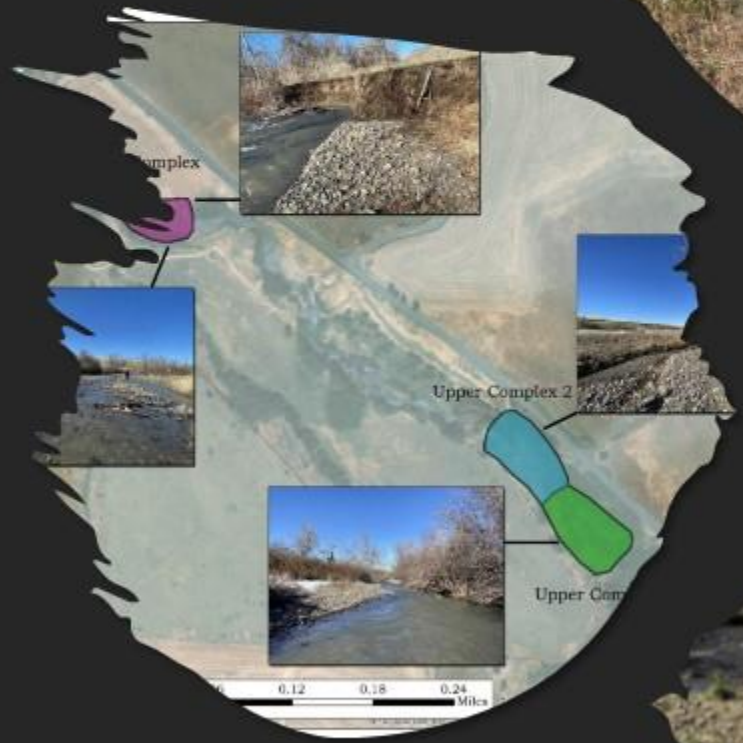
Passage Barrier

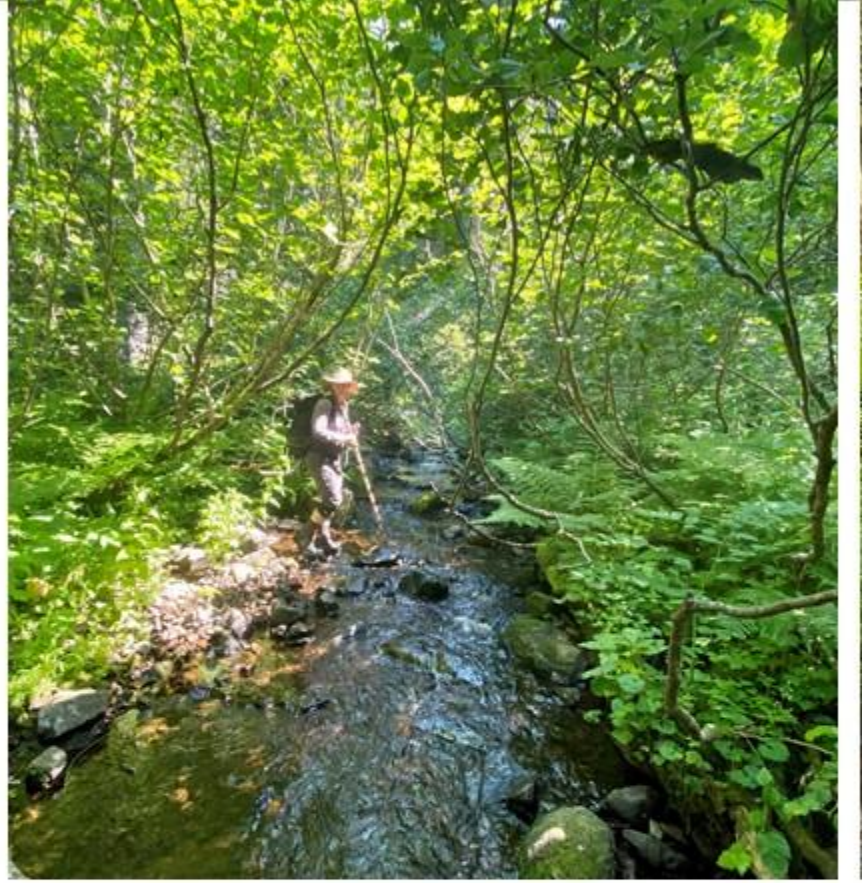
Stream conditions above the barrier

Couse Creek Project

Floodplain and Aquatic Habitat Restoration

- Low-tech treatment of 6 River Miles , PALS / Analogs
- Steelhead spawning and rearing
- Low and intermittent summer flow
- High water temperature
- Low channel complexity




Walla Walla River Habitat Assessment

North Fork Walla Walla River Project

- Stage Zero Opportunity, Reference Reach, Desired Outcome
- Restore Proper Channel Form & Riverine Processes, Floodplain
- Arrest Down-cutting Incision, Sheer Stress, Erosion, Turbidity

Conditions above project reach

North Fork Walla Walla River Project

- 4 river miles behind locked gate, no structural infrastructure
- Bull trout reach (Status of Oregon Bull Trout, ODFW & USFWS 2013)
- USFWS Letter of Support and pre project database
- 303(d) list for temperature (DEQ TMDL 2005)

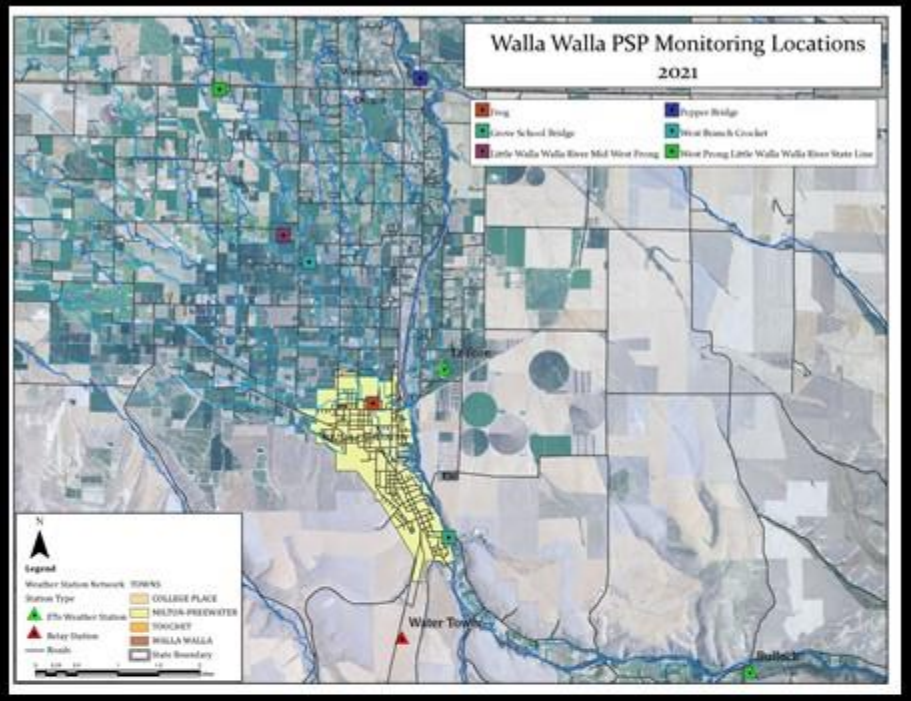
- Priority Protection & Restoration Reach (NPCC, 2004)
- Portion of Water Rights sold back to OWRD
- UCCD Funding Portion of Diversion Infrastructure Project
- Connectivity, Spring Protection

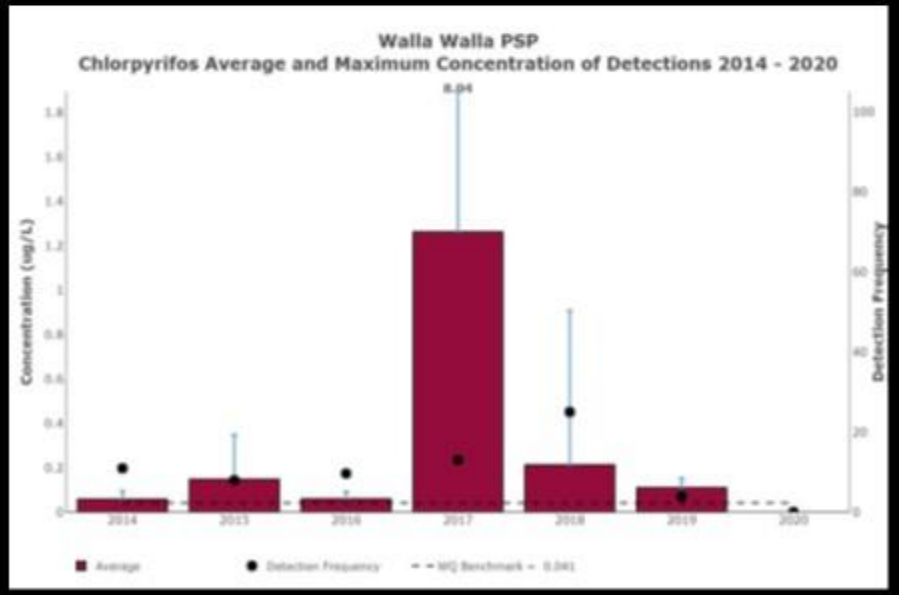
North Fork Walla Walla River Effectiveness Monitoring

Funding: OWEB, BPA

Walla Walla Basin
Pesticide Stewardship Partnership Project

Seasonal Monitoring and the PSP Strategic Plan





Walla Walla
Pesticide Stewardship Partnership
Strategic Plan

Prepared by the Walla Walla Basin Watershed Council

July 2020

Walla Walla Basin Watershed Council

WALLA WALLA BASIN
WATERSHED COUNCIL

Technical Memorandum

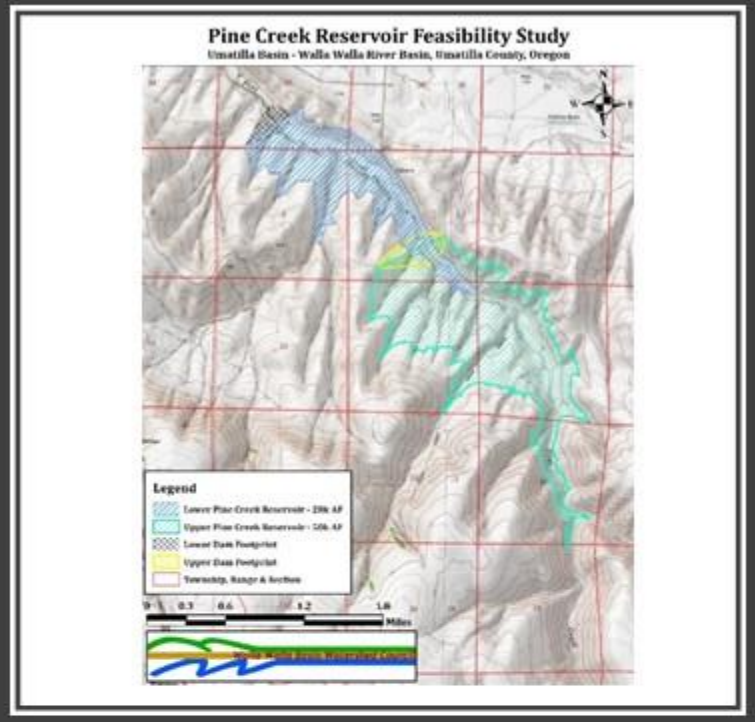
Subject	Walla Walla Basin Watershed Council Technical Support - Task 8
Project Name	Walla Walla River Bi-State Flow Study 2020-2021 Biennium
Attention	Aspect Consulting (Aspect)
From	Walla Walla Basin Watershed Council
Date	July 29, 2021

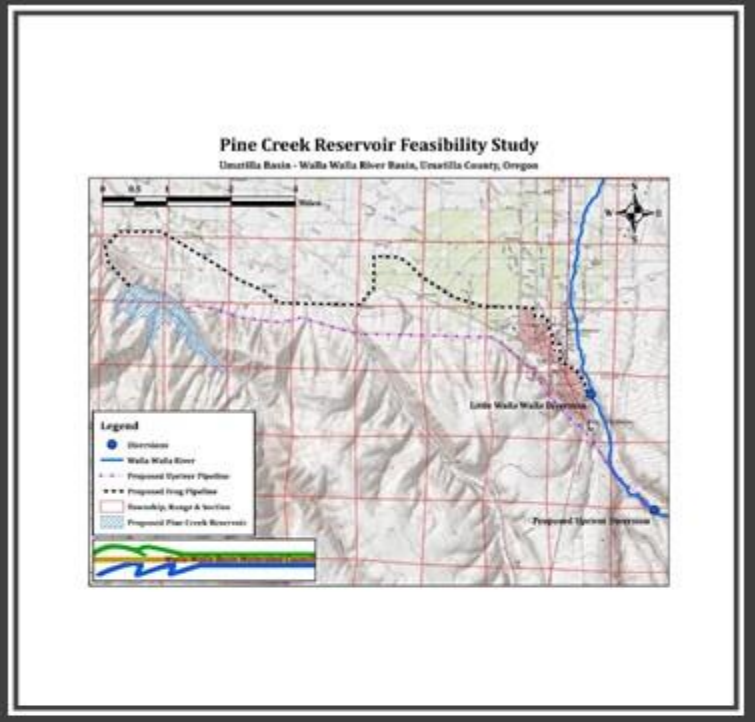
Project Purpose

The objective of the Bi-State Flow Study (Flow Study) is to achieve streamflow targets for native fish species in the Walla Walla River mainstem while maintaining the long-term viability and water availability for irrigated agriculture, residential, and urban use. The Flow Study identifies a strategy to meet instream flow demands while providing opportunities to protect and enhance municipal and agricultural needs.
Over the last 20 years, stakeholders within the Walla Walla Basin have made substantial efforts toward meeting instream flow demands. While individual efforts and attempts at larger-scale flow restoration planning efforts have made minor incremental improvements, the restorative change desired by basin stakeholders has not been achieved. The Flow Study represents a focused initiative to develop an integrated solution that has a greater potential for substantive instream flow improvement (Walla Walla River Bi-State Flow Study, 2019; Flow Study Update, 2019).

Project Background

The Walla Walla Basin Watershed Council (WWBWC) mission is to enhance, restore and protect the Walla Walla Basin's native aquatic populations, watersheds, fish and wildlife habitat, and water quality while sustaining a healthy economy. This will be done through community education and by working in collaboration with local, state, federal, and tribal natural resource managers, private landowners, and the public. In support of this mission, the WWBWC agreed to provide technical support to the Walla Walla River Bi-State Flow Study Steering Committee in its efforts to identify and evaluate project alternatives to increase stream flows in the mainstem of the Walla Walla River (Walla Walla Watershed Flow Study Steering Committee et al. 2019). The Steering Committee hired the Jacobs-Aspect consulting team, which in turn contracted with WWBWC for the tasks described below.





Walla Walla River Bi-State Flow Study

There is a need for increased stream flow in the Walla Walla Basin for native fish, while maintaining the long-term viability of and water availability for irrigated agriculture, residential, and urban use.

Jacobs

Memorandum

Subject: Dam Site Field Investigation Findings Report

Project Name: Lower Pine Creek Reservoir

Attention: Troy Baker, Walla Walla Basin Watershed Council

From: Greg Warren and Jacob Esterhuizen, Jacobs

Date: August 3, 2021

Copies to:

1. Introduction

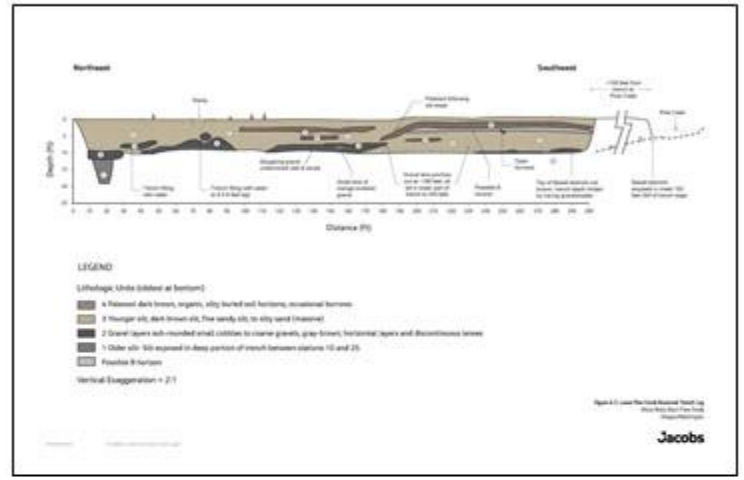
As part of a feasibility determination, a limited geotechnical investigation consisting of two components has been performed: a fault trench investigation, and the drilling of an angled rock core. The goals of this study are to:

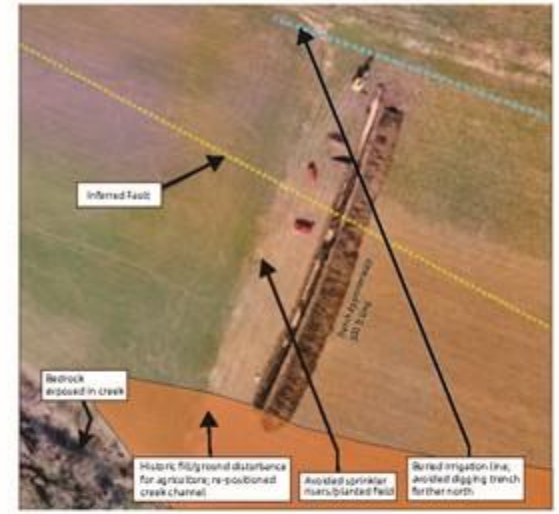
- Identify the presence or absence of a potentially active fault trace that has ruptured, geologically young (for example, Holocene-age) surficial deposits (*fault trench investigation*).
- Assess the potential for a surface rupture to occur on a buried high-angle fault plane (should one exist) in the bedrock beneath the proposed dam (*angled rock core*).
- Identify breccia, shear zones, and/or gouge zones associated with high-angle faulting in the basalt bedrock in the dam foundation (*angled rock core*).
- Gain a preliminary understanding of dam foundation conditions, such as rock mass quality, and the potential for leakage (*angled rock core*).

The following sections describe these activities and their findings.

2. Limitations

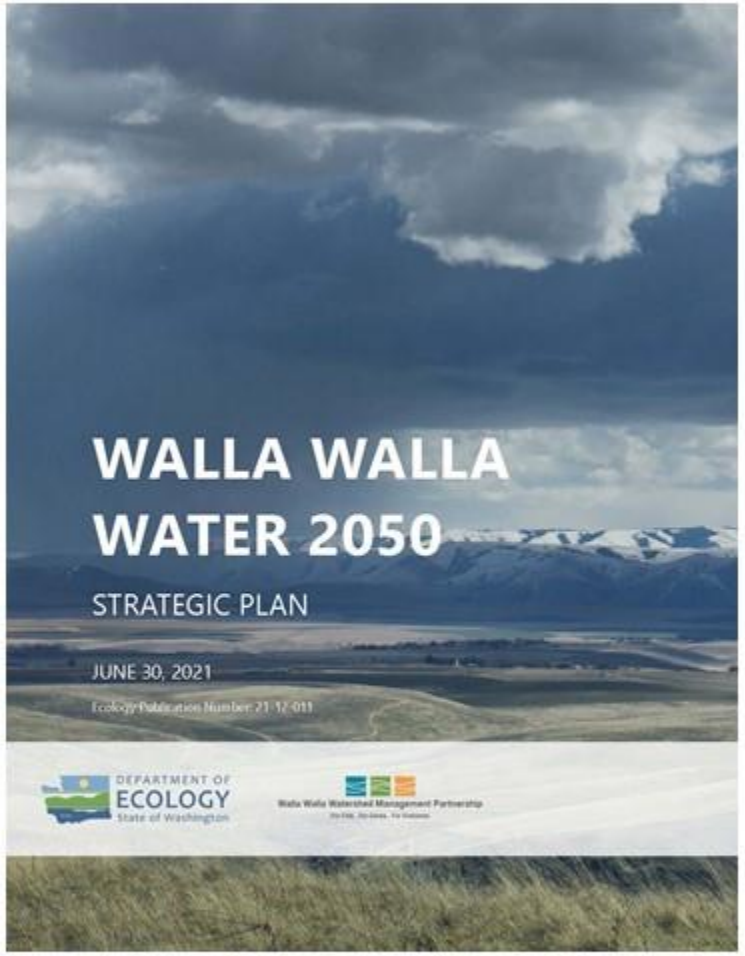
This technical memorandum (TM) presents findings based on data obtained from a single trench and a single rock core boring that indicate subsurface conditions at that specific location and time, and only to the depth penetrated. They do not necessarily reflect strata and water level variations at other locations or over time. If variations in subsurface conditions from those described are noted during subsequent explorations or construction, Jacobs should be notified and given an opportunity to review the design assumptions. In the event that any changes in the nature, design, or location of the components of this project are planned, the findings of this TM should be reevaluated, and the recommendations of this TM should be modified or verified in writing by Jacobs.





Lower Pine Creek Reservoir

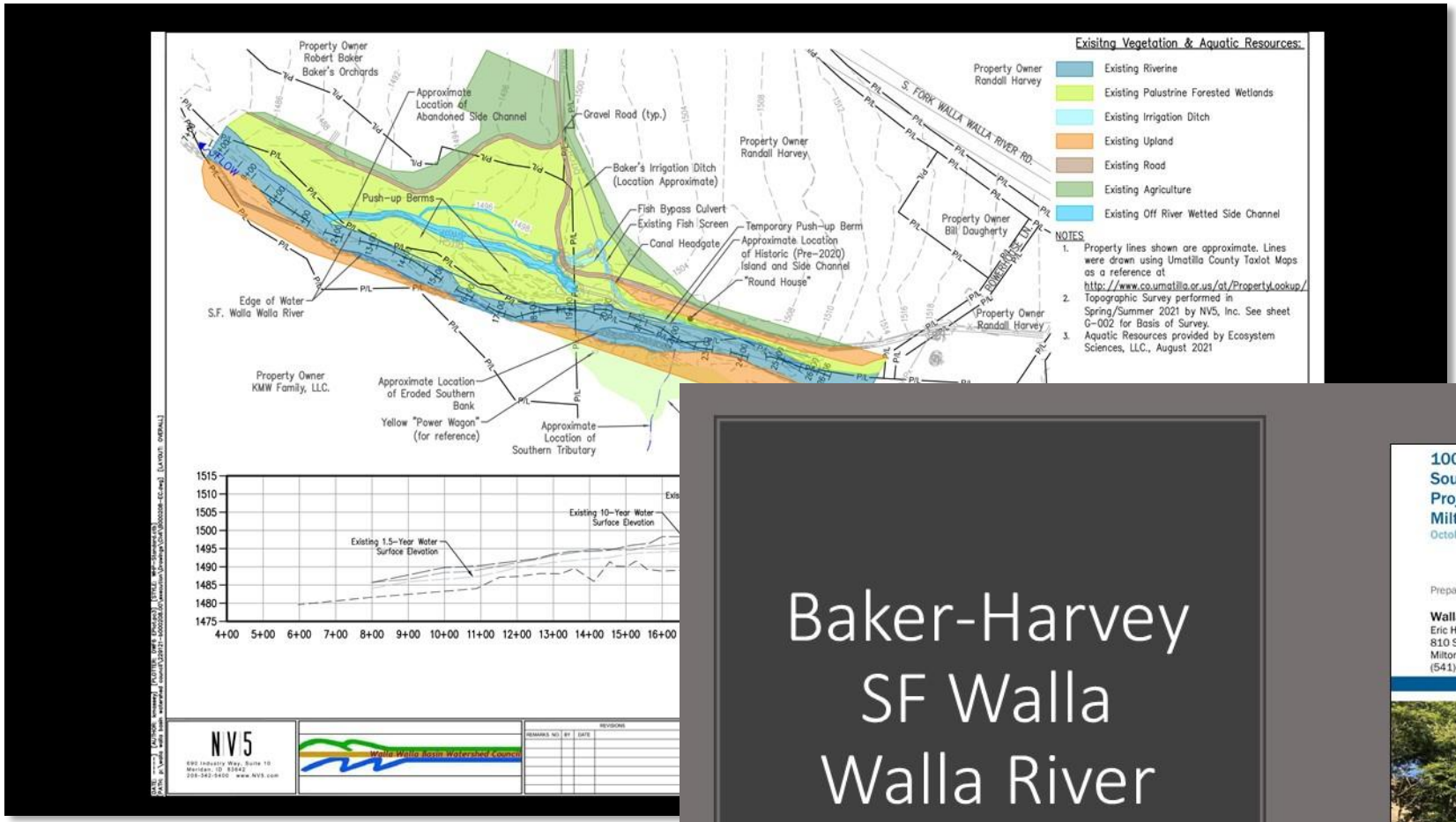
Funding provided by: OWRD and WDOE



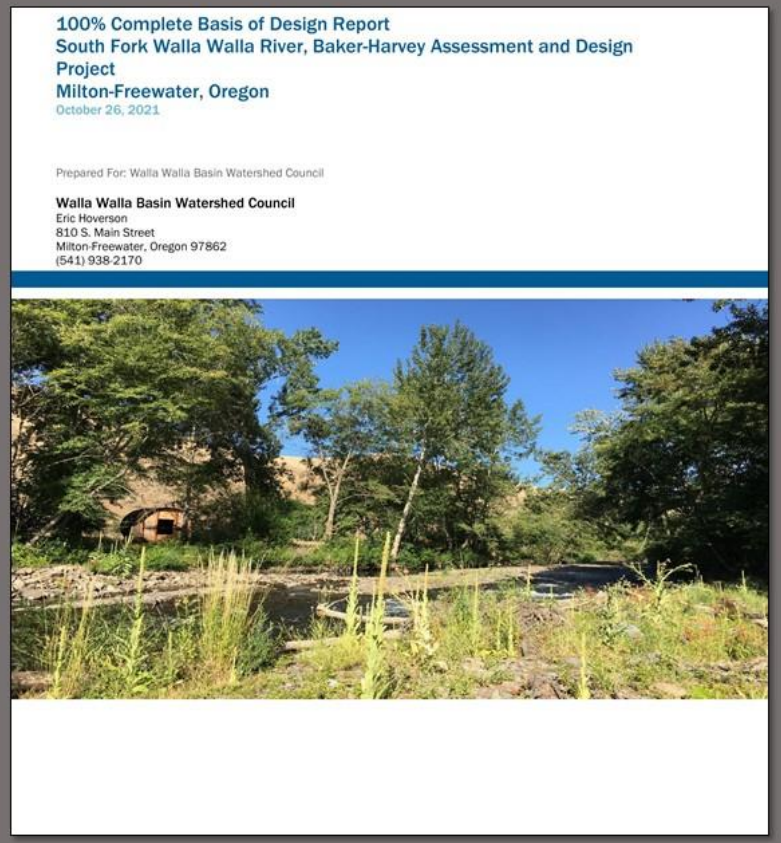
Walla Walla Water 2050 Strategic Plan

Holistically address the basin's longstanding struggle to balance instream and out-of-stream uses and future demand to ensure enough water for fish, farms, and people.

Fish Passage and Habitat Restoration Projects



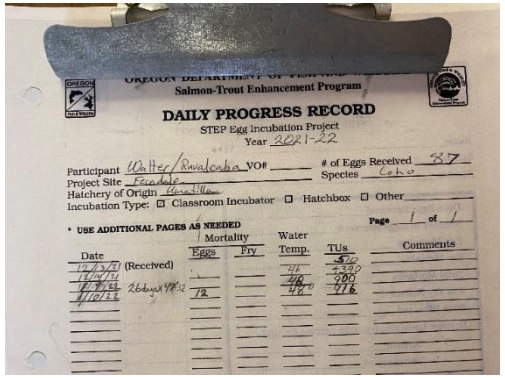
Baker-Harvey SF Walla Walla River Design Project



Completed the designs for multiple passage projects in 2021

- Baker-Harvey Passage Project
- NF 6 Smith-Bales Passage Project

2021 Open House


Salmon-Trout Enhancement Program

DAILY PROGRESS RECORD

STEP Egg Incubation Project

Year 2021-22

Participant Walter/Rivalcaba VO# ____ # of Eggs Received 837

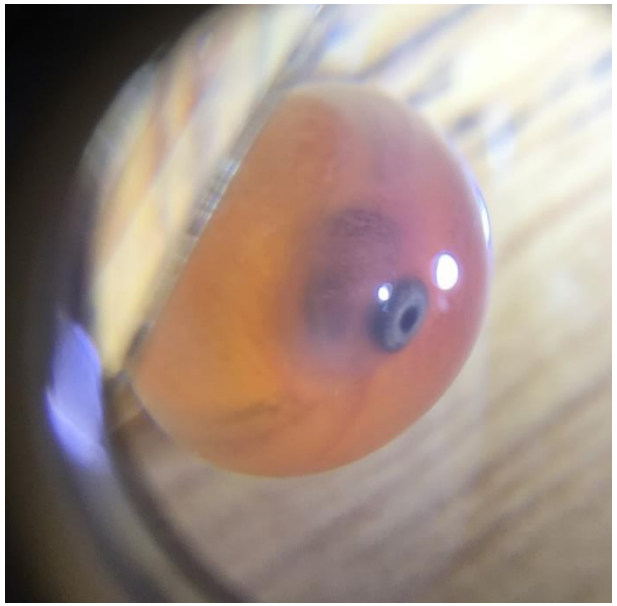
Project Site Ferndale Species Coho

Hatchery of Origin Hurd Creek

Incubation Type: ☑ Classroom Incubator ☐ Hatchbox ☐ Other

* USE ADDITIONAL PAGES AS NEEDED Page 1 of 1

Date	Mortality Eggs	Mortality Fry	Water Temp.	TUs	Comments
12/3/21 (Received)			41	570	
12/14/21	1		41	2390	
1/18/22	26days 478 32		40	700	
1/10/22	12		40	776	



"FISH EGGS TO FRY"

SALMON – TROUT ENHANCEMENT PROGRAM

Highlights to come

- High School water quality lessons and activities
- Release field trip Minthorn facility
- Watershed Field Day and Outdoor School


Success
Through
Collaboration