

# BAC DISCUSSION GUIDE

## 2025-2027 Biennium Office of Columbia River Capital Projects

Prepared for September, 25 2024 BAC Meeting

### Background

Ecology's Office of Columbia River plans to request funding for capital projects in the Washington State Legislative 2025-2027 biennium budget. Please note that OCR will also be requesting funding to support the Bi-State Flow Study and the WWW2050 facilitation process. The total amount available for capital project funding is expected to be in the range of \$2.5-2.8 million.

Four sub-workgroups (floodplains, habitat and fish passage, water, water quality and monitoring) met multiple times over the spring and summer of 2024 to discuss and consider each of the proposed projects. Included below, is a summary of the project review criteria that was developed by the WWW2050 BAC and its sub-workgroups to consider proposed projects. The BAC is charged with recommending a list of projects to the Tri-Sovereigns for future OCR capital project funding. The entire list of proposed projects is included at the end of this document as well as a list of the Tier 1 strategies for reference.

### Project Criteria Review Questions

- **Projects in Oregon.** If the project is located partially or entirely in Oregon, is there an adequate explanation (one or two paragraphs) on how the project will help benefit instream and/or out-of-stream water demands in Washington? Note this is a requirement of the Washington legislation codified in RCW 90.90.120. If the project is not in Oregon, this criterion does not apply.
- **Tier 2 or Tier 3.** If the project supports implementation of a Tier 2 or 3 strategy and not a Tier 1 strategy, does the project proponent adequately describe why this project is urgent to implement?
- **Benefit Metrics.** Does the project proposal adequately describe the likely project benefits using one or more of the suggested metrics?
- **Contribution to Desired Future Conditions (DFCs).** Does the project proposal provide a brief narrative description (no more than 2-4 sentences per metric) on how each benefit contributes to the DFC(s) selected. Does the proposal clearly connect project benefits to achieving the selected DFCs? How well do the project benefits achieved by this project meet the selected DFCs?

### Project Eligibility

The source of the project funding is the Washington State legislature's capital budget therefore only activities associated with direct project implementation are eligible. General outreach, fundraising, and programmatic support are not eligible activities.



## BAC Discussion Questions

The Tri-Sovs would like the BAC to consider the sub workgroup rankings and discuss and decide if they have any adjustments to the rankings. After the October 2024 BAC meeting the BAC will recommend a list of projects to the Tri-Sovereigns to advance for OCR capital budget funding. The discussion questions include:

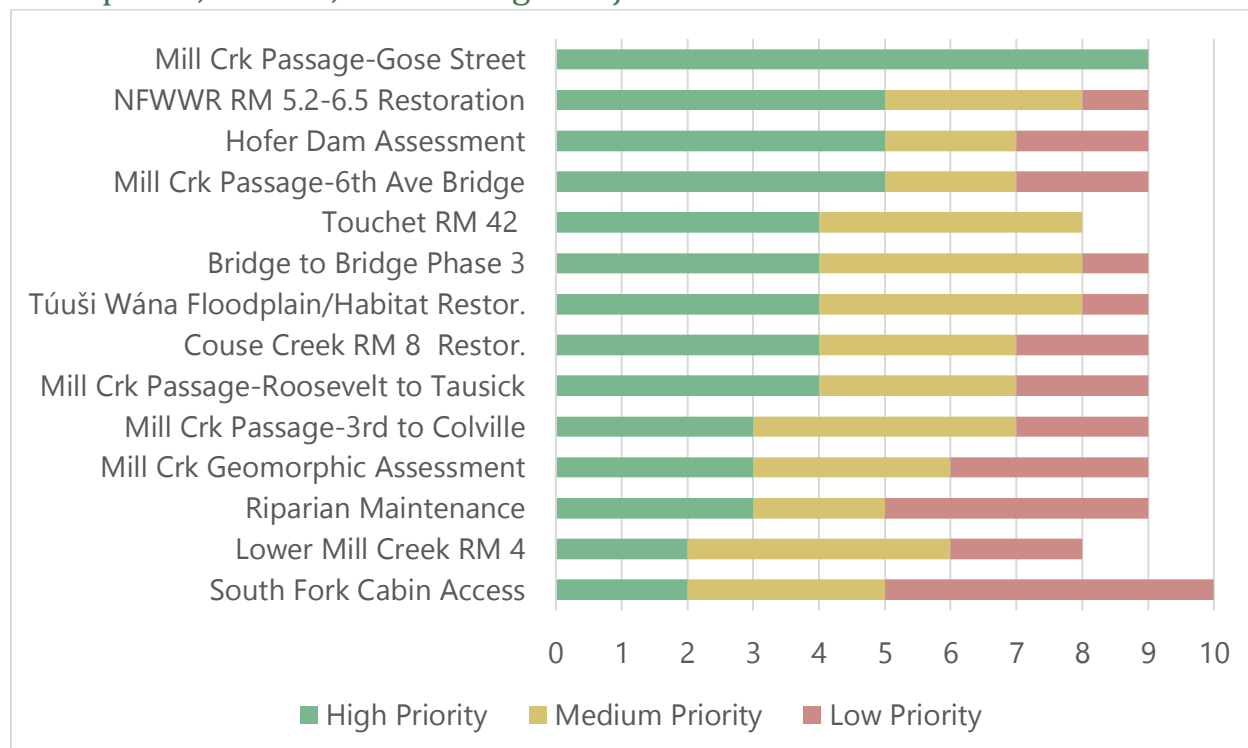
1. Which questions does the BAC have about each project?
2. Does the BAC agree with the sub-workgroups rankings or do you suggest adjustments to the rankings as provided by the sub-workgroups?
3. Which projects would the BAC like to recommend for funding?

The Tri-Sovereigns have indicated their desire to fund a variety of projects from a variety of sponsors. However, the funding does not need to be split evenly between types of projects and only projects that rank highly should be recommended for funding, meaning if a project category does not have one or more highly ranked projects there may not be a project advanced from that category.

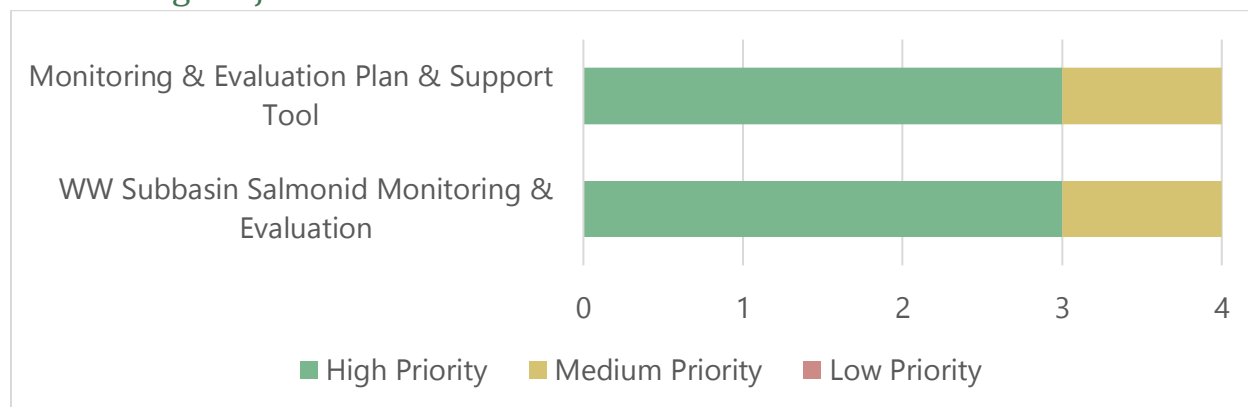
## Preliminary Project Sub-Workgroup Rankings

Over the Spring and Summer 2024, four sub-workgroups met to consider, discuss and prioritize projects proposed for OCR capital project funding. Below are the preliminary project prioritized in each category by each of the four sub-workgroups.

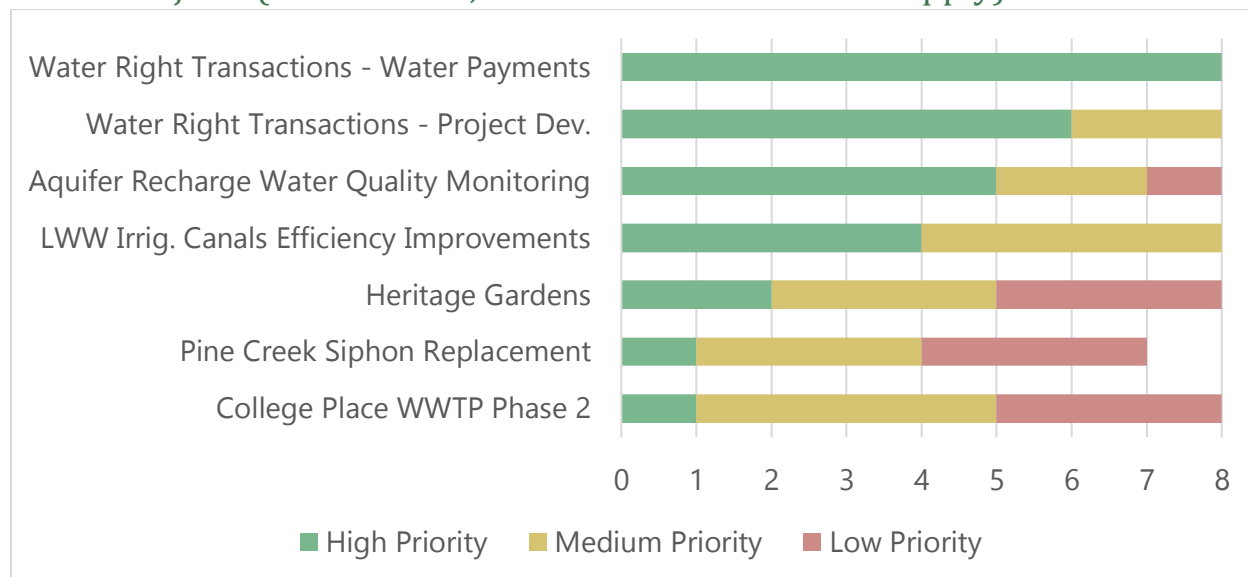
### Floodplains, Habitat, Fish Passage Projects



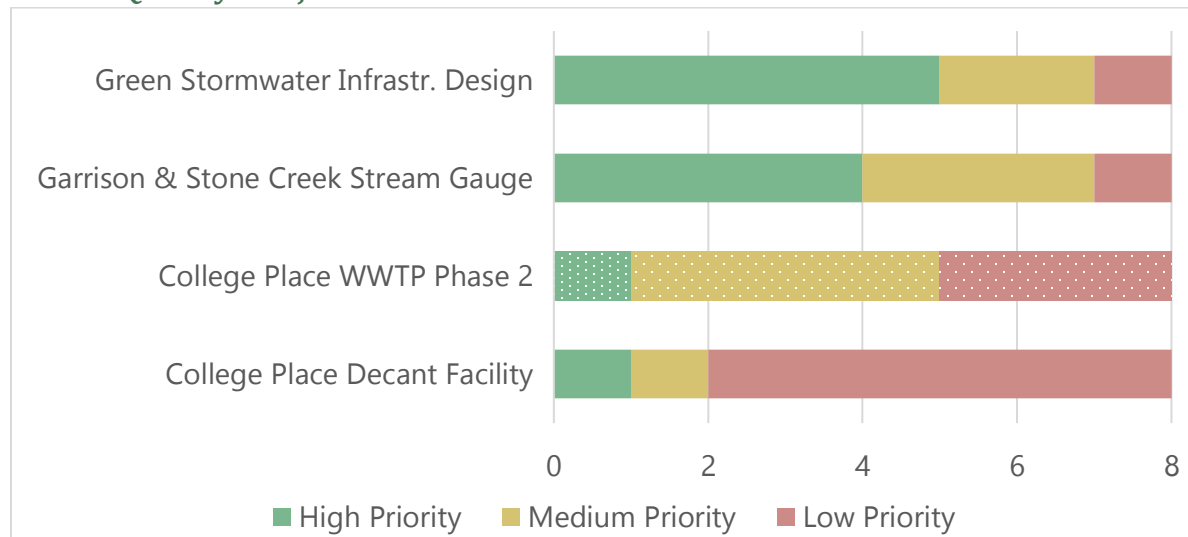
## Monitoring Projects



## Water Projects (Streamflows, Groundwater and Water Supply)



## Water Quality Projects



## Full List of Projects (in order of priority as ranked by the sub-workgroups)

\*Note first budget column lists the full funding request, the second column lists a minimum amount for some of the larger projects.

Strategy	Project Name	Preliminary Ranking	Project Sponsor	Funding Request	Funding Request (Min. Amt. for Larger Projects)
Floodplains, Habitat & Fish Passage	Mill Creek Passage - Gose Street		Tri-State Steelheaders	\$500,000	\$500,000
	NFWWR RM 5.2-6.5 Floodplain Restor.		WWBWC	\$497,000	\$250,000
	Hofer Dam Assessment & Design Study		WWT	\$156,000	\$156,000
	Mill Creek Passage - 6th Ave Bridge		Tri-State Steelheaders	\$300,000	\$300,000
	Touchet River Mile 42		WWCCD	\$500,000	\$250,000
	Bridge to Bridge Phase 3		Tri-State Steelheaders	\$90,000	\$90,000
	Túuši Wána Floodplain & Fish Habitat Restor.		CTUIR	\$5,000,000	\$350,000
	Couse Creek RM 8 Low Tech Restoration		WWBWC	\$100,000	\$100,000
	Mill Creek Passage - Roosevelt to Tausick		Tri-State Steelheaders	\$1,000,000	\$1,000,000
	Mill Creek Passage - 3rd to Colville		Tri-State Steelheaders	\$1,000,000	\$1,000,000
	Mill Creek Geomorphic Assessment & Plan		WDFW and CTUIR	\$55,000	\$55,000
	Riparian Maintenance		WWCCD	\$90,000	\$90,000
	Lower Mill Creek RM 4		WWCCD	\$700,000	\$250,000
	South Fork Cabin Access		SF Timber & Cattle Co.	\$225,000	\$225,000
Monitoring	WW Subbasin Salmonid Monitoring & Eval.		CTUIR	\$146,250	\$146,250
	Monitoring and Eval. Plan & Support Tool		WDFW	\$150,000	\$150,000
Water	Water Right Transactions-Water Payments		WWT	\$100,000	\$100,000
	Water Right Transactions-Project Develop.		WWT	\$120,000	\$120,000
	Aquifer Recharge Water Quality Monitoring		WWBWC	\$48,000	\$48,000
	LWW Irrigation Canals Efficiency Improv.		WWRID	\$350,000	\$350,000
	Heritage Gardens		WWCCD	\$30,000	\$30,000
	Pine Creek Siphon Replacement		WWCCD	\$1,200,000	\$1,200,000
	College Place WWTP Phase 2		City of College Place	\$200,000	\$200,000
Water Quality	Green Stormwater Infrastructure Design		WWBWC	\$71,500	\$71,500
	Garrison & Stone Creek Stream Gauge		City of College Place	\$125,520	\$125,520
	College Place Decant Facility		City of College Place	\$500,000	\$500,000
<b>TOTAL</b>				<b>\$13,254,270</b>	<b>\$7,657,270</b>

## WW2050 Plan Tier 1 Priorities

### WW 2050 Strategic Plan Tier 1 Strategies

Floodplains, Habitat & Fish Passage	1.01	Reconnect floodplain and restore channel complexity Basin wide to reduce flood risk and improve habitat
	1.06	Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek
	1.07	Restore and protect riparian habitat along tributaries, small streams, and the Walla Walla River Basin wide
	1.09	Protect and improve fish passage at Nursery Bridge and implement levee setback projects upstream and downstream of Milton Freewater
	1.12	Improve flow and timing of fish passage through the Hofer Dam fishway
	1.19	Improve fish passage at Gose Street long term
	1.23	Improve fish passage at Bennington Diversion Dam
Monitoring and Metering	1.1	Develop an overarching monitoring strategy and adaptive management plan for fish, habitat, and water to inform actions and evaluate effectiveness
	1.15	Expand and fund streamflow gages throughout the Basin
	1.2	Improve agricultural irrigation water use metering and reporting programs in WA and OR by installing telemetry and improving data use by agencies and water users
Water Policy and Management	1.11	Address legal implications of Bi-State surface water management and protection of instream flow across the state border and protection of instream flow within States
	1.14	Improve coordination and response to drought management Basin-wide
	1.16	Increase coordination and enforcement of floodplain and riparian regulations and management between Counties and State water management entities
	1.21	Additional Bi-State coordination on groundwater regulation
Streamflows, Groundwater and Water Supply	1.02	Support the ongoing analyses of the Bi-State Flow Study and work toward a recommendation on implementation of the preferred alternative
	1.03	Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function
	1.08	Decrease surface water diversions or substitute for basalt wells during low flow periods
	1.04	Water rights acquisitions (short-term, long-term, and split season) to restore streamflows
	1.05	Improve and expand managed aquifer recharge (MAR)
	1.13	Expand and support Aquifer Storage and Recovery (ASR) to maintain groundwater quality and capacity
Water Quality	1.17	Increase infiltration of stormwater rather than discharge to surface water bodies and improve coordination and management
	1.18	Upgrade Dayton wastewater treatment plant to meet Ecology requirements and watershed community environmental goals
	1.22	Implement conservation tillage and soil erosion BMPs to decrease nonpoint source pollution

## Project Descriptions

### Floodplains, Habitat & Fish Passage

#### **Project: Mill Creek Passage - Gose Street (WA)**

Sponsor: Tri-State Steelheaders

Funding Request: \$500,000

Description: In 2020, flood flow in Mill Creek created a new fish passage barrier below a fishway that transitions the flood control channel to the natural channel. An alternatives assessment has identified a preferred alternative - a 1,100 foot-long nature-like fishway. The funding requested below is the full project budget. We are applying to other funders, and expect to share project costs among multiple funders, but have not yet secured funding.

#### **Project: NFWWR RM 5.2-6.5 Floodplain Restoration (OR)\***

Sponsor: WWBWC

Funding Request: \$497,000 (Min. Amount \$250,000)

Description: Historic floods in the year 2020 were the largest on record and resulted in significant impacts to the NFWWR by creating excessive erosion resulting from shear stress scour of the riverbank and bed, resulting in expansive areas throughout the riparian and floodplain becoming stripped of fertile soils and vegetative components, leaving a barren cobble field or moonscape type of appearance for up to 10 times the width of the wetted channel. The floods resulted in both "take" and significantly reduced habitat suitability for ESA Threatened wild steelhead and bull trout populations, native red band rainbow trout, chinook salmon and mountain whitefish.

A series of post flood assessments and studies of hydrology, sediment, and physical habitat metrics were conducted to determine limiting factors in areas in need of restoration, enhancement, protection, connection and expansion of preferred habitats. Engineered design development will endure a thorough internal and external review process. Final designs will be formulated and stamped by certified engineers for the purpose of permitting and guiding implementation. Designs will reflect the most effective means of addressing the unique characteristics of the NFWWR sub-watershed and offer highest probability of achieving proper and holistic riverine function across the floodplain and achieving holistic recovery objectives by addressing the cause of detriment as opposed to masking a symptom of dysfunction. Objectives of the project are to reconnect of the floodplain and re-route surface spring flow directly into the NFWWR, re-establish proper riverine function that is self-sustaining over the long term as strategically placed engineered log jams evolve into living structures due to tree planting, increase infiltration and groundwater levels of the declining alluvial aquifer, and interaction with surface flows to promote prolonged absorption and retention of precipitation to elevate summer base flow and reduce detrimental flood impacts and reduce the need for non-engineered, reactionary emergency flood repair activities commonly conducted under disadvantageous timelines and conditions. Reducing the flashy hydrograph will benefit infrastructure protection, reduce contamination potential and result in improved water quality and continuous delivery capability and availability to achieve flow targets for users located downstream of the project, across state lines in effort to improve habitat suitability and status of ESA salmonids and meeting TMDL water quality standards. Additional project objectives involve converting the single, flumed channel currently dominated by dying trees throughout the riparian area to a complex network of heavily forested, braided channels to increase overall river length, decrease slope and substrate size, and provide future recruitment of LWD. The project reach will be converted from a transport reach to an accumulation reach for the purpose of capturing substrate and woody debris to rebuild incised features to the benefit of those in downstream proximity of the project, across the state line and into Washington. Re-establishing vibrant vegetative components across the re-connected floodplain will shade-out invasive dryland vegetation and provide buffering and resiliency to fire and climate change.

An underperforming 5.2-mile reach (RM 3.6-8.8) of the NFWWR was identified for holistic floodplain restoration by the WWBWC. Due to the magnitude of the project, a phased approach was deemed necessary with the goal of implementing 1-mile per year over a 5-year period. Two phases of the NFWWR project were effectively restored in 2022 & 2023. Beneficial beaver colonies have already taken up residence in reaches restored in 2023 and are welcomed by the landowners. Designs are being developed for the RM 5.2-6.5 reach planned for 2025 construction and the subject of this proposed funding application. The unique attributes of the NFWWR project area exhibit award winning potential and excellent opportunity for success. There is urgency associated with project implementation in

that ESA steelhead returns are at historic lows and approaching high risk of extinction with counts being a fraction of historic levels and well below recovery goals. Threatened bull trout populations are distributed sparingly in micro-habitats located near cold water inputs in the marginalized conditions of the NFWWR. Re-connectivity with the SF Walla Walla population is a goal and protective measure to provide a multitude of refuge avenues during catastrophic events and climate change. The WWBWC conducts monitoring and evaluation of several parameters related to water quality and watershed conditions for the purpose of informing adaptive management efforts to achieve optimal project performance. The WWBWC Watershed Restoration Specialist possesses a college degree in biology with fisheries emphasis, a Water Resource minor, 35 years of applicable experience in the discipline of salmonid habitat suitability assessment in the PNW region, and 3 years of college level instruction of Watershed Restoration Processes.

\* As advised by the 2050 restoration project review panel during the 8/15 meeting, I am responding to the effective input offered and agree to the following improvements to the WWBWC application seeking funds to implement RM 5.2-6.5 of the NF Walla Walla River in the spirit of compiling the most effective project priority list. The WWBWC agrees to the following alterations to strengthen the application and better represent the mutual, holistic interests of participating natural resource management entities participating in the process;

- Strengthen our monitoring strategy by adding a groundwater monitoring component via piezometer or similar deployment method to our surface water quality/quantity, physical habitat assessment inventory and biological monitoring of redds and juvenile inhabitation via snorkeling to inform adaptive management and scientifically defensible project actions. Funding for this management action will be sought through an external source, independent of the 2050 process.

- With the understanding that the ask of 497K to implement 1.3 miles of river in a holistic manner is already 50% of the estimated project cost, the WWBWC understands and would comply with a reduction of the financial request in effort to free up dollars to in effort to strengthen the overall diversity of the project list and participants. Based upon recent success attaining funds from 4 different sources for the multitude of phases as part of the overall 5.2-mile project effort planned over a 5-year period we are confident that we can secure dollars to via grant etc. to supplement the 2050 award amount with the understanding that this could push the implementation back a year to allow ample time to secure dollars externally. Ideally, the 497 request would remain intact, but if it would force out a project that the group believes could make impact towards achieving common objectives, it appears reasonable to solicit a minimal request for 250K or more depending upon where the final funding line falls.

- Quantification of water resulting from a multitude of project actions as described in detail in the original application is estimated to result in cumulative base flows increasing from 10 CFS to 17 CFS over time as the floodplain is reconnected over the entire 5.2-mile reach and approach a 2 CFS gain in the 1.3-mile phase specified in the funding application, riverine processes rectified by converting single, anthropogenic flume/transport channel is re-converted to the appropriate accumulation reach type, surface springs are re-connected directly to the NFWWR and expanded/protected via grazing enclosures, riparian attributes expanded across the valley floor, which will have increased hyporheic cooling capability, turbidity reduction, flood capacity, summer retention and storage duration during critical summer use months as protective measures of surface flows continue to be legislated in effort to flow from the critical headwater components located in Oregon and travelling short distance into neighboring Washington to support a multitude of water demands.

#### **Project: Hofer Dam Assessment and Design Study (WA)**

Sponsor: WWT

Funding Request: \$156,000

Description: WWT is seeking funds for the Touchet River Hofer Dam Assessment and Design Study in partnership with Touchet Westside Irrigation District (TWID). TWID holds the largest water right and therefore effectively the most senior water right on the Touchet River. Their historic water right, in combination with upstream diversions, allowed TWID to legally decrease flows to the point of impairing adult fish passage during critical fall adult in-migration window and in some years to essentially dewater the river below the diversion structure at Hofer Dam (~RM 4). The historic TWID syphon and diversion dam were fish passage barriers for migrating ESA-listed steelhead, bull trout, and reintroduced spring Chinook, included an ESA non-compliant fish screen, and utilized an unlined gravity fed canal system to deliver water. In 2009, the Walla Walla County Conservation District (WWCCD), Washington State Conservation Commission (WSCC), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Washington



Department of Ecology (DOE), and TWID completed the Hofer-Eastside-Westside Complex: Fish Passage, Fish Screening, Pump Station Construction, Pipeline Construction Project to address these items.

While the 2009 project improved water use efficiency at TWID and improved fish passage, the modified water circulation pattern in this area causes significant sediment accumulation during certain flows in the Touchet River, resulting in the new diversion infrastructure and pool and chute fish ladder not functioning as intended (BPA Statement of Work Report 5/14/2021). This sediment impacts the District's ability to divert their full water right and affects the function of the four fish screens. One of the screens is fully blocked by sediment and weeds, causing the need to excavate the area in front of the screen regularly. In times of low flows, the sediment build-up also impacts the flow rate going towards the diversion infrastructure and through the fish ladder. The District has had to install flash boards along the dam during these low flows to raise the water level above the sediment bar. In 2014, the WWCCD completed a project funded by Bonneville Power Administration (BPA) to develop a stamped construction-ready design to rectify sediment accumulation, provide fish passage and screening benefits as intended by the 2009 project, and allow TWID to divert their legal water right at Hofer Dam. Although a preferred alternative was selected, the design was not constructed and subsequent to 2014, no further design or implementation has been completed, but fish passage is still a recognized problem.

WWT's proposed assessment and design study seeks to build off of previous efforts to find a solution for these remaining challenges. A qualified engineering firm will be hired to complete an alternatives assessment, analyzing the effects of flow on sedimentation and fish passage at Hofer Dam. This project will incorporate any strategies discussed by partners in the years after the 2009 construction occurred, and design lessons learned from the placement of the screens and sweeping flows to make sure they function correctly in any future design. It will also incorporate lessons learned from the modified flow pattern, taking into account that flows are actually higher near the spillway, rather than the fish ladder, when choosing a preferred fish passage alternative. A preferred alternative will be identified in collaboration with stakeholders to improve passage for ESA-listed Mid-Columbia Steelhead and Bull Trout, and reintroduced spring Chinook and allow TWID to meet their diversion needs. Conceptual design plans will be produced for the preferred alternative.

#### **Project: Mill Creek Passage - 6th Ave Bridge (WA)**

Sponsor: Tri-State Steelheaders

Funding Request: \$300,000

Description: The 6th Avenue bridge on Mill Creek was constructed in the 1910s and is scheduled for replacement by the City of Walla Walla in 2027. The bridge has a support pier in the channel that creates hydraulic conditions that are a barrier to fish passage. With the pier in place, the fish passage treatment applied to the rest of the channel cannot be implemented. The City's bridge replacement project provides an opportunity to apply the fish passage treatment at the same time. In 2027, the 6th Ave bridge footprint and the underground section will be the only remaining sections of the concrete channel to be treated for fish passage.

#### **Project: Touchet River Mile 42 (WA)**

Sponsor: WWCCD

Funding Request: \$500,000 (Min. Amount \$250,000)

Description: WWCCD will restore a 1.4-mile stretch of the Touchet River starting at RM 42. This project area is located west of the town of Waitsburg, Washington. This project is located downstream of the levees and confluence with Coppei Creek. This reach of the Touchet River has high velocities of water due to the restriction by the upstream levees (located 0.6 miles upstream). The project is divided into project element groups. This funding will go towards the implementation of Element groups 5 & 6. Element groups 1-4 are funded through state and federal sources.

Restoration activities of the project include installing engineered log jams (ELJ) and other large woody material (LWM); completing 2,200 feet of side channel pilot cuts; and planting bank vegetation. These restoration activities will increase floodplain inundation during one-year and two-year flow events; channel complexity at low flows; off-channel rearing, foraging, and overwintering habitat for native salmonids; shade on the river; sediment deposition in over-straightened and transport reaches; and stabilization of gravel bars to encourage riparian growth. Completion of these restoration activities will also address TMDLs for the Touchet 42 reach. Together, the improvements will reduce suspended sediment in the water column, shade the river, and deepen and increase the reach's pool count, all of which help decrease water temperatures. Lower water temperatures help balance pH and increase dissolved oxygen.



The installation of ELJ and other LWM, and the creation of side channel cuts will promote geomorphic and habitat complexity, increase hydraulic connectivity within the floodplain, and help gather and retain woody debris and sediment. As a result, turbidity levels, sedimentation, and flow rates should decrease while bank stability and habitat diversity increase.

**Project: Bridge to Bridge Phase 3 (WA)**

Sponsor: Tri-State Steelheaders

Funding Request: \$90,000

Description: The Bridge-to-Bridge project reach is nearly two miles of the Walla Walla River near Lowden, WA. This project, Phase 3A, will address limiting factors by placing logs and log structures along 1,000 feet of the Walla Walla River to improve channel complexity, maintain pools, create off-channel areas, and encourage side channels. Riparian plantings will address limiting factors by increasing shade and improving riparian function.

**Project: Túuši Wána Floodplain & Fish Habitat Restoration (WA)**

Sponsor: CTUIR

Funding Request: \$5M (Min \$350,000)

Description: The Túuši Wána Floodplain and Habitat Restoration Project is located on the mainstem of the Touchet River from RM 14 through RM 17. The Touchet River is a major tributary to the Walla Walla River which flows to the Columbia River in southeast Washington State. Latitudinal/Longitudinal coordinates for the upstream end of the project are 46°13'26.01"N, 118°35'26.23"W while the downstream extent of the project are 46°12'17.52"N, 118°37'36.61"W. The project lies within the traditional use area of the CTUIR. The project area is approximately 35 miles east of Kennewick, WA and approximately 240 miles east of Portland, Oregon.

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) propose to sponsor a 2.7 mile-long floodplain and fish habitat restoration project on the mainstem Touchet River which lies within the Walla Walla Sub-basin (Figure 1). The CTUIR is a federally recognized Indian Tribe and has its reservation in northeast Oregon, but the aboriginal ceded areas extend well into Washington State where this project occurs. The project area has been negatively impacted by intensive riparian clearing, channelization, bank armoring, floodplain clearing, hillslope clearing, and levee construction. Riparian clearing occurred until at least 1996. The loss of riparian community has resulted in moderated channel erosion rates. Channelization, floodplain grading, and bank armoring appear to have been evident by 1952 and continued to accelerate in scope and scale through the 1970s. These actions are evident by meander scars and channels visible in the 1952 aerial disappearing by the 1964 aerial (Figure 2). These actions likely resulted from a desire to maximize land productivity for agriculture and as a reaction to flooding in the 1960s and early 1970s. The channel has been straightened and its ability to migrate within the floodplain is reduced compared with historical conditions. Straightening and confining the channel has resulted in increased stream power, leading to widespread channel disconnection from the floodplain. This has significantly reduced floodplain connectivity, contributed to a high load of fine sediments, and reduced channel complexity.

Based upon site analysis, project goals and objectives, identified habitat limiting factors, site review (stakeholders, funder technical review (BPA, SRFB), external technical review), and anticipated available funding ranges, two complementary strategies are proposed for the project area. The proposed strategies showcase two restoration approaches in two treatment reaches. These two approaches are intended to balance both the desire for more immediate benefit response time (Table 3) as well as "lighter" touch approaches that provide longer term benefits. These two provide an attempt to balance potential risks presented by both approaches as well as provide comparative lessons learned for future lower watershed projects in the Walla Walla Basin.

The first approach, the Floodplain Reveal Reach, (RM 16.5 to 17.1) intends to accelerate extensive, frequent, and sustained floodplain engagement. This more direct approach is expected to realize project benefits on the more immediate (immediately post construction) and near-term (1 to 3 year) benefits. These benefits will be achieved through excavation (floodplain reveals) by exposing a floodplain surface compatible with and just above the established long profile of the Touchet River's gravel bed channel that has been found to sustain the river's base-level elevation profile. The floodplain reveals also target relative surface elevations that will encourage and sustain passive revegetation. This approach will be paired with channel and floodplain structural elements (e.g., large wood structures (LWS)) which will be placed along the channel margins and across the floodplain. The placement of these LWS is intended to promote moderate to long-term (60 to 150 years (Beechie et al. 2008)) channel aggradation and

enhanced floodplain-forming and riparian processes. The second approach, the Large Wood Treatment Reach (RM 14.9 to 16.5), will utilize aggressively positioned main channel LWS to initiate lateral channel migration and drive moderate- to long-term (60 to 150 years (Beechie et al. 2008)) channel aggradation. This downstream treatment approach is proposed to be paired with active vegetation stewardship, such as a regenerative agriculture or permaculture approach, targeted to successively rebuild soil structure and ultimately support the return of active agricultural areas towards more naturalized floodplain forest and uplands.

**Project: Couse Creek RM 8 Low Tech Restoration (OR)**

Sponsor: WWBWC

Funding Request: \$100,000

Description: Couse Creek is a tributary of the Walla Walla River located near the town of Milton-Freewater, in Umatilla County. The proposed project area is a one-mile reach beginning at RM 8 and is entirely on private property owned by one landowner. Spawning and rearing habitat is limited in the Walla Walla Basin. Couse Creek is an important spawning and rearing area for threatened Mid-Columbia steelhead. A 2020 watershed assessment documented suitable habitat in the upper half of the watershed and impaired conditions downstream. While conducting a stream survey for the watershed assessment, WWBWC observed limited habitat complexity, impaired physical and hydraulic processes, high summer water temperatures, and seasonally dry stream reaches in the project area. The project goal is to improve steelhead spawning and rearing conditions in a one-mile reach of Couse Creek at RM 8-9. Using low-tech, process-based restoration methods, the project will restore the hydraulic processes such as erosion, deposition, channel aggradation, and tree recruitment that characterize healthy and productive riverscapes. Our long-term objective is to improve conditions for steelhead in Couse Creek by increasing channel complexity and decreasing stranding mortalities due to thermal barriers and dry stream reaches. By slowing and spreading water, the project will increase the wetted extent of the channel during low flow conditions, which will increase the quantity of habitat available to juvenile steelhead during late spring and summer low flow when stream flow in much of lower Couse Creek is intermittent. It will also improve channel complexity, creating refugia for juvenile steelhead and enhance spawning conditions for adult steelhead.

This project is part of a larger effort to improve longitudinal connectivity throughout the Couse Creek watershed. Within the last 7 years, WWBWC has conducted a habitat assessment and sponsored projects to remove a passage barrier and restore riparian function at the mouth, remove a barrier at Blue Mountain Station Road, and to restore instream and riparian functions at RM 4 with PALS and BDAs. Following the proposed restoration treatment of RM 8-9, WWBWC intends to use a hybrid of low-tech and engineered methods to address impaired conditions from RM 7-8, which was severely impacted by high flow events in 1996 and 2020.

With funding from OWEB and BPA, Anabranch Solutions is under contract to complete the restoration design for one mile (RM 8-9) in 2024. WWBWC will complete permitting and environmental compliance steps in coordination with BPA. The proposed funding request is for one mile of instream restoration treatment, which is planned for summer 2025 (July 1-Oct 31). We expect to install 100-150 structures within the 1-mile project reach. Project partners include OWEB, WWBWC, BPA, and the landowner who owns the project reach.

**Project: Mill Creek Passage - Roosevelt to Tausick (WA)**

Sponsor: Tri-State Steelheaders

Funding Request: \$1M

Description: Sections of the Mill Creek flood control channel are confined on both banks by levees, and have regularly-spaced energy-dissipating channel stabilizers (weirs). These weirs were described as passage barriers for juvenile and late-spring adult salmonids. This project will provide passage for about 5,600 feet of channel immediately upstream of the concrete channel. Weirs will be notched for passage, and a low-flow channel will be created for the length of the project. Because of the project length, construction is likely to occur in 2026 and 2027. The funding requested is the full project budget. We are applying to other funders, and expect to share the project costs across several sources.

**Project: Mill Creek Passage - 3rd to Colville (WA)**

Sponsor: Tri-State Steelheaders

Funding Request: \$1M



Description: A section of the Mill Creek flood control channel goes under downtown Walla Walla (between 3rd Avenue and Colville Street). This is one of two remaining sections to be treated for fish passage in the concrete channel (the other is 6th Avenue). Because of the project occurring in an enclosed area, this project may be constructed in 2026 and 2027. The requested funding is a very rough estimate.

**Project: Mill Creek Geomorphic Assessment and Strategic Action Plan (WA)**

Sponsor: WDFW and CTUIR

Funding Request: \$55,000

Description: The project objective is to hire an environmental consultant to develop a scientific defensible and well-coordinated assessment and action plan to prioritize restoration efforts in the Mill Creek Watershed. The assessment and action plan objectives will be to improve our scientific understanding so that restoration efforts in Mill Creek are more accountable and competitive for future funding, and so that the funded restoration efforts are more effective and efficient.

River and floodplain habitat condition and function have been degraded through much of the watershed area that will be included in this assessment. River channel complexity has been reduced through past channel management including channel confinement, removal of snags and clearing of riparian. Residential development, recreational and agricultural use in the floodplain has increased channel confinement and stream power. This project will provide quantifiable information on the extent of habitat restoration needs and options within the watershed so that restoration dollars can be directed toward priority projects. Having a defensible assessment and prioritized action plan will allow restoration partners in Mill Creek to direct future funding to ensure high priority projects are implemented.

The physical and biological assessment of the Mill Creek study area will be process-focused (generally following guidance of Booth et al. 2016, Beechie et al. 2008, Beechie et al. 2013, Devries et al. 2015, Palmer et al. 2005, Roni et al. 2017, Wohl et al. 2005), with the data collected and analyses conducted to informing restoration priorities to restore watershed processes that support multi-species benefit for the four focal species of the assessment and action plan: Middle Columbia River summer steelhead (ESA-listed Threatened); Columbia River bull trout (ESA-listed Threatened); Spring Chinook salmon; and Pacific lamprey

This project will identify (1) the current and historical functioning of natural geomorphic and hydrologic processes that are linked to focal species habitat, as organized by the CTUIR River Vision (Jones et al. 2008) and Snake Region Salmon Recovery Plan, 2005. (2) the effect of current land use on the function on those natural processes and their influence on the production of focal species; (3) quantitative prioritization of geographic areas according to the potential for restoration and conservation of watershed processes that support focal species habitat; and (4) itemized restorative actions that may be applied to each geographic area to aid in restoration of watershed processes and achieve multispecies uplift.

The final document will establish a strategic approach to watershed process restoration based upon watershed-specific data and its analysis with input from interested stakeholders for the watershed. A defensible approach will require the assessment of land use, land cover, vegetation, aquatic biotic communities, geomorphic and hydrologic processes and conditions to prioritize geographic areas and potential restoration actions. The collaborative process will include the CTUIR, Oregon and Washington state agencies, federal agencies, local non-governmental organizations, and private landowners. Frequent 2019 RFP - Upper Walla Walla River Watershed Assessment and Action Plan - Page 8 of 37 and open communication will be critical to project success. The selected contractor will be required to detail progress in their efforts at regular meetings and accept guidance from the CTUIR and stakeholders. The selected contractor will be required to address comments and concerns raised by stakeholders and effectively communicate outcomes. The selected contractor will collaboratively develop a communications plan with the CTUIR prior commencing project work to ensure efficient and effective communication with stakeholders.

**Project: Riparian Maintenance (WA)**

Sponsor: WWCCD

Funding Request: \$90,000

Description: The Riparian Maintenance funds will address riparian buffers in Walla Walla County. In the 2023-25 biennium alone, WWCCD will have installed approximately 20 small riparian projects. These were funded through both the Washington State Conservation Commission: Voluntary Stewardship Program and Riparian Grant Program.



Maintenance of these sites is a critical component for any restoration project and we anticipate ongoing management needs past the end of the current biennium.

Maintenance work will likely involve survival assessments with replanting and potential expanding of riparian areas, watering, mulch installment for moisture retention and caging for wildlife protection where necessary. Hand weeding, appropriate chemical applications, and mowing/brush cutting will be utilized for ongoing weed control. Blackberries have been an issue at several sites and may need additional treatment and control. Plants previously caged for wildlife protection may need cages removed. Some additional native grass seeding may also need to be done.

**Project: Lower Mill Creek RM 4 (WA)**

Sponsor: WWCCD

Funding Request: \$700,000 (Min. Amount \$250,000)

Description: The Lower Mill Creek RM 4 project is a 1.5-mile stretch located between Bunchgrass Lane and Wallula Ave, west of the city of College Place, Washington. The proposed project will reconnect 2,800 feet of side channel, restore 2.75 acres of vegetative riparian buffer, and install a series of engineered log structures, post-assisted log structures, and beaver-dam analogues to increase channel complexity. These restoration activities will increase floodplain inundation during one-year and two-year flow events; off-channel spawning, rearing, and migration habitat for native salmonids; channel complexity at low flows; shade on the creek; sediment deposition in over-straightened and transport reaches; and stabilization of gravel bars to encourage riparian growth. Activities will also improve pollutant filtration and add wood and other biological inputs to the stream ecosystem.

This project will also improve community resilience against high-flow events in and around Walla Walla. In February of 2020, the Walla Walla Valley, including this reach of Mill Creek, experienced a significant flood event, estimated to be a 500-return interval. This event caused millions of dollars in infrastructural and property damage and further impacted the already-degraded stream system. Project activities are expected to reduce floodplain inundation during 25- and 100-year flow events, responding to a community need for climate change and flood resilience.

This project currently has a 30% design and we received \$500,000 from the Dept of Ecology Water Quality grant to get us to a 90% design and cover some construction costs. Costs associated with this OCR requests would cover the remaining anticipated construction costs.

**Project: South Fork Cabin Access (WA)**

Sponsor: South Fork Timber and Cattle Company LLC

Funding Request: \$225,000

Description: Our project intends to build a road on a recently procured piece of property off of Blalock Mtn to gain access to our properties on the South Fork of the Walla Walla River. This will allow us to totally abandon our historic access on the actual river that until now we have had no other option. We believe that the monies that we have spent acquiring said piece of property shows our commitment to the 2050 efforts of the betterment of the basin as a whole for fish, farms and public use. We believe our actions will help the South Fork drainage be a complete, unfettered habitat for fish and wildlife that can be enjoyed by all.

## Monitoring

**Project: Walla Walla Subbasin Salmonid Monitoring & Evaluation (OR & WA)**

Sponsor: CTUIR

Funding Request: \$146,250

Description: CTUIR currently operates and maintains seven PIT tag interrogation arrays in the Walla Walla Basin. Three arrays are located along the mainstem Walla Walla River: 1) Nursery Bridge Dam, 2) Burlingame Dam, and 3) RM 3 near the Walla Walla River Mouth. Four arrays are located along Mill Creek and its tributary Yellowhawk Creek: 1) Bennington Diversion Dam, 2) Division Works Dam, 3) Upper Yellowhawk Creek, and 4) Lower Yellowhawk Creek. CTUIR plans to install a temporary PIT array at the Gose Street fish ladder when WDFW reinstalls concrete eco blocks to temporarily maintain pool depths, and WDFW plans to install Mill Creek PIT arrays at Roosevelt Street and below the Whitman Mission. These PIT tag infrastructure improvements should allow us to monitor both juvenile and adult migrations through the Walla Walla Basin.

The one ingredient that we are lacking for efficient adult monitoring is the sheer number of PIT tags released. CTUIR began releasing hatchery-origin smolts reared from the new Îmtwaha Fish Hatchery at full production (500,000 smolts) in 2022. We propose implanting 45,000 PIT tags into brood year 2024 juveniles to be released as smolts in 2026 to monitor and evaluate migration performance. Theoretically, at a smolt-to-adult return (SAR) rate of 1%, we would expect 450 PIT tags to return as adults. This number of returning adult PIT tags will allow for effective monitoring of adult migration performance.

**Project: Monitoring and Evaluation Plan & Support Tool (WA)**

Sponsor: WDFW

Funding Request: \$150,000

Description: This project seeks to develop and implement Strategy 1.10 (monitoring, evaluation & adaptive management). Over the course of 2024 and 2025 the project lead, in cooperation with the Monitoring workgroup, will continue to develop a framework for the strategy and the associated work product. In BN 25-26 funding sought through WW 2050 will be employed to execute the developed plan/product. Key aspects include the development of a digital clearinghouse populated with pertinent biological and ecological information. This clearinghouse, or database, will dovetail with an internal and external interface known as a Decision Support Tool (DST). The DST will geographically collate and represent data in a manner the holistically informs the Basin's regulators, fish & wildlife co-managers, and stakeholders of past and current trends to aid in progress tracking, trend identification and decision making.

## Water

**Project: Water Right Transactions - Water Payments (OR & WA)**

Sponsor: Washington Water Trust (WWT)

Funding Request: \$100,000

Description: WWT is seeking funds to support landowner payments for water right transactions benefitting ESA-listed populations of summer steelhead and bull trout, and reintroduced spring Chinook in both Washington and Oregon. These funds will be cost-share with WWT's main transaction funder, National Fish and Wildlife Foundation (NFWF) Columbia Basin Water Transactions Program (CBWTP). Water Right Transactions are a method to improve and protect streamflows through voluntary, market-based projects with water right holders. WWT prioritizes transactions in river and stream reaches where flow is a limiting factor to critical life stages of listed species, as defined by the 2004 Northwest Power and Conservation Council Walla Walla Subbasin Plan and the 2011 ESA-Snake River Salmon Recovery Plan. WWT is increasingly focused on transactions that add resilience to streams in the face of climate change, including developing new tools such as floodplain optimization and upland forest management.

Contracted transactions often result in water payments to the landowner contingent on final agency approval of water right quantities available for instream flow and continued evidence of those quantities remaining instream for the duration of the transaction. Water payments are based on the market value of water in the Walla Walla Basin in Washington and Oregon, and are negotiated with the water right holder and the CBWTP during the project development process. Payment for temporary leases can be on an annual basis or lump sum. Payment for permanent transactions occurs as a lump sum payment after a formal closing process (similar to a real estate transaction).

Between 2025 and 2027, funds will be used as cost-share for annual lease payments to the City of Walla Walla for Mill Creek instream flow (about \$40,000 per year, subject to future negotiations) and a lease or acquisition payment for a project on the Touchet River (\$13,000 - \$39,000 depending on transaction type).

**Project: Water Right Transactions - Project Development (OR & WA)**

Sponsor: Washington Water Trust (WWT)

Funding Request: \$120,000

Description: WWT is seeking funding to develop and implement water right transactions benefitting ESA-listed populations of summer steelhead and bull trout, and reintroduced spring Chinook in both Washington and Oregon. Water Right Transactions are a method to improve and protect streamflows through voluntary, market-based projects with water right holders. WWT prioritizes senior water right transactions in river and stream reaches where flow is a limiting factor to critical life stages of listed species, as defined by the 2004 Northwest Power and Conservation Council Walla Walla Subbasin Plan and the 2011 ESA-Snake River Salmon Recovery Plan, to maximize the

protectability instream for the benefit of as many river miles as possible. WWT is increasingly focused on transactions that add resilience to streams in the face of climate change, including developing new tools such as floodplain optimization and upland forest management.

Water transactions can take a considerable amount of time to develop, varying from less than a year for temporary leases to one or more years for permanent acquisitions depending on landowner willingness, project complexity, and change application processing time. Project development begins with in-person outreach in the form of water right workshops, basin event participation, newspaper op-eds, and other engagement methods. This outreach is critical to develop new relationships and build trust with water right holders over time. Other aspects of transaction development and implementation include water right due diligence to determine instream flow quantities, contract negotiation (lease, acquisition, water quantities, price, etc.), water right change process to protect water instream, agency approval, through to landowner payment distribution.

WWT's main funder of this work is National Fish and Wildlife Foundation (NFWF) Columbia Basin Water Transactions Program (CBWTP). Historically, WWT had State support through the Department of Ecology's Water Acquisition Program as cost-share support for transaction development and implementation, but has been missing this additional funding since 2021. OCR funds will act as cost-share to advance projects through these various stages. Between 2025 and 2027, WWT aims to develop 6 new water transactions and continue to develop an ongoing lease transaction on Mill Creek (City of Walla Walla) and two ongoing leases on the Touchet River. WWT has a goal to protect about 4-7 cfs in the Touchet River with 3 projects, 3-5 cfs in the Walla Walla River with 3 projects, and 8-10 cfs in Mill Creek.

#### **Project: Aquifer Recharge Water Quality Monitoring Project (OR & WA)**

Sponsor: WWBWC

Funding Request: \$48,000

Description: The Walla Walla Basin Watershed Council, in partnership with the Walla Walla County Conservation District, is seeking funding to conduct comprehensive water quality monitoring, as required by the Washington Department of Ecology (WDOE) and the Oregon Department of Environmental Quality (ODEQ) across 18 alluvial aquifer recharge sites within the Walla Walla Valley.

Background: Distinct from many aquifer recharge projects globally that aim for aquifer storage and recovery (ASR), this aquifer recharge (AR) project is primarily designed for the public and regional benefit. It seeks to restore the aquifer and boost groundwater contributions to instream flow, optimizing the resource's utility across various sectors. These include supporting aquatic life, enabling recreational water activities, providing for domestic use, and fulfilling irrigation needs, which are vital for our community's sustainability and ecological balance.

Project Location and Scope: Spanning across the Walla Walla Valley, our project encompasses the monitoring of 18 recharge sites located in both Washington and Oregon. These recharge sites are working towards addressing the challenges posed by the Walla Walla Valley's declining and over-allocated groundwater and surface water systems.

Project Objective: The requested funding will be utilized specifically to conduct the water quality monitoring required for operating 18 AR sites, the pumping costs at Stiller Pond, and annual reporting.

Water Quality Monitoring: Staying in compliance with the Oregon Department of Environmental Quality (ODEQ) and the Washington Department of Ecology (WDOE) regulations, the project requests funding for two recharge sampling seasons. The Washington recharge sampling frequency, type, and reporting requirements approved by WDOE (Report of Examination for S3-30674, Aug 2021; Groundwater Memo, May 2021, and others) will be the basis of the sampling plan in Washington. The ODEQ-approved recharge sampling frequency, type, and reporting requirements document, WWBWC Alluvial Aquifer AR Program Hydrologic Setting, Site Descriptions, and Proposed Surface Water and Groundwater Monitoring Plan, 2020, will provide the basis of the sampling plan in Oregon. Coordination will occur between the two states to develop a consistent water quality monitoring plan for the project.

Aquifer Recharge Volume: Annually, the sites can recharge 6,500 to 8,500 acre-feet of water into the alluvial aquifer.



**Project: LWW Irrigation Canals Water Efficiency Improvements (WA)**

Sponsor: WWRID

Funding Request: \$350,000

Description: The proposed project will perform planning and engineer design for water efficiency projects in the Little Walla Walla (LWW) canals managed by the Walla Walla River Irrigation District (WWRID), Milton-Freewater, Oregon. The proposed project will advance work funded with a previous Bureau of Reclamation grant via Tribal Assistance for Indian Water Resources Management and Protection which provided funding to initiate a design process. The funding requested in this proposal will complete the initiated design process from about 33% design through final design and initiate environmental permit related surveys and applications.

The project is located along the existing canal system for the WWRID. The LWW system starts on the Walla Walla River on the south end of Milton-Freewater, Oregon and then branches into several distribution canals that flow west and north through the city of Milton-Freewater and further through farm and orchards. The system has been in place for decades and requires updating to reduce loss (spill) in the system, and other efficiency improvements. All water savings will be transferred to an instream water right which will formally protect currently unprotected instream flows bypassed at WWRID's point of diversion. Minimum bypass flows were negotiated between local irrigation districts (WWRID and Hudson Bay District Improvement Company) and the U. S. Fish and Wildlife Service to protect species listed under the Endangered Species Act (ESA). The WWRID holds the oldest water right in the basin. The project is expected to take two years from a funding agreement.

**Project: Heritage Gardens (WA)**

Sponsor: WWCCD

Funding Request: \$30,000

Description: The Heritage Garden Program is a certification and technical assistance program initiated by the Benton Conservation District. The program promotes residential landscaping that prioritizes native plant diversity, low water usage, and habitat for pollinators and other wildlife. The program has expanded throughout the Columbia Basin and now includes Franklin, Chelan, Grant, Adams, Kittitas, and Yakima Counties.

The Walla Walla County Conservation District receives multiple requests each year from local landowners interested in the program. Without dedicated funding we have not been able to meet these requests. The requested funding would provide for staff time to initiate and establish parameters for the program in Walla Walla County, provide technical assistance to landowners, and purchase signage for local gardens meeting certification requirements.

A water savings calculator tool was created for Benton and Franklin Counties. WWCCD will use this tool to determine the conversion from the conventional lawn to the heritage garden criteria. This tool uses the Washington Irrigation Guide to determine certification needs. These funds are anticipated to fund between 5 and 10 local projects. If each project converts 2500 square feet (0.06 acres) from conventional lawn to meet the Heritage Garden requirements, over 45,000 gallons of water would be saved. On 5 projects, this would be a savings of over 225,000 gallons saved, annually. On 10 projects, 450,000 gallons of water (annually) would be conserved.

**Project: Pine Creek Siphon Replacement (WA)**

Sponsor: WWCCD

Funding Request: \$1.2M

Description: The Gardena Farms District #13 (GFD) Pine Creek siphon intake is located south of Lowden, Washington. The inverted siphon moves water from the top of the hill at Lowden-Gardena Road, across the valley, under Pine Creek, and up to the Gardena Bench. This district serves roughly 7,000 acres in irrigated crops which include alfalfa seed, seed peas, wine grapes, and alfalfa hay.

This funding would cover the remaining costs associated with replacing the Pine Creek siphon. The current 7,800-foot siphon was constructed in 1957 and needs to be replaced prior to piping the remaining 11 miles of open Upper Canal. The average seepage of the Upper Canal is measured to be roughly 12.5 cfs. Upon a fully piped Upper Canal, those 12.5 cfs could stay in the Walla Walla River and contribute to times of critical low flow. The replacement siphon would also be more energy efficient than the current steel and concrete siphon.



### **Project: College Place Wastewater Treatment Plant Upgrade to Class A Project - Pipe to Gardena Irrigation District Concept Feasibility Study Concept (OR & WA)**

Sponsor: City of College Place

Funding Request: \$200,000

Description: The City currently generates about 1 million gallons per day of wastewater effluent. This water is used to irrigate crops on the existing 110-acre land treatment area during the growing season - and the water is discharged into Garrison Creek during the non-growing season. The City has \$17M of funding secured to build a storage lagoon and a new irrigation distribution system; however, the City is interested in evaluating the feasibility of instead using this money to improve the WWTP to produce Class A Reuse water (like the City of Walla Walla WWTP) and a pump station and pipeline to send this water to the Gardena Farms Irrigation District year-round. The Gardena Farms Irrigation District would like to pipe the upper 11 miles of their irrigation canal because it currently seeps approximately 13 cfs of water. The Gardena District is also interested in utilizing the water from College Place for groundwater recharge. The \$2M of funding requested in this application will cover the cost for engineering of a feasibility study, amendment to the WWTP Facility Plan, and design of the upgrades to the WWTP, pump station, and pipeline.

This concept is needed to be investigated for strategic partnership, utilization of water with Gardena Irrigation District. Regardless of if it originates at CP Treatment Plant via Garrison Creek or Gardena via Mud Creek it ends up in the Walla Walla River less than half a mile from each other. Its worthy to be investigated.

The City has this project in front of Ecology currently to see if they will approve the concept. It is basically improving the College Place Wastewater Treatment Plant to Class A standards and then piping the Class A effluent to the Gardena Irrigation District. Also, as part of this project would be to line/pipe northern portion of Gardena Irrigation District. The purpose of this request is to fund engineering so we have plans to build off of to make this a reality.

## **Water Quality**

### **Project: Green Stormwater Infrastructure Design (OR)**

Sponsor: Walla Walla Basin Watershed Council (WWBWC)

Funding Request: \$71,500

Description: The project will improve water quality by developing an integrated plan to eliminate untreated stormwater inputs to the Walla Walla River in Milton-Freewater, Oregon. Storm runoff from Nichols Canyon, Basket Mountain Road, Highway 11, and adjacent farms, homes, and businesses flows through town and into the river through 48 culverts in the Milton-Freewater flood-control levee. The proposed plan will describe a multifaceted strategy to manage stormwater runoff from 1,395 upland acres by increasing infiltration using swales, rain gardens, green infrastructure along roadways, and by implementing on-farm conservation practices to reduce soil erosion.

Untreated stormwater is known to introduce contaminants such as metals, petroleum-derived compounds, pesticides, herbicides, and sediment into waterways. Increased water temperature due to sediment particles further exacerbates the environmental stress on native fish populations and impairs water quality. New research is showing 6ppd-quinone, the resulting chemical from oxidized tire particulate, to have lethal effects on many salmonids including Chinook.

A 2012 StormNET analysis for a 100-year, 24-hours storm event calculated a peak stormwater outflow rate of 48.2 cfs from the Nichols Canyon drainage and 65.9 cfs from the Hwy 11 drainage. WWBWC will hire an engineering firm to develop design alternatives to reduce, eliminate, or treat runoff to the Walla Walla River from the Highway 11 and Nichols Canyon drainage basins. Following stakeholder review, engineers will create detailed construction-ready designs we plan to implement in 2026. Key project partners include the City of Milton-Freewater, ODOT, private landowners, and the Walla Walla Basin Watershed Council.

### **Project: Garrison & Stone Creek Stream Gauge Project (WA)**

Sponsor: City of College Place

Funding Request: \$125,520

Description: This project entails the development and installation of four river gauges. One on Garrison Creek at Lions Park (801 SE Larch - upstream entry to city) and one at the Wastewater Treatment Plant (420 SW Owens Rd -

downstream exit to city). Also one on Stone Creek at the Larch crossing adjacent to HopThief and one at SW Teal Rd at the exit point to the City.

The City does not have stream gauges. The City wants to accelerate capital investment in the stormwater utility via enrolling into the USDA NRCS PL-566 grant program. The City has over 70 outfalls that need to be redone with treatment facilities. Currently the City has funding to reconstruct one and engineer one a year unless we get grant dollars to accelerate. The USDA NRCS Office out of Spokane paid for a PIFR but this effort reached an impasse where very little data existed about the cost vs. benefit due to lack of stream gauges in the corridor. We really need stream gauges at entry and exist points of the City along Garrison and Stone Creeks to be able to quantify improvements.

The City contacted the local USGS Office to get a quote for the installation of four river gauge systems. The financial cost is \$22,380 per site. This covers O&M, 6-8 calibration visits a year, surveying for stability, establish a datum, and data collection following national techniques for methods and stage. One time \$18,000 per site equipment cost installation that USGS would split cost of and then \$5,000 one time site labor and supply installation cost that the USGS covers. The fiscal cost annually in perpetuity is \$89,520. The City's Stormwater Utility is prepared to absorb this annual cost.

### **Project: College Place Decant Facility (WA)**

Sponsor: City of College Place

Funding Request: \$500,000

Description: The project site will be located near the Wastewater Treatment Plant. The site will include concrete pads that will facilitate emptying and cleaning of street sweeper and vacuor trucks. The solids will be allowed to dewater on the concrete pads. Decant water will be screened, clarified, and then pumped to the sanitary sewer system for further treatment and disposal. The facility will be permitted and operated as a solid waste Piles Facility. Metrics that will be used to track success will be an increase in curb miles of street sweeping per year and cubic yards of solid waste that is processed at the facility.

This project will not reduce the amount of runoff but it will improve the water quality of the runoff by removing pollutants from the roadways before they are flushed into the surface waters during runoff events. The City has approximately 50 stormwater outfalls which discharge untreated stormwater runoff into the creeks that pass through the City. The recently completed Stormwater Management Plan includes a Capital Improvement Plan to add treatment to these outfalls in the future; however, this will take many years to fund and implement. In the meantime, increased street sweeping will remove pollutants from the roadways before they can be flushed into the creeks via these outfalls during runoff events. Pollutants from roadway surfaces are generally sediments that contain metals, petroleum hydrocarbons, and phosphorus. This centralized decant facility will make street sweeping operations more efficient and will increase the total number of curb-miles that the City can clean each year - thereby increasing the number of pollutants that are removed from roadways before they are flushed away during runoff events. The City will be able to track and measure the amount of solids that are processed at this new facility.