Cowiche Confluence Complex - Construction Technical Proposal

WaterSMART Aquatic Ecosystem Restoration Project through the United States Department of Interior, Bureau of Reclamation

Yakima County Public Services – Water Resources Division

Yakima County Flood Control Zone District

In Cooperation with

City of Yakima Water and Irrigation Division

Including Construction of a New Irrigation Delivery Pipeline, related removal of surface Irrigation Diversion Facilities including a Dam, Fish Screen and Bypass Facilities; and the Restoration of Lower Cowiche Creek and the adjacent floodplains of Naches River and Cowiche Creek at their confluence near Yakima, Washington.

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1/22/2024
Yakima County Public Services
Yakima, Washington

Yakima County is a Category A applicant with water delivery authority including the management of 34 public water systems in Yakima County. The Water Resources Division of the Yakima County Public Services Department also manages the Yakima County Water Resource System which owns senior water rights in the Yakima Basin and provides mitigation water for new water uses permitted under the County's Comprehensive Plan, and the Yakima County Flood Control Zone District which has broad authorities under Washington State Law to cooperate with other entities in the management of water resources for the purposes of reduction of flood hazard and management of the channel/floodplain complex in Yakima County. This application is in cooperation with the City of Yakima Water and Irrigation Division, which manages both the potable and irrigation delivery systems for the City of Yakima, including facilities which will be both constructed and demolished by this proposed project. This application is for the Task B: Construction Grant. Yakima County is also applying for a related Task A; Design Grant in the same project area. This project is not focused on a Federal facility or on Federal land.

Project Summary

The Cowiche Confluence Complex Project (The Project) transforms the confluence of the Naches River and Cowiche Creek by creating active riverine habitat and improving floodplain connectivity, while providing improved fish passage, water use efficiency and improved sustainable and resilient infrastructure, public safety for both flood hazard and transportation, and other public needs such as recreation and open space retention. In the Naches-Cowiche confluence, the lynch pin to achieving the ability to implement measures that meet the above goals at a transformative scale is the retirement and removal of the outdated irrigation canals, bypasses and fish ladders that litter the confluence, and installing new delivery pipes outside of this valuable confluence.

This Project will catalyze transformative actions by first constructing a new pipeline from the recently completed fish, boat, and sediment friendly Nelson Diversion on the Naches River to the City of Yakima where it will connect to 3 existing surface water irrigation delivery systems. The Nelson Diversion completed in 2023 has been designed and sited to avoid impact to existing and future habitats and allow the retirement of two fish passage limiting irrigation diversions in the Naches-Cowiche confluence. This initial action will allow for implementation of the remaining restoration-oriented project measures in this proposal to directly transform the Cowiche Confluence habitat and access to miles of upstream habitat.

This project funds the permitting and removal of those diversions, screen systems and returns. Those removals in turn allow the restoration of the lower Cowiche Creek to a more natural

alignment, and the restoration of adjacent floodplains and riparian zones on property owned by the Flood Control Zone District. The lower 2,200 feet of current channel was heavily modified to convey irrigation deliveries, this project includes permitting and construction of a new channel with a more natural gradient and planform as it crosses its alluvial fan and enters the river. This application also permits and constructs another approximately 800 feet of side channel habitats fed by existing cold water springs in the project area which are not currently connected to the river and funds conversion of approximately 67 acres of current and former orchard, and the areas of the removed irrigation diversions, into native floodplain vegetation. Additionally, the County plans to reconfigure existing flood control levees and design a wider Powerhouse Rd. bridge over Cowiche Creek to expand the floodplain of Cowiche Creek, which allows the retirement of other irrigation facilities, canal improvement measures to take place, and the reconfiguration of an additional 900 feet of severely degraded channel. Finally, this conversion then allows the cessation a of diversion from another diversion on Cowiche Creek, returning those senior water rights to instream flow in this portion of Cowiche Creek.

Timeline

The estimated time from award to conceptual design of scoped elements is approximately 6 to 9 months, allowing ample time for stakeholder consideration. It is anticipated that designs would reach a 30% level in a year and with continued coordination between the County, stakeholders, and engineering consultants preliminary (60%) designs for all elements would be achieved in less than 2 years, except for the bridge design which could require up to an additional year to incorporate additional review and studies to ensure public safety and conveyance. Anticipated timeline of October of 2025 for deliverable designs for all the proposed design elements and legal review/survey/recording apart from the bridge design over Powerhouse Rd. which would be completed October of 2026.

The lynchpin that will unlock transformational habitat opportunities is the construction of the new conveyance pipeline from the Nelson Diversion into the city. This element is at 100% design with all permits and required real property interests secured, that portion of the project could begin construction of certain components upon grant award, while completion of the project could not occur until after the end of irrigation season 2025. During that construction timeframe, permitting for the other actions could easily occur, followed by preparation of contract documents. The irrigation diversions salvage and demolition could also be implemented after the 2025 irrigation season and the floodplain restoration actions and reconfiguration of lower Cowiche Creek, which would occur mainly in the dry could also occur during that time frame, with revegetation occurring in the spring of 2026. Levee setback upstream of US 12 cannot occur until pipeline installation is completed, along with the modification to the Naches Cowiche Canal Association mainline upstream of US 12. that action and the upstream stream location and floodplain revegetation would not occur until the summer, or more likely the fall of 2026.

Because of the long planning history at this project site, and the permitting process for the pipeline, most of the actions have already been through a large-scale environmental review

such as NEPA and the State Environmental Policy Act (SEPA) and will qualify for expedited permitting due to the strong habitat enhancement, sustainability, and climate resiliency of these related actions.

Project Location

The Cowiche Confluence Complex Project is located in Yakima County, Washington. Approximately half of the project area is within the city limits of Yakima while the remainder is in unincorporated Yakima County. The project latitude is 46.627785 N, and the project longitude is -120.574325 W. See attached map for more information.

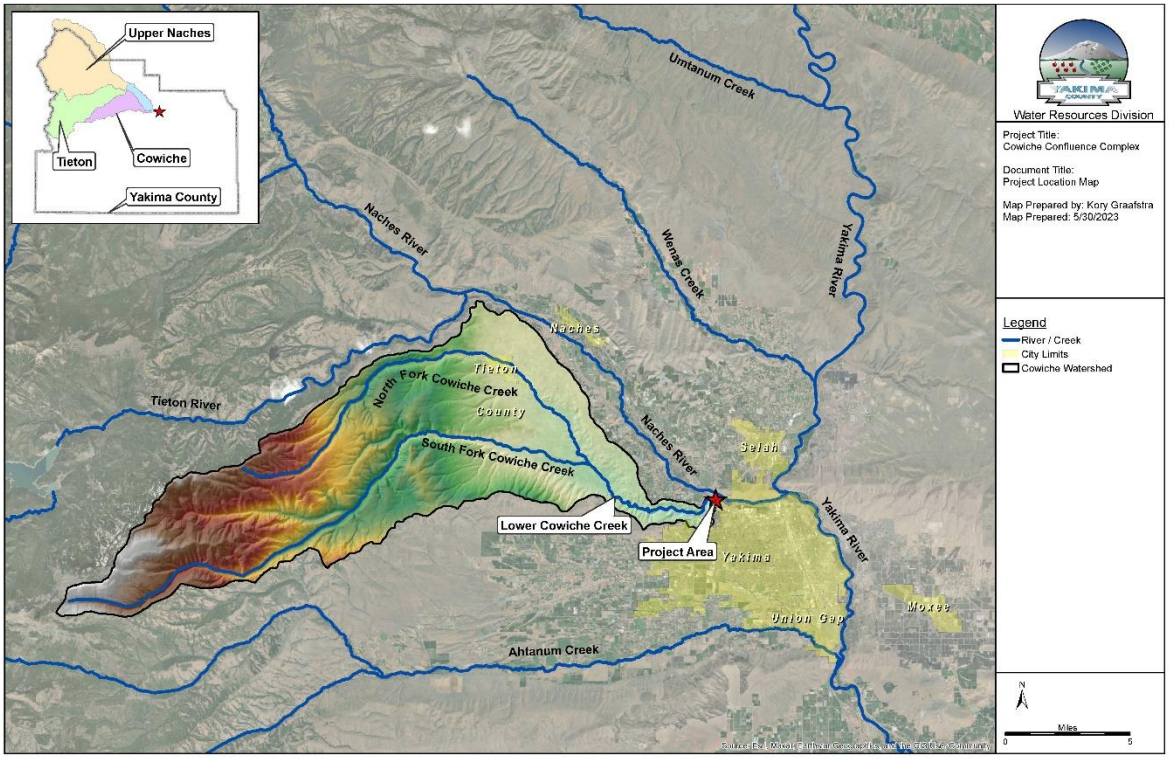

Figure 1 – Project Location

The project encompasses approximately 136 acres of floodplain and channel habitats, including 1.5 miles of the Naches River, 0.6 miles of Cowiche Creek as it currently exists, and 1.2 miles of new pipeline in already-secured ROW, beginning at the new Nelson Diversion just upstream of US 12 in Yakima County, and ending near 40th Av. North in the City of Yakima. The Project is complicated by the significant narrowing of the 'gap' between the two ridges that define the lateral limits of the geomorphic floodplain for the Naches River and the resulting complex overlapping network of independently designed, water diversion and conveyance, flood control, and transportation infrastructure.

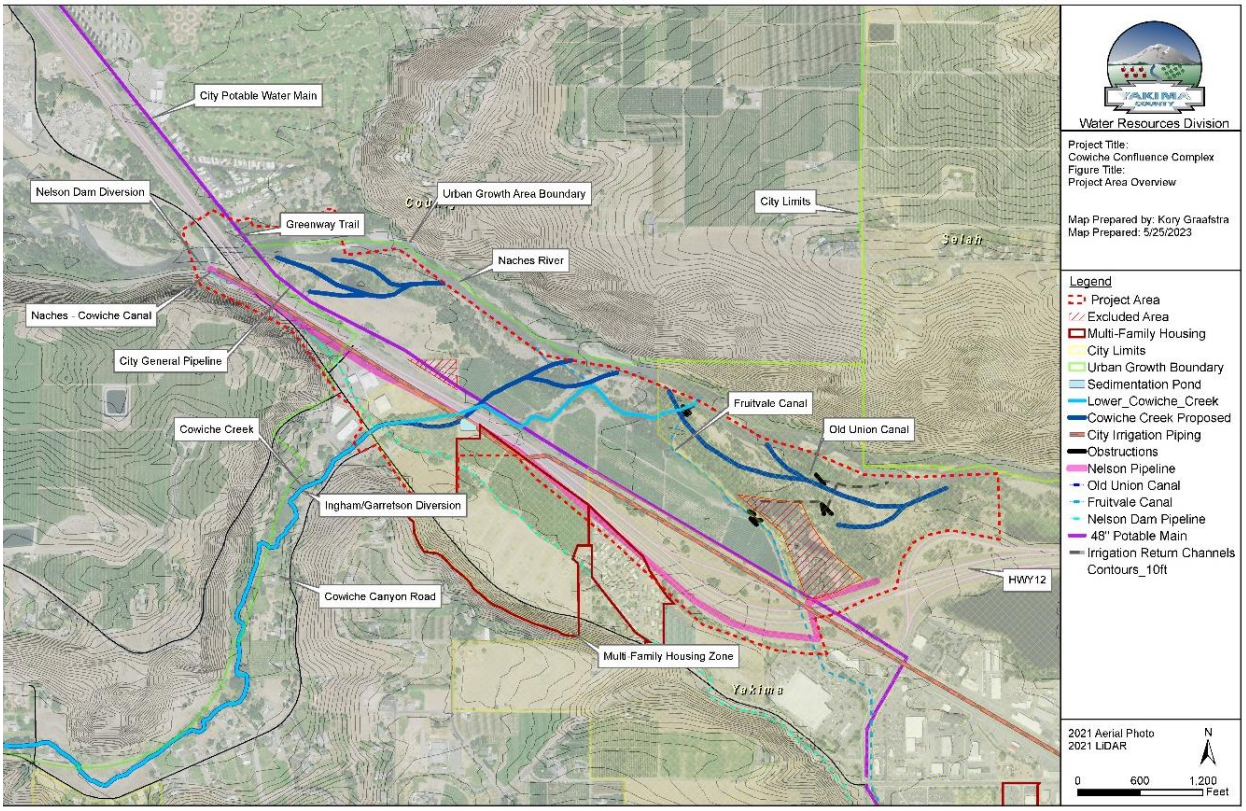

Figure 2 – Project Area is a relatively Narrow "water gap" linking the Lower Naches River alluvial valley to the Ahtanum-Moxee Valley where the City of Yakima is located in the lower right of the figure. Naches River lies along the north wall, current and former orchards and the two irrigation diversions to be removed occupy the floodplain. US 12 bisects the valley, south of US 12 is within the City Limits and currently is being converted to multi-family housing and hotels. The current channel of Cowiche Creek is shown in light blue, and proposed new alignment in dark blue, as proposed side channels.

Project Description

The County and City have a long history of cooperative planning and implementation of projects in this Project Area over the last 20 years. For both entities this has been an area of current and proposed land use change from agriculture to urban uses, related changes in capacity and alignment of transportation infrastructure, and repeated flood damage events on both the Naches River and Cowiche Creek. The objectives of both entities and their partners in these planning processes is to improve the sustainability and resilience of infrastructure in this area, while providing improved fish passage, habitat, water use efficiency, public safety for both flood hazard and transportation, and other public needs such as recreation and open space retention. These planning processes include the preparation of two Comprehensive Flood Hazard Management Plans that abut in the project area, the Lower Naches River Coordination Project in Cooperation with the Washington State Departments of Fish and Wildlife and Transportation. These plans took a broader look at the history of flood damage, high maintenance, and repair frequency, related high disturbance regime and low habitat quality. Examination of riverine

processes in the lower 9 miles of the Naches River and Cowiche Creek indicated that given the configuration of infrastructure in the reach, there was every reason to believe that these conditions would continue to worsen over time. Specific to the four irrigation diversions in the reach (one on Cowiche Creek and 3 on the Naches River) the Endangered Species Act Listings of both Steelhead and Bull Trout in the Basin also focused on poor migration conditions into Cowiche Creek, screen efficiencies, and fish passage facilities which functioned poorly and required extraordinary maintenance actions at the largest diversion at Nelson Dam which supplies the City of Yakima and farming operations south and west of the City. Implementation of these actions at these 4 diversions are recommended in the Yakima River Basin Steelhead Recovery Plan and the Yakima Bull Trout Action Plan.

As a result of these conditions and planning processes, an overall plan for reconfiguration of flood control, irrigation, and transportation infrastructure in this narrow "water gap" along the Naches River. Much of the background material and rationale for these actions can be found in the attached Nelson Dam Environmental memo from 2019, and in the Cowiche Addendum to the Upper Yakima Comprehensive Flood Hazard Management Plan. Currently, implementation of this plan is well underway, with all of the required properties acquired, and significant portions of the infrastructure reconfiguration already completed. In 2008, Yakima County replaced the Powerhouse Road Bridge in the reach, greatly increasing the span length. Beginning in 2010, the parts of the flood control levees in the reach were set back, and in 2017 an adjacent auto wrecking yard was reconfigured which allowed the setback of the remainder of the levee. In 2013, Yakima County, the City of Yakima and 13 other partnership agencies began the design of the new Nelson Diversion Dam. In 2023, the City of Yakima in partnership with Yakima County completed this structure with the diversion capacity to replace all 3 of the other diversions.

This application leverages and is dependent upon those already-implemented elements of the overall reach scale objectives of the County, City and its partners. Specifically, with the completion of the Bridge, Levee Setback and Wrecking Yard Reconfiguration, and the removal of Nelson Dam and replacement with a roughened channel, and funded, future phases of upstream floodplain restoration, sediment transport models indicate that the bedload and fine sediments that had accumulated for several miles upstream of Nelson Dam will move into the Reach of the Naches River which is in the project area for this Task B: Construction proposal. This is a fundamental restorative action in this reach and downstream reaches which have been starved of sediment since at least the 1920s when the current dam location was first used for the consolidated Nelson and Naches-Cowiche Canal Company diversion.

In Yakima County's experience, mainstem habitat conditions improve rapidly with the restoration of sediment transport, affecting the diversity and sorting of gravels, the establishment and migration of gravel bars, the provision of new substrates for native vegetation to establish and the return of a natural variation in age class and diversity of riparian

vegetation. Linked to these processes is a rise in the local water table as the river channel aggrades. These two changes then drive the reconnection to the floodplain and the re-emergence of side channel habitats. The geologic conditions in this narrow valley are such that under natural conditions hyporheic flow would rise to the surface in this project reach, creating thermally stable and nutrient rich habitats for salmonids. The existence of those habitats also created an excellent location for the original small irrigation diversion for the Nelson homestead, the second irrigation diversion in the Yakima Watershed in the late 1850s. Restoration of this riverine processes, geomorphic and hydraulic features in this project area is a major goal of this project and projects that have already been implemented. Overall, based on both hydraulic and sediment transport models, these actions will restore riverine/habitat creation processes on almost 9 miles of mainstem river channel, and provide badly needed sediment inputs to downstream reaches of the mainstem Yakima River as well. The Yakima County Flood Control Zone District has already implemented a channel and floodplain monitoring program in this 9 mile reach to track channel and floodplain response for the purposes of updates to the Flood Insurance Rate Maps (FIRMs) as to document the beneficial effects of these actions and change the maps as the channel responds. The Flood Control Zone District is also cooperating with American Rivers and graduate students at Central Washington University to document the sediment transport process and changes in habitat conditions which result from the restoration of sediment transport in this reach.

Specific Project Elements

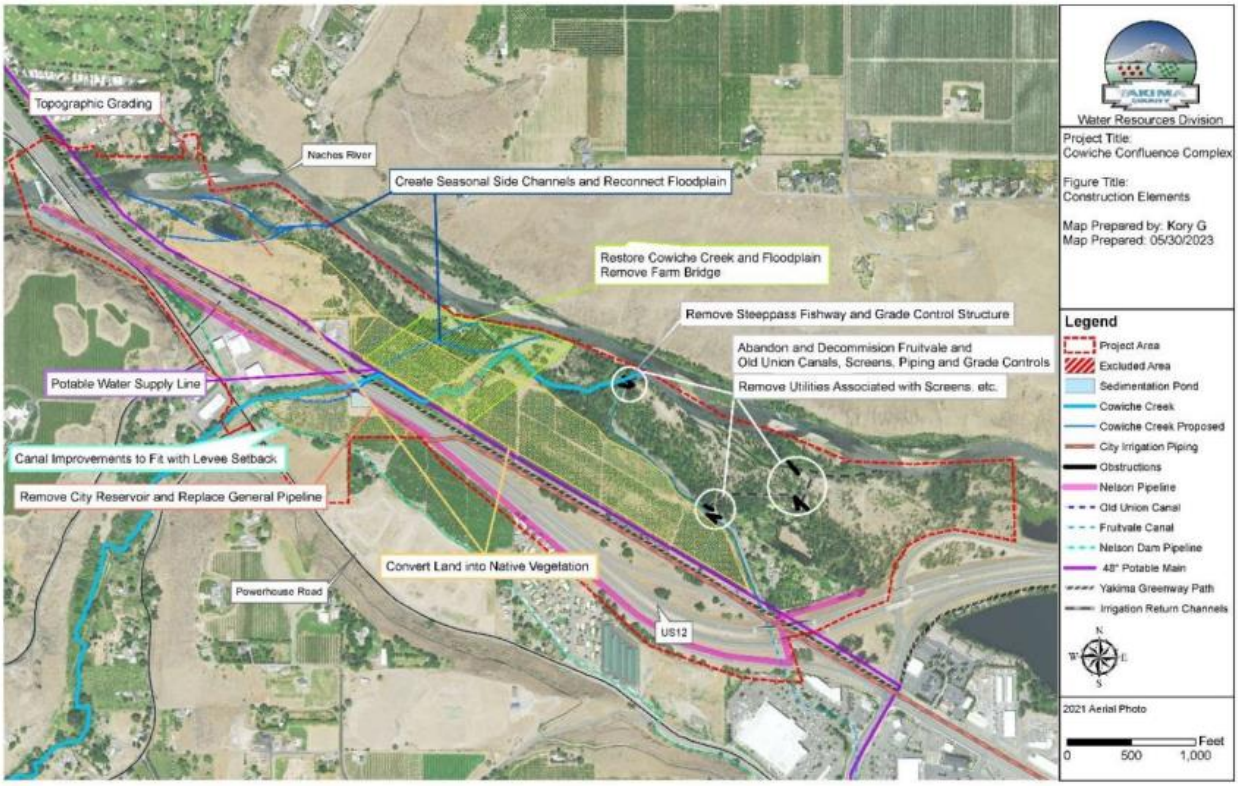

Figure 3 – Proposed Project Elements

Pipeline Conveyance and Water Delivery – The recently completed Nelson Diversion has a greater diversion capacity than Nelson Dam which it replaced, with the objective of eliminating the two downstream diversions on the Naches River, which primarily serve areas within the City of Yakima, and continuing to serve the Naches Cowiche Canal Association's needs as well the City's "General" irrigation water system. As a result of the Yakima Basin Adjudication, a significant proportion (over half) of the City's and Irrigation District and Company's irrigation water rights within the City were reduced. As a result, beginning in 2016 the City undertook an irrigation conveyance replacement project within the city limits, largely replacing old wood stave, concrete, and iron pipe with new HDPE mains and PVC pipe laterals. These improvements reduced but did not eliminate the need for new conveyance into the City with the completion of the new Diversion. The pipeline capacity and sizing to allow the removal of the Fruitvale and Old Union diversions on the Naches River are based on maximizing the conveyance capacity of the existing Naches Cowiche Canal Association, which had extra conveyance capacity as a direct result of the irrigation conveyance already undertaken in the City.

This project was designed and permitted at the same time as the construction of Nelson Dam, including NEPA and Cultural Resources, and is locally known as Nelson Phase II. After consolidation of the four diversions to one intake at Nelson Dam, a series of pipeline conveyance improvements are required to distribute irrigation water to its associated existing distribution system. The pipeline improvements include:

- Install a 36-inch high density polyethylene (HDPE) pipeline from the new intake to the existing Naches-Cowiche Canal. About 700 feet of pipeline will end at the canal and be discharged via a concrete outlet structure. Water will then be conveyed down the canal similar to existing conditions.
- Install a 42-inch HDPE "Consolidated" pipeline from the intake which will distribute water to the Fruitvale and Old Union canal systems. The pipeline will extend from the intake for a distance of approximately 7,000 feet along the eastbound Highway 12 right-of-way and terminate near the existing Fruitvale Canal. At this point, flow will be bifurcated using two valves and metered branches: one discharging into the existing Fruitvale Canal and the other extending north easterly and discharging into the existing Old Union Canal.
- Install a 32-inch HDPE pipeline from the new intake to the City's "General" pipeline system 3,000 feet to just downstream of its existing sedimentation pond, eliminating that which lies adjacent to US 12. Here, the new pipe will connect directly to the existing HDPE pipe at that location.

The City's General pipe and the new consolidated pipe will parallel the Highway 12 right-of-way and cross Cowiche Creek near the City's sedimentation basin (Figure 2-7). The pipeline will be installed via open trench under Cowiche Creek and set at a depth that accommodates future Cowiche Creek restoration efforts planned by the County.

Naches Cowiche Canal Improvements, Levee Setback, Channel Reconfiguration (upstream of US 12) –

This element is being implemented under an interlocal agreement between the County Flood Control Zone District (FCZD), the City of Yakima, and the Washington State Department of Transportation. The FCZD has received grants through the Yakima Basin Integrated Plan, the Floodplains by Design Program at the Washington State Department of Ecology, the Salmon Recovery Funding Board, and the US Fish and Wildlife Service. These funds have allowed the design of the project to approximately the 70% level and permitting is underway. Current funding is not sufficient to complete this element so some of the requested grant funds will be dedicated to this action. This element begins on Cowiche Creek, just downstream of Powerhouse Road. Sub-elements are as follows:

- In 2018, the North Yakima Conservation District installed a new Siphon to take the main canal below Cowiche Creek as the former siphon had been exposed by channel incision, was repeatedly damaged by bedload, and was a partial fish blockage. This project simply extends the length of the siphon pipe on either side of the creek to extend beyond the extent of the setback levee on the south side of the creek and prevents floodwaters from entering the canal (and being routed into the City) on the north side of the creek.
- There is an existing uncertified levee on the south side of the creek. With the lengthening of the siphon pipe from the sub element above, and the removal of the sedimentation basin at US 12 by the pipeline project. This levee will be removed and a new, Corps-Certified, levee constructed on a set back alignment of approximately 200 feet, tying into Powerhouse Road at the upstream end, and US 12 on the downstream end, providing approximately 7 acres of new floodplain in this 800-foot reach. This levee is on land acquired for the project, and is now owned by the City of Yakima, who will also be responsible for maintenance of the levee after construction.
- Cowiche Creek will then be moved and reconfigured, and the floodplain revegetated. These designs will largely conform (slight change in alignment) to a 100% stamped, engineered design created in 2016 through a grant from the Salmon Recovery Funding Board, that design continues downstream past US 12 to the confluence of Cowiche Creek, that downstream portion will likely be constructed first to get the fish passage improvement benefits as soon as possible.

Restore Lower Cowiche Creek and Floodplain – This action also largely follows the existing 100% design from 2016 but is not currently being permitted, the requested WaterSMART funding would fund minor redesign and permitting. The original design assumed that the adjacent orchard would remain in operation, so the creek was designed with an inset floodplain and channel. The adjacent lands have now all been purchased by the FCZD and will be restored to native vegetation, this will allow modification of the grades to that design to allow greater area of floodplain and channel migration, with the floodplain more in the shape of an alluvial fan which occurred there naturally and can be expected to redevelop in any event. This action will include the removal of an existing 16-foot farm bridge which severely constricts the Creek and may also require reconfiguration of the City's main line HDPE potable water pipe that runs underneath the Creek here, the relocation of the Creek allows that activity, and the Creek relocation itself, to be performed in the dry prior to wetting up the new Creek bed. Excavated

materials will be stockpiled and then used to fill in about half of the current channel length; the remainder of the current channel will be allowed to become a groundwater fed side channel.

Floodplain Restoration – This series of related actions restores the project area north of US 12, consisting of approximately 155 acres, to natural floodplain. Specific actions include:

- Remove Steep pass Fishway and Grade Control Structure, Abandon and Decommission Fruitvale and Old Unions Canals, Screens, Utilities, Piping and Grade Controls – This includes all diversion related structures shown on the map below. The mechanical components of the fish screens and the denil steep pass ladder assembly will be salvaged by the Washington State Department of Fish and Wildlife's Yakima Screen Shop. The remainder of the poured concrete elements will be demolished and removed. The Old Union Diversion Canal has had to be continually deepened as the river channel has incised due to sediment starvation from the upstream structure. This material remains in the floodplain and will be used to fill in the diversion canal. For the Fruitvale diversion, parts of the access road fill will be used to fill in the lower portions of that diversion canal from the river to the screen site. Those areas will be revegetated with riparian plantings as well.

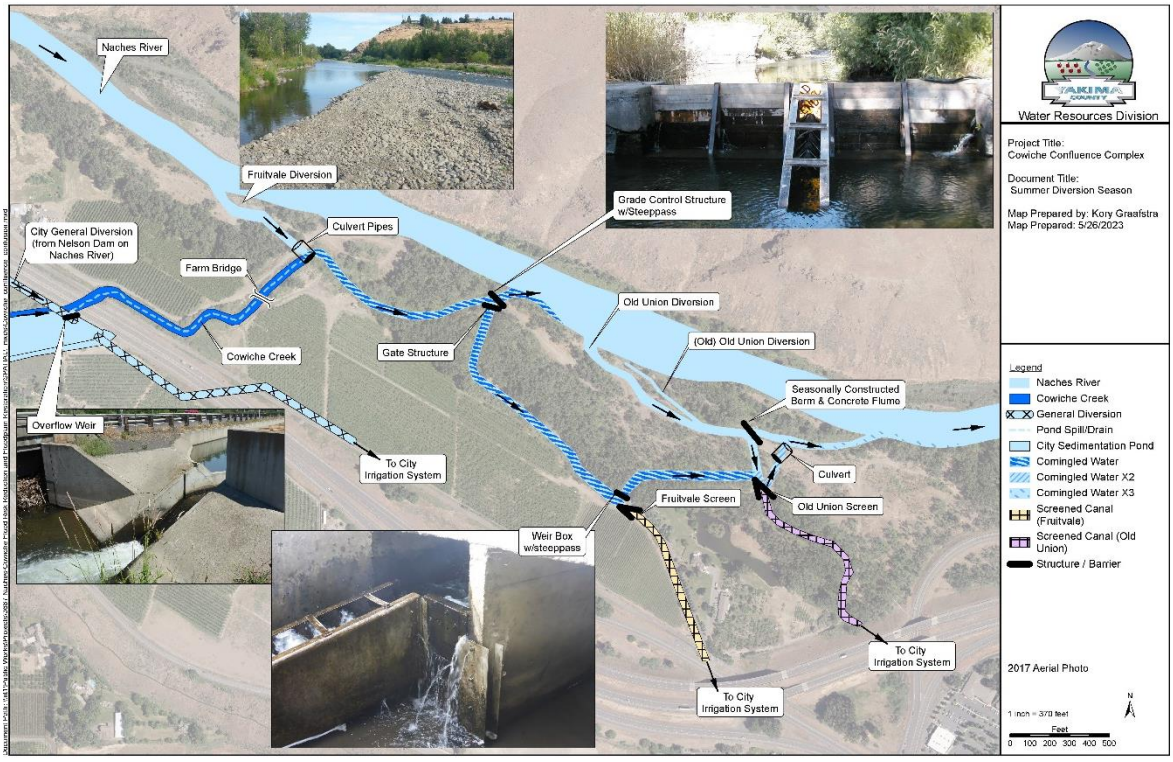

Figure 4 - Lower Cowiche Creek, Fruitvale and Old Union Irrigation Diversions. All of the routing shown is either removed or reconfigured, and all structural elements are removed as well. As the Naches River incised due to sediment starvation, lower Cowiche Creek was aligned to allow the diversion point for the Fruitvale system to move upstream of the Creek, with several right

angles and a drastic reduction in gradient as a result. Later a Dam and Steep Pass fishway was added at the confluence to further control grade of the diversion to the fish screens. The Old Union Diversion downstream combats the channel incision through a network of excavated channels which require ongoing maintenance. The fish bypass for the Fruitvale connects to the bypass for the Old Union, adult steelhead have been documented to become stranded between the two facilities. This interconnection of the altered Cowiche Creek and mixed Cowiche/Naches River water at entering the river at several locations also creates false attraction flows for anadromous fish, particularly the ESA listed Steelhead and Coho salmon.

- Vegetation Conversion – this consists of removal of approximately 42 acres of current orchard, which will mostly be hauled off site, some of that ground material will also be used as mulch. This action also includes the conversion of almost 20 acres of former orchard to native vegetation, along with the disturbed sites from the removal of the irrigation infrastructure. Revegetation will primarily consist of upland species such as sage brush and bitterbrush and related herbs in, hydroseeded with native bunchgrasses and annual rye as a cover/weed and dust suppression crop on these coarse, well drained sandy soils. For the most part, the riparian forest along the Naches River is in good shape within 200 feet of the channel, there will be approximately 11 acres of riparian plantings – cottonwood, low elevation Ponderosa Pine, and related shrubs in bare areas and the areas disturbed by the demolition. 4 acres of new riparian zone will be established along the approximately 400 feet of relocated channel outside of the existing riparian zone along the river. The lower 400 feet of relocated Cowiche Creek is designed to fit between existing large cottonwoods and former channels in the existing riparian zone near the Naches River.

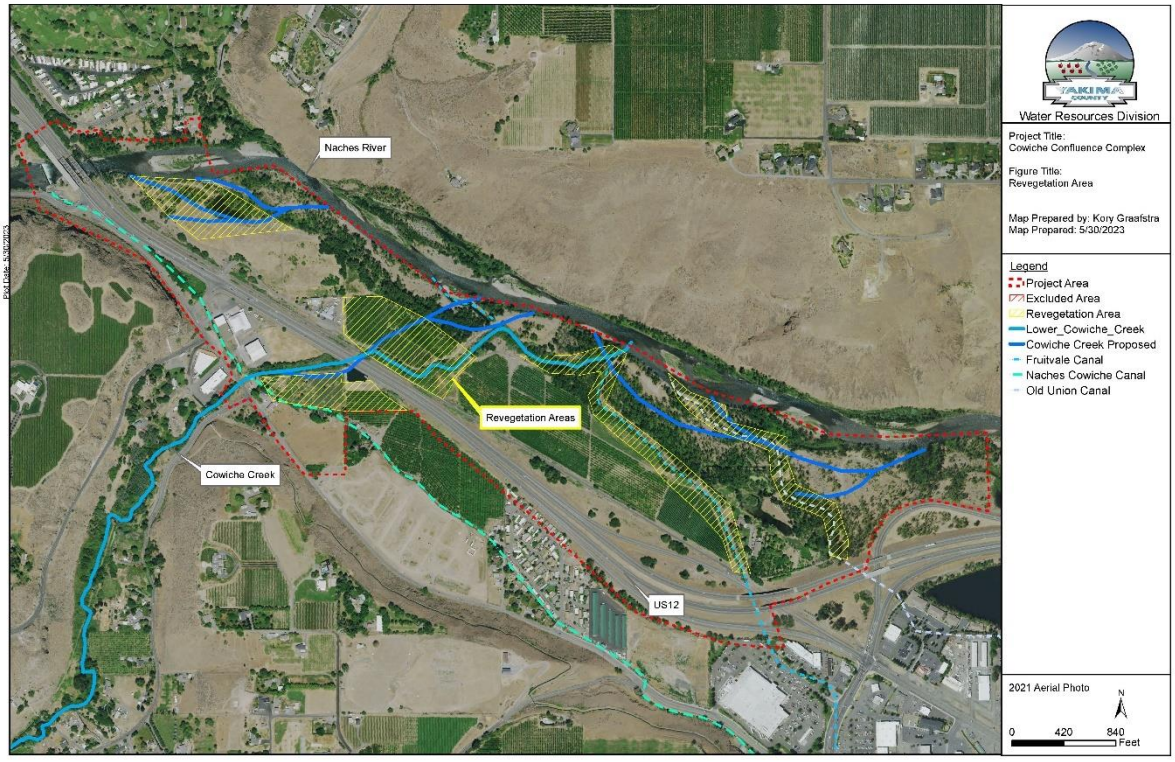

Figure 5 – Yellow Hatched Area shows where riparian plant communities will be established.

- Topographic Restoration and Site Grading – This is largely related to the Vegetation Conversion above as the majority of this action occurs on lands that will be revegetated – it includes regrading the orchard and removing the irrigation system and the abandoned irrigation system still present in the former orchard lands. It also includes the regrading of the canals on site, including most importantly the Fruitvale Canal landward from the current screens to prevent the routing of potential floodwaters down the canal alignment and into the City of Yakima.
- Relocation of Power Infrastructure - This consists of removal of the existing powerlines, poles and "drops" that serve the current diversion structures. This action also reconfigures an existing power line Main that crosses the river in this reach. Two of the large poles for this main are in the expected channel migration zone of the Naches River which is expected to increase in activity due to the removal of Nelson Dam and the desired restoration of sediment transport. This relocation has been laid out in cooperation with Pacific Power and uses existing highway and road utility easements to maintain service.

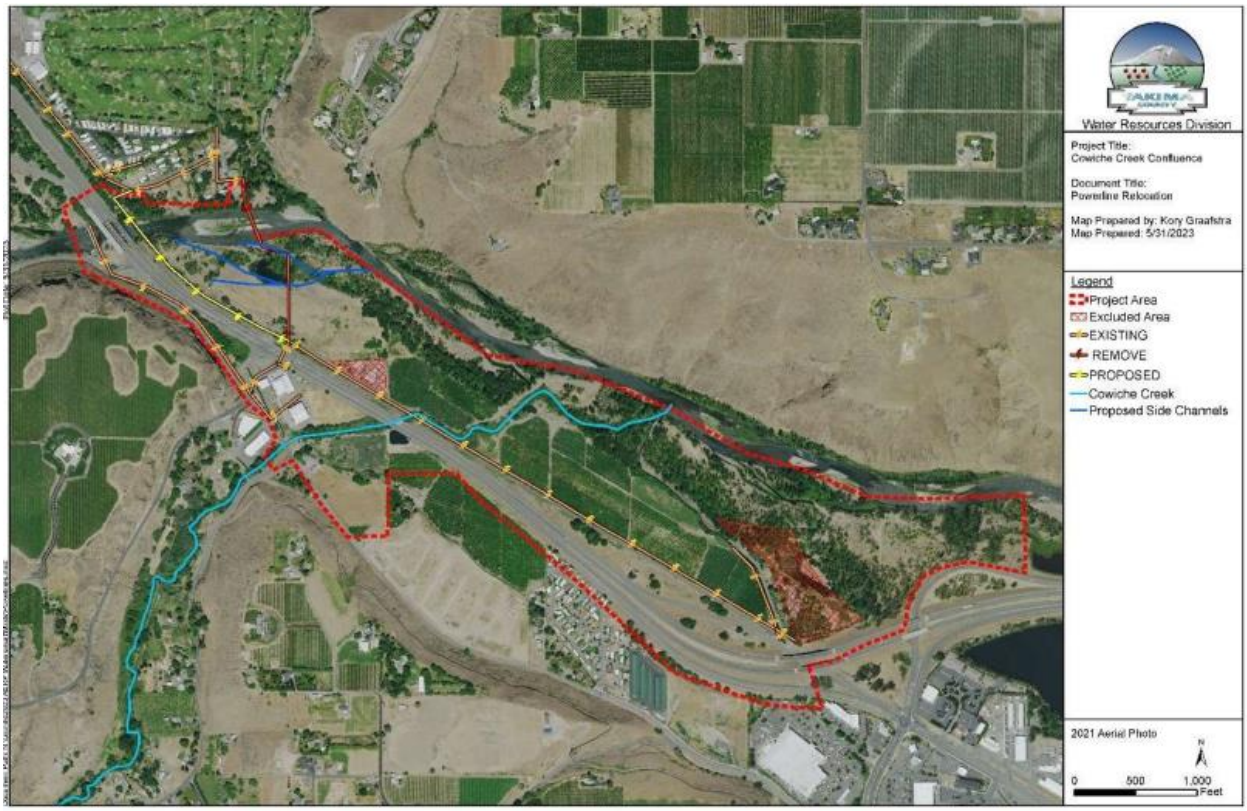

Figure 6 – Current and proposed Powerlines locations.

Side Channel Creation – The irrigation water source for the former orchard lands was a pond located in the current riparian zone along the river. This pond is fed by a buried infiltration system that intercepts groundwater near the river and discharges it to the pond. The pond maintains its static water level throughout the years and is very thermally stable – cold in the summer and ice free in the winter – due to this groundwater input. The project will lower the

pond approximately 4 feet and create two side channels, located in swales of former river channels, connecting to the river. This should provide rearing space for salmonids in the reach and will especially benefits Bull Trout in this reach which is the lowest elevation Foraging, Migration, and Overwintering habitat that is regularly used by the fluvial Bull Trout populations in the Naches River.

Evaluation Criteria

General Project Benefits

• *What are the critical issues of concern in the watershed? Provide documentation and support for how the critical issues were identified.*

Critical issues in this watershed have been identified through several planning processes including the Yakima Basin Subbasin Plan, and the Yakima Basin Steelhead Recovery Plan, both of which were formulated with Yakima County as the sponsor. Yakima County has also prepared both the Lower Naches and Upper Yakima Comprehensive Flood Hazard Management Plans, including the Cowiche Addendum which is directly related to this project proposal. The Yakima Basin Integrated Plan has incorporated those documents as well as the overall economic and water supply objectives for the Basin as a whole. The Habitat section of the plan features these types of floodplain restoration projects as centerpieces of the plan, both because of their central importance to agricultural productivity and the location of the major irrigation diversions which drive the economy of the valley, but also are consistent with the seminal blueprint for restoration of the salmonid productivity of the basin, known as The Reaches Report. This report was prepared by the Flathead Lake Biological Station under contract to the Bonneville Power Association, and in cooperation with the Yakama Nation and the United States Department of Interior, Bureau of Reclamation. The report looks at the historic production potential of the basin and the productive capacity and habitat diversity of the major mainstem river reaches. All these documents and studies tie back to that original report, and prior actions on the Naches and Yakima Rivers by the Yakima Flood Control Zone District and its partners have built upon that report to implement significant restoration actions such as the series of floodplain and habitat restoration projects in the lower Naches, including Nelson Dam and associated levee setbacks, and other actions on the Yakima River as well. This proposed project implements recommended actions from all of these plans and also represents the benefits of the Yakima Basin integrated plan as the continued implementation and design of these multiple actions aligned with overall management goals of sustainable and resilient management of the channel and floodplain, incorporating the ongoing need for surface diversion facilities which minimize conflict with fish passage and overall riverine processes would not be possible without the Integrated Plan. Just as important, the Washington State Department of Ecology's Floodplains by Design Program also is geared toward similar sets of social and biological considerations in management of channel and floodplain environments. Yakima County Flood Control Zone District has received funding in the past for related actions such as design of the Nelson Project, levee setback and Wrecking Yard Reconfiguration, and floodplain restoration in the project area, due largely to conformance with the biological goals of the Recovery Plans and

the societal goals of the Shorelines Management Section of the Department of Ecology in the provision of public access to, and the protection of Shorelines of the State, as well as flood hazard reduction and sustainability and resilience of infrastructure in the floodplain environments.

• *Explain how your project will benefit aquatic ecosystems, including benefits to plant and animal species, fish and wildlife habitat, riparian areas, and ecosystems.*

The scope of this project is a continuation of projects already implemented and is primarily designed to restore fish passage and habitat connectivity/eliminate false attractions flows at the confluence of Cowiche Creek with the Naches River. This project is also strongly related to the past upstream floodplain restoration, irrigation, and transportation projects which will restore sediment transport to this reach.

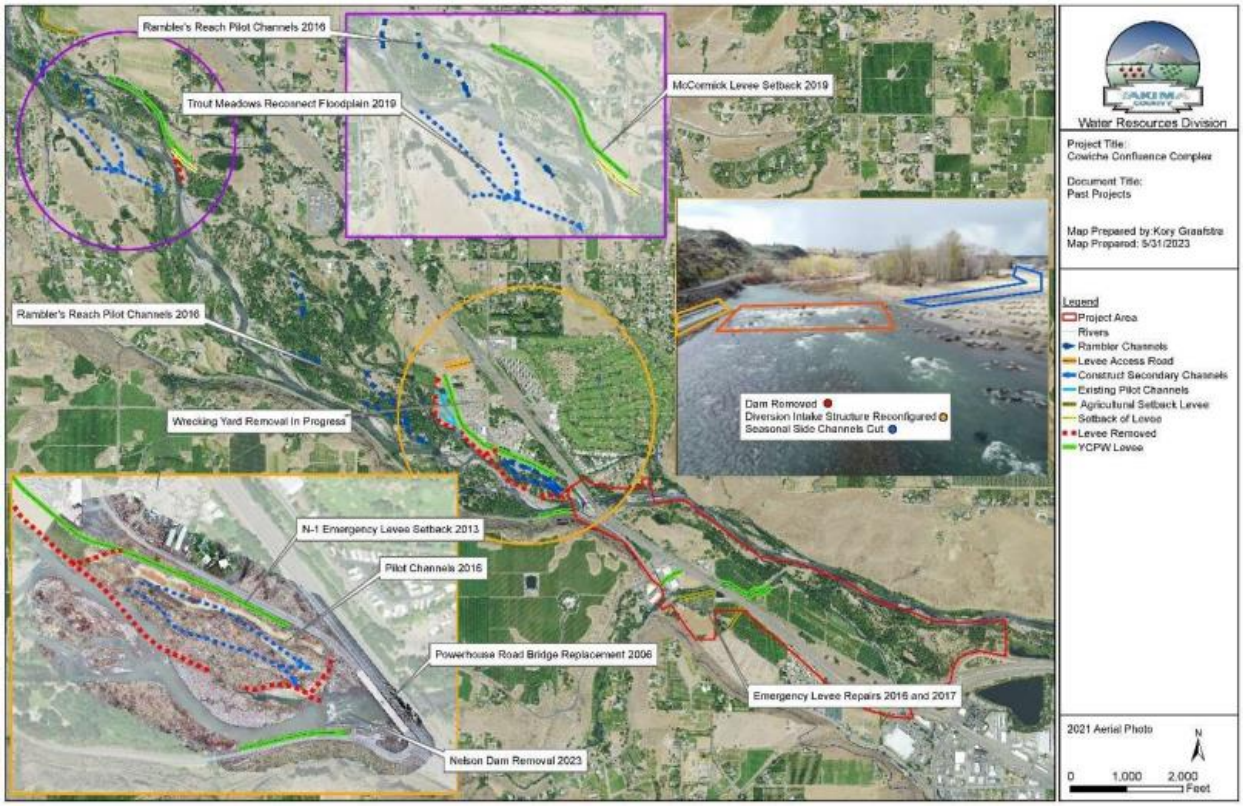

Figure 8 – Past floodplain restoration, infrastructure removal and infrastructure reconfiguration projects which combined have restored sediment transport to the project reach.

The project area also sits at the site of hyporheic upwelling at the lower end of the 11 mile long Lower Naches Valley, and restores the potential for the high habitat value side channels that naturally existed at this location prior to channel incision and floodplain disconnection in the early 20th century. For a more thorough discussion of these multi-reach scale benefits see the attached Nelson Dam Environmental Memo. The project also restores Cowiche Creek itself to a more natural alignment after it has been modified by uncoordinated flood, transportation, and irrigation projects since the first homesteads in the valley in the 1850s. This project unwinds

past uncoordinated and environmentally damaging capital project and implements a series of actions to improve sustainability and restore riverine processes at a critical time. This project area is at the edge of the City of Yakima's Urban area and the project represents an effort to resolve the uncoordinated development of infrastructure in this reach in an area that is now expected to rapidly develop. The restored area of Cowiche Creek is zoned for multi-family residences and is currently undergoing conversion to that land use. Within 2 years there will be over 5,000 new residences adjacent to the project area.

• *Does the project affect water resources management in 2 or more river basins (defined as a minimum HUC-10 level)? Explain how and identify the area benefitted (provide a map).*

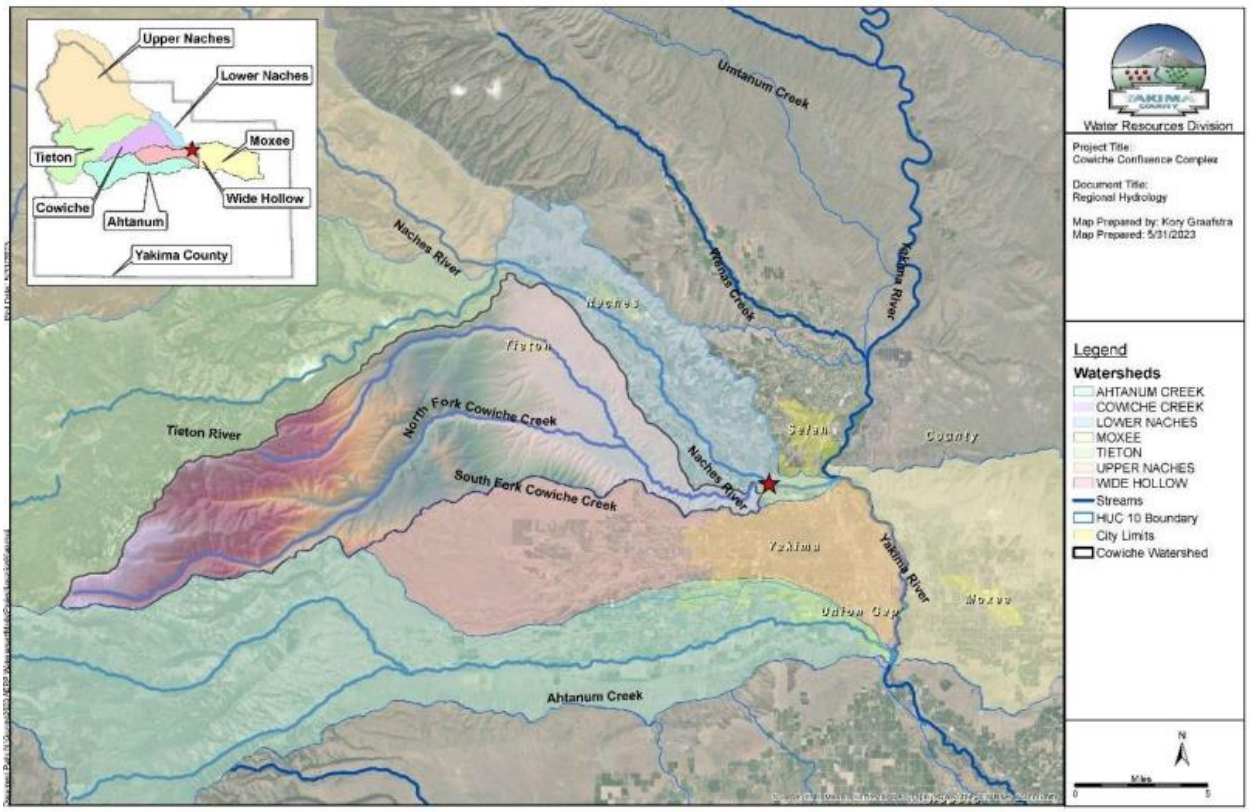

Figure 9 - HUC10 Watersheds

This project provides benefits to fish populations that reside in 3 HUC 10 watersheds that together occupy the entirety of the upper Naches watershed. It also affects water management in terms of irrigation distribution in the Lower Naches, Wide Hollow/Moxee, and Ahtanum HUC 10 watersheds. It also effects flows and sediment continuity between the Lower Naches and Moxee HUC 10 watersheds in the Naches and Mainstem Yakima Rivers.

• *Does the project provide regional benefits, in addition to fish or habitat restoration?*

Yes, this project provides regional benefits to municipal and agricultural water users for irrigation water and dramatic reduction in the need for maintenance actions related to the two removed diversions. Through retirement of the orchard and of the diversions, flow in lower

Cowiche Creek is restored for environmental purposes. It also has a strong relationship to flood hazard reduction and public safety through the floodplain restoration on Cowiche Creek which reduces flood hazard to the interior of the City of Yakima, and the overall 150+ acres of restored floodplain reduce peak flows in the mainstem Naches within the Cities of Yakima and Union Gap.

• *Is this project a component of a broader strategy or plan to replace aging facilities with alternate facilities providing similar benefits?*

This project is not necessarily targeting facilities due to age or inefficiency. It does replace old infrastructure with new infrastructure, with particular benefits to fish passage, reduction in false attraction flow and reduction in maintenance needs and emergency response to flood damage for irrigation infrastructure, but little of that had specifically to do with a larger scheme modernization goal such as a SCADA project. The project is greatly, however, by the replacement of the old irrigation distribution system in the City of Yakima which reduces overall water supply demand and reduces the cost and size of these proposed conveyance project elements.

• *Describe the status of the species and/or habitat that will benefit from the project:*

This project is targeted toward Steelhead recovery and directly improves passage and reduces false attraction flows to Steelhead, it occurs within and improves designated critical habitat for the species. The project addresses the last remaining partial fish blockages to Cowiche Creek. Restoring a healthy Steelhead population to Cowiche Creek is a cornerstone of the Recovery Plan for Steelhead as it greatly improves species viability through increased habitat and spatial diversity thereby reducing extinction risk. Steelhead numbers in the Yakima Basin have been gradually increasing over the years since recovery, some of this is undoubtedly attributable to improved habitat and passage conditions such as passage in Cowiche Creek which has shown Steelhead spawning increasing in the Creek. The Yakama Nation's Kelt reconditioning program has also likely greatly increased the production potential/fecundity of the population by increasing the survival of mature fish, large-bodied fish which have already spawned at least once in the basin and allowing them to spawn again.

The project will also have primary and secondary benefits to listed Bull Trout by improving mainstem/FMO habitat, providing the cold-water side channels proposed for construction, and allowing side channels to re-express themselves which should improve both designated critical habitat for Bull Trout and their prey. Fluvial life history Bull Trout populations in the basin are at a stable level, but still well below de-listing criteria. The most endangered Bull Trout populations are restricted to the upper reservoirs of the basin and are the focus on near term, emergency level actions such as the captive rearing program to keep those populations from extirpation under the local Bull Trout Action Plan for the Yakima Basin.

The project will also benefit other anadromous fish. The constructed side channels and natural side channels that will develop from hyporheic flow should also provide rearing habitat for

Naches River Spring Chinook; this species should also benefit from the other floodplain restoration action that occur in the lower Naches River. The restoration of mainstem Cowiche Creek will also benefit Coho salmon which are being reintroduced. These salmon do spawn in the lower portion of Cowiche Creek, but survival is very low due to unstable channel conditions associated with the modified channel plan form and slope of the lower creek.

Similarly, this reach of the Naches has been the focus of release projects for the reintroduction of Coho, but channel instability up and downstream of the former Nelson Dam had limited mainstem egg survivals for Coho and for mainstem spawning Steelhead. Over the longer term, these actions to restore sediment transport and other riverine processes in the mainstem should improve habitat for spawning and improved survival for those species. Similarly, the other floodplain restoration efforts in the lower Naches and the mainstem Yakima River in the Gap-to-Gap reach just downstream has led to efforts to reintroduce Summer Chinook in these reaches in the middle of the basin. The restored mainstem Naches in this area of high hyporheic zone discharge has all the elements needed to develop into high quality spawning habitat for all these species.

Quantification of Specific Project Benefits

Species and Habitat Benefits

Quantify and provide metrics for the extent to which the project will benefit the species and/or habitat, and provide support for your response:

This project will remove the last partial blockage into Cowiche Creek, a 77,000-acre watershed which has seen its population begin to rebound since habitat access was largely restored in the 2010s. Fish telemetry studies for steelhead from 2014-18 and periodic surveys indicate that these two diversions are problematic for steelhead passage. Several steelhead migrating up the Naches River were found to be trapped in the fish bypass channel that links the Fruitvale and Old Union Diversions, supposedly due to false attraction flows and the ability for fish to enter the fish bypass from the downstream end. This false attraction problem has been shown for other fish species as well including Spring Chinook and Coho, indicating that removal of these two diversions will benefit anadromous fish in the Naches drainage in general, and not just by improving migration conditions into Cowiche Creek. This project directly implements one of the 2 suggested high priority actions in the 2022 Status Review for Mid-Columbia Steelhead – “Restore complex floodplain habitats in mainstem reaches (Wapato, Gap to Gap-in progress, Lower Naches (Naches and Upper Yakima populations), as well as in Kittitas and Cle Elum reaches (Upper Yakima River population).”

The project will also benefit other anadromous fish. The constructed side channels (almost 1 acre of thermally stable habitats) and natural side channels that will develop from hyporheic flow should also provide rearing habitat for Naches River Spring Chinook; this species should also benefit from the other floodplain restoration action that occur in the lower Naches River.

The restoration of mainstem Cowiche Creek will also benefit Coho salmon which are being reintroduced (1 acre of functional creek habitat). These salmon do spawn in the lower portion of Cowiche Creek, but survival is very low due to unstable channel conditions associated with the modified channel plan form and slope of the lower creek. Flows will also be improved (1.7cfs peak, 230 acre feet annually) in this 1800 feet of relocated channel by the conversion from orchard to native vegetation and the ability to serve any remaining agricultural needs from the Naches Cowiche Canal Association ditch by reduced demand on that facility (in partnership with Trout Unlimited who leases water from these owners and has already installed infrastructure that will allow it to happen).

Similarly, this reach of the Naches has been the focus of release projects for the reintroduction of Coho, but channel instability up and downstream of the former Nelson Dam had limited mainstem egg survivals for Coho and for mainstem spawning Steelhead. Over the longer term, these actions to restore sediment transport and other riverine processes in the mainstem should improve habitat for spawning and improved survival for those species. Similarly, the other floodplain restoration efforts in the lower Naches and the mainstem Yakima River in the Gap-to-Gap reach just downstream has led to efforts to reintroduce Summer Chinook in these reaches in the middle of the basin. The restored mainstem Naches in this area of high hyporheic zone discharge has all the elements needed to develop into high quality spawning habitat (32 acres) for all these species. This project accomplishes this by building on restored sediment transport processes from upstream projects, restoration and maintenance of the riparian zone, elimination of repeated dredging and armoring projects to maintain the ability to divert, and reconnection of adjacent floodplains.

In addition, the project will convert 67 acres of current and former orchard to 50 acres of upland habitat and 17 acres of riparian habitat generally 180 feet in width from the wetted channel.

Watershed Benefits

o To what extent will the project improve water quality?

Washington State water quality standards include requirements for fish migration, spawning and rearing. Improvements to water quality will largely come from increases in summer flow by retirement of the lowest diversion in the Cowiche Creek when the orchard is converted to native vegetation and the current diversion with a capacity of 1.7 cfs is retired. Cowiche Creek is gauged during the warmer months of the year just below the diversion and it in common for that flow to read at or near 1 CFS periodically in July and August, and for extended periods for drought years such as 2015.

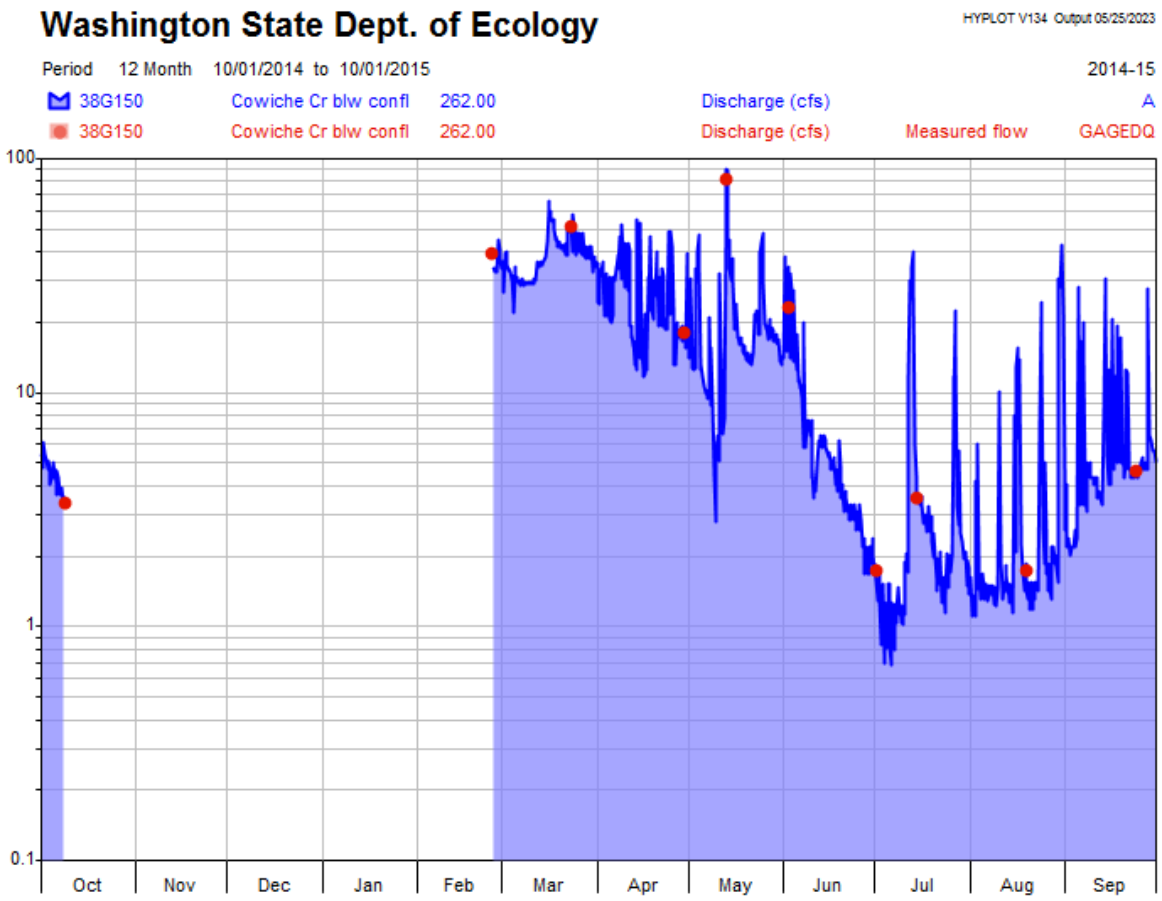

Figure 10 – Hydrograph of Cowiche Creek from 2022, note seasonal operation of gauge.

o To what extent will the project benefit ecological function?

Sediment transport has been improved by upstream actions. Sediment transport modeling of the effect of those actions indicate that the reach of the river in the project area will respond relatively quickly by rising 1.6 feet, and then leveling off. Much of the sediment that was trapped above the Nelson Dam/Ramblers levee constriction is now trapped in the riparian zone vegetation, and the Flood Control Zone District is undertaking another project (Ramblers Phase VI) to construct pilot channels to release even more sediment to benefit this reach and balance a head cut moving upstream from the Yakima River. With this rise in bed level and related floodplain reconnection of this project there will be a related rise in the local water table, and a return of the side channels which were here historically, as well as constructed side channel features from the existing irrigation pond. Combined these actions will supply badly needed thermally stable cold water refugia in the summer, and highly productive warm water refugia in the winter. Based on similar projects on the Naches and Yakima Rivers, the return of sediment will influence the presence of spawning gravels/natural sorting river substrate, but also lead to increased area for riparian zone planting and early seral stages of riparian plant communities which provide needed riparian habitat diversity and increased allochthonous input of leaves, insects, and other terrestrial organic inputs to the river.

Ecosystem Resiliency Benefits

 The reduction of impacts of climate change.

Local climate models indicate that the major effect of climate change in the Yakima Basin will be a reduction in winter snowpack, a shifting of peak flows earlier into the winter, and a reduction in summer low flows and increased water temperatures. Peak flows are not expected to increase but longer duration sediment transport flows are expected. The thermal benefits of the project, the return of sediment transport, the effects on the riparian zone, the construction of side channels and providing access to cold water refugia, and the increase in summer low flow in Cowiche Creek are all aspects of this project that reduce the impacts of climate change on salmonids, particularly listed salmonids such as Bull Trout. The increased duration of sediment transport flows would cause an increase in maintenance for the two diversions which are going to be removed, particularly the Old Union Diversion which requires a deep diversion channel because of channel incision in the river. Removal of these diversions is a mitigating effect on climate change by eliminating the need for diversion maintenance and "reset" of habitat forming processes that occurs with that maintenance. Similarly, the restoration of Cowiche Creek will allow a similar set of natural riverine processes to occur, including natural rates of channel migration across its alluvial fan at the confluence with the Yakima, as opposed to the series of right angles and the unnaturally low gradient which leads to channel aggradation and poor egg to fry survival for Coho.

 The reduction of impacts of development,

The project is part of an overall effort to prevent locking the River and Creek into its current dysfunctional alignments as a result of development. The main reason for early acquisition of most of the project area is that it lies within the Urban Growth Area of the City of Yakima and was zoned Suburban Residential. Because the City's main potable water line transits through this area, urban services were available which would have allowed 4 houses per acre in the upland and one house per acre in the floodplain, resulting in the potential for over 60 houses on the north side of US 12, in a very high flood hazard area from the river and the creek. This project takes advantage of those purchases and restores that floodplain with the eventual goal, in cooperation with the City of Yakima, of development of an open space Park, compatible with riverine processes and side channel development, at this location.

 Removing invasive species, protection against invasive species, and restoration of native species,
 Or assistance in helping aquatic ecosystems recover from disturbances such as floods, wildfire, or drought.

This project converts approximately 60 acres of non-native vegetation to native upland and riparian plant communities. We anticipate that this will include the ongoing involvement of the North Yakima Conservation District to maintain the plantings. Recent activity in the Washington State Legislature will provide additional funding for the restoration and maintenance of riparian zones as a component of the States Climate Change strategy – to achieve objectives of cooler

water and climate sequestration. The FCZD anticipates that these programs will fundamentally change how it manages all of the riparian properties it owns along the Naches and Yakima Rivers, providing funds for long term management of riparian zones, including responses to damage from flooding, fire, drought, insect infestation, invasive species or mitigating the impacts of homeless encampments.

 Improvement of habitat fragmentation,
This project does not reverse habitat fragmentation on its own, but it does link well with projects such as upstream floodplain restoration projects and preserves over 150 acres of open space directly adjacent to rapidly growing residential and commercial land uses along US 12.

Water Supply Benefits

Quantify and provide metrics for the extent to which the project will increase water supply to an aquatic ecosystem, and provide support for your response:

The project will eliminate the need to continue to divert from the Ingham/Garretson diversion on Cowiche Creek, the total quantities for the 3 water rights at that diversion are 1.7 cfs max instantaneous flow and 230 acre-feet (39 acre-feet currently in Trust). As discussed before, this is a significant improvement in low flows in Lower Cowiche Creek, especially in drought years. The water rights associated with this diversion are very senior – 1865 – and are of high value on the water market, thus providing an incentive to completely use or document use of these water rights as the land uses in lower Cowiche Creek changes. In 2019, Trout Unlimited entered into a drought year lease agreement with the diverters at this location to lease this senior water during July and August, with related changes in pipes and pumps installed to allow irrigation from the Naches Cowiche Canal during that time. Trout Unlimited entered into similar agreements in 2020 and 2021. With the conversion of a large area from orchard to residential and good water year in 2022, TU did not enter into summer lease agreements. The point here is that there is high certainty about the validity of these water rights due both to continuous use, the lease agreements, and the targeting of these rights by Trout Unlimited due to the relatively large flow benefits they provide to the Creek. The latest funding for water acquisition targets the remaining water rights at this diversion for purchase with all those rights remaining as instream flow in Cowiche Creek. Yakima County's water rights will be retained for use in the County's water mitigation program, the remaining water rights would go into Ecology instream flow "bucket" to improve flows, usually outmigration flows for juvenile salmonids, and in-migration flows for summer migrants into the basin such as Sockeye which are being reintroduced to the basin.

Other Quantifiable Benefits

o Improvements in public safety (reduce/eliminate flood risk, dam breach, road damage)

A major objective of planning in this area is the reduction of flood hazard and flood damage. As detailed in the attached environmental memo, the trajectory of channel aggradation upstream

of Nelson Dam and channel incision downstream lead to ever increasing flood hazard to Nelson Dam itself, US 12, and the surrounding community of Gleed, while also increasing the need and frequency of maintenance for both the Fruitvale and Old Union Diversions as the channel incised – which led to other problems of false attraction flows and poor fish passage, with passage generally not possible during summer low flow according to WDFW's fish passage database. This project, and the related projects already implemented were designed to reduce or reverse these altered processes. The new Nelson diversion along with floodplain restoration upstream has lowered the 100-year flood level by 4 feet, almost taking US 12 out of the regulatory floodplain. This increased conveyance/wider flow path along with restored sediment transport, will cause a channel response in the project area, the sooner these irrigation diversions are removed, and those users supplied by the new Nelson Diversion, the less wasted funds on maintenance, the less environmental damage, and the sooner the improved fish passage conditions will occur.

The floods of 2016 and 2017 in Cowiche Creek caused significant damage in the City of Yakima and closed the 40th avenue Exit from US 12 for several days, estimated economic damage from that closure was on the order of almost $400,000 per day in increased travel costs, travel delays, and business loss according to WSDOT. This project is designed to reduce the frequency of flooding by setting back and improving the farm levee (which partially failed in both flood events) and improving conveyance in the creek by restoring a more natural channel alignment and gradient on the alluvial fan as opposed to the current artificial alignment with 3 right angles and a near zero gradient. These actions alone will not provide certified 100-year flood protection until both the Powerhouse Road Bridge and the bridges on US 12 over Cowiche Creek are expanded from the current 1960's era design standard of passage of the 50-year flow to the current 100-year design standard. This project will take the capacity from the current approximately 10-year flow conveyance capacity up to something past the 50-year flow according to hydraulic models for the channel design. Yakima County and the City of Yakima are working with WSDOT and the City Streets division to get the US 12 bridges designed and constructed through the BIL-funded PROTECT act, and the City's Powerhouse Road bridge designed in the related Task A: Design grant at this location.

o Improvements in safe access to nature or recreational opportunities

See the attached letters of support for the proposed Naches Cowiche Confluence Park. The FCZD and its partners are planning to begin an update process for the Lower Naches Comprehensive Flood Hazard Management Plan in specific cooperation with the Yakima Basin Fish and Wildlife Recovery Board and the Washington State Recreation and Conservation Office. This planning exercise will include habitat restoration planning and recreational planning in the Lower Naches. This project is essentially the downstream terminus of a series of restoration projects on the lower Naches River which have resulted in floodplain restoration of over 390 acres in 7 project locations in addition to this project proposal. As the river responds to these projects the FCZD will need to maintain the 2D hydraulic models and periodically update the topography, but these parcels also represent a significant opportunity to manage for improved habitat along with other ownership by the Yakama Nation and Washington State Department of Fish and Wildlife, as well as a significant recreational opportunity. The need for this planning will

be further supported by the new State programs for the establishment and maintenance of riparian communities to combat the effects of climate change. In sum, this specific project is intended to result in improved public access to nature and open space and it is also part of a larger strategy to generally improve management and public access to sites along the entirety of the lower Naches River.

Task B: Construction Stakeholder Support and Prior Restoration Planning

o Describe the planning effort that supports your proposed project:

There were basically 3 eras of planning for this and related projects. During the early 2000's the City of Yakima, Yakima County and the Washington State Department of Transportation all had proposed Capital projects in the area that affected either the Naches River or Cowiche Creek. At that time, Mid-Columbia Steelhead had just been listed under ESA and these projects were subject to permitting under ESA. The City convened a group of those partners plus the Washington State Department of Fish and Wildlife to sketch out what actions could be undertaken to implement those projects and improve fisheries habitat in this reach. This group was called the Lower Naches Partnership and is discussed further in the Environmental Memo.

The second era was the preparation of the Comprehensive Flood Hazard Management Plans and the Yakima Subbasin and Recovery Plans, the FCZD was the lead agency for those plans formulated between 2005 and 2009. In the project area, both types of plans were heavily influenced by the recommendations of the Lower Naches Partnership. The FCZD then undertook preliminary reach scale designs for the Rambler's Park area, including modification of Nelson Dam, levee alignment, the existing highway bridges, abandoned infrastructure in the river channel itself. The FCZD also begin preliminary updates to the Flood Insurance Rate Maps for Cowiche Creek and developed 1-dimensional hydraulic models for the Creek, and from that understood the severe flood conveyance capacity limitations of the lower portions of the Creek.

The final era is related to the floods of 2011 which caused the Rambler's Park levee to partially collapse for the 11th time, and the Cowiche Creek floods of 2016 and 2017 which cause significant disruption within the City of Yakima. With the collapse of the levee the County and the Corps of Engineers decided to begin the process of levee setback and simultaneous hydraulic design of related facilities, various grant funds and sources were used to begin this project, specifically including the Yakima Basin Fish and Wildlife Recovery Board and the Yakima Basin Integrated Plan Habitat and Water Use Committees, both of which provided funding to those early efforts. The Cowiche Creek Floods caused the preparation of the Cowiche Addendum to the Upper Yakima Comprehensive Flood Hazard Management Plan, that planning group had a very wide range of stakeholder participants, the frontspiece from that Plan which shows the participants is attached. That plan basically finalized the outline and sequence of infrastructure reconfiguration in the entire reach, with specific emphasis on this project area and its strong relationship to Nelson Dam and the network of irrigation ditches, diversions, screens and returns in the rapidly urbanizing, narrow valley bottom of this project area.

 Please describe the process for stakeholder involvement and comment on the planning and design effort supporting your project.

The Flood Plans have a very formalized process for solicitation of comments, the development of structural and non-structural alternatives, information and study needs, etc which are required to get the plan approved by Ecology. Generally, effective implementation of capital projects requires that those projects also include benefits to listed species, anadromous fish and the environment in general to secure project funding. Because of the importance of irrigated agriculture to the economy, and the vulnerability of in-channel facilities to flood damage, reducing hazard to those types of facilities while also reducing those facilities conflicts with riverine and habitat forming processes are clear goals for projects implemented in those plans, this is reflected by the many large scale project already implemented in adjacent reaches by the FCZD.

Development of the Recovery Plan was similar, with stakeholder participates weighted heavily toward fish and wildlife entities such as the Yakama Nation, Bonneville Power, Reclamation, NOAA Fisheries, USFWS, Washington State Departments of Fish and Wildlife and Ecology, the Governor's Salmon Recovery Office, and private entities such as Mid-Columbia Fisheries Cooperative, Trout Unlimited and the Wildlife Society. The Focus on that planning effort was the development and funding of habitat enhancement projects, NOAA fisheries and USFWS took those studies and incorporated them into their regional fisheries recovery plans. Those plans contain a massive number of potential projects, but the most highly recommended projects were more or less emergency projects to prevent extirpation of upper basin populations of Bull Trout, and restoration of floodplains in the mainstem river valleys to restore large areas of habitat and salmon life histories which had been lost.

The end result of these planning processes was aligned priorities for floodplain and river process restoration across the basin, including this specific project area. The later flooding events provided impetus and some funding for design and implementation of these types of projects, with this proposed project the major concluding project to full implementation of these plans. Currently, this project is the highest priority in the basin for construction in the Recovery Plans and in the Yakima Basin Integrated Plan, which is providing the majority of the match for this project in an effort to realize the benefits that are now possible with the completion of the Nelson Diversion which then allows the projects in this proposal.

o How did you select the proposed project from among other project alternatives?

Much of the project selection in this reach started with the Lower Naches Coordination Project and the tenants of the Washington State Model Streambank Protection Guidelines which were used to develop projects. The overarching philosophy of that document is to diagnose the underlying causal factors for the problem – in this case the problem was sediment transport,

bed aggradation, degraded habitat conditions and very poor upstream and downstream fish passage conditions in this reach and Cowiche Creek. The causal factor for most of those conditions was the configuration of Nelson Dam and the adjacent levee system that kept the river aligned to the dam. Designing the remedies for this condition in this confined space with multiple types of infrastructure in it is more about working within the universe of the possible than across a variety of alternatives. The overall project had to address improvements to the causal factors while actual designs hinged on property acquisition when the property was available, usually after a flood event when damage had occurred and therefore private and public willingness to address the problems were high. In many ways these actions have to be tailored to the specific habitat conditions and historical demands/infrastructure configurations to attempt to come to the best possible outcome in this specific project area.

o Is there widespread support for the project

See attached letters of support. Also this recent article in the Yakima Herald-Republic regarding the project, at this gathering there was significant support for the related activities contained in this project proposal. The long list of partners for the project have shown consistent support for this project which represents many of the best elements of working with the Yakima Basin Integrated Plan to accomplish these types of large scale, multi benefit projects that require coordination and cooperation across authorities. The Nelson Project was implemented through a cooperative agreement between the City of Yakima and Yakima County, a companion agreement between those parties and the Washington State Department of Transportation will greatly facilitate the implementation of this project across those jurisdictional and property boundaries in the project area.

 Are any stakeholders contributing to the project cost-share?

The largest proportion of cost share is from the Yakima Basin Integrated Plan through the Washington State Department of Ecology. Ecology's Floodplains by design program is also contributing to the Cowiche Creek realignment and levee setback portions of the project, as is the US Fish and Wildlife Service. The Washington State Department of Fish and Wildlife's Yakima Screen Shop will oversee and partially perform the salvage of the fish screen and bypass facilities. The City of Yakima has contributed more to past aspects of the project including bonding for both the conveyance improvements in town, and over half of the $23 million (design and construction cost) of demolition of Nelson Dam and construction of the new Diversion.

There is no known opposition to these proposed actions.

Project Implementation and Readiness to Proceed

Both the City and the County have a long track record of cooperation and implementation of projects of this type and complexity.

This project's main expenses are related to construction of the new conveyance pipeline from the Nelson Diversion into the City. Since the project is at 100% design with all permits and required real property interests secured, that portion of the project could begin construction of certain components upon grant award, while completion of the project could not occur until after the end of irrigation season 2024. The engineers cost estimate prepared in late May of 2023 is attached.

During that construction timeframe, permitting for the other actions could easily occur, followed by preparation of contract documents. The irrigation diversions salvage and demolition could also be implemented after the 2024 irrigation season, along with the modification to the Naches Cowiche Canal Association mainline upstream of US 12. The floodplain restoration actions and reconfiguration of lower Cowiche Creek, which would occur mainly in the dry could also occur during that time frame, with revegetation occurring in the spring of 2025. Levee setback upstream of US 12 cannot occur until pipeline installation is completed, that action and the upstream stream location and floodplain revegetation would not occur until the summer, or more likely the fall of 2025.

Because of the long planning history at this project site, and the permitting process for the pipeline, most of the actions have already been through a large-scale environmental review such a NEPA and the State Environmental Policy Act (SEPA) and will qualify for expedited permitting due to the strong habitat enhancement, sustainability and climate resilience of these related actions.

o Describe any additional efforts planned to engage with regional stakeholders during the final planning and construction phase of your project.

This implementation actions will be tracked by the Yakima Basin Integrated Plan and through them to many of the stakeholders. There have been numerous newspaper and local broadcast media stories associated with the beginning and end of each of the major project phases thus far, we expect that to be the case with these actions.

o Identify and describe all engineering and design work that has been performed in support of the proposed project to date.

Pipeline – This was designed in coordination with the Nelson Project and permitted at the same time as that project. Engineering was by HDR Inc. and like the Nelson Project, they will oversee construction engineering, City of Yakima contract preparation and compliance, and Yakima County will provide construction inspection services.

Naches Cowiche Canal Association Canal Improvements, Levee Setback, Channel Relocation - The Canal and Levee elements has been designed by Anderson Perry Engineering under contract to the FCZD, with the hydraulic modeling performed by FCZD based on the updated FEMA model developed by FCZD. The Cowiche Creek relocation will largely be consistent with the 2013 Cowiche Creek Enhancement Design, that design will need minor updating to take

advantage of increased floodplain restoration area/removal of the City's sedimentation basin in the current design.

Lower Cowiche Channel restoration will also largely be according to the 2013 design with minor changes in gradient as that design anticipated retention of the orchard, which will now be converted to native vegetation and the open space park.

Floodplain Restoration – this action requires only limited design since the current hydraulic models are so up to date and most of the existing riparian zone will receive no alteration, almost all the native vegetation conversion will occur on a terrace which will generally receive minor modification. This action will use the hydraulic model to block off the existing Fruitvale Conveyance from allowing floodplain conveyance into town. The actual revegetation design is a near duplicate to the planting plans for the FCZD's Ramblers Park Floodplain Restoration which was implemented just upstream. The decommissioning and salvage of the existing irrigation diversion fish screen and bypass systems will be conducted in accordance with designs and specification for this project developed by the Washington State Department of Fish and Wildlife.

Constructed side channel - This element was designed in-house by the FCZD in 2018, using some of the geo technical information generated by Geo Engineers when they prepared their design in 2013. The two designs share a philosophy of channel creation in existing swales in the riparian zone with channel elevations below existing groundwater elevations from geotechnical borings.

Powerline Relocation - This proposal has been discussed with Pacific Power and a new route, in existing easements along US 12, onto County owned properties, and then in existing easements along Clover Lane (County Road) has been designed by them. This action will require installation of new poles, the only impacts to residential areas will be the installation of taller poles on the existing alignment and transfer of existing services to those new poles. Since the current alignment crosses formerly private property on a power easement held by Pacific Power, this project must pay for the cost of moving the poles. Pacific Power is a willing partner in this relocation to allow natural channel migration of the Naches River while avoiding negative impacts to their power distribution facilities.

Permits and Approvals

As mentioned before, the largest single element of this proposed action is the conveyance pipeline, which is already designed and permitted, with all real property needs secured.

The major remaining permit will be the Corps 401/404 permit for reconfiguration of lower Cowiche Creek. This will be applied for under Nationwide Permit 27, habitat enhancement. FCZD has a very good working relationship with Corps regulatory on these types of projects and we have secured these permits in the past.

The County or City has conducted Cultural Resource assessments on all of the structural elements of the irrigation diversions to be removed and has gained concurrence from SHPO that none of those structures warrants protection under NHPA. The County recognizes that further cultural resource surveys will need to be performed in conjunction with the vegetation conversion action on the current an former orchard lands. Full Cultural Resource compliance has been secured for those actions on Cowiche Creek/NCCA canal upstream of US 12.

Hydraulic Project Approvals will be required from the Washington State Department of Fish and Wildlife for the Cowiche Creek habitat enhancement actions. The original design was done in coordination with WDFW and we anticipate to undergo review and modification of that design in cooperation with WDFW and Yakama Nation prior to development of the contract specifications.

The project will secure several clearing and grading permits for the diversion decommissioning, the channel enhancements, and the vegetation conversion. A demolition permit will also be necessary for the demolition of the concrete portions of the irrigation screens and other facilities. FCZD will also be responsible for hydraulic modeling of the project and securing local floodplain permits.

• *If applicable, describe the projects impact on any contractual water or power supply obligations, Indian trust responsibilities, or water rights settlements.*

The project will have no impact on water or power supply obligations, Indian trust responsibilities or water rights settlements. We know of no other local or state requirements that will impact the project.

All project elements have secured necessary real property interests to implement the project, primarily by purchase of fee simple interest of floodplain lands.

The County has not contacted reclamation to discuss the potential environmental and cultural resource costs of the project. We have cooperated with Reclamation on similar projects and have included the necessary additional cultural resource surveys and reports as a project cost. It is unknown the extent to which additional NEPA documentation will be necessary. Since the USFWS is also a project partner on the Cowiche Creek enhancement actions, USFWS is currently identified as the lead for further NEPA documentation under that grant scope. We know of no other unresolved issues.

Presidential and Department of the Interior Priorities

The levee setback and reconfiguration of Cowiche Creek to a more natural alignment, the preservation and restoration of floodplains and the vegetative conversion actions all have strong connection to climate resiliency and reduction of flood hazard to irrigation, flood control, and transportation infrastructure as well as the built environment and citizens of the City of Yakima. The project will provide some level of drought resilience by providing a new pipeline conveyance facility and connected to a state-of-the-art surface water diversion which requires very little maintenance. The improvement of flow in lower Cowiche will improve low flow fish

passage during droughts by potentially doubling existing low flows and is expected to persist permanently.

This project will actively seek to be in conformance with recently initiated programs in Washington State to retain riparian plant communities for both water quality protection and sequestration of carbon on the landscape. This project also improve resiliency of the overall Naches and Yakima River system to long term resiliency by restoration of sediment transport from areas of accumulation upstream, through this reach and to the sediment starved lower reaches of the Naches River and the Yakima River in the Gap to Gap reach.

There are disadvantaged communities to the east and west of the proposed project, with the largest factor being low income and related health effects. This project is linked to both those communities by the Yakima Greenway Trail and provides access to nature for these communities. In general, the City of Yakima ranks in the lower 10% when it comes to park lands per capita, and this is the basis for the Parks and Recreation Department of the City of Yakima proposing the development of a park at the project site.

This project is strongly linked to tribal natural resource programs, especially the tribal trust resources of anadromous fish and water. The Yakama Nation has been a key supporter of the project at the state legislature and is using many of the floodplain restoration and hydraulic principles in this project on their own projects and in attempting to modify fish passage and sediment transport conditions at other diversions in the basin, particularly the Wapato Diversion which supplies water to the irrigation system on the Yakama Reservation.

Performance Measures

What are the desired conditions that this project contributes to and how will outcome objectives and project success be measured?

Desired conditions are:

1. Improved instream habitat conditions - this project directly improves habitat conditions by removal of the existing diversion systems, reconfiguring lower Cowiche Creek to a more natural vertical and horizontal alignment, restoring and maintaining riparian zones and other native plant communities. These attributes can be directly measured by as-built conditions.
2. Persistence and improvement of the above conditions over time - The FCZD will continue to contract with the North Yakima Conservation District to monitor and maintain the vegetative communities established by this project. The FCZD will conduct inspections of Cowiche Creek after flood events or other events such as fire or invasive species occupation of the site to determine if corrective action is needed. When the majority of this site was acquired, it was subject to conservation easements which the FCZD is required to maintain over time.

3. Restoration and movement of sediment Transport into and through the Reach – FCZD is cooperating with American Rivers and Central Washington University to monitor sediment transport and hydraulic parameters through the project area for the next 5 years. FCZD is responsible for periodically update the Flood Insurance Rate Maps if hydraulic conditions show significant change which is expected at this location. FCZD will monitor channel conditions with LIDAR or Structure from Motion surveys in conformance with FEMA's data standards to meet these requirements from the National Flood Insurance Program
4. Compliance with Riparian Restoration Programs - FZCD will seek to ensure that these properties are in compliance with the recently enacted programs for protection of riparian zones for water quality improvement and carbon sequestration throughout the project area.
5. Conversion of large portions of the project area to an open space public park - Current easements on the property also require that it be either in agricultural production or in open space status and available for access to the general public. FCZD will continue to cooperate with the City of Yakima Parks and Recreation Department and the Yakima Greenway Foundation to allow and improve public access to this project location.
6. Improve Streamflow and Fish Passage – after project completion, FCZD will work with Trout Unlimited and the other water rights holders to dedicate the current water rights to instream flow in lower Cowiche Creek, and to remove the existing Ingham/Garretson Diversion on Cowiche Creek. The existing stream gage on Cowiche Creek is expected to continue to document the streamflow improvement. The Yakama Nation monitors the Coho spawning population in the creek, with associated pit tagging and juvenile survival monitoring to determine if fish survival, especially egg to fry survival in the new creek channel, improves over time.

Budget Narrative

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
Ecology - Yakima Basin Integrated Plan	$8,347,852
Ecology - Floodplains By Design Program	$516,000
Non-Federal Subtotal	**$8,863,852**
USFWS Federal Contribution	$50,000
REQUESTED RECLAMATION FUNDING	**$9,976,792**
Total Project Cost	$18,840,644

Environmental and Cultural Resources Compliance

• *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area.*

This project will have effects on the adjacent environment, generally the largest effect will be on soil and air quality. These actions will be mitigated through the clearing and grading and demolition permit processes which focus on these issues through the pre-demolition inventory and the preparation of a Stormwater and Erosion Control Plan. This project will be of sufficient size to require a Stormwater General Permit from the Department of Ecology, this project will fully cooperate with those processes. Any of the other impacts will generally be positive as the majority of clearing and grading will occur in areas which are currently used for agriculture and will be converted to native riparian and upland vegetation.

• *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

Yes, both Mid-Columbia Steelhead and the Yakima Basin Populations of Bull Trout are listed as Threatened under the Endangered Species Act, this action fully complies with and implements portions of the Recovery Plans for both species. For Steelhead, the current configuration of the irrigation diversion and fish return system has documented passage and false attraction flows that negatively impact Steelhead and other salmonid migration during the irrigation season, it is a major objective of this project to eliminate those impacts. The denil ladder at the mouth of Cowiche Creek is also the last know partial barrier to fish passage in the entire Cowiche Creek system, the other 8 partial barriers have all been rectified, this project represents the endpoint of providing passage into Cowiche Creek which is a major goal in diversifying the population structure of Steelhead in the Yakima Basin. There is no known Bull Trout population in Cowiche Creek, but this reach of the Naches River is the lowest elevation reach of the Naches System that fluvial Bull Trout regularly use for foraging, migration and overwintering habitat. The replacement of Nelson Dam with the Nelson Diversion is already a major improvement in summer low flow fish passage in this reach, the side channel construction action and riparian zone enhancement actions in this project will further enhance this habitat type for Bull Trout.

• *Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States"? If so, please describe and estimate any impacts the proposed project may have.*

Yes, mainly Cowiche Creek and the Naches River. See permitting discussion below.

• *When was the water delivery system constructed?*

• *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

• *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

There are 3 different ages of the systems affected by this project. The City of Yakima/General Diversion that come out of the Fruitvale Diversion were constructed as part of a power generation facility in the 1910s and abandoned in the 1920s. All of those facilities were removed and replaced after WWII due to channel incision requiring the movement of the actual diversion points upstream to maintain grade. The fish screens and returns for that diversion and the Old Union diversion were built in the mid-1980s. The Old Union Ditch is one of the earliest private diversion companies in the Valley, dating from the 1870s. Like the Fruitvale, it has been forced to relocate over time as the side channels disappeared and the main channel incised due to the presence of Nelson Dam. All of the structural facilities for these diversions have already been inventoried and the reports sent to the SHPO and received approval as not qualifying under NHPA. The excavated channels themselves date from the 1980s and also do not qualify under NHPA.

• *Are there any known archeological sites in the proposed project area?*

Yes, 2 known sites. The adjacent petroglyph site on Powerhouse Road adjacent to the Nelson Diversion, this site areas adjacent have been thoroughly documented in association with other projects such as Nelson, which is directly adjacent, the impacts of pipeline construction in this area have already been addressed through the permitting for the pipeline. Also directly adjacent to Nelson Dam and related floodplain restoration, as well as downstream, is the area known locally as “Rambler’s Park”, a dust bowl era camp for migrant workers. The portion of this site in the project area is a series of trash middens downstream of US 12 and the railroad tracks (now Yakima Greenway Trail), this site has already been documented under NHPA, this site will not be disturbed in this project action but will be in actions considered in the related Task A. Design application.

• *Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*

No, the end use of an open space park will positively affect the recreational opportunities in the poorest and highest minority sections of the City of Yakima which are just east of the project and can access via the Yakima Greenway trail. This project does not affect or change any current housing, but will have positive effects by the reduction of flood impacts to these same areas of Yakima which are currently at risk of Cowiche Creek flooding as occurred in 2016 and 2017.

• *Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?*

No.

• *Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

No. The project will restore 60 + acres to native vegetation. The Yakima County Flood Control Zone District has owned property in the project area since 2006 and has been cooperating with the North Yakima Conservation District on plant maintenance and invasive species control since then. Currently there is no known concentration of invasive species in the project area or adjacent areas which have undergone channel and floodplain restoration.

Other Permits Required – As stated above, the largest single action, which is the construction of the Pipeline from Nelson Diversion into several points in the City is at 100% design and is fully permitted including NEPA and Corps permits.

In terms of Federal Permits, the stream restoration actions, and side channel creation action will require Corps of Engineers Section 401/404 permits. Yakima County has extensive experience with Corps permitting of reach and multi-reach scale permits with the Corps of Engineers Regional Office in Spokane using Nationwide Permit 27 for restoration actions, we anticipate the same process here as we have used for the upstream levee setbacks, pilot channel and floodplain restoration, and the construction of the new Nelson Diversion in past phases of this actions. The permitting process for the pipeline has resulted in wetland and cultural resource inventories that these related projects will use in their permitting processes. There has been cultural resource inventories and concurrence received for all of the components of the irrigation diversion removal, the only cultural resource inventory needs are in the area of the existing orchard.

All of the other actions in this grant application have been anticipated in either the Cowiche Addendum to the Upper Yakima Comprehensive Flood Hazard Management Plan or the Washington State Environmental Policy Act (SEPA) as related phases to the Ramblers Park/Nelson Dam project beginning in 2013 – which means all actions have been discussed and developed through collaborative processes and have already been approved as benefits to the environment. This project is and will continue to be a cooperative project with the Washington State Departments of Ecology and Fish and Wildlife through both the Yakima Basin Integrated Plan and the Salmon Recovery Funding Board Lead Entity, which is the local lead for implementation of the Steelhead and Bull Trout Recovery Plans. That support also helps with the state side of the 401/404 permit process and the Washington State Hydraulic Project Approval (HPA) permit from Fish and Wildlife. Even though most of the actions are already at 100% design, permitting these interrelated actions will require coordination in implementation and possible minor modifications to design to save money on things like permits, mobilization, erosion control, plantings by combining these actions into a larger scale action. Permitting these actions in that way may also require design modifications to better protect the environment or provide greater environmental benefit through implementation. Local permits will include Floodplain, Clearing and Grading, and Building/Demolition permits for the various projects. Because the Flood Control Zone District is actively monitoring floodplain and channel conditions in these reaches and has had to get Floodplain permits (conformance with the National Flood

Insurance Program or a “no rise” permit) we have a very up to date 2-dimensional hydraulic model of the entirety of the lower Naches River which will be affected by these actions, this will greatly facilitate securing the floodplain permits. Typically, the performance standards for the building and clearing/grading permits are incorporated into the actual construction bid package for the project. Obtaining those permits is the responsibility of the contractor and the on-site erosion control lead for the contractor.

Overlap or Duplication of Effort - This project does contain some project overlap, the Yakima Basin Integrated Plan funding and the Floodplains by Designs funding through the Dept of Ecology are incorporated into this grant application as match.

Additionally, the county also applied for the NOAA’s Transformational Habitat Restoration and Coastal Resilience Grant with the same construction elements included in that proposal. The low-cost construction elements that don’t hinge on the pipeline installation were also included in the Yakama Nation’s NOAA Transformational Habitat grant application, those elements are identified in the Budget Narrative.

Support Letters

This River Runs Forever
Yakima Basin Integrated Plan

January 22, 2024

To: U.S. Bureau of Reclamation Aquatic Ecosystem Restoration Projects Program (R23AS00106) Reviewers

Re: Support for the Cowiche Creek Complex Proposal

Dear Review Committee,

As members of the Yakima Basin Integrated Plan (Integrated Plan), we are writing to express support for the City of Yakima and Yakima County's application under the U.S. Bureau of Reclamation Aquatic Ecosystem Restoration Projects Program for the *Cowiche Creek Complex Proposal near the confluence of the Naches River and Yakima River*.

This project is a critical component of the Habitat Protection and Enhancement and Fish Passage elements of the Integrated Plan. The Integrated Plan is a unique integrated water resource management effort supported by a coalition of 23 members, including conservation groups, agricultural interests, irrigators, and local, state, and federal agencies. The U.S. Bureau of Reclamation, Washington State Department of Ecology, and the Yakama Nation are leading plan implementation through partnership with these and other organizations. Federal legislation authorizing the Integrated Plan lays out an ambitious fishery goal:

> To protect, mitigate, and enhance fish and wildlife and the recovery and maintenance of self-sustaining harvestable populations of fish and other aquatic life, both anadromous and resident species, throughout their historic distribution range in the Yakima Basin.

To meet this goal, the Integrated Plan developed a Salmon and Steelhead 10-Year Restoration Strategy to accelerate actions to improve safe fish passage and to restore river flow and habitat. This strategy prioritizes a suite of actions aimed at the Lower Yakima River, where current fish passage conditions are a critical limiting factor to the entire Integrated Plan salmon and steelhead restoration effort. Addressing fish passage at the Naches River, which has tremendous fish habitat potential, is identified as a priority.

The confluence of Cowiche Creek and the Naches River has been heavily modified for irrigation diversions, reducing floodplain function and constricting the channel, and includes a diversion dam and steep pass fishway and consolidated fish bypasses that limit upstream and downstream passage and provide false attraction flows for steelhead and Coho. The Cowiche Confluence

Complex proposal encompasses a suite of projects that, together, address these issues. The proposal is expected to restore near pristine access from Cowiche Creek to the Naches River, ensure that floodplain and riparian areas in the Lower Naches River and on into the Yakima River are restored to a condition that supports aquatic productivity and reduces fish mortality, reduce current and future flood hazards, and improve recreation and public access.

The Cowiche Confluence Complex proposal builds on strategic efforts over the past 20 years by the City of Yakima, Yakima County, and other partners to enhance and protect the Creek's ability to produce steelhead and salmon. These efforts have entailed land acquisitions in the Upper Cowiche Basin, efforts to properly screen and provide fish passage at the Cowiche Creek diversions, riparian restoration and water acquisition to improve instream flow, and infrastructure work at the old Nelson Dam. The $23 million Nelson Dam Phase I project, completed in 2023 and funded by the City of Yakima and the Washington State Department of Ecology, eliminated the old diversion dam, antiquated fishway, and previous irrigation infrastructure, resulting in a consolidated, nature based diversion that eliminates the need for a dam.

With Phase I completed, the City of Yakima and Yakima County can pursue the Cowiche Confluence Complex projects. The Nelson Dam Phase II project would complete the overall goals of long term floodplain, irrigation, and other infrastructure management plans in this reach by constructing a pipeline that delivers water from the new Nelson Diversion to the irrigation system in the City and to the south and west. Phase II, in turn, would allow removal of two irrigation diversion and bypass systems and permit reconfiguration of Lower Cowiche Creek to provide unimpeded fish passage. After removal, adjacent floodplain areas would be restored to native upland and side channel habitats, and recreation and public access projects would be implemented.

Thank you for your consideration of City of Yakima and Yakima County's proposal.

Sincerely,

Urban Eberhart
Kittitas Reclamation District

Cory Wright
Kittitas County

Brandon Parsons
American Rivers

Crystal Elliot-Perez
Trout Unlimited

Phil Rigdon
Yakama Nation

Scott Revell
Roza Irrigation District

Mike Livingston
WDFW

Tom Tebb
WA State Dept. of Ecology

"Restoring the natural health and economy in the Yakima Basin."

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Office of Columbia River
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

Date: November 16, 2023

To: NOAA Transformational Habitat Restoration and Coastal Resilience Reviewers (NOAA-NMFS-HCPO-2023-2008081)

RE: Letter of Funding Commitment for Cowiche Confluence Complex Proposal

I am writing to express support for the Yakima County's application under NOAA's Transformational Habitat Restoration and Costal Resilience funding opportunity. The Yakima Basin Integrated Plan Habitat Subcommittee authorized $500,000 in the 2017-2019 biennium (approximately $117,000 remains unspent) and $1.2 million in the 2023-2025 biennium in Washington Department of Ecology capital dollars from the Yakima River Basin Water Supply budget to the Yakima County Water Resources Division/Flood Control Zone District to support the infrastructure and habitat restoration of the Naches River-Cowiche Creek confluence. Additionally, the Office of Columbia River has authorized another $7.6 million in the 2023-2025 biennium in Washington Department of Ecology capital dollars also from the Yakima River Basin Water Supply budget to the Yakima County Water Resources Division/Flood Control Zone District to further support the infrastructure and habitat restoration of the Naches-Cowiche confluence.

This project will significantly improve salmon and steelhead habitat by restoring floodplain connectivity and riparian habitat, improving fish passage conditions, and enhancing instream spawning, rearing, and migratory habitat. These improvements are expected provide substantial co-benefits for local communities, including flood risk reduction, water quality improvements, and enhanced recreation and public safety.

A letter of support for a suite of partnership projects with the Yakama Nation (this Naches-Cowiche project would complement the Tribe's projects), attached hereto, in addition to the match commitments provided herein, demonstrates the strong ongoing support of the Yakima Basin Integrated Plan for this project. Ecology is extremely interested in making this project a success and we value the opportunity to be a cost-share funding partner with the county and a federal agency. The Yakima Basin Integrated Plan and its partners continue to be proactive in procuring funds and securing match for projects benefiting the Basin's water resources and aquatic ecosystems. Please accept this letter as our commitment to provide necessary matching funds for NOFO NOAA-NMFS-HCPO-2023-2008081. If you have any questions, please contact Kevin Haydon at (509)-823-6947 or by email at Kevin.Haydon@ecy.wa.gov.

Sincerely,

G. Thomas Tebb, L.H.G, L.E.G.
Director, Office of Columbia River

GT:jc (231115)

Enclosure: Support for Lower Yakima Basin Transformational Steelhead and Salmon Recovery Proposal

November 15, 2023

To: NOAA Transformational Habitat Restoration and Coastal Resilience Reviewers (NOAA-NMFS-HCPO-2023-2008081)

Re: Support for Lower Yakima Basin Transformational Steelhead and Salmon Recovery Proposal

Dear Review Committee,

As members of the Yakima Basin Integrated Plan (Integrated Plan), we are writing to express support for the Yakama Nation's application under NOAA's Transformational Habitat Restoration and Coastal Resilience funding opportunity for the *Lower Yakima Basin Transformational Steelhead and Salmon Recovery Restoration* proposal.

The proposal package is comprised of multiple projects critical to the Habitat Protection and Enhancement elements of the Integrated Plan. The Integrated Plan is a unique integrated water resource management effort supported by a coalition of 23 members, including conservation groups, agricultural interests, irrigators, and local, state, and federal agencies. The U.S. Bureau of Reclamation, Washington State Department of Ecology, and the Yakama Nation are leading plan implementation through partnership with these and other organizations. Federal legislation authorizing the Integrated Plan lays out an ambitious fishery goal:

> To protect, mitigate, and enhance fish and wildlife and the recovery and maintenance of self-sustaining harvestable populations of fish and other aquatic life, both anadromous and resident species, throughout their historic distribution range in the Yakima Basin.

To meet this goal, the Integrated Plan developed a Salmon and Steelhead 10-Year Restoration Strategy to accelerate actions to improve safe fish passage and to restore river flow and habitat throughout the Yakima Basin. The Yakama Nation, in collaboration with local government and conservation partners of the Integrated Plan, is putting forward two closely linked, transformative restoration proposals including high priority actions identified in this strategy. These proposals include projects in the Upper Basin to restore high quality salmon and steelhead habitat to improve fish populations and increase their resiliency, and projects in the Lower Basin to improve fish survival and support safe migration of salmon and steelhead to and from the Yakima River headwaters through the lower river.

In the Lower Yakima Basin, the Yakama Nation proposes restoration implementation and design for floodplain connectivity and function along 10 miles of the mainstem Yakima River, Tieton River, Little Naches River, as well as Cowiche, Ahtanum, Nile, Satus, and Toppenish Creeks. Their work, done in partnership with Yakima County, will significantly improve salmon and steelhead habitat by restoring floodplain connectivity and riparian habitat, improving fish passage conditions, and enhancing instream spawning, rearing, and migratory habitat. These improvements are expected to support the Yakama Nation's Treaty fishing rights and salmon economy and provide substantial co-benefits for local communities, including protection and restoration of cultural resources, flood risk reduction, water quality improvements, and enhanced recreation and public access.

Thank you for your consideration of the Yakama Nation's proposal.

Sincerely,

Urban Eberhart
Kittitas Reclamation District

Cory Wright
Kittitas County

Brandon Parsons
American Rivers

Crystal Elliot-Perez
Trout Unlimited

Scott Revell
Roza Irrigation District

Mike Livingston
WDFW

Tom Tebb
WA State Dept. of Ecology

"Restoring the natural health and economy in the Yakima Basin."

May 30, 2023

To: U.S. Bureau of Reclamation Aquatic Ecosystem Restoration Projects Program FY23 (R23AS00106) Reviewers

Re: Support for the Cowiche Creek Complex Proposal

Dear Review Committee,

As members of the Yakima Basin Integrated Plan (Integrated Plan), we are writing to express support for the City of Yakima and Yakima County's application under the U.S. Bureau of Reclamation Aquatic Ecosystem Restoration Projects Program for the *Cowiche Creek Complex Proposal near the confluence of the Naches River and Yakima River*.

This project is a critical component of the Habitat Protection and Enhancement and Fish Passage elements of the Integrated Plan. The Integrated Plan is a unique integrated water resource management effort supported by a coalition of 23 members, including conservation groups, agricultural interests, irrigators, and local, state, and federal agencies. The U.S. Bureau of Reclamation, Washington State Department of Ecology, and the Yakama Nation are leading plan implementation through partnership with these and other organizations. Federal legislation authorizing the Integrated Plan lays out an ambitious fishery goal:

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To meet this goal, the Integrated Plan developed a Salmon and Steelhead 10-Year Restoration Strategy to accelerate actions to improve safe fish passage and to restore river flow and habitat. This strategy prioritizes a suite of actions aimed at the Lower Yakima River, where current fish passage conditions are a critical limiting factor to the entire Integrated Plan salmon and steelhead restoration effort. Addressing fish passage at the Naches River, which has tremendous fish habitat potential, is identified as a priority.

The confluence of Cowiche Creek and the Naches River has been heavily modified for irrigation diversions, reducing floodplain function and constricting the channel, and includes a diversion dam and steep pass fishway and consolidated fish bypasses that limit upstream and downstream passage and provide false attraction flows for steelhead and Coho. The Cowiche Confluence

Complex proposal encompasses a suite of projects that, together, address these issues. The proposal is expected to restore near pristine access from Cowiche Creek to the Naches River, ensure that floodplain and riparian areas in the Lower Naches River and on into the Yakima River are restored to a condition that supports aquatic productivity and reduces fish mortality, reduce current and future flood hazards, and improve recreation and public access.

The Cowiche Confluence Complex proposal builds on strategic efforts over the past 20 years by the City of Yakima, Yakima County, and other partners to enhance and protect the Creek's ability to produce steelhead and salmon. These efforts have entailed land acquisitions in the Upper Cowiche Basin, efforts to properly screen and provide fish passage at the Cowiche Creek diversions, riparian restoration and water acquisition to improve instream flow, and infrastructure work at the old Nelson Dam. The $23 million Nelson Dam Phase I project, completed in 2023 and funded by the City of Yakima and the Washington State Department of Ecology, eliminated the old diversion dam, antiquated fishway, and previous irrigation infrastructure, resulting in a consolidated, nature based diversion that eliminates the need for a dam.

With Phase I completed, the City of Yakima and Yakima County can pursue the Cowiche Confluence Complex projects. The Nelson Dam Phase II project would complete the overall goals of long term floodplain, irrigation, and other infrastructure management plans in this reach by constructing a pipeline that delivers water from the new Nelson Diversion to the irrigation system in the City and to the south and west. Phase II, in turn, would allow removal of two irrigation diversion and bypass systems and permit reconfiguration of Lower Cowiche Creek to provide unimpeded fish passage. After removal, adjacent floodplain areas would be restored to native upland and side channel habitats, and recreation and public access projects would be implemented.

Thank you for your consideration of City of Yakima and Yakima County's proposal.

Sincerely,

Urban Eberhart
Kittitas Reclamation District

Cory Wright
Kittitas County

Brandon Parsons
American Rivers

Lisa Pelly
Trout Unlimited

Phil Rigdon
Yakama Nation

Scott Revell
Roza Irrigation District

Mike Livingston
WDFW

Tom Tebb
WA State Dept. of Ecology

"Restoring the natural health and economy in the Yakima Basin."

YAKIMA GREENWAY

August 3, 2020

Re: Support for the Naches Cowiche Confluence Park

Project 20-1728

WWRP Park Development, Acquisition and Development Category

Dear Mr. Freudenthal,

The Yakima Greenway Foundation is pleased to write this letter of support for the Naches Cowiche Confluence Park project. As a 501c(3) land trust, our mission is to pressure and conserve the Yakima River Corridor for generations. Retaining this land and protecting this property from future agriculture and residential development is very important.

The Yakima Greenway is a 20-mile continuous trail and park system that runs along the Naches and Yakima Rivers. The Greenway trail is used by visitors and residence living throughout the Yakima County, but primarily those living in the Upper Yakima Valley, North and Southeast Yakima, and those residing in neighborhoods along the 16th avenue to the west and Fruitvale boulevard.

This particulater development and acquisition project is especially important because it will provide a large number of underserved neighborhoods in the area access to the Naches River for recreational, educational, and conservation activities. A top priority in the Yakima Valley is to find and provide more free and equitable recourses for families to socialize and maintain their healthy lifestyle.

The Yakima Greenway Trail system runs adjacent to the proposed Park and river recreational use area. Trail users could have a safe and convenient way to enter the park and riverfront right off the Greenway pathway to the south. It is perfect!

During the current pandemic, the Yakima Greenway trail is experiencing an enormous increase in path and park traffic. The Confluence Park project will help to fill the high demand for more entry points for kayaking, fishing, and rediscovering our natural habitats.

More than ever, we need to support projects like Confluence Park to engage communities and continue providing free and equitable recreation for our valley.

Sincerely,

Kellie Connaughton, Executive Director
Yakima Greenway Foundation

American Rivers
RIVERS CONNECT US®

August 7, 2020

Joel Freudenthal
Senior Strategic Manager
Yakima County Flood Control Zone District
128 *N.* 2nd St.
Yakima, WA 98901

RE: Naches Cowiche Confluence Park, WWRP Park Development, Acquisition and Development Category Project 20-1728

Dear Mr. Freudenthal:

I am writing on behalf of American Rivers to express support for your application through the Washington Wildlife Recreation Program (WWRP) Local Parks program for the acquisition and development of the Naches Cowiche Confluence Park in Yakima County.

The proposed park would acquire a current orchard and would take advantage of adjacent properties already owned by the Flood Control Zone District and the City of Yakima to form the proposed Confluence Park. American Rivers has been working with the City, Yakima County Flood Control Zone District, the Resources Legacy Fund and other partners to implement floodplain acquisition and restoration, and the replacement of Nelson Dam with a more fish and boat passable design, in adjacent upstream and downstream reaches. The Naches Cowiche Confluence Park leverages those actions to provide improved recreational opportunities, habitat restoration, and sustainable river management and flood hazard reduction actions which provide benefits to the residential and industrial areas of the City of Yakima.

I look forward to following the progress of this project.

Sincerely,

Wendy D. McDermott
Director, Puget Sound-Columbia Basin

P.O. Box 1234 | Bellingham, WA 98227 | 206-213-0330 | AmericanRivers.org

DEPARTMENT OF PUBLIC WORKS
PARKS & RECREATION DIVISION
2301 Fruitvale Blvd., Yakima, Washington 98902
Phone (509) 575-6020 • Fax (509) 575-6238

"GET INTO THE FUNSHINE WITH PARKS & RECREATION"
"THE BENEFITS ARE ENDLESS"

June 22, 2020

Joel Freudenthal
Senior Natural Resource Specialist
Yakima County Public Services - Water Resources Division
128 N 2nd Street
Yakima, WA 98901

Dear Mr. Joel Freudenthal:

It has been a pleasure speaking with you regarding the purchase and possible development of the beautiful area along the Naches River in Yakima County, just outside of Yakima city limits. After visiting the property with RCO staff member Jesse Sims, potential project donors and other City of Yakima officials, I have become even more excited about the possibility of a public recreation space being developed there. The river is pristine and the area is a true example of the habitat of our region. I can envision so many recreation possibilities for our community, like walking trails, picnic areas, nature observation areas and a human powered watercraft launch. The Yakima Parks & Recreation Division completely supports your efforts and would like to partner with Yakima County in any way that we can. It is our commitment to help provide great outdoor recreation areas for people of all ages and ethnic origins and I know this project will be utilized by many. This project is within the urban growth area and is consistent with the City of Yakima 2017 – 2022 Parks & Recreation Comprehensive Master Plan. We hope to be a part of your master planning process and will assist with your community outreach and fund raising efforts.

This property is within walking distance of our Yakima Transit system, which stops at Chesterley Park. Such close proximity to our transit system allows anyone that lives within the city to have easy and inexpensive access to the area. Chesterley Park is also designated as a park and ride location and a great place for people to park their cars and ride their bicycles to the proposed recreation area.

Please let us know how we can assist you as you move forward with this grant application to the Washington Recreation and Conservation office. We look forward to seeing the progress made on the worthwhile project.

Respectfully,

Ken Wilkinson
Park & Recreation Manager for the City of Yakima

Cc: Yakima Parks & Recreation Commissioners
Alex Meyerhoff, Interim City Manager
Scott Schafer, Director of Public Works
File

Yakima Rotary Trust
Making Our Community A Better Place To Live.

June 3, 2020

Joel Freudenthal
Senior Natural Resource Specialist
Yakima County Public Services – Water Resources Division
128 North Second Street
Yakima, WA 98901

Dear Mr. Freudenthal:

Ken Wilkinson has made us aware of an opportunity to be involved in the planning and development of a potential project along the Naches River just to the west of Yakima. Over the years we have been able to work with the Yakima Parks Department and Ken to enhance the local parks with various projects. As Rotarians we are excited to be part of the development of a long-term plan for another opportunity for the families of our community to enjoy our wonderful area.

I am writing this letter to confirm that the Rotary Trust of Yakima is interested in being a part of this project and its development. Historically we have committed time and resources to projects of this type and that will most likely continue. The Rotary clubs and the Trust work together to identify the specific enhancements for these projects, and I would expect that to continue.

Sincerely,

Wes Morris
President
Yakima Rotary Trust

Mollie Davis

P.O. Box 464 • Yakima, WA 98907 • (509) 452-8332 • yakimarotarytrust.org

Planning Participants

ACKNOWLEDGEMENTS

This document was prepared by Tetra Tech/KCM, Inc. (KCM) under the direction of David Carlton, P.E., for Yakima County Department of Public Works. John Knutson, P.E., Manager of County Surface Water Management Division (SMD), served as the project manager for Yakima County.

Several others assisted in the development of this report. Issue development and alternative selection was performed with assistance from Advisory Committee members listed below. Yakima County GIS Department provided shape files for Tetra Tech/KCM to use in creating base maps. Erika Lacey, of FEMA, provide GIS flood data and maps describing flood damage resulting from the February 9, 1996 flood. Walker and Associates and Washington Department of Transportation provide aerial photographs. Historical photographs were provided by Yakima Herald-Republic and Yakima County.

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Committee Member	Affiliation
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Ralph Berthon	Citizen
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Chuck Steele	Washington State Department of Ecology
Jerry Franklin	Washington State Department of Ecology
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Dave Carlton	Tetra Tech/KCM, Inc.
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Al Brown	Greenway Foundation Representative
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This 2007 Upper Yakima Comprehensive Flood Hazard Management Plan update was prepared by Yakima County Public Services Surface Water Division with the assistance of Otak, Inc., specifically William Rice, Senior Environmental Specialist. Joel Freudenthal, Yakima County Fish and Wildlife Biologist, Terry Keenhan, Yakima County Surface Water Manager, Dianna Woods, Program Analyst, and Cliff Bennett, Program Coordinator, served as the primary authors of this updated plan.

The 1998 Upper Yakima Comprehensive Flood Hazard Management Plan was prepared by KCM, Inc. (KCM) under the direction of David Carlton, P.E., for Yakima County Department of Public Works. Roy A. Simonson, P.E., County Surface Water and Utilities Manager, served as the project manager for the Yakima County. The primary authors of the 1998 document were Robert Molacek and Jeffrey Henderson of KCM. David Silas provided editorial review and report production support.

Huibregtse, Louman Associates conducted a floodplain survey and collected high water elevations. Charles F. Buzzard, of Yakima County Department of Public Work, assisted greatly in providing GIS data and maps. Erika Lacey, of FEMA, provide GIS flood data and maps describing flood damage resulting from the February 9, 1996 flood. Walker and Associates and Washington Department of Transportation provided aerial photographs. Historical photographs were provided by Yakima Herald-Republic and Yakima County.

For the 1998 Upper Yakima Comprehensive Flood Hazard Management Plan report, issue development and alternative selection was performed with assistance from Advisory Committee members listed below.

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