



OANNA & YASUI
SUBLATERAL
EFFICIENCY
PROJECT

East Fork Irrigation District
P.O. Box 162 – Odell, OR 97044
Category A Applicant

Application for
WaterSMART
Environmental Water
Resources Projects for
Fiscal Year (FY) 2022

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1 - TECHNICAL PROPOSAL

1.1 EXECUTIVE SUMMARY

East Fork Irrigation District (EFID or District, Figure 1), with the support of the Hood River Watershed Group, Confederated Tribes of the Warm Springs, Natural Resources Conservation Service, and other agencies, is working to increase instream flows in the East Fork Hood River and mainstem Hood River while at the same time improving water reliability for EFID. The East Fork Hood River supports ESA-listed populations of spring Chinook salmon, winter and summer steelhead, and coho, and EFID currently diverts over 80% of the streamflow for consumptive use during the peak of irrigation season. The Oanna and Yasui pipelines (Figure 2) serve over 2,000 acres of perennial fruit trees (primarily pears), have a flow rate of 26 CFS, and drop over 800 vertical feet in old/non-pressure rated pipe. Due to the significant elevation drop, coupled with the non-pressure rated pipe, any water not used by patrons' overflows and is lost from the system. The proposed project will replace the old pipes with new pressure-rated high-density polyethylene (HDPE) pipe and several pressure reducing stations. The pipelines to be installed as part of this project also allow 'closing' (i.e. eliminating losses from) to an additional 25,000' of downstream pipe of the Oanna and Yasui pipelines, and hence allow surcharging of the pipe and eliminating all overflows/losses from the entire sub-lateral system.

EFID is committed to putting 100% of this water back instream. This project has been recommended and prioritized in the Hood River Basin Study (Reclamation, 2015), EFID Improvements Plan (WPN, 2021), the Hood River Basin Partnership Strategic Action Plan (HRWG, 2021), and other studies. This project has had an Environmental Assessment completed (Appendix B) and a Finding of No Significant Impact (FONSO, Appendix C) issued. This project is estimated to start construction in October 2023 and take 4-6 months. The project is not located on a federal facility.

EFID OVERVIEW

East Fork Irrigation District is located along the east slope of the Cascade Mountain Range in the Columbia River Basin. The largest of five irrigation districts in Hood River County, EFID covers 15,150 acres and delivers water to approximately 990 patrons irrigating 9,600 acres. Hood River County is a leading fruit-growing area in Oregon, producing one-third of U.S. winter pear crop. The primary crops grown in the District are pears, apples, and cherries.

EFID depends on streamflow from the glacier-fed East Fork Hood River, originating on Mt. Hood, Oregon's tallest peak. The District diverts 117 cfs from the river to irrigate orchards, farms, and other lands in EFID. It diverts an additional 13 cfs of water for the Mount Hood Irrigation District. The river's naturally high sediment load creates a maintenance challenge for the District, while the sand and silt content in irrigation water raises on-farm costs by clogging filters and control valves, eroding pumps and sprinkler nozzles, and limiting opportunities for high-efficiency sprinkler systems.

EFID delivers water to its patrons through 83 miles of canals and pipelines. Almost 18 miles of open, unlined canals built around 1900 serve as its primary canals and laterals. Open canals require constant maintenance and are a public safety risk, and much of the District's existing piping is aging or not suitable for pressurization. EFID does not have reservoir storage or hydroelectric-generation facilities, limiting water supply resiliency and earned-revenue opportunities.

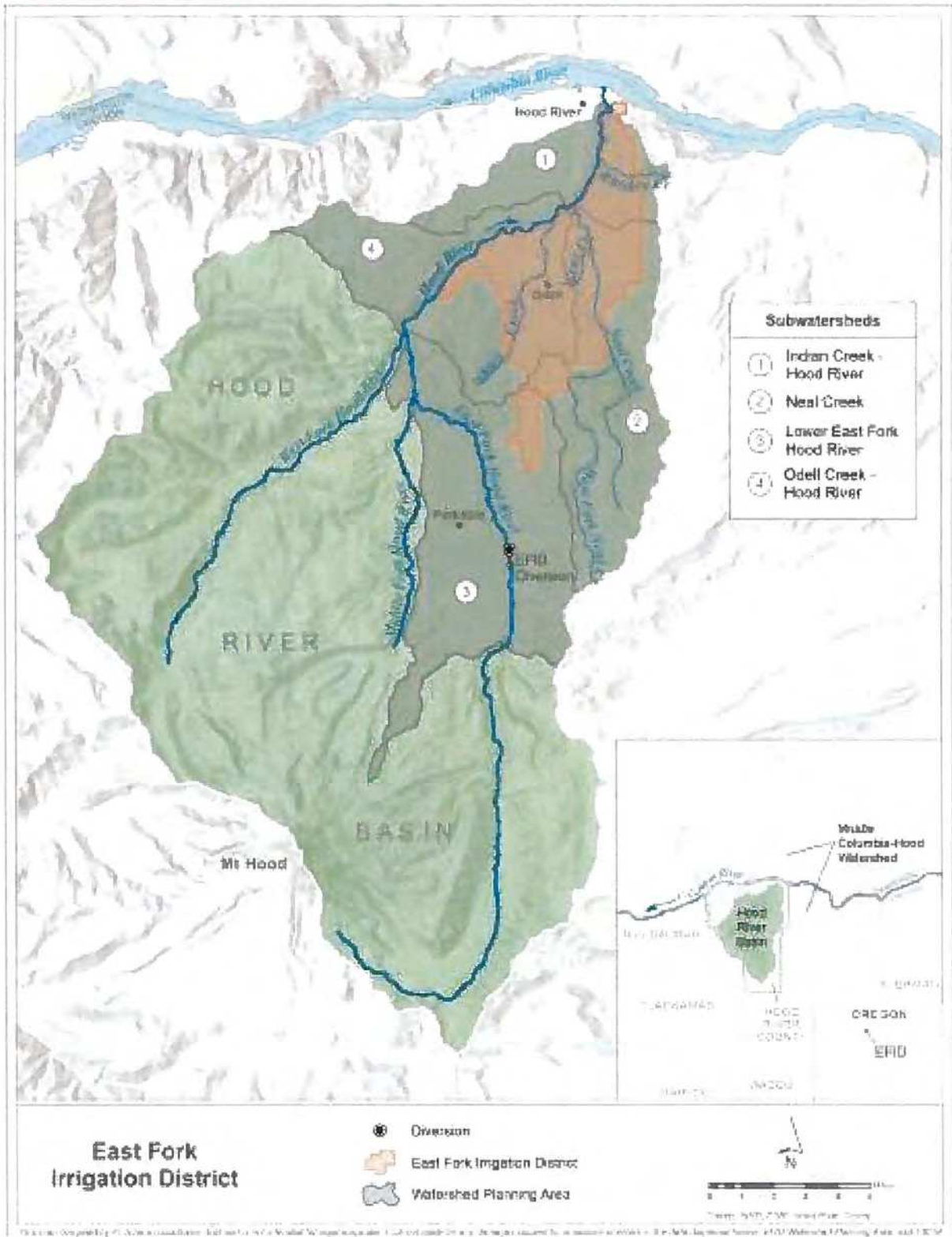
The District's aging canals, and non-pressure rated pipelines lose water and make it difficult to deliver the correct amount of water to farms at the correct time. To manage these challenges, the District typically diverts more water than its patrons need in order to ensure that water reaches all of its patrons throughout the system. Correspondingly, the District spills and estimated 18 percent, or 5,287 acre-feet/year, of the water it diverts from the East Fork Hood River as overflow at the end of pipelines and canals. An added but unquantified water loss likely occurs through seepage along the canals.

EFID diverts 80-85 percent of the available streamflow of the East Fork Hood River in late summer. During drought years, EFID has struggled to meet irrigation needs and leave water instream for fish. Three fish species in the East Fork Hood River are listed as threatened under the Endangered Species Act, including Chinook salmon, coho salmon, and steelhead trout. Currently, demands for water in the Hood River basin exceed available streamflow during the summer months. This imbalance is expected to worsen with climate change. Summer streamflow in the East Fork Hood River is projected to decline by almost 30 percent by 2059, reducing overall water availability (Reclamation, 2015). Without modernization, it will become increasingly difficult for EFID to meet both irrigation demand and keep water instream for fish, wildlife, and recreation (WPN, 2016).

EFID has already invested in improving conditions for federally listed fish populations in the East Fork Hood River. Previous actions include fish screening, fish ladder construction, piping over 11 miles of open canals, permanently allocating 2.105 cfs of conserved water instream, and cooperating with partners that assist landowners with irrigation efficiency upgrades. A modern, piped, and pressurized system will increase the District's operation efficiency, improve water supply reliability for agriculture, reduce energy use, improve water quality, eliminate a public safety risk from open irrigation canals, and improve habitat for fish and wildlife.

East Fork Irrigation District has engaged a broad range of partners to ensure that modernizing its infrastructure aligns with community interests. These partners include the USDA Natural Resources Conservation Service, Farmers Conservation Alliance, Hood River Watershed Group, Confederated Tribes of Warm Springs, Bonneville Power Administration, Hood River Soil and Water Conservation District, Oregon Water Resources Department, Oregon State Historic Preservation Office, and other agencies and organizations. Over the next five years, the District plans to strengthen and expand its agency, agricultural, and environmental partnerships.

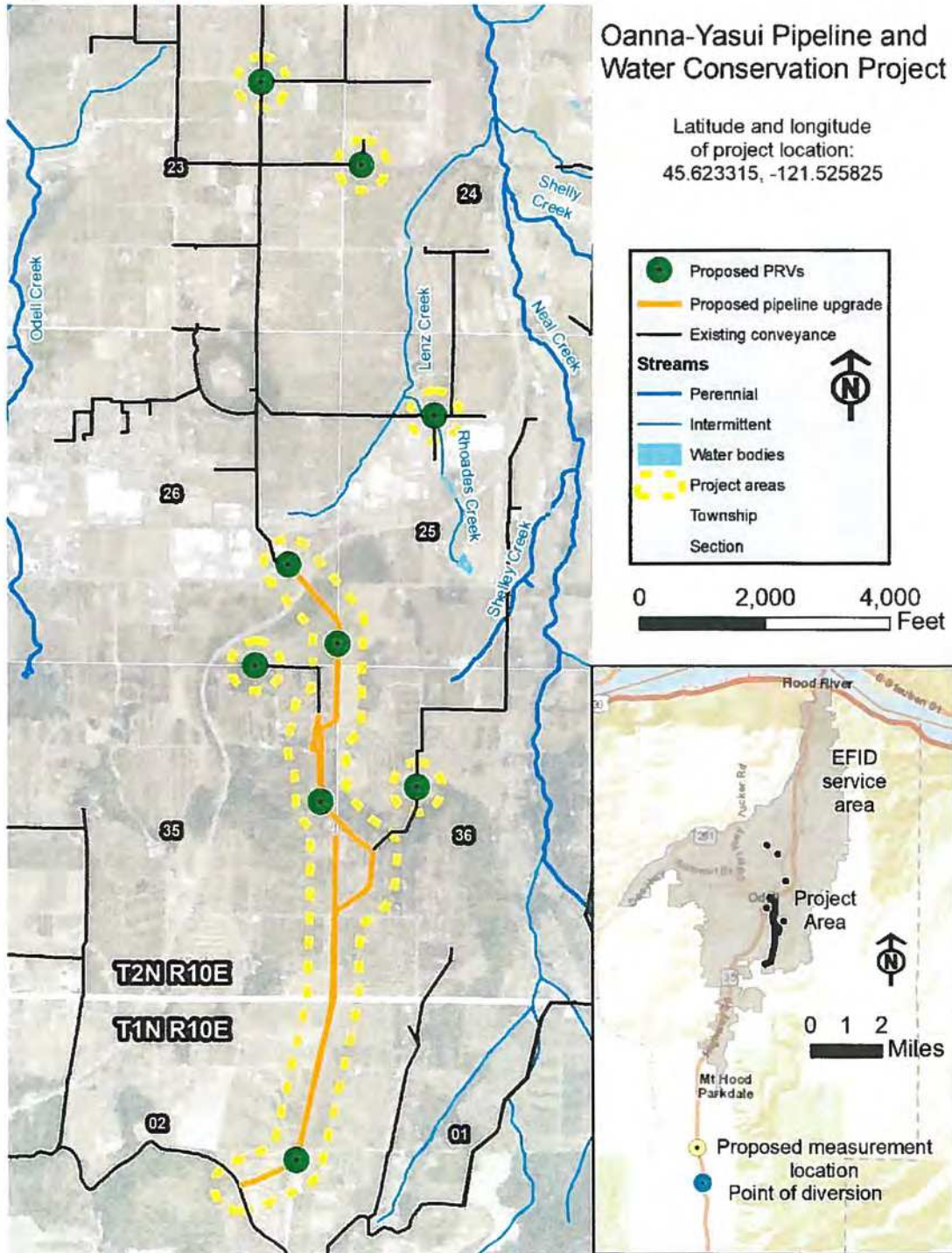
Figure 1 - East Fork Irrigation District Location and Surrounding Lands



1.2 PROJECT LOCATION

The project is located 1.5 miles southeast of Odell, Oregon (Figure 2). The project latitude is 45° 36' 20" and the longitude is 121° 31' 15".

Figure 2 - Project Map



1.3 TECHNICAL PROJECT DESCRIPTION

This project will eliminate 14,700 feet of non-pressure rated pipe (primarily wood and unreinforced concrete) and eight open concrete water boxes from EFID's system and replace them with 10,700 feet of HDPE pipe, three large pressure reducing stations, plus six smaller pressure reducing stations. EFID will be serving the same irrigated area with the shorter length of pipe (i.e., the installation of 10,700 feet versus taking 14,700 feet out of service) by combining two parallel lines into one line at the start of the new pipeline. This will allow EFID significant cost savings with no negative impacts in terms of operations and maintenance.

All the water boxes associated with the existing pipeline will be removed and replaced with pressure reducing stations at select locations. The current system has water boxes at every 100 foot change in elevation to break/eliminate the pressure in the pipeline, while the new pipe will be pressure-rated and hence only require pressure reducing stations at roughly every 275 foot change in elevation. The location of these pressure reducing stations has been optimized based on the location of patron turnouts, topography of the area served, and cost of pipe materials (pipe with higher pressure ratings cost more). In addition to the three pressure reducing stations, as part of this project EFID will also be installing pressure reducing valves (similar to the pressure reducing station, but smaller) in six other locations. Installing these six smaller reducing valves will allow EFID keep ~25,000' of existing low-pressure rated pipe while still eliminating all overflows and water loss. All pipe downstream of pressure reducing stations will also be protected by pressure relief valves in case of a failure of a pressure reducing valve.

The new pipeline will be installed in the same alignment as the existing line. This eliminates the need for EFID to obtain new easements and hence considerably streamlines the process. Additionally, this allows EFID to 'slip-line' the new pipe inside the existing pipe where appropriate. There are several locations where EFID can do this, however the final determination on exact locations has not been made yet. Locations that can be slip-lined require the existing pipe to have sufficient cover (burial depth), compatible/larger diameter, and other minor requirements. Any pipe slip-lined will be protected by the existing pipe, but also still have locate wire pulled in with it.

Pipe diameters for the project are 9,100 feet of ~30 inch pipe, plus 1,300 feet of 8 inch pipe. These pipe diameters are based on keeping velocity at or below 5 feet per second, however, EFID will perform a system optimization as part of final design, and it may use slightly smaller diameters in select locations (i.e. where allowed by delivery and surge pressure factors of safety). All new pipe will be High Density Polyethylene 7410 materials, and a majority of the pipe will be dimension ration (DR) 17 (125 psi) and DR 21 (100 psi) pipe.

The project will be constructed with standard methods employed by EFID and other local irrigation districts on several recent projects. The pipe will be butt-fused along the length of the pipe, and transition to flange coupling adaptors at all connections to valves and other

pipeline appurtenances. Construction equipment will include excavators, loaders, haul trucks, compactors, butt and electro fusion equipment, and other typical construction equipment.

1.4 PERFORMANCE MEASURES

The primary goal for this project is to conserve water and decrease EFID's diversion from the East Fork Hood River. Any reduction in diversion will result in higher streamflow downstream of the diversion (helping ESA-listed species) and increases EFID's water resource reliability. This goal can be tracked through the following performance measures:

1. Reducing required demand (flow) in EFID's canal just downstream of the diversion (and upstream of the project area) to help quantify water savings achieved by the project (to be measured in CFS and acre-feet).
2. Reducing patron demand (flow) in the Oanna Line system. This item specifically quantifies water savings achieved by this project (to be measured in CFS and acre-feet).
3. Increasing streamflow in the East Fork Hood River below EFID's diversion. This is one of the major goals of the project. Streamflow to be measured in CFS and compared to previous years.
4. Increasing habitat for ESA-listed species. This is to be quantified using a recent IFIM study and the data from #2 and #3 above.

1.5 EVALUATION CRITERIA

A - Project Benefits

A.1 Benefits to Ecological Values

The Lower Columbia River Conservation and Recovery Plan for Oregon Populations of Salmon and Steelhead identified low streamflow as a primary limiting factor to recovery in the Hood River Basin (ODFW, 2010). That, coupled with the significant water conservation from this project and the East Fork Hood River supporting threatened populations of spring Chinook salmon, winter and summer steelhead, and coho, indicate this project has significant and meaningful environmental benefits. A focus of the Confederated Tribes of the Warm Springs (CTWS), Pacific lampreys are also present in the East Fork and are limited by low flows. Resident rainbow and cutthroat trout also inhabit the East Fork Hood River. These flow restoration needs and water conservation planning in the basin have identified the Oanna and Yasui project as a top priority to be implemented.

Recent models for the Hood River Basin predict that by the year 2050, average air temperatures in the Hood River Basin are expected to increase by 2.3° F, which will lead to more precipitation falling as rain instead of snow, less snowpack, less glacial area for

meltwater, higher winter streamflow's, and lower summer streamflow's. The modeling was completed by the Bureau of Reclamation as part of the Hood River Basin Study (Reclamation, 2015). The study included a Water Use Assessment, Water Conservation Assessment, Instream Flow Incremental Methodology (IFIM) Study, Climate Model, and Surface Water Model. Because EFID takes an average of 80-85% of the East Fork Hood River's flow during August/September, the lower East Fork Hood River is the most vulnerable reach to climate change and drought in the entire Hood River Basin. With no additional water conservation actions, EFID will not be able to both meet irrigation needs and leave water instream for fish during future drought years (WPN, 2013B). The IFIM study completed as part of the Basin Study quantified the relative amount of suitable habitat for these species at varying streamflow's. The study indicated that the amount of suitable spring Chinook spawning habitat on the East Fork Hood River is well below optimal levels, and a 2 CFS increase in flow equates to a 3% increase in habitat in an average year (and much higher in a drought year). This is due to the fact that spring Chinook spawn in late summer when irrigation demand is high and stream flows are low. Lower stream flows throughout the summer also affect juvenile spring Chinook and steelhead that rear in the watershed for one to three years. All conserved water will be left instream at the EFID diversion, and hence will stay in the East Fork Hood River for 9 miles, plus the mainstem Hood River for 12.2 miles, for a total of 21.2 river miles.

The main canal, which supplies water to the Central Lateral pipeline and in turn the Oanna/Yasui sub-lateral, is an open canal. This exposes the irrigation water to thermal and chemical pollution as it travels through numerous orchards, where it is exposed to thermal radiation and to pesticides that are applied via air blast sprayers. Thus, end spills on the Oanna/Yasui sub-lateral are contributing polluted water to the Hood River, via Odell and Neal Creeks, which also support endangered species. (The specific destination of endspill water is discussed in A2.)

Conserving water through irrigation delivery system improvements is one of the most effective ways of leaving more water instream during late summer and protecting water quality. Increased summer flows will have a measurable impact on late summer spring Chinook spawning habitat, as well as juvenile Chinook and steelhead rearing habitat. Furthermore, eliminating the endspills on the Oanna/Yasui line will prevent warm, contaminated water from entering receiving streams.

A.2 Specific Project Benefits by Type

A.2.1 - Water Efficiency

The existing pipeline cannot hold the water pressure created by the 840 foot elevation drop (~360 psi), and hence has no way to surcharge the pipe and keep unused water in the system. This would be analogous to the plumbing to a kitchen sink not being pressure-

rated, hence the water always has to run whether in use or not. The proposed project will entirely enclose the system with pressure rated pipe and pressure reducing stations, and hence if peak demand of 26 CFS was cut in half to 13 CFS, all water would remain in the EFID system for future use (similar to when you turn off the kitchen sink in the example above). As the system is currently configured, in the example above the 13 CFS would spill out and be lost. A majority of it would eventually return to the Hood River, but only after flowing across farms and ditches, and hence likely return with higher temperature, pesticides, and turbidity.

The proposed pipeline project will save an estimated average of 2 cfs, which is equal to 725 acre-feet over the irrigation season.

A.2.2 - Drought Resiliency for Fish and Wildlife

Currently, streamflow in the Basin is insufficient to meet competing demands for water during the summer months (Reclamation, 2015). This imbalance is expected to be exacerbated by climate trends. Mount Hood's glaciers have been receding since the mid-1900s or earlier, including the Newton-Clark glacier in the headwaters of the East Fork Hood River. Glacial recession and declining snowpack are expected to continue as a result of the warmer air temperatures predicted with changing climate (Reclamation, 2015). Basin runoff is predicted to increase in fall and winter and decrease in spring and summer when water uses are greatest. In the East Fork Hood River, the modeled future decline in average streamflow for May through September approached 30 percent for the period 2030 to 2059 compared to the period 1980 to 2009 (Reclamation, 2015).

Glacial melt currently provides between 50 and 70 percent of the Basin's streamflow during the critical summer water use period (Bureau of Reclamation, 2015). Recent models for the Hood River Basin predict that by the year 2050, average air temperatures in the Hood River Basin are expected to increase by 2.3° F, which will lead to more precipitation falling as rain instead of snow, less snowpack, higher winter streamflows, and lower summer streamflows. The modeling was completed by the Bureau of Reclamation as part of a Basin Study in 2015. The Study included a Water Use Assessment, Water Conservation Assessment, Instream Flow Incremental Methodology (IFIM) Study, Climate Model, and Surface Water Model.

This piping project will result in notable increases in ecosystem resiliency to climate change. Because EFID takes an average of 80-85% of the East Fork Hood River's flow during August/September, the lower East Fork Hood River is the most vulnerable reach to changes in weather and streamflow in the entire Hood River Basin. With no additional water conservation actions, EFID will not be able to meet irrigation needs and leave water instream for fish during future drought years (WPN, 2013B). By improving water conservation and increasing instream flows, this project will increase streamflow, decrease

water temperatures (summer water temperature is inversely proportional to streamflow in the East Fork and mainstem Hood River), and enhance cold water habitat. This water conservation project will also protect EFID's Oanna Line patrons from drought, making them more resilient in a future, drier climate. All aspects of this project increase the future resilience of EFID, its patrons, and ultimately the local economy and ecosystem.

A.2.3 - Watershed Management

This project strongly promotes both state and local watershed priorities by directly addressing ecological and economic limiting factors and implementing recommended actions in both regional recovery plans and local management plans. The Hood River Basin is an essential basin within Oregon for recovery of the Lower Columbia Salmon and Steelhead ESU. This is due to the unique genetics and life history diversity of its populations (e.g., the Basin contains the only population of summer steelhead in the Lower Columbia ESU). Except for winter steelhead, the current extinction risks of salmon and steelhead populations within the Hood River are very high (ODFW, 2010). A primary limiting factor to recovery is low streamflow in the summer. The primary threat to streamflow on the East Fork Hood River is withdrawal for irrigation, as well as predicted reduction in summer streamflow from climate change.

Tribal, state, and federal fisheries agencies estimate that recovery of Hood River steelhead and spring Chinook populations is likely with appropriate restoration and conservation actions. Chief among these is restoration of summer instream flows. In the East Fork Hood River, this project will increase spring Chinook spawning and rearing habitat and summer steelhead rearing habitat. Both spring Chinook and steelhead are culturally important to the Confederated Tribes of the Warm Springs.

The Hood River County Energy Plan, a cooperative plan between Hood River County, the City of Hood River, and the Ports of Hood River and Cascade Locks, focuses on increasing local resiliency to disaster, reducing fossil fuel emissions, and increasing investment in local power. The plan also prioritized upgrading agricultural water delivery systems that result in water conservation and energy savings (the energy saving in the Oanna/Yasui Project will be achieved by using the elevation drop to pressurize the water, hence taking pumps offline).

Piping of the system will also reduce pesticide inputs (from drift into upstream open canals) from overflows that currently return to Odell and Neal Creeks.

A.2.4 - Multi-Benefit Project (if applicable)

Jobs and Local Economy

The economy of Hood River County is heavily dependent upon irrigated agriculture, with 1/3 of personal incomes in the County coming from the fruit industry and supporting industries. In 2012, gross agricultural commodity sales in Hood River County were approximately \$112 million (<http://oain.oregonstate.edu/>). The County supports an estimated 1,540 agricultural-related jobs. This project is critical to the long-term retention of approximately 150 agriculture-based jobs in the County. (This estimate is based on the project area being approximately 1/10 of the total irrigated land in the County). By stabilizing irrigation water availability and reliability in the project area through increased water conservation and efficiency of delivery, orchardists will be able to continue to support their families and hire workers to help with irrigation, pruning, and harvesting.

Vital to the growth in agricultural production and the associated continued job growth is a reliable water supply that supports the existing agricultural base and the recovery needs of threatened fish species, both now and in a future warmer, drier climate.

This project will also support local construction jobs with an estimated 15 FTE being supported for ~4-6 months during pipeline construction.

This project will have a long-term positive effect on economic activity for farmers within EFID by increasing the reliability and efficiency of irrigation water. Water security for agricultural use is essential to maintaining the family-owned farms in EFID. Without a reliable water source, it is difficult to plan for the future. As the next generation of farmers move into leadership roles, they must know that they have a water supply that will allow their farms to operate into the future. As with any business, investing in the future depends heavily on confidence in the ability to successfully operate into the future. Interpolation of data in EFID's Environmental Assessment (FCA, 2020) indicates that this project will enhance agricultural yield in the service area by approximately \$50,000.

Tribal Benefit

The Hood River Watershed is part of the ceded lands of the Confederated Tribes of the Warm Springs Reservation (CTWS). To improve fish harvest opportunities for tribal members, CTWS created the Hood River Production Program (HRPP), which includes raising spring Chinook smolts at a hatchery located in the Middle Fork Hood River Subbasin. The HRPP and associated CTWS/BPA funding has resulted in the investment of millions of dollars into the Basin, which has helped pay for numerous water conservation and habitat restoration projects. CTWS recently largely paid for the design of the Eastside Lateral Pipeline in 2019 and is heavily invested in the implementation and resulting water conservation from that project, and has committed financially to this project. The Tribes regularly monitor the Bypass Reach below EFID's diversion on the East Fork Hood River to

ensure that flows are sufficient to provide fish passage. Increased streamflows resulting from this project will directly benefit CTWS's Production Program and help support Tribal Treaty Fishing Rights.

Tourism Benefit

Hood River County has a significant tourism component to the local economy. Statistics gathered by Dean Runyan and Associates for the Hood River Chamber of Commerce shows an economic impact of \$98.7 million to the local economy of Hood River County in 2017 from tourism. Total direct employment related to tourism in Hood River County was calculated at 1,100 full time jobs. The vast majority of the tourism industry is focused on agriculture or recreation. When the local agricultural system is strengthened, so is the agricultural tourism economy. Recreational tourism in Hood River County has a strong focus on water sports. The Hood River is a favorite kayaking and swimming resource and any instream flow enhancement will enhance the opportunities associated with water-focused recreation.

Finally, recreational fishing, as well as CTWS harvest opportunities, would be enhanced by increased instream flow. Increased flow generally leads to better production and survival numbers which in turn leads to overall improved return of adult fish to spawn.

Improvements in conditions for members of minority or low-income communities

Hood River County has a substantial and growing Hispanic population making up approximately 30% of the entire population. Migrant workers (primarily from Mexico) began arriving in the Hood River Valley in the early to mid-1970's to work in the harvest of tree fruit. Since that time, descendants of the original migrants as well as others moving to the area for work, have become established and valued members of the community, taking leadership roles in agriculture, business, and community organizations. Despite the achievements made by those in the Hispanic population, there continues to be a disproportionate rate of lack of access to services and poor living conditions for members of the Hispanic population as compared to the general population. Irrigated agriculture was historically (and still is) the primary draw that attracts migrant labor. Irrigated agriculture has provided opportunities for economic growth for many who have chosen to make the Hood River Valley their permanent home. Some families have chosen to open businesses, others purchase or lease their own acreage, and many have moved into leadership or management roles with associated businesses. Labor shortages in recent years have led to increased pay and improvement in housing and working conditions in the agricultural sector and this trend is expected to continue. Water supply security and efficiency of application both directly affect the long-term viability of irrigated agriculture. The Hispanic community is just beginning to reach a place where social and economic parity is possible across the entire community.

Irrigated agriculture will continue to be the primary conduit for economic and social growth within the Hispanic community and therefore improving the long-term security and viability of irrigated agriculture in Hood River County will lead to improvement in conditions for members of a minority population that has historically had disproportionate representation in the low-income end of the economic spectrum. Increasing irrigation reliability and availability to patrons reduces the risk of crop loss and maintains the economic viability of farms, which protects the jobs and economic security of those farms, laborers, and all associated industries, which have a majority Hispanic workforce.

Public Safety and Food Production

This project creates significant improvements in public health and local food systems. The project replaces aging water infrastructure, improves streamflow, improves water quality, and creates a more resilient food network. Hood River is fortunate to be able to grow a portion of the food we consume, however, this comes with the need to maintain and update aging infrastructure, which this project accomplishes. Unreliable water ultimately equates to an unreliable national food system, and Hood River County's contribution to national food production accounts for 25% of the U.S. pear crop for fresh consumption (proportionally, EFID's 5,290 acres of pears would account for approximately 11% of the U.S. pear crop for fresh consumption).

Furthermore, East Fork Irrigation District includes substantial acreage dedicated to cherries, apples, and blueberries, which account for a substantial portion of local and, commonly, organically grown food in the Hood River Valley. The agricultural community dependent on this pipeline will directly benefit from the completion of this project, but so too will the Hood River Valley economy, ecology, and culture at-large.

B - Collaborative Project Planning

This project was identified in multiple collaboratively developed plans, including the Hood River Basin Study (Reclamation, 2015), the Hood River Water Conservation Strategy (WPN, 2016), and the Hood River Basin Partnership Strategic Action Plan (HRWG, 2021). Two of these plans (the Hood River Basin Study and the Hood River Water Conservation Strategy) were supported through in-kind and financial assistance from Reclamation WaterSMART grants. Stakeholders collaborating on and supportive of these plans include Hood River County, OWRD, ODFW, local irrigation districts, Hood River Soil & Water Conservation District, Hood River Watershed Group, CTWS, water districts, orchardists, and other Basin partners. The public has had extensive opportunities to comment at monthly Water Planning Group meetings (during the development of the Hood River Basin Study) and monthly public Hood River Watershed Group meetings. Meetings were advertised in the local newspaper as well as social media platforms.

In 2016, the Hood River Water Conservation Strategy (HRWCS) was developed by Hood River Watershed Group partners to identify, quantify, and prioritize the best opportunities for water conservation and instream flow enhancement in the Watershed. Water conservation through increased efficiency of irrigation water delivery systems, including the piping of EFID's sub-lateral system, was identified as one of the most cost-effective water conservation methods.

Similar to OWRD's Place-Based Planning Initiative, the HRWCS arose from the locally driven Hood River Basin Study (WPN, 2013A&B, Reclamation, 2015), which included an assessment of current water use and instream conditions, potential for water conservation, and likely impacts to local water resources from climate change. Developing the HRWCS also included partner and community discussions of how best to meet future out-of-stream and instream needs. One of the most important project types identified in the HRWCS was conveyance system improvements, for its significant overall impact.

The HRWCS also notes that "... fish populations, the local economy, and social equity are inextricably linked in the Hood River Basin. From an ecological standpoint, if instream flows are insufficient, Hood River salmon and steelhead will not recover to self-sustaining levels. From an economic standpoint, a certain amount of water is required to sustain existing agricultural and energy production. Furthermore, from a cultural and societal perspective, healthy fish runs benefit the local economy through sport fishing revenues, tourism, health benefits associated with a healthy ecology and aesthetics, and the avoidance of costly conflicts over water allocations. Identifying and building local support for effective solutions that keep both fish and people on a positive, synergistic trajectory is the essential goal of the HRWCS."

The proposed project is perfectly aligned with Oregon's Integrated Water Resources Strategy (IWRS), which promotes the protection and long-term sustainability of instream and out-of-stream water use. Like the HRWCS, the IWRS calls out the effects of a warming climate, which will necessitate even greater attention to water conservation and related innovations to maintain and possibly improve water supply and instream conditions in the future. The Oanna/Yasui Project addresses several of the recommended actions under Objective 4 of the IWRS, including "improve water use efficiency and water conservation," "reach environmental outcomes with non-regulatory alternatives," "improve watershed health, resiliency, and capacity for natural storage," and "protect and restore instream habitat and habitat access for fish and wildlife."

The proposed project has been identified and prioritized by the Hood River Watershed Group. Information on this group can be found at: <https://hoodriverwatershed.org>. This group is defined as a watershed group and meets the requirements in Section 6001 of the Cooperative Watershed Management Act.

C - Stakeholder Support

The stakeholder support for this project ranges from tribal, governmental, agriculture, environmental, to private land owners. Please see Appendix A for Letters of Support and Section 2 for financial commitments from stakeholders.

This project is supported by agencies responsible for management of water (Oregon Water Resources Department) and fish and wildlife (Oregon Department of Fish and Wildlife). This project is consistent with the goals of water conservation and increased streamflow.

This project complements other water conservation projects occurring in the Hood River Basin. Farmers Irrigation District, Middle Fork Irrigation District, and Dee Irrigation District have all undertaken piping projects in recent years to help conserve water and increase streamflow. This project does not duplicate efforts of the other district but adds to and supports their efforts. This is reflected in the letters of support from these districts.

This project is not on federal land, nor does the pipeline serve any federal land, and therefore no other federal agencies have been contacted for potential support of the project.

This project supports irrigated agriculture, instream flows, tribal, environmental, and economic interests, and hence there has been no opposition to this project from any agency or individual.

D - Readiness to Proceed

This project is ready to proceed once EFID receives financial support for it. EFID completed a feasibility study of the project in 2021 and determined there are no 'red flags' that may be encountered moving forward. EFID has already obtained or completed the following:

Already completed:

- NEPA analysis with a Finding of No Significant Impact (FONSI) from the proposed project.
- High resolution LiDAR elevation survey data of the project area
- EPA-NET pipe network model of the pipe alignment. This model has flow rates, elevation, pipe diameters, irrigation turnouts, and pressure reducing stations in it.
- GIS survey of all irrigation turnouts and other connections to this line.
- Landowner permission to construct the pipeline. The pipeline will be installed in an alignment (the existing pipe) which EFID has existing easements for.

Permits:

The permits and approvals that will be required are:

- Hood River County Right-of-Way permit to cross Willow Flat Road. This permit will be applied for at 60% design, is free to EFID, and is typically granted by Hood River County within 14 days of application. This road crossing is very typical, and no issues are expected.

- DEQ 1200-C permit. This project will disturb more than 1 acre, and hence the construction contractor will be required to obtain an Oregon DEQ 1200-C permit. This permit will be listed as required in the Contract Bid Documents and proof of permit due to EFID before construction activities can occur. DEQ typically turns these permits around in less than 30 days and no issues are expected.
- Below-ground cultural resource surveys and finding of no-significant impact from the Oregon State Historic Preservation Office.

Engineering:

As discussed earlier, a feasibility study, preliminary engineering, survey data, a hydraulic model, and other items have already been completed for this project, leaving the following items to be completed:

- 60% and 100% construction drawings
- Bid Documents

Site Access:

EFID has access to the project area, including construction ingress and egress. The new pipeline will be constructed along the same alignment as the existing line, of which EFID has existing/valid easements that allow this project.

Environmental Review:

Potential environmental and cultural resource compliance has been communicated to all state, federal, tribal, and other interested parties through the NEPA process that is complete. See Appendix C for the FONSI.

See Tables 1 and 2 for project schedule and project budget.

Table 1. Project Schedule

Task	2021		2022				2023				2024	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
EFID Project Prioritization ¹	X											
Feasibility of Oanna Project ¹		X										
Preliminary Design ¹		X										
60% Design				X								
Permitting and Compliance					X	X						
100% Design, Bid Documents					X	X						
Bid Project, Select Contractor							X					
Purchase Materials								X				
Receive Materials & Staging									X			
Construction										X	X	
Project Close-out & Reporting												X

Notes: ¹ EFID has completed project prioritization, feasibility study, and preliminary design of the Oanna Project in 2021.

Table 2. Project Budget

Task	Budget			
	EFID In-Kind	Consultants	Contractor	Total
EFID Project Prioritization ¹				completed
Feasibility of Oanna Project ¹				completed
Preliminary Design ¹				completed
60% Design	\$10,000	\$80,000		\$90,000
Permitting and Compliance	\$10,000	\$15,000		\$25,000
100% Design, Bid Documents	\$10,000	\$75,000		\$85,000
Bid Project, Select Contractor	\$10,000	\$10,000		\$20,000
Purchase Materials		\$10,000		\$10,000
Receive Materials & Staging	\$5,000			\$5,000
Construction ²	\$120,000		\$2,950,000	\$3,070,000
Construction Management	\$25,000	\$50,000		\$75,000
Project Close-out & Reporting	\$10,000	\$10,000		\$20,000
Total	\$200,000	\$250,000	\$2,950,000	\$3,400,000

Notes: ¹ These tasks have been completed and paid for.

² Construction cost is based on preliminary design and includes a 10% contingency.

E - Performance Measures

The primary goal for this project is to decrease EFID's diversion from the East Fork Hood River. Any reduction in diversion results in higher streamflow downstream of the diversion. This helps EAS-listed species and EFID's water resource reliability. This goal can be tracked through the following performance measures:

1. Measuring flow in EFID's canal just downstream of the diversion (and upstream of the project area).

EFID, in partnership with OWRD, maintains a water level sensor and rating curve, and has a continuous record of flow in this canal. This data has been collected for the past 10 years and will continue to be collected after project construction. Comparison of the before/after flow rates will allow EFID, Reclamation, and others to quantify the CFS and acre-feet benefits of the project.

2. Measuring flow in the Oanna Line system.

Similar to #1 above, measuring flow in the Oanna Line before and after the project will allow EFID and its partners to determine the effectiveness of the project. This data will be specific to the Oanna Line, whereas the data in #1 applies to the whole district. To measure the pre-project flow, EFID will install a flow measuring device at the start of the Oanna Line before irrigation season 2022. As part of the new pipeline project, EFID will be installing a permanent flow meter at the same location, and hence the benefits of this project can be quantified in both CFS and acre-feet.

3. Measuring streamflow in the East Fork Hood River below EFID's diversion.

This performance measure will be used to quantify impacts to streamflow achieved by the project. The Confederated Tribes of the Warm Springs have operated a continuous water level sensor with streamflow rating curve just below the diversion for the past 5 years. Comparison of the before/after streamflow data will allow quantification of changes in streamflow, number of times EFID is required to reduce diversions to meet instream flow targets, etc. It should be noted that the streamflow data is highly influenced by natural hydrology (snowpack, etc) and cannot be used by itself to quantify project benefits. This data must be combined with data in 1 and 2 for a complete picture of project benefits. Collecting and analyzing this data will allow the extra step of applying the water saved from the project (#2 above) to an amount of streamflow (e.g., 4 cfs conserved when East Fork Hood River is at 25 cfs).

4. Changes to habitat for ESA-listed species due to the project

As part of the Hood River Basin Study, an Instream Flow Incremental Methodology (IFIM) study analyzed amount of habitat as a function of streamflow for different species and life stages at six locations in the Hood River Basin. This 'habitat' is based on the suitability of

velocity and depth for each species/life stage and uses hydraulic modeling of the reaches to generate a curve of Weighted Usable Area as a function of streamflow. Two of these locations were on the East Fork Hood River below EFID's diversion. Combining information from this study, along with #2 and #3 above, will allow EFID and partners to directly quantify the increases in habitat achieved by the project.

F - Presidential and DOI Priorities

F.1 Climate Change

This project provides long-term resilience to drought and climate change. The Hood River Basin Study (Reclamation, 2015) found that the natural flow of the East Fork Hood River is highly dependent on April 1 snowpack and glacial extent. The study found that both of these streamflow contributions are expected to be significantly reduced by 2040, with further reductions expected by 2100. This project conserves water and hence allows EFID to be more resilient. This project also reduces greenhouse gas emissions by using the elevation drop over the pipeline to build water pressure that can then be used by patrons to irrigate, hence eliminating the need for pumps to provide water pressurize. It's difficult to make accurate projects outlast 100 years, however, the HDPE pipe that will be installed as part of this project has a 100+ year lifespan.

F.2 Disadvantaged or Underserved Communities

It's been estimated that roughly 85% of farm labor is provided by migrant workers and underserved communities. Although providing job security for these workers is not the primary goal of the project, protecting EFID against water shortages and reduced farm acreage does increase the long-term reliability of these jobs. A majority of the local farm labor workforce (i.e., non-migrant workers) reside in Odell, Oregon which has a per capita income of \$15,587, versus the statewide average of \$28,822. This farm labor workforce also meets the Executive Order 13985 as the community in Odell is 72.6% Hispanic.

F.3 Tribal Benefits

This project provides fisheries benefits to the Confederated Tribes of the Warm Springs (CTWS). The CTWS has prioritized and invested in streamflow restoration in the East Fork Hood River below the EIFD diversion, and this project is specifically further the CTWS goal of increasing streamflow in this reach. Please see the CTWS letter of support for additional documentation.

2 – PROJECT BUDGET

2.1 FUNDING PLAN & LETTERS OF COMMITMENT

The Confederated Tribes of the Warm Springs will provide two hundred-thousand-dollars (\$200,000) in non-federal cost-share to EFID for FY 2022. These funds are currently available and anticipated to be spent on project design and permitting.

In November of 2021, the EFID Board of Directors pass Resolution No. 2021-2 authorizing the application for this WaterSMART grant and authorized a cash match of one million (\$1,000,000) from the District's general operating fund. EFID has also pledged two hundred thousand dollars (\$200,000) of in-kind labor contributing to the overall project cost.

2.2 BUDGET PROPOSAL

Table 3. Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal Funding	\$ 2,000,000.00
Costs to be paid by the applicant	\$ 1,200,000.00
Value of third-party contributions	\$ 200,000.00
Total Project Cost	\$ 3,400,000.00

Table 4. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
<i>Non-Federal Entities</i>	
1. Confederated Tribes of Warm Springs	\$ 200,000.00
2. East Fork Irrigation District	\$ 1,200,000.00
Non-Federal Subtotal	\$ 1,400,000.00
REQUESTED RECLAMATION FUNDING	\$ 2,000,000.00

Table 5. Itemized Budget Proposal

Budget Item Description	COMPUTATION		Total Costs
	\$/Unit	Quantity	
SALARIES & WAGES			
EFID General Manager's Oversight	\$55.00 / Hour	50	\$2,750.00
Office Manager - Reporting	\$35.00 / Hour	20	\$700.00
SUBTOTAL			\$3,450.00
PROJECT MANAGEMENT			
Construction Management	\$165.00 / Hour	434	\$71,550.00
SUBTOTAL			\$71,550.00
CONTRACTED SERVICES (LABOR, SUPPLIES, AND MATERIALS)			
Design Consultant	\$165.00 / Hour	1060	\$175,000.00
Permitting/Compliance			\$25,000.00
Bid Project/Select Contractor			\$20,000.00
Materials & Staging			\$15,000.00
Construction			\$3,070,000.00
Project Close Out & Reporting			\$20,000.00
SUBTOTAL			\$3,325,000.00
PROJECT BUDGET TOTAL			\$3,400,000.00

2.3 BUDGET NARRATIVE

Salaries and Wages

The on-site construction management/inspector will be Niklas Christensen of the Watershed Professionals Network (WPN). The project anticipates 434 hours of work for this role, at a rate of \$165 per hour, for a total project cost of \$71,550. EFID’s District Manager, Steve Pappas will serve as the Project Manager. His oversight is estimated to require 50 hours at a rate of \$55 per hour for a total project cost of \$2,750. EFID’s Office Manager, Veronica Glenn, will perform project reporting, requiring an estimated 20 hours of time at a rate of \$35 per hour for a total project cost of \$700.

Fringe Benefits & Travel

There are no Fringe Benefits or Travel costs associated with the project.

Equipment, Materials and Supplies, & Contractual

Niklas Christensen with WPN will be the primary design consultant. He has estimated 1060 hours of work for this role, at a rate of \$165 per hour, for a total project cost of \$175,000. All Equipment, Materials and Supplies will be provided by the Contractor as described in the Budget Proposal. The procurement method for the contract will be via a Competitive Public Bidding process, with the contract awarded to the bidder presenting the lowest eligible bid.

Other Expense & Indirect Costs

Other expenses and indirect costs are not included in the project budget, not part of the grant request nor the pledged match.

Environmental & Cultural Resource Compliance Costs

East Fork Irrigation District will have to complete a below ground cultural resource survey. This cost will be part of EFID's cost share.

3 – ENVIRONMENTAL & CULTURAL RESOURCE COMPLIANCE

As documented in EFID's Watershed Plan-Environmental Assessment (EA) and accompanying Finding of No Significant Impact (FONSI), this project will not have adverse impacts on environmental or cultural resources. More specifically:

1. This project will not negatively impact the surrounding environment. All impacts to soil, water, and dust will be minimized and mitigated through a Temporary Erosion and Sediment Control (TESC) Plan that will be part of the construction contract documents. Earth-disturbing activities consist of trench excavation and stockpiling of materials per standard DEQ TESC requirements, no storm water with turbidity will be allowed to leave the project site, stockpiles will be covered in inclement weather, construction entrances will be used to minimize tracking of sediment off the project sites, and straw waddles and silt fences will be used as appropriate. The project alignment does not contain any waterbodies or animal habitat, and as such, those items will not be impacted.
2. The project area does not contain any threatened or endangered species, or critical habitat for them.
3. There are no wetlands or other surface waters within the project boundary. This was confirmed by walking the project alignment and reviewing the National Wetland Inventory Systems (NWIS).
4. The Oanna pipeline was originally constructed around 1900 but has been under a continual process of repair and replacement, and hence existing pipe ranges from the 1900s up to sections that were built in the 1990s. As part of the EA Section 6 process, it was concluded there would be "no anticipated significant effects to historic or cultural resources".
5. The project will result in removal of existing pipe and water boxes. These actions were analyzed in the NEPA process, from which a Finding of No Significant Impact (FONSI) was issued.
6. There are buildings in EFID that are eligible for historic listing, however this project is geographically separated from those structure and has no ability to impact them.
7. The proposed project will not have a disproportionately high or adverse impact on low income of minority populations.
8. This project will not limit access to ceremonial use of Indian sites or other impacts to tribal lands.

4 – REQUIRED PERMITS AND APPROVALS

As discussed further in Section 1.5.D, EFID will be required to obtain a 1) Hood River County Right-of-Way permit, 2) an Oregon Department of Environmental Quality (DEQ) 1200-C stormwater permit, and 3) survey for underground cultural resources and finding of no impact from the Oregon State Historic Preservation Office. All other permits and approvals have already been obtained through the NEPA process and EFID's receipt of the Finding of No Significant Impact (FONSI).

5 – OFFICIAL RESOLUTION

Full page Resolution document on next page.

EAST FORK IRRIGATION DISTRICT

RESOLUTION NO. 2021-2

A RESOLUTION IN SUPPORT OF A GRANT APPLICATION WITH THE BUREAU OF RECLAMATION FOR THE WATERSMART ENVIRONMENTAL WATER RESOURCES PROJECTS GRANT OPPORTUNITY NUMBER R22AS00026

WHEREAS, the East Fork Irrigation District is a Municipal Corporation organized under the Oregon Revised statute – ORS 545; and as such, the Board of Directors of the East Fork Irrigation District has the authority to enter into a Financial Assistance Award Agreement with the United States Government; and,

WHEREAS, Steven Pappas, District Manager for East Fork Irrigation District has been authorized by the Board as appropriate official has reviewed and supports the grant application for the purpose and use of irrigation water more efficiently as well as reducing water loss at the diversion; and accomplish other benefits that contribute to water supply reliability; and,

WHEREAS, The East Fork Irrigation District has the financial resources to enter into a financial assistance contract with the Bureau of Reclamation and commits to a one million dollar (\$1,000,000) cost share with the Bureau of Reclamation; and,

WHEREAS, the East Fork Irrigation District will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative grant agreement.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the East Fork Irrigation District as follows:

East Fork Irrigation District is hereby authorized to receive, if awarded, the WaterSMART Water and Energy Efficiency grant funding in the amount up to \$500,000 and will make a good faith effort to enter into a cooperative agreement with Reclamation for the receipt and administration of said grant funds; and that Steve Pappas, District Manager, or his designee, is hereby authorized to act on behalf of the East Fork Irrigation District in all matters related to the grant application which may be necessary for the receipt and administration of the grant funding in accordance with the requirements of the Bureau of Reclamation.

Adopted by the East Fork Irrigation District this 29th day of November, 2021.

DATED: November 29, 2021


Brian Nakamura, Chairman


Steven Pappas, District Manager

6 – UNIQUE ENTITY IDENTIFIER & SAM REGISTRATION

DUNS Number: 794994491

Unique Entity Identifier: VVGTGJLAMND3

7 – REFERENCES

- FCA, 2020A. East Fork Irrigation District Environmental Assessment (EA). Prepared for the United States Department of Agriculture Natural Resources Conservation Services (NRCS) by Farmers Conservation Alliance. July 2020
- FCA, 2020B. East Fork Irrigation District Finding of No Significant Impact (FONSI). Prepared for the United States Department of Agriculture Natural Resources Conservation Services (NRCS) by Farmers Conservation Alliance. July 2020
- HRWG, 2021. Hood River Basin Partnership Strategic Action Plan, August 2021. Hood River Watershed Group, Hood River, OR
- ODFW, 2010. Lower Columbia River Conservation & Recovery Plan for Oregon Populations of Salmon and Steelhead. Oregon Department of Fish and Wildlife. Salem, OR.
- Normandeau Associates, 2014. Hood River Tributaries Instream Flow Studies. Report prepared for Hood River County as part of Hood River Basin Study (see Reclamation 2015).
- Reclamation 2015. Hood River Basin Study. Pacific Northwest Regional Office. Boise, ID.
- WPN 2013A. Hood River Basin Water Use Assessment. June 2013. Watershed Professionals Network, Hood River, OR
- WPN 2013B. Hood River Basin Water Conservation Assessment. August 2013. Watershed Professionals Network, Hood River, OR
- WPN 2016. Hood River Basin Water Conservation Strategy. March 22, 2016. Watershed Professionals Network, Hood River, OR
- WPN 2021. East Fork Irrigation District Improvement Plan. September, 2021. Prepared for East Fork Irrigation District by Watershed Professionals Network, Hood River, OR

APPENDIX A – LETTERS OF SUPPORT

THE CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON

BRANCH OF NATURAL RESOURCES
P.O. Box C, Warm Springs, Oregon 97761
Phone (541) 553-2001 — Fax (541) 553-1994



November 22, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

The Confederated Tribes of Warm Springs (CTWS) Hood River Production Program supports the grant proposal being submitted for water conservation and efficiency by the East Fork Irrigation District (EFID). This project will ultimately lead to increased water conservation instream and greater water resource reliability for the Basin's agricultural producers. EFID recognizes the importance of improving instream flows to support threatened native fish populations, tribal fishing rights, and recreation.

The Oanna & Yasui Efficiency Project will show a direct conservation of water at the headgates, located on the East Fork Hood River. This system serves 2,013 acres and very little of the existing pipe is pressure rated. Piping and pressurizing the District's delivery system will eliminate water losses from end-spill overflows, allowing a portion of the saved water to be restored to and permanently protected in the lower East Fork Hood River below the EFID diversion.

Water conservation has long been a high priority of the CTWS Hood River fish habitat restoration program. The proposed project is critical for continuing to support environmental, agricultural and community investments already made, and will perpetuate and enhance our collaborative, progressive, basin-wide approach to solving water resource issues and concerns. To this end we are continuing our investment in water efficiency and stream flow protection by allocating a cost share of \$200,000 from our restoration budget for the upcoming fiscal year to this project.

On behalf of CTWS we urge your support of the Oanna & Yasui Efficiency Project as presented.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ryan Gerstenberger', with a long horizontal line extending to the right.

Ryan Gerstenberger, CTWS Hood River Program Supervisor

HEADQUARTERS
850 OFFICERS' ROW
VANCOUVER, WA 98661



CONTACT
TEL: 360.696.0131
FAX: 360.696.1847

November 29, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

Columbia Land Trust strongly supports East Fork Irrigation District's Oanna & Yasui Efficiency Project. Columbia Land Trust is a regional conservation organization, and the Hood River watershed is one of our priority conservation areas within our larger region. While our role is to protect important habitat by securing land for conservation, we support and rely on partners who use other strategies to save water instream.

The East Fork Irrigation District has been working on water-saving efficiency upgrades for years, and this project to upgrade three sub-laterals off the existing Central Lateral is an important next step. These upgrades will entirely close off this system and eliminate water loss from eight open water boxes. Water that is spilled from the existing system instead will be left instream with the new system.

A modern, piped, and pressurized system will increase the District's operational efficiency, improve water supply reliability for agriculture, reduce energy use, improve water quality, eliminate a public safety risk from open canals, and improve habitat for fish and wildlife. Without modernization, it will become increasingly difficult for EFID to meet both irrigation demand and keep water in stream for fish, wildlife, and recreation.

I highly recommend this project for any available funding. If I can be of further assistance, please feel free to contact me at isinks@columbialandtrust.org.

Sincerely,

Ian Sinks
Stewardship Director

LAND TRUST ACCREDITATION COMMISSION ACCREDITED | OFFICES IN ASTORIA - PORTLAND - HOOD RIVER

COLUMBIALANDTRUST.ORG | CONTACT@COLUMBIALANDTRUST.ORG
FACEBOOK • INSTAGRAM: @COLUMBIALANDTRUST | TWITTER: @COLUMBIANATURE

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• 1985 Country Club Road, Hood River, OR 97031 Phone (541)-387-5261 www.fidhr.org •

November 23, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

This letter is being written to express Farmers Irrigation District's (FID) support for the East Fork Irrigation District (EFID) and its Oanna & Yasui Efficiency Project.

EFID relies on natural streamflow in the East Fork Hood River for its water supply. The District delivers water to its patrons through 83 miles of canals and pipelines. Nearly 18 miles of the major canals and laterals still consist of century-old, open, unlined ditches that lose water through seepage prior to reaching the farms. The District's open canals and laterals and unpressurized pipelines do not pass water as efficiently as a fully piped and pressurized system would. Piping and pressurizing the majority of EFID's infrastructure will improve water supply in several ways. The upgrades to be completed as part of this project will entirely close off this system and eliminate any and all water loss.

EFID has exhibited a long-term commitment to working collaboratively with DEQ and other state and federal agencies to address the natural resource challenges of district operations. Over the years they have been interested and willing partners in a number of important, yet expensive projects. This project – and the full suite of project outlined in their System Improvement Plan – are examples of their commitment to natural resource protection.

If I can be of further assistance, please feel free to contact me at Les@fidhr.org.

Sincerely,

Les Perkins
General Manager, Farmers Irrigation District



Hood River County Board of Commissioners

Jeff Hecksel, County Administrator

COMMISSIONERS

601 State Street · Hood River, OR 97031 · (541) 386-3970 · FAX (541) 386-9392

Michael Oates – Chair
Karen Joplin – District No. 1
Arthur Babitz – District No. 2
Robert Benton – District No. 3
Les Perkins – District No. 4

November 24, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

Hood River County strongly supports East Fork Irrigation District's Oanna & Yasui Efficiency Project. This project will upgrade three sub-laterals off the existing Central Lateral, which serves 2,013 acres and currently has approximately 8 open water boxes and overflows any water not used. The project is extremely beneficial for East Fork Irrigation District because all water conserved will be realized (i.e., not diverted) at their headgates and the upgrades completed as part of this project will entirely close off this system and eliminate any and all water loss.

A modern, piped, and pressurized system will increase the district's operational efficiency, improve water supply reliability for agriculture, reduce energy use, improve water quality, eliminate a public safety risk from open canals, and improve habitat for fish and wildlife. Without modernization, it will become increasingly difficult for EFID to meet both irrigation demand and keep water instream for fish, wildlife, and recreation. This project deserves all efforts in obtaining the available funding as it protects and enhances the agricultural community and economy of Hood River County. Hood River County irrigation districts and the grower community have worked hard to be as efficient as possible with our precious water resources. The Oanna and Yasui Efficiency Project continues the proud legacy of conservation and protection of natural resources within the Hood River Valley.

Sincerely,

DocuSigned by:

Michael J. Oates

523AE8B29255471

Mike Oates

Chair, Hood River County Commission

A Small County with a big mission: Providing Quality of Life for all



**Hood River Soil & Water
CONSERVATION DISTRICT**

3007 Experiment Station Rd.
Hood River, OR 97031
541-386-4588
www.hoodriverswcd.org

December 6, 2021

Bureau of Reclamation
Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

The Hood River Soil and Water Conservation District (SWCD) strongly supports East Fork Irrigation District's Oanna and Yasui Efficiency Project. The SWCD is an Oregon "special district" that is governed by a locally elected, volunteer Board of Directors. The HRSWCD helps landowners, managers, and residents identify, understand, and correct or prevent threats to natural resources on a voluntary, non-regulatory basis.

This project is supported by extensive basin-wide assessment and planning efforts. The two most important project types identified through these efforts include conveyance system improvements and on-farm irrigation efficiency projects. The SWCD will continue to be a key partner for EFID's modernization by providing EFID's patrons on-farm irrigation efficiency upgrades and practices and by supporting conveyance system improvements.

The Oanna-Yasui Pipeline Project will upgrade three sub-laterals off the existing Central Lateral, which serves 2,013 acres and has approximately 8 open water boxes that overflow any water not used. Pressuring the sub-lateral and eliminating these overflows will result in water being left in the East Fork Hood River at EFID's point of diversion, which will support threatened anadromous fish populations while providing greater water resource reliability for the Basin's agricultural producers, tribal fishing rights, and recreationalists.

Healthy farms, healthy streams, healthy community. We support this project and urge you to fund it because of the benefits it will provide to the Hood River Basin.

Sincerely,

A handwritten signature in black ink that reads "Heather Hendrixson". The signature is written in a cursive, flowing style.

Heather Hendrixson, District Manager

"To provide educational, technical and financial assistance to our community for the protection, conservation and restoration of natural resources."



3007 Experiment Station Drive
Hood River, OR 97031

December 6, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

The Hood River Watershed Group (HRWG) strongly supports East Fork Irrigation District's Oanna and Yasui Efficiency Project. The HRWG is a non-governmental organization that includes a broad cross-section of interests in the watershed. HRWG's mission is to sustain and improve the Hood River Watershed through education, cooperation, and stewardship.

This project is supported by extensive basin-wide assessment and planning efforts that culminated in the Hood River Basin Study (Bureau of Reclamation 2015), the Hood River Water Conservation Strategy (Hood River Watershed Group 2016), the East Fork Irrigation District Watershed Plan EA (Natural Resources Conservation Service 2020), and the Hood River Basin Partnership Strategic Action Plan (Hood River Watershed Group 2021). The two most important project types identified in the Water Conservation Strategy were conveyance system improvements and on-farm irrigation efficiency projects, both for their significant overall impact and cost effectiveness. The Oanna-Yasui Pipeline Project will upgrade three sub-laterals off the existing Central Lateral, which serves 2,013 acres and currently has approximately 8 open water boxes and overflows any water not used. Pressuring the sub-lateral and eliminating these overflows will result in this water being left in the East Fork Hood River at EFID's point of diversion, which will support threatened anadromous fish populations while providing greater water resource reliability for the Basin's agricultural producers, tribal fishing rights, and recreationalists.

Fish populations, the local economy, and social equity are inextricably linked in the Hood River Basin. From an ecological standpoint, if instream flows are insufficient, Hood River salmon and steelhead will not recover to self-sustaining levels. From an economic standpoint, a certain amount of water is required to sustain existing agricultural production. Furthermore, from a cultural and societal perspective, healthy fish runs benefit local tribes and recreation, as well as heading off costly conflicts over water allocations. We strongly urge you to fund this broadly supported, highly effective project that will keep fish and people on a positive, synergistic trajectory.

If I can be of further assistance, please feel free to contact me at 541-206-0026 or cindy@hoodriverwatershed.org.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cindy Thieman".

Cindy Thieman, Watershed Coordinator



Oregon

Water Resources Department
Watermaster - District 3
2705 E 2nd St.
The Dalles, OR 97058
(541) 506-2650
Fax: (541) 506-2651

December 1, 2021

Bureau of Reclamation
Attn: Matthew Reichert
Financial Assistance Operations
P.O. Box 25007, MS 84-27133
Denver, CO 80225

RE: Oanna & Yasui Efficiency Project

Dear Mr. Reichert,

This letter is being written to express the Oregon Water Resources Department's (WRD) support for the East Fork Irrigation District (EFID) and its Oanna & Yasui Efficiency Project.

EFID relies on natural streamflow in the East Fork Hood River for its water supply. The District delivers water to its patrons through 83 miles of canals and pipelines. Nearly 18 miles of the major canals and laterals still consist of century-old, open, unlined ditches that lose water through seepage prior to reaching the farms. The District's open canals and laterals and unpressurized pipelines do not pass water as efficiently as a fully piped and pressurized system would. Piping and pressurizing the majority of EFID's infrastructure will improve water supply in several ways. The upgrades to be completed as part of this project will entirely close off this system and eliminate any and all water loss.

EFID has exhibited a long-term commitment to working collaboratively with WRD and other state and federal agencies to address the natural resource challenges of district operations. Over the years they have been interested and willing partners in a number of important, yet expensive projects. This project – and the full suite of project outlined in their System Improvement Plan – are examples of their commitment to natural resource protection.

If I can be of further assistance, please feel free to contact me at Robert.L.Wood@Water.Oregon.gov.

Sincerely,

Robert Wood
Watermaster, District 3