Middle Fork Irrigation District

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Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements
The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation , renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Middle Fork Irrigation District
Organization Name

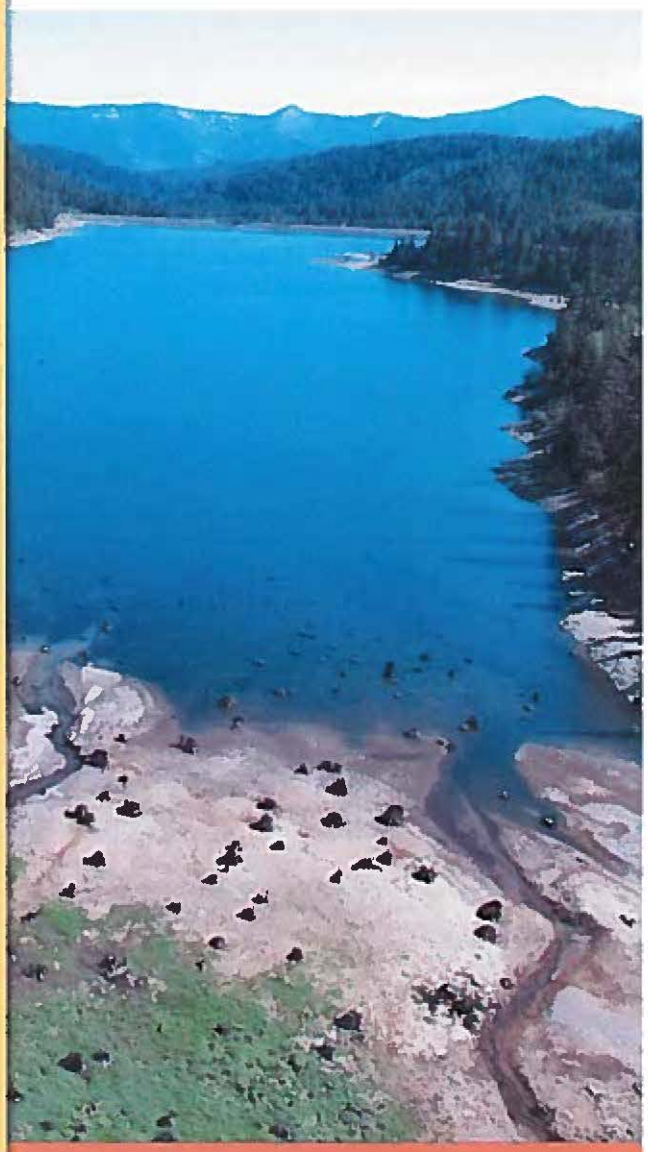
PR/Award Number or Project Name

Craig DeHart, General Manager
Name and Title of Authorized Representative

Signature

27 Sept 19
Date

Coe Branch Pipeline & Irrigation Efficiency Project



Application for
WaterSMART
Water and Energy
Efficiency Grant for
Fiscal Year 2020
(Funding Group 1)

MIDDLE FORK IRRIGATION DISTRICT

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Executive Summary

The Coe Branch Pipeline & Irrigation Efficiency Project is an irrigation water piping and treatment project that will increase on-farm water conservation in the **Middle Fork Irrigation District (MFID),** in the unincorporated town of Parkdale, in the Upper Hood River Valley of Hood River County in Oregon. The project will result in water conservation of 407 acre-ft per year (2.25 cfs during the irrigation season) through conveyance improvement and irrigation measures including the installation of high-efficiency sprinkler heads and drip lines on farms served by MFID. The water left instream will benefit threatened populations of winter steelhead, spring Chinook, and bull trout. This quantifiable water savings will be accomplished through the construction of a new pipeline segment from the Coe Branch diversion to an existing settling pond (see Figure 1), enabling the removal of significant amounts of glacial sediment that is present in the water before it is delivered to irrigators. This will enable MFID irrigators to use more efficient irrigation equipment such as micro-sprinklers and drip lines. As part of the project, MFID patrons will upgrade irrigation equipment on 304 acres, providing savings of 407 acre feet of water per year. The project will be complete within two years and is partially located on US Forest Service (USFS) land. **MFID requests a WaterSMART Water and Energy Efficiency Grant for Fiscal Year 2020 in the amount of $266,600 and pledges a 100% cash match.** The project also leverages financial support the State of Oregon Water Resources Department (OWRD) grant of $924,000. The project also compliments NRCS EQIP-funded on farm irrigation efficiency improvements totaling $1,372,907. Individual landowners on 4 farms have pledged cash and in-kind contributions to that effort totaling $80,415.

Figure 1: MFID's existing settling basin enables removal of glacial sediment from irrigation water

Background Data

Characteristics of the MFID System

MFID provides irrigation water to 6,358 acres of primarily fruit orchards and other field crops. Over 60 miles of 2" to 48" diameter, mostly buried pipeline delivers pressurized water to 627 tax lots serving 404 water users. MFID is and on-demand pressurized irrigation water distribution system.

In 1985, MFID implemented hydropower on their system, with three small hydroelectric plant producing at capacity approximately 3.2 megawatts of electricity annually; equivalent to the average annual energy used by 880 all electric homes. Waters of Clear Branch, Eliot Branch and Coe Branch of the Middle Fork of the Hood River are used for generation of electricity and are operated year around.

Other water uses are irrigation, orchard and field crop spray, temperature control, livestock water and fire protection. In addition to power generation, dozens of in-line pressure reducing valves are used to limit on-farm delivery pressures. MFID serves 25% of the Hood River Valley's irrigated agricultural lands, producing roughly 25% of the nation's pears. MFID patron pear, apple, and berry crops produced over $28 million in gross agricultural sales in 2012.

MFID is located approximately thirteen miles south and three miles west of Hood River, Oregon. (The city of Hood River is located immediately south of the Columbia River approximately 65 miles east of Portland.) Middle Fork Irrigation District boundaries are the Middle Fork of the Hood River on the west and the East Fork of the Hood River on the east and north. On the south the watershed for the District extends onto the northern slopes of Mt. Hood and includes Eliot, Langille and Coe Glaciers. The small unincorporated town of Parkdale is located near the center of MFID irrigated lands.

Locally the area is described as being in the Upper Hood River Valley. MFID occupies a gently sloping to undulating area about 6 miles long (south to north) and about 1½ miles wide (west to east). Irrigated land slopes predominantly to the north. Average slope is a little over 3%. Gently sloping to deeply incised drainage ways bisect the area. MFID irrigated elevations vary from 1300 feet msl at the northern boundary to 2420 feet msl at the southern. District lands are primarily pear, apple, and cherry orchards. There are a few fields of corn for silage, nursery, berries, hay and pasture. Water application is either by sprinkler or micro (drip, trickle, minispray, etc.) irrigation systems.

The entire MFID delivery system has been totally pressurized for decades. In addition to water conservation the closed pipeline system provides energy conservation since there are no on-farm or District pumps in the system. Three hydroelectric power generation stations and dozens of in-line pressure reducing stations are used to reduce lateral line pressures for on-farm deliveries.

Today, MFID is one of the most efficient irrigation districts in the United States, with MFID staff continuously monitoring flow rates and pressure and making adjustments where needed to ensure maximum efficiency and reliable delivery of water to irrigators.

MFID History

Middle Fork Irrigating Company was founded in 1896 to build the first ditch from the East Fork of the Middle Fork of the Hood River (Eliot Branch), claiming a total of 3,250 acres to be irrigated. On September 19, 1921 the Middle Fork Irrigation District (MFID) was organized under the laws of the State of Oregon and purchased the Middle Fork Irrigating Company in 1923.

In the early 1960's MFID partnered with the USDA Soil Conservation Service to construct Clear Branch Dam, Clear Branch Conduit, the Sediment Basin and over 45 miles of distribution pipelines. The dam was constructed in 1968 with the purpose to provide irrigation to 8,400 acres in the Upper Hood River Valley, creating the Laurance Lake reservoir (see Figure 2). When full, Laurance Lake has 130 surface acres and 3,500 acre feet of storage capacity. The lake helps provide irrigation water to 6,358 acres of pears, apples, cherries and other crops in the Upper Hood River Valley. Hood River is the largest fruit-growing district in the State of Oregon.

Figure 2: Aerial view of Laurance Lake Reservoir

About Coe Branch

Coe Branch is a glacier-fed tributary of the Middle Fork Hood River. The high sediment load in Coe Branch restricts MFID's ability to fully utilize this water source during irrigation season because the sediment plugs micro irrigation systems and requires extensive filtering and backflushing on-farm.

When Coe Branch is too turbid to use, MFID must meet irrigation demand with stored water from Laurance Lake. This reservoir and its tributaries, Clear Branch and Pinnacle Creek, are critical habitat for a population of bull trout, listed as threatened under the Endangered Species Act. Both of these tributaries have very cold, clear water, making them particularly valuable salmonid spawning and rearing habitat. Clear Branch continues below the reservoir where it also provides habitat for threatened winter steelhead, spring Chinook, and bull trout. From a fisheries perspective, it is better for MFID to divert its legal water right from Coe Branch and reduce its diversion of stored water in Laurance Lake, thereby improving lake levels for bull trout and downstream flows on Clear Branch for winter steelhead, spring Chinook, and bull trout. (See Figure 3 to right for an example of the high sediment load carried by the system, Elliot Creek is pictured).

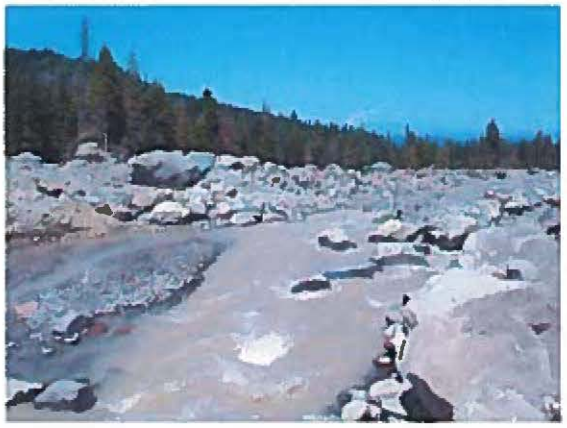

Figure 3: Elliot Creek is fed by the same glacier melt as Coe Creek, with cold water carrying a high sediment load as shown here.

MFID Water Rights

MFID's irrigation water rights date back to 1884. A water right from Trout Creek through the "Thomas Ditch" for irrigation of 40 acres is MFID's oldest water right. Successive water rights were claimed in the 1890's on Trout Creek, Evans Creek and the East Fork of the Middle Fork Hood River (Eliot Branch). In the early 1900's rights were acquired on Rogers Creek, Wishart Creek and Griswell Creek. A water right for 75 cfs from the Middle Fork of the Middle Fork Hood River (Coe Branch) was filed on November 19, 1906, however; the Coe Branch right was abandoned as a source of appropriation in 1969 when Clear Branch Reservoir was completed and pressurized pipelines were installed, due to the amount of abrasive glacial sediment in the water. In the 1960's, rights were acquired on Clear Creek, Emil Creek and the Clear Branch Reservoir (Laurance Lake). Additional water rights were acquired on Coe Branch in 1985 and 1987.

Water Use, Need, and Potential Shortfalls

By far, the two largest water needs in the basin are irrigated agriculture and instream flows for threatened populations of salmon and steelhead. These competing needs are at the crux of most water conservation planning and restoration efforts that have occurred in the watershed. Climate 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. This will lead to more precipitation falling as rain instead of snow, resulting in less snowpack, higher winter streamflows, and even lower summer streamflows (BOR 2014). Consequently, water conservation tools will become even more important than they are today.

The primary threats to streamflow are withdrawals for agriculture as well as predicted reduction in summer streamflow from climate change. In some stream reaches, diversions for agricultural use can withdraw 40% or more of the average natural flow from July to September. These diversions reduce the quantity of spawning and rearing habitat and can affect fish passage. Low flows in September and October are particularly harmful for fall spawning species like spring Chinook salmon.

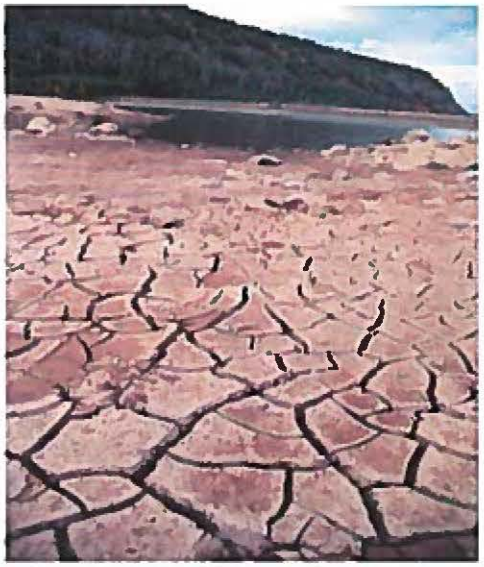

Figure 4: This image shows typical water level condition at Laurance Lake

The three major irrigation districts in the Hood River Watershed are East Fork (EFID), Middle Fork (MFID), and Farmers (FID) Irrigation Districts, which serve over 21,000 acres. Two smaller districts, Dee (DID) and Mt. Hood (MHID) Irrigation Districts serve an additional 2000 acres. Over the past 20 years, these districts have been converting irrigation ditches to pipeline, and some farmers have installed modern, efficient irrigation equipment.

Five subwatersheds - Evans, Trout, Emil, Knight and Wishart Creeks of the East Fork Hood River and five subwatersheds - Clear Branch, Coe Branch, Eliot Branch, Pinnacle Creek and Rogers Creek of the Middle Fork Hood River, supply water to the MFID system. Fall through spring runoff water from Clear Branch and Pinnacle Creek is stored in Laurance Lake behind Clear Branch Dam. MFID operates an "on-demand" supply and distribution system. (See Figure 5 on the next page for typical water use from each source).

The Hood River 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. For example, the basin contains the only population of summer steelhead in the Lower Columbia ESU. With the exception of winter steelhead, the current extinction risks of salmon and steelhead populations within the Hood are very high (ODFW 2010).

Tribal, state, and federal fisheries agencies estimate that recovery of Hood River winter steelhead and spring Chinook populations is likely with appropriate restoration and conservation actions.

The Ecosystem Diagnostic and Treatment Model, developed for the Hood River Subbasin Plan, identified five primary limiting factors to anadromous salmonid production (Coccoli Description 2004). These were streamflow, habitat diversity, key habitat quantity, channel stability, and sediment load. The Lower Columbia River Conservation and Recovery Plan for Oregon Populations of Salmon and Steelhead also identified low streamflow and impaired habitat diversity as primary limiting factors to recovery (ODFW 2010).

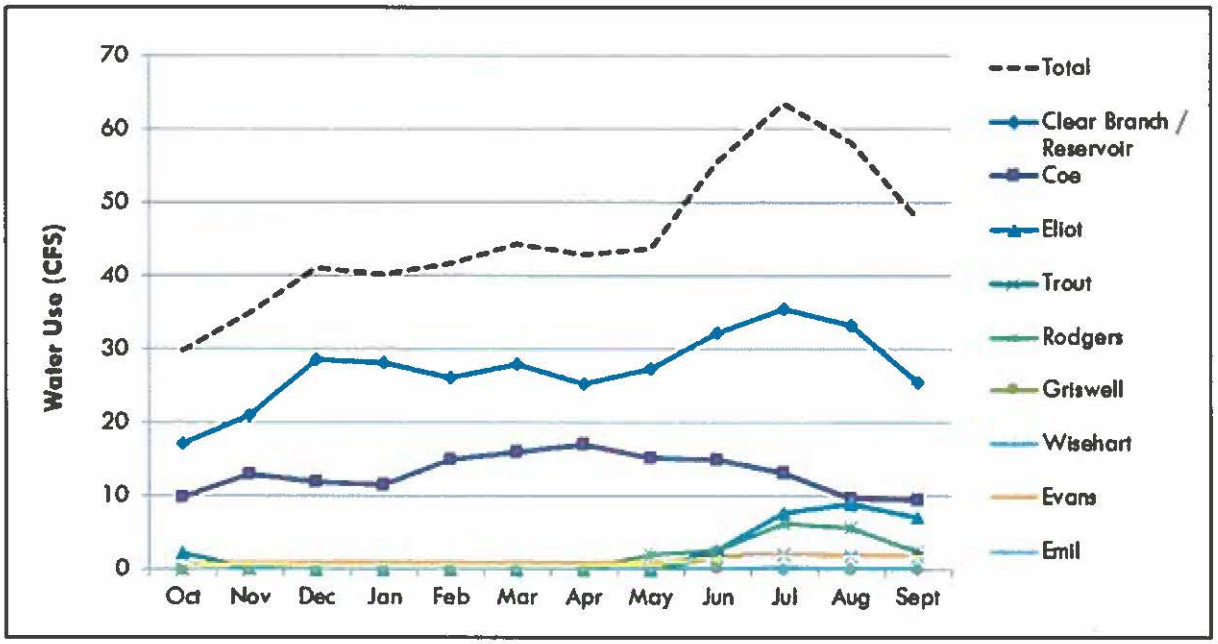

Figure 5: MFID's typical water use from each source, shown in cubic feet per second (CFS)

Project Location

The Coe Branch Pipeline and On-farm Efficiency Project is located in Hood River County in Oregon, 5.6 miles southwest of the unincorporated town of Parkdale. The project latitude is 45.463010 and the longitude is -121.637928. See Figures 6 & 7 for maps of the project location.

Figure 6: Google map showing project location relative to Parkdale, Mount Hood, the Columbia River, and the city of Hood River

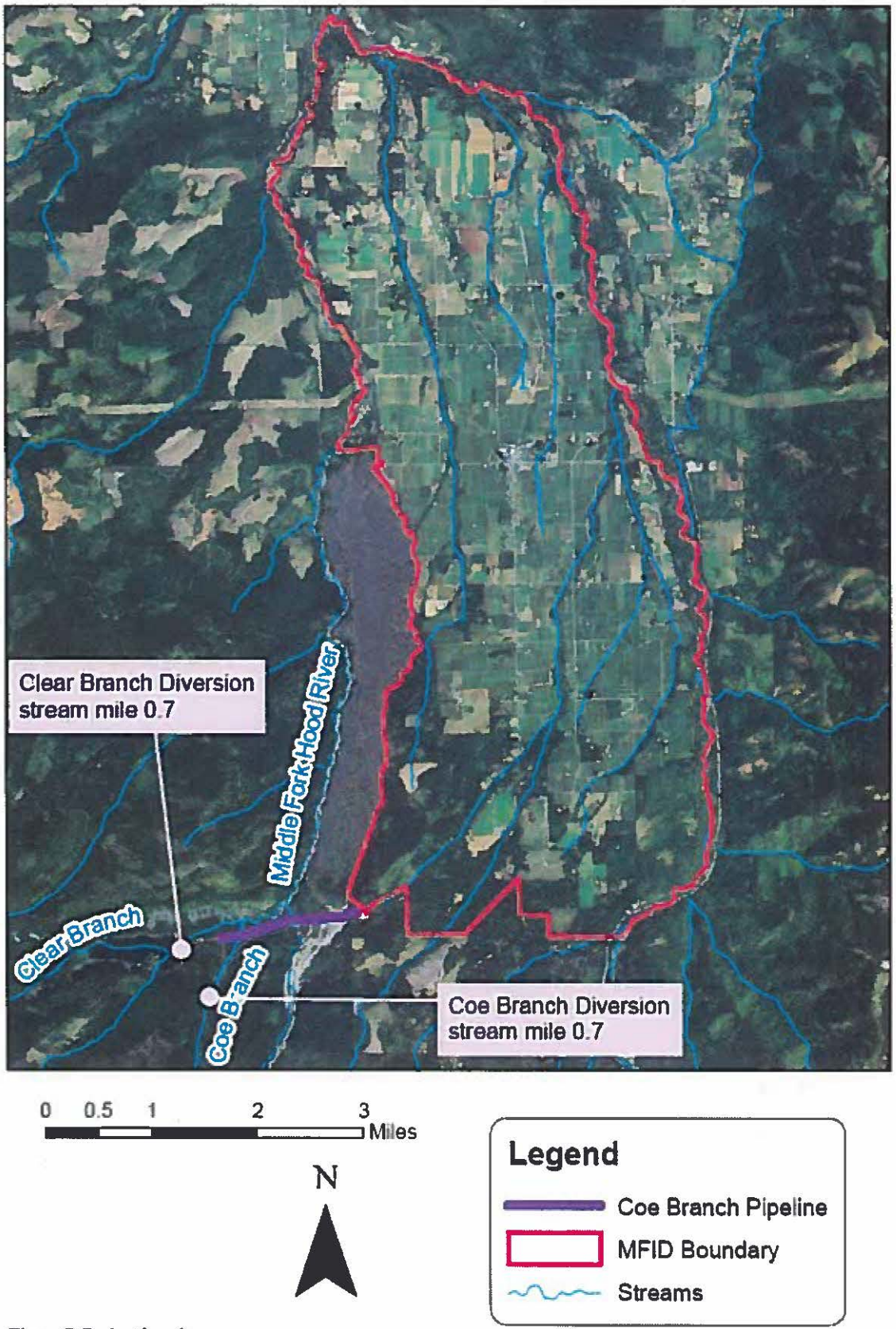

Figure 7: Project location map.

Technical Project Description

Pipeline installation from point of diversion to settling pond

Design and Permitting Status

Design work for the Coe Branch Pipeline and Irrigation Efficiency project began in 2017 with determination of construction specifications for backfill and bedding material, final construction drawings developed, and FERC Quality Control and Inspection Plan for construction. USFS comments received have been addressed with project design changes incorporating a bridge over Coe Creek instead of excavation.

Because the Coe Branch diversion and proposed pipeline is on USFS land, MFID is conferring with the Hood River Ranger District for approval of a Categorical Exclusion, expected to be received in October 2019. (See attached letter of support from USFS).

Construction Schedule

Construction is anticipated to be underway beginning in the spring of 2020, is expected to be complete in four to six months, and will include the key tasks listed below:

1) Solicit bids & award construction contract,
2) Acquire materials,
3) Pipeline installation to include: excavating a trench and burying 24" pipe along an existing pipeline right-of-way; constructing a carrier pipe over Coe Branch; building a concrete energy dissipater at entrance to settling pond.

On-farm Irrigation Upgrades

On-farm irrigation upgrades have already begun, with full implementation expected to be complete by December 2020. Each landowner will have an irrigation system design developed by one of the local irrigation companies; have the design reviewed and approved by NRCS or MFID; and purchase and install new irrigation lines, valves, and sprinklers. MFID will collect data on pre- and post-project on-farm water use. (See proposed monitoring and evaluation methods in the Quantifying Water Savings section below.)

Evaluation Criteria

Quantifiable Water Savings

Conservation at the point of diversion and on-farm irrigation efficiency upgrades

MFID's Coe Creek water right is typically diverted at a rate of 5 to 25 cfs during the irrigation season. Recent studies, including the Hood River Basin Study (USBR, 2015), Hood River Basin Water Conservation Assessment (WPN, 2013), and MFID monitoring data suggest that conveying the Coe Creek diversion

through the existing settling pond will conserve approximately 2.25 CFS. This estimate is based on the following:

1). The Hood River Basin Study and Hood River Water Conservation Assessment found that conversion from impact sprinklers to micro sprinklers reduced water use by approximately 36% (from 2.39 AF/acre to 1.53 AF/acre). Approximately half the acreage served by Coe Creek has not converted to micro sprinklers, and growers typically cite the sediment in the Coe Creek water as the primary barrier to conversion. Removing this barrier (through piping the Coe diversion to the sediment basin) would facilitate a 36% reduction in use of half the Coe Creek diversion, resulting in a 2.25 CFS reduction in overall use.

2). MFID monitored the amount of water used to flush a filter on a 52 acre parcel from 2016-2019. The parcel used an average of 4.9% of its irrigation water to flush the filter when it used dirty (unsettled) water, but only 0.8% when it used clean (settled) water. Applying this 4.1% difference to half the average Coe Creek diversion (6.25 CFS) is equal to a savings of approximately 0.25 CFS. This 0.25 CFS is included in the 2.25 CFS cited in #1 above.

Because of the water conservation potential of this project, it is recommended in both the Hood River Basin Study and the Hood River Basin Water Conservation Assessment.

The on-farm irrigation upgrade projects that will be implemented on 304 acres will result in a 60% reduction in water use to achieve the same irrigation benefits. This is based on the following: Orchards that use hand-lines with impact sprinklers use on average 2.39 acre-feet/acre/year. Orchards that have upgraded to efficient rotator or micro-sprinklers use an average of 1.53 acre-feet/acre/year. The 304 acres of orchard land that will be upgraded to micro-sprinklers, as part of this project and through EQIP, will go from using 726 acre- feet/year to 319 acre-feet/year, resulting in a savings of 407 acre-feet/year.

Figure 8: Solid set micro sprinkler

Avoided losses due to back flushing filters

Removing sediment particles from Coe Branch water using MFID's existing settling pond will significantly reduce the amount of filtration required on-farm. The effectiveness of the settling pond was documented in a 2012 study of above and below pond total suspended solid levels. This translates into less backflushing of on-farm filters (i.e., reversing the water flow to clean the filter), which equates to more efficient use of water and energy. Water diversion and use will be measured at several locations. Diversion flow rate and total volume have been and will continue to be measured at the Coe Branch and Clear Branch diversion points with automated ultrasonic flow meters owned and operated by MFID. Measurements are continuous and data is automatically archived into a spreadsheet.

MFID has monitored water losses due to flushing of filter systems on farm since 2016. The table below illustrates losses due to flushing:

Water Year	Total Gallons flushed X100	Acre feet equivalent	% of Delivered Water Used for Flushing
2016	119,300	.36 acre feet	.05%
2017	319,100	.97 acre feet	1%
2018	1,593,000	4.9 acre feet	4.7%
2019	1,803,800	5.53 acre feet	5%

MFID will continue to monitor losses due to flushing filters. MFID will measure all on-farm water use for those patrons with EQIP-funded upgrades with battery-powered magnetic flow meters. Flow rate and cumulative volume will be recorded by MFID staff on a sufficient frequency during the growing season to ensure accurate calculation of water conserved as a result of the project. Pre-project data was collected in 2016. These data will be summarized and included in WaterSMART final and monitoring reports.

Enabling future upgrades for system optimization

In addition, MFID can efficiently and effectively remove sediment from all of their diverted water in one location before delivery to patrons. Currently reliant on passive settling, having one centralized location would enable MFID to install additional sediment removal technology in the most water and energy efficient manner if necessary. This improvement will also optimize MFID's already installed hydropower generation.

On-farm upgrades prevent overwatering and related issues

Converting 304 acres to high-efficiency micro-sprinklers will considerably reduce water use and save orchardists time and money on tasks associated with inefficient irrigation equipment and overwatering. Increases in efficiency include:

- Eliminating excessive canopy development caused by overwatering, which necessitates more pruning costs,
- Reducing the likelihood of alfalfa greening in pears caused by overwatering, which leads to lower fruit grading and profit margin,
- Preventing fertilizer from being transported overland or below rooting zone,
- Eliminating labor costs associated with moving pipes (orchardist or employees can instead focus on tasks associated with careful irrigation water management)

Water left in stream and in reservoir benefits threatened species

This project will ultimately result in approximately 2.25 cfs being left in Clear Branch and/or Laurance Lake Reservoir as a result of on-farm water conservation. It will be protected when MFID renews its Special Use Permit with the USFS in 2021 to continue its operation of Laurance Lake Reservoir on National Forest land. The Clear Branch drainage contains the best salmonid habitat in the Middle Fork Hood River sub-basin. The reservoir provides crucial rearing habitat for the only viable population of bull trout in the Hood River Basin.

Higher lake levels, which will ultimately result from this project, will improve that rearing habitat. In addition, increased streamflow in Clear Branch below the reservoir will improve spring Chinook spawning and rearing habitat and winter steelhead rearing habitat. Spring Chinook and winter steelhead are culturally

important to CTWS, which has a hatchery on the Middle Fork Hood River and has been working closely with MFID to improve streamflow and habitat conditions in the Middle Fork sub-basin.

In 2015, Watershed Professionals Network completed stream flow and temperature modeling for Clear Branch, Middle Fork tributaries, and Laurance Lake for MFID. Results indicate that MFID can maintain its water supply to agriculture and release more water below Clear Branch dam in the summer months. The modeling assumed an increase in withdrawal from Coe Branch in the summer (not to exceed the existing water right), as we are proposing with this application. Model results showed no detrimental effect to Coe Branch and Middle Fork stream temperatures, and an improvement to stream temperatures, streamflow, and the natural hydrograph in Clear Branch.

Measurable improvement in groundwater levels

This project will protect groundwater levels by reducing the desire or need for agricultural producers to seek new wells or more heavily utilize existing wells. The vast majority of agricultural land in the Hood River Valley is irrigated with surface water. By improving irrigation water quality, through more efficient infrastructure and technology, we anticipate that growers will not go to the time or expense of pumping groundwater. To evaluate current groundwater levels, OWRD and the Hood River Watershed Group have been monitoring 52 wells around the Valley, which will enable us to track groundwater levels over the long-run and better predict whether more groundwater use could be an option for sustainably augmenting irrigation and instream flows in the future.

Reduced demand on stored water benefits water temperature for bull trout

Preliminary reservoir and river temperature model results (Watershed Professionals Network, 2015) indicate this project will benefit water temperature in the reservoir and Clear Branch by reducing demand on stored water (i.e., more water will come from Coe Branch, due to the new pipeline to settling pond, instead of Laurance Lake Reservoir). Reduced demand on stored water will result in increased reservoir levels, which will allow release of water into Clear Branch later in the summer when water temperatures can exceed state standards for bull trout spawning. Other planned projects needed before these temperature benefits are fully realized include a surface water withdrawal system in the reservoir and new stream flow release infrastructure at Clear Branch Dam. Both of these projects are currently in the planning-level design stage.

Summer-time water temperature monitoring has been conducted for the past 10 years on Coe Branch and Clear Branch (up and downstream of the reservoir). Temperature monitoring is conducted with temperature probes installed in the stream, which record hourly temperature measurements. This monitoring will continue for at least 3 years after project completion.

Water Supply Reliability

Benefits to Multiple Users and Sectors

Increasing streamflow, through water conservation, is the best way to **mitigate instream impacts from climate change**. This conclusion is drawn from a recently completed Basin Study authored by the Bureau

of Reclamation (2015). The study found that by the year 2050, average air temperatures in the Hood River Basin are expected to increase by 2.3° F. This will lead to more precipitation falling as rain instead of snow, resulting in less snowpack, higher winter streamflows, and lower summer streamflows (BOR, 2015). In addition, as glaciers recede, sediment in glacier-fed streams will increase. Silt-laden water is virtually impossible to use in micro and drip systems. By improving irrigation water quality and on-farm irrigation efficiency, this project will increase the future resilience of MFID, its patrons, and ultimately the local ecosystem.

This project will directly address a primary limiting ecological factor in the watershed by increasing lake levels in 'Laurance Lake' reservoir and streamflow in Clear Branch below the reservoir. The Hood River Aquatic Habitat Restoration Strategy (Shively 2006), Hood River Sub-basin Plan for Fish and Wildlife (Coccoli 2004), and the Lower Columbia River Recovery Plan for Oregon Populations of Salmon and Steelhead (ODFW, 2010) have identified low streamflow as a primary limiting factor to the recovery of ESA-listed threatened salmon and steelhead. Irrigation withdrawals for agriculture were identified as the main contributing factor to summer low flows.

This project will ultimately result in approximately 2.25 cfs being left in Clear Branch and/or Laurance Lake Reservoir as a result of on-farm water conservation. It will be protected when MFID renews its Special Use Permit with the USFS in 2021 to continue its operation of Laurance Lake Reservoir on National Forest land. The Clear Branch drainage contains the best salmonid habitat in the Middle Fork Hood River sub-basin. The reservoir provides crucial rearing habitat for the only viable population of bull trout in the Hood River Basin.

Higher lake levels, which will ultimately result from this project, will **improve that rearing habitat.** In addition, increased streamflow in Clear Branch below the reservoir will improve spring Chinook spawning and rearing habitat and winter steelhead rearing habitat.

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 (Radtke et al, 2000). In 2012, gross agricultural commodity sales in Hood River County were $112,094,000 (http://oain.oregonstate.edu/). This is a 100% increase since 1999, demonstrating the growth of jobs and economic impact of the tree fruit industry in the Hood River Valley. Vital to the continued growth in agricultural production and associated jobs is the ability to use water more conservatively, both now and in a future warmer, drier climate.

This project will have a significant, long-term positive effect on economic activity for farmers within MFID by increasing the reliability and quality of irrigation water. In addition, purchase of materials for on-farm irrigation projects will benefit **local irrigation equipment companies and the local construction industry** will benefit from the pipeline project. This project will also boost long-term economic activity for the local and regional economy, which is heavily dependent on irrigated agriculture. Finally, improved instream flows will benefit **sport and subsistence fishing, recreation, and tourism.**

The Hood River Watershed is part of the ceded lands of the Confederated Tribes of the Warm Springs Reservation (CTWS). To **improve subsistence fish harvest opportunities** for tribal members, CTWS created the Hood River Production Program (HRPP). This program includes local, tribal hatchery production of winter steelhead and spring Chinook and implementing a suite of stream restoration projects to improve fish habitat and restore stream flows. The HRPP 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. These conservation projects are **invariably constructed by local companies**, which add significant value to the local economy. Ongoing water conservation and increased summer stream flow is vital to the continued investment of CTWS funding and success of the HRPP.

Tourism is another significant component to Hood River County's economy. Statistics gathered by Dean Runyan and Associates for the Hood River Chamber of Commerce shows an economic impact of $87.4 million to the local economy of Hood River County in 2014 from tourism. Total direct employment related to tourism in Hood River County was calculated at 1,040 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. Laurance Lake is a popular boating, swimming, and fishing spot; additional stored water is a significant improvement for these recreational pursuits.
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.

This project improves the infrastructure of MFID's conveyance system, **making it more efficient and resilient to changing environmental, economic, and social conditions.** It will also **increase the property value of farmland** within MFID through on-farm irrigation system upgrades (i.e., 304 acres under contract) and by enabling MFID to provide water that is virtually free of damaging sediment in the water column, thus facilitating the deployment of more efficient irrigation application methods.

Laurance Lake is located on USFS land and benefits bull trout rearing habitat and recreation, in addition to providing irrigation water. This project will lead to less early irrigation season demand on stored water in Laurance Lake, thus **increasing summertime lake levels for bull trout and recreation.** The project will also free up reservoir water for summertime stream flow release into Clear Branch (below the reservoir), supporting spring Chinook, winter steelhead, and bull trout.

This project will provide **exceptional benefits to both tribal and minority communities** in the Hood River Valley. In addition, CTWS was integral to the development of this project through their participation in the Adaptive Management Group, which created the Fisheries Management Plan. The project was also presented for approval to the Hood River Watershed Group (HRWG), which is Hood River's watershed council and open to all members of the community. Meetings and agendas are published in the Hood River News.

Tribal members harvest salmon and steelhead from the Hood River for subsistence and ceremonial purposes. Tribal fishing opportunity has become severely restricted because of low fish populations and the

need to protect weak or threatened stocks. Instream flows have been identified as a primary limiting factor to the recovery of salmon and steelhead, and **an increase to instream flow in Clear Branch offers meaningful stream enhancement** potential. Furthermore, the success of this and similar flow restoration projects is pivotal to the success of CTWS' Hood River Production Program and ultimate increase in tribal fishing opportunity in the Hood River Watershed.

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 some in the Hispanic population, there still exists a problem with the living conditions and access to services for members of the Hispanic population at a disproportionate rate to the rest of the 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, some have purchased or leased 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.

This project supports the long-term (i.e., 50 - 100 years) **retention of approximately 500 agriculture-based jobs** in the Middle Fork Irrigation District. *(This estimate is based on 1 FTE/11 acres and does not include the jobs supported by packing, delivery, and sales of the harvested fruit.)* By improving irrigation water quality for 5,720 acres of commercial agriculture land, orchardists will be able to conserve more water and manage their farms more efficiently. This will help them continue to support their families and hire workers to help with irrigation, pruning, and harvesting. This project will also support local construction jobs, with an estimated 12 FTE being supported for 4 months during construction of the pipeline projects.

As stated earlier, MFID serves 25% of the Hood River Valley's irrigated agricultural lands and thus contributed over $28 million in gross agricultural sales in 2012. The estimated value added as the fruit crop moves through the first handler level is two times the gross agricultural sales (Oregon State University Extension, 2007), which means that MFID's $28 million in gross sales adds another $56 million to the local economy. Improving on-farm water conservation therefore contributes to both job growth, as described above, and increased economic activity through processing and packing, transportation and handling,

marketing, management, and local tax revenue. This effect reverberates through the state and regional economy, as the Hood River Valley produces roughly 25% of the nation's pears.

From a fisheries perspective, increases or even stabilization of salmon and steelhead runs brings economic growth through the sport fishing industry. The Confederated Tribes of the Warm Springs tribal members could also benefit from increased or improved salmon and steelhead runs as the Hood River is a traditional fishing ground and the CTWS has ceded fishing rights in the Hood River.

Implementing Hydropower

This project will increase hydropower efficiency for MFID's hydropower project. The pipeline will be inter-tied so that during the 9 to 10 months out of the year that Coe Branch is clean, MFID can operate it in a hydraulically parallel manner with the existing infrastructure, thus reducing head loss to the hydro turbine and increasing renewable energy production by approximately 700,000 kwh annually.

Complimenting On-farm Irrigation Improvements

Currently, water diverted from Coe Branch is piped directly to MFID patrons. The proposed new Coe Branch pipeline segment will route the water to an existing settling pond, where sand can settle out, before water is delivered on-farm. This will facilitate on-farm water conservation in two ways. First, patrons that already have efficient irrigation systems and filters will need to backflush their filters less. (Backflushing wastes a significant amount of water). Second, patrons that don't have high efficiency irrigation systems yet will be more motivated to install them knowing their maintenance requirements will be less.

On-farm irrigation upgrades to 304 acres are being implemented with two sources of funding. MFID is providing $24,800 of matching funds to four patrons on 59 acres of commercial agriculture land to upgrade their on-farm irrigation equipment in 2017 (see attached landowner match documentation and acknowledgement). In fall 2016, NRCS approved up to $500,000 of EQIP funding for on-farm irrigation upgrades in the MFID. A total of 8 landowners with 245 acres have recently signed EQIP contracts with this cost-share funding. (Note: the EQIP funded projects are not being counted as match for this project since landowner names, tax lots, and monitoring data are protected by NRCS' privacy policy.)

The MFID Fisheries Management Plan (FMP) was developed in cooperation with CTWS, USFS, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish and Wildlife, and the Oregon Department of Environmental Quality. The Plan describes and recommends several critical improvements to MFID's infrastructure and operations in order to improve summer time stream flows, water quality, and habitat conditions above and below Clear Branch Dam. The Coe Branch Pipeline is the first project in the FMP that will be implemented to accomplish the stream flow and water quality objectives. A public meeting for the Coe Branch Pipeline and other projects described in the FMP was held in October 2016, which gave the public an opportunity to learn about and comment on the project.

In 2015, 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. Similar to OWRD's Place-Based Planning Initiative, the HRWCS arose from the locally driven Hood River Basin Study (Watershed Professionals Network, 2013 a & b, Bureau of Reclamation, 2015), which included an assessment of current local water use and instream conditions, potential for water conservation, and likely impacts to water resources from climate change. (The Basin Study was partially funded by an OWRD Feasibility Study grant.)

Developing the HRWCS included partner and community discussions of how best to meet future out-of-stream and instream needs. The two most important project types identified in the HRWCS were on-farm irrigation efficiency projects and conveyance system improvements, both for their significant overall impact and cost effectiveness. 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 Coe Branch Pipeline and On-farm Irrigation Efficiency 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."

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 Coe Branch Pipeline and On-farm Irrigation Efficiency 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."

Letters of support are included from the following:
Hood River County, U.S. Forest Service, Department of Environmental Quality, U.S. Fish & Wildlife Service, Hood River Watershed Group, Upper Valley Farms, Randy Kiyokawa, Gorham Blaine.

Department of Interior Priorities

As the project involves multiple federal agencies, local governments, local soil and water conservation groups, Treaty Tribes, and private agricultural producers; will foster further modernization of irrigation and hydropower water conveyance infrastructure; improves system resiliency and independence; is based on years of scientific study, evaluation, and planning; and protects and improves habitat for endangered and threatened species, this project supports the following Department of Interior Priorities:

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt
    a. Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;
    d. Review Department water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;
    e. Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;
2. Utilizing our natural resources
    a. Ensure American Energy is available to meet our security and economic needs;
3. Restoring trust with local communities
    a. Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;

Implementation and Results

Project Planning

MFID's Water Management & Conservation Plan was developed in 2011 with the assistance of H & R Engineering, Inc. based in Salem, Oregon, Oregon Water Resource Congress, and the US Bureau of Reclamation. The plan document is 125 pages, so we'll not attach it to the hard copy of this application, but it can be viewed and downloaded at http://mfidp.com/Water%20Conservation%20Plan.pdf. This project supports the goals and objectives of the plan and is called out within it by reference to the MFID Fisheries Management Plan.

MFID's Fisheries Management Plan (attached) was developed in 2010 and specifically calls out this project as a component of the plan, as excerpted below:

> ***[Page 28]***
> ***Partial blockage and flushing of sediment at Coe and Eliot diversions.***
> ***[1B]***
> MFID used best available technology in designing and constructing the new Coe and Eliot diversion facilities to reduce the frequency and magnitude of sediment flushing. MFID will monitor and evaluate compliance with DEQ's turbidity standard post-construction. If not met, then MFID and AMG will review the frequency and magnitude of sediment flushing and effects

on fish, then decide on any feasible mitigations and/or alternative options (through the MFID/AMG recommendation process).

In addition to the above, MFID believes the proposed Coe Diversion to sediment basin Pipeline would further reduce the need for flushing, sediment management and on/off cycling activities at these diversions.

Performance Measures

MFID will collect data on the effectiveness of the pipeline and on-farm irrigation upgrade projects, the results of which will be publicly available. The effectiveness of the pipeline project will be assessed by increased late summer water levels in Laurance Lake and streamflow in Clear Branch. The effectiveness of the on-farm irrigation upgrade projects will be assessed with 2 years of post-project flow meter monitoring at each farm. Pre-project on- farm water use data was collected in 2016.

MFID, ODFW, CTWS, and the Hood River Watershed Group (HRWG) have a long history of collecting stream flow and temperature data in the Middle Fork Watershed. These partners will continue flow and temperature monitoring to evaluate long-term project effectiveness, which will be publicly available upon request. Furthermore, the HRWG will continue to track progress of all its basin partners as part of its Watershed Action Plan, which is updated every 5 years and available on the HRWG's website (www.hoodriverswcd.org/hrwg).

Readiness to proceed

As described above in the Technical Project Description, design work for the project began in 2017 with determination of construction specifications for backfill and bedding material, development of final construction drawings, and FERC Quality Control and Inspection Plan for construction. Because the Coe Branch diversion and proposed pipeline is on USFS land, MFID is conferring with the Hood River Ranger District for approval of a Categorical Exclusion, expected to be received in the next 6-8 weeks. (See attached letter of support from USFS).

MFID is ready to proceed with construction anticipated to be underway beginning in spring of 2020, and expected to be complete in four to six months, with key tasks listed below:

1) Solicit bids & award construction contract,
2) Acquire materials,
3) Pipeline installation to include: excavating a trench and burying 24" pipe along an existing pipeline right-of-way; constructing a carrier pipe over Coe Branch; building a concrete energy dissipater at entrance to settling pond.

Nexus to Reclamation Project Activities

The project is not connected to any Reclamation project activities, but it does support the goals and initiatives of the Confederated Tribes of the Warm Springs' fisheries restoration efforts. As described above in the "Water Supply Reliability" section, the Hood River Watershed is part of the ceded lands of the Confederated Tribes of the Warm Springs Reservation (CTWS). To improve subsistence fish harvest opportunities for tribal members, CTWS created the Hood River Production Program (HRPP). This program includes local, tribal hatchery production of winter steelhead and spring Chinook and implementing a suite of stream restoration projects to improve fish habitat and restore stream flows. The HRPP 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. Ongoing water conservation and increased summer stream flow is vital to the continued investment of CTWS funding and success of the HRPP.

Additionally, tribal members harvest salmon and steelhead from the Hood River for subsistence and ceremonial purposes. Tribal fishing opportunity has become severely restricted because of low fish populations and the need to protect weak or threatened stocks. Instream flows have been identified as a primary limiting factor to the recovery of salmon and steelhead, and an increase to instream flow in Clear Branch offers meaningful stream enhancement potential. Furthermore, the success of this and similar flow restoration projects is pivotal to the success of CTWS' Hood River Production Program and ultimate increase in tribal fishing opportunity in the Hood River Watershed.

Additional Non-federal Funding

MFID is requesting a WaterSMART Water and Energy Efficiency Grant for Fiscal Year 2020 in the amount of $266,600 and pledges a 100% cash match. The project also leverages financial support the State of Oregon Water Resources Department (OWRD) grant of $924,000. The project also compliments NRCS EQIP-funded on farm irrigation efficiency improvements totaling $1,372,907. Individual landowners on 4 farms have pledged cash and in-kind contributions to that effort totaling $80,415.

As described in the Project Budget section below, the total project cost of $1,464,400 will be funded with $924,000 State of Oregon funding, $3,200 in-kind and $266,600 in cash match from MFID, and the $266,600 WaterSMART grant request enclosed. **Non-federal funding ratio for this project is 4.48 to 1.**

Project Budget

Funding Plan and Letters of Commitment

Non-federal share of the project costs will be covered by a $924,000 State of Oregon Water Resources Department grant awarded to MFID in 2017 that expires December 31, 2022 (Please see attached OWRD grant award WPG-0012-17 and grant amendment WPG-0012-17A). These funds are currently available.

In September of 2019, the MFID Board of Directors passed Resolution No. 19-07 authorizing the application for this WaterSMART grant and authorized a 100% cash match if awarded from the District's general operating fund. While the Board authorized acceptance of a grant up to $300,000, this application is requesting $266,600.

Please see the **Budget Proposal** on the following page for the itemized project budget.

Budget Proposal

CAPITAL BUDGET

	A	B	C	D	E	F	G
Itemize projected costs under each of the following categories.	**Unit Number**	**Unit Cost**	**In-Kind Match**	**OWRD Funds**	**Cash Match Funds**	**BOR Funds**	**Total Costs**
	(e.g., # of hours)	(e.g., hourly rate)					(add columns C, D, E)
PROJECT MANAGEMENT							
Construction Management/Inspector	800	$165/Hr		132,000			132,000
							0
							0
SUBTOTAL (2)			0	132,000	0	0	132,000
IN-HOUSE PERSONNEL							
MFID General Manager's Oversight	43 Hrs	$55/Hr	2,365				2,365
Office Manager - Reporting	9.5 Hrs	$35/Hr	335				335
Contingency			500				500
SUBTOTAL (3)			3,200		0	0	3,200
CONTRACTED SERVICES. Labor, supplies, and materials							
Mobilization/Demobilization		LS		91,000			91,000
Traffic Safety/Erosion Control		LS		5,000			5,000
Job Photos	30 Ea	$10		300			300
24" DR 17 HDPE Pipe	6360 '	$57/'		97,500	266,600		364,100
Pipe & Conduit Installation	6360 '	$57/'		365,700			365,700
36" HDPE Pipe & Install	360'	$122/'		43,900			43,900
48" HDPE Pipe & Install	180'	$180/'		32,400			32,400
Electrical Conduit	6230'	$13/'		81,000			81,000
Pull Box Vault	8	2400		19,200			19,200
Connections/Crossings/ Structures		LS		16,000		266,600	282,600
Pumps & Drains	4	29500		40,000			40,000
SUBTOTAL (4)			0	792,000	266,600	266,600	1,325,200

PROJECT BUDGET TOTAL *Totals automatically round to the nearest dollar

PROJECT BUDGET TOTAL	3,200	924,000	266,600	266,600	1,460,400

Budget Narrative

Salaries and wages

The on-site Construction Management/Inspector will be Niklas Christianson of the Watershed Profressionals Network. The project anticipates 800 hours of work for this role, at a rate of $165 per hour, for a total project cost of $132,000. MFID's General Manager, Craig DeHart will serve as the Project Manager. His oversight is estimated to require 43 hours at a rate of $55 per hour for a total project cost of $2,365. MFID's Office Manager, Cheryl Moore, will perform project reporting, requiring an estimated 9.5 hours of time at a rate of $35 per hour for a total project cost of $335.

Fringe Benefits & Travel

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

Equipment, Materials and Supplies, & Contractual

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. The list below presents a description of each item on the construction cost estimate:

Mobilization and demobilization; Contractor arriving on site and leaving at the end of the project
Temporary traffic control; Project safety and erosion control are standard contract elements
Job Photos; Documentation for future and completion of record drawings
24-inch HDPE - The Coe creek conservation conduit project will consist of the purchase and installation of Approx. 6360 feet of 24-inch HDPE to convey silt laden irrigation water to an existing settling pond.
Pipe and conduit installation; The installation of pipeline and electrical conduit including excavation and backfill
36-inch HDPE is for the flow line between the overflow structure and overflow discharge vault
48-inch HDPE, is for the flow line between the overflow structure and settling pond
Electrical conduit, is for PVC conduit for future communication and or electrical
Pull box vault for electrical conduit; While the project is being constructed and the excavation open the contractor will install PCV electrical conduit for project communications / future use. MFID has found that it is extremely beneficial to utilize existing excavations and projects to install electrical conduits for future use.
Pipeline connections/crossings/structures; Contractor to connect to existing system at start of project, cross Coe creek with Pipeline bridge to avoid in water work , contractor will slip new 24-inch HDPE into existing 36-inch culvert under Eliot creek to accomplish the Eliot creek crossing with out in water work., contractor will intertie the new 24-inch HDPE into the existing pipeline at the settling pond so turbid water can flow to the settling pond after project completion. Contractor to install overflow structure and discharge vault; Since the settling pond is located at the head of an adjacent drainage basin the project also calls for the construction of a cast in place concrete overflow structure that will convey emergency over-

flows, back to the Middle Fork Hood River drainage and into a overflow discharge vault thus eliminating any chance of inter basin water transfers even in an emergency situation.
Pump and drains; The pump out assembly is required for future maintenance and dewatering of the new pipeline in low spots that will not allow gravity drainage. The pipe drain assembly facilitates future drainage of pipeline for maintenance and inspection where gravity drainage is possible.

Other Expenses & 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 and Regulatory Compliance Costs

MFID has incurred the following environmental documentation and compliance costs to support the U.S. Forest Service issuance of a Categorical Exclusion (CE) for implementation of the proposed project. As support to develop the CE, MFID funded four studies to evaluate potential impacts of projects (including the Coe pipeline) on USFS lands where project components are located. The total cost of these studies and the portion directly attributable to the Coe Pipeline are as follows:

- Wetland delineation: Total cost - $10,934; Cost attributable to Coe pipeline - $10,934
- Archeological investigation: Total cost - $19,629; Cost attributable to Coe pipeline - $9,800
- Water temperature modeling: Total cost - $50,000; Cost attributable to Coe pipeline - $10,000
- Instream flow study to assess habitat quantities: Total cost - $136,000; Cost attributable to Coe pipeline - $27,000

Future expense to MFID for regulatory compliance will be part of the recipient cost share. Future regulatory compliance costs will include site visits and reporting to document compliance with conditions set forth in the CE and/or implementing any required mitigation measures and are estimated at $10,000.

Total environmental compliance cost $67,734

Letters of Support

HOOD RIVER COUNTY BOARD OF COMMISSIONERS

JEFF HECKSEL, COUNTY ADMINISTRATOR
601 State Street • Hood River, OR 97031 • (541) 386-3970 • FAX (541) 386-9392

September 24, 2019

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Darren Olson
PO Box 25007, MS 84-27815
Denver, CO 80225

RE: *Water Smart and Energy Efficiency Grant* – Coe Creek Conduit & On-farm Irrigation Upgrade Project

Dear Mr. Olson:

The Hood River County Board of Commissioners supports the grant proposal being submitted for water conservation and efficiency by the Middle Fork Irrigation District (MFID). This project is the result of several years of basin-wide assessment and planning that culminated in several documents, including the MFID Fish Management Plan (2010), Hood River Basin Study (2015), and the Hood River Water Conservation Strategy (2015). This proposal will ultimately lead to increased water conservation instream and greater water resource reliability for the Basin's agricultural producers. With one-third of County incomes and over $100 million in annual gross sales coming from agriculture, it is critical that we find long-term solutions to provide reliable water into the future. The Board also recognizes the importance of improving instream flows to support threatened native fish populations, tribal fishing rights, and recreation.

The Coe Creek Conduit and On-farm Irrigation project will direct water diverted at Coe Branch to MFID's existing settling pond before being delivered to patrons. MFID's settling pond removes a significant amount of sediment, which will encourage and enable more of its patrons to use high efficiency irrigation equipment. The pipeline project will be complemented by 200 acres of on-farm irrigation upgrades in the MFID, which is expected to save in excess of one CFS.

The Hood River Basin has a very long history of collaboratively working to address potentially conflicting water use demands for fish, farms, and people. Water plays a central role in the cultural, economic, and social history and values of Hood River County. Finding ways to allow for equitable use of our valuable water resources is essential to the continued success of this communities within Hood River County. The proposed projects are 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.

On behalf of the Hood River County Board of Commissioners we urge your support of the Coe Creek Conduit & On-farm Irrigation Upgrade Project as presented.

Sincerely,

Michael Oates, Chair
Hood River County
Board of Commissioners

Hood River Watershed Group

3007 Experiment Station Road
Hood River, OR 97031
www.hoodriverswcd.org

September 26, 2019

Bureau of Reclamation
Attn. Daren Olson
Financial Assistance Support Section
P.O. Box 25007, MS 84-27815
Denver. CO 80225

Re. Coe Branch Pipeline & On-farm Irrigation Efficiency Project

Dear Mr. Olson,

The Hood River Watershed Group strongly supports the Middle Fork Irrigation District's (MFID) Coe Branch Pipeline and On-farm Irrigation Efficiency Project. This project proposes to construct a pipeline from Coe Branch Creek to an existing settling pond. MFID's settling pond removes a significant amount of sediment, which will encourage more of its patrons to use high efficiency irrigation equipment and result in more water conserved instream.

The Middle Fork Hood River provides critical habitat for steelhead, Chinook salmon, coho salmon, and bull trout, which are listed as a threatened species under the Endangered Species Act. The MFID has developed a Fisheries Management Plan as part of their Special Use Permit with the USFS. This plan identifies fishery related issues associated with MFID's operations, and recommends potential studies and solutions to identified issues. This proposed project represents one of several projects identified in that plan. The MFID has a proven track record in implementing projects to increase instream flows, water quality, and habitat in the Middle Fork Hood River.

This project is also supported by several years of basin-wide assessment and planning, which culminated in the Hood River Basin Study (2013) and the Hood River Water Conservation Strategy (2015). Both of these studies were funded by Reclamation WaterSMART grants.

The Hood River Basin has a long history of collaboratively working to address potentially conflicting water use demands for fish, farms, and people. Water plays a central role in the cultural, economic, and social history and values of Hood River County. Implementing projects that allow for equitable use of our valuable water resources is essential to the continued success of the communities within Hood River County.

Best regards,

Cindy Thieman

Cindy Thieman
Watershed Coordinator

From: Tervo, Janeen S -FS <janeen.tervo@usda.gov>
Sent: Thursday, September 26, 2019 3:29 PM
To: 'craig@mfidp.com' <craig@mfidp.com>; Arendt, Kathryn -FS <kathryn.arendt@usda.gov>
Subject: RE: Updated Letter of support

Hello Craig,

By way of this email the Mt Hood National Forest, Hood River Ranger District transmits our continued support for the Coe Creek Pipeline Project. We are well aware of the delay in project implementation due to other factors however, the goal remains the same and this project will serve to improve water flow and water quality in the Middle Fork Hood River sub-basin, while enhancing the Middle Fork Irrigation District's (MFID) ability to meet its purpose of providing reliable and economic water supplies to irrigated agriculture in the upper Hood River valley.

Please let me know if you need further assistance as MFID endeavors additional grant funding opportunities with BOR for this project.

Regards,

Janeen Tervo
District Ranger
Forest Service

Mt Hood National Forest, Hood River Ranger District
p: 541-352-1201
janeen.tervo@usda.gov
6780 Hwy 35
Mt Hood - Parkdale, OR 97041
www.fs.fed.us

Caring for the land and serving people

Oregon
Kate Brown, Governor

Department of Environmental Quality
Eastern Region Bend Office
475 NE Bellevue Drive, Suite 110
Bend, OR 97701-7415
(541) 388-6146
Fax (541) 388-8283
TTY 711

January 14, 2016

Jon Unger, Grant Program Coordinator
Oregon Water Resources Department
725 Summer St. NE, Suite A
Salem, OR 97301

Dear Mr. Unger :

This letter is being written to express the Oregon Department of Environmental Quality's support for the Middle Fork Irrigation District (MFID) and its Coe Branch Pipeline & On-farm Irrigation Efficiency Project.

MFID has been meeting with an Adaptive Management Group (AMG)[1] since 2005 to develop a Fisheries Management Plan (FMP) as part of their Special Use permit with the USFS. The group identified fish passage, habitat, and water quality issues that were affected by MFID's operations and recommended studies to be done to further evaluate these issues. These studies are currently being finalized and the collaborative process is coming to fruition with a suite of recommended projects. It is anticipated that the projects will result in improved flow and water quality in the Middle Fork Hood River watershed while enhancing the district's ability to meet its purpose of providing reliable and economic water supplies to irrigated agriculture in the upper Hood River valley.

The Coe Branch Pipeline Project is the first project in the FMP that will be implemented to accomplish the objectives stated above. This project is scheduled for construction in the fall of 2017, pending the completion of the NEPA process. The Mt. Hood National Forest and MFID are beginning the National Environmental Policy Act (NEPA) process this month (January 2016) with anticipated conclusion and decision in mid-2017. Other planned projects needed before the flow and water quality benefits are fully realized include a surface water withdrawal system in the reservoir and a new stream flow release infrastructure at Clear Branch Dam. Both of these projects are currently in the planning-level design and NEPA phase.

MFID 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. Staff at DEQ continue to be impressed with the MFID's commitment to improving water quality and fish habitat. 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 projects outlined in the FMP – are examples of their commitment to natural resource protection.

If I can be of further assistance, please feel free to give me a call at (541) 633-2027.

Sincerely,

Bonnie Lamb
Middle Columbia-Hood TMDL Basin Coordinator

[1] This group includes USFS (Hood River Ranger District), U.S. Fish and Wildlife Service, National Marine Fisheries Service, DEQ, Oregon Department of Fish and Wildlife, Hood River Watershed Group & Confederated Tribes of the Warm Springs.

From: Gorham Blaine <gorhamblaine@gmail.com>
Sent: Monday, September 30, 2019 8:26 AM
To: mfid@mfidp.com
Subject: Letter of Support

Hi Craig (and the Middle Fork staff):

I am emailing you in support of your efforts to obtain funding from the Bureau of Reclamation's Water Smart program to assist in the completion of the Coe Creek Conservation project. As a vital water supply system for my Parkdale orchards, Coe Creek (and a properly functioning diversion) is crucial to my operation.
Please make any and all efforts to obtain this funding.

Thank you,

Gorham Blaine

Dog River Ranch LLC
Parkdale, OR

8129 Clear Creek Road • Parkdale, OR 97041 • (541) 352-7115 • www.mthoodfruit.com

To: Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Darren Olson
P.O. Box 25007, MS 84-27815
Denver, CO. 80225

Sept. 26, 2019

From: Kiyokawa Orchards Inc.
Randy Kiyokawa, President
8129 Clear Creek Rd.
Parkdale, OR. 97041
541-352-7115

RE: Grant for Coe Project Continuing Support

Dear Sir/Madam:

My name is Randy Kiyokawa, a third generation farmer from Parkdale Oregon, which is located in the beautiful Hood River Valley on the base of Mt. Hood.

Water from Mt. Hood has been the source of irrigation water for the orchards in the valley before the time my grandfather started farming in 1911. Over time the establishment of water districts has allowed the formation of visionary men/woman directing and carrying out a goal to create a stable water supply during the hot summer months. This has allowed the Hood River Valley's agricultural community to harvest fruit that has become known worldwide.

Middle Fork Irrigation directors and staff has proposed a pipeline from Coe Creek Diversion to the settling pond that would be a huge help in reducing the glacial sediment. Conservation of water is key in allowing all users; those with two feet, four feet and fins, to thrive and be healthy. Routing diverted water through an established a settling pond will reduce sediment that would allow more farmers to effectively and economically use drip and micro irrigation systems in their orchards, therefore using much less water to raise our crops. By using less water a positive domino effect will occur. Nitrogen and other elements will not be leeched through the soils profile as quickly, allowing for better plant absorption and reducing the amount of fertilizer needed in a growing season. Stream level and temperature will improve because of less water being taken from the creeks and streams.

I encourage you to please consider funding the Middle Fork Irrigation project that would be another step in the right direction for conserving water.

Best Regards,

Randy Kiyokawa

Upper Valley Farms, LLC
P.O. Box 8 / 5025 Quinn Drive
Mount Hood Parkdale, OR 97041
541-490-6644,
eddie@uppervalleyfarms.com

September 27, 2019

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Darren Olson
P.O. Box 25007 MS 84-27815
Denver. CO 80225

RE: Middle Fork Irrigation District Water Smart Water and Energy Efficiency grant program application for the Coe Creek pipeline project

To Whom It May Concern:

Upper Valley Farms produce certified organic apples for local fresh consumption and for local and regional cider producers. Our clients include New Seasons Market, Azure Standard, Tree Top Juice, Rack and Cloth Cidery, and Slopeswell Cidery. Our products are part of Oregon's self-reliant food production, and add to the food security and resiliency of local, state, and regional markets.

Our farm is fortunate to be a patron of the Middle Fork Irrigation District (MFID). Our production is dependent on the continued supply of clean quality irrigation water that MFID provides. We are pleased that MFID is currently engaged in implementing a suite of projects that will add to the long-term efficiency and reliability of the irrigation water supply, while improving the environmental benefits of the District's operations to fish and wildlife habitats and populations.

As we understand it, one component of the MFID upgrade plan is the construction of a new pipeline from the Coe Branch diversion to an existing settling pond which will allow for the settling of glacial silt from these waters. Removal of these fine sediments will add to the longevity of the water-efficient micro sprinklers that we and other farms in the District have invested in. Maintenance of these systems is part of the long-term strategy to increase irrigation efficiency and reliability in the District.

We whole-heartedly support the Water Smart Water and Energy Efficiency grant application for the Coe creek pipeline project, and encourage the Bureau to support this worthy endeavor which will benefit water conservation, efficiency of use, and reliability of the overall system.

Sincerely,

Ed Salminen, Member
Upper Valley Farms LLC

Official Resolution

RESOLUTION NO. 19-07

A RESOLUTION IN SUPPORT OF A GRANT APPLICATION WITH THE BUREAU OF RECLAMATION FOR THE WATERSMART WATER AND ENERGY EFFICIENCY GRANT OPPORTUNITY NUMBER BOR-DO-20-F001

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

WHEREAS, Craig DeHart, General Manager for Middle 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; increase the production of hydro power; mitigate conflict risk of future water resources; enable farmers to make additional on-farm improvements in the future; and accomplish other benefits that contribute to water supply reliability; and,

WHEREAS, The Middle Fork Irrigation District has the financial resources to enter into a financial assistance contract with the Bureau of Reclamation and commits to a three hundred thousand dollar ($300,000) cost share with the Bureau of Reclamation; and,

WHEREAS, The Middle 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 Middle Fork Irrigation District as follows:

Middle Fork Irrigation District is hereby authorized to receive, if awarded, the WaterSMART Water and Energy Efficiency grant funding in the amount up to $300,000 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 Craig DeHart, General Manager, or his designee, is hereby authorized to act on behalf of the Middle 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 Middle Fork Irrigation District this 18th day of September, 2019.

Bud Lacey, Chairman

Craig DeHart, General Manager

ATTEST:

Cheryl Moore, Office Manager

Attachments