

Application Name: Catherine Creek Red Mill Reach Restoration

Application Number: 218-8205-16258

By: Union SWCD

Offering Type: Upper Grande Ronde Initiative

Application Type: Restoration

OWEB Region: Eastern Oregon

County: Union

Coordinates: 45.213257,-117.889593

Applicant:

James Webster
10507 N McAlister Rd Ste 7
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(541) 963-1313
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Payee:

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Project Manager:

Aaron Bliesner
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Budget Summary:

OWEB Amount Requested: \$33,533
Total Project Amount: \$99,384

Administrative Information

Abstract

Provide an abstract statement for the project in 250 words or less. Include the following information: 1) Identify the project location; 2) Briefly state the project need; 3) Describe the proposed work; 4) Identify project partners.

This proposal is the first of a three-stage approach for improving habitat and flow conditions for ESA-listed aquatic species in Catherine Creek. The first stage will improve instream flow quantity by converting flood irrigation to a high efficiency, pressurized system servicing 65.1 acres of property. Flood irrigation has proven to be inefficient water use, resulting in water quality degradation due to sediment and chemical laden water returning to the main channel. NRCS staff suggest that irrigation upgrades will result in more efficient water distribution, and will reduce water consumption by 40-60%. The landowner has agreed to sign a Cooperative Conservation Agreement that will allow the District to complete the second two stages of a floodplain restoration effort.

Stage two will improve physical riverine processes and aquatic habitat, coordinated across multiple ownerships. The majority landowner has agreed to allow the District access to 9 acres of historic floodplain property. The District will assist the Bureau of Reclamation (Reclamation) to design more natural channel geomorphology and sinuous alignment, increase floodplain connectivity, and improve aquatic habitat complexity. Stage two construction is planned for two phases, with an anticipated start in 2020.

Stage three of the project will establish a conservation easement to protect the newly established floodplain and riparian plants from livestock and agricultural impacts. The landowner has agreed to defer the transfer of water rights for the 9-acre project area for the first three years following construction, to irrigate new plantings. The District will assist the landowner in pursuing a CREP agreement.

Location Information

What is the ownership of the project site(s)?

Public land (any lands owned by the Federal government, the State of Oregon, a city, county, district or municipal or public corporation in Oregon)

Private (land owned by non-governmental entities)

Please select one of the following Landowner Contact Certification statements:

I certify that I have informed all participating private landowners involved in the project of the existence of the application, and I have advised all of them that all monitoring information obtained on their property is public record.

I certify that contact with all participating private landowners was not possible at the time of application for the following reasons: Furthermore, I understand that should this project be awarded, I will be required by the terms of the OWEB grant agreement to secure cooperative landowner agreements with all participating private landowners prior to expending Board funds on a property.

Please include a complete list of participating private landowners

Rob Langford

This grant will take place in more than one county.

Permits

Other than the land-use form, do you need a permit, license or other regulatory approval of any of the proposed project activities?

- Yes
 No

Racial and Ethnic Impact Statement

Racial and Ethnic Impact Statement

- The proposed grant project policies or programs could have a disproportionate or unique POSITIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs could have a disproportionate or unique NEGATIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs WILL HAVE NO disproportionate or unique impact on minority persons.

Insurance Information

- Working with hazardous materials (not including materials used in the normal operation of equipment such as hydraulic fluid)
- Earth moving work around the footprint of a well
- Aerial application of chemicals
- Transporting individuals on the water
- Removal or alteration of structures that hold back water on land or instream including dams, levees, dikes, tidegates and other water control devices (this does not include temporary diversion dams used solely to divert water for irrigation)
- Applicant's staff or volunteers are working with kids related to this project (DAS Risk assessment tool not required, additional insurance is required)
- Applicant's staff are applying herbicides or pesticides (DAS Risk assessment tool not required, additional insurance is required)

Additional Information

This project affects Sage Grouse.

Problem Statement

Describe the watershed problem(s) that this restoration project seeks to address.

Early records describe the Grande Ronde River and Catherine Creek as streams that meandered for about 70 miles before they left the Grande Ronde Valley. "Due to the flatness of the valley, the rivers meandered, snake-like, and were slow and sluggish in summer" (Gildemeister 1998). The rivers were connected to their floodplains and overflowed their banks during the spring freshet to form lakes, marshes, and wetlands. Beavers were plentiful, and influenced the vegetation seral stages and the mosaic of wetlands, meadows, flowers, cottonwoods, and willows that covered the bottomlands (Gildemeister 1998).

Beavers were systematically harvested from the Grande Ronde Valley. By the 1860s, pioneer settlements established within the valley and the logging industry expanded, starting near the valley bottom and expanding up watersheds. The first sawmill dam on Catherine Creek was constructed in 1863, about six miles above Union (Gildemeister 1998).

Agricultural development in the late 1800s focused on draining lakes and wetlands, and removing of riparian vegetation to increase the size of available pasture and farm lands. In 1869, a ditch was constructed to drain Tule Lake and the surrounding wetlands, and Catherine Creek was rerouted through a 3-mile long ditch. The practice of ditching, draining, ground leveling, and removing riparian vegetation has continued into the present. Thousands of cattle and sheep grazed the Catherine Creek meadows, and continues on the artificially created pasturelands today (Gildemeister 1998).

The flow regime for Catherine Creek has been greatly altered for irrigation of farmlands through the project site. Above the town of Union agricultural water diversions are limited with few acres available for farming. Flow data collected (USGS) above the town of Union through the summer months average around 23cfs. Flow data at the tenth street bridge in Union drops to about 11cfs on average through the summer months.

Catherine Creek through the project area is listed on the 303(d) list in four categories. The stream segment is listed for excessive warm stream temperatures during the summer months. The channel segment has excessive sedimentation from eroding stream banks, overland flow events and tailwater returns. The stream reach is listed for issues with the pH during the summer months and could be related to fertilizers from tailwater runoff. The stream particularly through the project area is listed for flow modifications in the summer related to the lack of flow.

How have past or current land management practices contributed to the problem?

Flow modifications, and specifically the reduction in instream flow, has led to an overall decline in water quality through the project reach. Irrigation withdrawals have decreased the summer base flow through the project area by more than half the expected flow during the summer months, leading to elevated water temperature and diminished habitat space. The water that does return to the stream from flood irrigation is often high in nutrients, sediments, bacteria, and pesticides.

Does this project address one or both of the following:

- Habitat needs for one or more Endangered Species Act-listed species and/or species of concern*
- Concerns identified on 303(d) listed streams*
- No*

Proposed Solution

Goals and Objectives

Provide a goal statement for this restoration application.

The goal of Stage 1 of this restoration effort is to convert 65.1 acres of pasture land from flood to sprinkler irrigation. This will provide a more efficient conveyance of water to the property, reduce the amount of water diverted from Catherine Creek, and minimize polluted return flows.

List the objectives of this restoration application.

- 1) Reduce water withdrawal and usage by 40 to 60% through the construction of a more efficient irrigation delivery system (measured at the site).
- 2) Improve water quality by the elimination of tailwater returns to Catherine Creek from flood irrigation by the reduction of sediment, bacteria, nutrient loading, and water temperature from direct solar radiation.
- 3) Gain landowner support and cooperation for restoration and conservation actions in Catherine Creek and the associated floodplain by 2021 through a signed Cooperative Conservation Agreement between the landowner and the District.

Project History

Continuation - Are you requesting funds to continue work on a project previously funded by OWEB where that work did not result in a completed project?

- Yes
 No

Resubmit - Have you submitted, but were not awarded an OWEB application for this project before?

- Yes
 No

Phased - Is proposed work in this application a phase of a comprehensive watershed restoration plan or project?

- Yes
 No

List the phases of the project.

Phase	Brief Description	Project Number
Irrigation Efficiency Upgrade	Switch 65.1 acres from flood to sprinkler	
Instream Restoration	Re-meander Catherine Creek	
Plant and Protect	Plant the site and enroll in CREP	

Plans and Salmon

Is the proposed restoration activity(ies) identified in a local assessment or other plan?

- Yes
- No

Provide name of local plan, Watershed assessment or other locally relevant document.

IDENTIFICATION AND CHARACTERIZATION OF CATHERINE CREEK JUVENILE SPRING CHINOOK SALMON OVERWINTER REARING HABITAT IN UPPER GRANDE RONDE VALLEY

THE CATHERINE CREEK TRIBUTARY ASSESSMENT GRANDE RONDE RIVER BASIN Tributary Habitat Program, Oregon

THE CATHERINE CREEK REACH ASSESSMENT GRANDE RONDE RIVER BASIN Tributary Habitat Program, Oregon

The Catherine Creek ATLAS

ODFW's Habitat Reach 12 Report

CC-38 Habitat Project Rapid Site Assessment Catherine Creek, Upper Grande Ronde Subbasin

Catherine Creek Reach Assessment 3 and 4 Hydraulics

Will this project benefit salmon or steelhead?

- Yes
- No

- ✓ Snake River Basin - Steelhead
- ✓ Snake River Spring/Summer-run - Chinook Salmon

How will the resulting restoration project benefit salmon or steelhead or their habitat?

Stage 1 of this three-stage project will yield benefits for salmon and steelhead through the project reach and downstream. The project will have a net yield of instream flow through the reduction of water use to irrigate the property. Sprinkler irrigation will reduce the amount of water applied to the fields at any one time and eliminate tailwater returns to the stream. This will reduce the amount of pesticides, bacteria, and fertilizers that are currently entering the stream system. In addition, cutting off the tailwater will reduce fine sediments from entering the stream network.

Stages 2 and 3 will restore the stream to a more natural geomorphic form by increasing the stream length through the project area by about 1000 feet, increase large woody material through the reach (from 1 key piece to over 100), create at least 12 new pool features, and the reconnect the floodplain to the stream channel. The riparian corridor will be planted with native riparian species, and the entire project area will be protected in a CREP agreement.

Does the project address a restoration action identified in a regional assessment or recovery plan?

- Yes
- No

Regional Assessments or Recovery Plans
(Draft)Proposed ESA Recovery Plan for Snake River Spring/Summer Chinook & Snake River Steelhead
Northwest Power and Conservation Council Grande Ronde Subbasin Plan
Oregon's Native Fish Conservation Policy

Oregon Conservation Strategy
The Oregon Plan for Salmon and Watersheds

For each plan chosen above, describe how your project is consistent with specific recovery/restoration actions cited in that plan.

Degradation of instream and riparian habitat in the Grande Ronde Subbasin (Subbasin) has been the dominant cause of salmon and steelhead decline (NPCC, 2004). The adverse effects of poorly managed logging, grazing, mining, dams, irrigation withdrawals, urbanization, exotic species introductions, and other human activities have been documented in all of Columbia River tributaries (ISG 1996). Riparian and instream habitat degradation has most severely impacted spring Chinook production potential in the Grande Ronde Subbasin (ODFW and CTUIR 1990, NPCC 2004a) and habitat loss and degradation has been widespread with the exception of road-less and wilderness areas (Anderson et al. 1992; CTUIR 1983; Henjum et al. 1994; McIntosh et al. 1994).

Approximately 379 miles of degraded stream miles have been identified in the Subbasin (ODFW et al. 1990), with an estimated 80 percent of anadromous fish habitat in a degraded condition (Anderson et al. 1992). McIntosh (1994) documented a 70 percent loss of large pool habitat in the Upper Grande Ronde River since 1941. Riparian shade on low gradient streams was found to be less than 30 percent (Huntington, 1993). Stream channelization, levee construction, wetland drainage, and the use of splash dams were common and widespread practices until the 1970's resulting in severe channel incision and degradation in some locations. The Oregon Department of Environmental Quality (ODEQ) listed over 60 stream reaches in the Subbasin on the State's list of water quality limited water bodies 303 (d). Of these stream segments, 24 are listed for habitat modification, 27 for sediment, and 49 for temperature.

Watershed analysis through the EDT (NPCC, 2004a and Moberg, 2003) and synthesis through the Subbasin Management Plan development process, identified instream habitat condition, high water temperature, sediment loads, and flow modification as primary limiting factors for Chinook and steelhead (pg. 11 NPCC 2004c, pg. 3 NPCC 2004d). Primary habitat degradation includes:

- Channel Habitat Conditions – Channel instability associated with removal of streamside cover and channelization has resulted in channel incision/down cutting, increased gradient, reduced channel length, elevated erosion, increased width-to-depth ratios, and loss of channel complexity. The quality of instream habitat has correspondingly been altered throughout much of the Subbasin.
- Sediment – Loss of upland and streamside vegetative cover has increased the rates of erosion. Soils lost from upland areas has overwhelmed hydraulic processes resulting in decreased availability of large pool habitat, spawning areas, riffle food production, and hiding cover.
- Riparian Function – Riparian habitat degradation is the most serious habitat problem in the Subbasin for fish (McIntosh 1994, ICBEMP 2000). The loss of floodplain connectivity resulting from road/dike construction and channel incision, in addition to reduced habitat suitability for beaver, have altered dynamically stable floodplain environments and contributed to degradation and limited habitat recovery.” This loss leads to secondary effects that are equally harmful and limiting, including increased water temperature, low summer flows, excessive winter runoff, and sedimentation.
- Low Flow – Water resources in many streams have been over-appropriated resulting in limited summer and fall base flow, development of fish passage barriers, and increased summer water temperatures.

This watershed has been identified as one of the highest priority areas to conduct habitat restoration with the greatest response in Chinook salmon and steelhead production potential (NPCC, 2004a, Supplement, Pgs 49-50, Table 5-6). Habitat protection and restoration needs in the Subbasin have been recognized in numerous reviews, planning processes, and reports (CTUIR, 1983), Noll and Boyce 1988, (ODFW, 1990), Wallowa-Whitman et al.

1992, (Huntington, 1993) GRMWP (1994), (Mobrand, 2003), (NPCC, 2009), and (NPCCa, 2004). NPCC (2004a) Appendix 5 (pg 254) provides a relatively complete list of habitat protection and restoration strategies that can be applied to achieve goals and objectives. The NMFS recovery plan for Snake River Chinook salmon recognized the importance of tributary habitat restoration and protection of habitat on both federal and private lands to Chinook and steelhead recovery (NMFS, 1997). NMFS recently restarted the recovery planning effort for Chinook salmon and steelhead and tributary habitat restoration is expected to play a prominent role in the final NMFS recovery plan. NRC (1996) also noted the importance of protecting and rehabilitating freshwater habitat as part of salmon recovery. They specifically note the importance of riparian areas and recommend that habitat reclamation or enhancement should emphasize rehabilitation of ecological processes and function. The USFWS draft bull trout recovery plan recognized the importance of habitat protection and restoration as well (USFWS, 2002), specifically noting the need to improve water quality, reduce or eliminate fish passage barriers, and restoring impaired instream and riparian habitat.

Habitat Types

In which habitat type(s) are you proposing to work?

- Instream Habitat: below the ordinary high water mark (includes in-channel habitat restoration, bank stabilization, flow, fish screening, and fish passage) -- Details will follow.*
- Riparian Habitat: above the ordinary high-water mark of the stream and within the stream's floodplain.*
- Upland Habitat: above the floodplain and improves native habitat and watershed function. -- Details will follow.*
- Wetland Habitat: land or areas covered, often intermittently, with shallow water or have soil saturated with moisture.*
- Estuarine Habitat: tidally influenced areas.*

Instream Habitat

Select all applicable Instream categories.

- Bank stabilization**
- Fish passage improvement**
- Fish screening project**

✓Instream Flow

Select all the actions you propose to implement to address the problem.

✓Irrigation improvement for increased stream flow

Initial start date of irrigation improvement

06/01/2018

Length of time for irrigation practice improvement

Permanent

Temporary

Estimate stream miles where increased flow is the result of decreased/eliminated water withdrawals

38.5

Irrigation agreement for increased stream flow

Installation of stream gauges and/or flow meters to measure water use

Estimate the increased flow of water in the stream (cfs)

.23

Is the primary purpose of the instream flow project to address water quality limiting factors?

Yes

No

✓pH

✓Sediment

✓Nutrients

✓High Temperature

✓Toxics

✓Dissolved Oxygen

✓Bacteria

Total stream miles with improved flow.

38.5

Instream habitat restoration

Stockpiling logs

Upland Habitat

Select all applicable Upland categories.

Upland road activities

Vegetation establishment or management

Livestock management

✓ Agricultural practices for conservation including erosion control

Select all the actions you propose to implement to address the problem.

✓ Irrigation improvement for water quality

Acres
65.1

Activities

✓ Installation of stream gauges and/or flow meters to measure water use

Give the number
1

Is an objective of the irrigation improvement to address water quality limiting factors?

Yes

No

✓ pH

✓ Sediment

✓ Nutrients

✓ High Temperature

✓ Toxics

✓ Dissolved Oxygen

✓ Bacteria

Low/ No till

Filter Strips

Wind breaks

Erosion control structures

Terracing

Grass waterway

Livestock manure management

Upland wetland protection, creation or improvement for agricultural water quality

Non-Agriculture practices for conservation including erosion control

Urban impact reduction

Total upland acres to be treated:

65.1

Wrap-Up

Outcomes

Explain how the proposed restoration activities address the watershed problem described in the Problem Statement and Goals and Objectives.

The project will reduce the amount of water that is currently used to irrigate the 65.1 acres along Catherine Creek. This reduction in water use will directly benefit salmon and steelhead through the project reach and in the downstream direction. Tailwater or excess irrigation water that does not enter the soil profile has been documented to deliver nutrients, pesticides, bacteria, and sediment to river systems. By switching from flood to sprinkler irrigation, the tailwater will be eliminated. During the process of flood irrigating water is spread out over vast acreages and slowed down. This water receives solar radiation and as it collects and moves back into the river system is often much warmer than stream temperatures. Stage 1 of this restoration effort will lower stream temperatures, reduce the amount of fine sediment entering Catherine Creek, and will help to balance pH levels in the creek by reducing nutrient and pesticide loading.

After implementation of stage 1, the landowner, District, and NRCS will work to quantify the water savings that the landowner realizes. This will take place during the implementation of stages 2 and 3. After the completion of stage 3, water rights for the 9 acres the landowner is allowing the project to occupy, and the water savings for the irrigation efficiency upgrade will be transferred to instream rights.

Describe the steps you will take to minimize adverse impacts to the site and adjacent lands during and after project implementation .

The entire stage 1 project will take place above the ordinary high water mark with no negative impacts to Catherine Creek. Stage 1 will not require any environmental permitting. Ground disturbance will be limited to a single 1920-foot long trench to accommodate the pipe and risers. Post implementation the trench will be back-filled and planted with herbaceous grass species.

After completion of stage 2 (stream restoration) the existing ditch network will be filled with excess soil material from the stream restoration construction.

Does this proposed project include outreach activities?

- Yes
 No

Describe these activities, as well as any related products, and explain how the proposed activities relate to the project's objectives.

The project will be highlighted in the Districts annual news letter.

Design

Were design alternatives considered?

- Yes
- No

Select the appropriate level of design for your project.

- No design is required.
- 10-30%: Conceptual design (evaluation of alternatives, concept-level plans, design criteria for project elements, rough cost estimates).
- 30-85%: Preliminary design (selection of the preferred alternative, draft plans, draft design report, preliminary cost estimates).
- 85-100%: Final design (final design report, plans, and specifications, contracting and bidding documents, monitoring plan, final cost estimate).

If work remains on the project's design, describe the work that remains to be done and when you expect to have it completed. If no design is required put "N/A"

Design for this project is being completed by NRCS engineering and will be finalized prior to construction.

Project Management

List the key individuals, their roles, and qualifications relevant to project and post project implementation. At a minimum include the following: project management, project design, project implementation, and project inspection.

Role	Name	Affiliation	Qualifications	Email	Phone
Project and Grant Administration	Jim Webster	Union Soil and water Conservation District	The District Manager with over 20 years of experience as a fluvial hydrologist developing natural resource management strategies, managing grant funding, and planning and implementing floodplain and fish habitat restoration projects.	jwebster@unionswcd.org	(541) 963-1313
Project Management	Aaron Bliesner	Union Soil and Water Conservation District	The District's Project Manager for the past 3 years with extensive experience in the design, implantation, and oversight of complex restoration efforts.	abliesner@unionswcd.org	(541) 963-1313
Design Management, Landowner Communications and Final Project Approval	Mike Burton	Natural Resource Conservation Service	The District Conservationist for Eastern Oregon with extensive experience in the design and implementation of on farm irrigation systems, project management, and outreach.	mike.burton@or.usda.gov	(541) 624-3092

Project Design and final inspection	Kevin Shaw	Natural Resource Conservation Service	Civil Engineer for the NRCS with many years designing irrigation systems in eastern Oregon and working with local companies that construct irrigation systems.	kevin.shaw@or.usda.gov	(541) 523-7121 Ext.102
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List the major project elements and time schedule for each, including post project implementation.

Element	Start Date	End Date
Project funding	11/2017	7/2018
Project Design	4/2017	7/2018
Photo Point Establishment	7/2018	7/2018
Project Implementation	8/2018	9/2018
Project Inspection	10/2018	10/2018
Photo Monitoring	10/2018	10/2018
Flow Monitoring	5/2019	9/2021
Photo Monitoring Year 1	10/2019	10/2019
Photo Monitoring Year 2	10/2020	10/2020
Photo Monitoring and Final Report	10/2021	10/2021

Element	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Project funding																			
Project Design																			
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Photo Monitoring Year 1																			
Photo Monitoring Year 2																			
Photo Monitoring and Final Report																			

Optional Monitoring

OPTIONAL: Restoration Project Monitoring

- Salmonid Monitoring*
- Non-salmonid biological monitoring*
- Water (quantity) flow monitoring*
- Water quality monitoring*
- Rangeland monitoring*
- Onsite*
- Downstream*
- Upstream*
- Upslope*
- Effectiveness monitoring will be conducted for this project*

Budget

Item	Unit Type	Unit Number	Unit Cost	OWEB Funds	External Cash	External In-Kind	Total Costs
Salaries, Wages and Benefits							
Project Manager (Aaron Bliesner)	Hours	180	\$27.26	\$2,726	\$0	\$2,181	\$4,907
Grant Administration (Jim Webster)	Hours	80	\$43.54	\$0	\$0	\$3,484	\$3,484
NRCS Design and landowner contacts (Kevin Shaw and Mike Burton)	Match Lump Sum	1	\$8,000.00	\$0	\$0	\$8,000	\$8,000
Rob Langford	Match Lump Sum	1	\$12,000.00	\$0	\$0	\$12,000	\$12,000
Category Sub-total				\$2,726	\$0	\$25,665	\$28,391
Contracted Services							
6" 125PSI PVC Installed	Feet	2020	\$5.00	\$10,100	\$0	\$0	\$10,100
4" 125PSI PVC Installed	Feet	350	\$5.15	\$1,803	\$0	\$0	\$1,803
Pump 1 180 GPM 120TDH Installed	Each	1	\$3,785.00	\$3,785	\$0	\$0	\$3,785
Pump 2 185 GPM 120TDH Installed	Each	1	\$3,785.00	\$3,785	\$0	\$0	\$3,785
Clear Water Screen and Spreader Bar	Each	1	\$950.00	\$950	\$0	\$0	\$950
Diversion Structure Installed	Each	1	\$2,165.00	\$2,165	\$0	\$0	\$2,165
2" PVR at 100PSI Installed	Each	3	\$120.00	\$360	\$0	\$0	\$360
2" CAV Nelson ACV200P Installed	Each	3	\$113.00	\$339	\$0	\$0	\$339
Drain Installed	Each	1	\$45.00	\$45	\$0	\$0	\$45
Flow Meter Installed	Each	1	\$1,350.00	\$1,350	\$0	\$0	\$1,350
Steel Fittings (Suction and Discharge) Installed	Each	7	\$333.57	\$2,335	\$0	\$0	\$2,335
5' Wheel Line and Mover Installed	Feet	1480	\$13.08	\$0	\$19,365	\$0	\$19,365
4' Wheel Line and Mover Installed	Feet	1160	\$12.93	\$0	\$14,997	\$0	\$14,997
K-Line Irrigation System	Each	2	\$1,350.00	\$0	\$2,700	\$0	\$2,700
Category Sub-total				\$27,017	\$37,062	\$0	\$64,079
Travel							
Travel to site and back to the office for 10 trips	Miles	280	\$0.55	\$153	\$0	\$0	\$153
Category Sub-total				\$153	\$0	\$0	\$153
Materials and Supplies							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Equipment and Software							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Other							
BPA indirect in kind	Each	1	\$3,124.00	\$0	\$3,124	\$0	\$3,124
Land Use Information Form	Each	1	\$30.00	\$30	\$0	\$0	\$30
Category Sub-total				\$30	\$3,124	\$0	\$3,154
Modified Total Direct Cost Amounts				\$29,926	\$40,186	\$25,665	\$95,777
Indirect Costs							
Federally Negotiated Indirect Cost Rate					Override Amount		\$2,607

Post Grant							
Status Reporting Amount	Status Reporting	3	\$250.00	\$750	\$0	\$0	\$750
Effectiveness Monitoring Amount	Effectiveness Monitoring	1	\$250.00	\$250	\$0	\$0	\$250
Total				\$33,533	\$40,186	\$25,665	\$99,384

If the budget includes unusually high costs and/or rates, provide justification for those costs and/or rates.

The total cost shown in this proposal budget is slightly higher than was estimated in the project prospectus, as the system design was modified to fit the site conditions and land management needs. Line item costs for portable materials had to be shifted from the OWEB funding request to BPA funding request.

If the budget identifies a contingency amount for specific line item(s) within the Contracted Services and Materials and Supplies budget categories, explain the specific reasons a contingency is needed for each line item. Contingencies are line-item specific and cannot be used for other costs.

N/A

Funding and Match

Fund Sources and Amounts

Organization Type	Name	Source Note	Contribution Type	Amount	Description	Status
Landowner	Rob Langford	Site Preparation, Waterway creation, and maintenance	In-Kind - Labor	\$12,000	Site Preparation	Pending
Non-Governmental Organization	Union Soil and Water Conservation District	Project oversite	In-Kind - Labor	\$5,665	Project oversite and grant administration	Secured
Federal	Natural Resource Conservation Service	Project design and landowner relations	In-Kind - Labor	\$8,000	Project design and landowner relations	Secured
Federal	Bonneville Power Administration	Cash Contribution	Cash	\$40,186	Wheel Line and K line	Pending
Fund Source Cash Total			\$40,186	Fund Source In-Kind Total		\$25,665

Match

Contribution Source-Type: Description	Amount
Rob Langford-In-Kind - Labor: Site Preparation	\$12,000
Union Soil and Water Conservation District-In-Kind - Labor: Project oversite and grant administration	\$5,665
Natural Resource Conservation Service-In-Kind - Labor: Project design and landowner relations	\$8,000
Bonneville Power Administration -Cash: Wheel Line and K line	\$0
Match Total	\$25,665

Do match funding sources have any restrictions on how funds are used, timelines or other limitations that would impact the portion of the project proposed for OWEB funding?

- Yes
 No

Do you need state OWEB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project?

- Yes
 No

Does the non-OWEB funding include NOAA/PCSRF funds?

- Yes
 No

Uploads

Federally Negotiated Indirect Cost Rate Plan: [StateFederal Indirect agreement-FY15-Union SWCD.pdf -](#)

Map: [Red Mill Stage One Irrigation Efficiency Portrait Letter.pdf -](#)

Secured Match Forms: [Red Mill Match Form.pdf -](#)

Project Design: [Hefner Irrigation Project \(plan set\).pdf -](#)

Figures and Tables: [UGR Partnership - Red Mill Reach Restoration.pdf - Excel Budget](#)

Reports: [Red Mill Reach Comments_USWCD response_043018.pdf - IT Comments Response](#)

Permit Page

No Permits have been identified for this application.

**State and Local Governments
Indirect Cost Negotiation Agreement**

EIN: 93-6007803

Organization:

Union Soil and Water
Conservation District
10507 N. McAlister Road
La Grande, OR 97850

Date: June 30, 2014

Report No(s): 14-A-0869(13F)
14-A-0870(14P)
14-A-0871(15P)

Filing Ref.:
Initial Negotiation Agreement

The indirect cost rates contained herein are for use on grants, contracts, and other agreements with the Federal Government to which 2 CFR 225 (OMB Circular A-87) applies, subject to the limitations in Section II.A. of this agreement. The rates were negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in 2 CFR 225.

Section I: Rates

Type	Effective Period		Rate*	Locations	Applicable To
	From	To			
Final	07/01/12	06/30/13	5.86%	All	All Programs
Provisional	07/01/13	06/30/14	8.43%	All	All Programs
Provisional	07/01/15	06/30/15	8.43%	All	All Programs

*Base: Total direct costs, less capital expenditures and passthrough funds.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Section II: General

Page 1 of 3

A. Limitations: Use of the rates contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rates agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).

B. Audit: All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.

C. Changes: The rates contained in this agreement are based on the organizational structure and the accounting system in effect at the time the proposal was submitted. Changes in organizational structure, or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rates in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.

D. Rate Type:

1. **Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such periods have been determined, an adjustment will be made to the rate for future periods, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.

2. **Provisional/Final Rates:** Within 6 months after year end, a final indirect cost rate proposal must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.

3. **Predetermined Rate:** The predetermined rate contained in this agreement is based on estimated costs which will be incurred during the period for which the rate applies and is normally not subject to subsequent carry-forward adjustments. However, if material changes occur in the grantee/contractor's cost structure, adjustments to the rate may be necessary to compensate for the effects of such changes.

E. Agency Notification: Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.

F. Record Keeping: Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.

G. Reimbursement Ceilings: Grantee/contractor program agreements providing for ceilings on indirect cost rate(s) or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.

H. Use of Other Rate(s): If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the affected programs, and the approved rate should be used to identify the maximum amount of indirect cost allocable to these programs.

I. **Central Service Costs:** Where central service costs are estimated for the calculation of indirect cost rate(s), adjustments will be made to reflect the difference between provisional and final amounts.

J. **Other:**

1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.

2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.

3. New indirect cost proposals are necessary to obtain approved indirect cost rate(s) for future fiscal or calendar years. The proposals are due in our office 6 months prior to the beginning of the year to which the proposed rate(s) will apply.

Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the State & Local Government:

By the Cognizant Federal Government Agency:

Union Soil and Water
Conservation District
State/Local Government

U.S. Department of the Interior
Agency

 /s/

 /s/

Kathryn Freneya
Name (Type or Print)

Deborah A. Moberly
Name

District Manager
Title

Office Chief
Office of Indirect Cost Services
Title

6/24/14
Date

U.S. Department of the Interior
Interior Business Center
Agency

JUN 30 2014

Date
Negotiated by Jacqueline B. Ross
Telephone (916) 566-7003

Red Mill Reach Stage One Irrigation Efficiency

Hefner, Dianne D

Hefner, Dianne D

Hefner, Dianne D

Hefner, Dianne D



Map created and copyrighted by Christopher Moats
Union Soil and Water Conservation District 27FEB2018

The Union Soil and Water Conservation District makes no representation or warranties, implied or expressed, concerning the accuracy, completeness, reliability, or suitability for any purpose of the information and data contained on this document.

N

140

Yards

Legend

 Parcels

ATTACHMENT A



MATCH FUNDING FORM

*Document here the match funding
shown on the budget page of your grant application*

OWEB accepts all non-OWEB funds as match. An applicant may not use *another OWEB grant* to match an OWEB grant; this includes ODA Weed Board projects because they are funded through OWEB grants. However, an applicant who benefits from a pass-through OWEB agreement with another state agency, by receiving either staff expertise or a grant from that state agency, may use those benefits as match for an OWEB grant. (Example: A grantee may use as match the effort provided by ODFW restoration biologists because OWEB funding for those positions is the result of a pass-through agreement). At the time of application, match funding for OWEB funds requested does not have to be *secured*, but you must show that at least 25% of match funding has been sought. On this form, you do not necessarily need to show authorized signatures (“secured match”), but the more match that is secured, the stronger the application. Identify the type of match (cash or in-kind), the status of the match (secured or pending), and either a dollar amount or a dollar value (based on local market rates) of the in-kind contribution. In the table below, the match may be identified as Effectiveness Monitoring (EM), Plant Establishment (PE) or Other (OTHER) Dollar Value. **If you are not requesting funds from OWEB to support effectiveness monitoring or plant establishment, disregard the EM column or the PE column and use only the OTHER column.**

EFFECTIVENESS MONITORING (EM): If you are requesting more than \$3,500 in OWEB funds to support Effectiveness Monitoring activities as part of a Watershed Restoration Grant Application and filling out information for Question R17, you must include matching funds which will be used as match for the effectiveness monitoring portion of the project. This is identified in the table below as the EM Dollar Value.

PLANT ESTABLISHMENT (PE): If you are requesting more than \$3,500 in OWEB funds to support Plant Establishment as part of a Watershed Restoration Grant Application and filling out information for Question R18, you must include matching funds which will be used as match for the Plant Establishment portion of the application. This is identified in the table below as the PE Dollar Value.

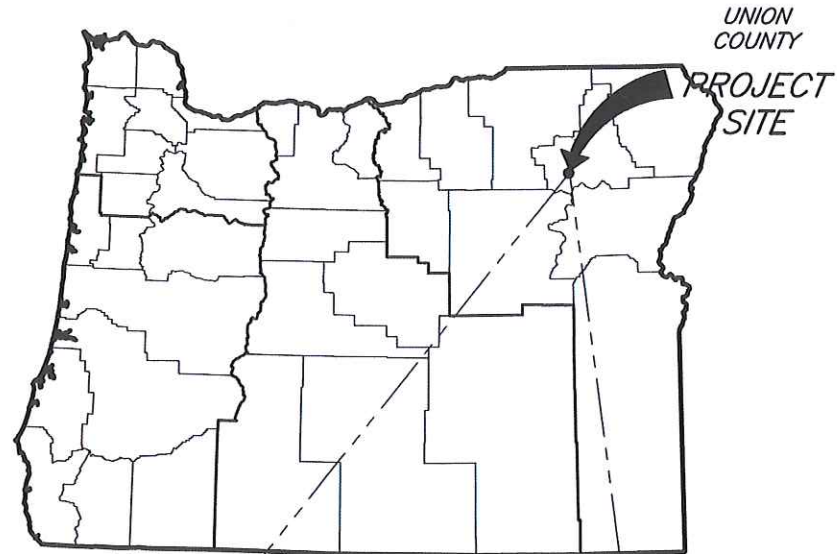
If you have questions about whether your proposed match is eligible or not, see Allowable Match document in OGMS <http://apps.wrd.state.or.us/apps/oweb/fiscal/nologin.aspx> under Restoration application or contact your local OWEB regional program representative (contact information available in the instructions to this application).

Project Name: Red Mill Reach Restoration

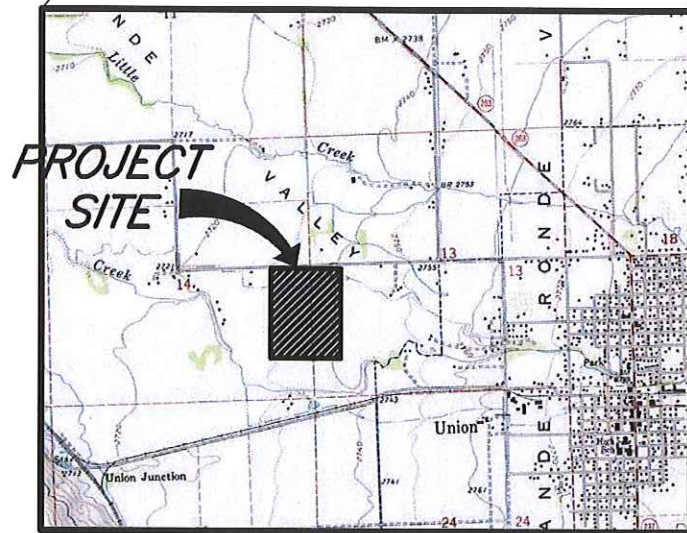
Applicant: Union SWCD

Match Funding Source	Type (√ one)	Status (√ one)**	EM Dollar Value	PE Dollar Value	OTHER Dollar Value	Match Funding Source Signature/Date**
USWCD	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending			\$5,665.00	<i>James S. Roberts</i> 2/21/18
NRCS	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending			\$8,000.00	<i>Mike Burk</i> 2/27/18
BPA	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input checked="" type="checkbox"/> pending			\$40,186.00	
<i>Rob Langford</i>	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in kind	<input type="checkbox"/> secured <input checked="" type="checkbox"/> pending			\$12,000.00	<i>R. Langford</i>
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending				
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending				
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending				

** **IMPORTANT:** If you checked the “Secured” box in the Status Column for any match funding source, you must provide either the signature of an authorized representative of the match source in the final Column, or attach a letter of support from the match funding source that specifically mentions the dollar amount you show in the EM, PE or OTHER Dollar Value Column(s).

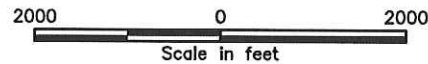


OREGON



LOCATION MAP

T4S, R39E, SEC 13,14
Union COUNTY, OREGON



UNION COUNTY
PROJECT SITE

HEFNER IRRIGATION SYSTEM

UNION COUNTY, OREGON

PREPARED BY:

UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL
RESOURCES CONSERVATION SERVICE

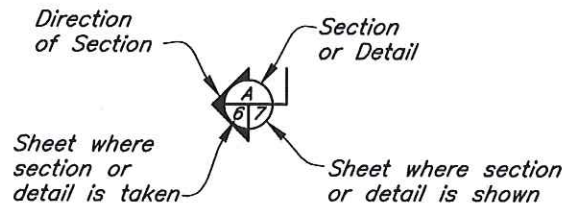
INDEX OF DRAWINGS

SHEET NO.	TITLE
1.	Cover Sheet
2.	Plan View
3.	PUMP Details
4.	TRENCH Details
5.	DIVERSION/WHEELLINE Details

ESTIMATED QUANTITIES

Excavation	30 CY
4" 125PSI PVC	350 FT
6" 125PSI PVC	1920 FT
WHEELLINE	2640 FT
HANDLINE	300 FT
DIVERSION	1 EA

Quantities are estimates only, based on topographic survey data and design drawings. The Contractor shall check quantities before entering into a contract with the landowner or NRCS.



CROSS-SECTION SHEET REFERENCE



GENERAL NOTES

1. Contour interval on all drawings is 1 foot.
2. Elevations and coordinate locations are based on State Plane OR North, NAD83.
3. All stationing refers to centerline of construction and is the measured horizontal distance.
4. Slopes designated as 2:1, 1.5:1, et cetera, are the ratios of horizontal distance to vertical distance.
5. All existing conditions are to be verified in the field prior to construction and any adjustments to the drawings shall be made as directed by the Project Engineer.
6. Dimensions are given in feet and tenths of a foot.
7. Topography and cross section ground lines are based on survey work performed in 10/2016.
8. Existing private improvements, which lie within the construction limits, unless otherwise noted will be removed by the owner prior to construction, or abandoned in place.
9. Protect all trees and land areas not located within the project construction or earthwork limit. Exercise care in areas not so marked to avoid unnecessary damage to natural vegetation.
10. Construction shall meet the requirements of OSHA. Actual slopes shall not exceed the slopes as indicated on drawings.
11. NRCS makes no representations as to the existence or non-existence of utilities. It is the responsibility of land owners or operators to comply with the provisions of ORS 757.541 to 757.571. Land owners or operators and contractors will be liable for any damage resulting from disruption of service caused by construction activities.
12. Contractor is required to attend a pre-construction meeting with NRCS and the landowner.

I UNDERSTAND THAT THIS IS MY PROJECT. I HAVE RECEIVED A COPY OF ALL DRAWINGS AND SPECIFICATIONS TO BE USED ON THIS PROJECT. I AGREE TO IMPLEMENT THE PROJECT IN ACCORDANCE WITH THE DRAWING SET AND SPECIFICATIONS PROVIDED. ANY ALTERATIONS TO THE DESIGN WILL BE APPROVED BY NRCS PRIOR TO INSTALLATION.

LANDOWNER SIGNATURE/DATE

ATTENTION: Construction must be in conformance with these NRCS-approved drawings and specifications. No changes or modifications shall be made to these designs without full prior approval of the designer. Any material deviation from these drawings and specifications may constitute a breach of contract resulting in a discharge of NRCS from its obligation to provide cost-share under terms of the NRCS contract.

Date 10/17
 Designed KLS
 Drawn KLS
 Checked
 Approved
 Title

HEFNER IRRIGATION SYSTEM
 HEFNER
 UNION, OR

United States
 Department of
 Agriculture
 Natural Resources
 Conservation Service

File Name hefprp1.rvtg
 Drawing No.
 11/1/2017 9:59 AM
 Sheet 1 of 5



IWM Parameters
 Soil - Catherine Silt Loam
 Crop - Alfalfa
 Rooting Zone - 5 feet
 Available Water Content-11.28"
 Set times - 23.5 Hours
 Nozzle Flow Rate- 6.38gpm
 Design Pressure@Sprinkler- 40psi
 Designed according to Nelson R33 or
 equivalent sprinkler

Date _____
 Designed _____
 Drawn _____
 Checked _____
 Approved _____
 Title _____

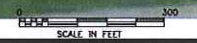
PLAN VIEW
HEFNER
 UNION, OREGON

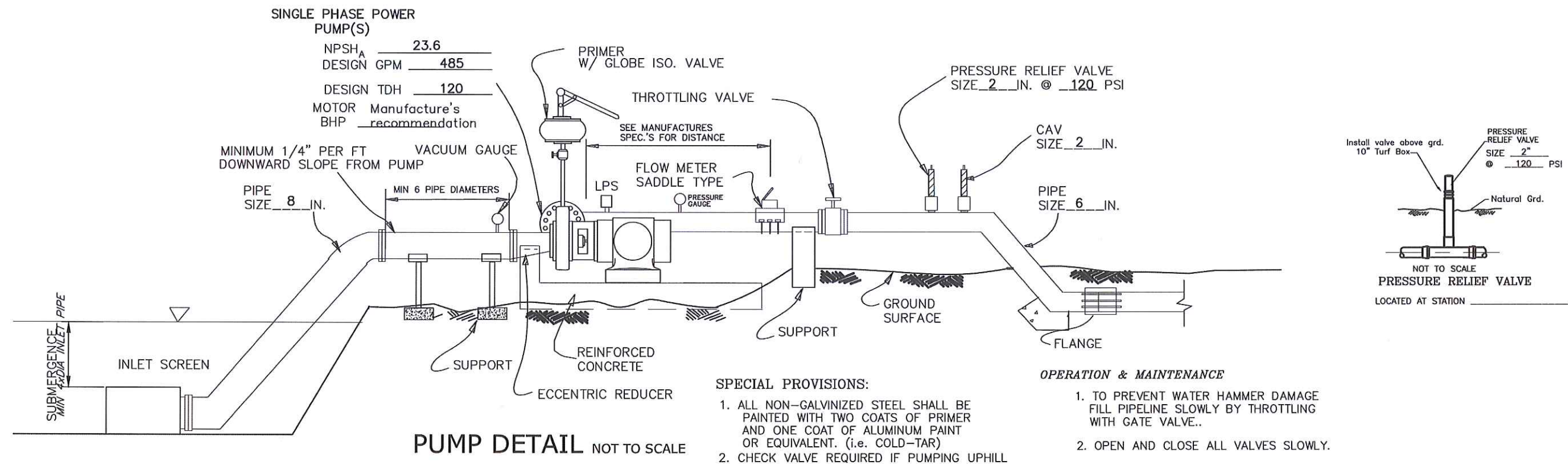
United States
 Department of
 Agriculture
USDA
 Natural Resources
 Conservation Service

File Name
 HEFN
 Drawing No.

Sheet 2 of 5

SCALE - 1" = 300 FT

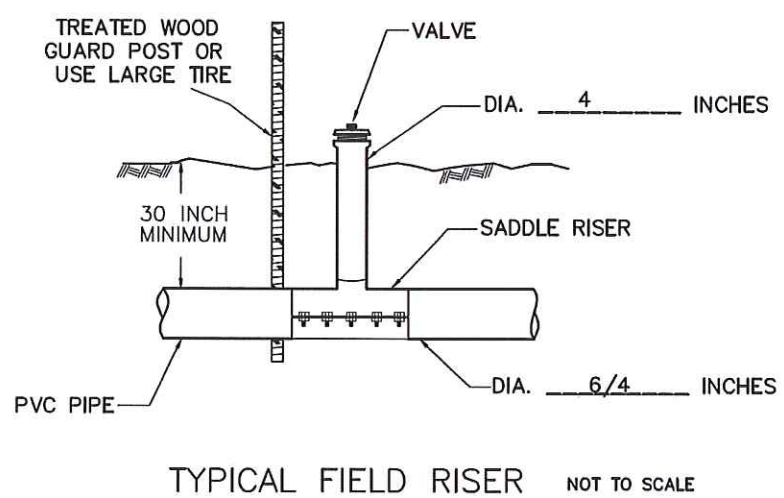
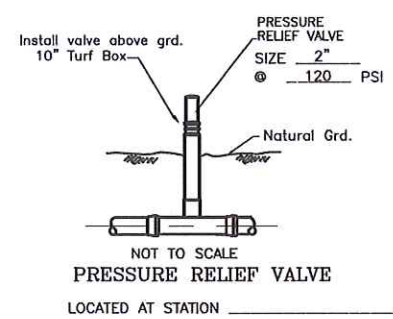




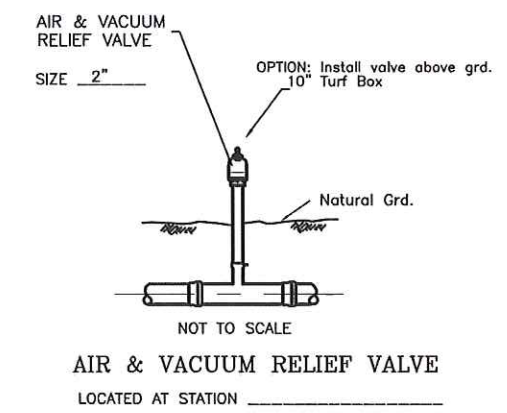
PUMP DETAIL NOT TO SCALE

- SPECIAL PROVISIONS:**
1. ALL NON-GALVINIZED STEEL SHALL BE PAINTED WITH TWO COATS OF PRIMER AND ONE COAT OF ALUMINUM PAINT OR EQUIVALENT. (i.e. COLD-TAR)
 2. CHECK VALVE REQUIRED IF PUMPING UPHILL

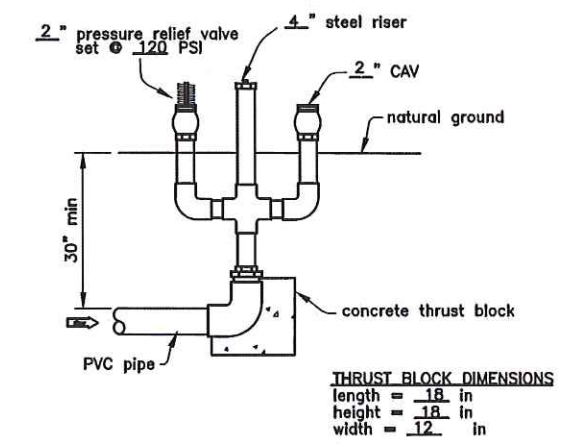
- OPERATION & MAINTENANCE**
1. TO PREVENT WATER HAMMER DAMAGE FILL PIPELINE SLOWLY BY THROTTLING WITH GATE VALVE..
 2. OPEN AND CLOSE ALL VALVES SLOWLY.



TYPICAL FIELD RISER NOT TO SCALE



AIR & VACUUM RELIEF VALVE LOCATED AT STATION



END DETAIL NOT TO SCALE

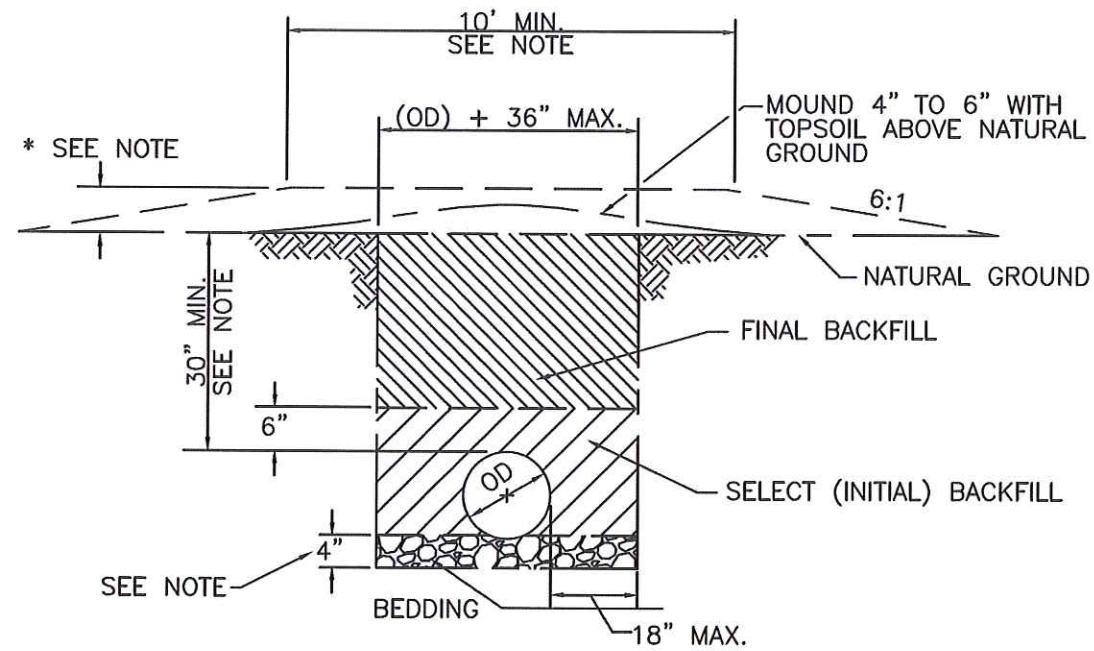
Date	
Designed	
Drawn	
Checked	
Approved	
Title	

PUMPING PLANT DETAILS
HEFNER
 UNION, OREGON

United States Department of Agriculture

 Natural Resources Conservation Service

File Name	HEFN
Drawing No.	
Sheet	3 of 5



DETAIL TD - TYPICAL MAINLINE & TRENCH CROSS SECTION

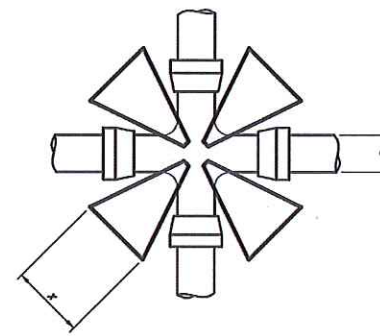
DESIGN Q = 380 (GPM)
 MAX PRESSURE = 50 (PSI)
 VELOCITY = 4.2 (FPS)
 D = 6/4 (INCHES)

CONSTRUCTION NOTES:

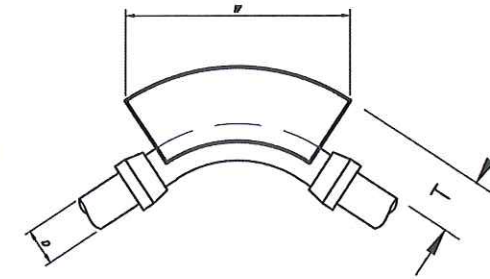
- * PLACE FILL OVER PIPE AS SHOWN TO PROVIDE MINIMUM COVER IN PLACES WHERE NATURAL GROUND IS LOW. FILL MATERIAL MUST BE PLACED AND COMPACTED BEFORE TRENCH IS EXCAVATED. TOP WIDTH OF FILL SHALL BE NO LESS THAN 10 FEET AND SIDE SLOPES NO STEEPER THAN 6 HORIZONTAL AND 1 VERTICAL.
- FINAL BACKFILL SHALL BE FREE FROM MATERIAL LARGER THAN 3 INCHES IN DIAMETER. (SEE 430 PRACTICE SPECIFICATIONS)
- SELECT (INITIAL) BACKFILL SHALL CONSIST OF NATIVE SOIL, SAND OR GRAVEL THAT IS FREE FROM ROCKS OR STONES LARGER THAN 1 INCH IN DIAMETER, CONTAINING A MAXIMUM OF 12 PERCENT NON-COHESIVE FINES. SANDS SHALL HAVE A MAXIMUM OF 45 PERCENT PASSING THE #40 SIEVE. (SEE 430 PRACTICE SPECIFICATIONS)
- BEDDING SHALL BE USED ON FOUNDATIONS CONTAINING MATERIAL LARGER THAN 1/2 INCH. BEDDING MAY BE EITHER GRANULAR MATERIAL CONFORMING TO ASTM C-33 GRADATION 7 OR 8, OR SELECT BACKFILL MATERIAL.
- MINIMUM DEPTH OF COVER SHALL BE 30 INCHES.
- IF THERE ARE ROCKS, BOULDERS, OR ANY OTHER MATERIAL THAT MIGHT DAMAGE THE PIPE, THE TRENCH BOTTOM SHALL BE UNDERCUT A MINIMUM OF 4 INCHES BELOW FINAL GRADE AND FILLED WITH BEDDING MATERIAL CONSISTING OF SAND OR COMPACTED FINE GRAINED SOILS.
- WHERE TRENCH DEPTH EXCEEDS 4 FT, LOCAL, STATE AND FEDERAL SAFETY REQUIREMENTS FOR TRENCH EXCAVATION SHALL BE STRICTLY FOLLOWED.

DESIGN Q = 1200 (GPM)

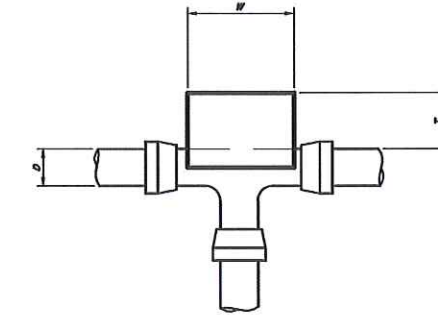
DETAIL TBD - THRUST BLOCK DETAIL



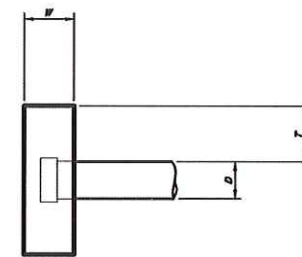
TYPE D
(SEE SECTION A)



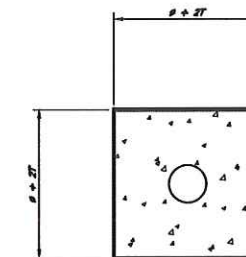
TYPE A
(SEE SECTION A)



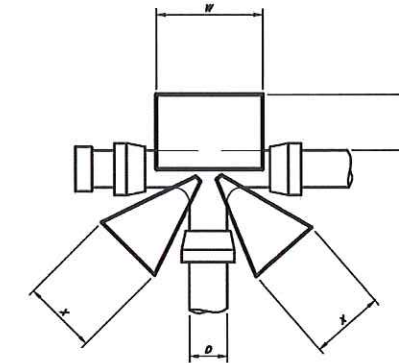
TYPE E
(SEE SECTION A)



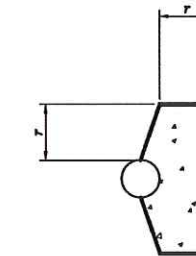
TYPE H
(SEE SECTION B)



SECTION B



TYPE F
(SEE SECTION A)



SECTION A

DIMENSIONS

TYPE A-45
 D = 6 (in)
 L & W = 1.5 (ft)

T = 12 (in)
 V = 0.1 (yd³)

DIMENSIONS

TYPE H
 D = 6 (in)
 L & W = 1.5 (ft)

T = 12 (in)
 V = 0.07 (yd³)

DIMENSIONS

TYPE H
 D = 4 (in)
 L & W = 1.5 (ft)

T = 12 (in)
 V = 0.07 (yd³)

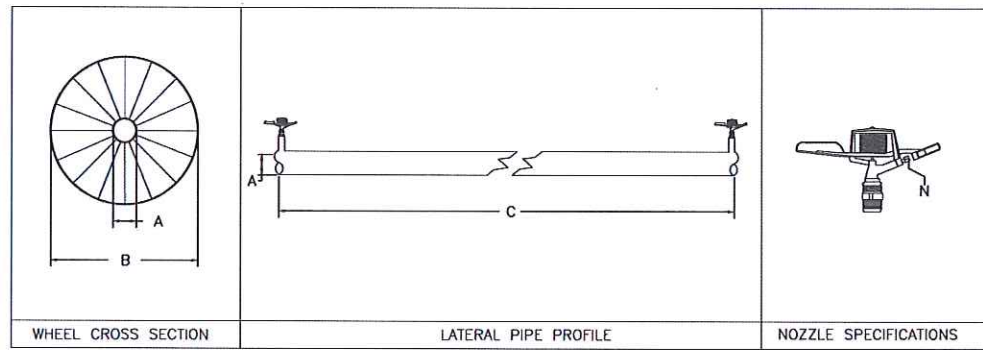
Date	
Designed	
Drawn	
Checked	
Approved	
Title	

TRENCH DETAILS
 HEFNER
 UNION, OREGON

United States
 Department of
 Agriculture
 Natural Resources
 Conservation Service

File Name
 HEFN

Drawing No.



A = 4"/5" IN
 B = 76 IN
 C = 40 FT

N = GREEN IN
 - THE NOZZLE SELECTED IN THIS DESIGN IS AN NELSON R33
 (THIS IS NOT A REQUIRED SPRINKLER NOZZLE FOR THIS DESIGN.)
 - THE FOLLOWING ITEMS ARE DESIGN SPECIFICATIONS FOR ANY NOZZLE THAT
 MAY BE USED:

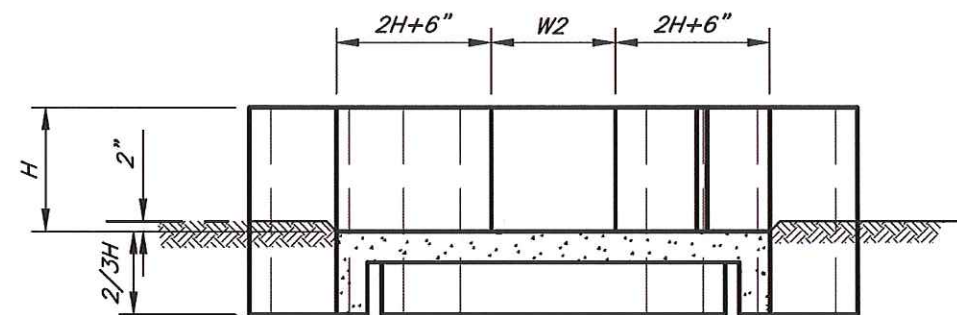
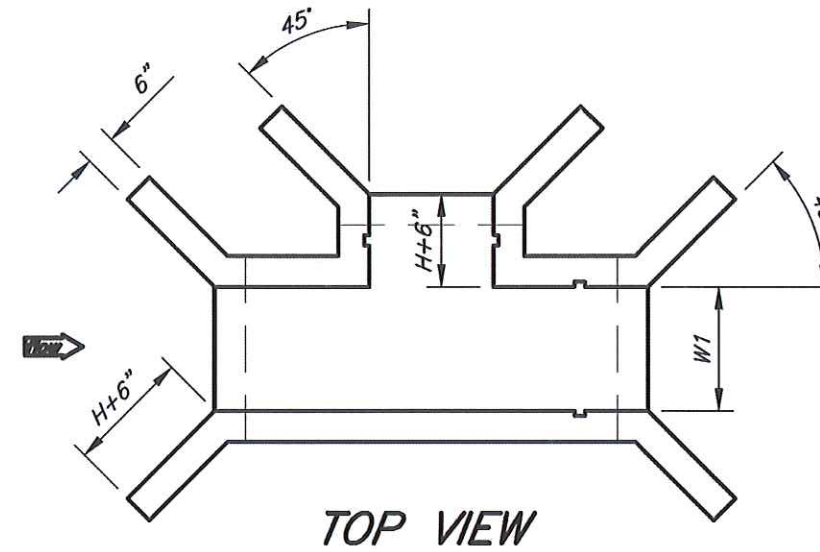
DESIGN PRESSURE = 45 PSI
 FLOW = 6.38 GPM/NOZZLE
 RADIUS = 50 FT
 WETTED DIA. = 100 FT

CONSTRUCTION NOTES:

- IF NOT INDICATED, THE WHEEL DIAMETER (B) MAY BE DETERMINED BY THE LANDOWNER.

- IF CHECKED FLOW CONTROL NOZZLES ARE REQUIRED

WHEEL LINE DETAIL
 NOT TO SCALE



SECTION

DIMENSIONS

Capacity 500 gpm
 Soil Classification SILT LOAM
 W1 = (24" max) 2 ft
 W2 = (24" max) 2 ft
 H = (18" max) 1.5 ft
 REBAR #4
 SPACING 12 c.c. in

All walls and slabs shall have a minimum thickness of 6 inches.

This drawing requires supporting technical documentation prior to use and must be adapted to the specific site.

Drawing not to scale.

Date	
Designed	
Drawn	
Checked	
Approved	
Title	

DIVERSION/WHEELLINE DETAILS

HEFNER

UNION, OREGON

United States Department of Agriculture
 Natural Resources Conservation Service

File Name	HEFN
Drawing No.	
Sheet	5 of 5

BUDGET

Totals automatically round to the nearest dollar

A	B	C	D	E	F	G	H
<i>Itemize projected costs under each of the following categories:</i>	Unit Number	Unit Cost	OWEB Funds	BPA Funds	Cash Match	In-Kind Match	Total Costs
	(e.g., # of hours)	(e.g., hourly rate)					(add columns D, E, F)
SALARIES, WAGES AND BENEFITS. List position titles, include only costs of employees charged to this grant.							
Rob Langford (Landowner) Site Prep.	1	\$12,000				12,000	12,000
Grant Administration (Jim Webster)	80	\$44				3,484	3,484
Project Management (Aaron Bliesner)	180	\$27	2,726			2,181	4,907
NRCS Design and landowner communication	1	\$8,000				8,000	8,000
SUBTOTAL (1)			2,726	0	0	25,665	28,391
CONTRACTED SERVICES. Labor, supplies, and materials to be provided by <i>non-staff</i> for project implementation.							
6" 125psi pvc installed	2020	\$5.00	10,100				10,100
4" 125psi pvc installed	350	\$5.15	1,803				1,803
Pump 1 180gpm 120tdh installed	1	\$3,785.00	3,785				3,785
Pump 2 185gpm 120tdh installed	1	\$3,785.00	3,785				3,785
Clear water screen and spreader bar installed	1	\$950.00	950				950
Diversion Structure installed	1	\$2,165.00	2,165				2,165
2" PVR at 100psi installed	3	\$120.00	360				360
2" CAV Nelson ACV200P installed	3	\$113.00	339				339
Drain installed	1	\$45.00	45				45
Flow meter installed	1	\$1,350.00	1,350				1,350
Steel fittings (suction and discharge) installed	7	\$333.57	2,335				2,335
5' wheel line and mover installed	1480	\$13.08		19,365			19,365
4' wheel line and mover installed	1160	\$12.93		14,997			14,997
K-Line irrigation system	2	\$1,350.00		2,700			2,700
							0
SUBTOTAL (2)			0	0	0	0	0
TRAVEL. Mileage, per diem, lodging, etc. Must use current State of Oregon rates.							
Ten tips to the site	280	0.545	153				153
SUBTOTAL (3)			153	0	0	0	153

A	B	C	D	E	F	G	H
Itemize projected costs under each of the following categories:	Unit Number	Unit Cost	OWEB Funds	BPA Funds	Cash Match	In-Kind Match	Total Costs
	(e.g., # of hours)	(e.g., hourly rate)					(add columns D, E, F)
MATERIALS/SUPPLIES. Refers to items that are "used up" in the course of the project. Costs to OWEB must be directly related to the implementation of this grant.							
SUBTOTAL (4)			27,017	37,062	0	0	64,079
EQUIPMENT/SOFTWARE. List portable equipment costing \$300 or more per unit. Must remain property of a governmental entity, tribe, watershed council, SWCD, institution of higher learning or school district.							
SUBTOTAL (5)			0	0	0	0	0
OTHER. Costs must be necessary and reasonable for successful completion of this grant.							
Land Use Information Form	1		30				30
SUBTOTAL (6)			30	0	0	0	30
[Add subtotals above] MODIFIED TOTAL DIRECT COSTS (7)			29,926	37,062	0	25,665	92,653

GRANT ADMIN. Select one of the methods below. Fill in the requested rate. Compute by multiplying MTDC (7) line by this rate.							
Federally Negotiated Indirect Cost Rate	X	8.43%	2607	3124			5731
Federally Accepted 10% <i>de minimis</i>	<input type="checkbox"/>						0
OWEB Negotiated Indirect Cost Rate	<input type="checkbox"/>						0
SUBTOTAL (8)			2607	3124	0	0	5731
POST-GRANT. Pre-paid costs (\$3,500 or less) that are associated with either post implementation status reporting or effectiveness monitoring or plant							
Post-Implementation Status Reporting (\$3,500 or less)	3/yr	250	750				750
Effectiveness Monitoring (\$3,500 or less)	3/yr	250	250				250
Plant Establishment (\$3,500 or less)	/yr						0
SUBTOTAL (9)			1,000	0	0	0	1,000

GRANT BUDGET TOTAL *Totals automatically round to the nearest dollar

GRANT BUDGET TOTAL							
[Add Totals (10), (11), and (12) as applicable]			33,533	40,186	0	25,665	99,384

General Review Comments for The Red Mill Reach Restoration Stage 1

1. Project is sound if NRCS can estimate how much water might be saved and would remain instream for benefit of fish.

The maximum allotted flow rate for the 65.1ac that is to be converted from flood to sprinkler irrigation is 1.62cfs. The maximum water savings that could be expected at a 40% reduction in use would be 0.651cfs.

2. Provide information on current water right and savings expected to be transferred instream.

See discussion provided for #1. As was described in the proposal, a totalizing flow meter will be installed in the upgraded irrigation system and the landowner has agreed to monitor flow rates over time and through seasons to quantify actual water savings. The water savings is initially estimated at 40% based on the results of other similar projects. Flow calculations will be completed that best fit the landowner's management practices to determine water use and additional water will be dedicated to instream flow.

3. 10 acres of historic floodplain in a high priority reach set aside for restoration and a .26 cfs water right in exchange for an irrigation efficiency upgrade is a great deal for all. Other IT members would like to see a guarantee of a percentage of the water saved being dedicated instream also.

For clarity, the approximate 9 acres identified for restoration activity is associated with a maximum water right flow rate of 0.225cfs and the District agrees this is a great benefit for aquatic conditions. The landowner has verbally agreed to cease farming activity and allow restoration project development on the currently productive 9ac of property and transfer the associated water right to instream. In addition, the landowner has agreed to transfer water savings gained from the upgraded irrigation system on the 65.1 acres that will remain in agricultural production to an instream right. The District is developing a conservation agreement detailing this verbal agreement that will be signed by the landowner prior to the construction of the upgraded irrigation system. Several irrigation seasons of operation will be required to evaluate and fully understand the water savings that will be realized on the 65.1 acres from the conversion from flood to sprinkler irrigation.

4. Landowner should agree to sign an agreement up front agreeing to enroll the 9 acres into CREP, allow habitat rehab work to be done and dedicate water right for instream.

See discussion provided for #3. The project objectives have been modified to include a specific objective addressing the proposed transfer of water rights to instream use. Prior to the construction of irrigation system upgrades, the landowner has agreed to sign a legally binding agreement with the District allowing restoration efforts to be implemented, establish conservation protection of the approximate 9 acres, transfer the associated water right for the 9 acres to an instream water right, establish a conservation easement along the remaining riparian corridor of Catherine Creek, and transfer the water savings realized on the 65.1 acres to an instream right after adequate flow monitoring has been completed to calculate water savings from the conversion of flood to sprinkler irrigation.

5. Make sure formal commitments are complete to ensure conservation is achieved.

See discussion above in #4.

6. Quantify the water savings from irrigation upgrade. Even if the number is an estimate, having a shared understanding of the amount of water that will be saved for fish would be very helpful – would give more certainty of benefits to fish.

See discussion above in #1, #2, and #3.

7. Quantify stage 2 water transaction in terms of expected water to be dedicated instream from fish funded irrigation system upgrade. Needs to be incorporated into legally binding agreement.

See discussion above in #1, #2, #3, and #4.

8. Consider presentation of a BPA funded permanent conservation easement purchase of 10-acre area, including 0.26cfs of water.

The option of a permanent easement for the 9 acre conservation area was discussed during the Atlas IT proposal review and site visit to the Red Mill Reach. During Stage 1 of this three-stage restoration effort negotiations on the type of easement and conservation agreement options will be conducted. The landowner has asked the District to investigate and gather information for permanent easement options so a decision can be made that makes sense for agricultural operations. As stated above, the landowner will be required to sign a conservation agreement with the District that he will protect the 9-acre parcel and remaining riparian corridor. In addition, the landowner has agreed to pursue a CREP agreement after Stage 2 channel and floodplain construction (likely a 15-year term), which is scheduled for completion in 2021. Additional details of a permanent conservation easement, required funding and long-term management can continue to be developed during the period that a more temporary easement is in place.

9. Indicate on Page 2 that this is a project coordinated across multiple ownerships. But indicate that the only cooperative agreement will be with the landowner allowing conversion from flood irrigation to a new high efficiency system. What is meant by coordinated across multiple ownerships?

The fish habitat restoration goals and objectives for the overall project will be applied along a reach of Catherine Creek that includes 5 different property ownerships. This proposal specifically addresses Stage 1 of the project which includes irrigation system upgrades, conservation agreement establishment, and instream flow improvements and will take place on the only property identified in the proposal. The most downstream landowner signed a conservation agreement with the District in 2017 for the restoration activities and agreements with the other 3 landowners will be negotiated and formalized over the next 3 years.

10. Indicate 40-60% reduction in water consumption. What is current consumption, or more importantly, what is water right and date of water right. Include this important information in application.

See discussion above in #1, #2, and #3. The certified water right for the 65.1 acres has a priority date of 1876 and is for a maximum volume of 195.3 acre-feet and a maximum diversion rate of 1.62 cfs. The certified water right for the 9 acres is for a maximum volume of 27 acre-feet and a maximum diversion rate of 0.225 cfs.

11. Mention converting water right instream in the abstract – major benefit of the project. See discussion provided in #3 and #15 for additional clarification.

12. Page 6. Objective is to gain landowner support/cooperation for restoration and conservation actions by 2021. But on Page 2 indicate stage two construction anticipated in 2019. Clarify project timeline.

The timeline has been corrected to be consistent with restoration actions occurring in 2021.

13. On page 12, say this project will lower stream temperatures – is this an accurate statement with only 0.24 cfs staying instream?

Two separate components of this first project stage are expected to improve stream temperature conditions. The first component is the elimination of warmer tailwater returns to the main channel. Water diverted from Catherine Creek that flows slowly through open ditches and is spread across fields before returning to the stream channel has been documented at a higher temperature than the water left in the stream channel. The second component will seek to transfer water rights to instream flow in Catherine Creek. Although stream temperature modeling completed by CRITFC researchers using the

Upper Grande Ronde River Basin Stream Temperature Model have indicated this amount of increase in flow would have a minimal effect on stream temperature, the net change would be a decrease. Additionally, the stream temperature decreases are expected to be realized through the project reach from physical channel and floodplain changes planned during the restoration stage (Stage 2) of the project and will result from the increase in floodplain connectivity and hyporheic interaction.

14. Include more discussion of water quality benefits resulting from the project.

- a. Problem Statement includes a nice discussion of the WQ issues; how will the solution help improve those issues in goals/objectives (p6)?

A third objective was added to the proposal to address this issue. "Improve water quality by the elimination of tailwater returns to Catherine Creek from flood irrigation by the reduction of sediment, bacteria, nutrient loading, and water temperature from direct solar radiation."

15. There is a flow meter in the budget. Explain in the narrative how this will be used in the project and in tracking increase in instream flows.

The flow meter will be placed on the irrigation system to track actual water application on the 65.1 acres that will remain in agricultural production. This device will quantify the total water applied during the irrigation season and monitored for several seasons to establish annual water usage requirements. The certified water right is for a total of 195.3 acre-feet and a maximum flow rate of 1.62cfs. The water savings realized will be the difference between the certified water right and the actual usage measured during several irrigation seasons. The flow meter will not track instream flow.

16. Is TFT considered a cost share partner on the project? They're not listed in the match funding section (p19).

Consultation with TFT has taken place to identify options for water leases and transfers. Coordination discussions with TFT occurred prior to project funding and would not be allowed as an in-kind match through OWEB. TFT is not currently being asked for project support in Stage 1 but may be included in coordination efforts in the future.

17. Is it possible to provide more detail in the timeline (p15)?

- a. Break out project implementation into more specific activities

The implementation of Stage 1 described in this proposal includes the three actions of establishing a conservation agreement with the landowner, irrigation system installation and monitoring.

- b. When do you expect to receive the signed landowner agreement for stages 2 and 3?

A conservation agreement will be entered by the landowner and the District prior to any expenditures being made for Stage 1. This agreement will include a description of both the landowner and District responsibilities to cease farming activity on the 9 acre project area, allow for restoration designs to be implemented and protected, transfer water rights to instream for the 9 acres and the water savings for the 65.1 acres, and pursue the establishment of a CREP agreement with FSA to protect the 9 acre project area and additional riparian area along Catherine Creek.

18. What Environmental Monitoring will be conducted for the project? (p16)

Provide in final proposal the monetary amount the landowner will be paid for water rights by the Freshwater Trust.

The District is proposing photo monitoring and to assist the landowner in flow monitoring in Stage 1. The District is working with Reclamation to develop a more robust monitoring plan for Stage 2 of this restoration effort.

19. This is a great private land opportunity.

Agreed.

20. Page 7 Draft Recovery Plan – Recovery Plan is final (November 2017)

This has been addressed in the final proposal in the discussion portion but needs to be changed in the OWEB application form in the drop-down tab.

21. A signed agreement dedicating water instream should occur prior to project being funded.

See discussion above in #4.

22. Is there any pre-project/baseline water flow and water quality data?

Station 13320300 (10th Street Gauge) operated by OWRD provides background discharge data for water entering the project reach with only one small diversion downstream of the sample location. The District is currently quantifying the amount of flow that is discharged from the Union Wastewater Treatment Plant. The BPA AEM project identified monitoring sites upstream and within the project reach and sampled a variety of water quality parameters and fish species presence in 2017. The AEM metrics could be repeated in the future to measure effectiveness of restoration activities. The Union Wastewater Treatment Plant is also required to collect several water quality parameters above and below the plant and the District is investigating the value of these measurements.

23. Why is Project Manager time identified as cost share, but then also requesting Project Manager funding?

The total Project Manager's time and associated salary costs for project development, coordination, implementation oversight and monitoring are split between the requested OWEB funding and other funding available to the District. The District has made a good-faith effort to accurately estimate the time and funds needed to complete the project.

24. Believe OWEB in-direct rate should only be 2%, and why is indirect charged to BPA funding?

Indirect cost estimates are based on the Federally-negotiated indirect cost rate (FNICR) for the District. This cost rate is based on District administration and operation expenditures.

25. With habitat components coming in the next two stages, this is a High priority project! USWCD should be commended for the evolution of this project from a single landowner to multiple landowners and a much larger scale project than originally envisioned.

Thank you.

26. OWEB will ask for a landowner agreement at the start of the project and before first payment for the irrigation work. It is fine if the SWCD wants to include this part of the agreement in the broader agreement for stages 2 and 3.

A draft of this agreement is in the process of being completed. The final agreement will be reviewed by the District's attorney.

27. The OWEB grant will require that the landowner agreement is provided as a condition of the

grant. This document should include agreement to the CREP acres and dedication of the 10 acres of water rights (.24 cfs) to instream, through Oregon's conserved instream water certification). This document should also include a commitment to the restoration concept for stages 2 and 3.

See discussion above in #1, #2, #3, and #4.

28. Budget:

- Salaries/Wages/Benefits: If Jim's time is for Grant Admin then this should be included in the Indirect costs category. If this is additional PM time then its fine as is.

The salary identified as match for Jim's time will be used for project planning, implementation, and monitoring. Salary for administrative duties are not shown as match but are part of the indirect cost pool.

29. Indirect: Assuming the GMRW approves the project and we enter into an OWEB grant agreement, OWEB will need a current FNICR before we can release any payments on the grant.

The District is in the process for updating a new FNICR and anticipates that this will be in place well before project implementation.