



Prospectus of Proposed Project Opportunity Submitted Mar 04, 2020

Opportunity Title

Catherine Creek River Mile 44 Kinsley Campground Correction

Opportunity Lead

Jim Webster

Organization: Union Soil and Water Conservation District

Phone: 541-963-1313

Email: jwebster@unionswcd.org

Technical Contact

Aaron Bliesner

Organization: Union Soil and Water Conservation District

Phone: 541-963-1313

Email: abliesner@unionswcd.org

Landowners

Contacted: Yes

Supportive: The Landowner is very supportive of this project moving forward.

Contribution: The landowner has granted unrestricted access to the project location and will review all plans for the project.

River

Name: Catherine Creek

Mile: RM 43

Tributary: Grande Ronde River

Restoration Atlas

BSR: CC3B1
Tier: Tier 1
Initial Score: 50.7
Proposed Score: 50.7

Restoration Activities

- 3. Pool Development
- 18. Riparian Buffer Strip, Planting
- 26. Boulder Placement
- 27. LWD Placement
- 28. Modification or Removal of Bank Armoring
- 33. Reduce - Mitigate Point Source Impacts

Species Affected

Focal: Snake River Spring Chinook salmon, Snake River Summer steelhead, lamprey, and bull trout.

Other: redband trout and other native aquatic species.

Description

The CC44 Phase IV Project is located on private land approximately 3 miles Southwest of Union, Oregon on Catherine Creek (R.M 42.8-43.3) in the Upper Grande Ronde Subbasin. The project legal description is: Township 4 South, Range 40 East, Section 28.

The project area is located within Reach UGS10A (Summer Steelhead) and Reach CCC3 (Spring-Summer Chinook) (Northeast Oregon Snake River Recovery Plan, Draft (NOAA, March 2012) and BiOp Expert Panel Draft Reach Delineations (BPA/BOR, April 2012). Geographically, these reaches encompass Middle Catherine Creek from the confluence of Pyles Creek upstream to the North and South Forks of Catherine Creek.

The Project Area is also located within Reach 4 of the Catherine Creek Tributary Assessment (BOR 2012) and has been identified as one of the highest priority reaches for restoration actions in the Grande Ronde Basin. ODFW fish monitoring and BOR assessment results confirm this reach as the highest priority critical area for Chinook salmon and steelhead over-wintering, summer rearing, and spawning. In addition, adfluvial bull trout utilize the reach as a migration corridor and for rearing, and spawning.

The stream section for this funding proposal is part of a large-scale local partnership effort between 6 private landowners and the USWCD, BPA, BOR, CTUIR, GRMW, USFWS, and ODFW. The larger multi-phase project area encompasses approximately 4 miles of Catherine Creek between R.M. 42 and 46. Since spring 2010, these partners have been working to strategize, plan, and design a multi-faceted and phased project addressing critical Spring/Summer Chinook habitat limiting factors to promote

increased capacity for spawning, summer rearing, and overwintering habitat within the Middle Catherine Creek Reach. The BOR Rapid Site Assessment completed in 2011 along with several site visits by project partners indicated that significant opportunities exist to improve habitat conditions and address limiting factors throughout the project area. The project was separated into four phases allowing for funding options and a feasible construction schedule.

Environmental baseline conditions were derived from various sources including baseline field surveys, aerial photography, LiDAR imagery, habitat characterization reports, and communication with the landowners and partnership agency staff with knowledge of the action area. Project partners have worked together to compile data sets and develop baseline assessment data with an accompanying hydraulic model and a 100-year flood event model. Additional limiting factors and existing conditions data were compiled from ODFW habitat surveys, the Catherine Creek Tributary Assessment (BOR 2012) and the BiOp expert panel draft recovery plan. During the winters of 2009-2012 the ODFW fish tracking study of overwintering juveniles in the area showed a preference for deeper pools with cover habitat (overhanging vegetation and/or submerged large woody material [LWM]).

BOR and ODFW limiting factor assessments found Catherine Creek within this project area to include stream bank instability, high channel width/depth ratios, poor riparian vegetation, and poor in-channel diversity and complexity. The project reach is affected by winter icing, high summer water temperatures, and low summer base flow. The existing channel is relatively homogenous with minimal habitat availability and complexity. There is a lack of LWM, which has reduced the available cover and the ability to sustain deep pools. In addition, high summer water temperatures are common during the irrigation season.

The CC-44 Phase IV project on the Kinsley property was completed in the summer of 2016. The project consisted of 38 large wood structures. A total of 11 pools were created and 3 other pools were enhanced with the addition of large wood (Figure 1). One perennial side channel was created with a total length 0.16 miles (Figure 2). Once the project construction was completed, all disturbed areas and places with limited natural vegetation were replanted (Figure 4).

In the middle of the Kinsley property reach is an area the landowners manage as a family campground and gathering place. Past management of this area by the landowners utilized rock rip-rap as protection. The District had many discussions with the landowners about removing the rock to encourage natural regeneration of stream side vegetation, but at the time of construction the owners did not trust that the thalweg could be moved to the valley left and away from the rip-rap bank. The project was successful in moving the channel thalweg to valley left (Figures 4 and 5).

Currently the channel thalweg has migrated north and to the edge of the campground area, eroded the depositional bar formation, and is now threatening to undercut the banks (Figure 6). The District is proposing to

enter the project area to correct this issue and further enhance the site. The proposed solution would add 8-10 whole trees to the bar that has developed above the campground, encouraging deposition, allowing the removal of more of the rip-rap material, and enabling riparian planting of the area. The boulders placed during the initial construction would be repurposed as habitat boulders downstream. One large wood structure would be added to redirect flow away from the right bank and increase the pool development on river left.

Objectives

Project Objectives

- 1) Maintain an excellent working relationship with a willing landowner in critical habitat on Catherine Creek.
- 2) Remove artificial bank stabilization in favor of more natural methods and increase streamside vegetation.
- 3) Increase the amount of large wood in the active channel.
- 4) Encourage the development of one large pool.
- 5) Add habitat and flow diversity to the channel.

Major Risks

Prior to the construction of phase IV of the CC44 complex the property owner identified the campground area for protection from impacts of the project. High flow events that occurred in spring 2019 removed the gravel bar and began to erode the streambank adjacent to the campground area causing the owner to request assistance from the District. The largest risk would be a no treatment alternative. Over the course of the project, the District built a positive relationship with the property owner and not addressing these issues would be detrimental to that relationship.

Permits and Consultation

ESA Section 7 USFWS: Applicable
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COE or DSL Permit: Applicable
Cultural Resources Section 106: Applicable
DEQ 401 Water Quality Permit: Applicable

Project Schedule

Year: 2021

Monitoring: Monitoring: Monitoring will be targeted at the specific objectives detailed in this prospectus. The linear feet of rip-rap material removed will be measured. Large wood amounts and pool development will be monitored through repeated photography. Any additional required monitoring will be determined during the design process.

Project Relations

Multi-phase Effort: No

Preliminary Cost Estimate

Total: 32,259

BPA Funding: 0

OWEB Funding: 12,650

Design Funding

Design Funds Requested: No