

Request for Proposals June 10, 2014

Odell Creek Dam Removal & Stream Restoration Construction Design & Budget

Proposal and bid must be submitted by July 3, 2014, 5 p.m.

Questions and Proposals shall be directed to:

Cindy Thieman, Coordinator
Hood River Watershed Group
3007 Experiment Station Dr.
Hood River, OR 97031
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541-386-6063

Introduction

The Hood River Watershed Group (HRWG) is requesting proposals for the Odell Creek Dam Removal and Stream Restoration Design in Hood River County, Oregon. Project elements include site survey and assessment, sediment evaluation, construction designs, preparation of bidding materials, and construction oversight for the removal of the dam and associated stream corridor restoration. The project will be managed by the HRWG in collaboration with a Technical Advisory Committee consisting of local, state, and federal agency partners.

Project Background and Description

Odell Creek is a non-glacial tributary of the lower Hood River (see **Attachment A**- Project Location Map). The Oregon Department of Fish and Wildlife has identified Odell Creek as important potential habitat for threatened Lower Columbia winter steelhead, as well as populations of resident rainbow trout and coastal cutthroat trout. The 12-foot high by 30-foot wide Odell Creek hydroelectric dam has a concrete fish ladder with 12-inch increment baffle heights (**Figure 1**). The dam spillway and 1980's era mechanical fish screen may cause injury or death to downstream migrating fish (**Figure 2**). The existing screen mesh does not meet current criteria and the diversion does not have a fish bypass mechanism. Finally, approach velocities exceed current state and federal standards, which has resulted in fish impingement.

The Odell Creek Hydroelectric Project was established in 1984 as a private electric generation facility. The project is FERC exempt, but had a license from Oregon Water Resources Department (OWRD) to generate up to 0.2 MW at a powerhouse located at RM 0.16. The dam is located at RM 0.44 and was licensed to divert up to 45 cfs from Odell Creek. Minimum bypass flows were set at 10 cfs from December through June, and 7 cfs from July through November.

The 1984 OWRD hydropower license expired in December 2010. At that time, OWRD notified the license holder that fish passage and screening needed to be upgraded, and that bypass flow requirements might be changed under a new license. A recently completed economic evaluation of the hydroelectric facility found the net present value of the operation to be about -\$450,000. This calculation was based on estimated upgrade costs, future power prices, system capacity, operations/maintenance costs, stream flow records, bypass flow requirements, and discount rate and term. Given the project's negative value and the significant environmental impact to the creek, both the licensee and landowner have decided to pursue removing the dam and restoring the creek.

In addition to the hydropower water right, there is an irrigation water right for 18 acres with a rate of 0.23 cfs that will remain in place. The current diversion point and fish screen for this water is at the dam. From the dam, it is piped to a water box and pumped to the orchard above.



Figure 1. Odell Creek Hydroelectric Dam. The fish ladder is on the left side of the photo.



Figure 2. Existing fish screen

Goals & Objectives

The ecological goals of this project are to restore fish passage, stream habitat, and fluvial processes in Odell Creek within areas affected by the Odell Creek dam. This will be accomplished through removal of the dam, removal and/or stabilization of sediment accumulated behind the dam using natural channel design methods, and restoration of native riparian and floodplain vegetation within the project area.

The principal project objectives are to:

- Eliminate the fish passage barrier, thereby providing winter steelhead access to 4.5 miles of upstream habitat
- Increase average monthly flows and wetted habitat in current bypass reach
- Eliminate pulses of sediment from dam operations

An additional goal is to re-design and construct the diversion for the existing 18-acre irrigation water right. The specific objectives are to design a low-maintenance system that meets the landowner's water right and all regulatory criteria.

Statement of Work

HRWG has been awarded an OWEB technical assistance grant for \$41,480 to complete Phase 1 of the design work and develop a construction budget. Once Phase 1 and a construction budget are complete, HRWG will apply for an implementation grant to finish the design and fund the removal and restoration construction costs. **We are requesting proposals for a final project design and construction oversight** (i.e., not just for the first \$41,480 worth of work). Please note in your proposal the tasks that would be completed in Phase 1.

The consultant shall provide detail on their approach, deliverables, costs and timeline for delivery associated with each of the following tasks:

- 1. Data Collection and Review:** 2006 LiDAR data and recent stream flow data for Odell Creek will be available to the consultant.
- 2. Field Survey:**
 - 2.1 Complete a field survey of the dam and identify any impacted utilities and/or structures.
 - 2.2 Complete a stream survey of the project area as necessary to complete Tasks 3 and 4. Proposals should describe surveying techniques necessary to complete Tasks 3 and 4.
 - 2.3 The Existing Conditions Plan should depict structures, topography and impoundment bathymetry in the plan view and cross section.
- 3. Sediment Management Analysis:**
 - 3.1. Determine the extent and physical nature of sediments impounded by the barrier.
 - 3.2. Evaluate impacts of releasing impounded sediments and the appropriate management approach to restore a natural state of dynamic equilibrium post-barrier removal.
 - 3.3. Develop an erosion and sedimentation control plan that includes disposal or relocation for any sediment removed during the project.
- 4. Hydrology and Hydraulics:**
 - 4.1. Review available and relevant hydrologic data from local, state and federal sources.
 - 4.2. Compute hydrology as necessary for hydraulic analyses. Bidders should describe their proposed techniques for assessing hydrology to input into hydrologic analyses.
 - 4.3. Conduct a hydraulic analysis to predict water surface and velocity profiles for both existing and post-removal conditions through the project reach. Bidders should describe their techniques for completing hydraulic analysis and how it will be used to inform project tasks. The hydraulic analysis should assess the potential scour increases as a result of barrier removal and river restoration techniques and inform the stream/riparian restoration plan and new diversion structure.

5. Coordination with Regulatory/Approval Entities:

5.1. Participate in two to three meetings with regulatory agencies and the project's Technical Advisory Committee. A pre-application meeting with the Federal-State interagency coordination team is anticipated in the fall of 2014.

6. Design Alternatives and Construction Budget for Dam Removal, New Irrigation Diversion, and Stream Restoration:

6.1. Describe the preferred design(s) for the removal of the dam, construction of new diversion, and stream restoration.

6.2. Develop conceptual design documents and construction budget for the selected alternative. These documents will be used to finalize the project approach with the regulatory entities and seek construction funding.

6.3. Develop a Sequence of Events for major project elements.

7. Dam Removal and Stream Restoration Engineering Design:

7.1. Develop draft final design sheets for preferred alternative and technical specifications, suitable for submittal with permit application. Design drawings will be prepared in AutoCAD format, and made available as PDF documents. The design plans will include, but are not limited to:

7.1.1. Title Sheet

7.1.2. Existing Conditions Sheet

7.1.3. General Notes

7.1.4. Proposed Site Plan and Profile

7.1.5. Cross-Section

7.1.6. Structure Details

7.1.7. Planting Plan

7.1.8. Site Restoration Plan

7.1.9. Sheet(s) showing design details pertinent to understanding the stream/habitat design approach

7.1.10. Mobilization and Demobilization Plan

7.1.11. Erosion and Sedimentation Control Plan

7.2. Develop engineer's cost estimates for construction including costs for construction oversight.

7.3. Meet with Technical Advisory Committee to address questions or comments concerning the final design.

7.4. Prepare final design specifications and final Engineer's estimate of construction costs.

8. Permit Application Preparation:

8.1. Compile materials as needed to complete the permit application package for the dam removal and stream restoration/stabilization.

9. Bidding Assistance and Services During Construction:

- 9.1. Attend on onsite pre-bid meeting to review the proposed work with potential construction bidders and representatives of the Technical Advisory Team.
- 9.2. Respond to technical questions as necessary during the construction bidding process.
- 9.3. Attend one preconstruction meeting to review the project schedule, submittal requirements, construction sequencing and other relevant construction procedures.
- 9.4. Provide on-site project representation during construction to review construction progress, record observations, verify design and materials specifications are being met, report deviations from design documents, provide field clarifications and respond to contractor requests for information.

Pre-bid Site Visit

There will be an optional pre-bid site visit associated with this Request for Proposals. The site visit will be held at 11 a.m. on June 25, 2014. Please confirm your intention to attend the site visit by email to Cindy Thieman, no later than 4 p.m. June 23, 2014.

Selection Process

Consultants must submit proposals in digital format by 5 p.m. July 3, 2014 to Cindy Thieman (cindy@hoodriverswcd.org). The proposal package shall include:

- a. Description and itemized cost for each task described in Statement of Work.
- b. A list of staff who will work on the project, their primary role, approximate number of hours they will spend on the project, and experience with dam removal design projects.
- c. The location of the office that will be providing service to this project.
- d. A description and references for at least two dam removal designs.

HRWG will review proposals for the project and may propose modifications to the selected contractor before finalizing the contract. Responding firms will be ranked in order of their cost-effectiveness, qualifications, and proposal content. The following evaluation criteria will be used:

- a. Experience with conducting stream barrier removals;
- b. Experience with restoration of in-stream habitat and native riparian areas using natural channel design methods;
- c. Applied knowledge of ecological and geomorphic processes, and aquatic organism passage;
- d. Demonstration of successful cooperation with relevant local, state, and federal agencies;
- e. Demonstration of implementing creative solutions to complex river issues, particularly working in habitat with endangered aquatic species and removal/fate of sediment and dam debris.
- f. Cost-effectiveness of proposal, and
- g. Clarity, quality and presentation of proposal.

General Information

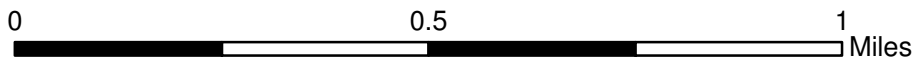
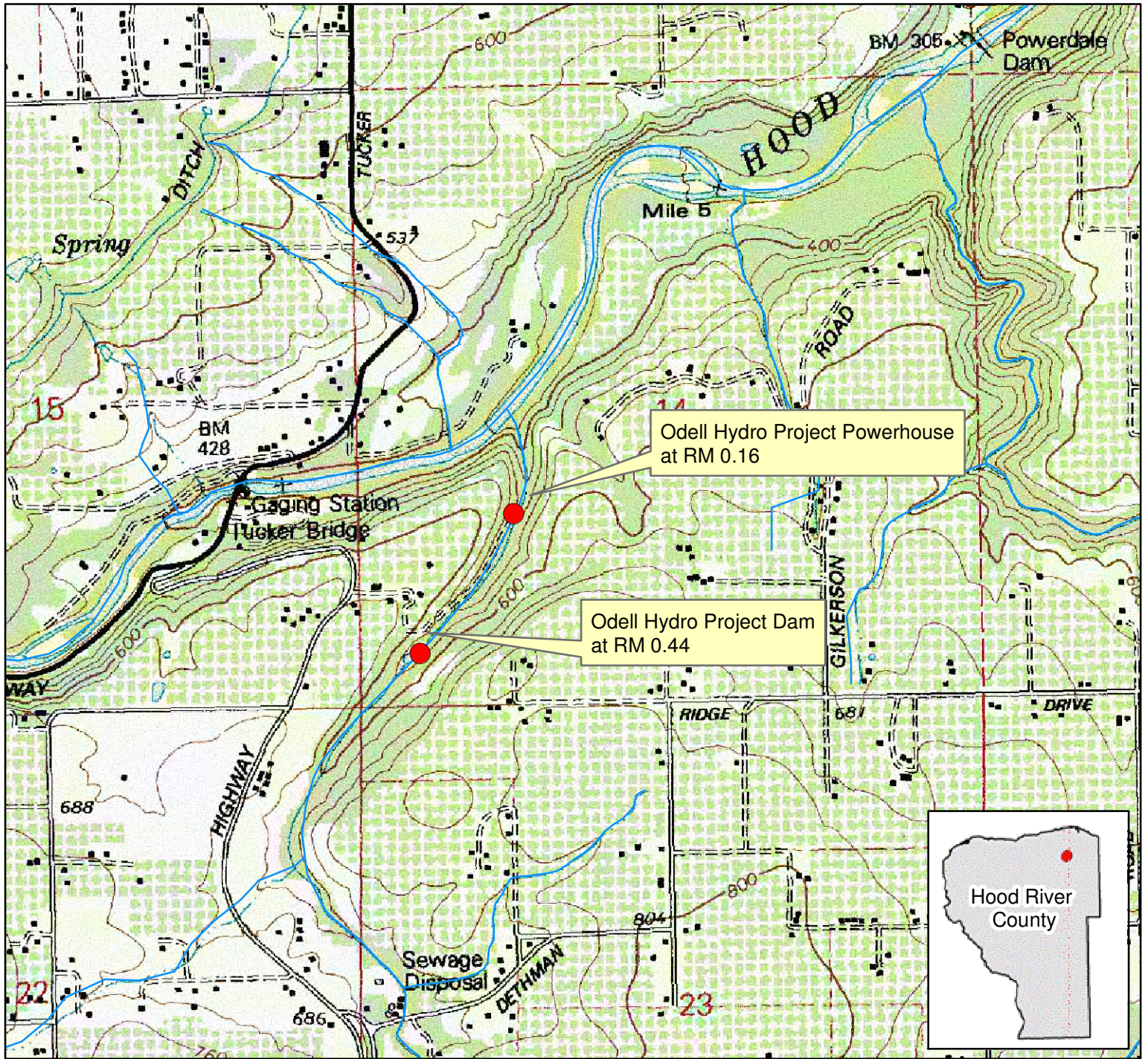
The Hood River Soil & Water Conservation District (HRSWCD) is the fiscal sponsor for the HRWG. As such, all bid solicitation and contracting requirements of the HRSWCD will be adhered to and the contract for this design project will be executed and administered by the HRSWCD. The HRWG and HRSWCD reserve the right to accept the proposals and award a contract to a responsible and qualified bidder; to postpone the acceptance of the proposal and the award of the contract for a period not to exceed thirty (30) days; or to reject any and all bids received and further advertise the project for bids. HRWG and HRSWCD also reserve the right to eliminate the need for the selected consultant to complete one or more tasks, pending the outcome of preceding related tasks or issues, and/or the availability of project partners to complete that task.

Timeline

The target date for preliminary design and construction budget is March 30, 2015.

Odell Creek Hydro Project Decommissioning (Phase 1: Planning)

Legal Description: NW4 / SW4, Section 14, T2N - R10E Hood River County
Lat/Long: 45.6509364, -121.5426635



Legend

- Project Sites
- ~ Streams



Scale: 1: 15,000