REQUEST FOR PROPOSALS GEOMORPHIC DESIGN SERVICES Yakama Nation Fisheries Program-Low-Tech Processed Based Design

Response Deadline: November 18, 2020, 5:00 pm



Yakama Nation

Yakama Nation Fisheries- Goldendale Field Office 114 West Main Street, Goldendale, WA 98620Phone: 509-949-0481 Email: <u>elaine@ykfp.org</u>

Project Timeline

Proposal Submission Deadline Award Selection Project Initiation (estimate) Site Visits Draft Designs Final Deliverable November 18, 2020 at 5:00pm November 20, 2020 December 9, 2020 December 2020 January 2021 March 31, 2021

Please send questions in writing so responses can be shared with other interested parties.

Request for Proposals for Design Services

I. Project Overview

The **Yakama Nation (YN)**, Rock Creek Project (RCP) is soliciting a Request for Design Services for Process-Based Restoration projects in the Rock Creek subbasin. Rock Creek is a 223- square-mile subbasin located in eastern Klickitat County, Washington and is a tributary of the Columbia River upstream of John Day Dam (Figure 1).

RCP works to restore, enhance, and protect watershed function within the Rock Creek subbasin. Work emphasizes restoration and protection of Endangered Species Act (ESA)-listed as 'threatened' steelhead in the Rock Creek subbasin. Overall restoration activities will focus on improving habitat conditions and water quality factors in support of species recovery. Rock Creek is characterized as being an intermittent stream system from the mid-subbasin to its confluence, with the Columbia River, many isolated perennial pools provide vital over summer rearing habitat. These pools are spring-fed and over the past eight years we have conducted low-flow habitat surveys and documented the dry, wet, and pool reaches in Rock Creek (river kilometer (Rkm) 1 to Rkm 22) and in Walaluuks Creek (Rkm 1 to Rkm 9). We also conducted fish population surveys in randomly selected pools to document the salmonid over-summer rearing locations in Rock Creek.

A study, *Fluvial Reconnaissance with Observations on Geomorphology and Suitability for Anadromous Salmonid Habitat Actions Rock Creek, Klickitat County* was completed in 2014. Recommendations from the geomorphic assessment include applying best management practices (BMP's) in the subbasin, such as allowing beaver activities to expand without disturbance in the watershed and managing livestock in ways to improve native riparian plant composition, density and abundance. Other recommendations include increasing habitat complexity (small wood jam or boulder placements) in perennial pools that would in turn increase the carrying capacity of age-0 and age-1 fish (http://www.ykfp.org/klickitat/Library/Rock Creek Fluvial Recon Report.pdf).

Many of the pools surveyed lack instream cover for juvenile rearing and the main purpose of this project is to create a design that is process based and self-maintaining that incorporates large wood, boulders, and/or beaver dam analogs. Large woody debris is absent from the low-flow channel and not a habitat forming agent in the geomorphic assessment. Underwater cover was also documented as being a limiting factor for juvenile survival during summer baseflows.

Low-Tech Process-Based Restoration is a practice of using simple, low unit-cost, structural additions (i.e. wood and beaver dams) to riverscapes to mimic functions and initiate specific processes. These

approaches may be appropriate for the identified sites, but the reaches need to be assessed from a geomorphic and stream power perspective to evaluate the effectiveness of any proposed approach.

Three reaches were identified in which to conduct pool enhancement in the mainstem Rock Creek and tributary Walaluuks Creek (Figure 1). The intent of the design is to obtain an in-depth geomorphic assessment for each reach and get a process based design for pool enhancement for each of the reaches. Pool enhancement will be focused on providing instream habitat structure in designated pools that will benefit resident and anadromous salmonids in the subbasin. Another key aspect of the design will include increasing structural elements to promote scour and pool maintenance. The addition of structural elements will promote increased connectivity with flood surfaces, provide high flow refugia for fish and increased cover during periods of low flow (over-summer survival is a limiting factor). The design process will determine the number and arrangement of large wood pieces and/or boulders to be placed into the series of small pools to provide instream fish cover per reach.

The identified reaches are as follows:

- Blackwolf Site located on the mainstem Rock Creek at Rkm 10 to Rkm 12 (Figure 2). There are a dry, non-pool wet, and a suite of bedrock and cobble pool habitat types located in this reach (Figure 3 and 4). A map of the site is included in Figure 5 with the reach elevation, baseflow habitat, and stream power. LWD and boulder additions may be appropriate for this site since there is adjacent roadside access which could facilitate a combination approach of machinery and low-tech equipment (grip hoist, directional falling).
- 2. Old Cabin Site located on the mainstem Rock Creek at Rkm 18 to Rkm 19 (Figure 6). There are also dry, non-pool wet, and cobble pool habitat types in this reach (Figure 7 and 8). A map of the site is included in Figure 9 with the reach elevation, baseflow habitat, and stream power. Similar to the Blackwolf site, LWD and boulder low-tech additions to this reach could be appropriate since there is good roadside access for machinery.
- 3. Walaluuks Site for Low-tech Process Based Restoration located in Walaluuks Creek Rkm 6 to Rkm 8 (Figure 10). This reach also has a combination of dry, non-pool wet, and a suite of bedrock and cobble pool habitat types within the reach (Figure 11 15). A map of the site is included in Figure 16 and 17 with the reach elevation, baseflow habitat, and stream power. This site is located in a remote location with limited road access to the site.

Site Locator Map for Low Tech Process Design Techniques Projects located in Rock Creek Subbasin, Klickitat County, Washington State





Figure 1. Rock Creek Subbasin and Reach locations for Geomorphic Assessment and Process Based Design.

II- Objective

The objective is to obtain Habitat Improvement Program (HIP) III design submittals for process-based pool enhancement projects and to develop broader approaches for future YN sponsored aquatic habitat enhancement projects in the Rock Creek subbasin. The selected firm will demonstrate experience with designs in intermittent riverscapes and process-based design approaches, project implementation, familiarity with Bonneville Power Administration's HIP Design submittals, and examples of practical approaches to watershed scale degradation.

Proposals should include the consulting engineering firm's:

- Consultant Team Structure
- Team/Personnel Qualifications and Experience
- Project Approach
- Past Performances/References
- Fee Schedule Personnel Hourly Rates and Estimated Overall Project Cost

III- Scope of Work

The cost estimate should reflect the following design components:

- A. A reconnaissance
 - a. Field Observations (as applicable)
 - b. Geomorphic Assessment
 - c. Base Mapping
- B. Hydrology and Hydraulics
 - a. Hydrology

i.

- C. BPA HIP III Design Submittals
 - a. Brief Design Report
 - i. Periodicity of species present
 - ii. Describe limiting factors and degraded condition
 - iii. Project objectives
 - iv. Matrix with triggers for adaptive management
 - b. Planview Drawing
 - Label channel structures with unique symbols
 - c. Typical Cross Section Drawings with Construction Notes
 - i. Typical wood and boulder placements or posts
 - d. Draft Cost Estimates by Project Site
- D. Assistance with response to initial HIP III Feedback

Yakama Nation will provide:

- Personnel to support site reconnaissance survey
- Project Management and Coordination
- Aerial photography
- Lidar data as available
- Rock Creek Geomorphic Assessment
- Beaver Restoration Assessment Tool (BRAT) outputs for sites

IV – TIMING AND DURATION

We expect to award this contract in November 2020 and receive final deliverables by March 31, 2021. Qualified Contractor Proposals shall be received via email <u>no later than 5:00 P.M. Pacific Daylight Time on</u> <u>November 18, 2020</u>. Bids may be emailed to: Elaine Harvey <u>elaine@ykfp.org</u>.

Timeline: Proposal Submission Timeline: Tentative Award Selection: Project Initiation (estimate): Site Visits: Draft Designs and Work Products: Final Deliverables:

November 18, 2020 – 5:00pm November 20, 2020 December 9, 2020 December 2020 January 2021 March 31, 2020

V- MINIMUM QUALIFICATIONS

PROPOSAL SUBMITTAL CONTENT

To be considered for this RFP, the Proposal shall include all items identified in Section II by the deadline specified in Section IV.

PROPOSAL COVER AND COVER LETTER

Clearly label the Proposal cover and the subject line in the cover letter with "PROPOSAL for Yakama Nation Low-Tech Process-Based Restoration." The cover letter shall be limited to one page and shall identify the consultant name and contact person, their title, mailing address, email address, phone number, and the name of the proposed project manager.

CONSULTANT TEAM STRUCTURE

Provide the team structure, identifying any sub-consultants, including names of lead persons with titles and general project responsibilities, and the physical location of each lead person.

TEAM/PERSONNEL QUALIFICATIONS AND EXPERIENCE

The Proposal will be evaluated for the team and individual team member's qualifications, general background, and experience in relation to the stated Scope of Work.

PROJECT APPROACH

The Proposal will be evaluated based on the approach and proposed solutions for designing the addition of instream structure into the system and making habitat improvements.

PAST PERFORMANCES/REFERENCES

References may be used to verify the accuracy of information provided in the Proposal. Provide three recent references who can be contacted concerning your firm's/ team's RFP. In listing the references, include the name of the client, telephone number, e-mail address, contact person, and the specific work your firm did for the client. Also provide three recent references who may be contacted concerning the performance of your firm's/ team's proposed project manager(s). The Yakama Nation reserves the right to contact references other than those submitted by the respondent.

FEE SCHEDULE

The Proposal will be evaluated on the costs associated with the design work. Please include:

- A. Hourly rate by position classification and estimated hours per task
- B. Charges for equipment, printing, and other expenses
- C. Direct expenses (if applicable)

VI- SELECTION PROCESS & EVALUATION CRITERIA

Each contractor shall provide references and/or other information related to their proposal that demonstrates their past performance. The owner (Yakama Nation) shall evaluate the qualifications of bidders. The owner shall have the sole discretion and responsibility for choosing the responsive and responsible contractor.

Bids will be evaluated based on the following ranking criteria:

- A. Fee Schedule
- B. Relevant Firm Experience
- C. Project Approach
- D. Qualification of Assigned Staff
- E. References



Figure 2. Blackwolf site on the mainstem Rock Creek (Rkm 10 – Rkm 12) for geomorphic assessment and process based design.



Figure 3. Blackwolf site (Rock Creek) Rkm 10 -12 non-pool wet habitat



Figure 4. Blackwolf site (Rock Creek) Rkm 10 -12 bedrock pool habitat



Figure 5. Blackwolf site (Rock Creek) Rkm 10 -12 relative elevation, baseflow habitat, and stream power.



Figure 6. Old Cabin site on the mainstem Rock Creek for (Rkm 18 – Rkm 19) for geomorphic assessment and process based design.



Figure 7. Old cabin site (Rock Creek) Rkm 18 -19 non-pool wet habitat



Figure 8. Old cabin site (Rock Creek) Rkm 18 -19 typical pool wet habitat



Figure 9. Old Cabin site (Rock Creek) Rkm 18 -19 relative elevation, baseflow habitat, and stream power.



Figure 10. Walaluuks site on the tributary stream Walaluuks Creek for (Rkm 6 – Rkm 8) for geomorphic assessment and process based design.



Figure 11. Walaluuks site (Walaluuks Creek) Rkm 6 non-pool wet habitat



Figure 12. Walaluuks site (Walaluuks Creek) Rkm 6.5 pool habitat



Figure 13. Walaluuks site (Walaluuks Creek) Rkm 7 non-pool dry habitat



Figure 14. Walaluuks site (Walaluuks Creek) Rkm 7.5 non-pool dry habitat



Figure 15. Walaluuks site (Walaluuks Creek) Rkm 8 pool habitat



Figure 16. Walaluuks site (Walaluuks Creek) Rkm 6 - 7 relative elevation, baseflow habitat, and stream power.



Figure 17. Walaluuks site (Walaluuks Creek) Rkm 7 - 8 relative elevation, baseflow habitat, and stream power.