Request for Proposals – Engineering Services for the Lower Wenatchee River Reach Assessment Project

Yakama Nation Upper Columbia Habitat Restoration Project – Lower Wenatchee River Subbasin

Introduction

The Yakama Nation Department of Fisheries Resource Management is seeking an engineering services contractor to assist restoration planning and project identification efforts under the Upper Columbia Habitat Restoration Program (UCHRP). The UCHRP, in coordination with the Regional Technical Team (RTT), has identified the lower Wenatchee reach of the Wenatchee River to be a high value unit for restoration of habitat and impeded river processes affecting listed salmonids in the Upper Columbia system. This effort will include the development of a Reach Assessment and Restoration Strategy for the lower Wenatchee River from the mouth to the Icicle Road Bridge in Leavenworth, WA just downstream from the end of Tumwater Canyon (from RM 0-26.4). This project will develop a comprehensive understanding of the degree and mechanisms of physical and biological stream habitat impairments and will identify strategies for improving aquatic habitat conditions. This effort will build on a considerable amount of past work in the study area, including past restoration projects, the 2004 Chelan County CMZ study, and on-going fisheries investigations. The Reach Assessment will include several interrelated components that are described below.

Objective

The objective of this reach assessment is to create a document to be used to identify and conceptually develop restoration projects. Refined restoration strategies will guide a project ranking and evaluation process wherein process habitat enhancement project opportunities are evaluated according to the restoration objectives developed above and according to other feasibility and logistical factors, such as land ownership and construction access. Project opportunities will be identified in tandem with the

geomorphology survey. Potential habitat actions will be identified, described in detail, and mapped. The contractor will provide regular communication with Yakama Nation (YN) staff and reporting of project status. The contractor will meet with and provide routine communications with YN staff, the RTT, as well as others as needed to carry out the project activities as outlined below.

Scope of Work

Task 1 – Initiation Meeting and Data Collection

This task includes the attendance at a kick-off meeting with Yakama Nation Fisheries Staff and stakeholders to discuss goals and objectives, approach, schedule, and to initiate data acquisition. Data and other background information will be collected via follow-up communication and coordination with stakeholders. Available information includes numerous past studies, assessments, and data collection efforts. This information will be referenced and incorporated into the assessment as appropriate.

Task 2 – Reach Assessment

The reach assessment includes numerous components to assess stream physical process and aquatic habitat conditions on the lower 25 miles of the Wenatchee River from the mouth to Leavenworth, WA.

STREAM HABITAT SURVEY

The habitat survey will characterize stream channel and riparian habitat conditions. The survey will help to identify areas that could benefit most from habitat enhancement and will serve as a baseline for future monitoring of project effectiveness. The habitat survey will be conducted using the USFS Level II protocol, most likely with an adapted methodology due to non-wadable stream conditions. The methodology employs a habitat unit survey along with general characterization of substrate, large woody debris, and riparian conditions. This will also include a review of past surveys and other available information in order to characterize the existing condition of aquatic habitat and how it has changed over time.

GEOMORPHOLOGY ASSESSMENT

This includes developing a thorough understanding of the geomorphic setting, channel evolution trends, and processes at work in the study reach and contributing basin. It will identify how human uses have affected channel dynamics, floodplain connection, sediment processes, and large wood dynamics; and how impaired processes can be addressed through enhancement measures. A geomorphologist(s) will walk each reach in the study area and will characterize bio-physical conditions and channel processes. Some of the geomorphic information has already been compiled

and analyzed as part of past studies. This information will be thoroughly reviewed prior to the geomorphology surveys in order to provide context for field investigations. An emphasis will be placed on identifying site-specific geomorphic conditions to inform the selection of habitat restoration actions.

Geomorphic conditions will be recorded during field surveys. Conditions with respect to the following observed characteristics will be described: 1) sediment transport and response conditions, 2) channel incision and channel evolution trends (erosion and stability), 3) substrate types, distribution, and availability, 4) influence and role of large woody debris, 5) floodplain, channel migration zone, and habitat connectivity, 6) surface and subsurface flow interactions, 7) influence of past and current human structures and activities, and 8) interaction of the stream with riparian ecological processes. Analysis of aerial photography, topographic data, historical information, geology mapping, and other data sources will be used to complete the geomorphology analysis. The condition and impact of land uses (historical and current) on reach-scale processes and habitat will be described. Risks and constraints associated with existing or planned land-uses will be documented.

HYDRAULIC MODELING

A planning level hydraulic model will be developed for the study area. Hydraulic modeling will be applied to available topographic and bathymetric data in order to evaluate hydraulic and sediment transport conditions at the reach-scale. This analysis will help inform the understanding of flood risk to infrastructure and future potential projects, as well as help to identify the impact of human features on floodplain connectivity.

REACH-BASED ECOSYSTEM INDICATORS

Results of the habitat, geomorphic, and hydraulic assessments will be used to populate the regional REI metrics for each reach. These metrics offer a consistent means to characterize the overall condition of habitat and stream physical processes and will help to identify and target restoration actions.

FIELD IDENTIFICATION OF PROJECT OPPORTUNITIES

Field surveys will be conducted to identify potential restoration actions that achieve the objectives of the restoration strategy. Identification of restoration project opportunities will be guided by the combination of: 1) site observations of geomorphology, habitat, riparian, and land-use impairments;

and potential specific opportunities for addressing these impairments, and 2) the reach-scale restoration targets developed as part of the Restoration Strategy (Task 3).

Task 3 – Restoration Strategy

The restoration strategy is the link between the technical analysis and the identification/ prioritization of specific project opportunities. For each reach in the study area and for a suite of multiple habitat and geomorphic metrics, the restoration strategy identifies the t*arget condition* and compares that to the *existing condition*. Restoration action types are then identified that are necessary to bring existing conditions up to target conditions. The information on existing conditions comes from the stream habitat, geomorphic, hydraulic, and REI assessments (Task 2). Target conditions are identified with reference to historical information, needs of the fish species, and properly functioning conditions identified by the REI analysis.

Specific project opportunities are identified via field surveys (Task 2) and also via coordination with key landowners and other stakeholders. Identification of projects will also consider past restoration actions and potential actions that have been identified as part of past efforts.

The restoration strategy includes the development of reach-scale strategy tables, project maps showing potential restoration actions, and project prioritization. Project prioritization will occur using a prioritization system that is based on the needs identified in the restoration strategy as well as other factors including socio-economic considerations. Prioritization will utilize methods previously employed as part of past Yakama Nation Reach Assessments

Task 4 – Compile Draft and Final Report

A draft Reach Assessment and Restoration Strategy document will be compiled that describes the background, methods, and results of the assessment. The draft document will be reviewed by YN and other stakeholders, as determined by YN. The document will be revised and finalized based on review of comments and coordination with YN staff.

This task also includes the production of No draft copies and 25 final copies (all bound and in color) of the final report for the reach assessments (25 report copies total).

Task 5 – Project Management

The Project Manager will provide regular communication with YN staff and reporting of project status. This will include routine communications with YN and others as needed to carry out project activities. In addition to regular project management activities, this task also includes attendance at three meetings

with Yakama Nation Fisheries Staff and others as appropriate. These meetings will occur throughout the scope of the project in order to communicate project status and to obtain input from stakeholders and partners.

Anticipated Schedule

The Yakama Nation is seeking to have this work completed promptly upon issuance of a Notice to Proceed. Data collection will be completed by the fall of 2015. A draft of the final reach assessment will be expected by spring 2016.

Limitations

The Yakama Nation reserves the right to accept or reject any and all of the proposals received as a result of this request, or to cancel in part or entirely this request if it is in the best interest of the Yakama Nation to do so. This request does not commit the Yakama Nation to pay any costs incurred in the preparation of a proposal. The contractor must supply all supervision, equipment, and tools necessary to complete the work as outlined in the Scope of Work.

Baseline Qualifications:

The contractor will have and demonstrate the following:

- Field survey capabilities by in-house and local (Washington/Oregon based) design engineers
- Ability to effectively model hydraulics using HEC-RAS
- Ability to effectively model inundation using a program like Flow 2-D (or similar)
- Have on staff (not subcontracted) a Geologist, Hydrologist, Biologist, and a Professional Engineer with at least 10 years' experience designing instream restoration projects
- Experience producing reach assessments of this type in the Upper Columbia

Bid Directions:

Each engineering firm seeking to be eligible for a contract award under this Request for Proposals must submit two hardcopies of their proposal in writing to:

Yakama Nation
Attn: Jackie Olney, Lower Wenatchee Reach Assessment Project
PO Box 151

Toppenish WA, 98948
(If using package delivery service: 401 Fort Road, Toppenish, WA 98948)

Proposals must be received by the Close of Business, Wednesday, March 18, 2015. Only hand deliveries and/or mail or parcel delivery service submittals will be accepted.

Each proposal must include a detailed Statement of Qualifications pertaining to the listed Baseline Qualifications as stated in this Request for Proposals. Please include a detailed cost proposal based upon the Scope of Work and certify the cost proposal for at least 180 days.

Project related questions should be directed to:

Matt Wilberding
UCHRP Biologist
Cell (509)881-7091
Fax (509)423-7616
wilm@yakamafish-nsn.gov