Wenatchee Watershed Riparian Prioritization Scope of Work

Overall Project Goals/Objectives:

- Document and analyze data on existing riparian habitat conditions.
- Identify sites where installing fencing and/or riparian plantings will protect and improve riparian habitat and address limiting factors to support salmon recovery efforts.
- Prioritize riparian enhancement projects based on potential for water quality improvements.

Sub-consultant tasks and assistance needed:

1. Create a geodatabase to document existing vegetation conditions using remote sensing LiDAR data and aerial photographs.
    a. Review data from existing sources to determine which information can be used for this analysis.
    b. Analyze vegetation height and density in the Lower Wenatchee River, Mission, Peshastin, Icicle, Chumstick, Chiwawa, Little Wenatchee, White, and Lake Wenatchee subwatersheds through comparing LiDAR "bare earth" digital elevation models (DEMs), to the "highest hit" LiDAR DEMs.
    c. Populate a data table of riparian buffer parcels with data from the LiDAR vegetation analysis.
    d. Populate a data table of the riparian buffer parcels in the above subwatersheds with an estimate of aerial cover of trees and shrubs and vegetation type (herbaceous, shrub, or tree). Classify remaining area as either developed, agricultural, or herbaceous.
    e. Extent of mapping includes: Lower 25 miles of the Wenatchee mainstem, Lower 7.4 miles of Mission Creek, Lower 9.3 miles of Peshastin Creek, Lower 5.4 miles of Icicle Creek, Lower 9 miles of Chumstick Creek, Lower 14 miles of Nason Creek, Privately owned riparian parcels on the Chiwawa, Little Wenatchee, White, and Lake Wenatchee subwatersheds (distance to be quantified as part of this analysis).
    f. Create a map characterizing the existing conditions of the 25 miles of the Wenatchee mainstem and over 50 miles of tributaries. Provide GIS shapefiles and pdf maps as deliverables.
    g. Provide a description of the GIS mapping methods used to develop the map.

2. Prepare an attribute table that corresponds to the mapping effort above to prioritize riparian projects at the sub-watershed and watershed scale by evaluating additional information pertinent to riparian restoration. This information will be added to the geodatabase table of existing conditions for each parcel. The final list of attributes will be developed based upon consultant and stakeholder input, however, it may include some or all of the following information:
    a. The number of TMDL listings where riparian vegetation is listed as a BMP (on a sub-watershed scale).
    b. Land use.
    c. Soil type (from the County Soil Survey).
    d. Likelihood of project success (based upon proximity to road/railroad ROW, presence of rip-rap, potential for contamination, soil type).
    e. Number of ESA listed salmonids present in this sub-watershed (where mapped).
    f. Effective shade deficit percentages from the *Wenatchee River Temperature TMDL Study*.
    g. Other characteristics determined to be useful attributes for riparian project prioritization. For example, stream width, bank slope, aspect, % conifer cover in the watershed, etc.

3. Develop summary metrics at the sub-watershed scale to describe the results of the prioritization.

4. Assistance with obtaining stakeholder input on draft mapping and attribute table development.

CCNRD staff will draft a short report to describe the methods and findings from the mapping, stakeholder input, and prioritization process.