**Rehydrating Landscapes: A Summary of recent Yakama Nation Fisheries’ Low-Tech Process-Based Projects**

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**Abstract:**

In 2018 the Yakama Nation Fisheries Program (YNF) engaged in a multi-watershed planning effort to support climate-resilient landscapes. One component of this effort was a collaboration with the Ecogeomorphology and Topographic Analysis Laboratory at Utah State University to assess the potential to use beaver or beaver mimicry as a conservation and restoration agent. The Beaver Restoration Assessment Tool (BRAT) model utilizes publicly available national data sets for vegetation cover, stream flow, stream slope, and watershed area to generate spatial models that predict the capacity of riverscapes to support dam-building activity by beaver, potential conflict risk, and restoration potential. The model outputs were utilized at the watershed level to identify streams and reaches that might be suitable for beaver occupancy or low-tech process-based restoration (LTPBR) techniques.

In 2020 YNF utilized the BRAT model, habitat data, and a review of aerial photographs to identify stream reaches for site visits and further assessment. From the ground-based assessments, 8 Low-Tech Process-Based Restoration (LTPBR) project sites were selected across a range of geophysical settings for which to develop designs. The LTPBR approach can be applied at broad spatial scales utilizing an efficient design approach that relies on physical and ecological processes. Wood structures placed in streams are designed to work in aggregate and have short design lives with the goal of jump-starting in-stream physical processes through structural forcing. To date, designs have been developed for ten sites in the White Salmon, Klickitat, and Rock Creek watersheds, and three projects implemented. The presentation will highlight project identification, development, implementation, and a preview of future LTPBR projects.

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