

Rock Creek Fish and Habitat Assessment for the Prioritization of Restoration and Protection

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ABSTRACT:

The Rock Creek watershed encompasses an area of approximately 223 square miles in Klickitat County, southeastern Washington. The headwaters of Rock Creek originate in the Simcoe Mountains and the creek flows in a southerly to southeasterly direction to the Columbia River joining the Columbia River at river mile (RM) 230, approximately 12 miles upstream of John Day Dam. Rock Creek currently supports fall Chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*) salmon, summer steelhead (*O. mykiss*), resident rainbow trout (*O. mykiss*), and other native and introduced fish species throughout much of its watershed.

The project's goals include characterizing baseline conditions of the Rock Creek watershed and anadromous fish habitat to prioritize sites for restoration. Environmental and biological attribute data will be collected throughout the watershed. One of the key strategies and objectives listed in the Northwest Power and Conservation Council's Subbasin Plan for Rock Creek include an evaluation of the genetics of Rock Creek steelhead. A genetic assessment has been conducted on steelhead to determine if Rock Creek has its own unique strain and sub-populations. Population and habitat surveys were conducted in the mainstem and its tributaries to define the full extent of anadromous use and potential habitat. Spawning surveys and scale analysis were done on steelhead trout in the watershed. Fish species composition and distribution surveys were conducted to determine distribution, relative abundance, and movement within or out of the watershed. Stream temperature and water quality monitoring is concurrently being conducted throughout the watershed.

This project addresses NOAA-Fisheries' Rock Creek Recovery Plan objectives for Middle Columbia River Distinct Population Segment (DPS) steelhead. Some of the key research needs indicated in the recovery plan include genetic studies to identify genotypic variation; population structure assessment; identification of the natural water temperature in the lower river and whether fish could survive with higher average mainstem temperatures if in-stream diversity and side channel/floodplain habitats are present and diverse enough to provide thermal refugia.

Comment [LU1]: Is this separate from what two lines ago is saying or redundant?