

2 Executive Summary

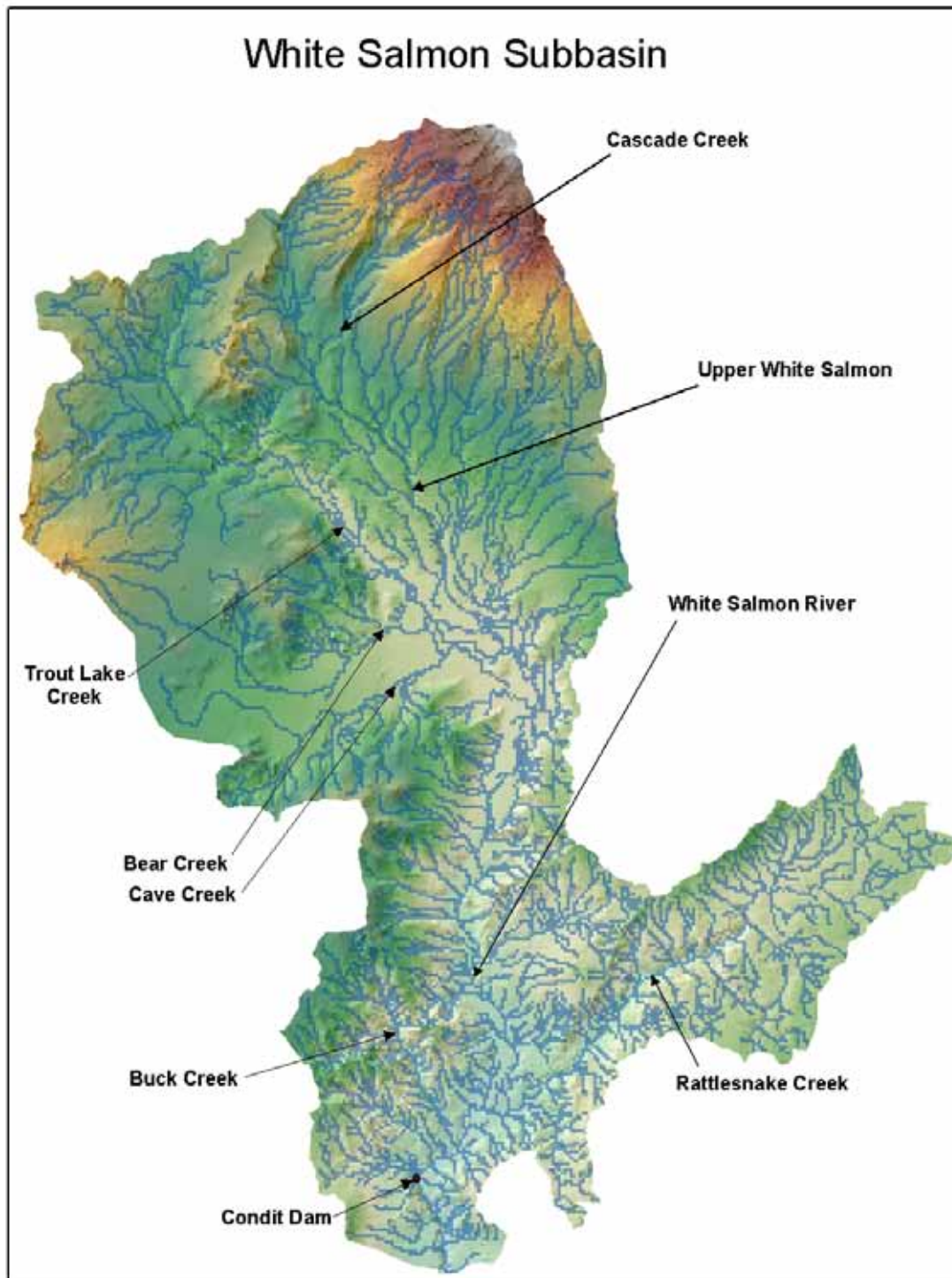


Figure 1 Location of White Salmon subbasin, topography, vegetation, demographics, and hydrology

2.1 Purpose and Scope

The White Salmon subbasin management plan—along with the supporting assessment and inventory -- is one of nearly 60 management plans that have developed throughout the Columbia River Basin for the Northwest Power and Conservation Council (NPCC). This subbasin plan was crafted by the same team that is currently working on the Klickitat and Lower Middle Mainstem Columbia subbasins, and thus shares many elements in common with those plans. The plans will be reviewed and adopted as part of the NPCC's Columbia River Basin Fish and Wildlife Program. They will help prioritize the spending of Bonneville Power Administration (BPA) funding for projects that protect, mitigate and enhance fish and wildlife that have been adversely impacted by the development and operation of the Columbia River hydropower system.

The primary goal of subbasin planning in the Columbia Basin is to respond to the Independent Scientific Group's Return to the River report to the NPCC. Notable conclusions from that report were:

“Our review constitutes the first independent scientific review of the Fish and Wildlife Program...”

“The Program's...lack of a process for prioritization provides little guidance for annual implementation...”

“We recommend incorporation of an integrated approach based on an overall, scientifically credible conceptual foundation...”

The NPCC responded to the ISG by creating the subbasin planning process, within the context of the 2000 Fish and Wildlife program. Subbasin plans provide the first basin-wide approach to developing locally informed fish and wildlife protection and restoration priorities.

Another important goal of subbasin planning process is to bring people together in a collaborative setting to improve communication, reduce conflicts, address problems and, where ever possible, reach consensus on biological objectives and strategies that will improve coordinated natural resource management on private and public lands.

The plan could potentially have a great effect on fish and wildlife resources in the subbasins, and could also have a significant economic impact on the communities within the subbasins. For these reasons, public involvement is considered a critical component in the development of the subbasin plans.

An important objective of this subbasin plan is to identify management actions that promote compliance of the federal Endangered Species and the Clean Water acts. None of the recommended management strategies are intended nor envisioned to compromise or violate any federal, state or local laws or regulations. The intent of these management strategies is to provide local solutions that will enhance the intent and benefit of these laws and regulations. The NPCC, BPA, NOAA Fisheries and the U.S. Fish and Wildlife Service (USFWS) intend to use adopted subbasin plans to help meet requirements of the 2000 Federal Columbia River Power System Biological Opinion. NOAA Fisheries and the USFWS have stated their intent to use subbasin plans as a foundation for recovery planning for threatened and endangered species.

The White Salmon management plan's purposes include providing benefits to fish and wildlife where that help is most needed. The broad purposes of the plan and of the NPCC program mesh regarding fish and wildlife species.

From the Columbia River Basin Fish and Wildlife Program (NPPC 1994):

The development of the hydropower system in the Columbia River Basin has affected many species of wildlife as well as fish. Some floodplain and riparian habitats important to wildlife were inundated when reservoirs were filled. In some cases, fluctuating water levels caused by dam operations have created barren vegetation zones, which expose wildlife to increased predation. In addition to these reservoir-related effects, a number of other activities associated with hydroelectric development have altered land and stream areas in ways that affect wildlife. These activities include construction of roads and facilities, draining and filling of wetlands, stream channelization and shoreline riprapping (using large rocks or boulders to reduce erosion along streambanks). In some cases, the construction and maintenance of power transmission corridors altered vegetation, increased access to and harassment of wildlife, and increased erosion and sedimentation in the Columbia River and its tributaries.

The habitat that was lost because of the hydropower system was not just land; it was home to many different, interdependent species. In responding to the system's impacts, we should respect the importance of natural ecosystems and species diversity.”

Some species, such as some waterfowl species, have seemed to benefit from reservoirs and other hydropower development effects, but for many species, these initial population increases have not been sustained.

2.1.1 Public Involvement

The White Salmon plan could potentially have a great effect on fish and wildlife resources in the subbasin. It could have significant economic impacts on the communities within the subbasin as well. For these reasons, public involvement is considered a critical component in the development of the subbasin plans. Considerable time and effort was spent from the earliest meetings to craft a statement or “vision” of what the participants would like to see in their subbasin as the result of efforts to restore, protect and enhance fish and wildlife populations and their habitat.

Public involvement in the subbasin planning processes for the Klickitat, White Salmon and Lower Middle Mainstem Columbia River (including Rock Creek) included a public mailing, public meetings held at different locations and times throughout the subbasins, regular conference calls, use of a ftp site to store draft documents, posting draft subbasin plans on the NPCC website, and development and use of extensive e-mail lists that were intended to keep members of the public informed regarding the status of the subbasin planning process.

The subbasin planning team, as a part of its public outreach effort, developed a brochure for the public mailing. The brochure was sent as bulk mail and delivered to all postal customers residing in the three subbasins.

There were also a total of seven public meetings held as a part of the subbasin planning effort. These meetings were held on March 9 and May 6 in Goldendale, on March 11 and May 4 in White Salmon, on March 10 and May 5 in Bickleton, and on May 3 in Klickitat. Numerous technical and planning meetings, announced and open to the public, were held in many locations throughout the subbasins to facilitate collaboration, information flow and involvement by as diverse a group as possible. Throughout the subbasin planning process, participants worked on a vision statement that reflects their vision of the subbasin in 10 – 20 years. The vision statement for the White Salmon subbasin is as follows:

2.2 Subbasin Goals, and Vision Statement

2.2.1 Vision Statement

We envision healthy self-sustaining populations of fish and wildlife indigenous to the Columbia Basin that support harvest and other purposes. Decisions and recommendations will be made in a community based, open and cooperative process that respects different points of view, and will adhere to all rights and statutory responsibilities. These efforts will contribute to a robust and sustainable economy.

2.2.2 Subbasin Goals

- Protect or enhance the structural attributes, ecological function, and resiliency of habitats needed to support healthy populations of fish and wildlife.
- To restore and maintain sustainable, naturally producing populations of chinook, coho, and steelhead that support tribal and non-tribal harvest and cultural and economic practices while protecting the biological integrity and the genetic diversity of the subbasin.

2.2.3 Biological Objectives

Fish and Wildlife

- The larger, long-term objectives for fish and wildlife and wildlife habitat are to:
- increase reduced populations of native fish and wildlife to sustainable sizes;
- increase quantity and quality of reduced and degraded fish and wildlife habitat to amounts that will sustain native fish and wildlife species;
- decrease fragmentation of wildlife habitat, to restore connectivity of populations and historic migration routes, within and between subbasins, and
- increase presence of native plants in their historical distribution and reduce exotic plant distributions.

2.2.4 Major Findings and Conclusions

The White Salmon assessment analysis and management plan biological objectives and strategies compares two scenarios -- one with the subbasin segmented by Condit Dam and by water falls farther upstream and the other with access restored for salmon and steelhead that spawned in the river and tributaries above the dam before access was blocked.

Condit Dam was built in 1913 at river mile 3.4. A settlement agreement is now pending before the Federal Energy Regulatory Commission to have the hydroproject removed as soon as 2006. Its owner, PacifiCorp, has said that providing the fish passage FERC would require for relicensing of the project is cost-prohibitive. A cheaper solution is removal, the utility has said.

The topic has been controversial locally with residents protesting the potential loss of Northwest Lake, which backs up behind the dam. Klickitat County -- which participated in the development of the White Salmon subbasin assessment, inventory and management plan -- and Skamania County governments have opposed the settlement agreement removal plan and the fisheries agencies and tribes support the removal plan in the settlement agreement.

There are numerous changes in ecosystem processes within the White Salmon Subbasin that have been identified as a part of the subbasin planning process. They will be the target of the plan's strategies to improve conditions for fish and wildlife.

Because of the large number of wildlife species and habitats present in the subbasin, biologists could not provide adequate descriptions and status reports for each. Instead, they chose to select focal habitats on which to focus assessment and management analysis. The focal habitats are montane coniferous wetlands, ponderosa pine/Oregon white oak forests and interior riparian wetlands. The focal species include the Western gray squirrel, Lewis' woodpecker, the Oregon spotted frog, the American beaver, the yellow warbler and the Western pond turtle. Focal fish species include fall and spring chinook salmon, coho salmon, steelhead and resident rainbow trout.

The WDFW has proposed biological objectives for salmon performance based on a rehabilitated White Salmon subbasin. These goals explicitly recognize the White Salmon subbasin will not be returned to pristine condition and human impacts are and will continue, but salmon performance would reach the "healthy and harvestable levels" desired in Washington's Statewide Salmon Strategy (JNRC, 1999).

The suggested management plan strategies for anadromous fish follows two paths. One set of recommendations offers strategies and "assessment opportunities" to provide anadromous fish access above Condit Dam. The other focuses on improving salmon and steelhead habitat above the dam.

The WDFW analysis indicates that the present-day fall chinook population is actually increased over what it would have been historically. That's because the reservoir created by the Columbia River mainstem's Bonneville Dam inundates the lowest reaches to create additional juvenile rearing habitat and decreased bed scour and incubation survival in the bypass reach is increased since Condit Dam reduces sedimentation and peak flows. All other anadromous fish species performance improves as conditions move from present day back toward historic condition (with Condit Dam removed and habitat restoration and protection strategies being implemented) The steelhead and reintroduced spring chinook would refill their historic niche above the hydroproject if anadromous access were provided.

The primary aquatic habitat attributes that to be addressed are: the removal of obstructions and wood, degraded riparian function, increased maximum temperature, higher % fine sediment in spawning gravel, higher peak flow, and lessened channel stability. The watershed processes that control these attributes are fish access, riparian zone condition, sedimentation, and hydrology.

Fish access improvement is controlled by Condit Dam and is being addressed through the FERC relicensing. The riparian process is in good shape except for riparian function in Rattlesnake and Indian Creeks. There is a lack of wood in all reaches due to reduced recruitment and removal. The sediment and hydrology processes are dominated by the effects of roads and forest clearing.

The most challenging watershed processes to return to more normative conditions will be the sediment and hydrology due to higher road densities. Much of the upper assessment unit is under federal ownership and managed by the USFS and their watershed analysis recommendations include reducing road densities. The riparian function in the mainstem is good and can be improved with landowner co-operation in the tributaries. Wood recruitment will develop naturally as protected riparian areas mature. However, there is a challenge in the mainstem White Salmon River striking a balance of leaving sufficient wood in the river for fish habitat and maintaining enough open channels for whitewater recreation.

A key finding from the White Salmon analysis is that habitat in the subbasin above the dam is capable of supporting anadromous fish. Therefore, the prime strategy is for protection of functional habitat and watershed processes throughout the basin. Another prime strategy is to carry out the necessary evaluations to fill data gaps and key uncertainties with population monitoring, physical habitat monitoring, road analysis, and in-stream water monitoring.

For restoration and rehabilitation actions, those actions that have the highest certainty regarding effectiveness in restoring habitat quality were projects in Rattlesnake and Indian Creeks designed to reduce maximum water temperatures, stabilize banks and provide potential wood recruitment through plantings in the riparian zone. Other primary actions include screening and water conservation strategies in Buck Creek and decommissioning of roads identified in the USFS watershed analysis.

The remaining anadromous fish strategies involve an update to the re-introduction plan including risk assessment for genetic diversity and population maintenance during dam removal, hypothesis testing for strategies, population monitoring and evaluation, and adaptive management sections. In general, the Washington Department of Fish and Wildlife biologists that conducted the analysis felt that a monitoring and evaluation strategy is needed to guide adaptive management

A general theme across the subbasin is a reduction in the quantity and quality of all types of wildlife habitat that the focal and other species need to flourish.

Riparian wetlands have been lost as floodplain habitats have been converted to human uses. That loss of riparian wetland habitat structure and hydrology reduces or ecological function.

This plan's objectives and strategies recommend efforts to restore riparian wetland habitat in order to bring benefit to both fish and wildlife. Those actions involve both restoring habitat by increasing native vegetation and creating adequate hydrological conditions to reconnect habitats in tributary and mainstem floodplain areas.

Strategies to restore beaver habitat are possible and will bring populations closer to historic levels, helping to achieve the goal of restoring hydrological function to floodplains. The restored habitat would benefit beaver, whose activities would in turn benefit the salmon and steelhead that visit the watershed. Beaver dams result in the creation of off channel habitat and increased channel stability.

Shrub steppe habitat has been reduced in quantity and quality. Land conversion and changes in fire intervals has resulted in fragmentation and reduction in size of functional shrub steppe habitat. Shrub steppe has been replaced by agriculture and grassland. Grassland quality has been reduced and in many places is mostly a monoculture of cheatgrass and other noxious weeds.

Habitat quality and ecological function in Ponderosa pine / Oregon white oak habitat has been reduced because of altered forest species composition and age structure. Historic harvest practices and fire suppression have resulted in a replacement of late seral stands and large overstory trees with smaller trees and denser stands.

Objectives include retaining any surviving late seral stands and large decadent wildlife trees and managing stands to restore functional habitat. Such strategies include identifying areas where thinning and/or prescribed burning would help achieve habitat objectives and thinning appropriate stands to decrease stand density.