

# ***White Chuck Watershed Analysis***

## **Chapter 2 - Issues and Questions**

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## **Introduction**

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This step of the watershed analysis process helps to focus the analysis on the key elements of the ecosystem that are most relevant to the management questions, human values, or resource conditions within the watershed. This chapter is arranged by three major ecosystem types, Aquatic System, Terrestrial Ecosystem, and Human Use. For each ecosystem type, river basin and watershed scale issues are described. The watershed level issues were developed during an interdisciplinary process that included public involvement. For each watershed level issue, key questions were formulated.

## **Aquatic System**

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### ***Broader Scale Issues – Sauk and Skagit River Basin***

The Skagit River is one of only four river systems in the State of Washington managed primarily for wild salmon and sea-run cutthroat trout (WDFW and WWTIT 1994). Fish production in the Skagit River tributaries is significant to the sport, subsistence, and commercial fisheries in the Puget Sound Region. The Sauk River flows into the Skagit River and supports spawning runs of all five Pacific salmon species (Chinook, Coho, chum, pink, sockeye) as well as steelhead, coastal (sea-run) cutthroat and sea-run char. The Sauk River is the largest free-flowing tributary of the Skagit River, making it important as refugia habitat for anadromous fishes of the Skagit River. The White Chuck River supports Chinook and Coho, but only a limited amount of pink, sockeye, and sea-run cutthroat and no chum. It is a major tributary to the Sauk River and provides a source of high quality water.

### ***Watershed Scale Issues – White Chuck River***

#### **Key Issue**

Healthy and diverse aquatic communities, and their maintenance.

#### **Key Questions**

How and to what extent are human influences affecting aquatic processes, habitat, and species within the watershed?

What are the effects of stocking lakes on native aquatic species?

What are the potential effects to at-risk species downstream in the Sauk River?

#### **Key Issue**

Water quality maintenance.

#### **Key Questions**

What are the processes most likely to effect water quality?

What are the potential threats to water quality?

How and to what extent are human influences affecting soil erosion and sedimentation processes?

## **Terrestrial Ecosystem**

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### ***Broader Scale Issues- Sauk and Skagit River Basins***

Over the past century, there has been the conversion of low and mid-elevation west-side forests to agriculture, industrial, urban and other uses. This has resulted in a regional reduction of older forests, especially in the western hemlock and Pacific silver fir zones, and a relative increase in the value of the late-successional lands on public lands to provide for organisms associated with the older forests. Due to the large amount of lands managed as wilderness, and currently as Late Successional Reserves in the North Cascades, this area is important for the potential conservation of a number of large home-range species, such as the grizzly bear, wolverine, gray wolf and spotted owl. Outdoor recreation is also attracted to the North Cascades, and creates challenges in managing for plant and wildlife resources, as well as human use demands.

Modification of habitat over the past century has had an impact on plant distribution and abundance. Roads, and disturbed sites from agriculture, timber harvests, dispersed recreation, and land conversion to urban sites has led to the introduction and spread of invasive weed species.

The Sauk and Skagit River basins have been intensively harvested and farmed since the late 1800s. The remaining late successional forest is found primarily on federal lands. The forest stands within the lower elevations of the Sauk drainage were railroad logged in the late 1800s through the 1940s. In the 1950s through 1980s, timber harvesting on National Forest pushed into the upper elevations with logging roads that provided easier access to backcountry, and more fragmentation of habitat. The White Chuck River drainage is one of four major tributaries to the Sauk River, and is a relatively intact drainage of older forests and unroaded areas. The watershed receives high levels of backpacking recreation due to the White Chuck being a major portal to the wilderness, Kennedy Hot Springs, and climbing Glacier Peak. Recreational demand on the White Chuck area is expected to continue with population growth in the Puget Sound area. This will contribute to increasing demand that federal lands serve both wildlife and plant recovery plans as well as human use desires.

### ***Watershed Scale Issues – White Chuck River***

#### **Key Issue**

Maintenance of unique plant and wildlife habitats, and species of concern in the watershed.

#### **Key Questions**

What and where are the known populations of botanical and wildlife species of concern? What is their relative importance in the analysis area and at a larger scale?

What and where are the known or suspected habitat types that are important to the above species, and to biodiversity?

What and where are areas important for ethno-botanical reasons?

Are there threats to species viability or habitats?

What and where are noxious weeds? What factors are involved in their introduction, spread, and persistence?

Are there activities needed to address botanical and wildlife habitat and species issues?

**Key Issue**

Maintenance of seral stages and disturbance regimes in the watershed within the range of natural variability.

**Key Questions**

Is the basin vegetation within the range of natural variability?

Are there actions needed to return to the range of natural variability?

What are the factors and processes limiting wildlife and botanical species' use of habitats?

**Key Issue**

Human influences on terrestrial systems and organisms over time.

**Key Questions**

How, and to what extent, are humans influencing the terrestrial system?

Are there actions needed to adjust human influences?

## Human Use

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### ***Broader Scale Issues- Sauk and Skagit Basins***

In October 2002, the Washington State Interagency Committee (IAC) for Outdoor Recreation released the updated State Comprehensive Outdoor Recreation Planning (SCORP) Document. This document reports that walking and running are still some of the most popular activities. In 1990, IAC reported that 76 percent of all Washington households walked or hiked for recreation. In the October 2002 report, participation had dropped to 53 percent. However, since 1990, the state has seen a 20 percent increase in population (approximately one million people). Concurrent reports of increased obesity and diabetes indicate an increasingly sedentary population. The National Forests are the largest owners of public lands in Washington State at nine million acres. The Department of Natural Resources has three million acres and the National Park Service two million acres. The Washington State Parks reports ownership of about one hundred, seven thousand acres of recreational lands. This indicates that the Forest Service may currently be the largest potential provider of recreation opportunities and will see increased pressure to provide recreational opportunities. The SCORP concluded that an increasingly sedentary population is tending to exercise closer to home and recommended that the State concentrate efforts in acquiring low-elevation open space, improving or creating city and neighborhood parks and sporting facilities such as ball fields. It also stressed that this did not lessen the increasingly important role of federal agencies, especially the Forest Service, to consider the SCORP findings in management plans, maximize its recreation resources and work with constituents to identify areas outside wilderness that would allow for higher levels of access and use.

A large portion (71%) of the White Chuck Watershed is designated wilderness and the White Chuck Trailhead is a major portal into the Glacier Peak Wilderness and to Glacier Peak climbing routes. The demand for hiking and climbing is expected to continue to increase.

Recreation, tourism, and forest products are a significant part of the local and regional economy. Changes in the outputs of forest products and recreational opportunities could affect the local and regional economies. Identification of the level of sustainable economic and non-economic outputs could help direct the future of local and regional economies and communities.

### ***Watershed Scale Issues – White Chuck River***

#### **Key Issue**

Demand for human use in the watershed.

#### **Key Questions**

What is the demand by the public for access and can it be balanced with resource and budget concerns?

What are the current and anticipated future demands for recreation use and can the current management of trail and road facilities provide for it?

What are the human uses in the Glacier Peak Wilderness and can they be provided and still preserve and protect the wilderness character?

Are there areas important for tribal uses or treaty rights?

**Key Issue**

Contribute toward the Forest Plan goal of providing for the production of timber on suitable lands.

**Key Questions**

What areas are suitable for timber production in the watershed, and where are opportunities for timber management?

What kind and quantity of special forest products are available in the watershed that can be provided for human use?