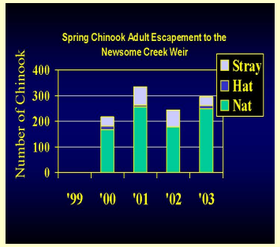
COLUMBIA GORGE

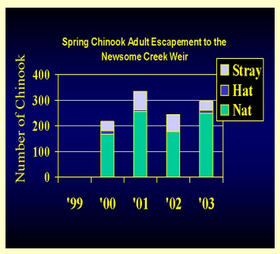
Subbasin: Hood

Bull Trout



Federal Designation: Threatened
Core Population: Hood
Current Distribution:
Biological Objective: ≥ 500 adults[1]
Status: Not achieved, 300 adults[1]

Coastal Cutthroat Trout



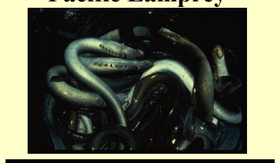
Resident

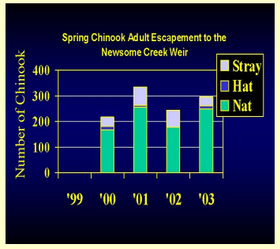
State Designation: Vulnerable Sensitive
Population: Hood River
Current Distribution:
Biological Objective:
Status:

Sea-Run

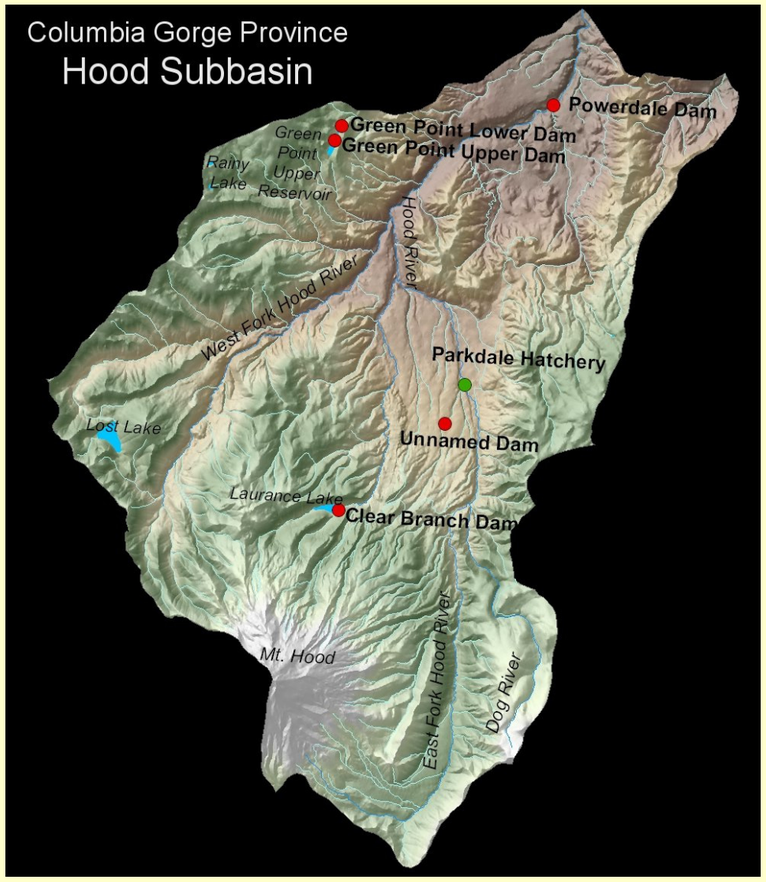
State Designation: Critical Sensitive
Population: Hood River
Current Distribution:
Biological Objective:
Status:

Pacific Lamprey





State Designation: Critical Sensitive
Population: Hood River
Current Distribution:
Biological Objective:
Status:



Limiting Factors

Water Quality— Exceed standards for temperatures, pH, chemicals, and dissolved gas due to dams, and past and current forestry/ agriculture practices
Isolation/Migration Impediments— Loss of gene flow and access to rearing habitat. Clear Branch Dam fish trap is not effective for passing fish.
Entrainment—Downstream entrainment at Clear Branch and Powerdale dams
Flows-Altered and reduced flows due to dam operations and diversion structures have reduced flows
Lack of In-stream Cover—lack of large wood due to past forestry practices

Summer

Federal Designation: Threatened
ESU:
Current Distribution:
Biological Objective:
Status:

Winter

Federal Designation: Threatened
ESU:
Current Distribution:
Biological Objective:
Status:

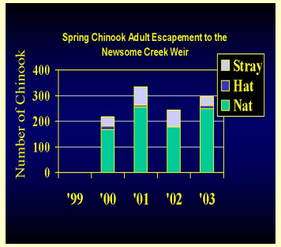
Spring

Federal Designation: Threatened
ESU:
Current Distribution:
Biological Objective:
Status:

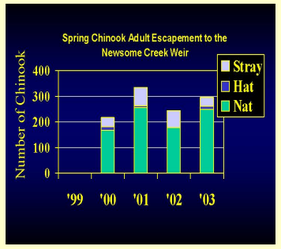
Fall

Federal Designation: Threatened
ESU:
Current Distribution:
Biological Objective:
Status:

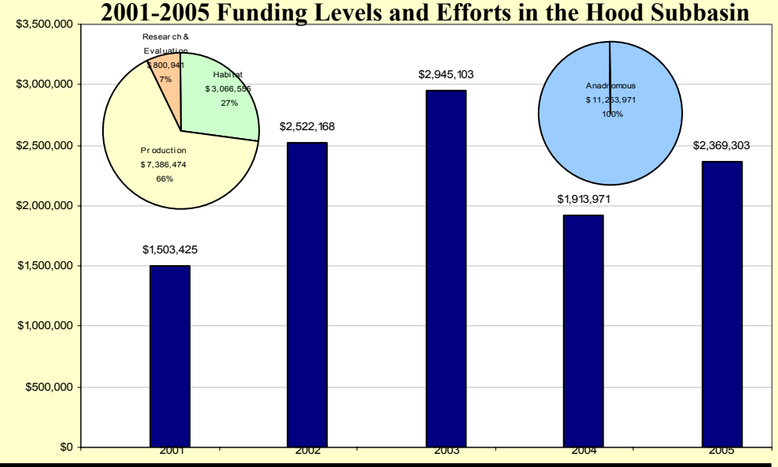
Steelhead



Chinook



2001-2005 Funding Levels and Efforts in the Hood Subbasin



INTRODUCTION

The Columbia River flows for over 1,900 km and drains 670,000 square km in seven states and Canada (Figure 1). Within this watershed are approximately 1,239 dams (Lee et al. 1997), 29 of which are federal hydroelectric facilities (Figure 1). Construction of these facilities eliminated or isolated habitats that were available to migratory fish and wildlife. In addition, anthropogenic activities (e.g., forestry and agriculture practices, mining, and urbanization) have imperiled many native fish and wildlife species.

RESIDENT FISH

At least 53 native resident fish species and another 50 non-native species exist throughout the Columbia River Basin. Habitat fragmentation can jeopardize these resident fish populations by reducing habitat area, complexity, and connectivity. The effects of hydroelectric operations and anthropogenic activities on resident fish species, although less chronicled than those of anadromous fish, have been deleterious, resulting in the losses of numbers and diversity of native resident fishes. Thurow et al. (1997) evaluated the population status of native resident salmonids and chars in the interior Columbia River Basin and found that all species exhibited declines in abundance and distribution and an increase in population fragmentation. The magnitude of these declines has resulted in a number of resident fish species receiving consideration for protection via state or federal regulations.

ANADROMOUS FISH

Historically, salmon and steelhead migrated through much of the Columbia River Basin and spawned as far upriver in the Columbia as the headwaters at Columbia Lake, British Columbia, 1,200 miles from the mouth of the river near Astoria, Oregon. Salmon and steelhead migrated up the Snake River, the Columbia's largest tributary, as far as Shoshone Falls, 615 miles from the confluence and more than 900 miles from the Pacific Ocean.

Beginning in the late 1800s and increasing from the 1930s on, there was a large decline of salmon and steelhead in the Columbia River and its tributaries, from an estimated peak of 10-16 million adult fish returning to the basin each year to about 1 million in recent years. While loss of habitat, harvest, and variable ocean conditions have all contributed to this decline, it is estimated that the portion of the decline attributable to the construction and operation of hydroelectric dams in the Columbia River Basin is, on average, about 5 to 11 million adult fish.

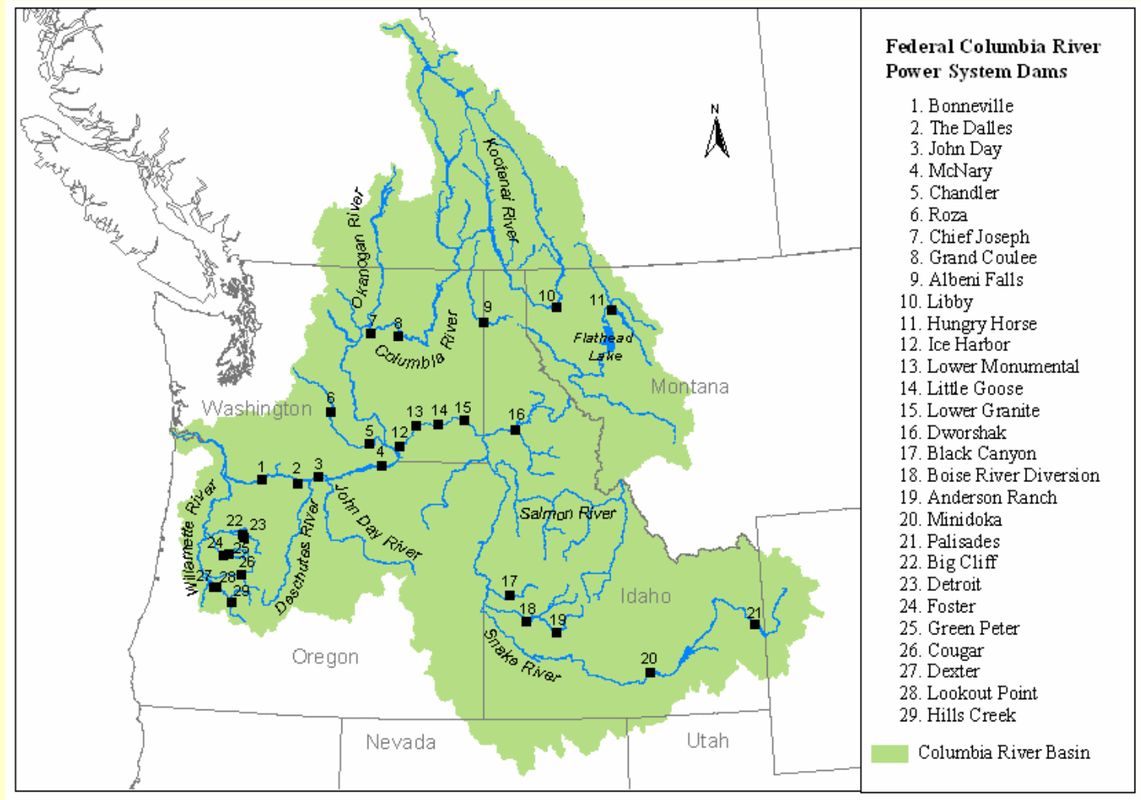


Figure 1. Watershed of the Columbia River Basin and location of federal hydroelectric dams.

WILDLIFE

The development of the hydropower system in the Columbia River Basin has affected many species of wildlife. 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. Besides hydro-operations, the construction of roads and facilities, the draining and filling of wetlands, stream channelization and shoreline riprapping have also altered habitats that are essential to the survival of wildlife throughout the Columbia River Basin. Lost, as a result of inundation, were thousands of acres of native shrub and grasslands. Consequently, species that were associated with these habitats have become depressed.