

## CHAPTER 8 SPECIES AND HABITAT: AQUATIC

### Characterization

This chapter provides an overview of available information regarding the status of aquatic species and habitat within the Gordon Creek Watershed. Much of the information presented here has been extracted from analyses and reports that have been performed for neighboring watersheds within the Sandy River Basin. There is little information documented by the Oregon Department of Fish and Wildlife (ODFW), or other sources, regarding the status of fish in Gordon Creek specifically. Information related to the life history of migratory and resident fish species is presented, supplemented by population trends in nearby rivers, including Bull Run and the upper Sandy River.

The second section of this chapter discusses the condition of the habitat features present in and along Gordon Creek that are important to fish and other aquatic species. Information is presented from ODFW aquatic habitat surveys conducted in Gordon Creek in 1993. A large flood event occurred in 1996, however, and the degree to which conditions have changed since the surveys were conducted is unknown.

### Current Conditions

#### *Threatened, Endangered, and Sensitive Species*

Populations of several fish species found in the Gordon Creek Watershed are protected by the federal Endangered Species Act (ESA). In addition, the State of Oregon maintains a list of state threatened and endangered species, and the Oregon Natural Heritage Information Center (ONHIC) tracks listings and includes additional categories of concern. Finally, the Bureau of Land Management (BLM) categorizes species as “bureau sensitive” and “bureau tracking”, which receive additional management consideration.

Spring and fall chinook salmon, coho salmon and winter steelhead trout are all listed as threatened under the ESA. Coho salmon are also listed as endangered by the state of Oregon. Pacific lamprey are considered a federal species of concern. The ESA listed species are monitored and regulated by state and federal agencies to prevent additional decline in their populations.

Summary information regarding the status of these species, as well as other species found in the Sandy River Basin, is shown in Table 8-1.

**Table 8-1. Special status fish species in the Gordon Creek Watershed.**

Common Name	Scientific Name	Federal Status	ODFW Status	ORNHIC List	BLM Status
Fall chinook salmon (Lower Columbia River)	<i>Oncorhynchus tshawytscha</i>	LT	SC	1	
Spring chinook salmon (Lower Columbia River)	<i>Oncorhynchus tshawytscha</i>	LT	SC	1	BA
Winter steelhead (Lower Columbia River ESU)	<i>Oncorhynchus mykiss</i>	LT	SC	1	
Bull trout (Columbia River population)	<i>Salvelinus confluentus</i>	LT	SC	1	
Coho salmon (Lower Columbia River)	<i>Oncorhynchus kisutch</i>	LT	LE	1	
Pacific lamprey	<i>Lampetra tridentata</i>	SOC	SV	4	BT

Federal: LT = Listed as Threatened Species, SOC = Species of Concern

ODFW: SC = Critical, LE = Listed as Endangered Species, SV = Vulnerable

ORNHIC: 1 = Threatened or endangered throughout range, 4 = Taxa of conservation concern, are rare but secure, or declining in numbers but still too common for T and E status

BLM: BA = Bureau Assessment, BT = Bureau Tracking

### ***Anadromous Fish***

Few data exist regarding the numbers of anadromous fish that historically or currently use the Gordon Creek Watershed. Information in this document often refers to the Sandy River Basin or the neighboring Bull Run Watershed. A summary of the primary anadromous fish stocks in the Gordon Creek Watershed is provided in Table 8-2.

### **Steelhead Trout (*Onchorynchus mykiss*)**

Steelhead trout express an array of life histories, including a variety of freshwater and saltwater rearing strategies, and adult spawning and migration strategies. Juvenile steelhead may rear one to four years in fresh water prior to their first migration to salt water. Saltwater residency may last one to three years. Adult steelhead may enter fresh water on spawning migrations year round if habitat is available for them, but generally spawn in the winter and spring. Steelhead may spawn more than once, returning to salt water between spawning runs. Resident forms that do not migrate to the ocean are referred to as rainbow trout.

Winter steelhead enter the Sandy River Basin from November through May (Map 8-1). A native late-winter steelhead run begins entering the Sandy River in February, although most of the run arrives in April and May. Historically, native fish spawned throughout the watershed, but today most of the spawning occurs in the upper Sandy River Basin. An introduced hatchery run from Big Creek stock enters the Sandy River between November and May. The hatchery fish now account for 70 to 80 percent of winter steelhead in the subbasin. Most of the fish bypass Gordon Creek and ascend past Marmot Dam to spawn in the Salmon River and upper Sandy River tributaries, although some spawning and rearing occurs in Gordon Creek (USFS 1997).

**Table 8-2. Fish Stock Summary.**

<b>Species/Run</b>	<b>Origin/Hatchery Stock</b>	<b>Typical Spawning and Rearing Habitat</b>	<b>Spawning Time</b>	<b>Freshwater Rearing</b>
Fall Chinook	Native  Wild spawning from previous hatchery stocking	Low-gradient mainstem spawners (LWD* and pools)	Fall/winter	3-6 months
Spring Chinook	Native Hatchery-Willamette	Low-gradient mainstem spawners (LWD and pools)	Late summer Early fall	Up to 1 year
Coho	Native Hatchery - Sandy	Low-gradient, small to medium-sized streams and side channels. LWD	Late fall	1 year +
Winter Steelhead	Native Hatchery – Big Creek	Riffles, glides	Late winter, spring	1-4 years
Resident Cutthroat	Native  Genetically unique population upper Bull Run River and Bull Run Lake	First- to third-order tributaries. Juveniles use pools and large channels with LWD.	Spring	N/A
Sea-run Cutthroat	Native	Small tributaries. Juveniles use pools and large channels with LWD.	Winter/early spring	1-6 years
Rainbow Trout	Native	Tributaries, margins of mainstems, and side channels	Spring	N/A
Pacific Lamprey	Native	Clear gravel riffles and runs	Spring/early summer	3-8 years

\* LWD = Large Woody Debris





























