

## Endangered Species Act Constraints

**A TOTAL OF 13 SALMON** and steelhead stocks in the Columbia River are listed under the federal Endangered Species Act (ESA) as threatened or endangered, starting with Snake River sockeye in 1991. In all cases, states and other entities must obtain a federal permit before conducting fisheries or any other activity that would impact listed fish from these 13 Evolutionarily Significant Units (ESUs). These permits specify the allowable “take” of listed fish within a given ESU. The chart below shows the ESUs present during various management periods.

<b>Salmon and Steelhead Listings in the Columbia River</b>		
<b>Spring</b>	<b>Summer</b>	<b>Fall</b>
<b>January 1 – June 15</b>	<b>June 16 – July 31</b>	<b>August 1 – December 31</b>
Snake River spring/summer Chinook	Snake River sockeye	Snake River fall Chinook
Upper Columbia spring Chinook	Lower Columbia steelhead	Lower Columbia fall Chinook
Lower Columbia spring Chinook	Mid-Columbia steelhead	Columbia River coho
Upper Willamette spring Chinook	Snake River steelhead	Columbia River chum
Lower Columbia steelhead	Upper Columbia River steelhead	Mid-Columbia steelhead
Mid-Columbia steelhead		Snake River steelhead
Upper Willamette steelhead		Upper Columbia River steelhead

In August 2008, a new 10-year agreement was approved for salmon management on the Columbia River that included new ESA impact levels for several listed stocks. That agreement, reached by parties to the *U.S. v. Oregon* case of 1969, provides a framework for rebuilding weak salmon populations and for conducting sustainable fisheries. The National Marine Fisheries Service (NMFS), a party to the agreement, has determined that the new impact levels described in the accord are consistent with the ESA.

The new *U.S. v. Oregon* management agreement includes a sliding scale harvest schedule that allows for limited incidental mortality of the ESA-listed fish during fisheries that target healthy, harvestable stocks; the greatest limitations are when the runs are at low levels. In the case of wild spring Chinook, the new impact limit restricts non-tribal fisheries to an incidental impact rate of 0.5% to 2.7%, compared to the previous rate of 0.5% to 2.0%. The lowest rates apply to poor returns such as those observed in the 1990s while the highest rates reserved for returns that are above even recent year

averages. NMFS has concluded that the sliding scale harvest schedule is consistent with recovery of the stocks and should be in place for the long term.

### **Spring Chinook**

After decades of fishery restrictions on upriver spring Chinook, the states of Washington and Oregon implemented mark-selective sport and commercial fisheries resulting in small impacts on ESA-listed stocks while providing opportunity to harvest abundant hatchery fish. Since 2001, sport and commercial fisheries have used mark-selective fishing techniques that require the release of all spring Chinook with an adipose fin intact, and have a low level of release mortality. From 2002-2007, the total incidental mortality rate from non-tribal fisheries has averaged 1.6%, compared to the 2% ESA limit.

The mortality rate that is applied to the fish that are released is based on scientific studies of release mortality and in the Columbia River the rates are established by consensus of state, tribal and federal biologists. At the present time, the rate is 10% in sport fisheries. In commercial fisheries the release mortality rate is 12.7% (tangle nets) and 40% (large mesh gill nets). Tangle nets are small mesh nets (4¼ inch mesh) that capture the salmon in the teeth or around the head, causing the fish to be tangled in the net and not captured by the gills. The mortality rate associated with tangle nets is significantly lower than gill nets. It is the mortality of the released fish that is included in the calculations for the ESA impact rates; NMFS has reviewed and approved these mortality rates for use in determining compliance with the ESA take permits.

Until 2002, non-Indian sport and commercial catch of upriver spring Chinook had never been formally allocated, although *U.S. v Oregon* agreements limited seasons for sport and commercial fisheries which resulted in relatively balanced impacts to upriver spring Chinook. Instead, the commercial/recreational allocation was specified by the Willamette allocation formula determined by the Oregon Commission. Since 2002, four policies guiding allocation of the ESA-limits to sport and commercial fisheries have been in place.

### **Upriver Spring Chinook Impact Allocation Accounting**

Year	Sport				Commercial			
	Allocation	Impact Rate		%	Allocation	Impact Rate		%
		Pre	Post			Pre	Post	
2000	50	0.10%	0.06%	62%	50	0.10%	0.13%	131%
2001	47	0.80%	0.95%	119%	53	0.90%	0.49%	55%
2002	60	1.00%	1.14%	114%	40	0.70%	0.80%	115%
2003	65	1.10%	0.85%	78%	35	0.60%	0.70%	117%
2004	60	1.20%	1.18%	98%	40	0.80%	0.94%	118%
2005	60	1.20%	1.05%	87%	40	0.80%	0.65%	82%
2006	57	1.14%	0.57%	50%	43	0.86%	0.83%	97%
2007	57	1.14%	0.82%	72%	43	0.86%	0.54%	63%

Washington Department of Fish and Wildlife

## **Winter Steelhead**

Winter steelhead are present in the lower Columbia River primarily during January through March. The ESA limit for wild winter steelhead is 2% of the total wild winter steelhead population. This 2% limit applies to all mainstem Columbia River fisheries. Recreational fisheries in the tributaries are managed under a different ESA take limit that is in addition to the mainstem limit. In the mainstem, winter steelhead are primarily an incidental catch during the commercial spring Chinook tangle net fishery, and mainstem sport fisheries are mark-selective and primarily target salmon. Test fishing is conducted prior to commercial fishery openings in part to determine when steelhead are least abundant.

## **Summer Steelhead**

The Columbia River summer steelhead run is made up of populations originating from tributaries both below and above Bonneville Dam. Summer steelhead enter the Columbia River primarily from April through October each year, with most of the run entering from late June to mid-September. Steelhead are intercepted in sport fisheries throughout the basin. Summer steelhead sport fisheries allow retention of fin-clipped hatchery fish only. Commercial harvest of steelhead by non-Indians has been prohibited since 1975 and time, area, and gear restrictions are implemented to minimize incidental interception of steelhead.

Sport fisheries targeting summer steelhead occur primarily during May through July below Bonneville Dam. During June and July, commercial fisheries that may handle steelhead include the summer Chinook fishery and the sockeye fishery. Summer Chinook commercial fisheries occur using large mesh nets (8-inch minimum), which allows the majority of the steelhead to pass through without being caught.

## **Sockeye**

The Columbia River sockeye run consists of three stocks, the Okanogan, Wenatchee, and Snake River stocks. The Okanogan and Wenatchee stock abundance is cyclic, with occasional strong return years followed by years of low returns.

The Snake River sockeye run, largely returning to the Stanley Basin in Idaho, is extremely depleted. This stock was listed under the ESA as endangered in November 1991. In some years in the 1990s, zero fish returned. Production is maintained through a captive brood program and most returning adults are products of this program. In recent years, there have been very few fisheries targeting sockeye because of the small returns in recent years and the small ESA impact limit on Snake River sockeye (1%).