STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2009

Robert Stansell, Sean Tackley, and Karrie Gibbons - (541) 374-8801

Fisheries Field Unit
U.S. Army Corps of Engineers
Bonneville Lock and Dam
Cascade Locks, OR 97014

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This status report summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from September 2008 through January 29, 2009.

Intermittent observations for sea lion activity at Bonneville Dam tailrace occurred from September 2008 through 16 January 2009. The information prior to January 2009 is provided here to make regional managers aware that California sea lions have now been seen up in the Bonneville Dam tailrace preying on fall Chinook and other fall fish species for the first time. Regular daylight observations began on January 19 and will continue to the end of May, five days per week. Weekends will not be regularly monitored this year. Predation estimates will be expanded for hours and days not observed at the end of the observation season and these updated figures will be presented in our annual field report.

Boat-based crews from Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), and Columbia River Inter-Tribal Fish Commission (CRITFC) will haze sea lions within the Bonneville dam boat restricted zone (BRZ) and in downriver areas two days per week initially, and expand to seven days per week by March. The Corps is contracting U.S. Department of Agriculture (USDA) Wildlife Services to haze sea lions from March 1 through May 31, 2009 from dam structures and adjacent lands seven days per week, eight hours per day, during daylight hours.

ODFW and WDFW plan to deploy three sea lion traps at the corner collector of Bonneville powerhouse two during the first week of February 2009 and one trap at the old navigation lock channel by powerhouse one. These traps will be used to mark California sea lions not previously captured and to remove animals that meet removal criteria, per removal authority granted to the states of Oregon, Washington, and Idaho by NOAA Fisheries under Section 120 of the Marine Mammal Protection Act. All traps will be locked open for the remainder of the month to allow sea lions to begin using them as resting areas. If the 9th Circuit Court does not grant a stay of the states' removal actions (the HSUS request for a stay on the states' actions was denied in the U.S. District Court on January 29, but a HSUS appeal to the 9th Circuit Court is anticipated), then ODFW and WDFW will begin removal operations as soon as March 1, depending upon use of the traps by sea lions. Final plans are being developed by the states for transfer of sea lions to captivity and for euthanizing animals that can not go to captivity or do not use the traps. ODFW and WDFW expect to operate the traps weekly (1-3 events per week) through the end of May.

PRELIMINARY RESULTS

All data presented here are preliminary as of the status report date. Predation figures are unexpanded and sea lion abundance estimates will likely change as the season progresses and data are proofed and analyzed, so please use these estimates with appropriate caution. A final report of the 2009 evaluation will be available later this year.

PINNIPED ABUNDANCE

Fall and Early Winter Activity: September 18 – December 31

Two California sea lions (*Zalophus californianus*) were regularly seen foraging in the Bonneville Dam tailrace throughout the fall and winter months, significantly earlier than recorded in past years. California sea lion C265, an individual that has been extensively documented at the dam since 2002, was first sighted on September 18. In response, we began conducting near-daily (most weekdays) 30-45 minute surveys of the Bonneville dam tailrace areas to document sea lion presence and any predation activity. C265 was observed on 41 of 46 observation days between September 18 and December 31, and was likely present on most of the days not observed. A second well-documented California sea lion, C805, was documented on 9 or 46 observations days between October 15 and December 31. A third California sea lion was seen on October 8, C?57, but only briefly. For the limited days and hours observed between mid-September and the end of December, C265 was observed to take 19 Chinook, 6 Coho, 2 Steelhead, and 5 unknown fish. C805 was seen to take 4 Chinook and 1 unknown fish. C?57 was seen to take 2 Chinook.

Presence of Steller sea lions (*Eumetopias jubatus*) were first documented this season on October 15. Because we did not conduct full-time observations, it is difficult to estimate total abundance during the pre-observation season period. However, three to four Steller sea lions were regularly documented during periodic surveys in December. All Stellers combined were seen to take 3 sturgeon and 3 unknown fish in the tailrace area during this time.

Observation Season Activity: January 1 – January 29

Full daytime observations did not begin until January 19, with limited observations occurring before then. We have seen as many as 17 Steller sea lions and four California sea lions at the dam on any given day (see Figure 1). The highest daily abundance estimate for all pinnipeds at Bonneville dam was 21 on January 23 We have seen at least five different California sea lions, 17 Steller sea lions, and 1 harbor seal (*Phoca vitulina*) since full-time monitoring began. All five of the California sea lions (C265, C635, C805, BZC194, BZC278) have been seen in previous years. An additional four “Bonneville” animals have been spotted in Astoria in recent months.

Up to nine Steller sea lions have been documented hauling out inside the second powerhouse corner collector (B2CC) outfall. With the exception of C265, who has been hauling out on a barge in the old navigation lock and on the B2CC apron at PH2, the California sea lions have not been seen hauling out at the dam yet.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2009 are:

	California Sea Lions	Steller Sea Lions	Total
Chinook	0	1	1
Steelhead	19	12	31
Sturgeon	1	121	122
Lamprey	0	1	1
Shad	3	10	13
Other	0	1	1
Unknown	11	159	170

It is likely that most unknown fish caught by Steller sea lions are sturgeon, while those unknown fish caught by California sea lions were Steelhead. The Steller sea lions are catching most of the fish at the downstream range of our viewing area, making fish identification very difficult.

DETERRENTS

Hazing by the states from boats began the first week in January and has occurred a few days each week. Severe weather (snow, ice, sub-zero temperatures, 50mph winds) occurred many days through much of January, limiting days it was safe to operate from boats.

C265 was observed entering the powerhouse two fishway entrances in mid-January (before the sea lion exclusion devices – SLED's were installed, typically by the end of January). The Bonneville project crane crew responded quickly and had installed the SLED's in all 12 main entrances about two weeks early. The second powerhouse fishway is currently out of service for winter maintenance and will be operational by February 28. Barriers on the floating orifice gates are being attached this week and next and should prevent sea lion entry while allowing fish passage. Acoustic deterrents were deployed at powerhouse one and two fishway entrances on January 28.

OTHER ITEMS OF INTEREST

CRITFC will be working with ODFW and WDFW to attach about 15 acoustic tags to California sea lions trapped at Bonneville Dam and deploy an array of receivers within and downstream of Bonneville Dam tailrace to help managers better understand movement patterns, feeding locations, night-time activities and hazing impacts. CRITFC will also be testing a camera system with the goal of being able to enumerate pinniped presence and predation in stretches of the Columbia River below Bonneville Dam tailrace.

Portland State University Bi-410 class will be conducting observations at Willamette Falls Locks this winter/spring similar to the Oregon Department of Fish and Wildlife work of the late 1990's.

Figure 1. Daily minimum pinniped abundance (weekends interpolated).