

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

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This sixth weekly status report of 2009 summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through March 11, 2009.

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) began hazing sea lions within the Bonneville dam boat restricted zone (BRZ) and in downriver areas in January, and plan to continue through the end of May. The U.S. Department of Agriculture (USDA) Wildlife Services, contracted by the Corps, began to haze sea lions from dam structures and adjacent lands last week and will continue seven days per week, eight hours per day, during daylight hours 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

Over the past two weeks, we have seen an increase in the number of California sea lions present at the dam. We have seen as many as 15 California sea lions and 20 Steller sea lions at the dam on any given day (see Figures 1 and 2). There are more sea lions present per day on average so far this year, both for California and Steller sea lions, than in previous years (Figure 6). The highest daily abundance estimate for all pinnipeds at Bonneville dam was 27 on March 11. We have seen at least 21 different California sea lions, 20 Steller sea lions, and 2 harbor seal (*Phoca vitulina*) since full-time monitoring began. At least four of the California sea lions appear to be new visitors to Bonneville Dam, with the remainder repeats from previous years.

Both Steller and California sea lions are regularly hauling out on the powerhouse two (PH2) corner collector (B2CC) traps lately.

PREDATION DATA

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

	California Sea Lions	Steller Sea Lions	Total
Chinook	41	4	45
Steelhead	67	14	81
Sturgeon	25	521	546
Lamprey	0	3	3
Shad	6	12	18
Other	1	1	2
Unknown	46	289	335

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 (Figure 3). The Steller sea lions are catching most of the fish at the downstream range of our viewing area, making fish identification very difficult. Observed sturgeon catch is on pace to exceed the catch of previous years (Figure 4) with a record 50 being observed caught on February 23. More sturgeon are now being observed caught in PH2, followed by the spillway, then PH1 (Figure 5). Salmonid passage has just begun to increase to double digits most days, with 304 steelhead and 13 chinook passing since January 1, which is the second lowest to date total since we have been observing sea lions back in 2002. However, more Chinook have been observed taken by California sea lions than have passed the dam yet, so they are present and will likely push on through soon.

DETERRENTS/TRAPPING

Trapping by the states began this week and got off to a good start, with two animals on the removal list being trapped, one on March 10 and the other on March 11. The remote gate closing mechanisms had to be sent back to the manufacturer last week, but they were operational this week. Visual inspections and blood tests from the two captured animals were conducted by veterinarians to clear them for transportation to an aquarium in Chicago or Texas. One of these animals, C265, was the first animal to show up in the fall and prey on fall Chinook, coho, and steelhead. ODFW and WDFW expect to operate the traps weekly (1-3 events per week) through the end of May. C265 was found to have a herpes virus on his genitalia with the prognosis of death in 12-18 months, and therefore would not be suitable for the aquarium. We have not heard the results of the second blood test yet. These traps will continue to be used to mark California sea lions not previously captured and to remove animals that meet removal criteria in the following weeks, per removal authority granted to the states of Oregon, Washington, and Idaho by NOAA Fisheries under Section 120 of the Marine Mammal Protection Act.

Hazing by the states from boats began in January has been conducted on at least 26 days up through March 10. 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. Boat hazing continues to have some limited, local, short term impact in reducing predation in the

tailrace, primarily by Stellers on sturgeon, during this time of year. USDA agents began hazing from the tailrace decks last week.

OTHER ITEMS OF INTEREST

We received some night vision and thermal imaging gear from Portland District through the National Guard and will be conducting some night time observations in the coming weeks to determine if there is any significant night time feeding occurring near the dam.

Several acoustic receivers have been deployed in the tailraces of Bonneville and downstream by CRITFC personnel. As California sea lions that are not on the list are captured, acoustic tags will be attached to them. Movements within and downstream of the dam during day and night can give researchers a better idea of movement patterns and locations of some animals when not being observed up close to the dam during the day.

Figure 1. Daily minimum pinniped abundance (weekends interpolated) at Bonneville Dam, 2002-2009.

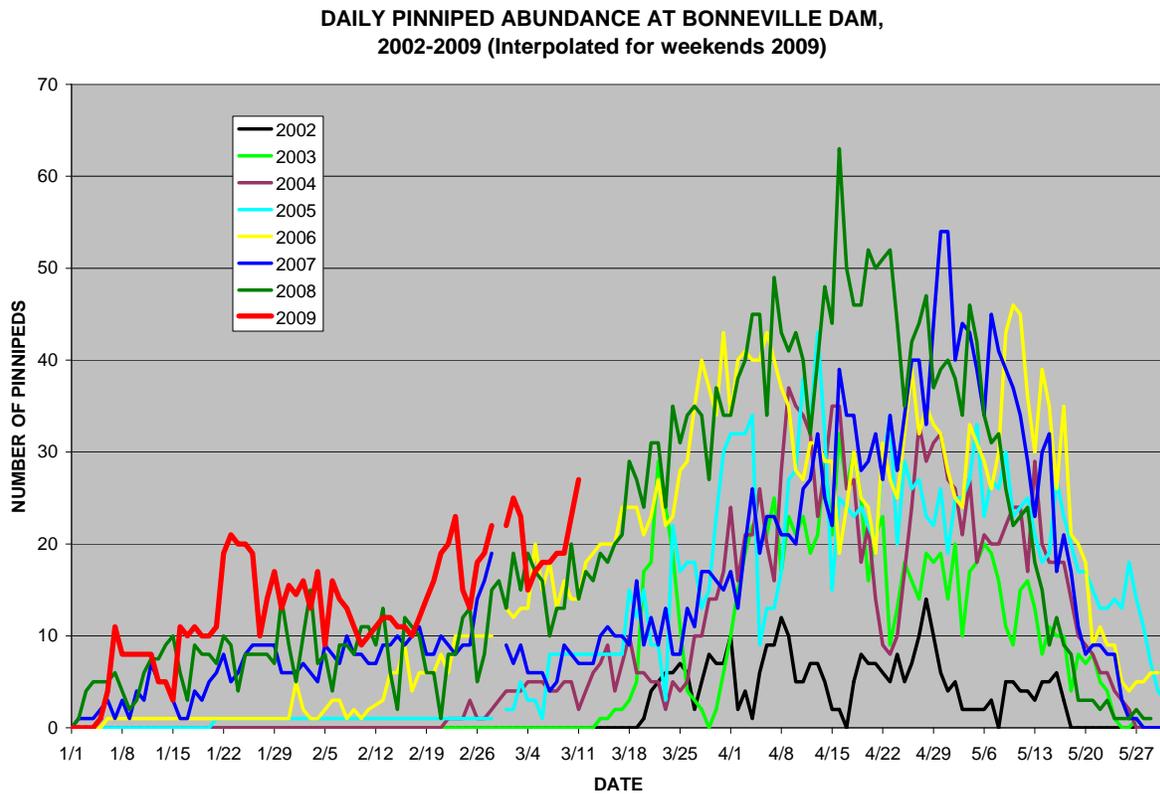


Figure 2. Daily pinniped abundance, by species, at Bonneville Dam, 2009.

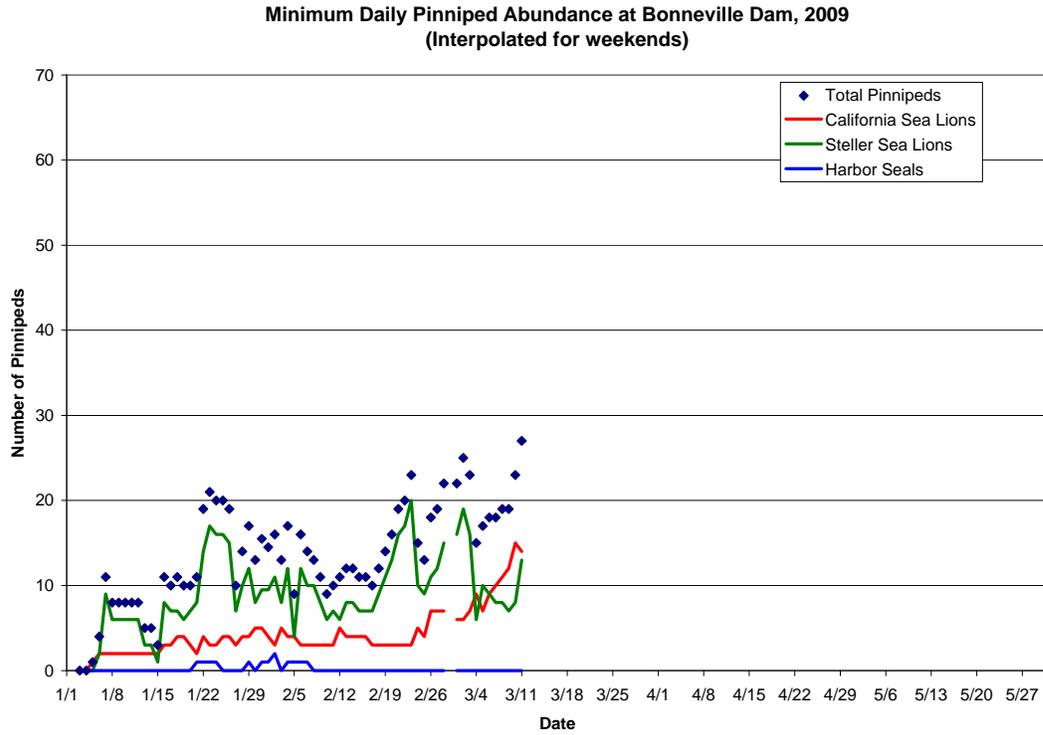


Figure 3. Major prey species taken by Pinniped species at Bonneville Dam, 2009.

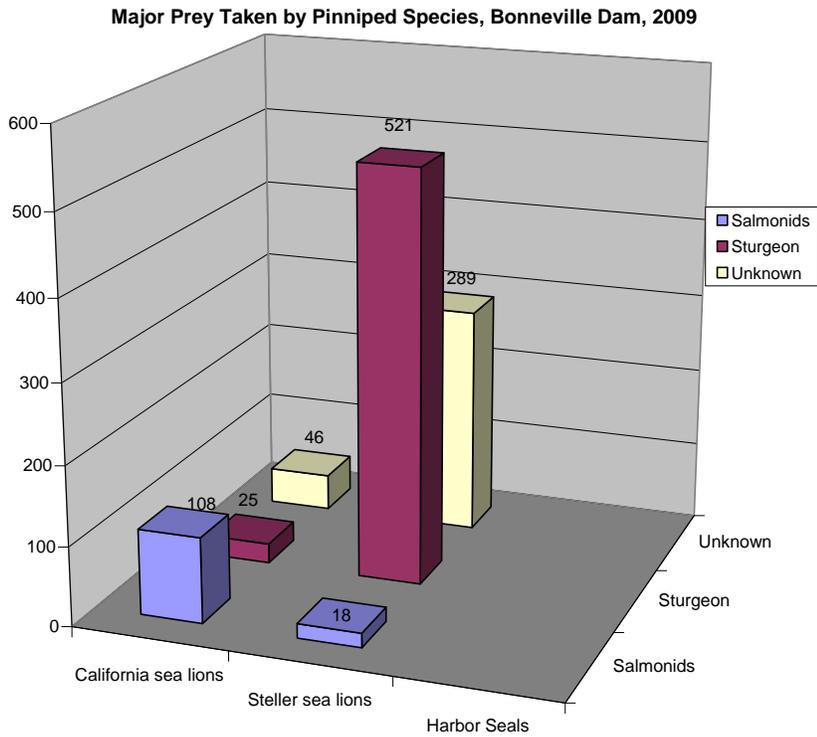


Figure 4. Daily cumulative sturgeon catch at Bonneville Dam, 2006-2009. All data unexpanded.

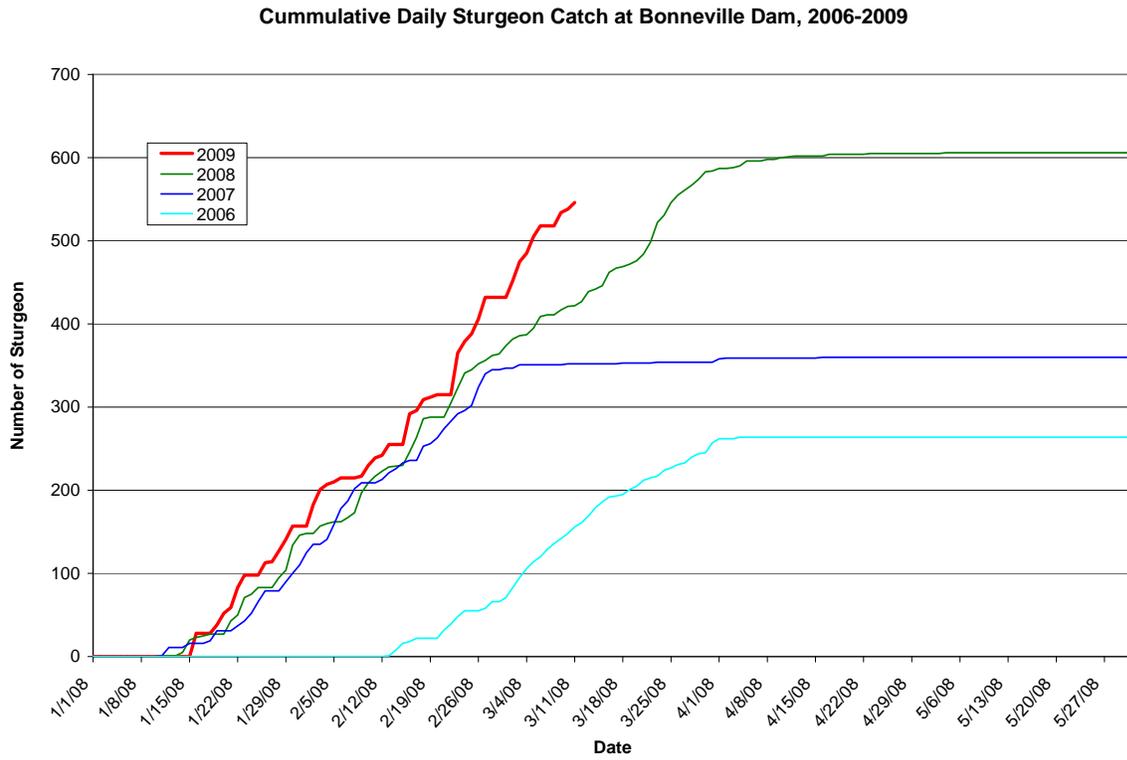


Figure 5. Major prey species taken by Pinnipeds by location, 2009.

