

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**

March 27, 2009

This seventh weekly status report of 2009 summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through March 25, 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 the first week of March 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 17 California sea lions and 25 Steller sea lions (a new high) at the dam on any given day (Figures 1 and 2). Although the recent removal of five California sea lions from the Bonneville population has obviously dropped their numbers present recently, there have still been more total pinnipeds present per day on average to date this year, although it has dropped from last years levels for California sea lions (Figure 6). The highest daily abundance estimate for all pinnipeds at Bonneville dam was 42 on March 26. We have seen at least 28 different California sea lions, 25 Steller sea lions, and 2 harbor seal (*Phoca*

vitulina) since full-time monitoring began. Up to seven 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 now hauling out on the powerhouse two (PH2) corner collector (B2CC) traps and concrete apron and rip rap near the traps in the early morning.

PREDATION DATA

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

	California Sea Lions	Steller Sea Lions	Total
Chinook	160	8	168
Steelhead	90	16	106
Sturgeon	30	623	653
Lamprey	0	3	3
Shad	7	12	19
Other	1	1	2
Unknown	78	304	382

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). Observed sturgeon catch has already exceeded 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). However, even though we have recently seen record numbers of Steller sea lions, the sturgeon take for the last week or so is lower than last year at this time, suggesting that many of the Steller sea lions are going downstream during the day to catch their prey elsewhere. It is also early April when we begin to see very few sturgeon caught at the dam for the remainder of the season, at least judging by the pattern of the last few years.

Salmonid passage has begun to increase to double digits most days, with 639 steelhead and 103 chinook passing since January 1, which is the second lowest to date total since we have been observing sea lions back in 2002. River temperatures are just now making it past 40°F.

DETERRENTS/TRAPPING

Trapping by the states began March 10, and to date, a total of five animals have been trapped and removed. This week, no animals were trapped as there were either too many Stellers on the traps or no animals at all during trapping efforts. The third trap, which was located in the old navigation lock channel and not showing much sign of use, was moved upstream of the other two traps in the PH2 channel by the corner collector. The 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 most days (excluding weekends) up through March 25. 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 the first week of March and will continue seven days per week.

OTHER ITEMS OF INTEREST

A group of animal behavior specialists from the International Marine Animal Trainers Association (IMATA) visited Bonneville Dam March 23 and 24 to learn about our pinniped situation. They heard from state and federal biologists about what has been going on here for several years, specifically mentioning behaviors observed that could possibly be used or modified to help find ways to deter them from eating salmon at Bonneville Dam. They will issue a report to WDFW with some of their recommendation in about a month.

The acting Regional Administrator for NMFS Barry Thom, and Carrie Selberg, acting deputy Regional Administrator, were given an overview of the pinniped project at Bonneville Dam by Garth Griffin, NMFS, Brent Norbert, NMFS, Robin Brown, ODFW, Steve Jefferies, WDFW and Corps staff on March 26. Mr. Thom is stepping in for Bob Lohn.

We plan on conducting night time observations beginning late this week, one day a week for the next several weeks, to see if foraging behavior is occurring at night near the dam.

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

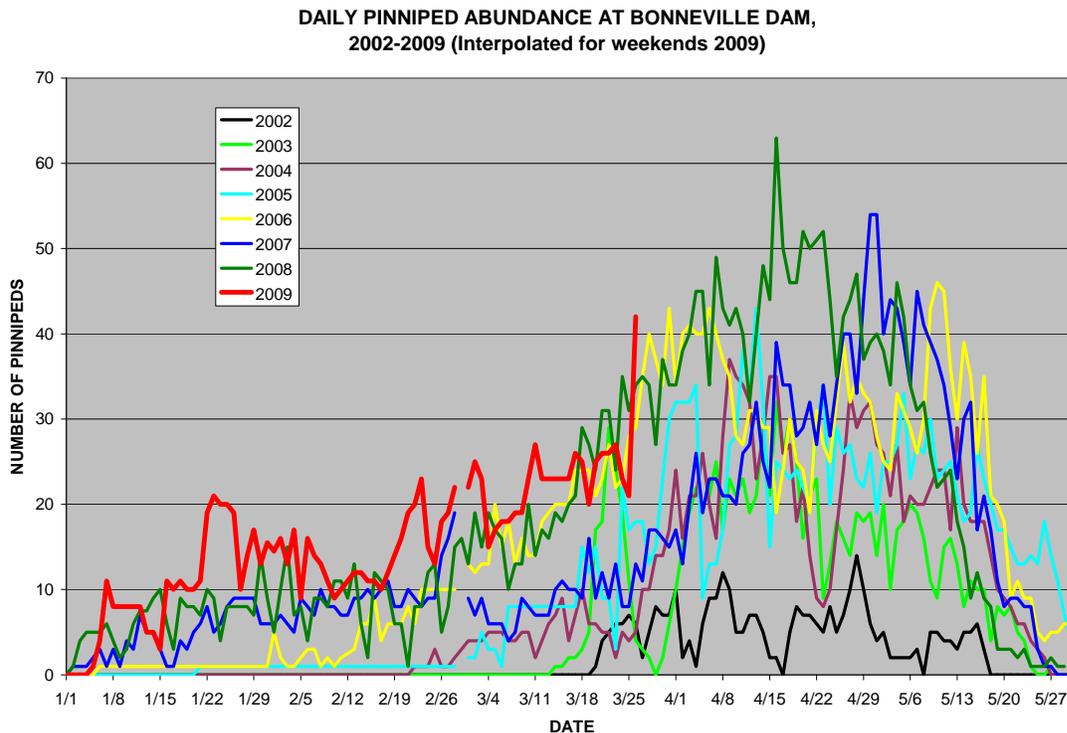


Figure 2. Daily pinniped abundance, by species, at Bonneville Dam, 2009.

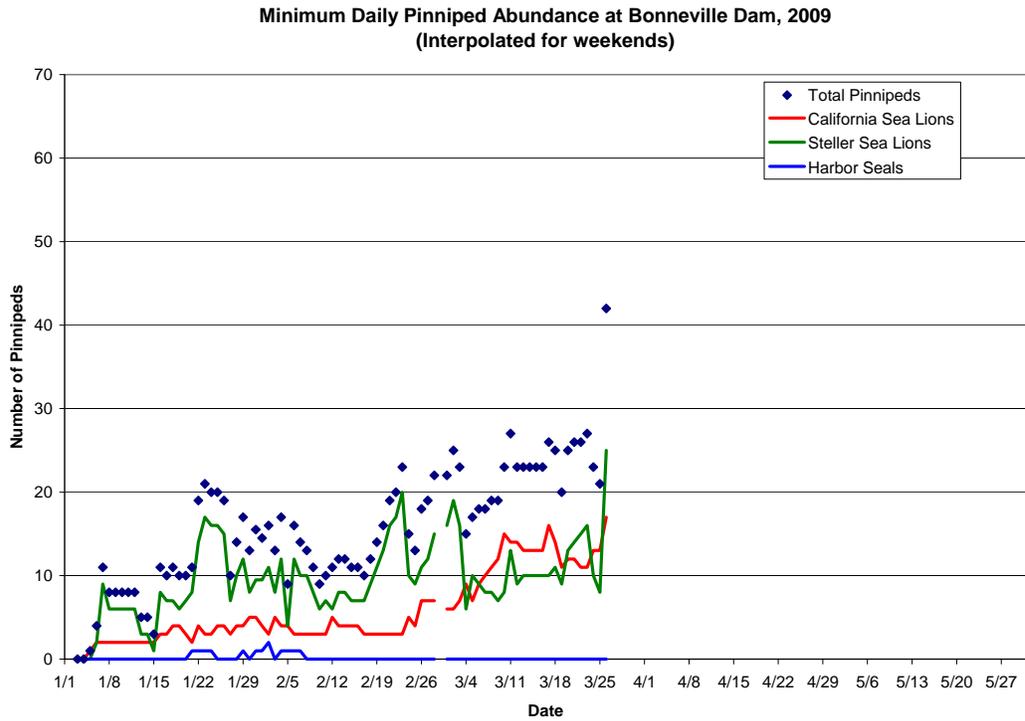


Figure 3. Major prey species taken by Pinniped species at Bonneville Dam, 2009.

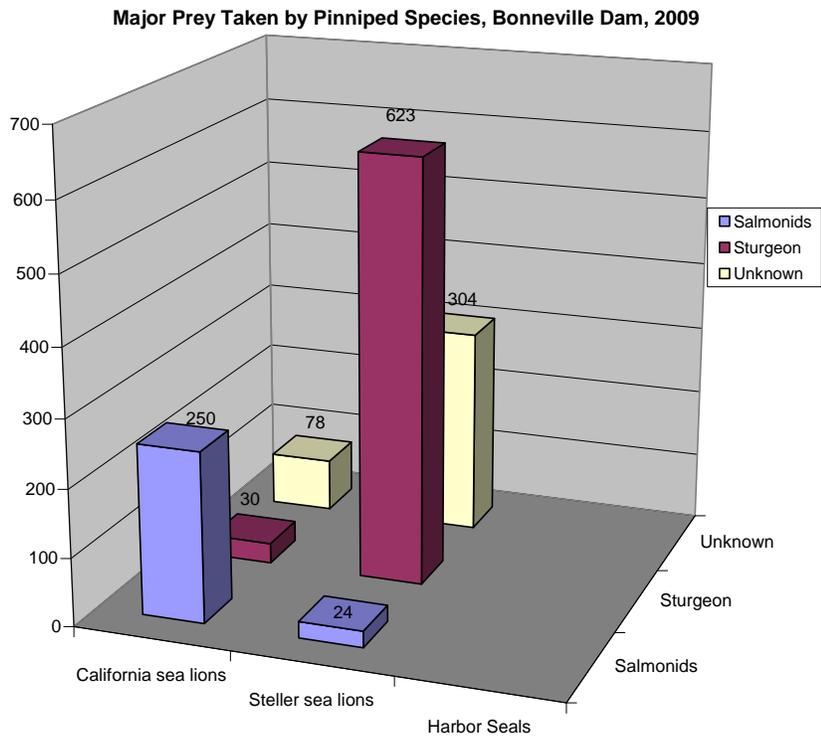


Figure 4. Daily cumulative sturgeon catch at Bonneville Dam, 2006-2009. All data unexpanded.

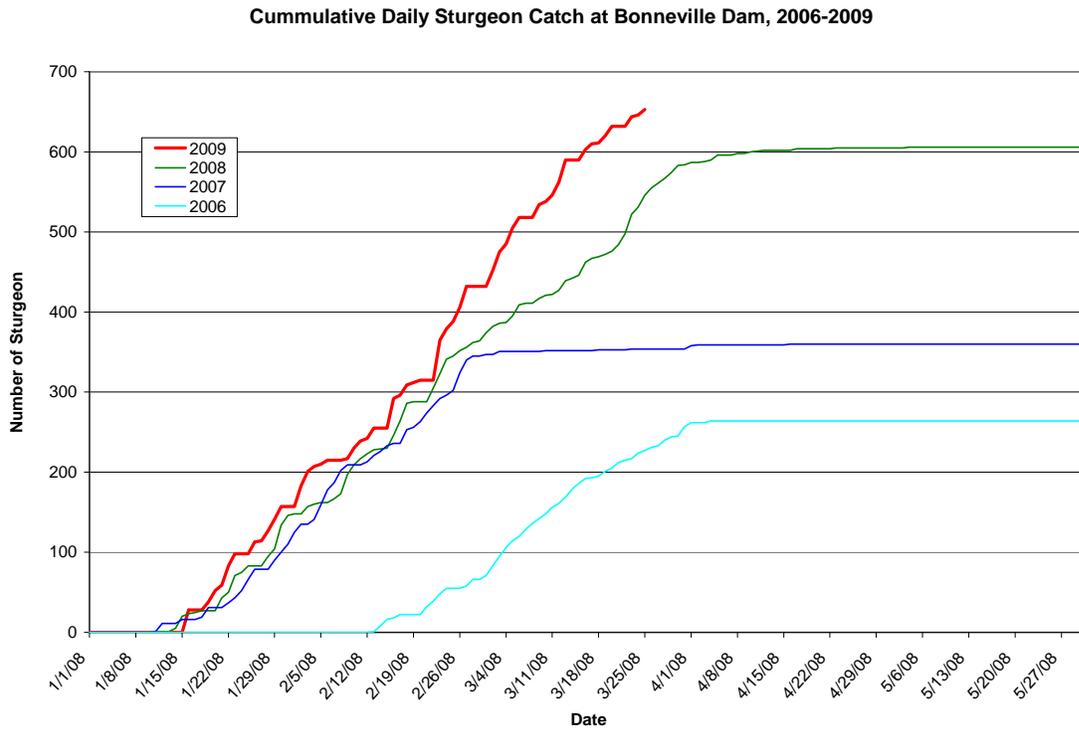


Figure 5. Major prey species taken by Pinnipeds by location, 2009.

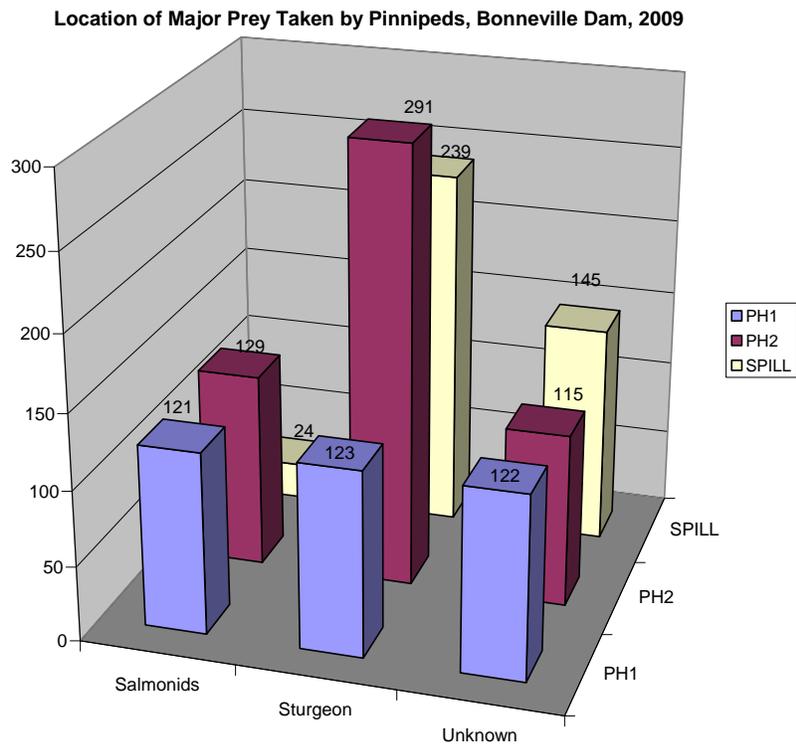


Figure 6. Average daily presence of pinnipeds, by species, to date (March 25) for each year at Bonneville Dam.

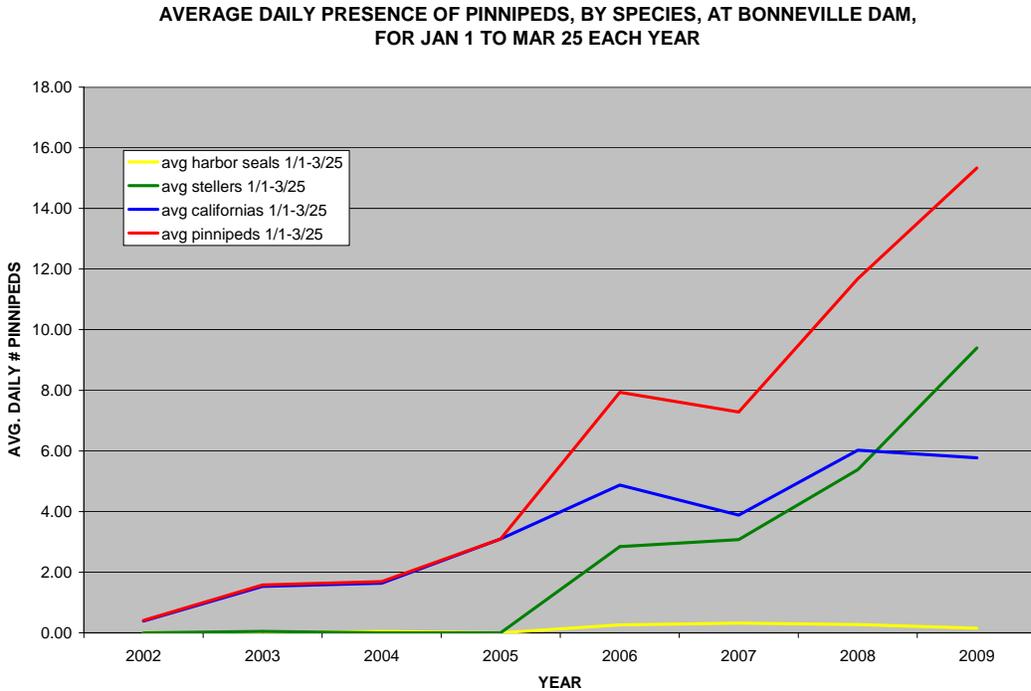


Figure 7. Daily cumulative salmonid catch at Bonneville Dam, 2002-2009. Please note 2009 data presented are unexpanded for weekends not observed.

