

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

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This fourth weekly status report of 2009 summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through February 18, 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 Corps has contracted 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.

## 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

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 five California sea lions at the dam on any given day (see Figures 1 and 2). The highest daily abundance estimate for all pinnipeds at Bonneville dam was 21 on January 23. We have seen at least seven different California sea lions, 17 Steller sea lions, and 2 harbor seal (*Phoca vitulina*) since full-time monitoring began. All seven of the California sea lions (C265, C586, C635, C657, C805, BZC194, BZC278) have been seen in previous years. No “new” California sea lions showed up this past week.

Up to nine Steller sea lions have been documented hauling out inside the powerhouse two (PH2) corner collector (B2CC) outfall. C265 has been observed hauling out on the B2CC apron at PH2, and C635 at the spill bays. The Steller sea lions have been hauling out on the traps by B2CC regularly this past week, at least at night. This morning there were 6 on the two traps.

**PREDATION DATA**

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

|           | California Sea Lions | Steller Sea Lions | Total |
|-----------|----------------------|-------------------|-------|
| Chinook   | 1                    | 0                 | 1     |
| Steelhead | 36                   | 13                | 49    |
| Sturgeon  | 5                    | 304               | 309   |
| Lamprey   | 0                    | 3                 | 1     |
| Shad      | 4                    | 11                | 14    |
| Other     | 0                    | 1                 | 1     |
| Unknown   | 26                   | 231               | 257   |

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). Most sturgeon are being caught in the spillway, followed by PH2 then PH1 (Figure 5). Very few fish are passing the count stations (175 steelhead) since January 1.

**DETERRENTS/TRAPPING**

ODFW and WDFW deployed two sea lion traps at the corner collector of Bonneville powerhouse two on February 2 and one trap at the old navigation lock channel by powerhouse one. An additional trap may or may not be deployed at the corner collector in the future. 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. ODFW and WDFW plan to begin removal operations as soon as March 1, depending upon use of the traps by sea lions and logistical support. Final plans are being developed by the states for transfer of sea lions to captivity (potentially up to 20 animals) 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.

Hazing by the states from boats began in January has been conducted on 14 days up through February 18. 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. On the 14 days of hazing, 210 fish (sturgeon, salmonids, unknown) were observed caught, for an average of 15.0 catches per day, while on 12 days with no hazing, 327 fish were observed caught, an average of 27.3 catches per day. 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. Figures 6 and 7 are offered to show that hazing appears to have some effect on reducing

predation by pinnipeds during the period of hazing, but when no hazing is present, predation is higher. Either that, or pinniped union rules require mid day and late afternoon breaks!

### **OTHER ITEMS OF INTEREST**

CRITFC, ODFW, WDFW, and COE will meet early next week to discuss plans for locations of acoustic tag receivers both within the Bonneville BRZ and downstream several miles to get more information on where California sea lions are spending time when not being observed up in the tailrace of the dam. This should particularly be informative for night time activities. Only sea lions trapped not on the list for removal will be given acoustic tags.

A media day event by the states, NOAA and COE is scheduled for next Friday, February 27, to invite the media to hear about the upcoming trapping and removal operation as well as the monitoring and hazing programs. Representatives from each program will be on hand to answer questions from the media.

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

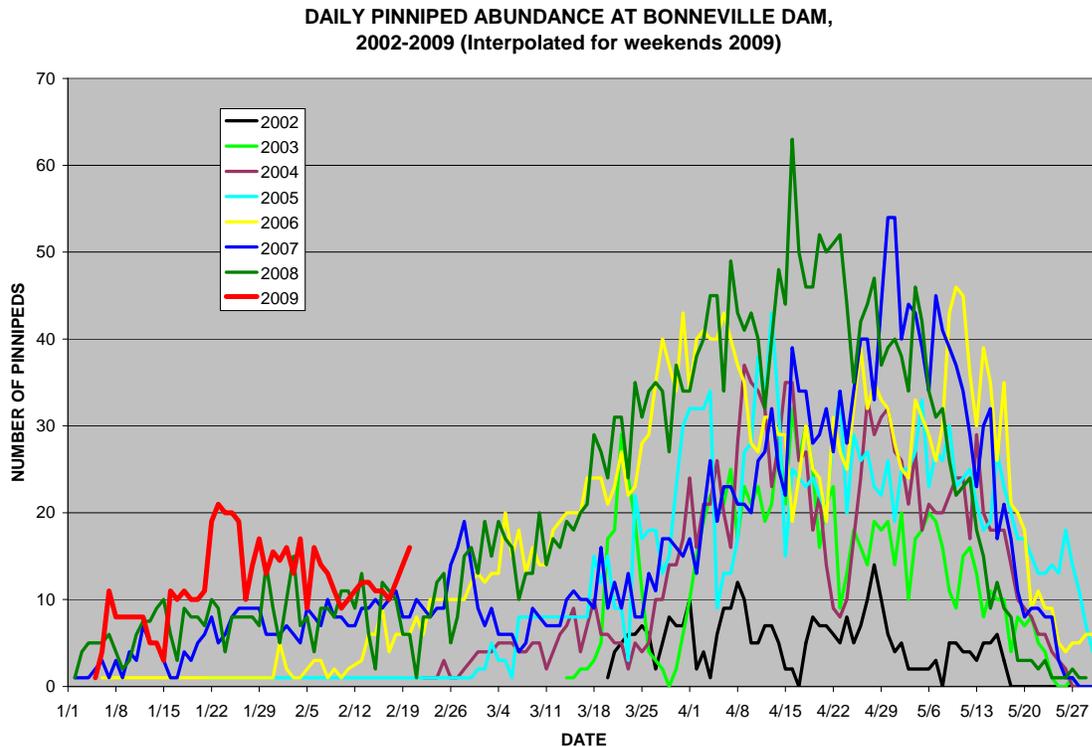


Figure 2. Daily pinniped abundance, by species, at Bonneville Dam, 2009.

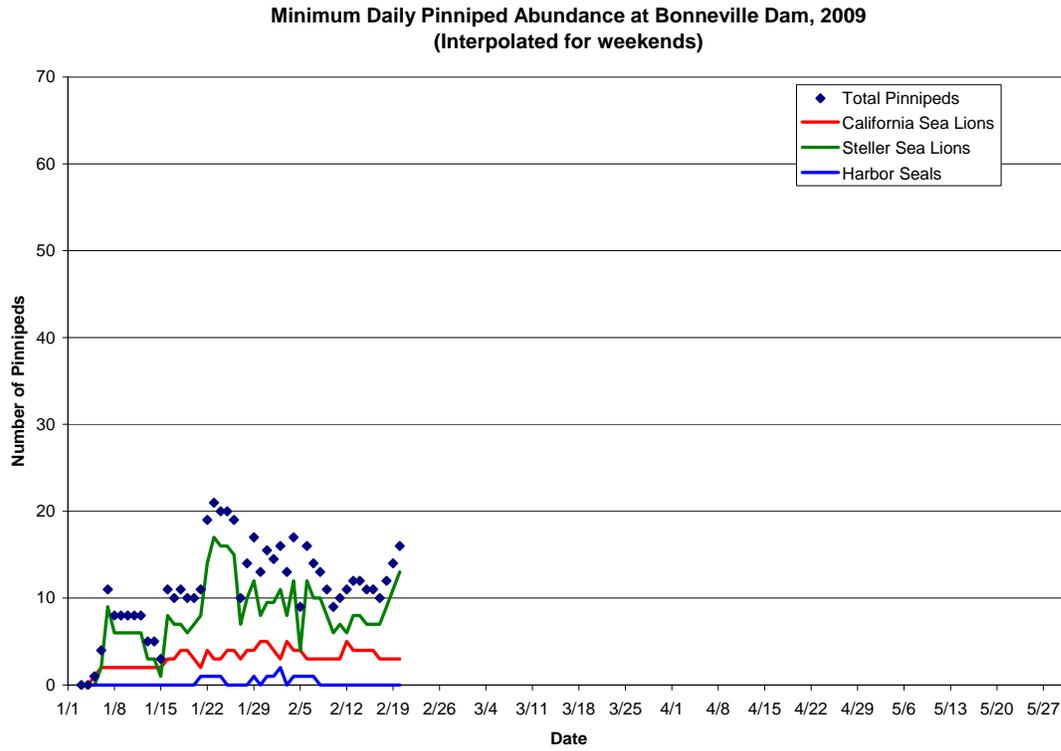


Figure 3. Major prey species taken by Pinniped species at Bonneville Dam, 2009.

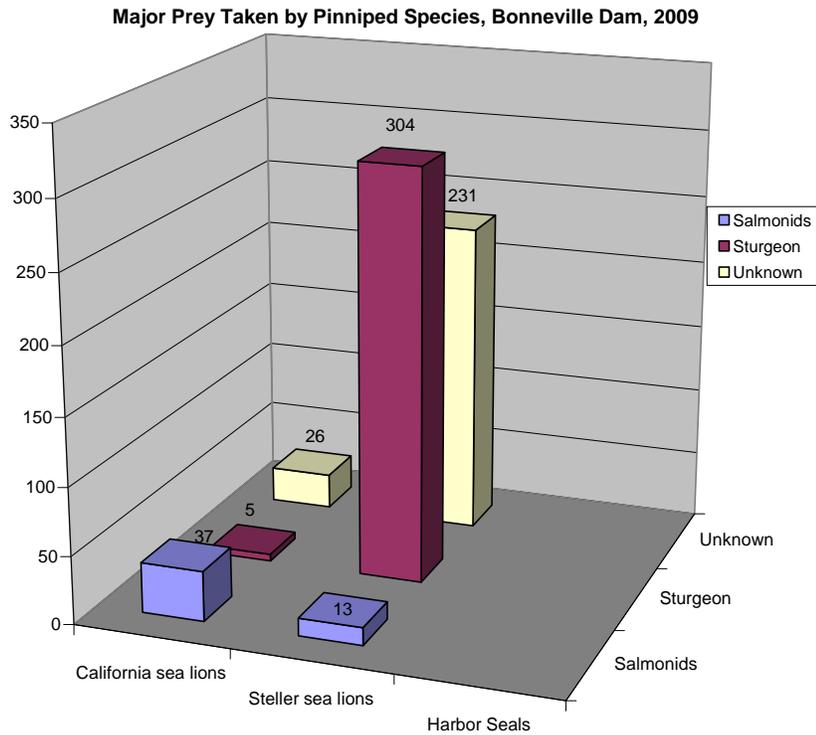


Figure 4. Daily cumulative sturgeon catch at Bonneville Dam, 2006-2009. All data unexpanded.

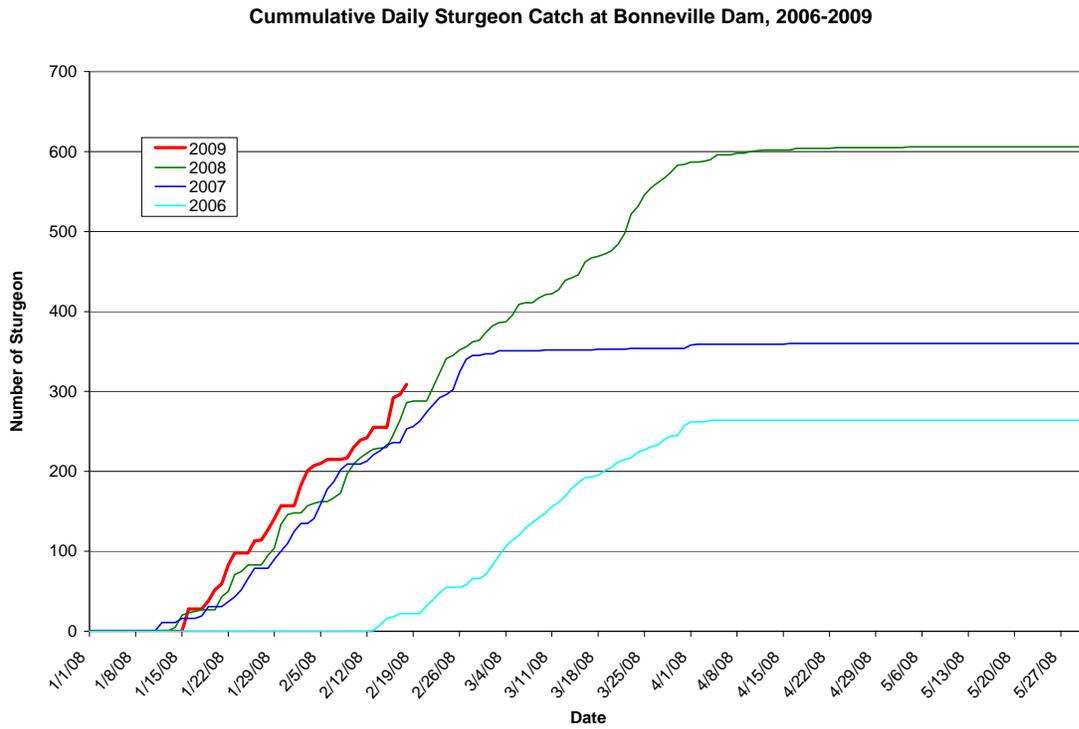


Figure 5. Major prey species taken by Pinnipeds by location, 2009.

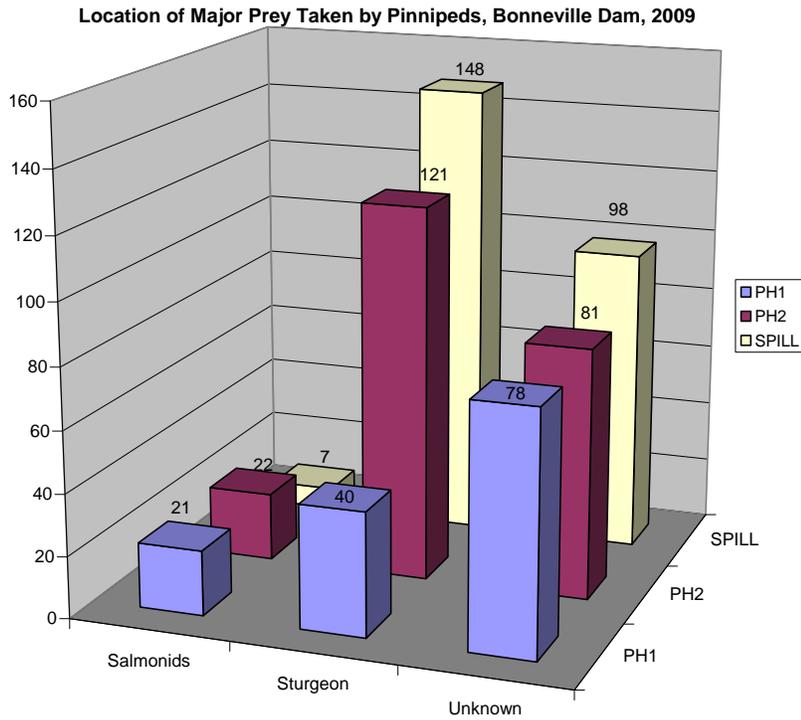


Figure 6. Diel distribution of all prey caught by sea lions through February 18.

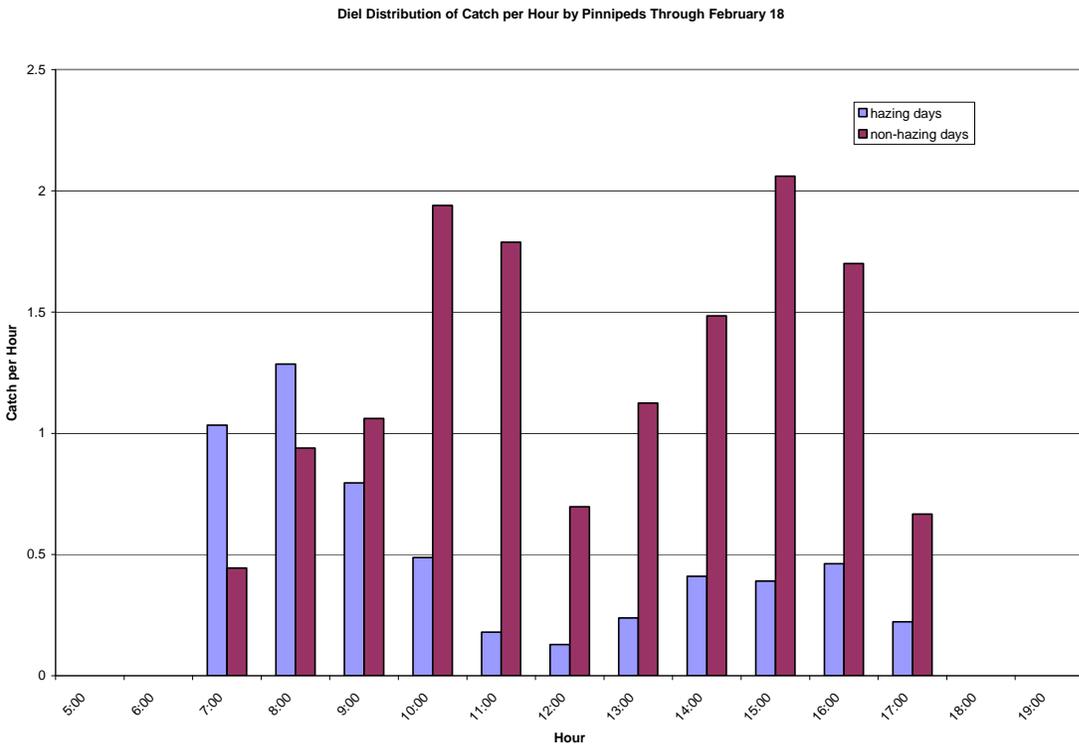


Figure 7. Diel distribution of hazing in Bonneville Dam tailrace through February 18. Non-active hazing means the boat was present but no pyrotechnics were fired.

