

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

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This twelfth weekly status report of 2009 summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through April 29, 2009.

Regular daylight observations began on January 19 and will continue to the end of May, five days per week. Weekends were only monitored twice 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

California sea lions numbers have been relatively steady, and much lower than previous years (Figure 6 and 11), likely due to the remove of 11 animals this year and 11 last year, while Steller sea lion numbers are higher than previous years (Figure 6 and 12). Average daily number of California sea lions present from January to the present is the same as for Steller sea lions at this point. We have seen as many as 26 California sea lions and 26 Steller sea lions at the dam on any given day (Figures 1 and 2). The highest daily abundance estimate for all pinnipeds at Bonneville dam was 47 on April 21. We have seen at least 47 different California sea lions, 26 Steller sea lions, and 2 harbor seals since full-time monitoring began. Up to 13 of the California

sea lions appear to be new visitors to Bonneville Dam, with the remainder repeats from previous years.

PREDATION DATA

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

	California Sea Lions	Steller Sea Lions	Total
Chinook	1701	174	1875
Steelhead	243	36	279
Sturgeon	36	720	756
Lamprey	30	4	34
Shad	7	12	19
Other	3	1	4
Unknown	184	358	542

Previously, before the last few weeks, you could count on most unknown catch's by Steller sea lions to be sturgeon. But from now to the end of May, unknown catches by Stellers are more likely to be Chinook (Figure 3). So far this year, salmonids have made up about 16.1% of the diet for Steller sea lions (excluding all the additional ones they steal from California sea lions), compared to 3.8 % last year and lower for previous years. Sturgeon continues to make up about 55% of the Steller sea lion diet, the balance being mostly unknown species. California sea lions have taken at least 36 sturgeon this year, three times higher than last year, yet over 95% of all sturgeon taken are still taken by Steller sea lions, while this year only 90.3% of salmonids are caught by California sea lions. Daily unexpanded salmonid catch has been over 100 on four days in the past two weeks, excluding yesterday's high of 120 salmonids caught. Observed sturgeon catch has exceeded the catch of previous years (Figure 4) with a record 50 being observed caught on February 23. Size distribution of sturgeon seen caught has been similar to the past few years (Figure 10). Only seven sturgeon were seen caught last week. Chinook salmon are now the primary prey caught by both California and Steller sea lions, however, the cumulative salmonid catch to date continues to be lower than it has been for the past two years (Figure 7). This is likely due to the removal of 11 California sea lions from this year (and 11 last year) from the population that frequented Bonneville Dam to feed on salmon in the spring. However, keep in mind 2009 figures are unexpanded for weekends not observed. More salmonids have been observed caught in PH1 this year (Figure 5).

C287 has now been observed to take 131 fish already so far this season since he was first seen in early April. This exceeds the 111 fish taken by C319 last year (although he was captured on April 24 and likely would have caught many more). Another animal, B267, has also exceeded 100 fish taken (101). Steller sea lions continued to steal prey from California sea lions regularly this week. Also observed to date have been an additional 37 (1.7%) salmonids caught, then lost (swam away) or 88 (2.4%) total fish of all species lost.

Salmonid passage continues to be about 2,000-3,000 per day over the past week. This is now back to the second lowest to date total since we have been observing sea lions back in 2002 (Figures 8 and 9). We are either going to have a late and long spring Chinook season, a huge peak passage event, or miss the pre-season prediction.

DETERRENTS/TRAPPING

Trapping by the states began March 10, and to date, a total of 11 animals have been trapped and removed. This week, no animals were trapped as none were using the traps, but rather hauling out on the concrete pad along the corner collector (none were hauled out anywhere this morning) or rafting nearby. The states will be looking into making the concrete pad less appealing for the sea lions in the coming weeks and the Corps may examine a longer term solution for next year. Table 1 summarizes the animals trapped this year to date. 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.

Sea Lion ID	Capture Date	On Removal List?	Passed Health Exam?	Action	Additional Information
C265/B237	3/10/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C635/B240	3/11/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C643/B242	3/17/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C507	3/18/2009	Yes	Yes	Relocated	Relocated to Shedd Aquarium (Chicago, IL)
C700/B247	3/18/2009	Yes	Yes	Relocated	Relocated to Shedd Aquarium (Chicago, IL)
C554	4/1/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C578	4/1/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C579	4/1/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C586	4/1/2009	Yes	Yes	Relocated	Relocated to Gladys Porter Zoo, Texas
C657/B127	4/1/2009	Yes	Yes	Relocated	Relocated to Gladys Porter Zoo, Texas
C669/B110	4/1/2009	Yes	No	Euthanized	Infected with Gammaherpes virus and unsuited for zoos/aquariums
C697	4/1/2009 4/8/2009	No No	- -	Released Released	Tagged with acoustic transmitter for research (ODFW/CRITFC)
C926/B278	4/1/2009	Yes (09)	-	Released	Tagged with acoustic transmitter for research (ODFW), branded C926
C927	4/8/2009 4/16/2009	No No	- -	Released Released	Tagged with acoustic transmitter for research (ODFW), branded C927
C928	4/16/2009	No	-	Released	Tagged with acoustic transmitter for research (ODFW), branded C928

Table 1. Summary of information for California sea lions trapped in 2009, to date.

Hazing by the states and CRITFC from boats began in January has been conducted on most days (excluding weekends) up through April 8. Hazing continues to have some limited, local, short term impact in reducing predation in the tailrace, but less so now that the spring Chinook run has begun and the number of California sea lions has increased.

OTHER ITEMS OF INTEREST

Night Observations

No night observations were made this past week.

Acoustic Tracking

Bryan Wright of ODFW showed us the acoustic tracking data for Bonneville to about 5 miles downstream, and they are collecting good information on the 4 tagged animals. CRITFC also has acoustic sensors near the estuary, and at least 2 of the animals have moved downstream, one to Astoria for sure (but he has since returned). We look forward to seeing the movement patterns of these animals across the day, night, and seasonal time periods.

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

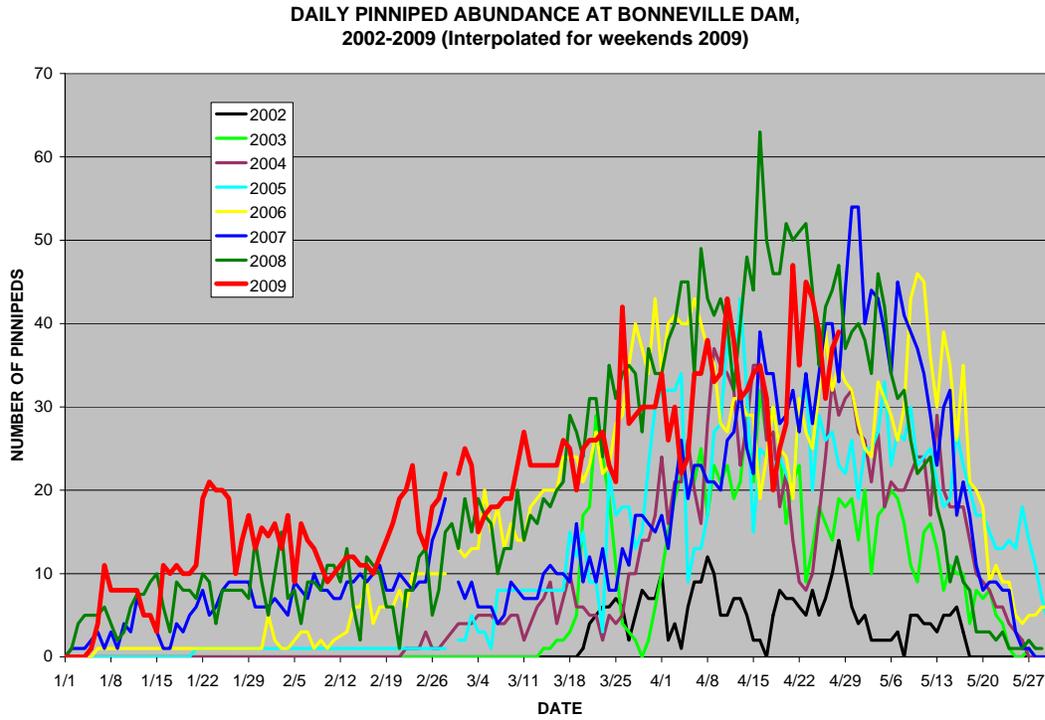


Figure 2. Daily pinniped abundance, by species, at Bonneville Dam, 2009.

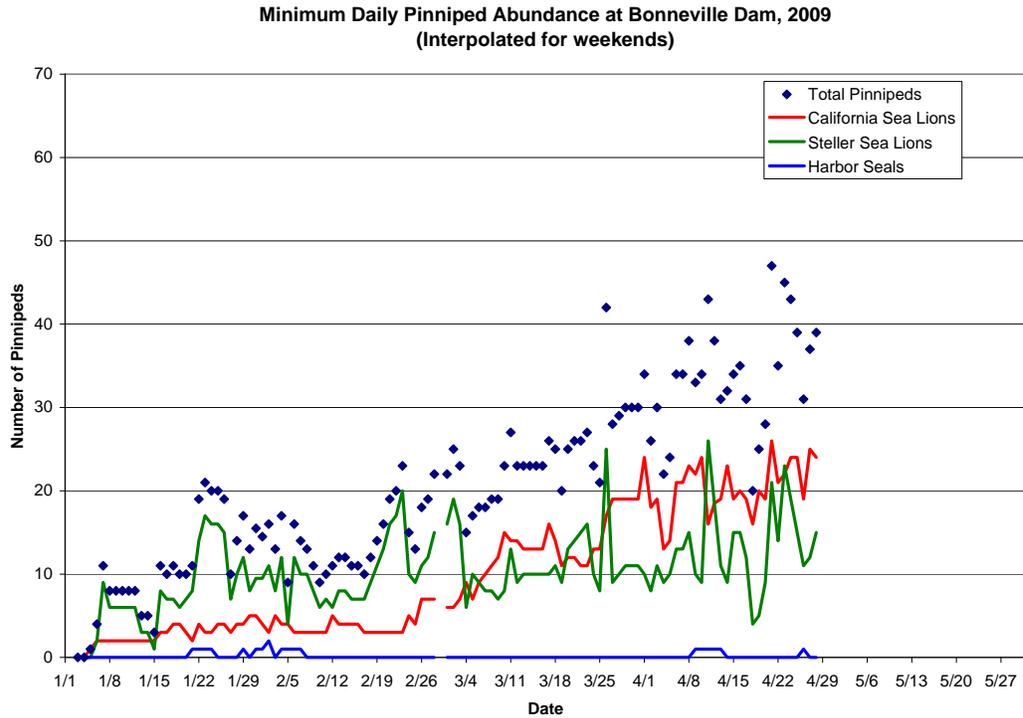


Figure 3. Major prey species taken by Pinniped species at Bonneville Dam, 2009.

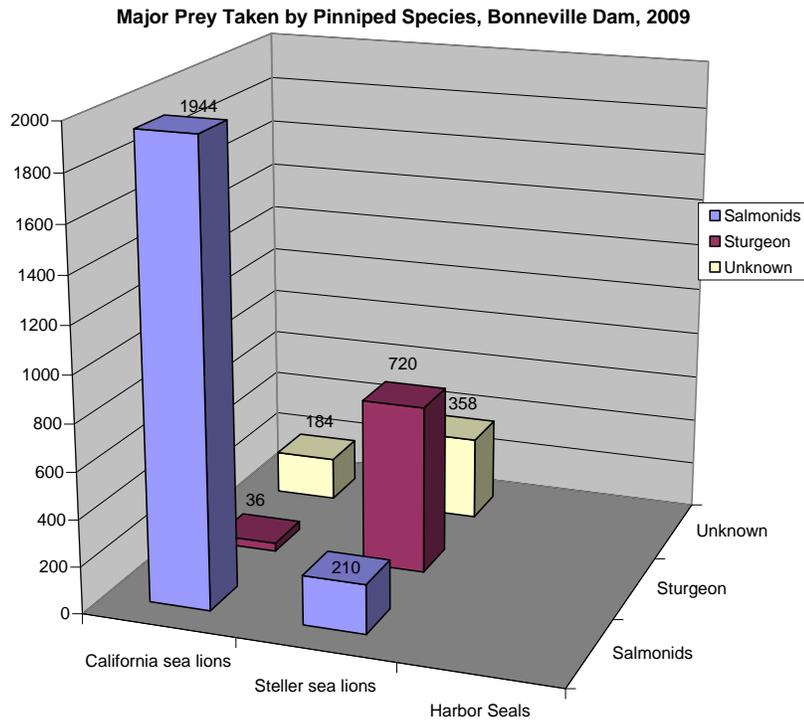


Figure 4. Daily cumulative sturgeon catch at Bonneville Dam, 2006-2009. All data unexpanded.

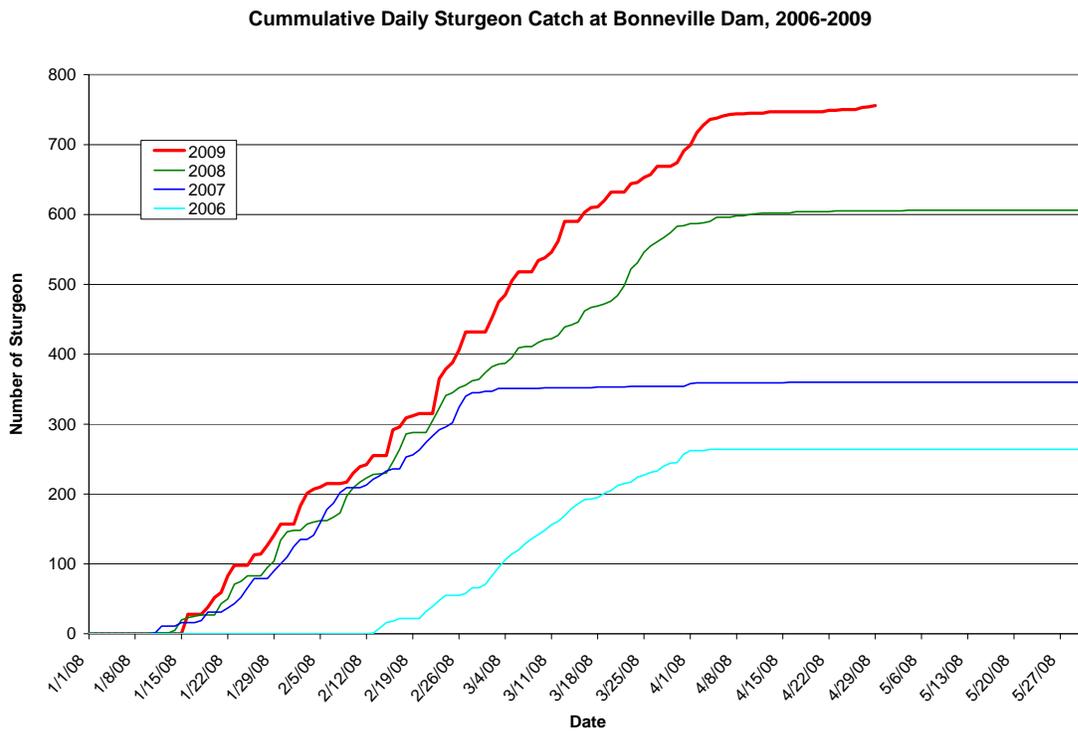


Figure 5. Major prey species taken by Pinnipeds by location, 2009.

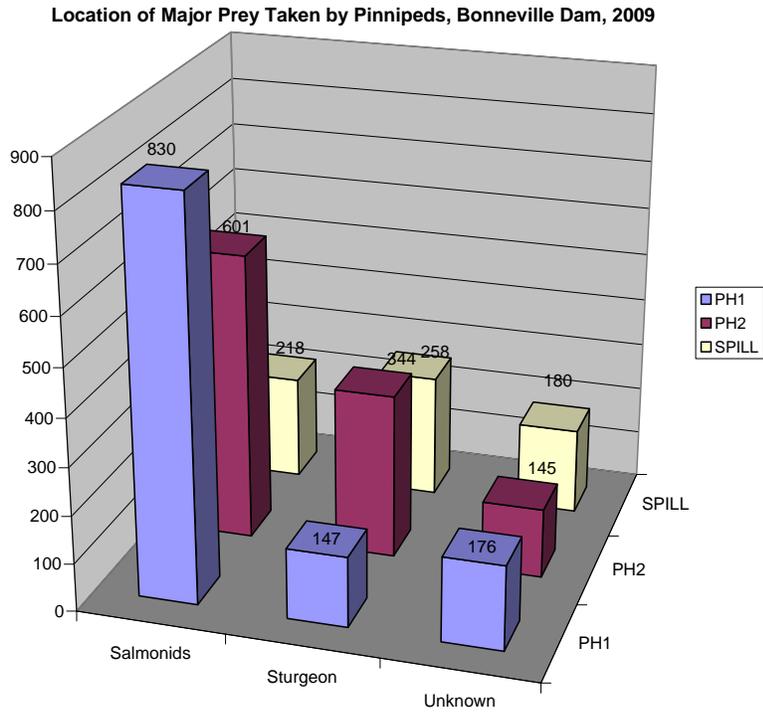


Figure 6. Average daily presence of pinnipeds, by species, to date (April 29) for each year at Bonneville Dam.

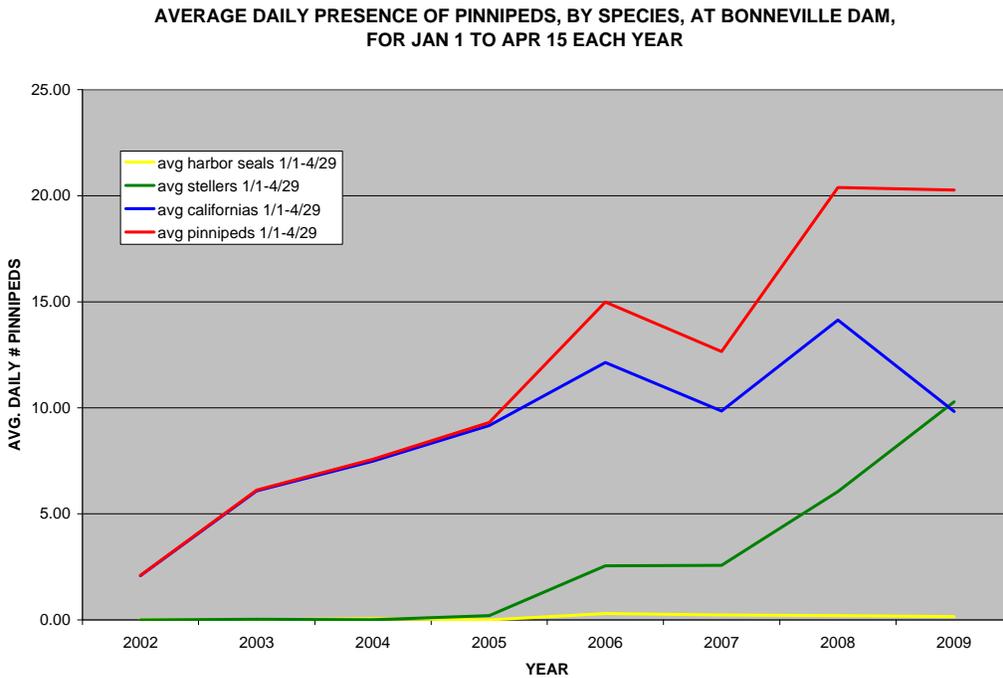


Figure 7. Daily cumulative salmonid catch at Bonneville Dam, 2002-2009. Please note 2009 data presented are unexpanded for weekends not observed.

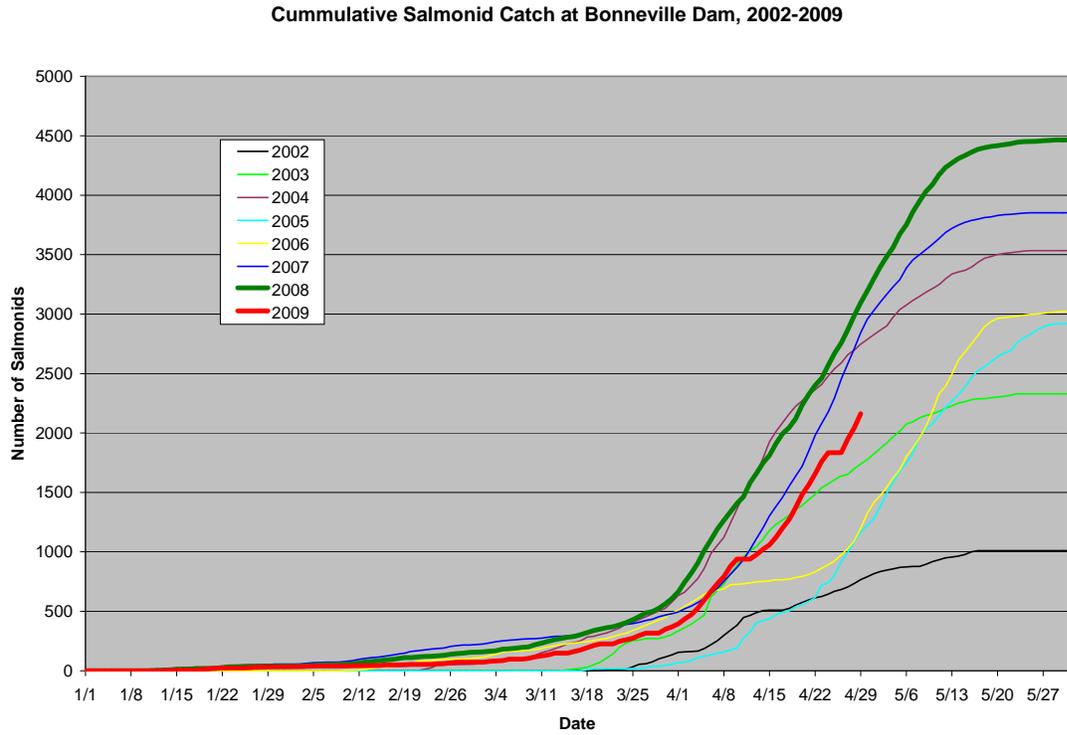


Figure 8. Daily cumulative salmonid passage at Bonneville Dam, 2002-2009.

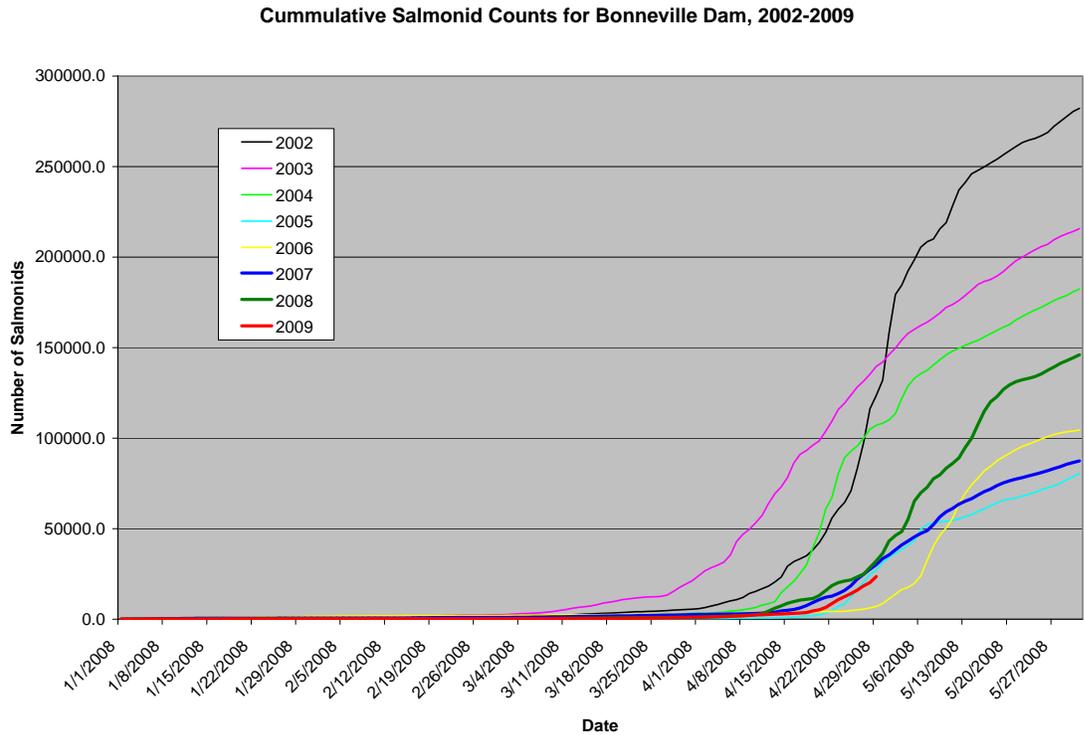


Figure 9. Daily salmonid passage at Bonneville Dam, 2002-2009.

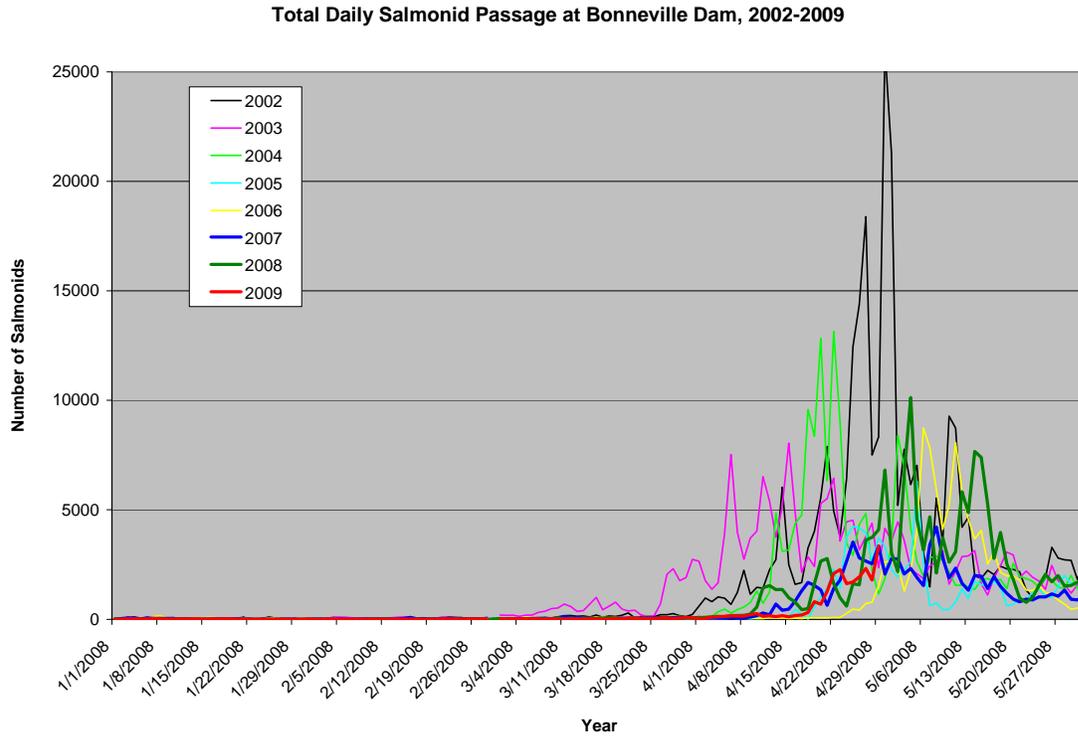


Figure 10. Size distribution of sturgeon observed caught at Bonneville Dam, 2006-2009.

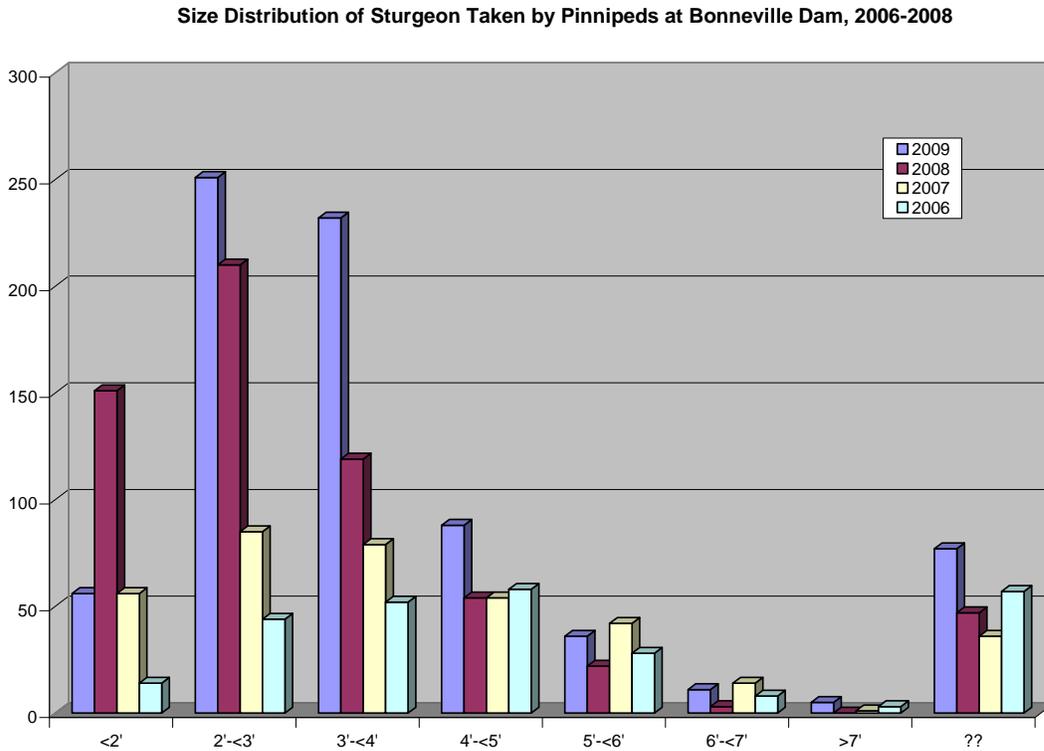


Figure 11. Daily minimum California sea lion abundance (weekends interpolated) at Bonneville Dam, 2002-2009.

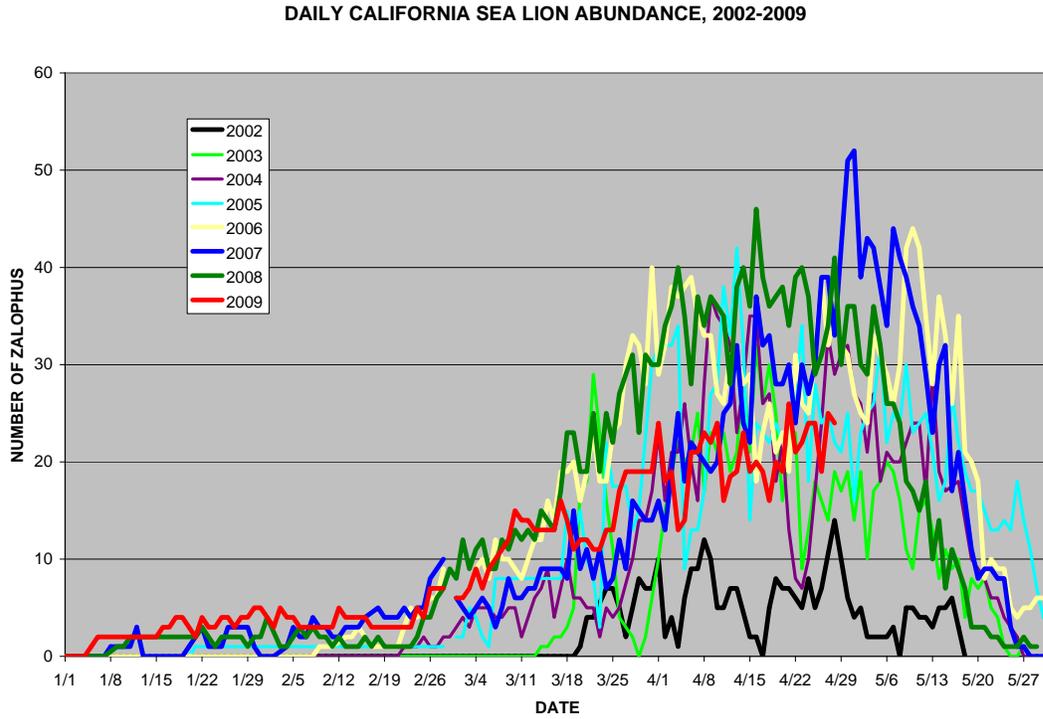


Figure 12. Daily minimum Steller sea lion abundance (weekends interpolated) at Bonneville Dam, 2002-2009.

