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

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This eleventh weekly status report of 2009 summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through April 22, 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 lately, 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). 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 44 different California sea lions, 26 Steller sea lions, and 2 harbor seals since full-time monitoring began. Up to 12 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	1297	112	1409
Steelhead	211	29	240
Sturgeon	34	715	749
Lamprey	23	4	27
Shad	7	12	19
Other	3	1	4
Unknown	155	346	501

At this point, it is likely that most unknown fish caught recently by Steller sea lions and California sea lions are Chinook (Figure 3), but the bulk for Steller sea lions was likely sturgeon. 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). However, only two sturgeon were seen caught last week. Chinook salmon are now the primary prey caught by both Californa 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).

So far, we have been able to attribute a catch to a specific identified individual California sea lion approximately 66% of the time, when excluding Steller sea lion catches. If Steller sea lion catches are included, the figure is approximately 33%, as we do not typically identify individual Steller sea lions and much of their early season sturgeon catches were too far downstream for that level of identification. It is of interest that one individual, C287, has been observed to take 100 fish already so far this season (although 16 of those were stolen away from him) since he was first seen in early April. He is on pace to exceed the record 111 fish taken by C319 last year (although he was captured on April 24 and likely would have caught many more). Last year C287 only arrived in early May, stayed for two weeks, and was seen to take 76 fish. Also of note is another individual, B81, who was first seen this year two weeks ago, has been observed to take 61 fish already (including 5 lamprey), but of those 61 fish, 20 were stolen away from him. He is a much younger, smaller animal than average and seems to get many of his fish stolen by Stellers and California sea lions alike. Through April 22, we have observed 111 fish taken from California sea lions by Steller sea lions, 55 fish taken from California sea lions by another California sea lion, and 2 Steller catches stolen by Stellers and 1 Steller catch stolen by a California sea lion, most of this behavioral activity occurring in the past three weeks.

Salmonid passage finally picked up, with over 2,000 passing on April 22 and 23. This is now the third lowest to date total since we have been observing sea lions back in 2002 (Figures 8 and 9). Hopefully the numbers will remain high and counts will get close to pre-season predictions.

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 (although with rising tailwater, none were hauled out anywhere this morning). The states will be looking into making the concrete pad less appealing for the sea lions in the coming weeks. 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, however SCA interns did observe over the weekend, and this data, plus data from the weekend of April 4 and 5 are now included in the predation data presented..

Acoustic Tracking

I have not seen any new acoustic tracking data from the states or CRITFC, however C697 returned to Bonneville from Astoria this week, so there should be some good data coming soon. C926 and C927 have been regularly seen at Bonneville, while C928 has been spotted a few days by the traps, but rarely up into the tailraces for observers to see

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

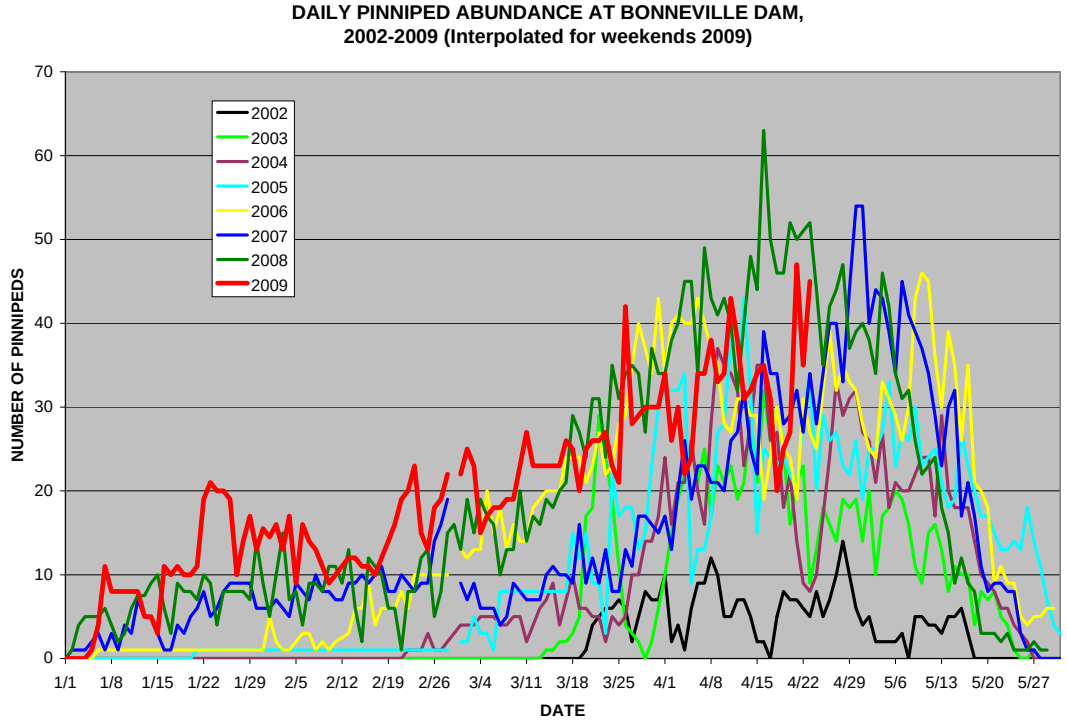

Figure 2. Daily pinniped abundance, by species, at Bonneville Dam, 2009.

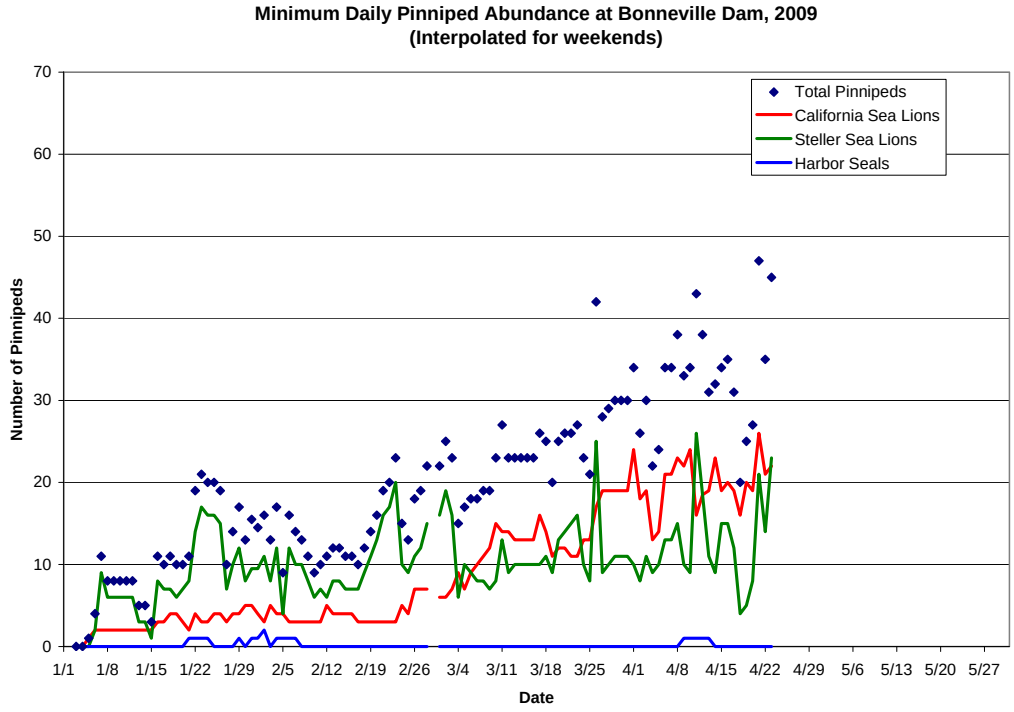

Figure 3. Major prey species taken by Pinniped species at Bonneville Dam, 2009.

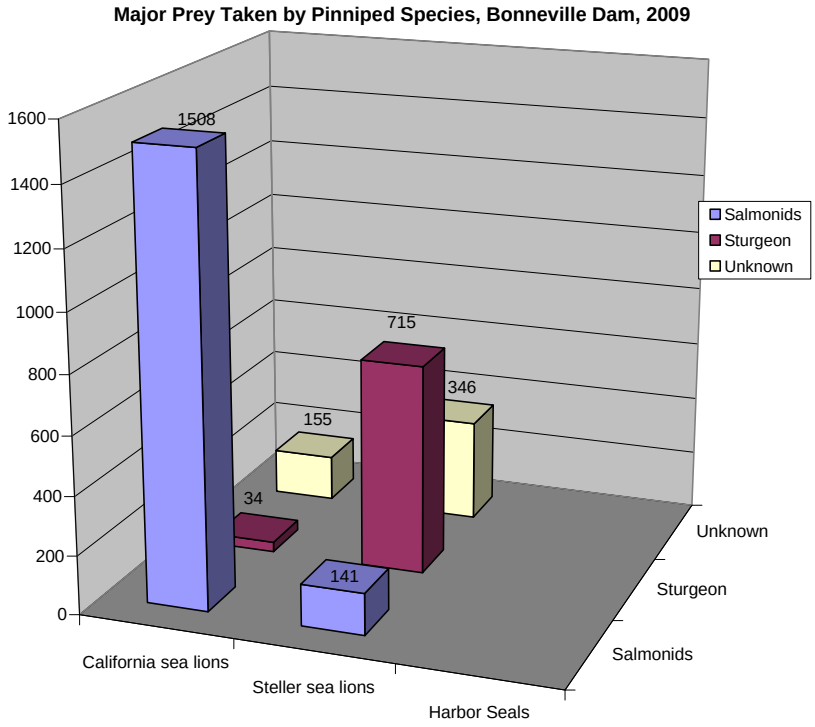

Figure 4. Daily cumulative sturgeon catch at Bonneville Dam, 2006-2009. All data unexpanded.

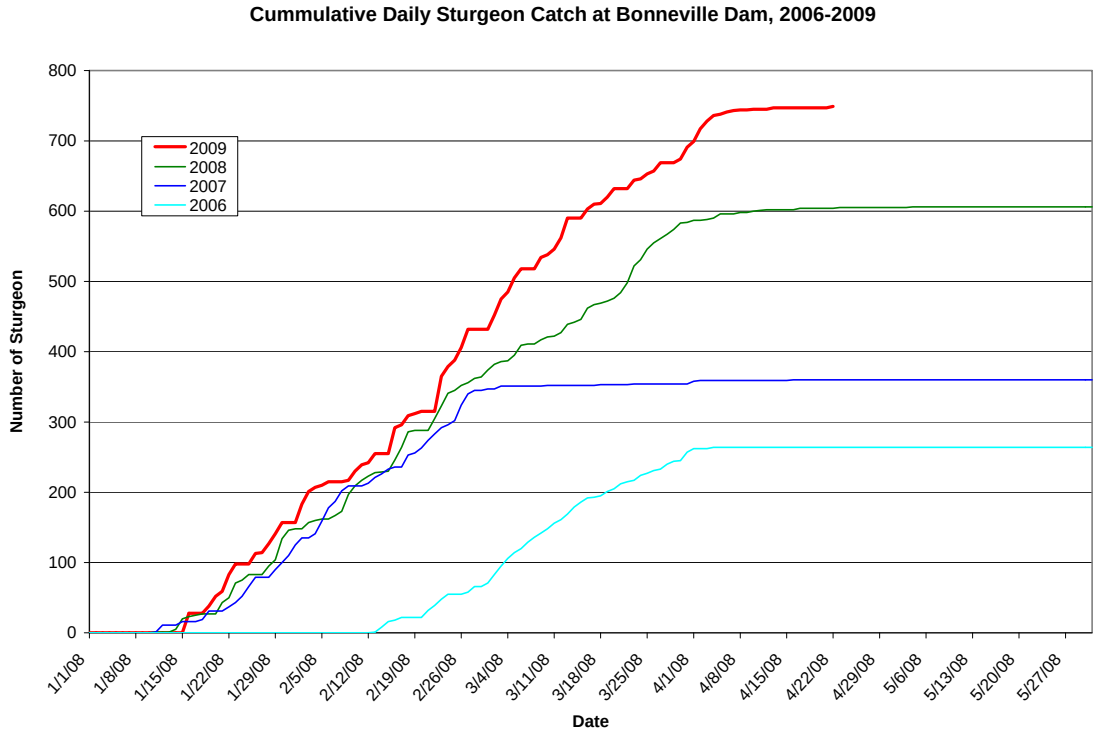

Figure 5. Major prey species taken by Pinnipeds by location, 2009.

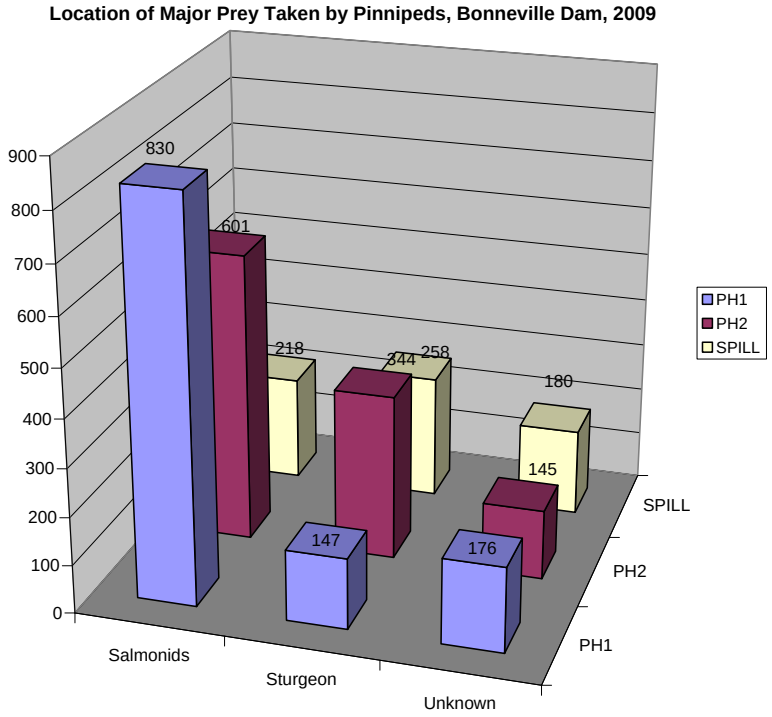

Figure 6. Average daily presence of pinnipeds, by species, to date (April 15) for each year at Bonneville Dam.

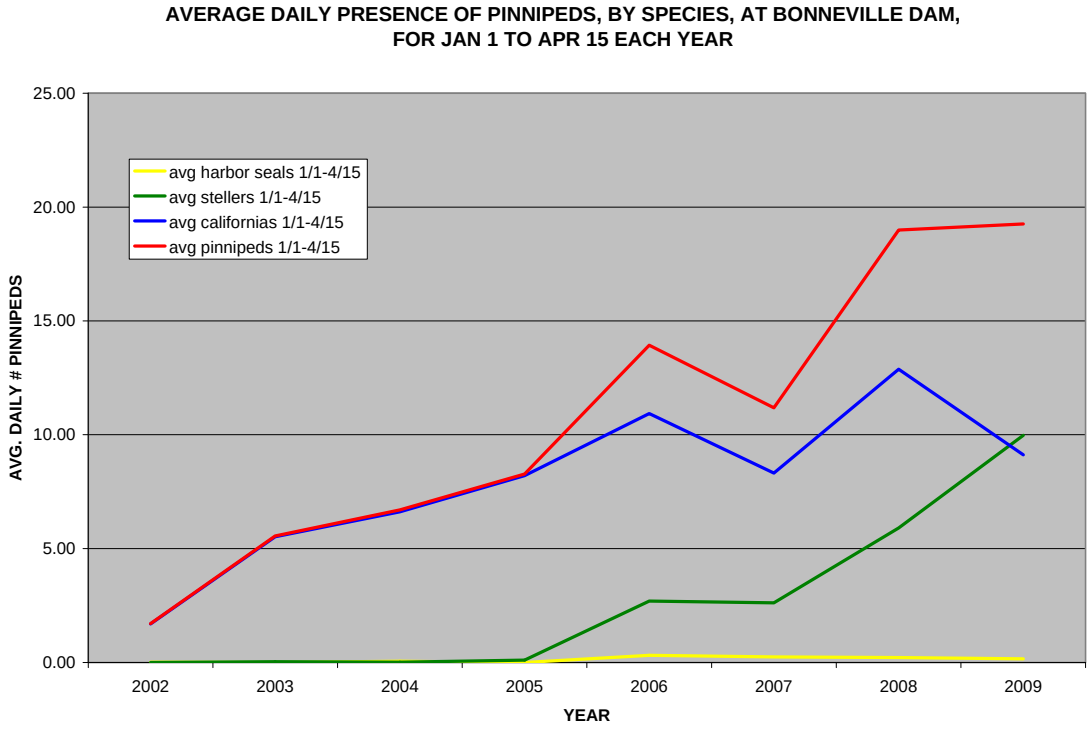

Figure 7. Daily cumulative salmonid catch at Bonneville Dam, 2002-2009. Please note 2009 data presented are unexpanded for weekends not observed.

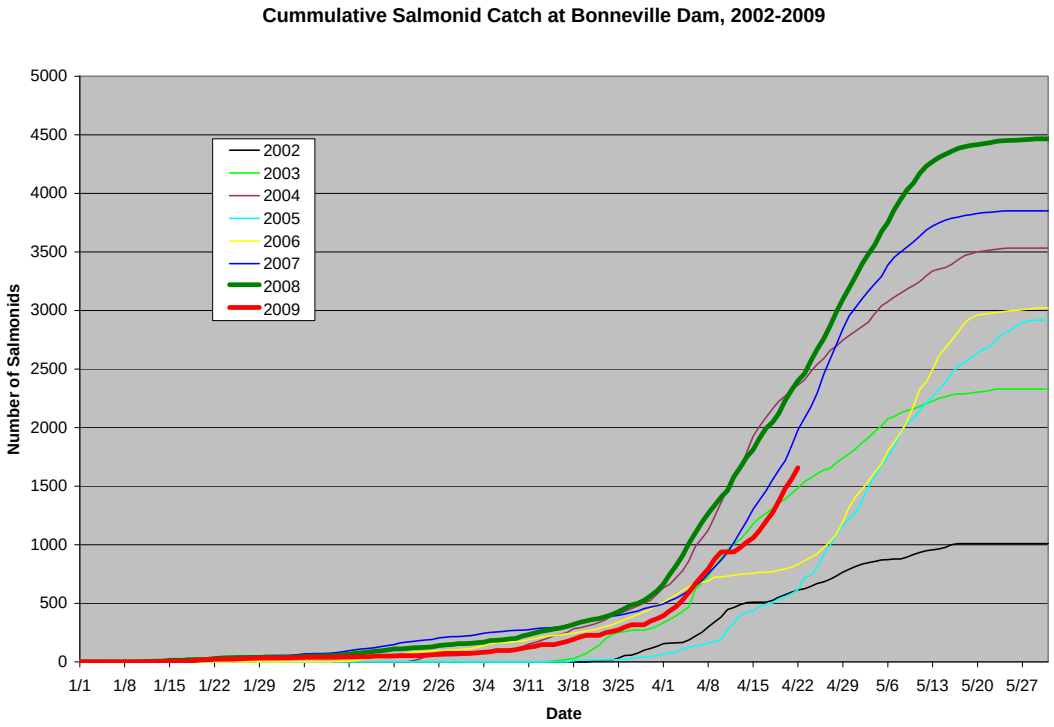

Figure 8. Daily cumulative salmonid passage at Bonneville Dam, 2002-2009.

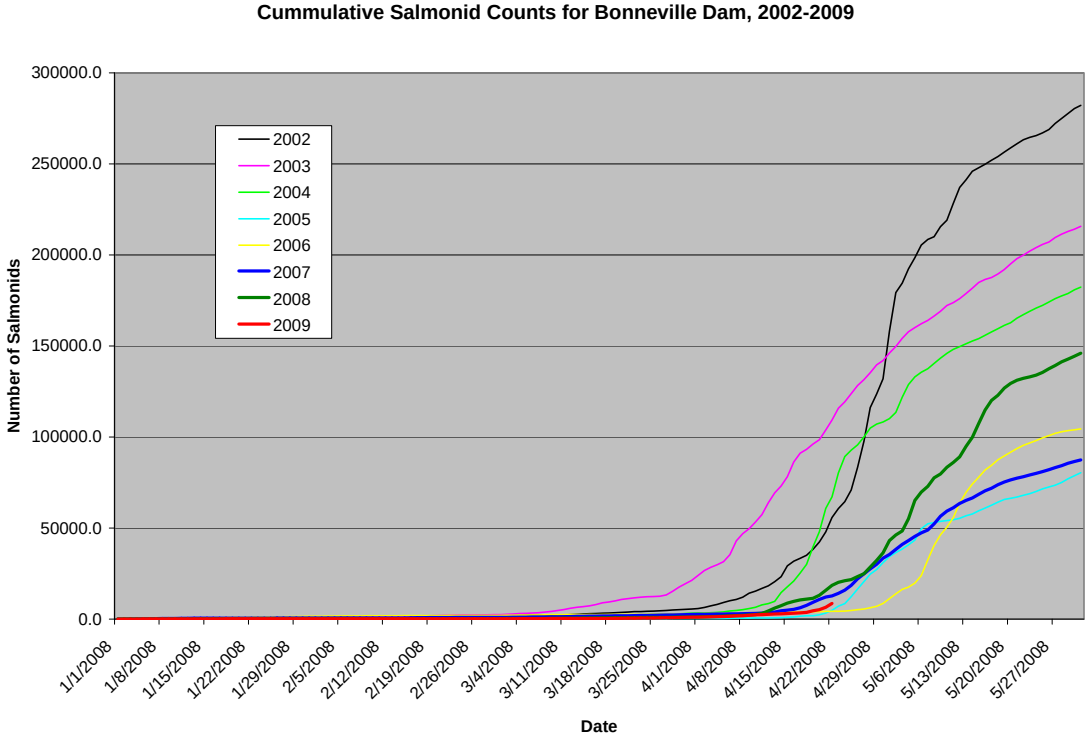

Figure 9. Daily salmonid passage at Bonneville Dam, 2002-2009.

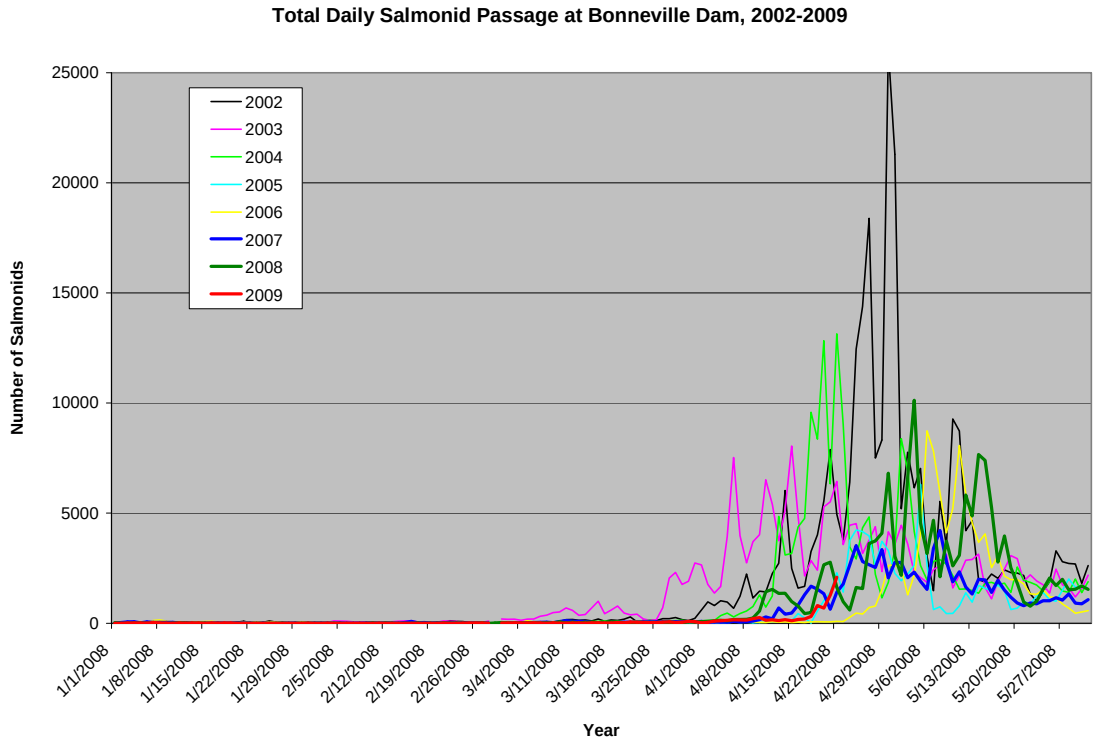

Figure 10. Size distribution of sturgeon observed caught at Bonneville Dam, 2006-2009.

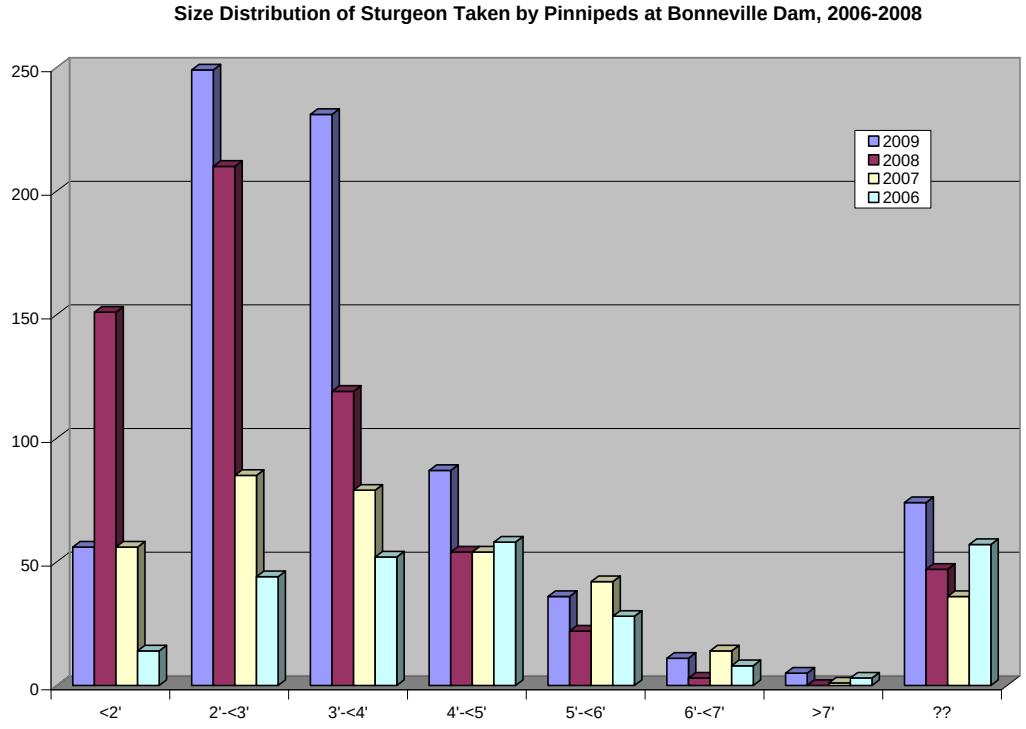

Figure 11. Daily minimum California sea lion abundance (weekends interpolated) at Bonneville Dam, 2002-2009.

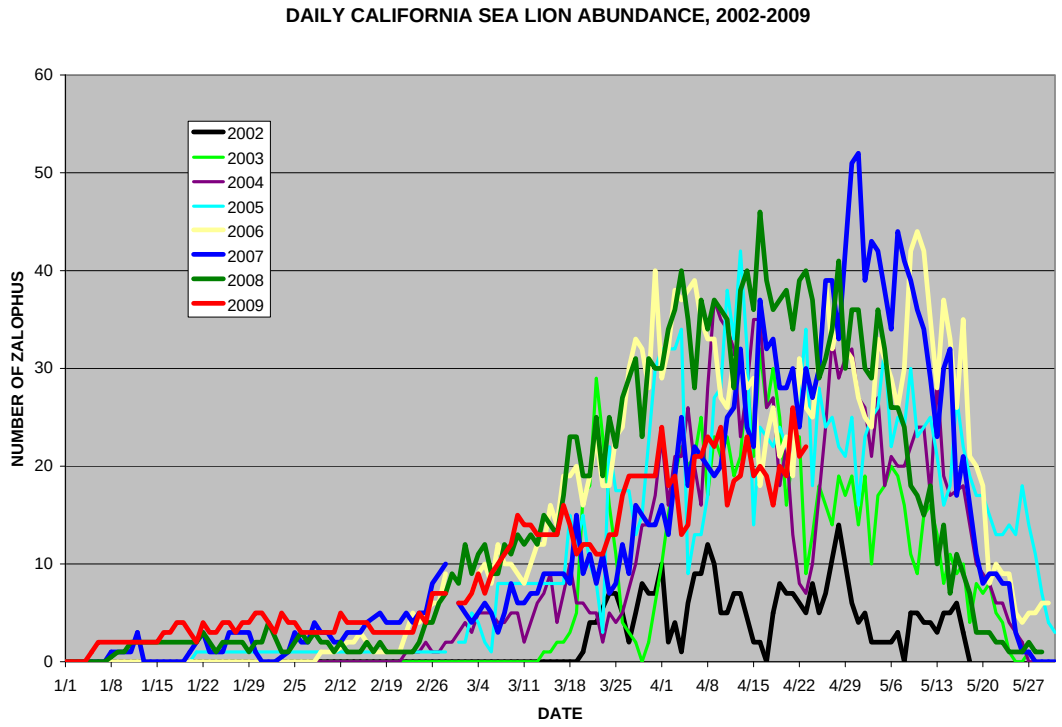

Figure 12. Daily minimum Steller sea lion abundance (weekends interpolated) at Bonneville Dam, 2002-2009.