

STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2011

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This is the thirteenth weekly status report of 2011 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through April 27, 2011 (unless otherwise noted). This report and earlier reports can be found at:

http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2011/sea_lion_hazing2011.html.

Regular daylight observations began on January 7 and will continue to the end of May, five days per week. Weekends will not be regularly monitored this year, as was the case in 2009/2010. Final 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.

PRELIMINARY RESULTS

All data presented here are preliminary as of the status report date. Predation figures are unexpanded (unless otherwise noted) 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 summarizing the results of the 2011 evaluation will be available in the fall of this year.

PINNIPED ABUNDANCE

California sea lion (*Zalophus californianus* - CSL) numbers have increased significantly the past week. We have seen as many as 31 Steller sea lions (*Eumetopias jubatus* - SSL) and 19 CSL at the dam on any one day so far this year (Figure 1). There are still fewer SSL present per day on average this year compared to last year, and the fewest average CSL per day to date since 2003 (Figures 2 and 6). CSL and SSL numbers continue to be relatively low for this time of year compared to previous years. The highest daily abundance estimate for pinnipeds at Bonneville dam this year was 48 on April 26. We have documented over 70 different individual SSL since January 7, at least 26 of those being confirmed as seen in past years. We have now documented about 44 individual CSL, at least 28 have been seen in previous years.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2011 are:

	<u>California Sea Lions</u>	<u>Steller Sea Lions</u>	<u>Total</u>
Chinook	532	270	802
Steelhead	59	114	173
Sturgeon	3	1350	1353
Lamprey	2	1	3
Shad	2	89	91
Smolt	5	1	6
Other	0	2	2
Unknown	51	703	754

It is likely that at least 95% of the unknown fish now being observed caught by CSL and SSL are salmonids. No sturgeon were observed taken at all this past week (Figure 4). CSL have now taken more salmonids than SSL (Figure 3). The Chinook run has finally taken off, with almost 6,000 passing April 28 (Figure 7). However the passage to date is still about 1/5th of the passage last year at this time (Figure 8). Total salmonid catch to date (1,322 expanded by interpolating for weekends) has also picked up a lot, with an estimated 486 salmonids taken this past week alone (Figure 5). About 95 cleptoparasitism events have been seen so far. C287 is well on his way to taking top predation honors this year with 67 observed salmonid catches to date. C287 was observed to take at least 198 salmonids last year.

DETERRENTS/TRAPPING

No trapping was conducted this week.

Hazing by CRITFC (boats) and USDA (land) began on February 28 and will continue until the end of May.

OTHER ITEMS OF INTEREST

There have been several reported sightings of one and possibly two California sea lions above the dam up to Stevenson. We have yet to get a look ourselves to try and identify the animal.

We conducted another night time observation on April 22 and somewhat surprisingly saw very little activity. The only predation observed was 4 minutes after the evening shift observation period ended and presence in the powerhouse tailraces dropped to zero after 2200h. As usual, the abundance of animals in and around the traps increased during the night. We were expecting more activity with the arrival of so many pinnipeds and the fish run beginning to get strong. It is possible night time predation is occurring in the spillway tailrace, but it is not possible for us to detect presence or predation events there at night.

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2011.

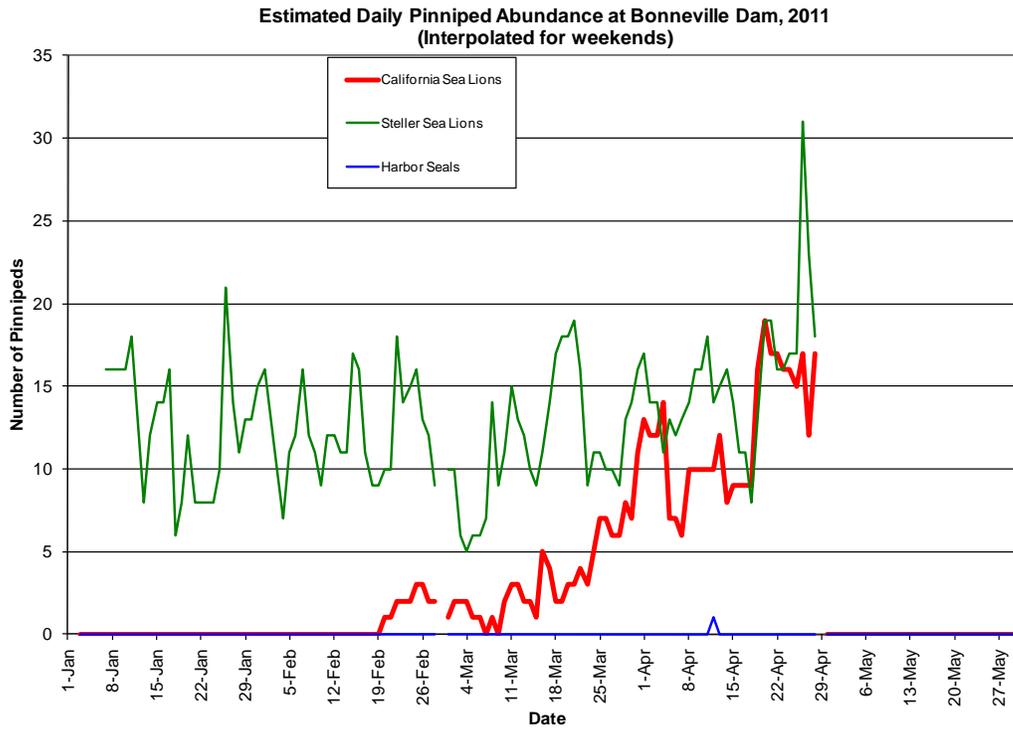


Figure 2. Average daily presence of pinnipeds, by species, to date (April 28) for each year at Bonneville Dam.

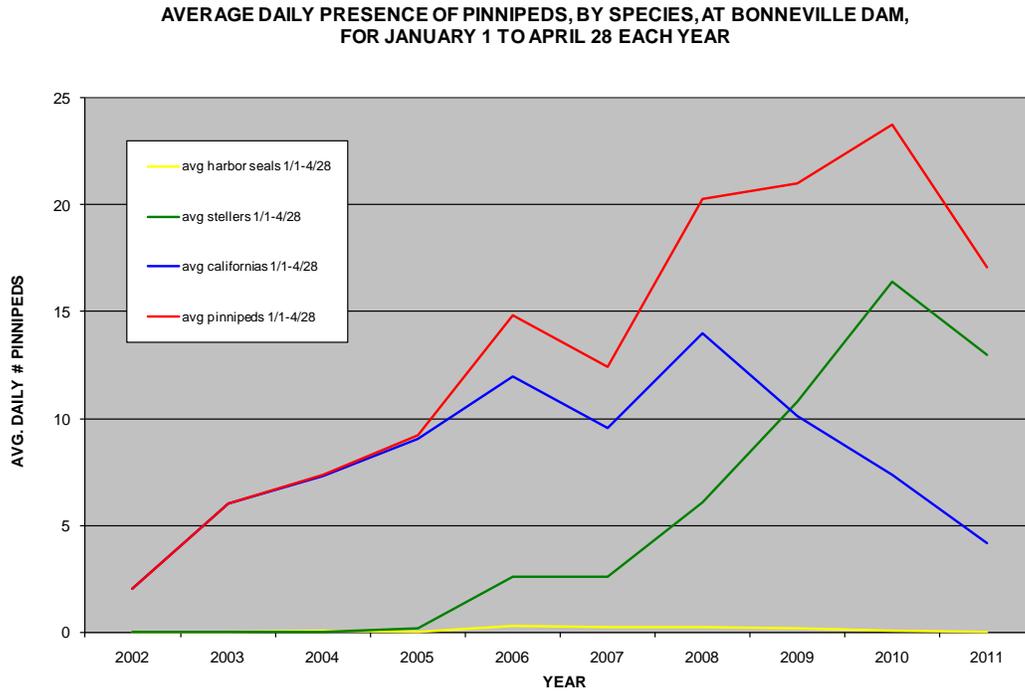


Figure 3. Major prey species taken by CSL and SSL and harbor seals, 2011.

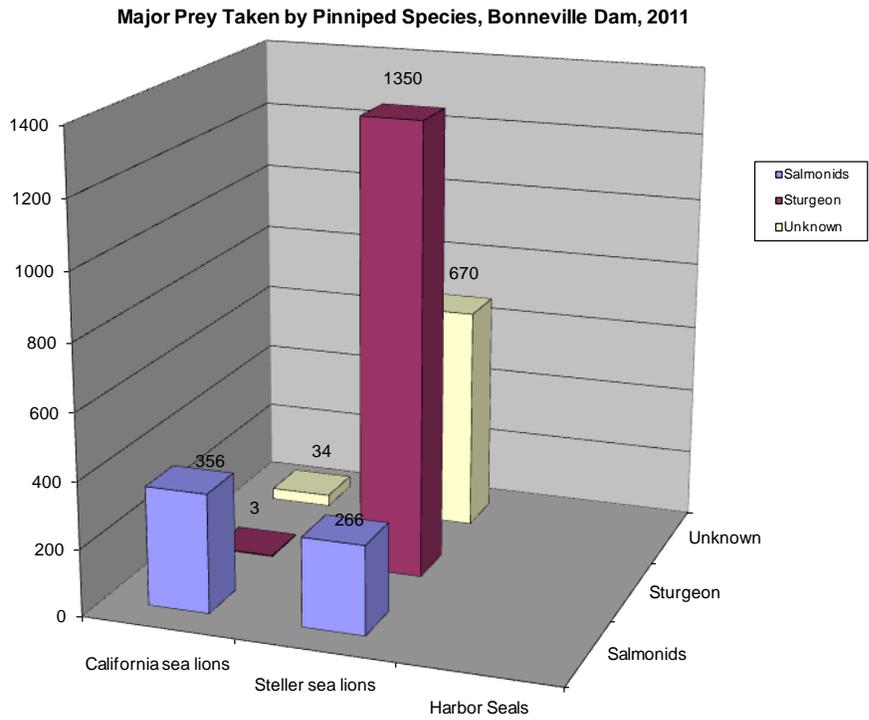


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

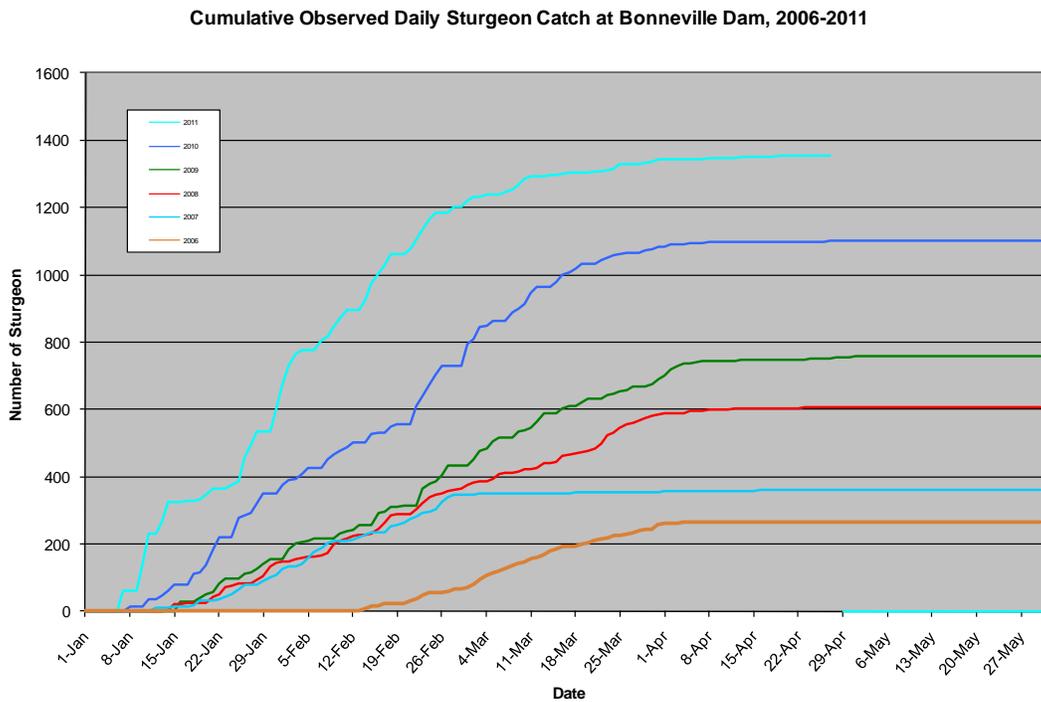


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

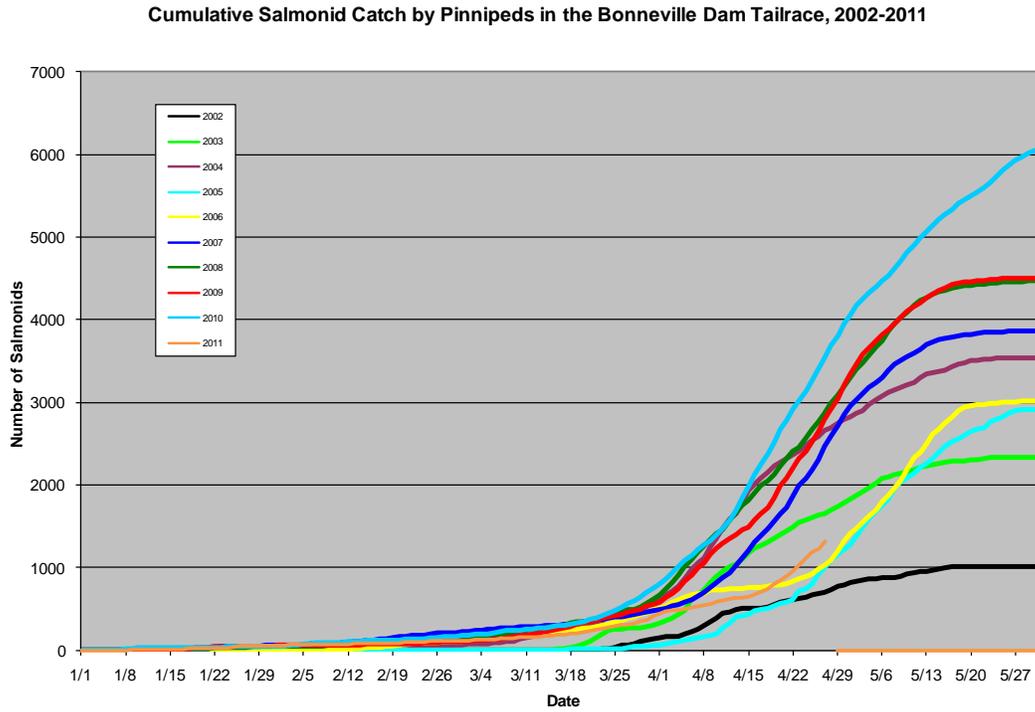


Figure 6. Daily California sea lion numbers for 2011 compared to the average daily CSL numbers from 2002-2010.

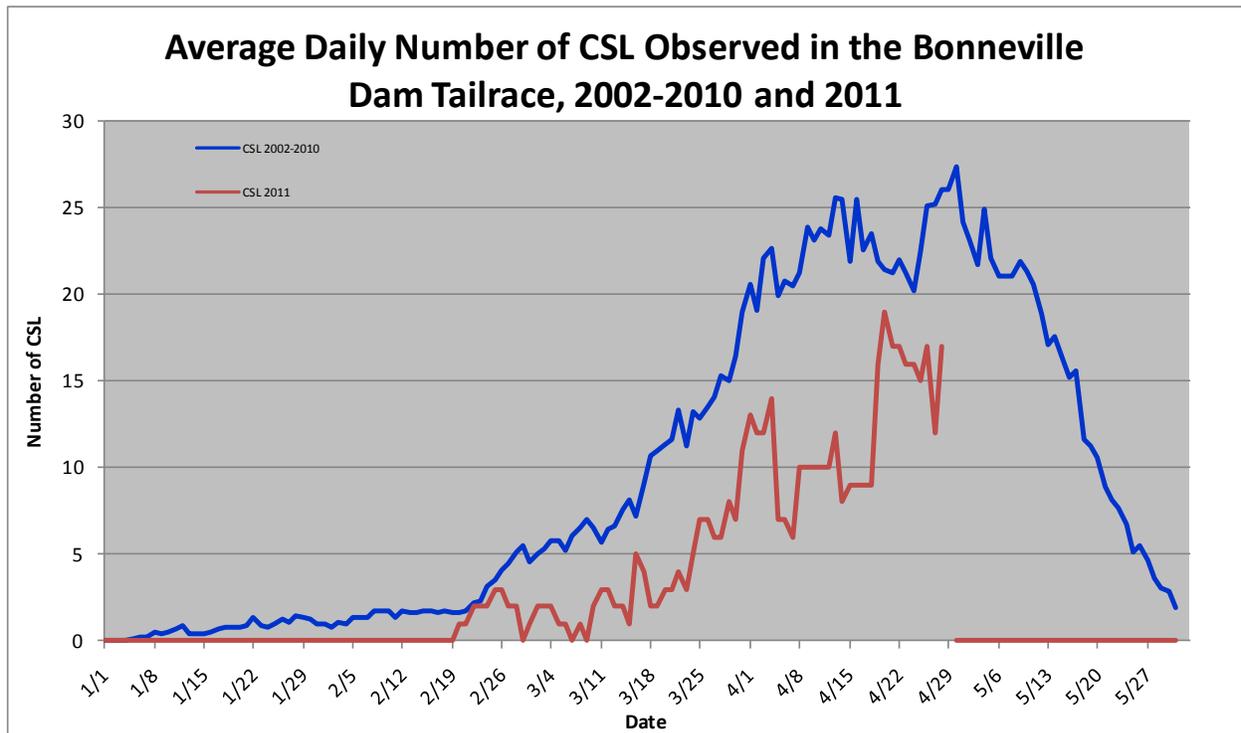


Figure 7. Daily salmonid count for Bonneville Dam, January 1, 2011 to present.

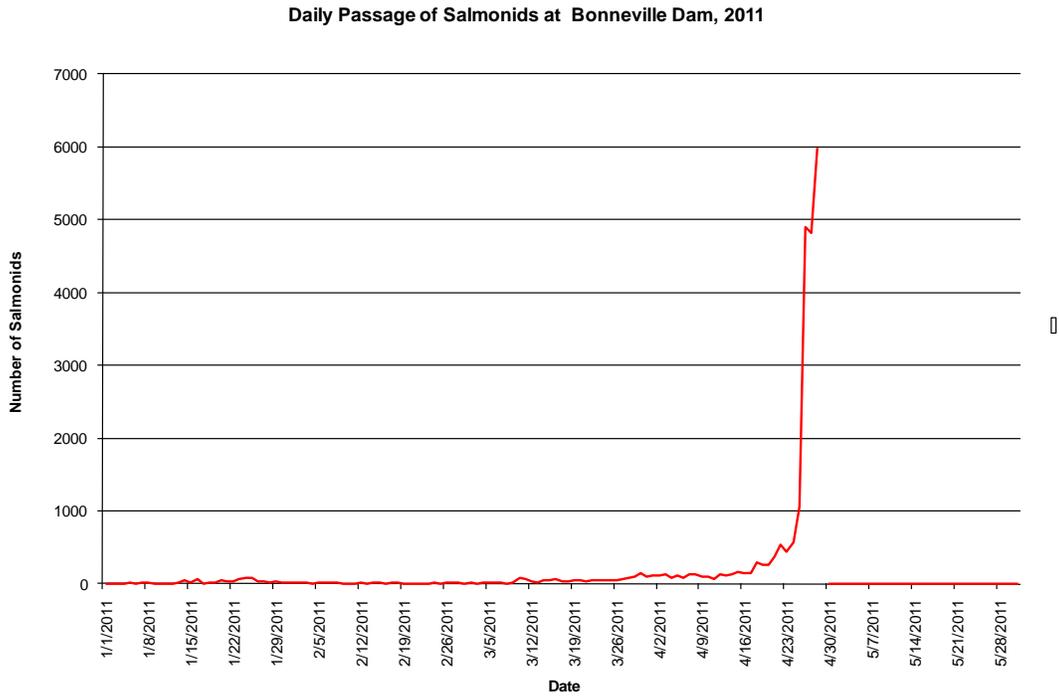


Figure 8. Cumulative salmonid passage for Bonneville Dam from January 1 to present, for the years 2002-2011.

