

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

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This is the twelfth weekly status report of 2011 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through April 20, 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 21 Steller sea lions (*Eumetopias jubatus* - SSL) and 19 CSL at the dam on any one day so far this year (Figure 1). There are now 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 was 38 on April 20. 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 40 individual CSL, at least 26 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	307	159	466
Steelhead	49	107	156
Sturgeon	3	1350	1353
Lamprey	2	1	3
Shad	0	89	89
Smolt	2	0	2
Other	0	2	2
Unknown	34	670	704

It is likely that at least 90% of the unknown fish caught by Steller sea lions were sturgeon and over 95% of the unknown fish caught by California sea lions are salmonids. CSL have now taken more salmonids than SSL (Figure 3). The Chinook run has at least broke into over 300 passing per day now, however the passage to date is still quite low (3,307 Steelhead, 2,031 Chinook since January 1) with 363 Chinook on April 21 being the high so far this year, and daily salmonid passage is still low (Figure 7). Since 2002, only 2005 and 2006 have seen fewer salmonids passing this late in the season (Figure 8), and only in 2006 have we reached 1,000 salmonids passing per day so late in the spring. Total salmonid catch to date (826 expanded by interpolating for weekends) is one of the lowest cumulative catch to date since 2002 (Figure 5). About 65 cleptoparasitism events have been seen so far.

DETERRENTS/TRAPPING

The States trapped pinnipeds on three days this week. On April 19, they branded 2 CSL (C012 and C013), April 20 they branded 1 CSL (C014), and April 21 they branded 2 CSL (C015 and C016). Several other CSL and SSL were captured but released as they were already branded or in the case of SSL, just released.

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

OTHER ITEMS OF INTEREST

Tribal members reported seeing a dark sea lion above the dam, around the Ft. Rains area, on April 15 and 16. Also on April 15, Bonneville Dam operators reported a sea lion in the locks which would have been passed upstream when the next barge came through, however we dropped the locks and flushed the sea lion (C779) back downstream, out of the locks and back into the tailrace.

We will be conducting another night time observation on April 22 as there are now more CSL and salmonids around.

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

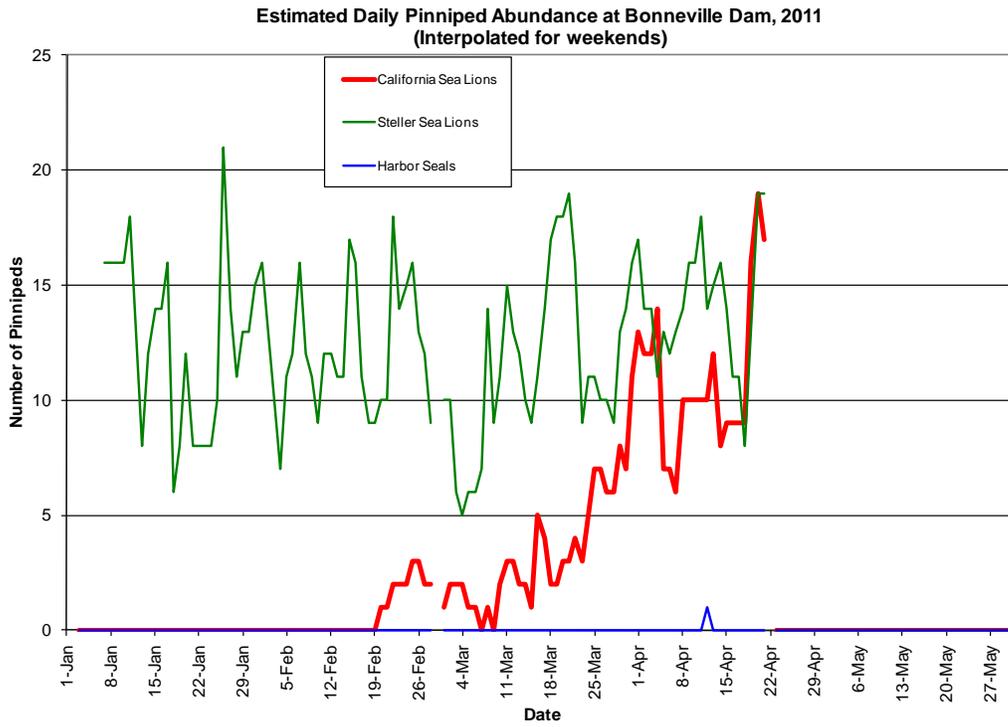


Figure 2. Average daily presence of pinnipeds, by species, to date (April 21) for each year at Bonneville Dam.

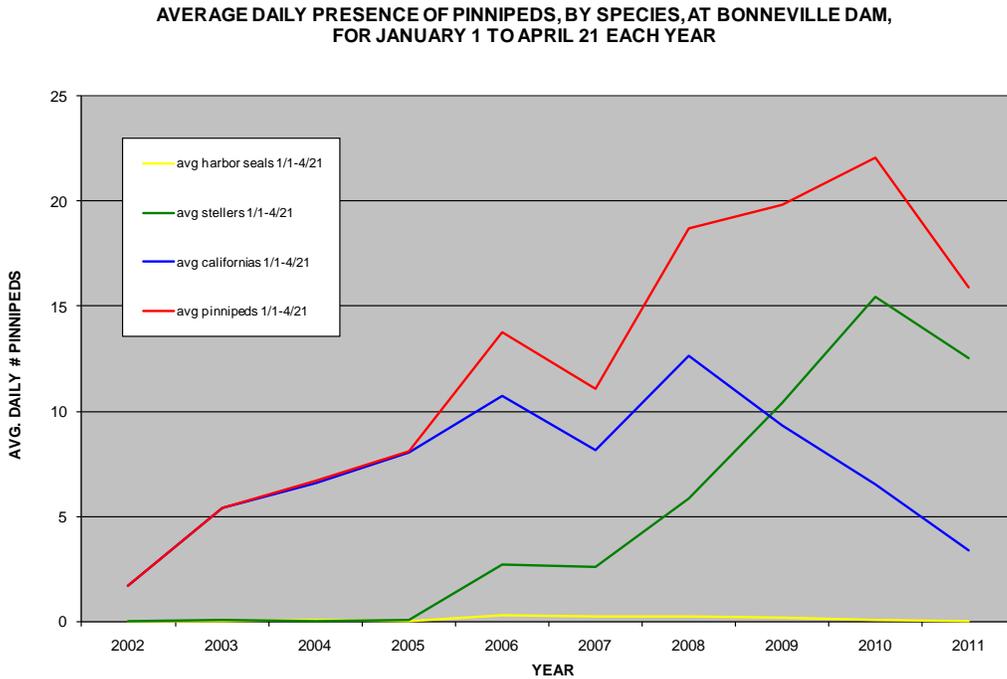


Figure 3. Major prey species taken by CSL and SSL and harbor seals, 2011.

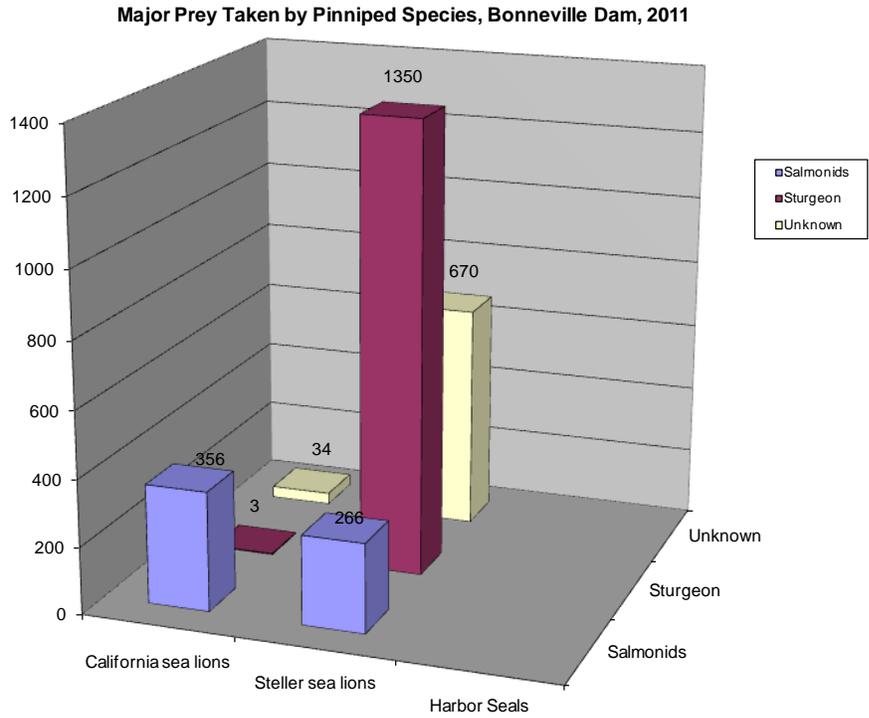


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

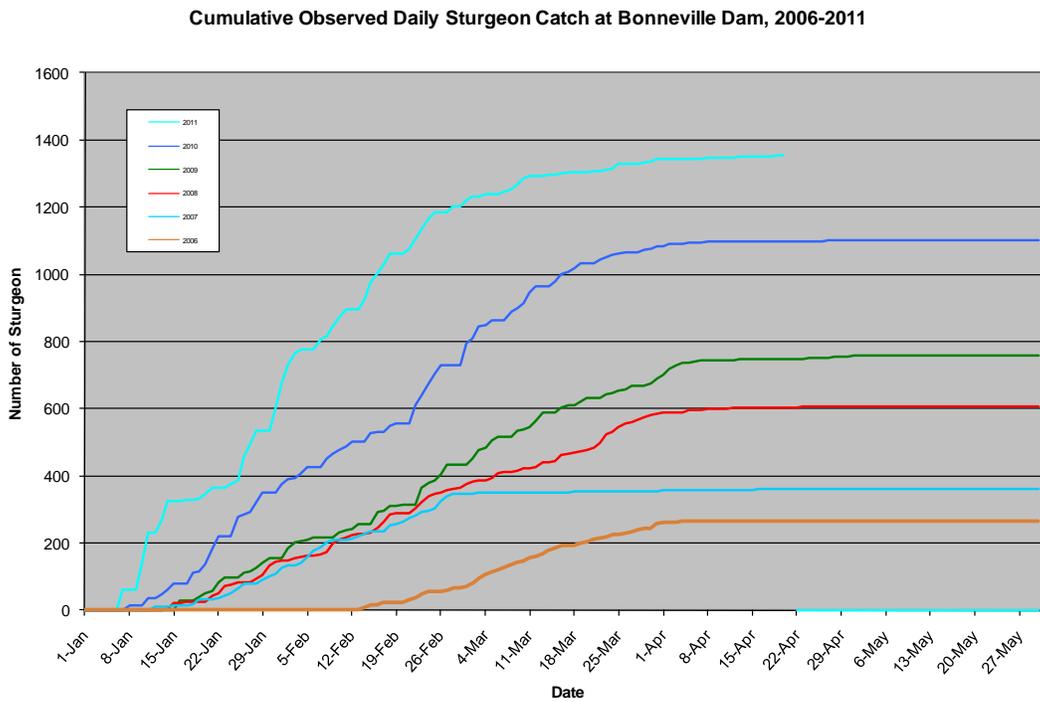


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

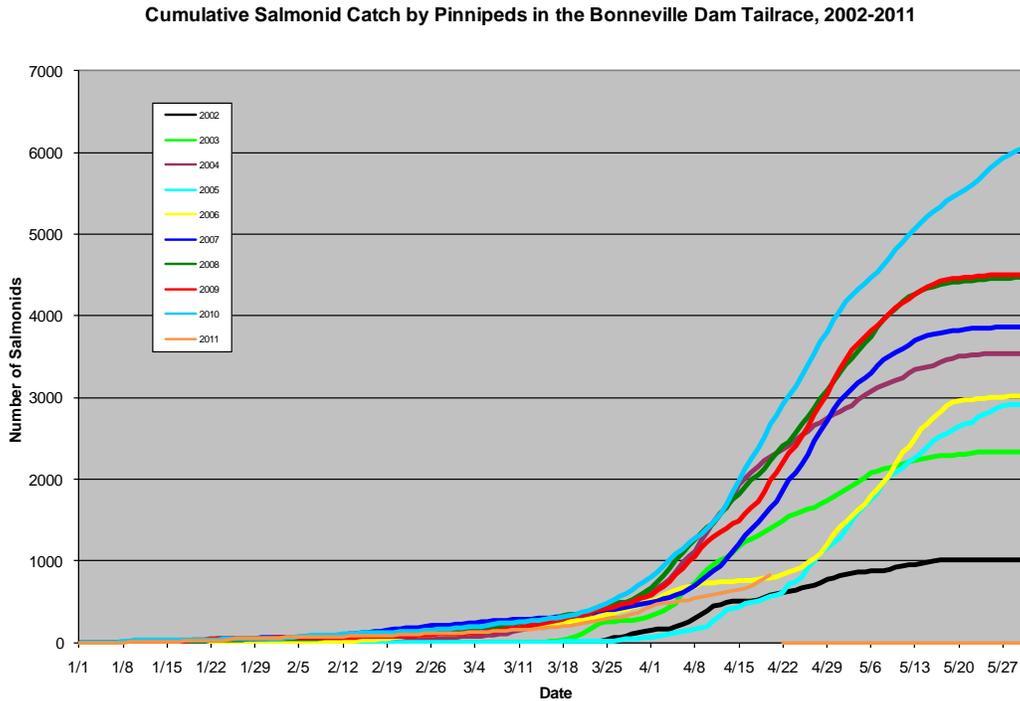


Figure 6. Daily California sea lion numbers for 2011 compared to the average daily CSL numbers from 2002-2010.

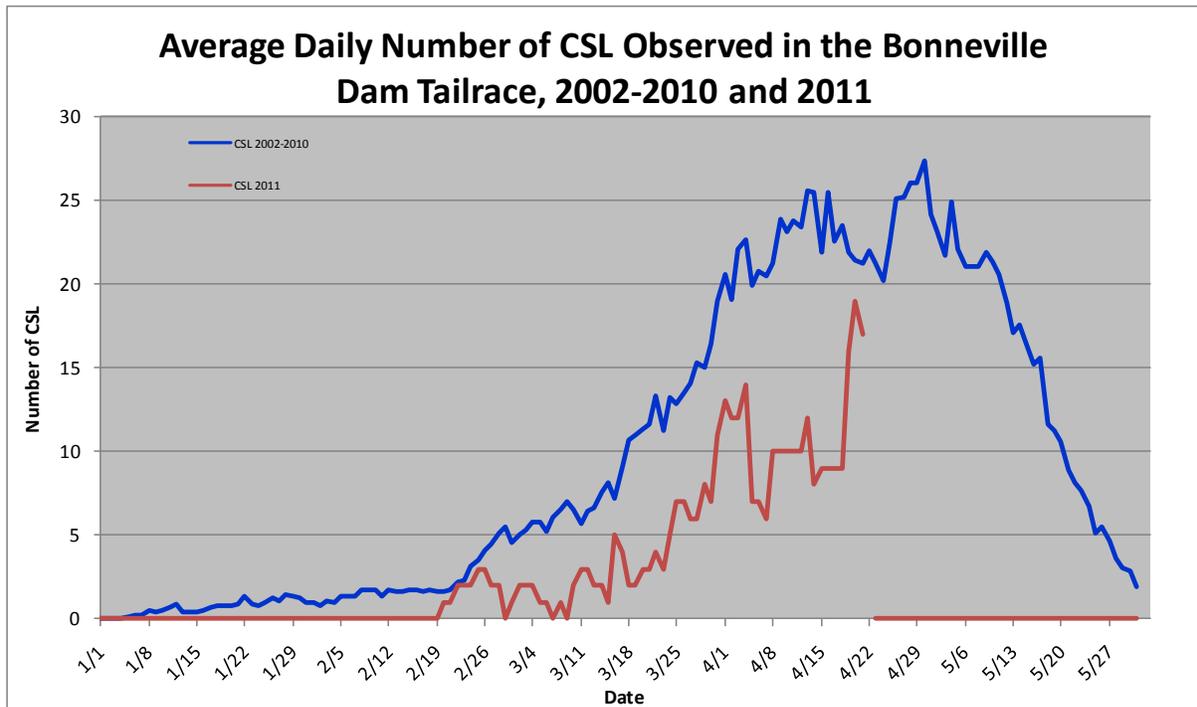


Figure 7. Daily salmonid count for Bonneville Dam, January 1, 2011 to present.

Daily Passage of Salmonids at Bonneville Dam, 2011

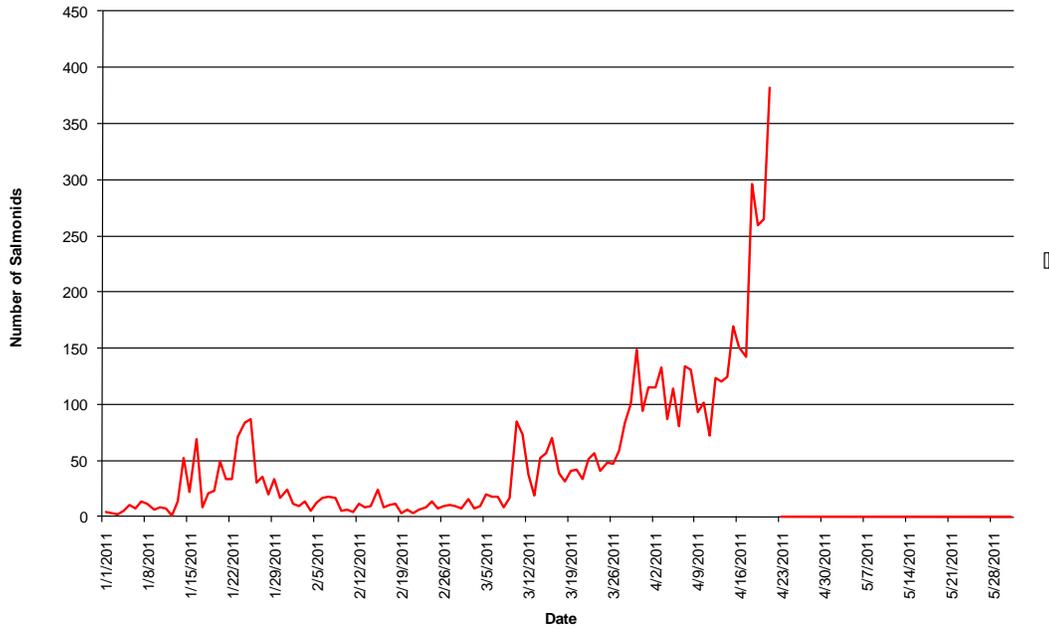


Figure 8. Cumulative salmonid passage for Bonneville Dam from January 1 to present, for the years 2002-2011.

Cumulative Salmonid Counts for Bonneville Dam, 2002-2011

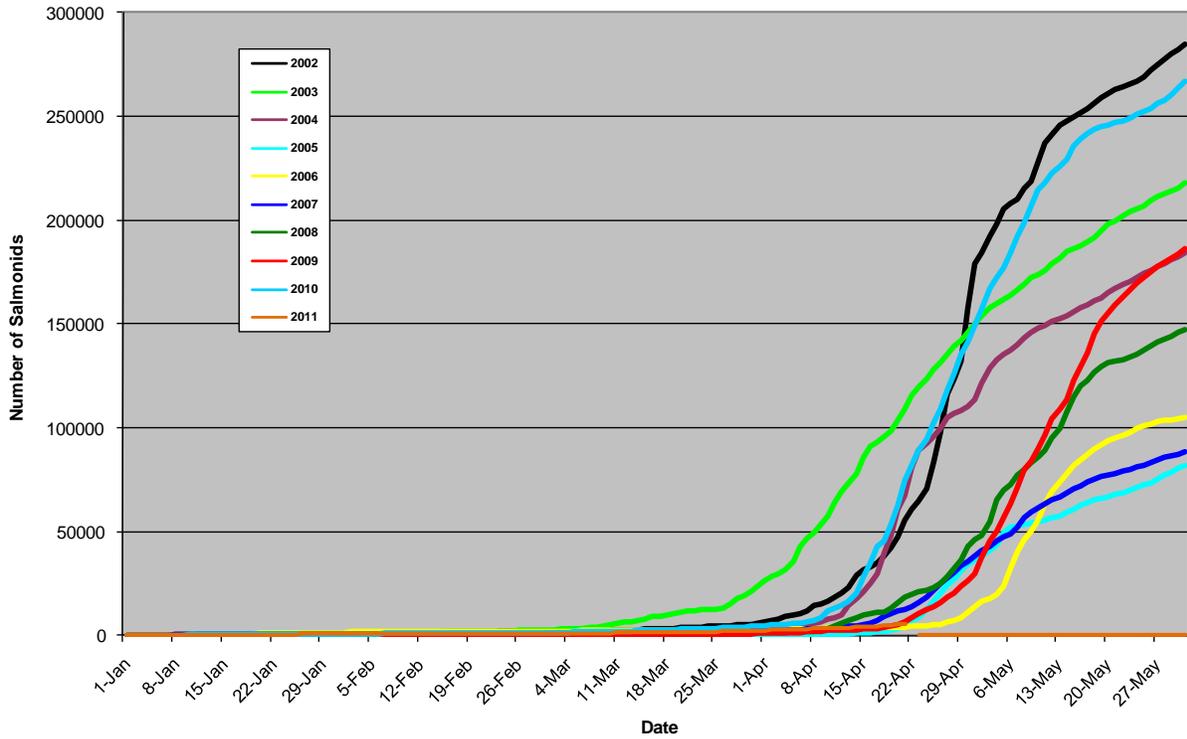


Figure 9. CSL C779 in the Navigation Lock of Bonneville Dam.





