

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

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This is the fourteenth weekly status report of 2011 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 4, 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 this past week. We have seen as many as 31 Steller sea lions (*Eumetopias jubatus* - SSL) and 20 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). CSL numbers continue to be relatively low for this time of year compared to previous years, but SSL numbers are staying higher than typical (Figures 9 and 10). 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 47 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	865	414	1279
Steelhead	60	114	174
Sturgeon	3	1350	1353
Lamprey	3	1	4
Shad	2	89	91
Smolt	5	1	6
Other	0	2	2
Unknown	68	727	795

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 two days exceeding 10,000 ((May 1 with 16,139 Chinook and May 3 with 10,292 Chinook) (Figure 7). However the passage to date is still about 1/3rd of the passage last year at this time (Figure 8). Total salmonid catch to date (1.984 expanded by interpolating for weekends) has also picked up a lot, with 123 salmonids taken on May 2 and over 100 each day since (Figures 5 and 6). About 123 cleptoparasitism events have been seen so far, and it seems to be far short of last years observations (over 800 when expanded for hours and days not observed). C287 is well on his way to taking top predation honors this year with 89 observed salmonid catches to date, but he is slowing down, unable to take more than a couple a day now. 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

This is relatively late in the season to have so many SSL still around the dam, however, with the late Chinook run, it may be keeping them here a bit longer than normal. Also, many of the CSL showing up for the first time this year already look large. It appears they have been eating fish somewhere else, prior to their arrival at Bonneville Dam. It could also be that they are some of the many individuals taking fish in the spillway tailrace, where it is difficult for us to get individual identifications and hazing activities have no effect.

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

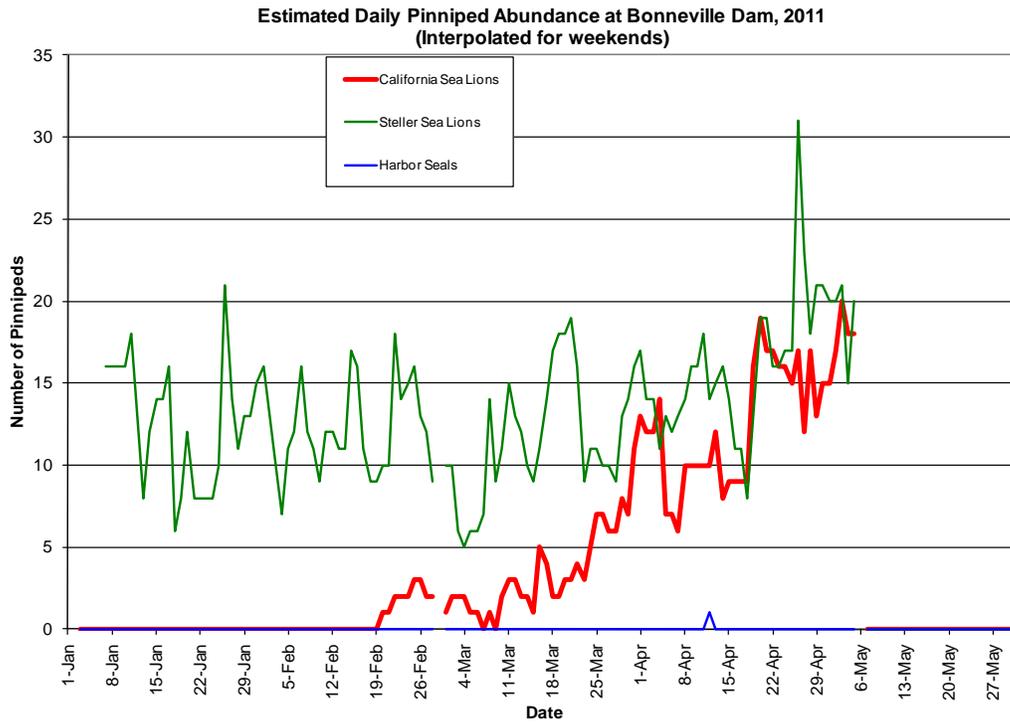


Figure 2. Average daily presence of pinnipeds, by species, to date (April 28) for each year at Bonneville Dam.

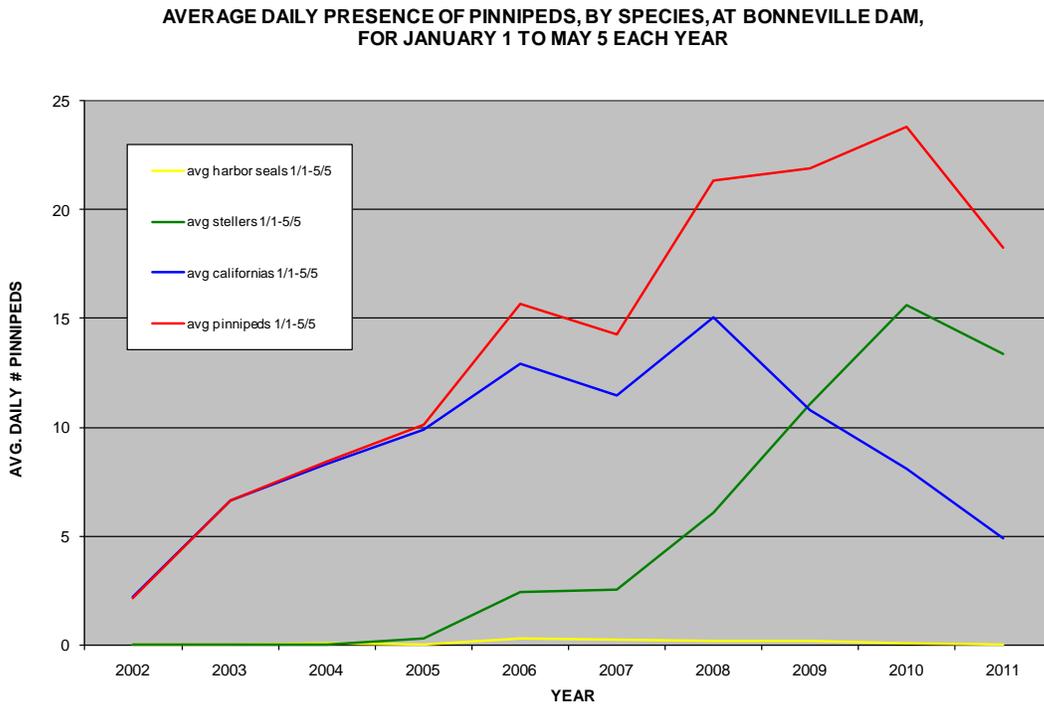


Figure 3. Major prey species taken by CSL and SSL and harbor seals, 2011.

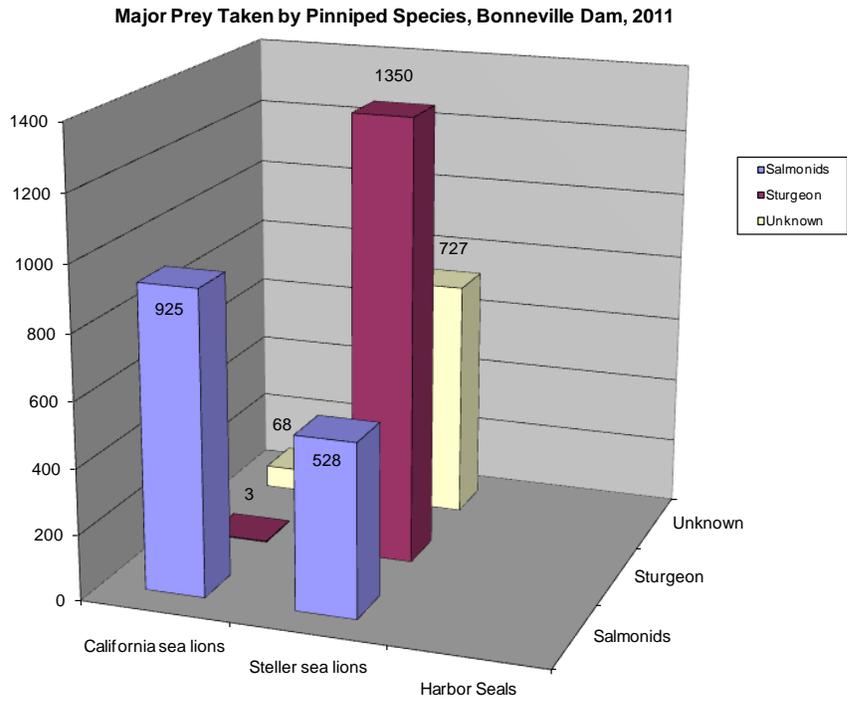


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

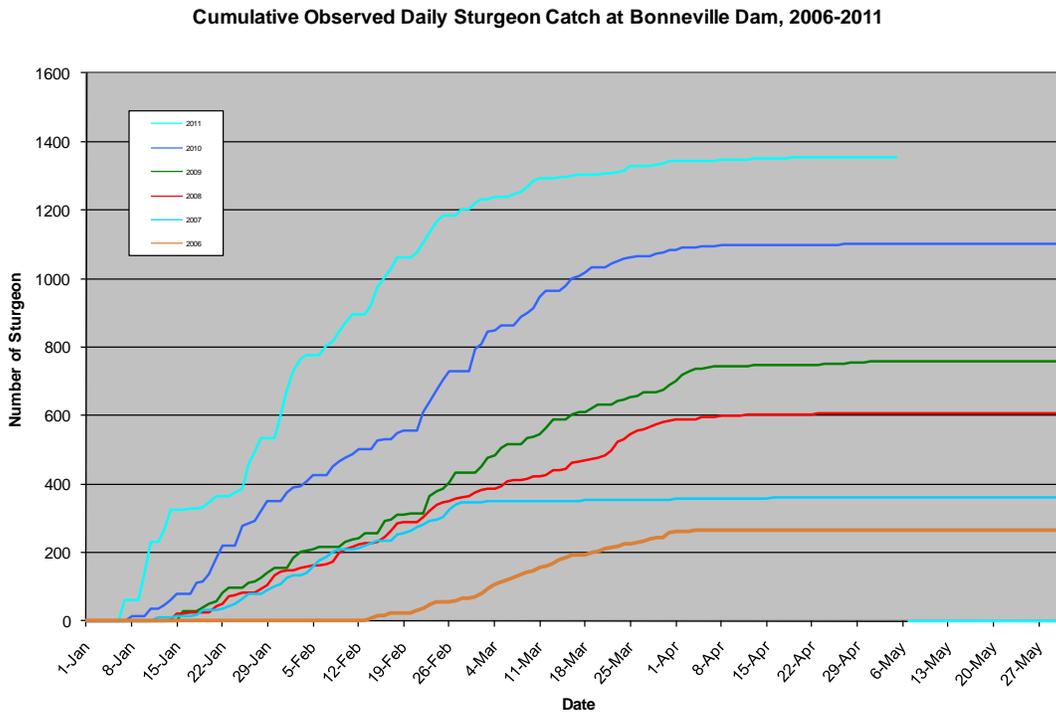


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

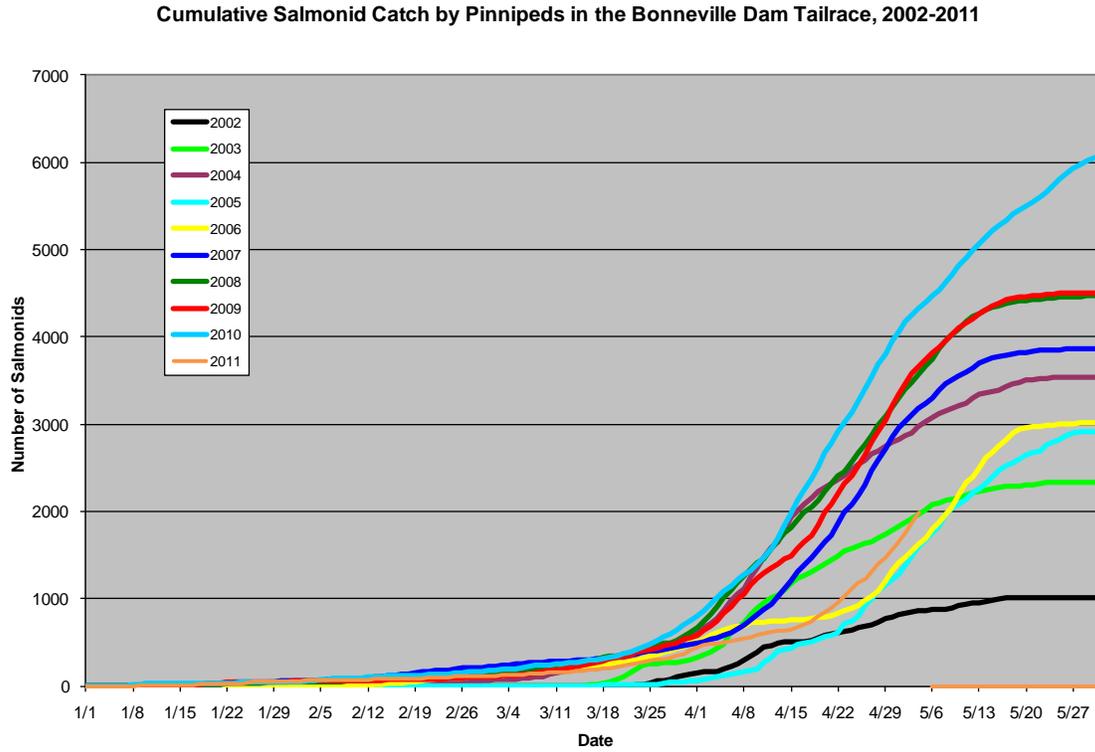


Figure 6. Daily pinniped predation estimates on salmonids for 2011 compared to daily salmonid predation estimates by pinnipeds from 2002-2010.

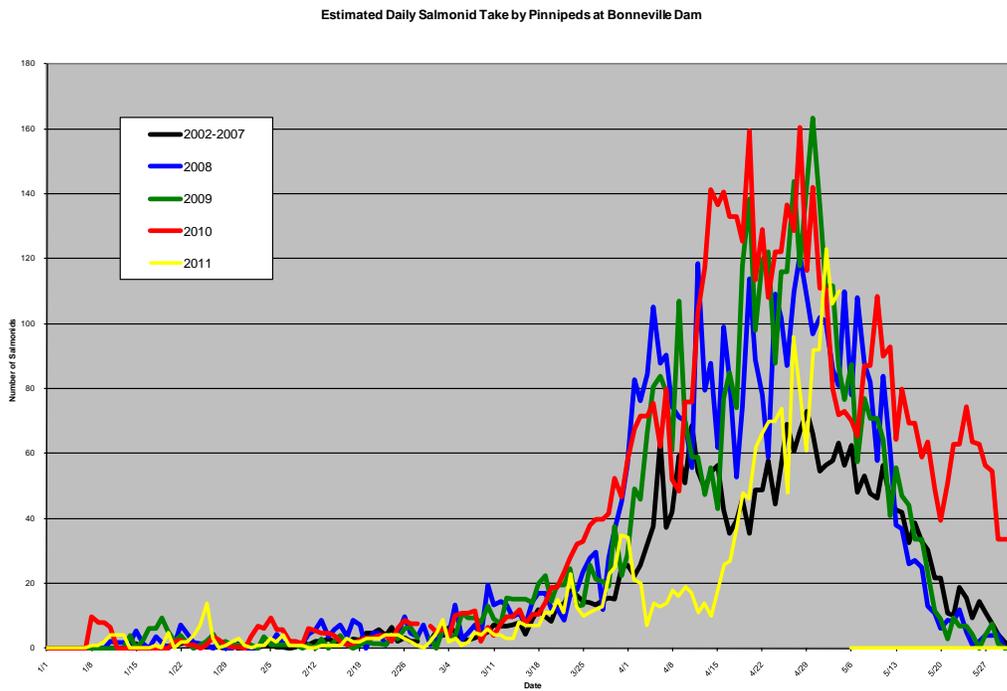


Figure 7. Daily salmonid count for Bonneville Dam, January 1, 2011 to present.

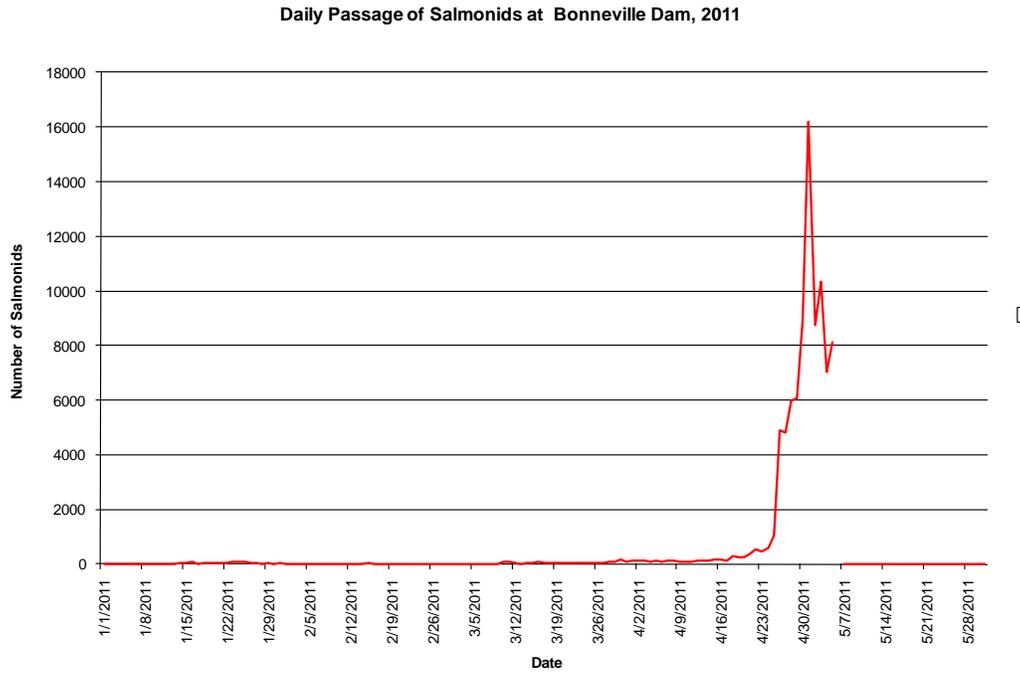


Figure 8. Cumulative salmonid passage for Bonneville Dam from January 1 to present, for the years 2002-2011.

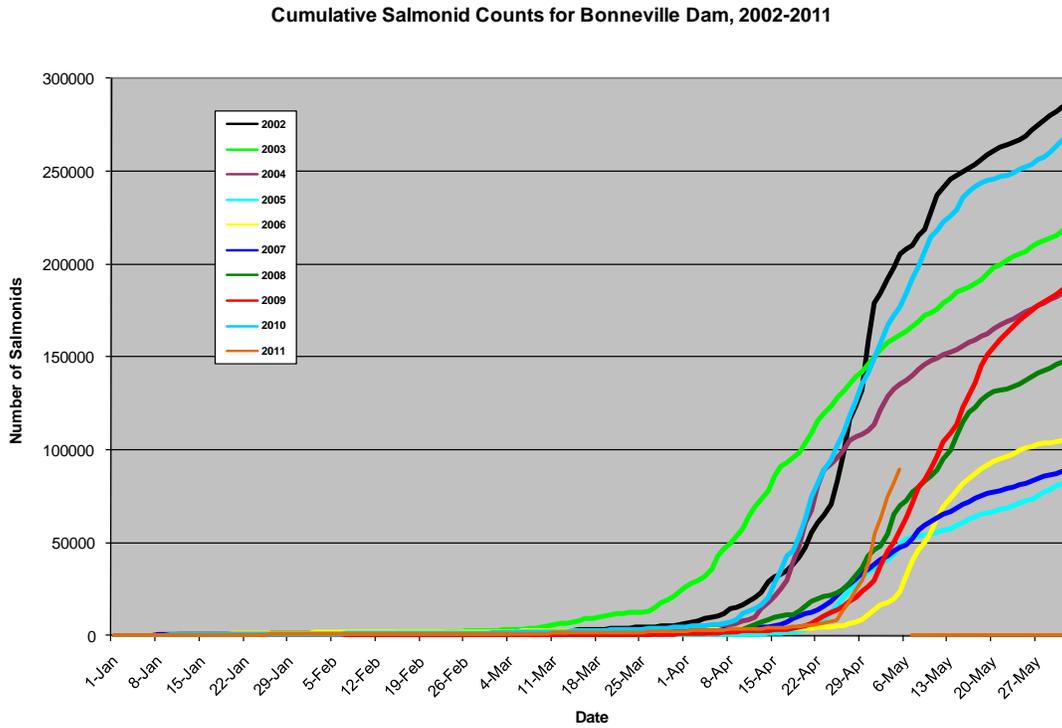


Figure 9. Daily CSL abundance at Bonneville Dam, 2003-2011.

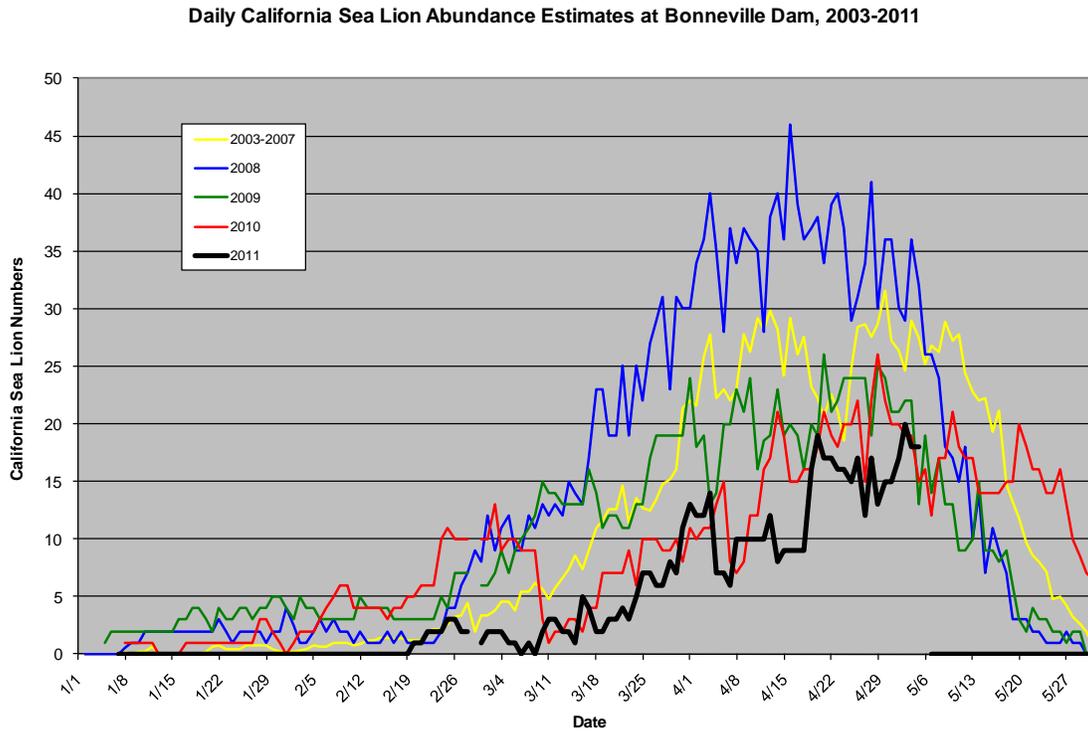


Figure 10. Daily SSL abundance at Bonneville Dam, 2003-2011.

