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Folks,

CSL and SSL mostly gone this week, only a few CSL hanging around now and likely for next couple of weeks. This will be the last weekly status update for this year. The final report should be available sometime in September/October.

Take home messages for 2013 season:

1. Although individual numbers of CSL are higher than last year (mostly non-repeat individuals), the daily number of CSL present is very similar to last year, which was the lowest since 2002. Basically, a lot of new, smaller CSL showed up to explore Bonneville throughout the season (possibly attracted at first by the large smelt runs in the Columbia River, then the spring Chinook run) but didn't spend much time at Bonneville. Possibly either hazing or 'bullying' (by the larger SSL present) convinced them that they could catch fish elsewhere without having to endure harassment and theft of their catch.
2. Individual numbers of SSL are similar to the high seen in 2011 (mostly repeat individuals), and the daily number of SSL present will be close to the high seen in 2010.
3. The estimated (non-adjusted) salmonid predation by CSL this year will be slightly higher than last year, but similar to the lowest predation figures seen in 2002 and 2012.
4. The estimated (non-adjusted) salmonid predation by SSL will be slightly lower than last year, but higher than all other years observed.
5. The estimated (non-adjusted) sturgeon predation by SSL will be the lowest seen since 2007. No idea why this occurred, whether fewer sturgeon were present, or left earlier than normal, or SSL decided to save room for the much more tasty spring Chinook!

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STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2013

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This is the 15th and final weekly status report for 2013 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 15, 2013 (unless otherwise noted). Regular daylight observations began January 4 and will continue through the end of May, five days per week excluding holidays. Final predation estimates will be expanded for hours and days not observed, adjusted for “unknown” prey species take, and a night time predation factor applies at the end of the observation season and those updated figures will be presented in our annual field report. This report can be found at: http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2013/sea_lion_hazing2013.html

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 2013 evaluation will be available in the fall of this year.

PINNIPED ABUNDANCE

California sea lion (*Zalophus californianus* – CSL) numbers have drastically dropped off this past week (Figure 1). The maximum number of CSL seen on any one day so far this year is 21. We’ve identified about 60 individual CSL so far, at least 14 being repeat individuals from previous years. Steller sea lions (*Eumetopias jubatus* - SSL) have all but disappeared this past week but the daily average will remain higher than past two years at this point (figures 1 and 2). The maximum number of SSL seen on any one day so far this year was 40 (Figure 1). We have documented over 80 different SSL’s visiting the dam so far (including 34 with brands) and confirmed that 53 are repeats from past years, although these figures are preliminary. These figures do not include pinniped numbers that are upstream of Bonneville Dam (at least 4 CSL likely).

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2013 (through May 15) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	733	655	1388
Steelhead	19	94	113
Sturgeon	0	314	314
Lamprey	18	18	36
Shad	3	73	76
Smolt	18	13	31
Other	76	10	86
Unknown	57	131	188

Spring Chinook numbers passing Bonneville Dam have reached 93,758 Chinook to date and for steelhead, 2,914 (Figure 6). Predation by CSL and SSL on salmonids dropped a lot this week and estimated total predation (non-adjusted) is virtually equal for both species (Figure 7). Total salmonid catch through May 15 was 2,160 (expanded by interpolating for weekends) and will be slightly more than last year by less than most other years observed (Figure 5). Salmonid catch has been fairly equal across the three tailraces (Figure 3), although the location of predominant predation switched several times during the season. Sturgeon catch (489 expanded by interpolating for weekends only) is the lowest rate since 2007 at this time of year (Figure 4).

DETERRENTS

Hazing by USDA (land) began on March 4 and will continue until the end of May, seven days a week. CRITFC also began hazing from boats March 4 but have suspended hazing efforts for the rest of the season due to lack of sufficient number of pinnipeds present. The states did not trap any sea lions at Bonneville this week. The states trapping information and results can be found at ODFW's website (<http://www.dfw.state.or.us/fish/SeaLion/index.asp>).

PRELIMINARY SUMMARY OF 2013 SEASON

1. Although individual numbers of CSL are higher than last year (mostly non-repeat individuals), the daily number of CSL present is very similar to last year, which was the lowest since 2002 (Figure 2).
2. Individual numbers of SSL are similar to the high seen in 2011 (mostly repeat individuals), and the daily number of SSL present will be close to the high seen in 2010 (Figure 2).
3. The estimated (non-adjusted) salmonid predation by CSL this year will be similar to the lowest predation figures seen in 2002 and 2012, although slightly higher (Figure 8).
4. The estimated (non-adjusted) salmonid predation by SSL will be slightly lower than last year, but higher than all other years observed (Figure 9).
5. The estimated (non-adjusted) sturgeon predation by SSL will be the lowest seen since 2007 (Figure 4).

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2013.

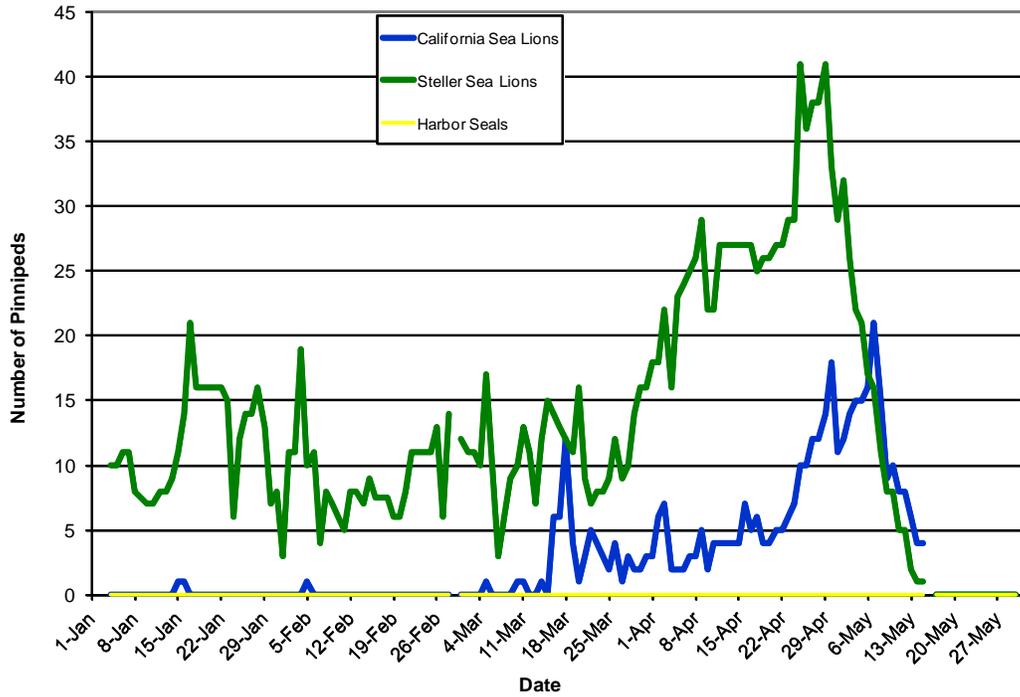


Figure 2. Average daily presence of pinnipeds, by species, to date (May 15) for each year at Bonneville Dam.

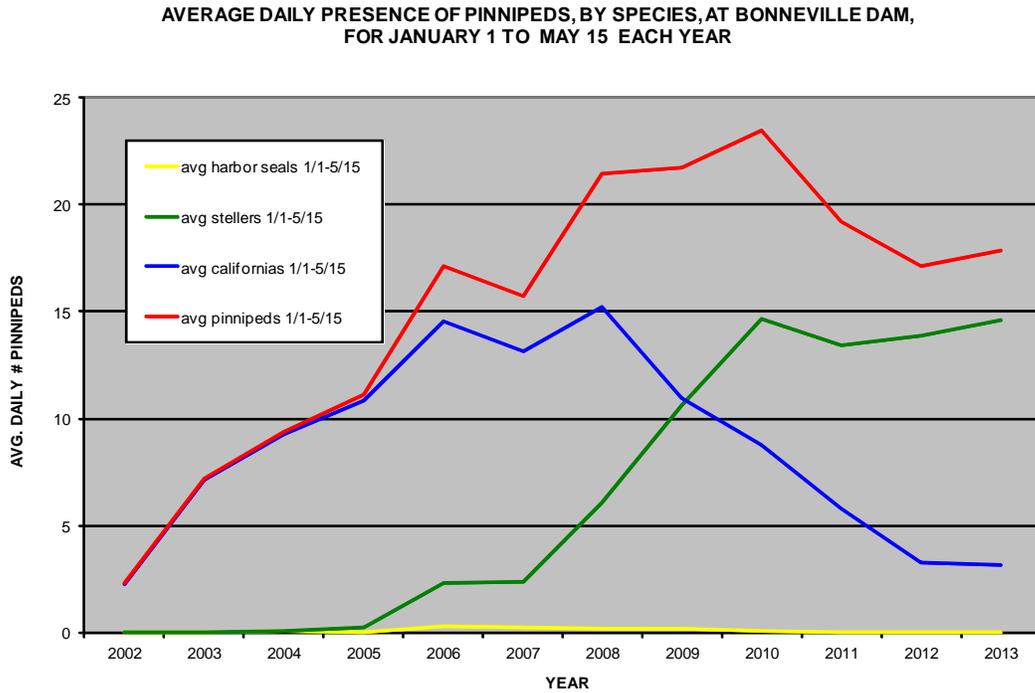


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 15, 2013.

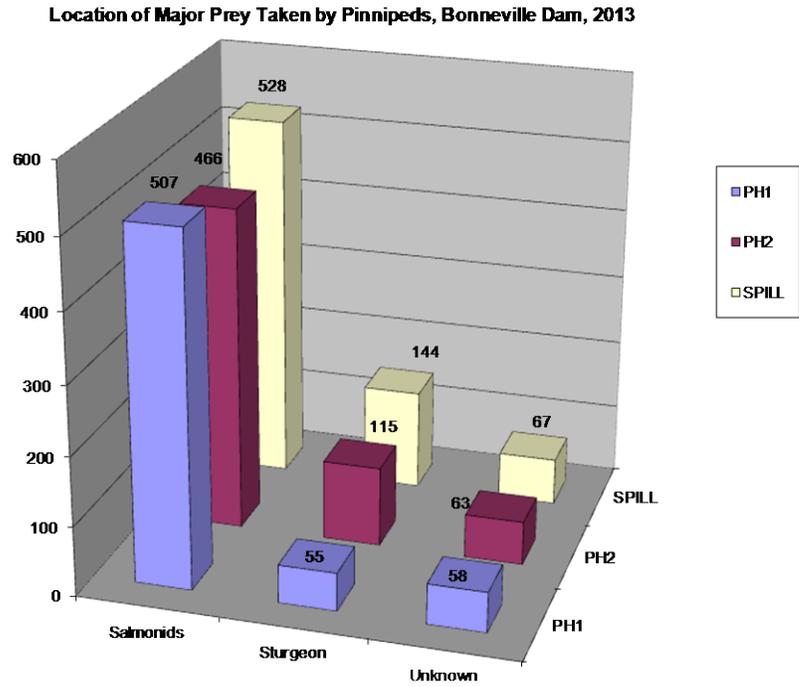


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2013.

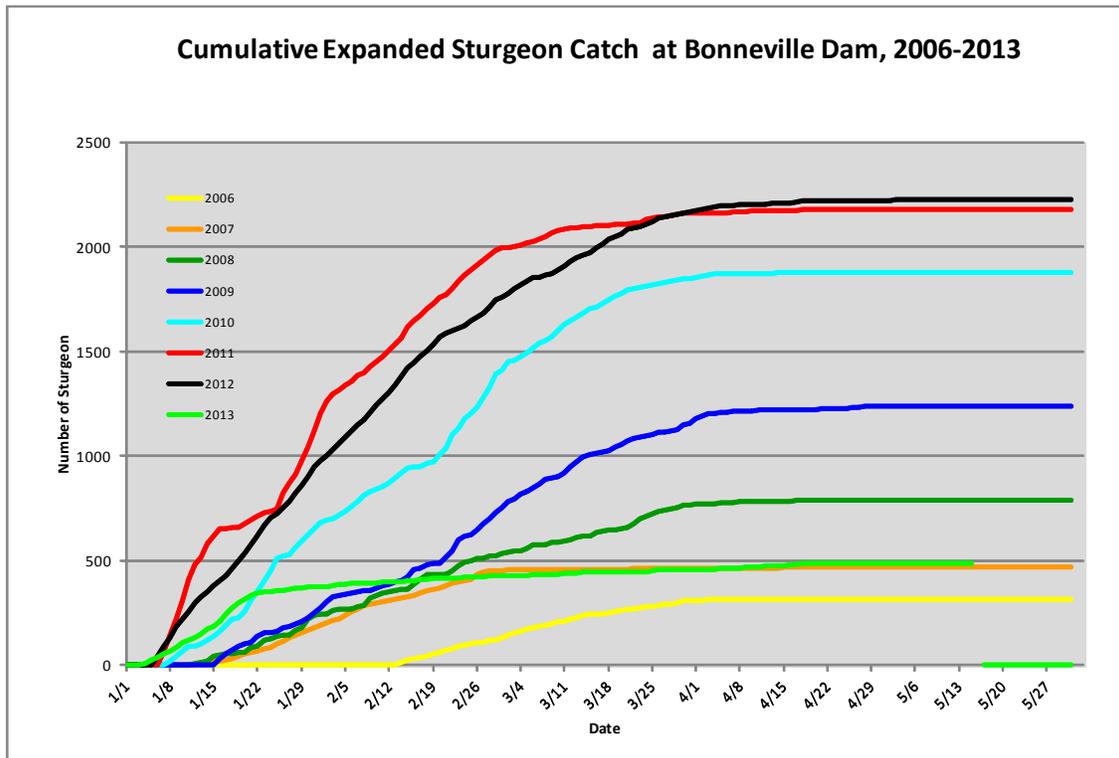


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, through May 15 for 2002-2013.

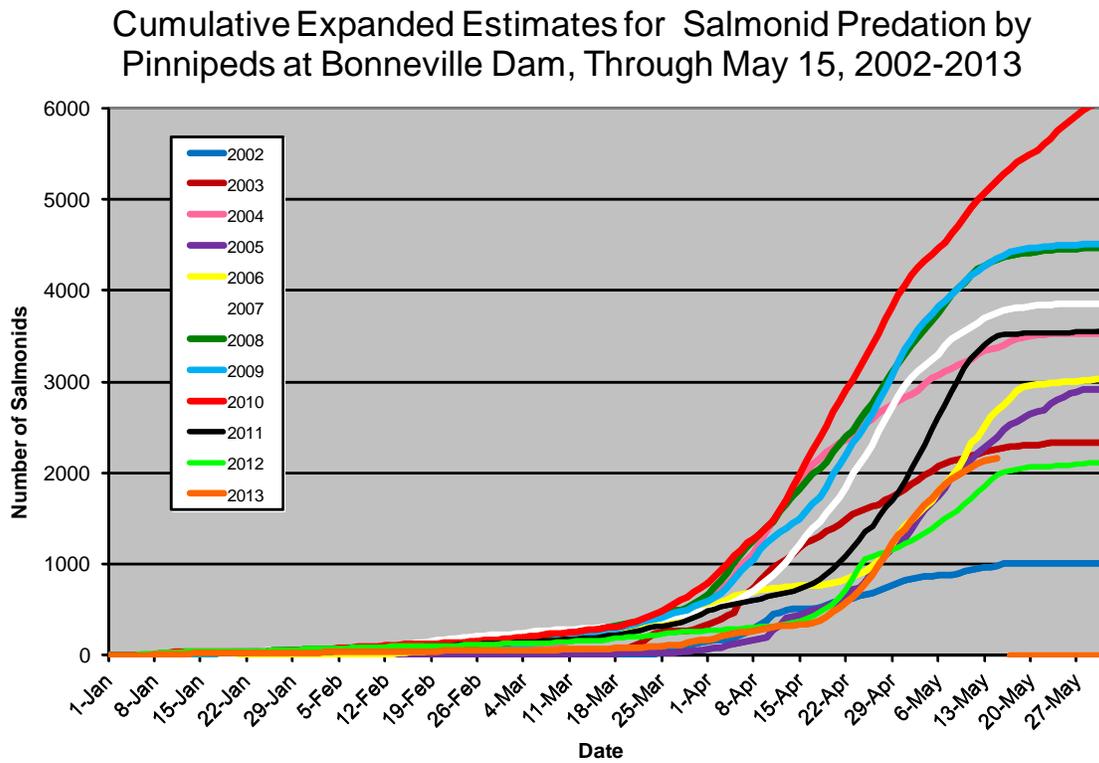


Figure 6. Cumulative salmonid passage at Bonneville Dam for 2013 and the 5 and 10 year averages to date.

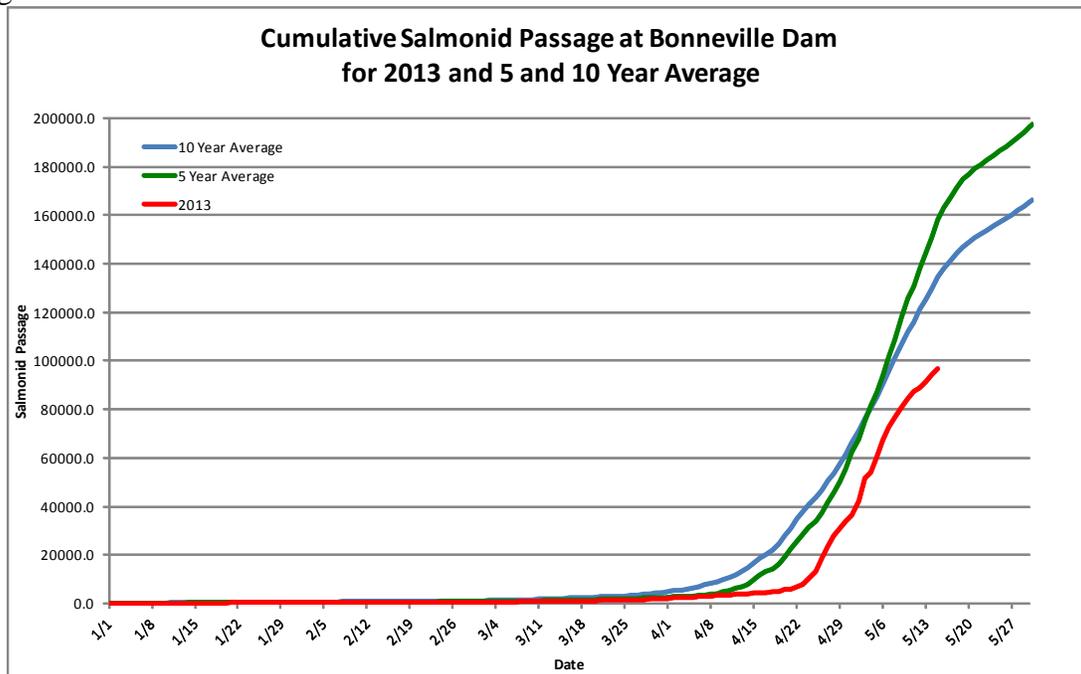


Figure 7. Prey distribution by Pinniped species at Bonneville Dam, through May 15, 2013.

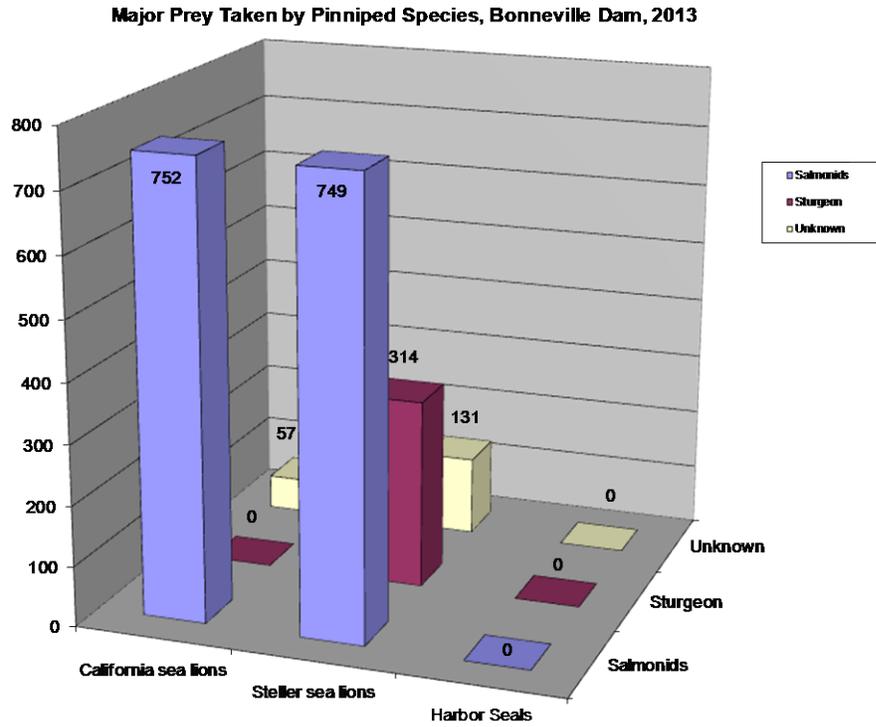


Figure 8. Cumulative daily expanded (not adjusted) salmonid predation estimate by CSL at Bonneville Dam, 2002-2013.

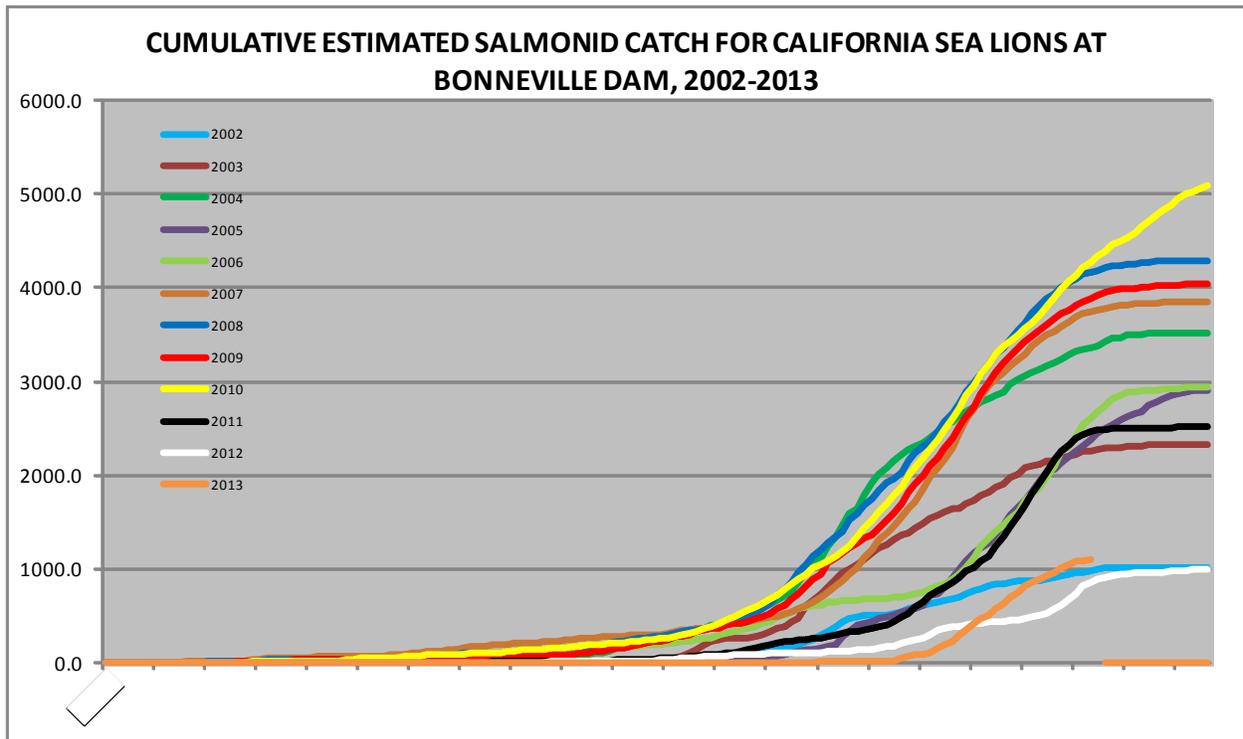


Figure 9. Cumulative daily expanded (not adjusted) salmonid predation estimate by SSL at Bonneville Dam, 2002-2013.

