

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

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This is the thirteenth weekly status report for 2013 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 1, 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 this year are lower than we have ever observed (Figure 1), however many new individuals showed up this past week. The maximum number of CSL seen on any one day so far this year is 18. We’ve identified about 45 so far, at least 11 being repeat individuals from previous years. Steller sea lions (*Eumetopias jubatus* - SSL) numbers are slightly 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 approximately 77 different SSL’s visiting the dam so far (including 32 with brands). All but 29 SSL are confirmed as seen in 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 1) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	352	517	869
Steelhead	8	88	96
Sturgeon	0	313	313
Lamprey	1	13	14
Shad	1	73	74
Smolt	9	10	19
Other	76	9	85
Unknown	36	119	155

Spring Chinook numbers passing Bonneville Dam have really started to rise (33,530 Chinook and 2,650 steelhead from January 1 through May 1), but still lags behind seven of the past 11 years (Figure 6). Predation by SSL (primarily) and CSL on salmonids has increased dramatically this past week and is now higher than last year at this point and higher than 2002 and 2005 estimates. Total salmonid catch through May 1 (1,374 expanded by interpolating for weekends) almost doubled the total since last week (Figure 5). Salmonid catch has been predominantly at the spillway, followed by powerhouse two and powerhouse one, a drastic change over the past two weeks (Figure 3). Sturgeon catch (482 expanded by interpolating for weekends only) is the lowest rate since 2007 at this time of year (Figure 4), most being taken in the 2 to 4 foot range. CSL consumed more salmonids this past week than SSL, however SSL's continue to have the higher prey total consumed for the year, including salmonids (Figure 7).

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. The states trapped and branded 6 CSL this week. Three additional CSL trapped were on the list for removal, 2 were undergoing health exams for transport to the Queens Zoo in New York, and the third was euthanized. The states trapping information and results can be found at ODFW's website (<http://www.dfw.state.or.us/fish/SeaLion/index.asp>).

OTHER ITEMS OF INTEREST

A total of nine separate night/early morning observations have been made since early April (29 hours total) with seven fish catches being seen (five during the hours just before dawn or after dusk). Members of National Geographic were present this week to test the deployment of two "Critter Cams" with remote release mechanisms (and GPS tracking). The two SSL that had the cameras affixed headed downstream to Phoca Rock the first day and did not appear to be back at the dam as of today.

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

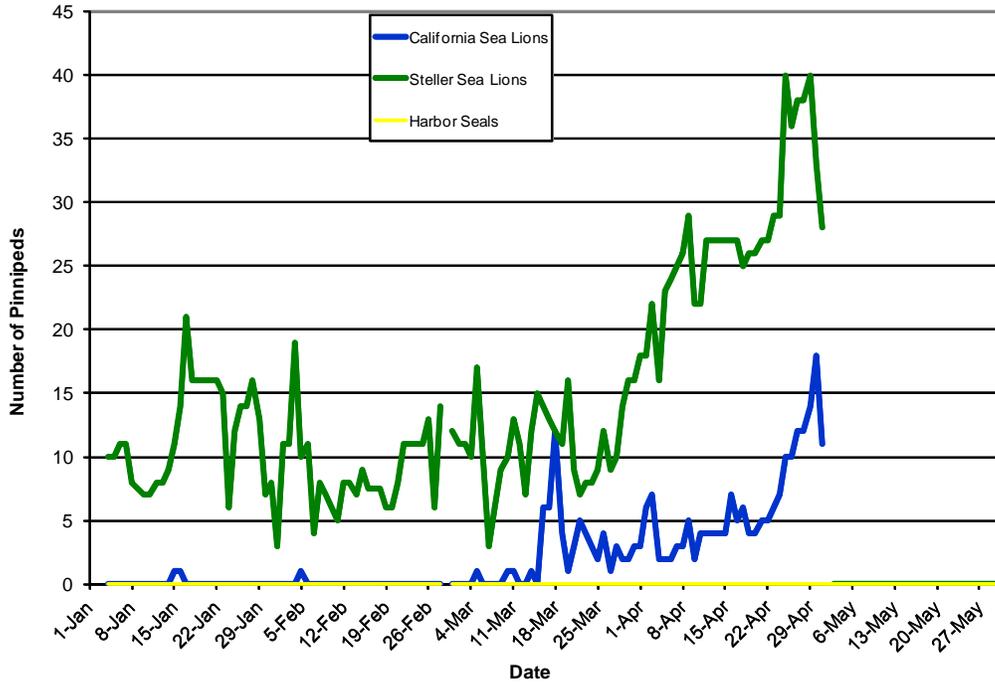


Figure 2. Average daily presence of pinnipeds, by species, to date (May 1) for each year at Bonneville Dam.

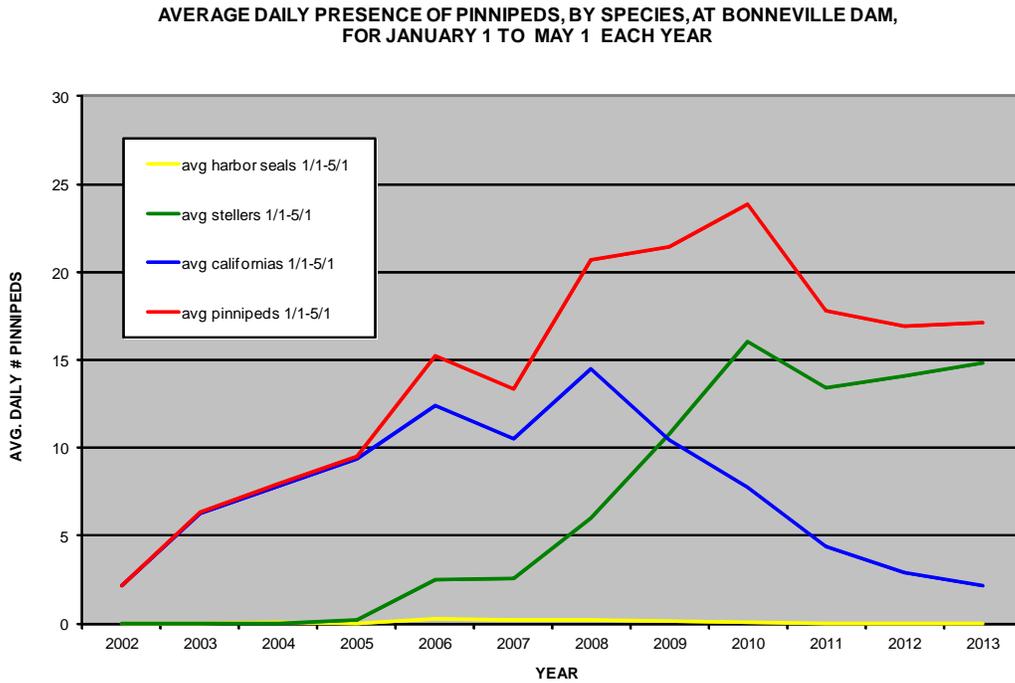


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 1, 2013.

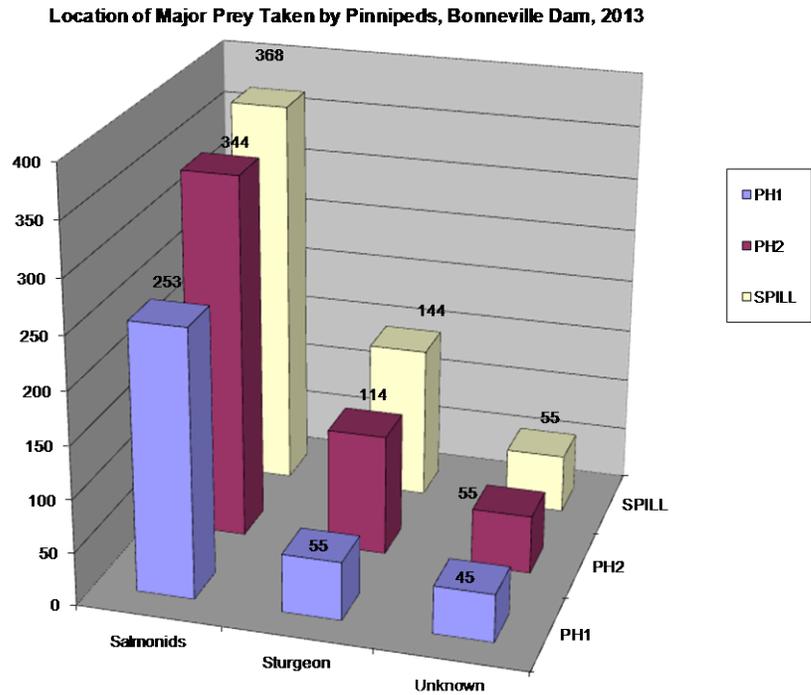


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2013.

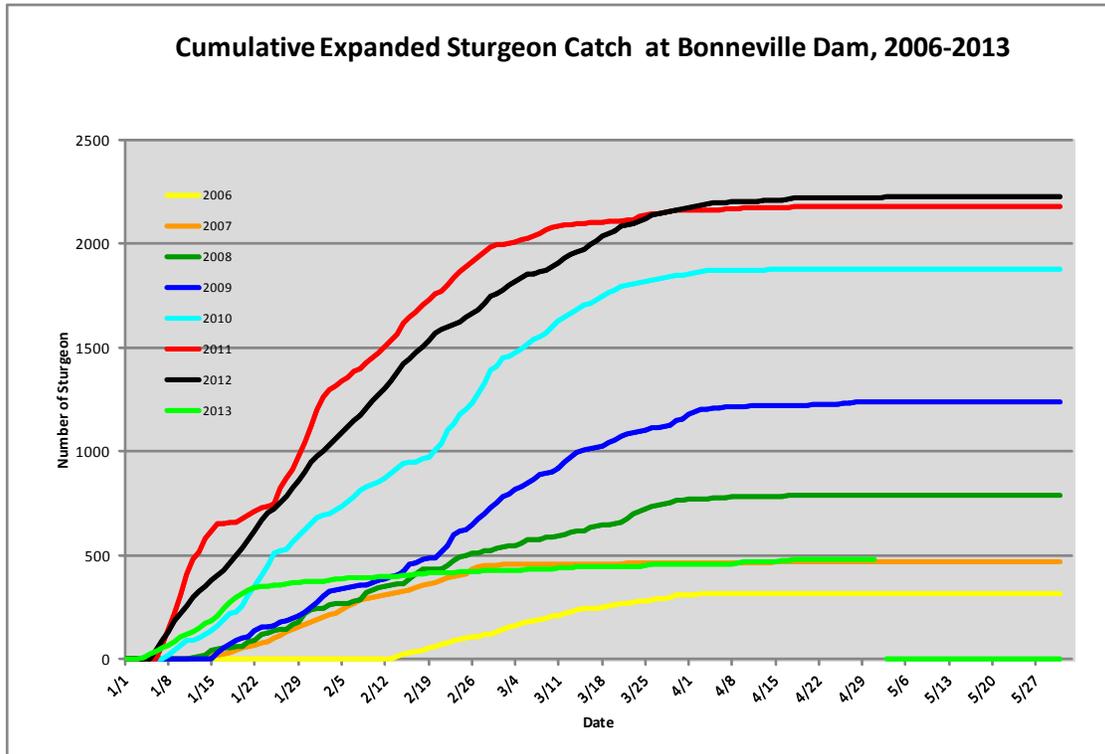


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, through May 1 for 2002-2013.

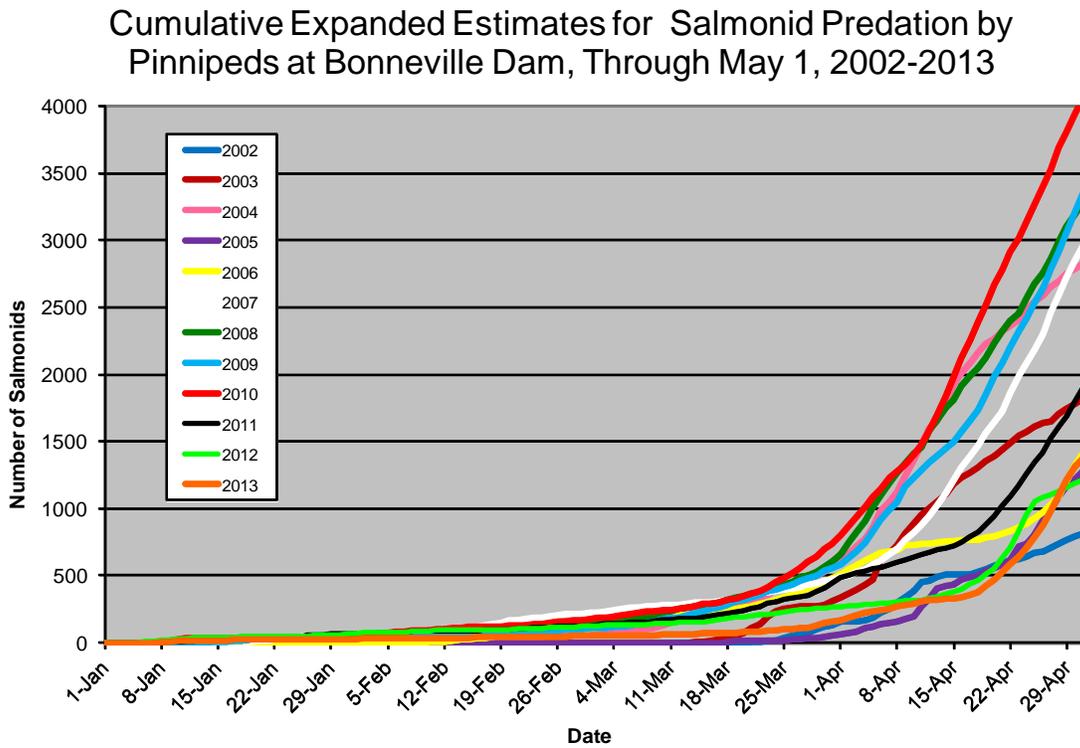


Figure 6. Cumulative salmonid passage at Bonneville Dam for 2013 and the 5 and 10 year averages to date.

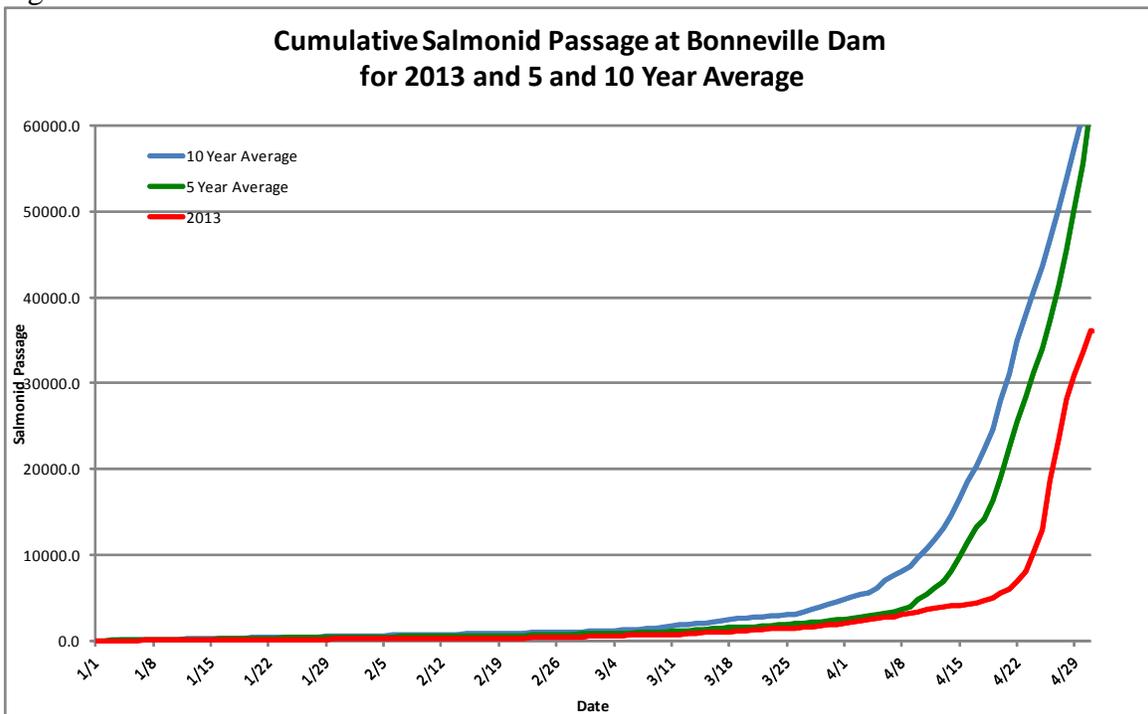


Figure 7. Prey distribution by Pinniped species at Bonneville Dam, through May 1, 2013.

