

STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2012

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This is the eleventh weekly status report for 2012 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 9, 2012 (unless otherwise noted). Regular daylight observations began January 6 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/2012/>.

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 2012 evaluation will be available in the fall of this year.

PINNIPED ABUNDANCE

Steller sea lions (*Eumetopias jubatus* - SSL) numbers dropped again this past week while California sea lions (*Zalophus californianus* – CSL) numbers dropped at first then jumped up as the peak of the spring Chinook run came in this past week (Figure 1). Average daily SSL numbers are similar to last year (Figure 2). The maximum number of Pinnipeds seen any day so far this year was 38 (on April 25). The maximum number of of SSL seen any day so far this year was 29 and 14 for CSL (Figure 1). Average CSL numbers present per day this year is lower than last year (Figures 2), which is the lowest for CSL since 2002. This is undoubtedly influenced by the removal of several CSL which would otherwise be adding to the daily abundance estimates. We have documented about 68 different SSL’s visiting the dam so far and 32 CSL. At least 32 of the SSL are confirmed as seen in past years, and 23 of the CSL. SSL outnumbered CSL almost every day this year.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2012 (through May 9) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	269	465	734
Steelhead	58	148	206
Sturgeon	0	1341	1341
Lamprey	11	6	17
Shad	3	26	29
Smolt	0	0	0
Other	0	0	0
Unknown	23	280	303

It is likely that most of the recent unidentified fish are Chinook. There is a higher probability that SSL are eating some prey underwater, and thus undetected by our observers, than with CSL. Besides observing many steelhead and smaller Chinook swallowed whole by SSL, we are also observing SSL just breaking the surface with larger Chinook prey that are already missing the head or tail section, and SSL are usually finished with a large Chinook in less than a minute. Most Chinook predation has occurred in powerhouse 1 (Figure 3). One sturgeon was caught during the past week. Sturgeon catch (expanded for weekends only) is less than last years at this time (Figure 4). The Chinook run seems to have peaked this past week, with 19,035 passing on May 9. To date 4,533 steelhead and 91,109 Chinook have passed the count station windows at Bonneville Dam from January 1 through May 10. The cumulative salmonid count jumped up dramatically this past week and is now higher than five of the past 10 years at this date (Figure 9). Chinook predation this week rose from the previous week. Total salmonid catch by sea lions through May 9 (1,293 expanded by interpolating for weekends) is lower than any year after 2002 (Figure 5). Predation on salmonids, by CSL in particular, continues to be far lower than any previous year monitored (Figure 6). On the other hand, SSL predation on salmonids is still high, but lower than the past two years (Figure 7) and SSL predation on salmonids continues to be higher than that for CSL, which is not surprising when looking at the abundance figures for each species (Figure 8).

DETERRENTS/TRAPPING

Hazing by USDA (land) began on March 1 and will continue until the end of May, seven days a week. CRITFC began hazing from boats March 5th.

The states trapped and branded one SSL this week and no other sea lions were trapped.

OTHER ITEMS OF INTEREST

We conducted night/early morning observations last week and observed some pre-dawn hunting by SSL but little activity at night, and no predation events were observed. Numbers hauling out on traps or rafting near the traps increased as night progressed.

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2012.

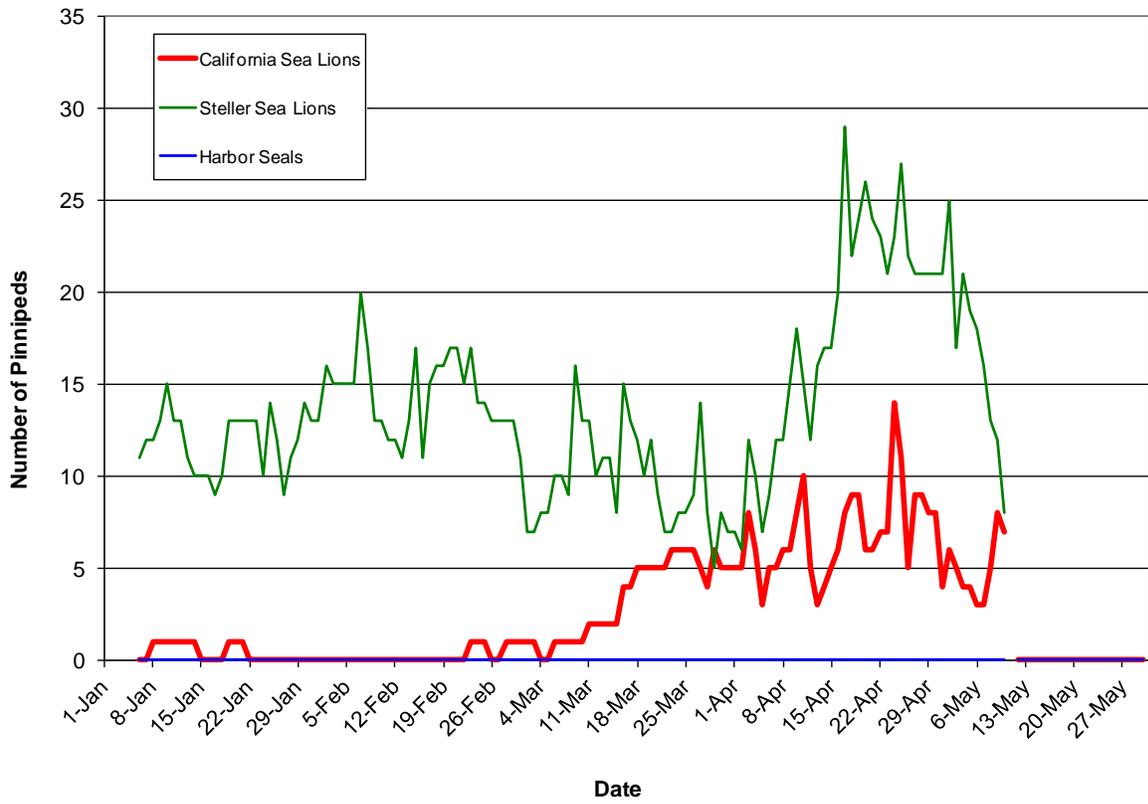


Figure 2. Average daily presence of pinnipeds, by species, to date (May 10) for each year at Bonneville Dam.

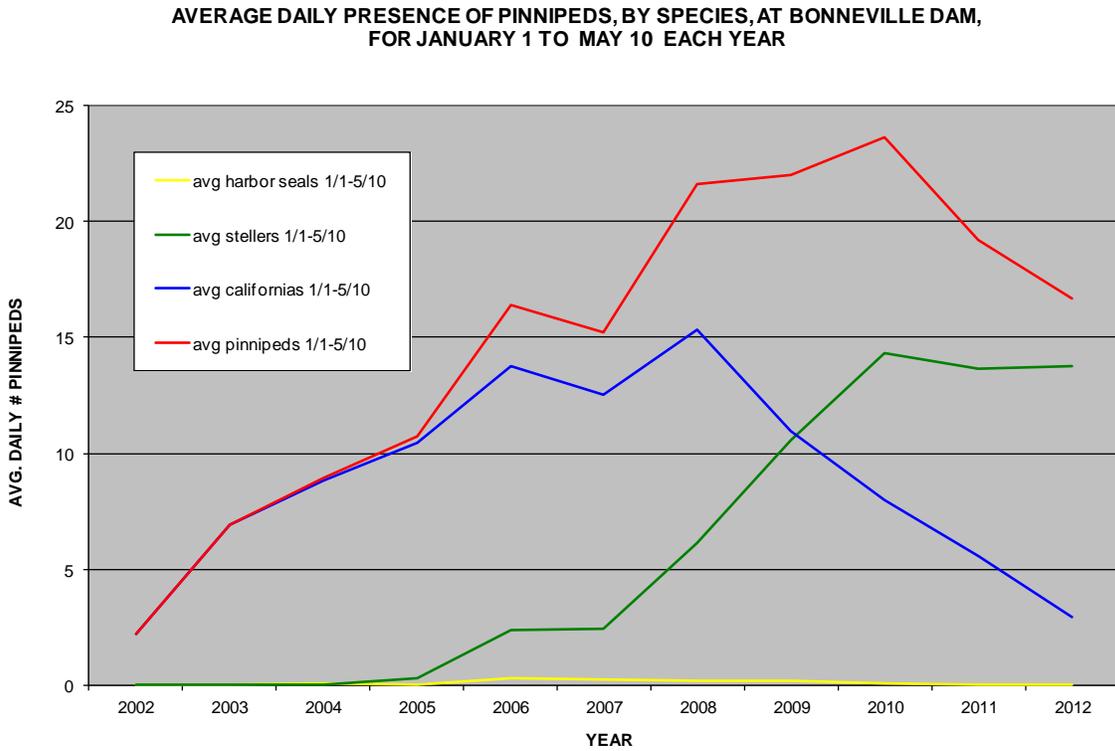


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 9, 2012.

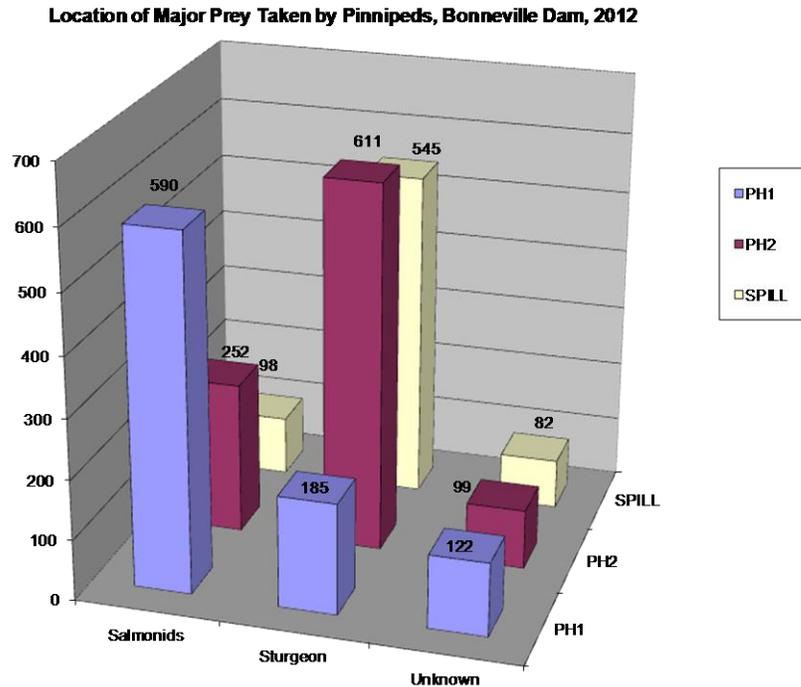


Figure 8. Predation by predator and prey species at Bonneville Dam in 2012.

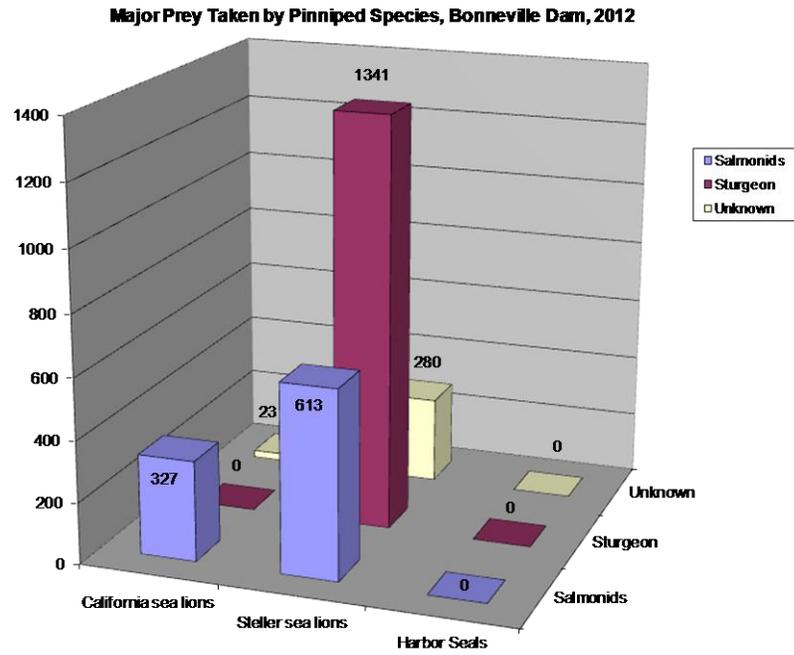


Figure 9. Cumulative salmonid passage at Bonneville Dam, 2002-2012.

