

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

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This is the tenth weekly status report for 2012 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 2, 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

Both Steller sea lions (*Eumetopias jubatus* - SSL) and California sea lions (*Zalophus californianus* – CSL) numbers dropped a bit 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.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2012 (through May 2) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	212	350	562
Steelhead	54	134	188
Sturgeon	0	1340	1340
Lamprey	11	6	17
Shad	3	25	28
Smolt	0	0	0
Other	0	0	0
Unknown	21	264	285

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). No sturgeon were caught during the past week. Sturgeon catch (expanded for weekends only) is less than last years at this time (Figure 4). The Chinook run hit the 1,000 per day mark on April 21 and rose for a few days, dropped, rose, and dropped again, likely due to the very high river flows. To date 4,301 steelhead and 30,338 Chinook have passed the count station windows at Bonneville Dam from January 1 through May 3. The cumulative salmonid count has dropped again and is lower than all but one of the past 10 years at this date (Figure 9). Chinook predation this week dropped from the previous week. Total salmonid catch by sea lions through May 2 (1,020 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 one SSL this week, branding and putting an acoustic pack on him. They also trapped two CSL that were on the list for removal, bringing the total to 10 CSL removed from the system so far this year.

OTHER ITEMS OF INTEREST

CRITFC conducted a survey from the I205 bridge to Tanner Creek earlier this week and spotted 5 SSL in the water (one with a salmonid kill) and 2 CSL in the water (one with a salmonid kill). They also spotted 3 SSL on Phoca Rock. During the same time period, we had at least 16 SSL and 3 CSL in the Bonneville Dam tailrace area and observed 10 salmonid and 1 lamprey being preyed upon by the pinnipeds.

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

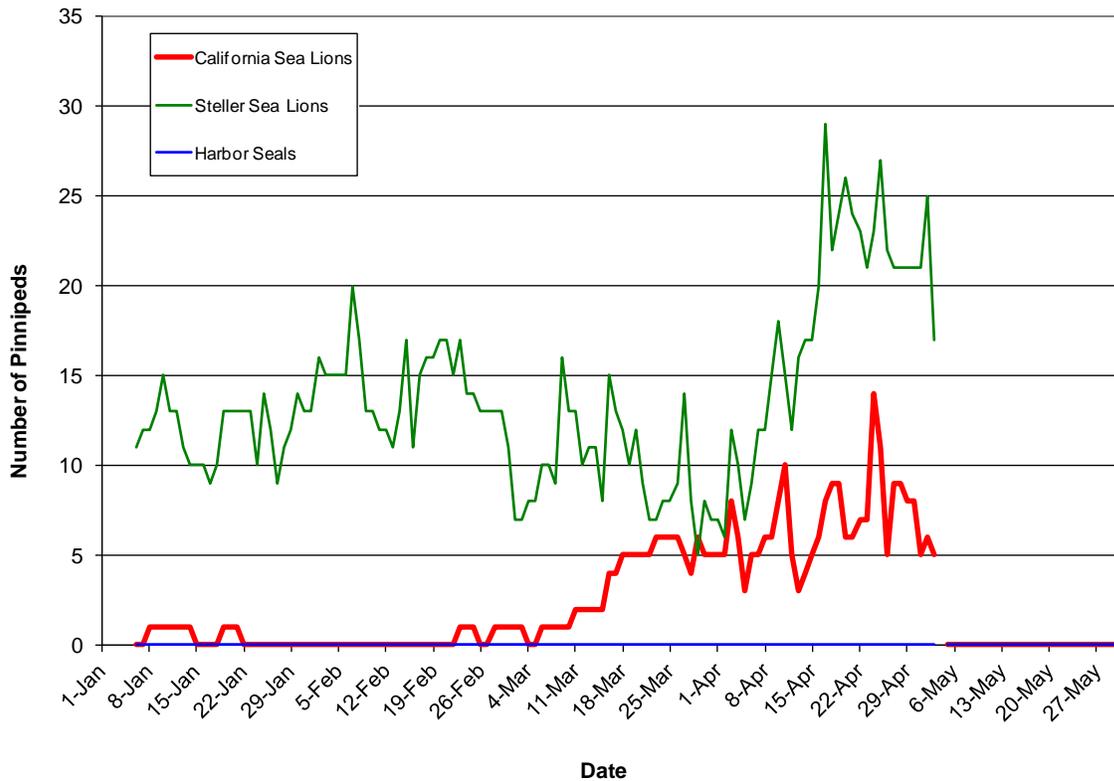


Figure 2. Average daily presence of pinnipeds, by species, to date (May 3) for each year at Bonneville Dam.

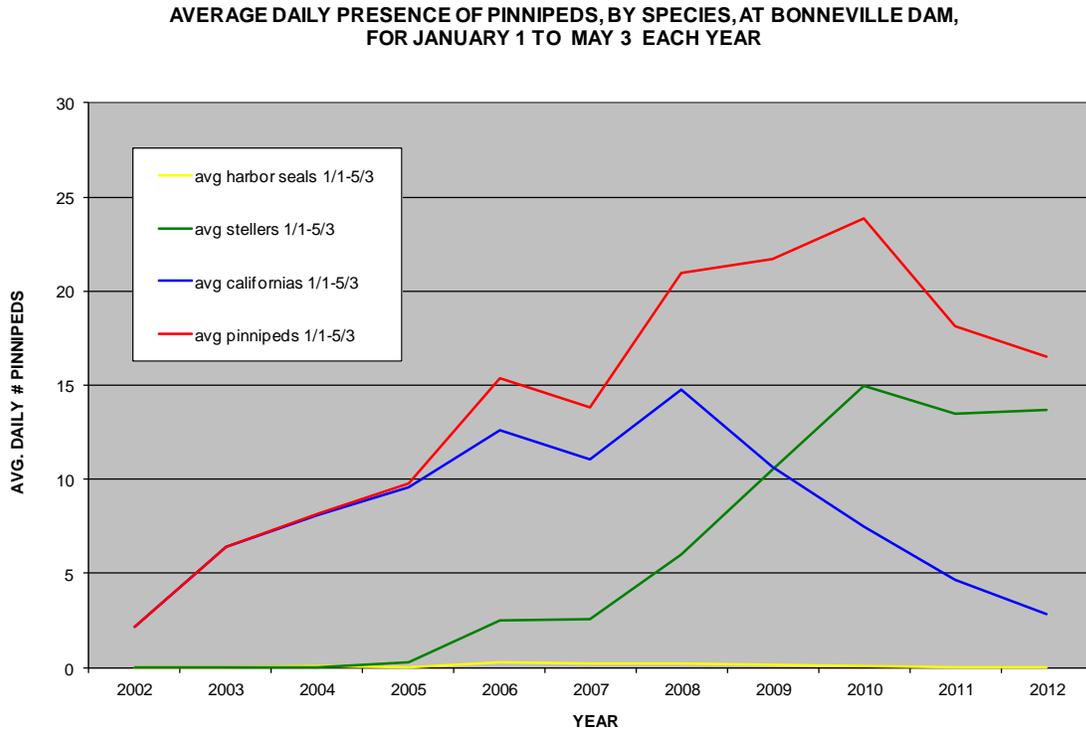


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 2, 2012.

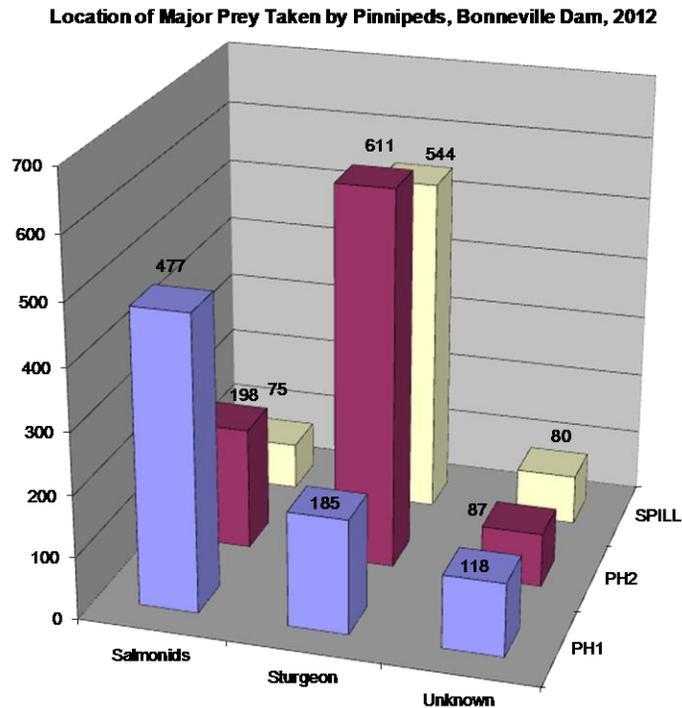


Figure 8. Predation by predator and prey species at Bonneville Dam in 2012.

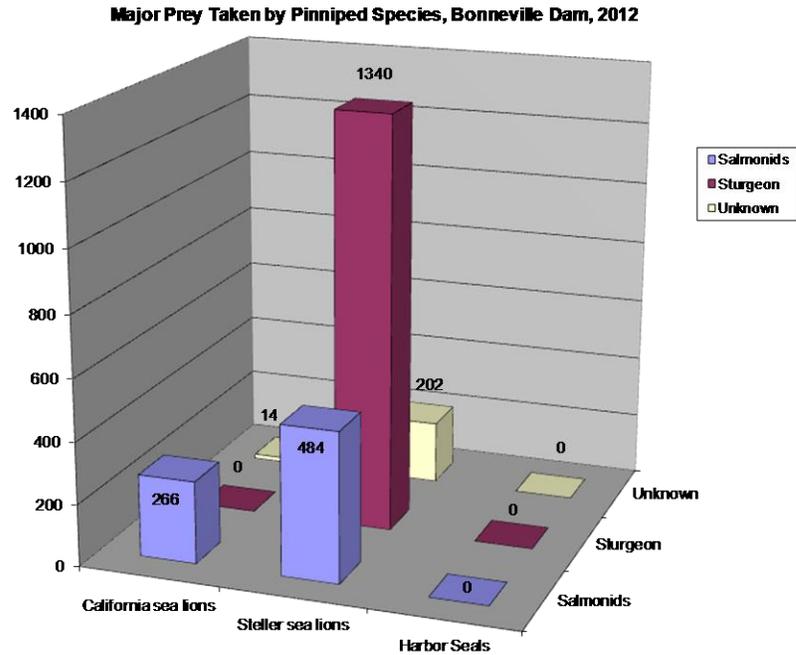


Figure 9. Cumulative salmonid passage at Bonneville Dam, 2002-2012.

