

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

Robert Stansell, Bjorn van der Leeuw, and Karrie Gibbons - (541) 374-8801

Fisheries Field Unit
U.S. Army Corps of Engineers
Bonneville Lock and Dam
Cascade Locks, OR 97014

May 18, 2012

This is the twelfth weekly status report for 2012 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 16, 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) began to disappear this past week and few have been seen the last couple of days while California sea lions (*Zalophus californianus* – CSL) numbers jumped up a bit as spring Chinook numbers stayed high (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 and by CSL in the forebay. We have documented about 70 different SSL’s visiting the dam so far and 40 CSL. At least 34 of the SSL are confirmed as seen in past years, and 24 of the CSL. SSL outnumbered CSL almost every day this year until the past week.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2012 (through May 16) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	470	498	968
Steelhead	60	150	210
Sturgeon	0	1341	1341
Lamprey	20	6	26
Shad	3	26	29
Smolt	0	0	0
Other	0	0	0
Unknown	31	284	315

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 (Figure 4). The Chinook run seems to have peaked the previous week, with 19,035 passing on May 9, but the daily numbers have stayed relatively high. To date 4,969 steelhead and 140,084 Chinook have passed the count station windows at Bonneville Dam from January 1 through May 17. The cumulative salmonid count jumped up again 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 16 (1,648 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 (Figure 8), which is not surprising when looking at the abundance figures for each species.

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 removed two CSL this week that were on the removal list, and branded another very large CSL before releasing him.

OTHER ITEMS OF INTEREST

We conducted one more night observation last week and observed virtually no hunting activity past one hour after sunset.

The states took a boat up into the forebay of Bonneville Dam earlier this week and confirmed two branded and one small unbranded CSL present. If the CSL that has been upstream of Bonneville Dam all of last year and this winter is still up there, it is likely that there are at least four CSL upstream of Bonneville Dam this year. It is difficult to know if and when the CSL go downstream through the navigation lock until they are confirmed seen below the dam. The states have traps placed in the forebay and hope to trap them.

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

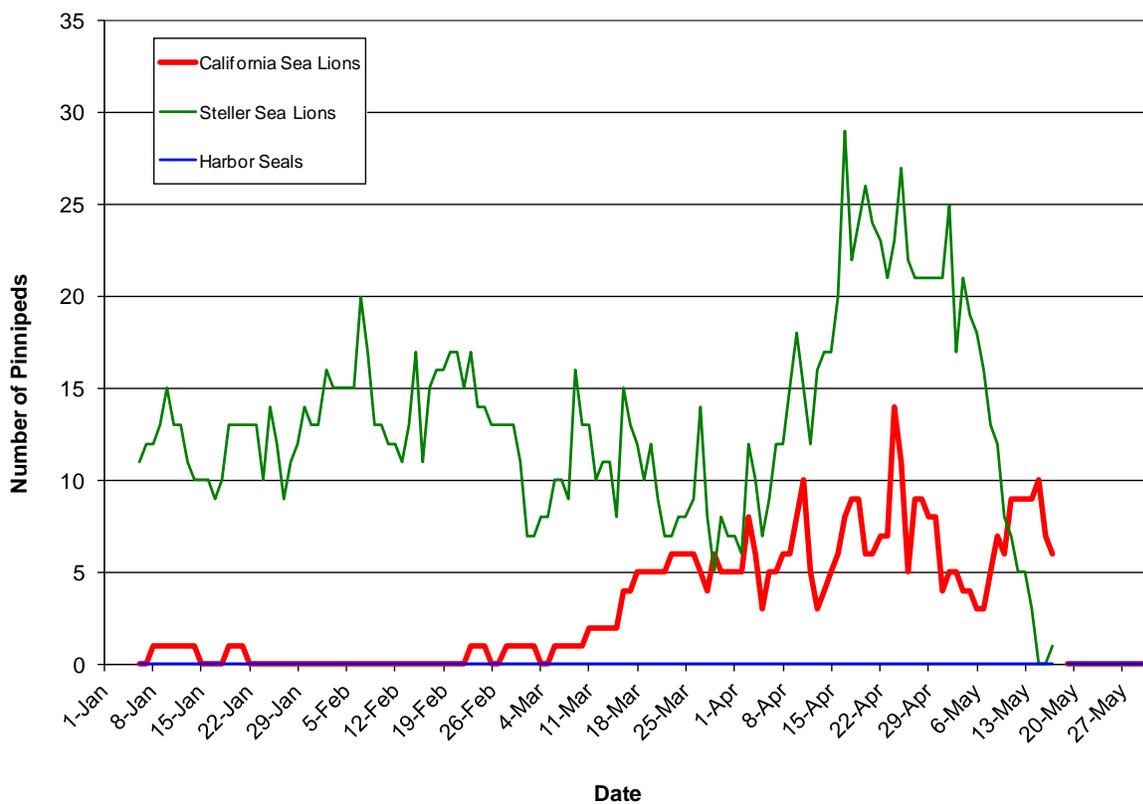


Figure 2. Average daily presence of pinnipeds, by species, to date (May 17) for each year at Bonneville Dam.

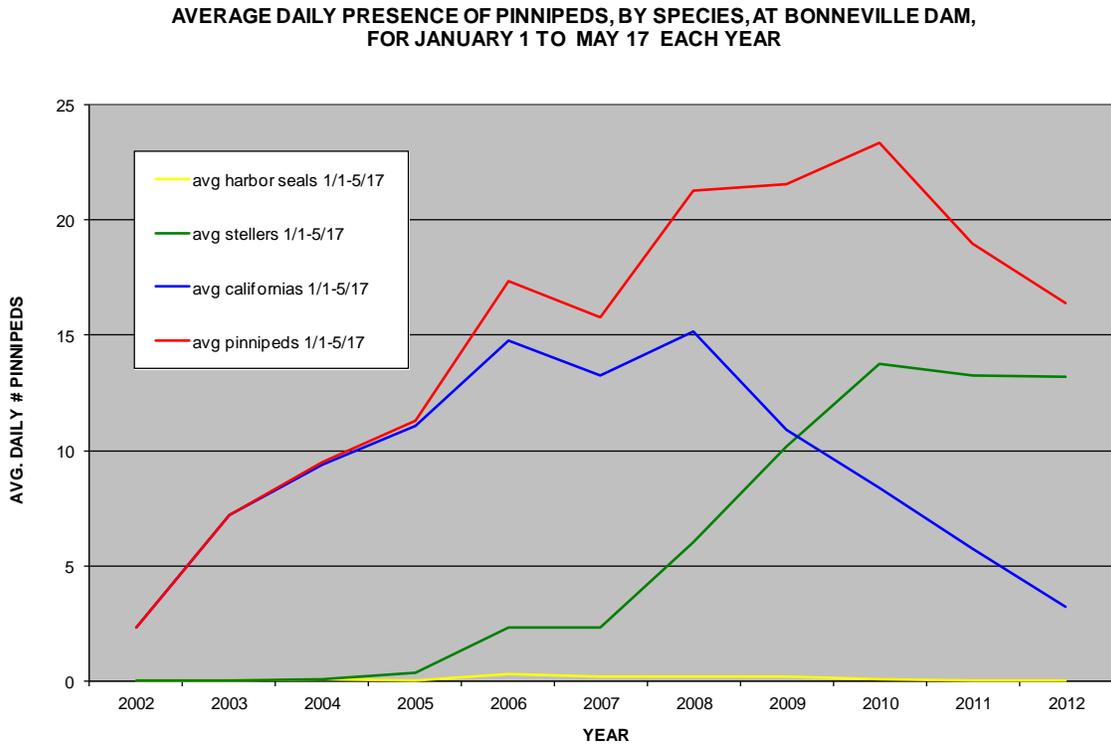


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 16, 2012.

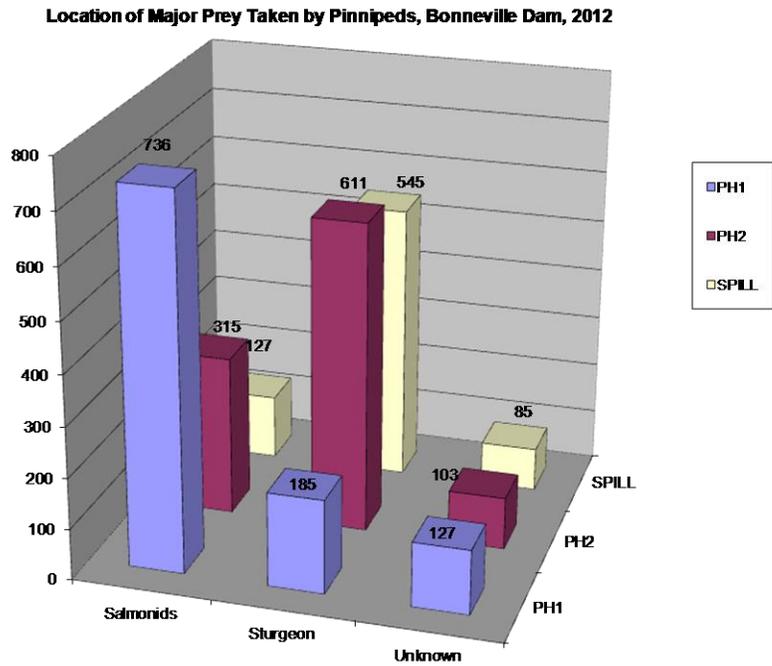


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2012.

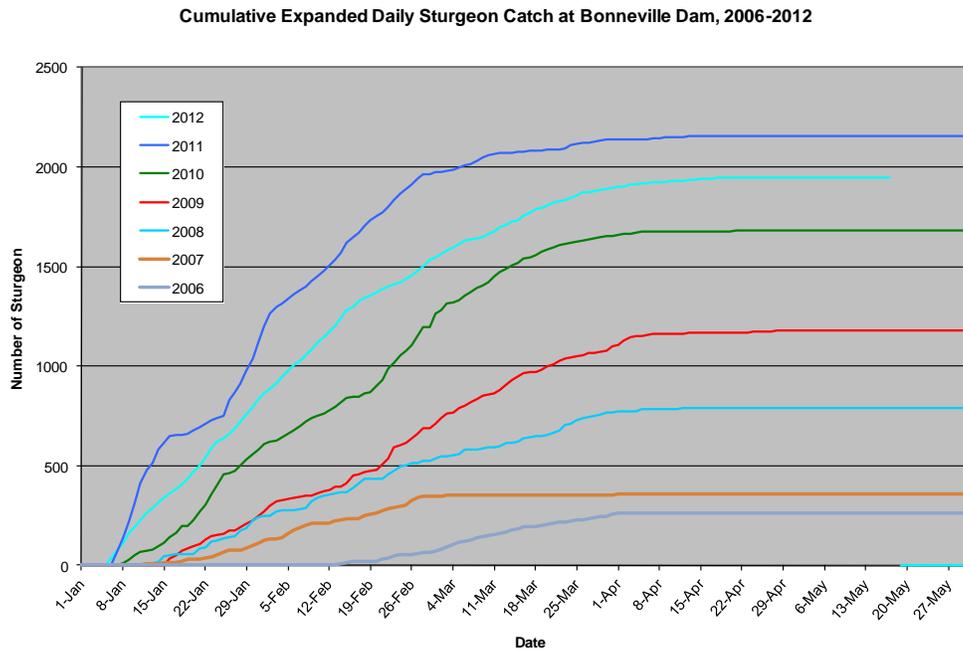


Figure 5. Daily average salmonid predation by all pinnipeds, by week, for each year at Bonneville Dam.

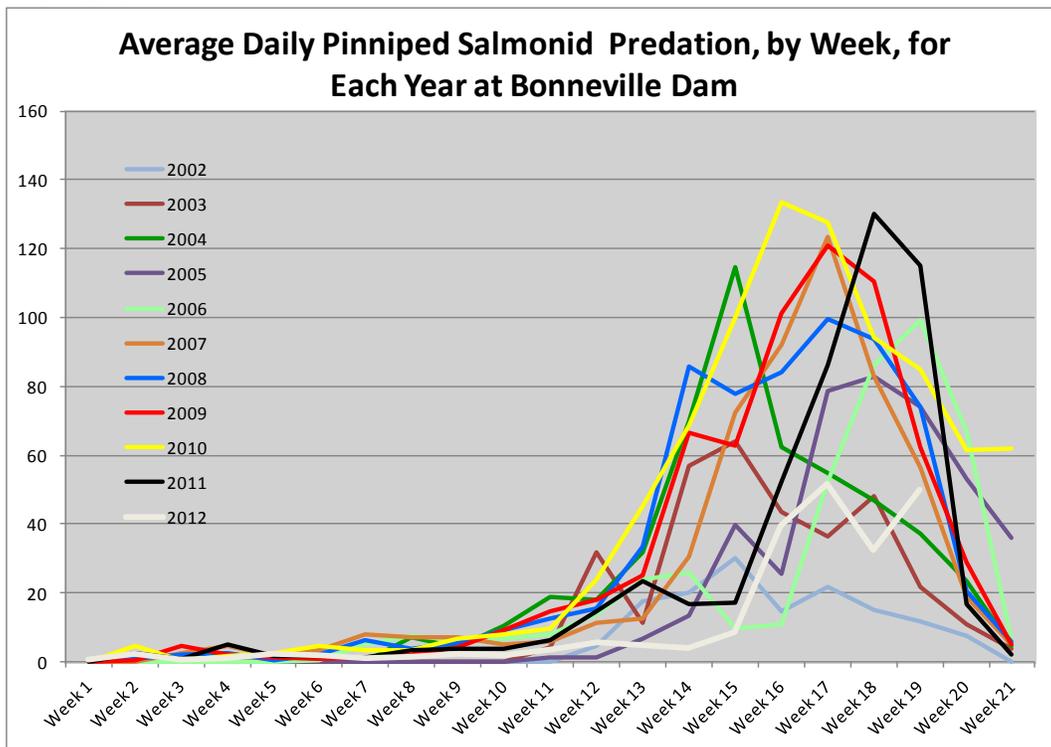


Figure 8. Predation by predator and prey species at Bonneville Dam in 2012.

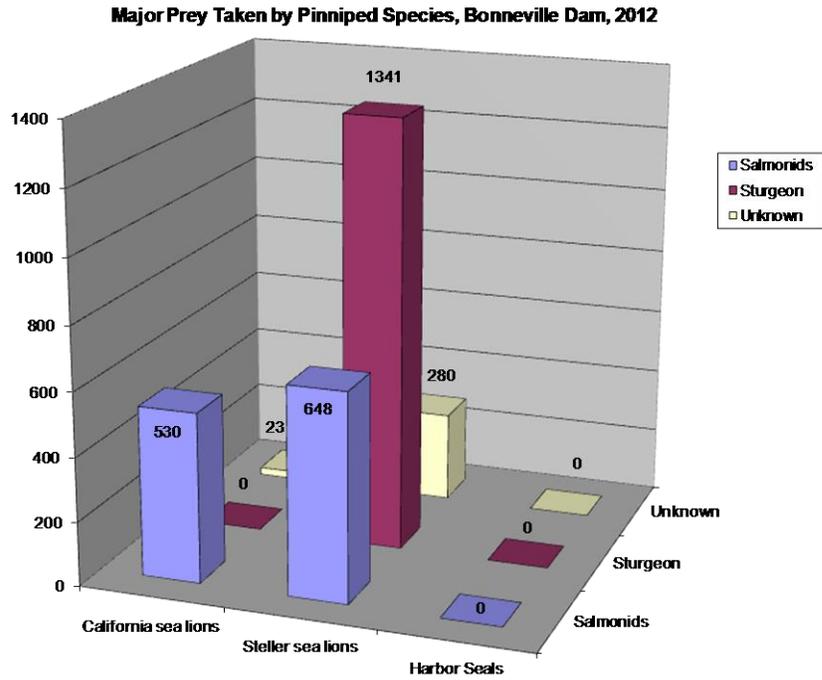


Figure 9. Cumulative salmonid passage at Bonneville Dam, 2002-2012.

