

**Thursday, May 15, 2014**

**From:** Stansell, Robert J NWP  
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Folks,

The majority of the CSL and SSL have left Bonneville with only a few stragglers remaining, so they left a bit earlier than previous years. This is likely because most of them came to Bonneville already full of smelt, but the sheer numbers of new CSL focusing on salmon for a short 2-3 week period put the estimated salmon predation so far to over 3,300. Yet, with the big spring Chinook run, this will put the percentage of the run taken to below 2% for this season. No CSL were removed over the past 2 weeks.

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# STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2014

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This is the sixth bi-weekly status report for 2014 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 14, 2014 (unless otherwise noted). Regular daylight observations began January 9 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 is applied at the end of the observation season. 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/>.

## 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. Please use these estimates with appropriate caution. A final report summarizing the results of the 2014 evaluation will be available in the fall of this year.*

### PINNIPED ABUNDANCE

Pinniped abundance dropped off the last week or so, as the large pod of pinnipeds resting at the tip of Tower Island rapidly dissipated after May 5 (must have celebrated Cinco de Mayo a bit too strongly). Over 70 California sea lions (*Zalophus californianus* – CSL) have been seen at Bonneville so far this year (Figure 1), and at least 24 of those are returning individuals. This is similar to 2010, when more “new” CSL were seen at the dam than returning individuals. A maximum of 27 CSL on any one day was observed this year. Steller sea lion (*Eumetopias jubatus* - SSL) numbers dropped to single digits last week and have disappeared from Bonneville for the most part (Figure 1). Average daily SSL is less than the past few years (Figure 2). The maximum number of SSL seen any day this year was 41 (Figure 1). We have documented over 50 different SSL’s visiting the dam this year. All but 20 of the SSL have been confirmed as seen in past years.

## **PREDATION DATA**

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2014 (through May 14) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
<b>Chinook</b>	1420	921	2341
<b>Steelhead</b>	9	47	56
<b>Sturgeon</b>	1	78	79
<b>Lamprey</b>	18	1	19
<b>Shad</b>	12	7	19
<b>Smolt</b>	5	0	5
<b>Other</b>	6	11	17
<b>Unknown</b>	76	112	188

Chinook passage really increased the past two weeks (169,469 Chinook and 4,476 steelhead total) from January 1 through May 14. Total salmonid passage to date is higher than the average for the past 12 years by about 40,000 (Figure 6). A single day high of 17,972 salmonids passing on May 14 is the 3<sup>rd</sup> highest one day total seen since 2002 for the spring. Total salmonid catch through May 14 (3,351 expanded by interpolating for weekends) has increased by one third in the last two weeks. It is now above average for all the years we have observed (Figure 5). Most salmonid predation has occurred in the powerhouse 1 tailrace, followed by the spillway and powerhouse 2. Most predation on sturgeon occurred in the powerhouse 2 tailrace, followed by the spillway and powerhouse 1 (Figure 3). Estimated sturgeon catch (expanded for weekends only) is the lowest since we began recording in 2006 (Figure 4). Most sturgeon taken were in the 2 to 4 foot range.

## **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 10 and will end this week as there are few pinnipeds remaining.

The states trapped and branded one CSL last week and none this week at Bonneville Dam.

## **OTHER ITEMS OF INTEREST**

CRITFC has been doing regular surveys of Phoca Rock (Rm 132) and reported between 0 and 6 SSL most weekdays and 0 to 1 CSL over the past two weeks.

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2014.

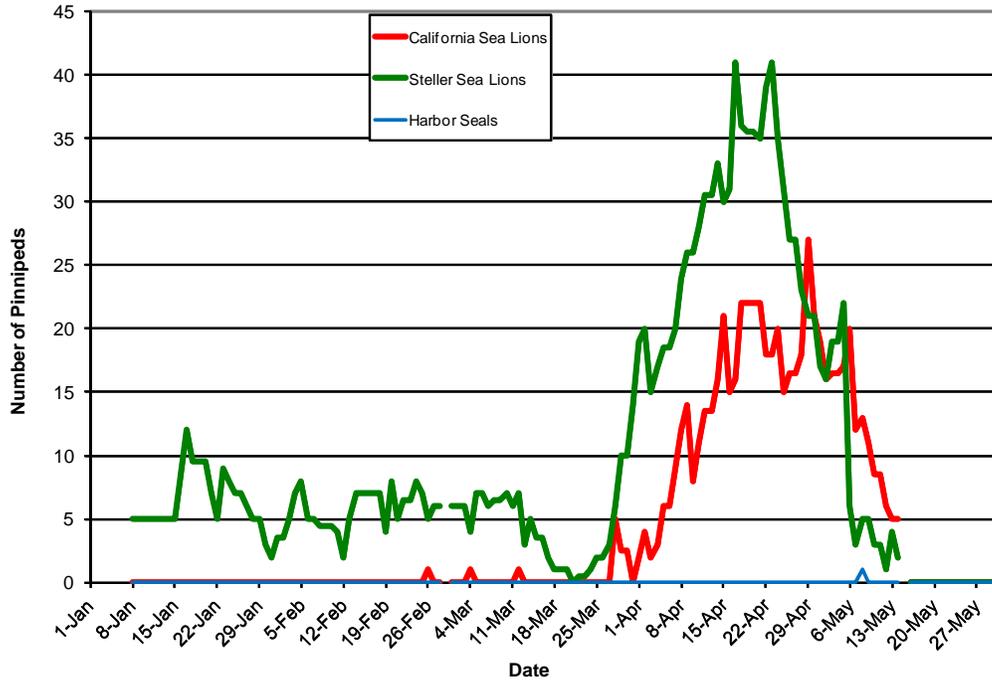


Figure 2. Average daily presence of pinnipeds, by species, to date (May 14) for each year at Bonneville Dam.

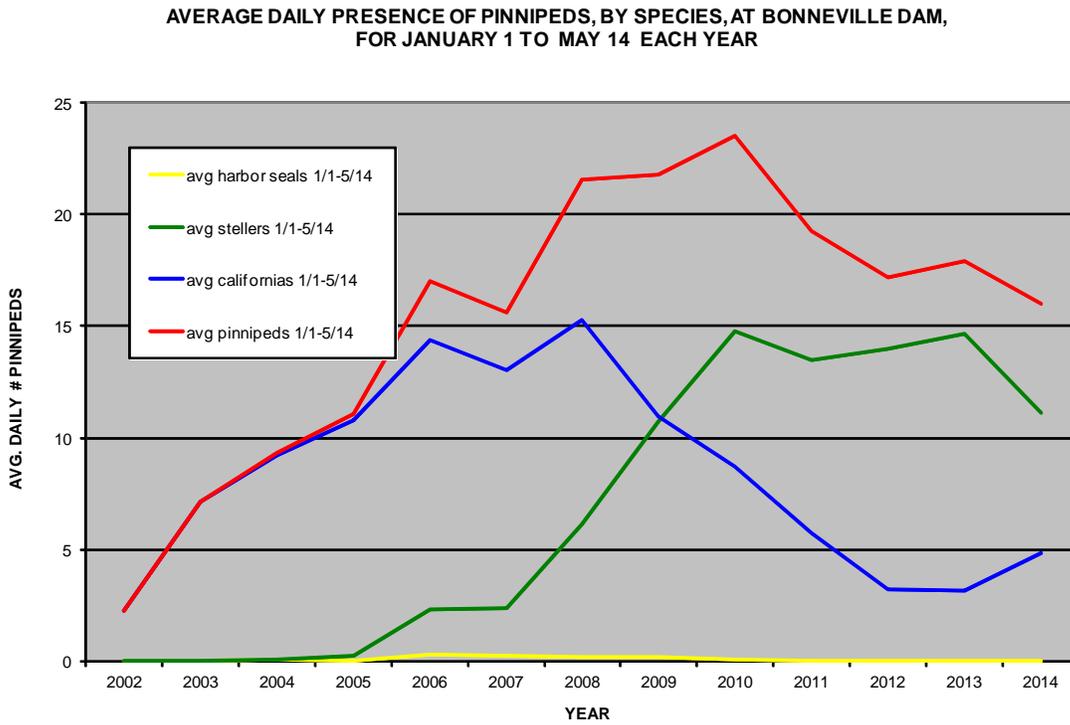


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 14, 2014.

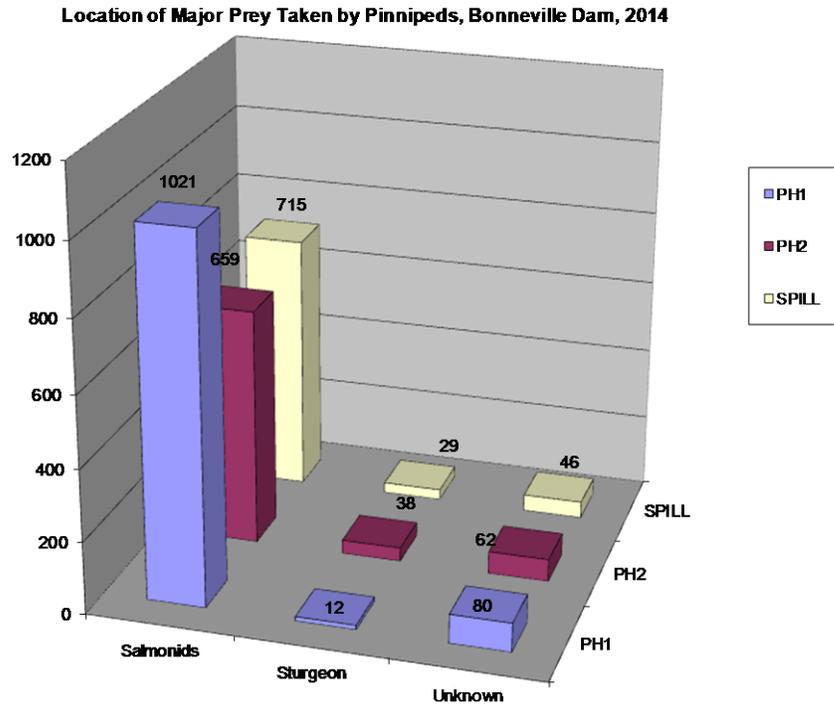


Figure 4. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2002-2014.

Cumulative Expanded Estimates for Salmonid Predation by Pinnipeds at Bonneville Dam, 2002-2014

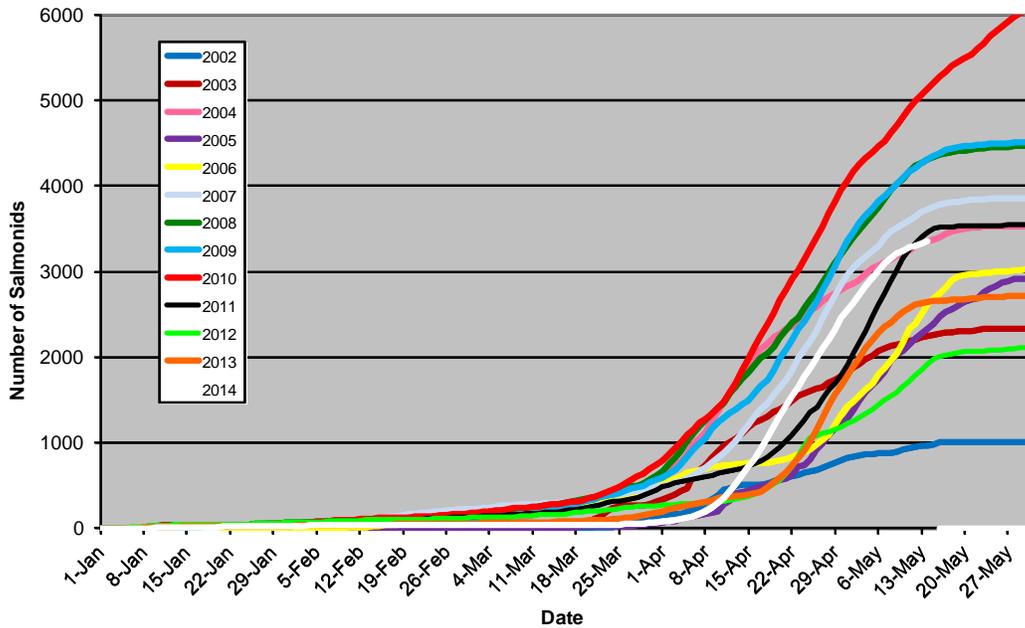


Figure 5. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2002-2014. (White is 2014 catch; data collection started later than normal for 2005.)

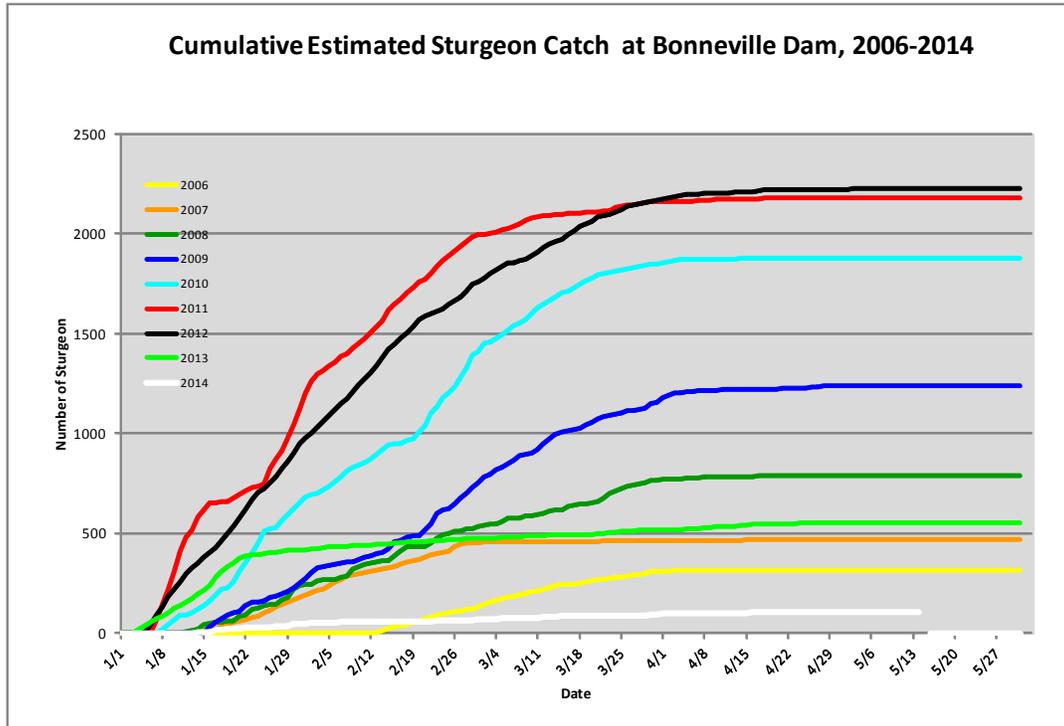


Figure 6. Daily cumulative salmonid passage at Bonneville Dam, 2002-2014. (White is 2014 run).

