

From: Stansell, Robert J NWP
Sent: Thursday, May 29, 2014 2:51 PM
Subject: Final bi-weekly sea lion report from Bonneville for 2014

Well, the sea lions have finally departed Bonneville (except for the occasional straggler). Hopefully I have attached the correct file this time and removed most of the typos, however, please keep in mind the data are still very preliminary and the numbers will be tweaked some. We hope to have the final report out by late summer, if not early fall.

Take home messages for 2014:

- Steller sea lion daily average abundance down from the past 3 years.
- Steller sea lion predation on sturgeon the lowest seen since 2005.
- California sea lion daily average abundance up from the last 2 years, but still quite low compared to 2003-2011 years.
- California sea lions identified were predominately non-returning individuals, similar to 2010, likely due to all the younger, unbranded CSL that were seen in Astoria feeding on smelt and then some of them exploring the spring Chinook run all the way up to Bonneville Dam. All other years CSL were predominately returning individuals.
- Chinook predation was initially the lowest we had ever seen, until the second week in April, when there was a very concentrated effort by sea lions to feed on Chinook for about three weeks before slowing down, again, similar to 2010.
- Expanded predation estimate by all pinnipeds on salmonids (3,450) should be below 2% of the run, however the adjusted estimate (adjusting for unidentified fish species observed preyed upon and a small night time predation factor) might put it right around 2% of the run.
- States removed 15 CSL at Bonneville this year, matching the most removed in one year.
- States branded 21 CSL at Bonneville this year, almost doubling the most branded previously at Bonneville.

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

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This is the final bi-weekly status report for 2014 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through May 28, 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 few weeks to only one or two present each day. Close to 80 California sea lions (*Zalophus californianus* – CSL) have been seen at Bonneville so far this year (Figure 1), and at least 25 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 zero most days 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 60 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 28) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	1475	923	2398
Steelhead	9	47	56
Sturgeon	1	78	79
Lamprey	37	3	40
Shad	18	7	25
Smolt	9	0	9
Other	7	11	18
Unknown	80	112	192

Chinook passage increased the past two weeks (207,732 Chinook and 5,469 steelhead total) from January 1 through May 28. Total salmonid passage to date is higher than the average for the past 10 years by about 60,000 (Figure 6). A single day high of 17,972 salmonids passing on April 30 is the 3rd highest one day total seen since 2002 for the spring. Total salmonid catch through May 28 (3,450 expanded by interpolating for weekends) looks like it will make it higher than the past two to three years, but nowhere near as high as the 2008-2010 years predation (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, although there is virtually nothing to haze anymore. CRITFC began hazing from boats on March 10 and ended two weeks ago as there were few pinnipeds remaining.

The states ended trapping at Bonneville Dam on May 15 as few sea lions were present and those that were present did not appear to be using the traps. They finished with a total of 15 CSL being removed and branding 21 CSL at Bonneville, which was almost twice the number ever branded at Bonneville over the past several years.

OTHER ITEMS OF INTEREST

There are still reported sightings of a CSL near the fishway entrances of The Dalles Dam and we have heard reports of CSL at the mouth of the Wind River and Drano Lake areas.

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

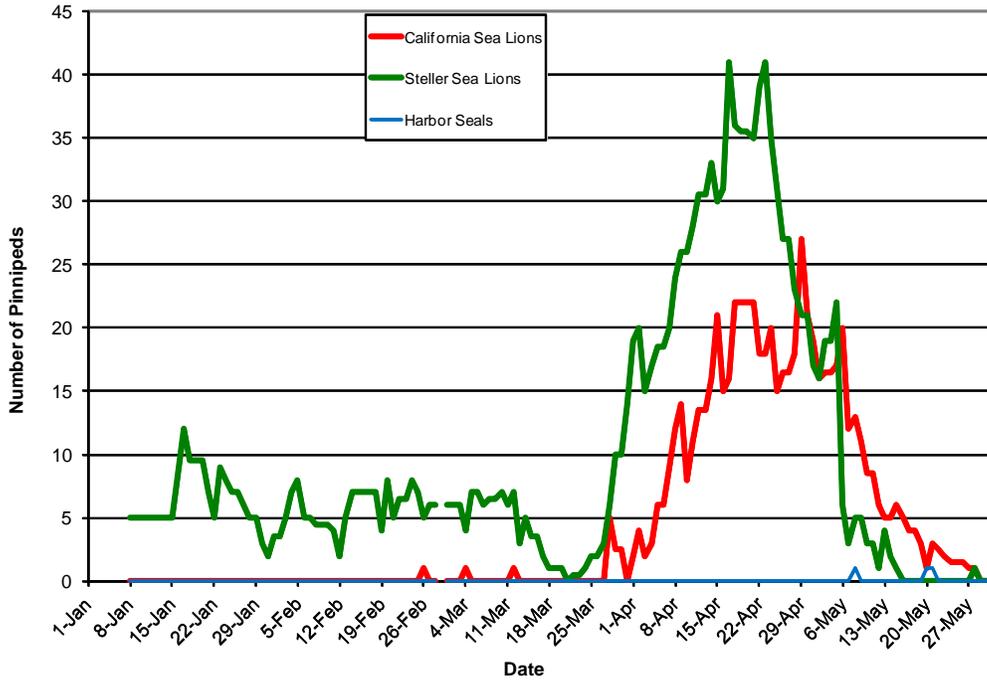


Figure 2. Average daily presence of pinnipeds, by species, to date (May 28) for each year at Bonneville Dam.

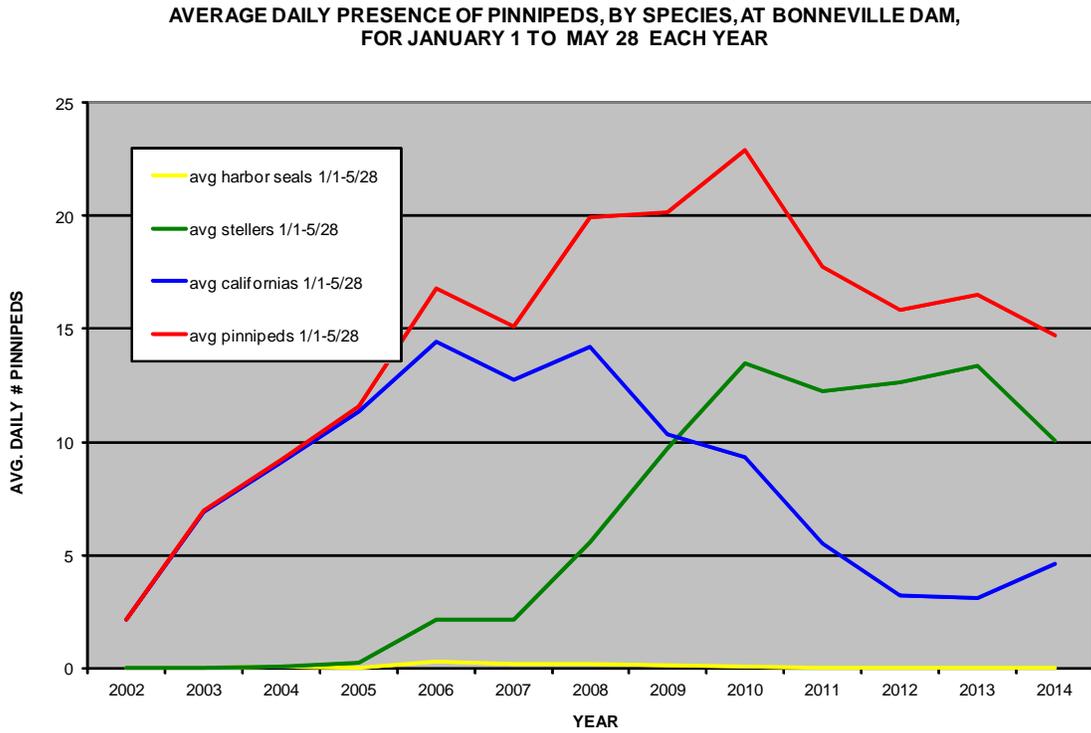


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through May 28, 2014.

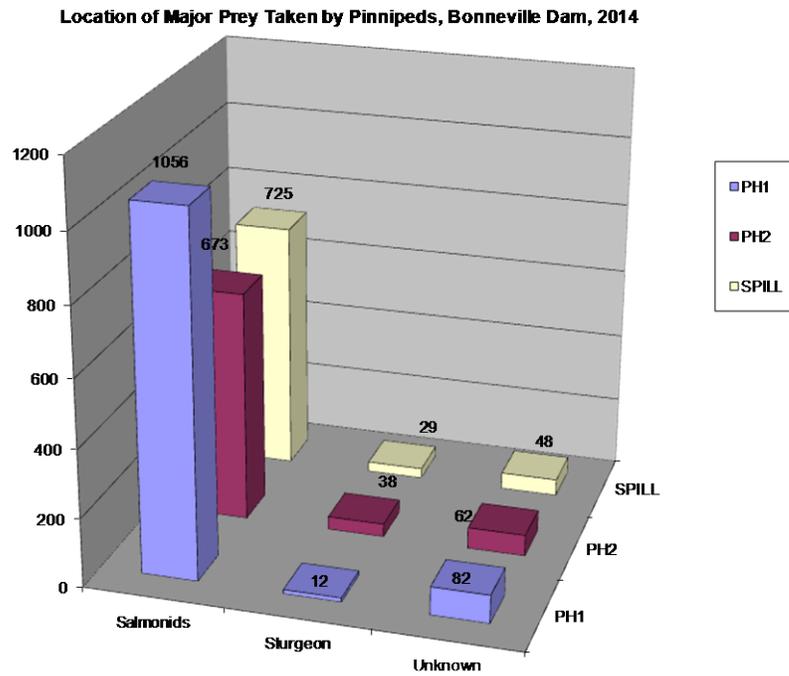


Figure 4. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2002-2014.

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

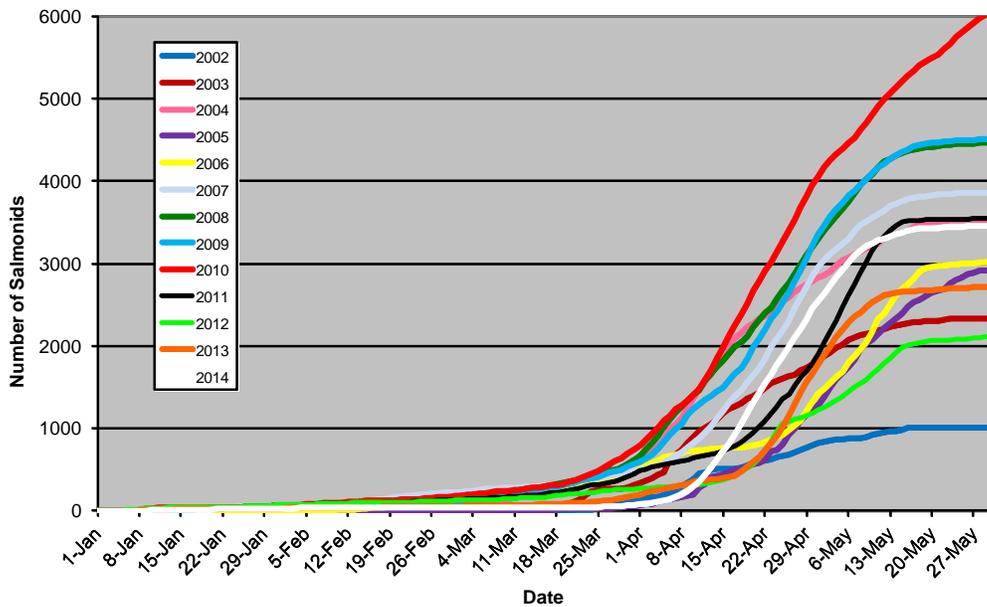


Figure 5. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2002-2014. (White is 2014 catch; data collection started later than normal for 2005.)

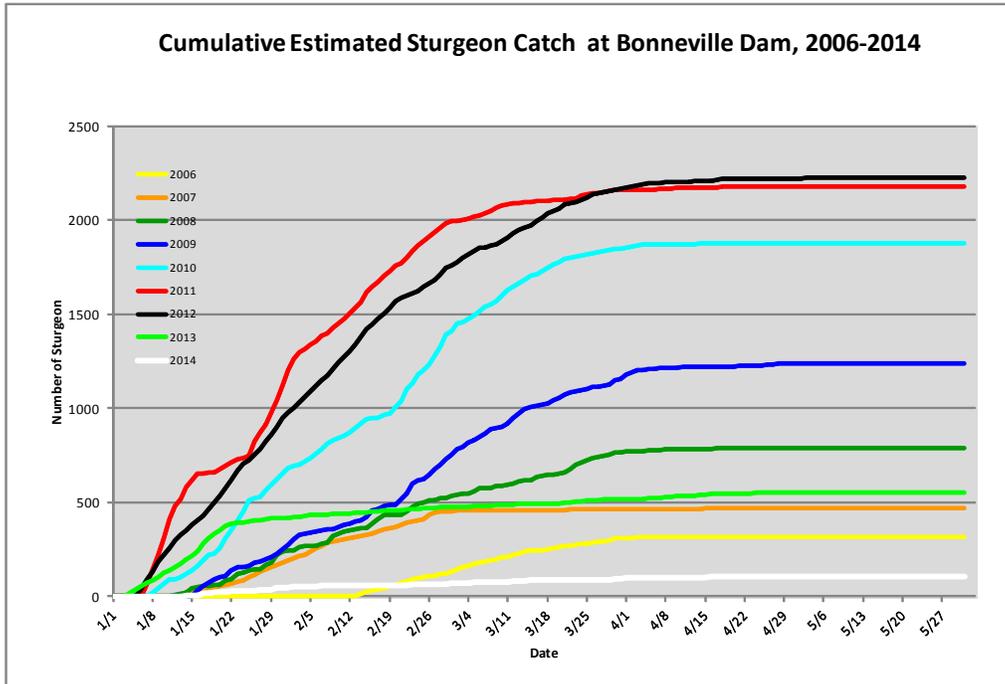


Figure 6. Daily cumulative salmonid passage at Bonneville Dam, 2002-2014. (White is 2014 run).

