

# STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2011

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

March 16, 2012

This is the third weekly status report for 2012 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through March 14, 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

California sea lions (*Zalophus californianus* – CSL) have remained scarce so far this year (Figure 1), with only two individuals seen but not during the same day. However, CSL were observed on January 9 of this year, more than a month earlier than last year, and by the same individual that arrived first last year. Steller sea lions (*Eumetopias jubatus* - SSL) are as abundant as last year (figures 1 and 2). The maximum number of SSL seen any day so far this year was 20 and only 1 for CSL (Figure 1). So far, there are slightly more SSL present per day on average this year compared to last year, but average CSL per day are as low as they were last year (Figures 2). We have documented approximately 45 different SSL’s visiting the dam so far and seven CSL. At least 24 of the SSL are confirmed as seen in past years, and four of the CSL.

Several SSL have been observed hauling out inside the end of the corner collector outfall most mornings, and a few have been using the traps as well, but not in the past couple of weeks.

## **PREDATION DATA**

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2012 (through March 14) are:

<b><i>Prey</i></b>	<b><i>California Sea Lions</i></b>	<b><i>Steller Sea Lions</i></b>	<b><i>Total</i></b>
<b>Chinook</b>	4	5	9
<b>Steelhead</b>	9	79	88
<b>Sturgeon</b>	0	1189	1189
<b>Lamprey</b>	0	1	1
<b>Shad</b>	2	22	24
<b>Smolt</b>	0	0	0
<b>Other</b>	0	0	0
<b>Unknown</b>	2	148	150

It is likely that at least 90% of the unknown fish caught by Steller sea lions were sturgeon. The Steller sea lions are catching many of the fish at the downstream range of our viewing area, making fish identification very difficult. Most sturgeon have been caught in powerhouse 2 tailrace, followed closely by the spillway, while relatively few are caught at powerhouse 1 (Figure 3). Sturgeon catch (expanded for weekends only) is less than last years at this time (Figure 4), but still higher than previous years, most taken being in the 2 to 4 foot range. Few fish are passing the count stations (1,508 steelhead and 13 Chinook) from January 1 through March 13, very similar to last year. Total salmonid catch (primarily by Steller sea lions) through March 14 (119 expanded by interpolating for weekends) is much less than any of the last six years (2011 – 185, 2010 – 274, 2009 – 220, 2008 – 271, 2007 - 308, 2006 - 219).

## **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.

There were no animals trapped last week.

NOAA Fisheries authorized the states of Oregon, Washington, and Idaho to permanently remove specific California sea lions eating endangered salmon below Bonneville Dam yesterday, effective March 20, 2012 and in effect through May 2016.

## **OTHER ITEMS OF INTEREST**

CRITFC conducted a boat survey of pinniped presence and predation observations between Tanner Creek (just below the Bonneville Dam tailrace boat restricted zone) to the I205 bridge between 1300h and 1500h on March 9th. Five Steller sea lions were observed in the river, three of those in the process of eating sturgeon, plus 13 Steller sea lions hauled out on Phoca Rock, for a total of 18 Steller sea lions. During that same time period, there were at least 11 Stellers and 1 California sea lion present in the Bonneville Dam tailrace, and they took 1 sturgeon, 1 salmonid, and 1 unidentified fish.

We conducted our first night observation on March 9 and although we observed one to two Steller sea lions still hunting in both powerhouse tailraces up to 3 hours after sunset, we did not note any predation events. However, if the animals drag their catch downstream very far, it would be almost impossible for us to notice a predation event at night. Near the dam we can hear them when they breathe and splash around with a fish, and focus in on them, but if they are downstream, we would have to be lucky to have our night vision binoculars looking in the right place at the right time. As in previous year, numbers hauling out or rafting (near the corner collector outfall on this night) increased as the night progressed. None were seen hauling out or rafting near the any of the traps during this time.

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

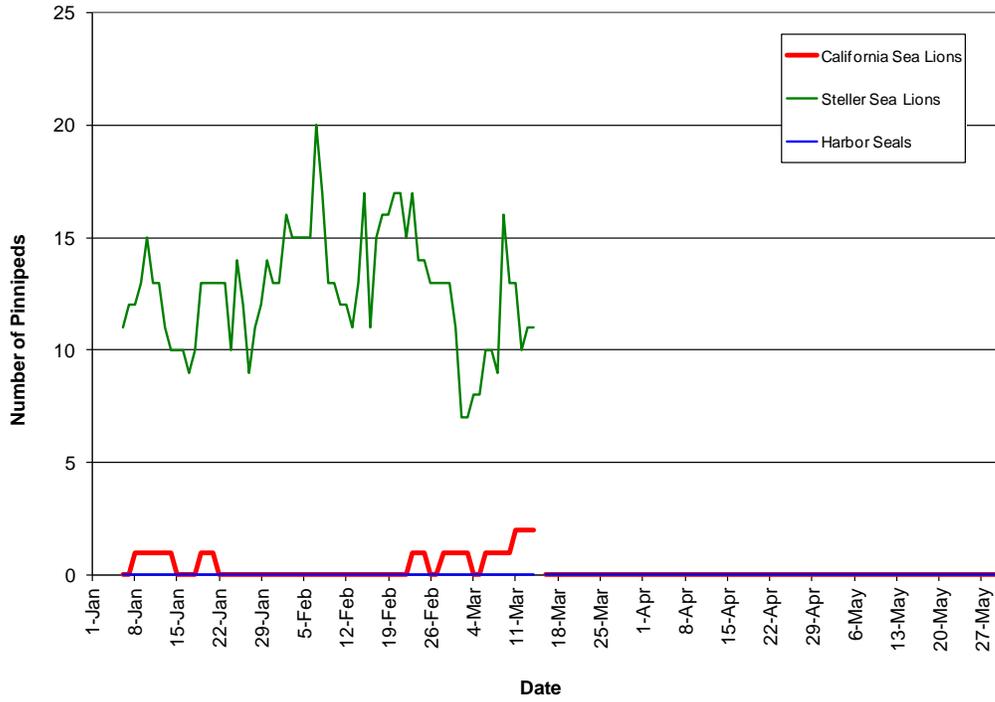


Figure 2. Average daily presence of pinnipeds, by species, to date (March 14) for each year at Bonneville Dam.

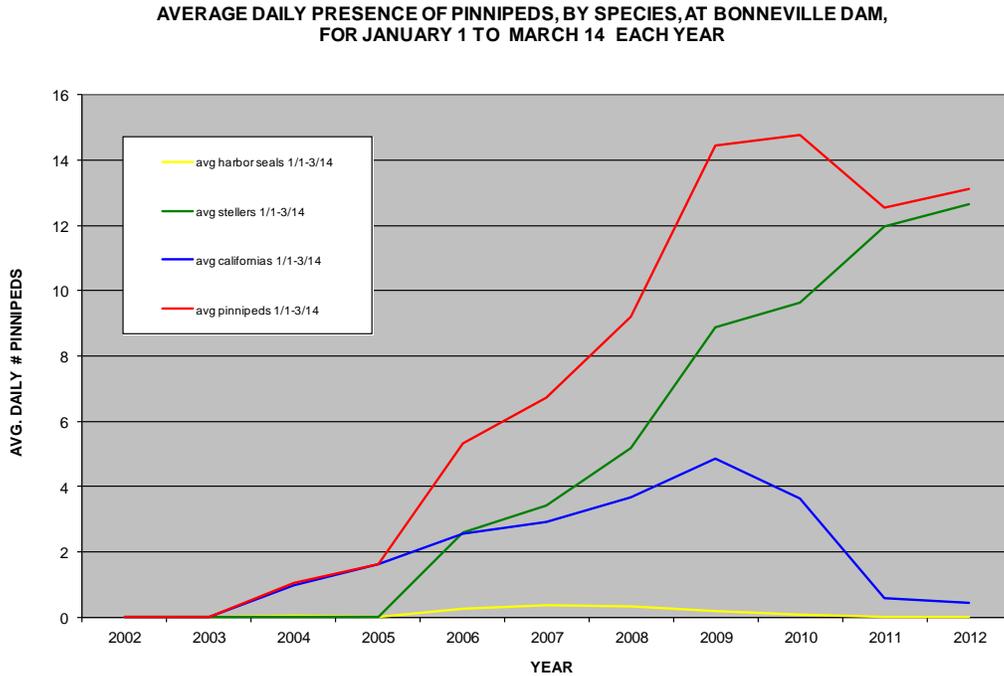


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through February 22, 2012.

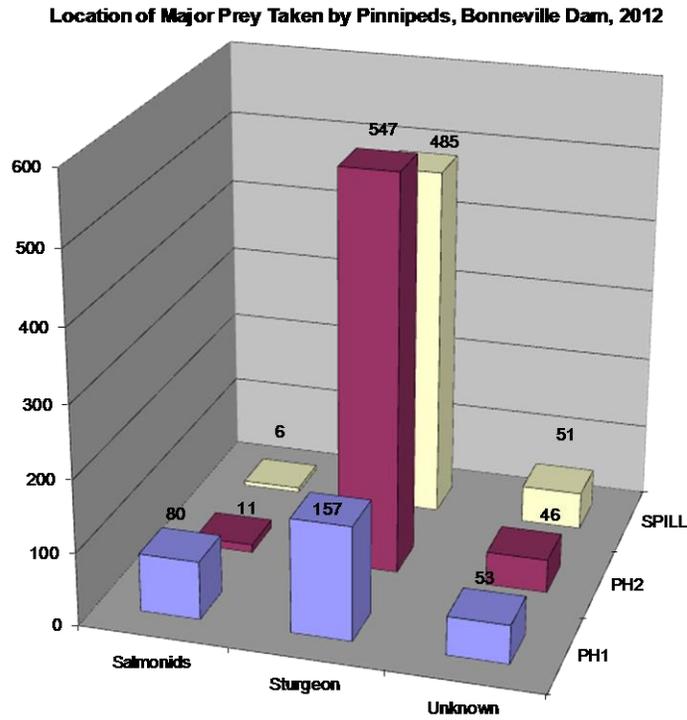


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2012.

