

STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2013

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This is the ninth weekly status report for 2013 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through April 3, 2013 (unless otherwise noted). Regular daylight observations began January 4 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/2013/sea_lion_hazing2013.html

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 2013 evaluation will be available in the fall of this year.

PINNIPED ABUNDANCE

California sea lion (*Zalophus californianus* – CSL) presence increased over the past few days (Figure 1). The maximum number of CSL seen on any one day so far this year is 12. We’ve only identified 10 so far, three being repeat individuals from previous years. CRITFC and the states reported seeing about 55 CSL between Skamania Landing and Hamilton Island boat ramp on April 3! Steller sea lions (*Eumetopias jubatus* - SSL) are slightly less abundant than the past two years (figures 1 and 2). The maximum number of SSL seen any day so far this year was 22 (Figure 1). We have documented approximately 47 different SSL’s visiting the dam so far (including 25 with brands). All but eight of the SSL are confirmed as seen in past years, although there may be some new individuals we have not adequately documented yet. These figures do not include pinniped numbers that are upstream of Bonneville Dam.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2013 (through April 3) are:

<i>Prey</i>	<i>California Sea Lions</i>	<i>Steller Sea Lions</i>	<i>Total</i>
Chinook	5	83	88
Steelhead	1	54	55
Sturgeon	0	289	289
Lamprey	0	8	8
Shad	0	72	72
Smolt	0	1	1
Other	0	0	0
Unknown	1	73	74

Spring Chinook are just beginning to show up in decent numbers this past week (449 Chinook and 1,900 steelhead from January 1 through April 3), lower than the last three years and less than half the 10 year average (Figure 6). Correspondingly, predation by SSL (primarily) and CSL on salmonids has picked up over the past week. Total salmonid catch through April 3 (205 expanded by interpolating for weekends) is the lowest since 2002 (Figure 5) excluding 2005 (began observations well after predation was occurring). Salmonids have been caught almost equally between powerhouse two and powerhouse one tailrace, while somewhat less are caught at the spillway (Figure 3). Sturgeon catch (458 expanded for weekends only) is the lowest rate since 2006 at this time of year (Figure 4), most taken being in the 2 to 4 foot range.

DETERRENTS

Hazing by USDA (land) began on March 4 and will continue until the end of May, seven days a week. Hazing as an avian deterrent began on April 1, however, as there are very few gulls present, USDA is able to double up our pinniped hazing at times being present at both powerhouse 1 and 2 tailraces simultaneously. CRITFC also began hazing from boats March 4. The states trapping information and results can be found at ODFW's website (<http://www.dfw.state.or.us/fish/SeaLion/index.asp>).

OTHER ITEMS OF INTEREST

The SSL that was in the Bonneville Dam forebay last week has been identified back downstream in the tailrace early this week. He likely passed downstream through the navigation lock. As mentioned earlier, CRITFC and the states are reporting seeing unusually large numbers of CSL and SSL both at the east mooring basing in Astoria and up the Columbia River this past week. We conducted two observations during night time hours this past week. More SSL hunting activity has been seen than in previous years, but few catches observed. Recently, during daylight hours, a majority of SSL have been taking their salmonid prey downstream quite far before eating it, and at night we are unlikely to see or hear predation activity downstream of the near dam zones. Therefore, we may be underestimating SSL predation at night.

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2013.

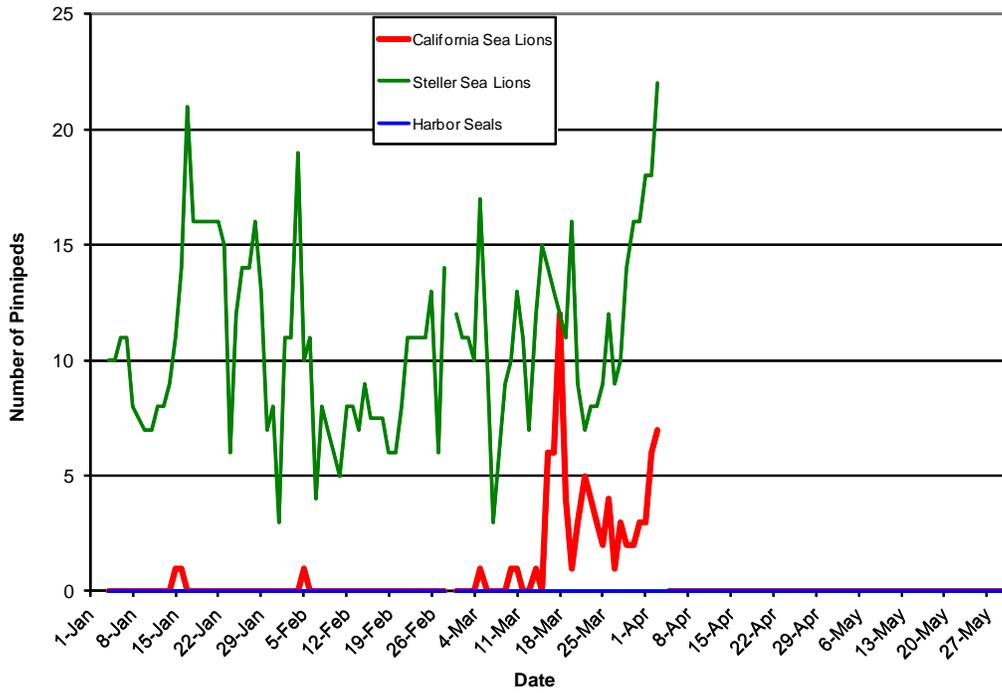


Figure 2. Average daily presence of pinnipeds, by species, to date (April 3) for each year at Bonneville Dam.

AVERAGE DAILY PRESENCE OF PINNIPEDS, BY SPECIES, AT BONNEVILLE DAM, FOR JANUARY 1 TO APRIL 3 EACH YEAR

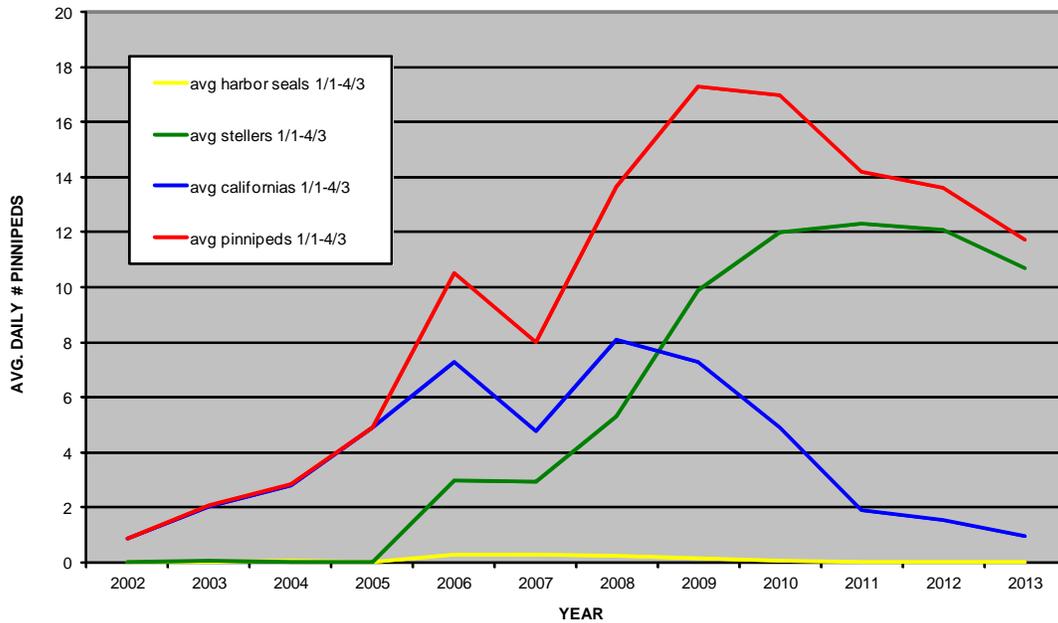


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through April 3, 2013.

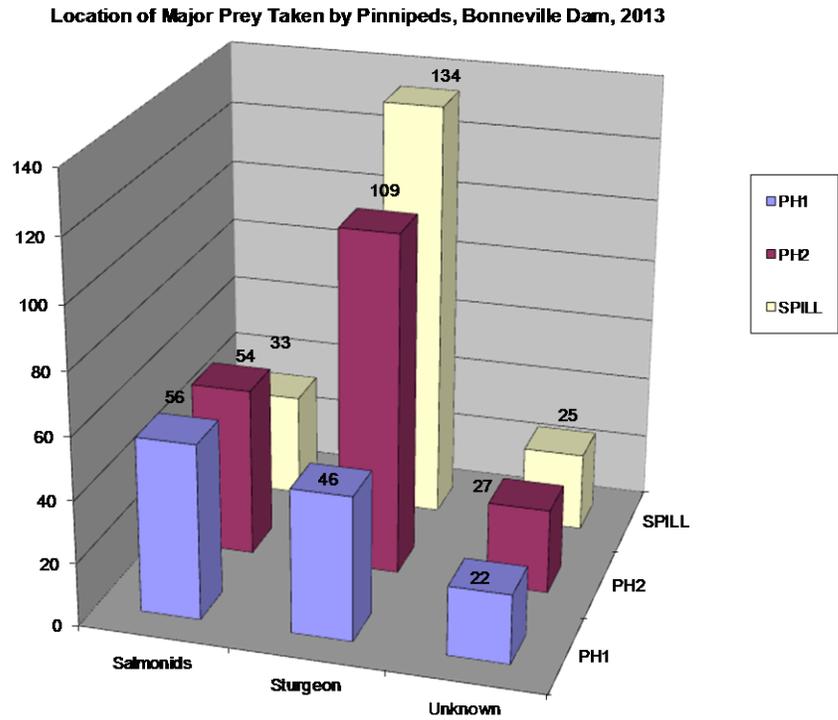


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2013.

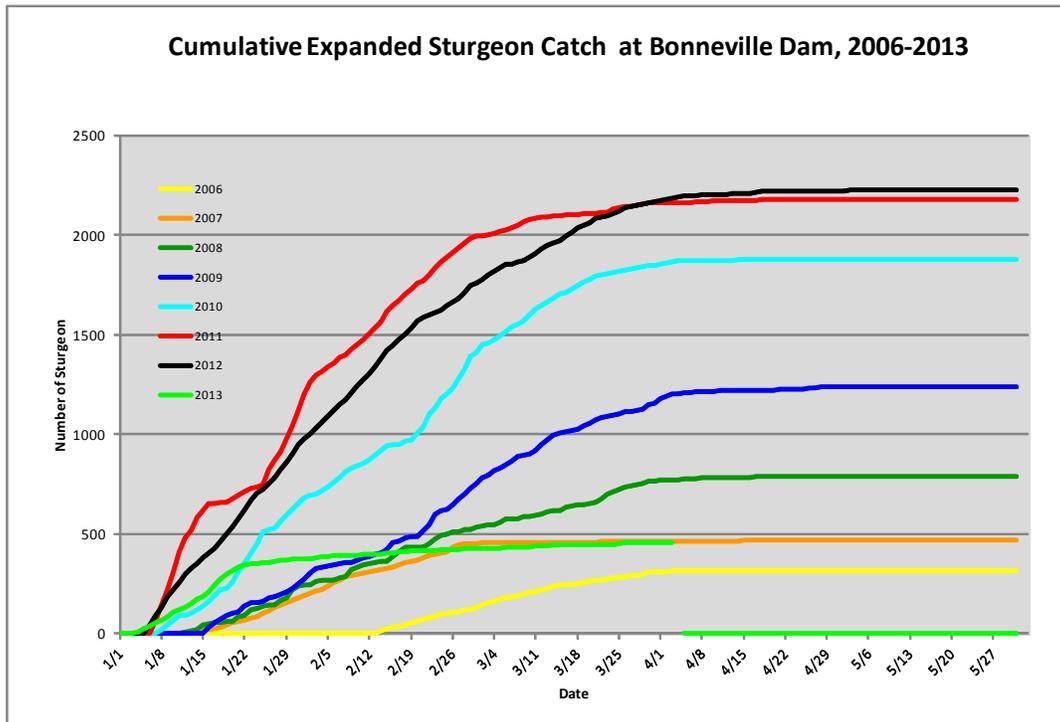


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, through April 3 for 2002-2013.

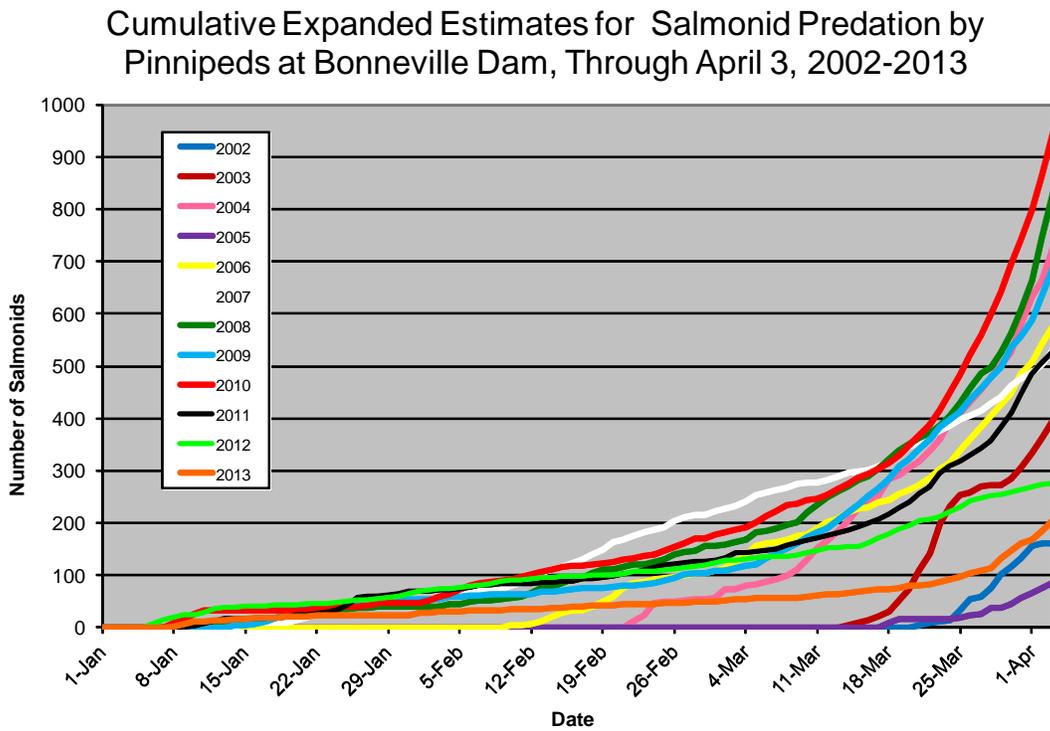


Figure 6. Cumulative salmonid passage at Bonneville Dam for 2013 and the 10 year average to date.

