

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

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This is the sixth weekly status report for 2013 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through March 13, 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 lions (*Zalophus californianus* – CSL) have remained scarce so far this year (Figure 1), with only one observed on five separate days. We were unable to identify the CSL, and no predation was observed by CSL yet. 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 21 and only 1 for CSL (Figure 1). We have documented approximately 37 different SSL's visiting the dam so far (including 23 with brands). All but three of the SSL are confirmed as seen in past years, although there may be some new individuals we have not adequately documented yet.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2013 (through March 13) are:

| <i>Prey</i> | <i>California Sea Lions</i> | <i>Steller Sea Lions</i> | <i>Total</i> |
|------------------|-----------------------------|--------------------------|--------------|
| Chinook | 0 | 9 | 9 |
| Steelhead | 0 | 33 | 33 |
| Sturgeon | 0 | 273 | 273 |
| Lamprey | 0 | 6 | 6 |
| Shad | 0 | 70 | 70 |
| Smolt | 0 | 0 | 0 |
| Other | 0 | 0 | 0 |
| Unknown | 0 | 64 | 64 |

It is likely that most 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 the spillway tailrace, followed by the powerhouse 2 tailrace, while relatively few are caught at powerhouse 1 (Figure 3). Sturgeon catch (441 expanded for weekends only) is the lowest rate since 2007 at this time of year (Figure 4), most taken being in the 2 to 4 foot range. Few fish are passing the count stations (744 steelhead and 38 Chinook) from January 1 through March 12, lower than the last three years and less than half the 10 year average (Figure 6). Total salmonid catch through March 13 (65 expanded by interpolating for weekends) is fewer than any previous year (Figure 5) excluding the early years when no sea lions were present.

DETERRENTS/TRAPPING

Hazing by USDA (land) began on March 4 and will continue until the end of May, seven days a week. CRITFC also began hazing from boats March 4. No trapping has been conducted at Bonneville yet as there are virtually no California sea lions present.

OTHER ITEMS OF INTEREST

WDFW and CRITFC have been sharing their observations of Pinnipeds seen at Phoca Rock with us. I have yet to decide on the best way to concisely display this data, but the information, coupled with our Bonneville Dam observations, does show that when fewer SSL are present at Bonneville, there tend to be more seen at Phoca Rock, and vice-versa. In addition, CRITFC is doing a weekly tandem boat survey from Bonneville Dam down to the Cowlitz River, reporting Pinnipeds seen and predation events. We also continue to receive numerous reports of sea lions observed between Bonneville and The Dalles Dam.

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

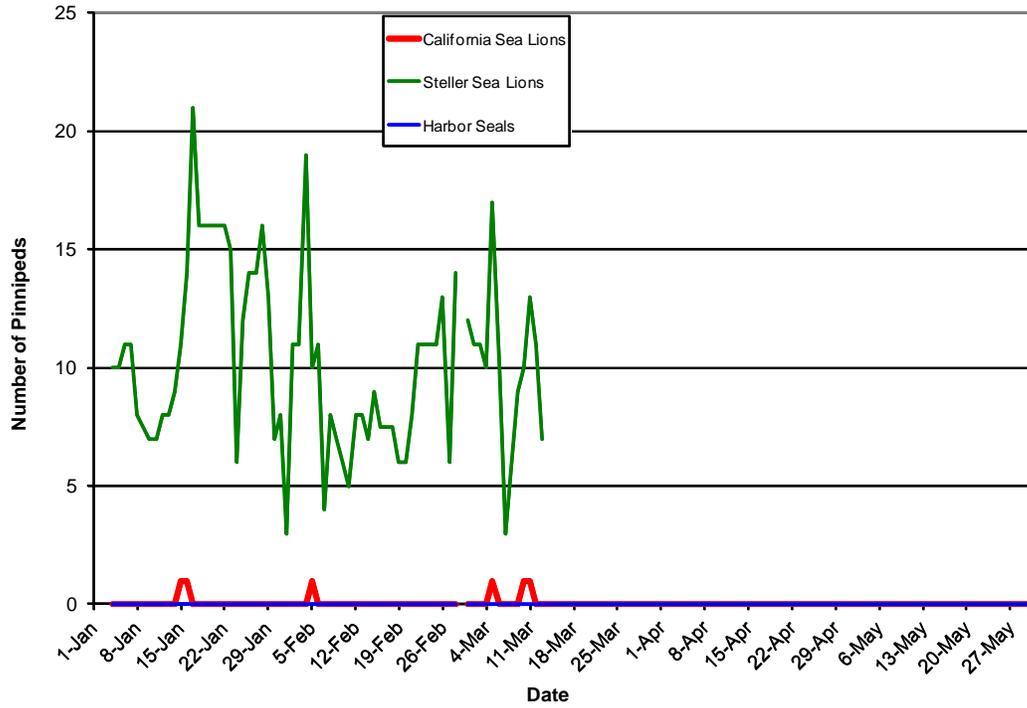


Figure 2. Average daily presence of pinnipeds, by species, to date (March 13) for each year at Bonneville Dam.

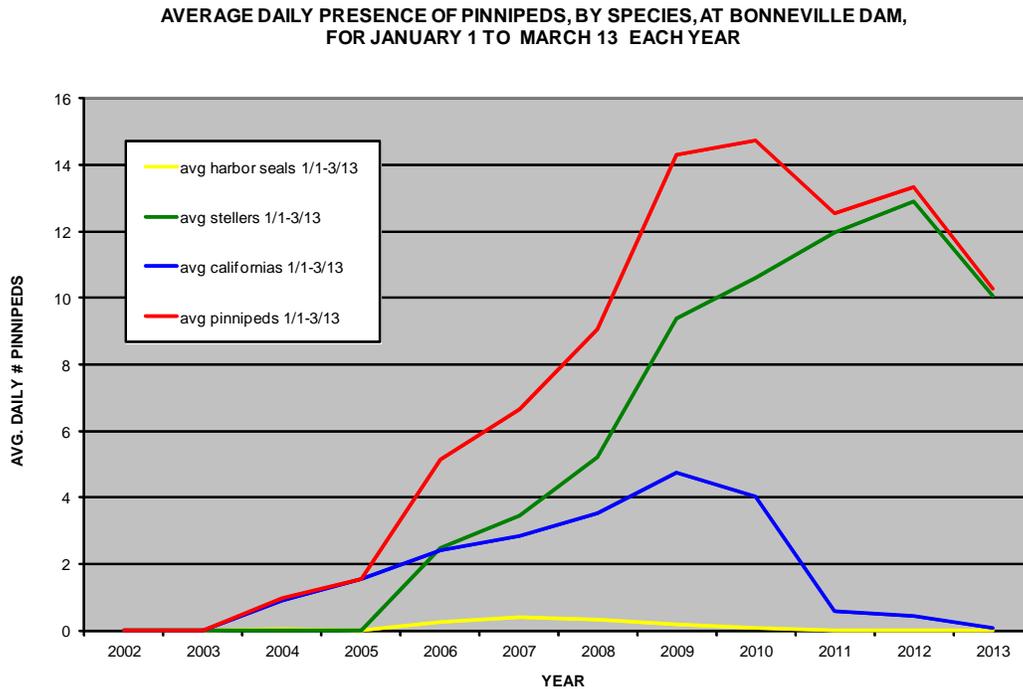


Figure 3. Distribution of prey taken by Pinnipeds by location at Bonneville Dam, through March 13, 2013.

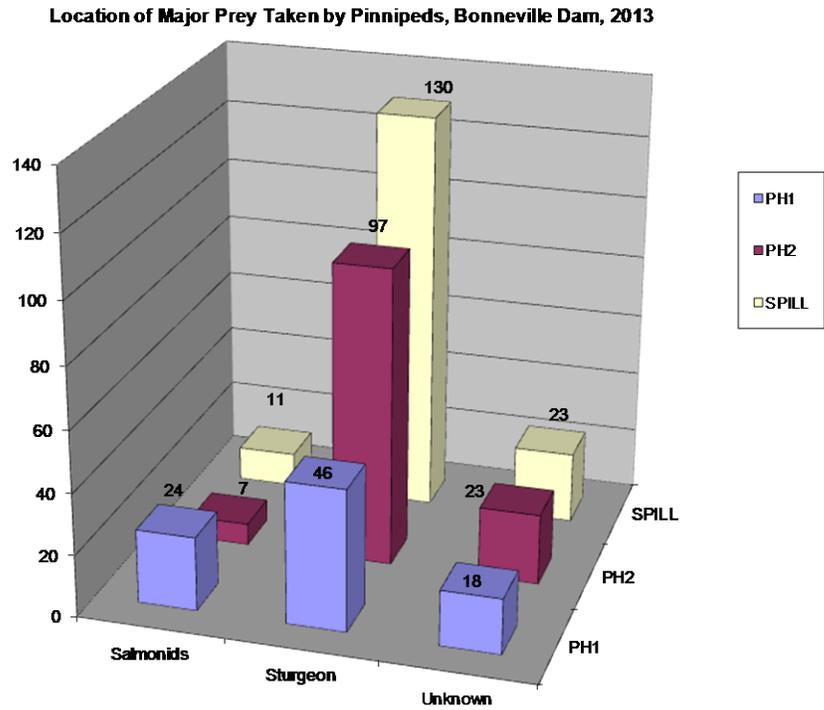


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2013.

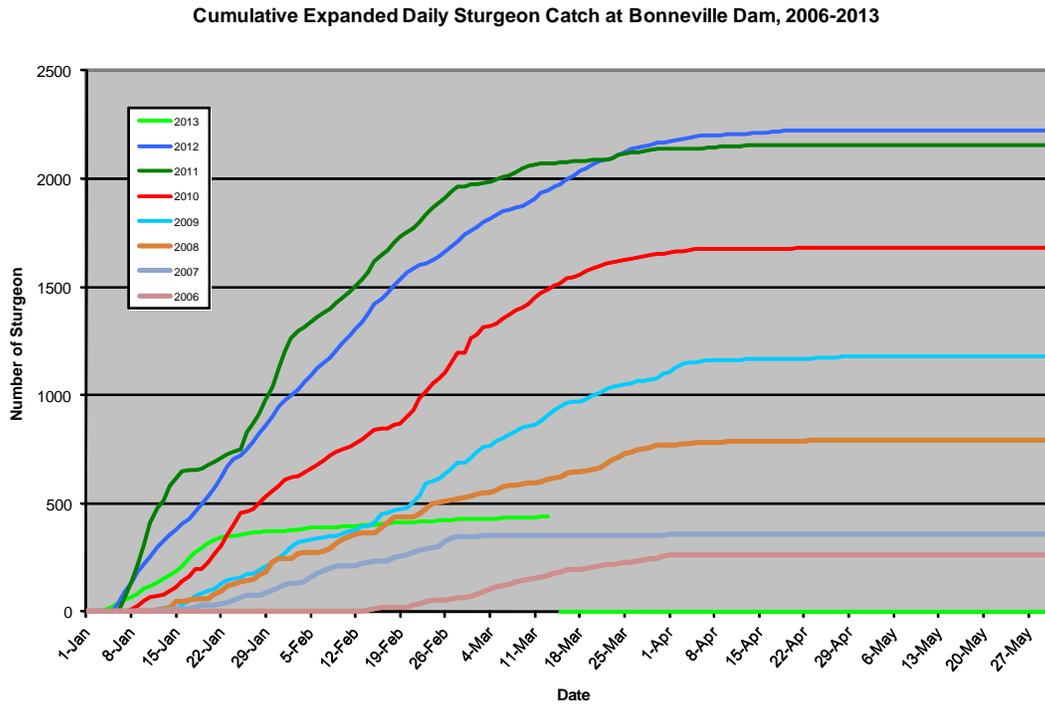


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, through March 13 for 2002-2013.

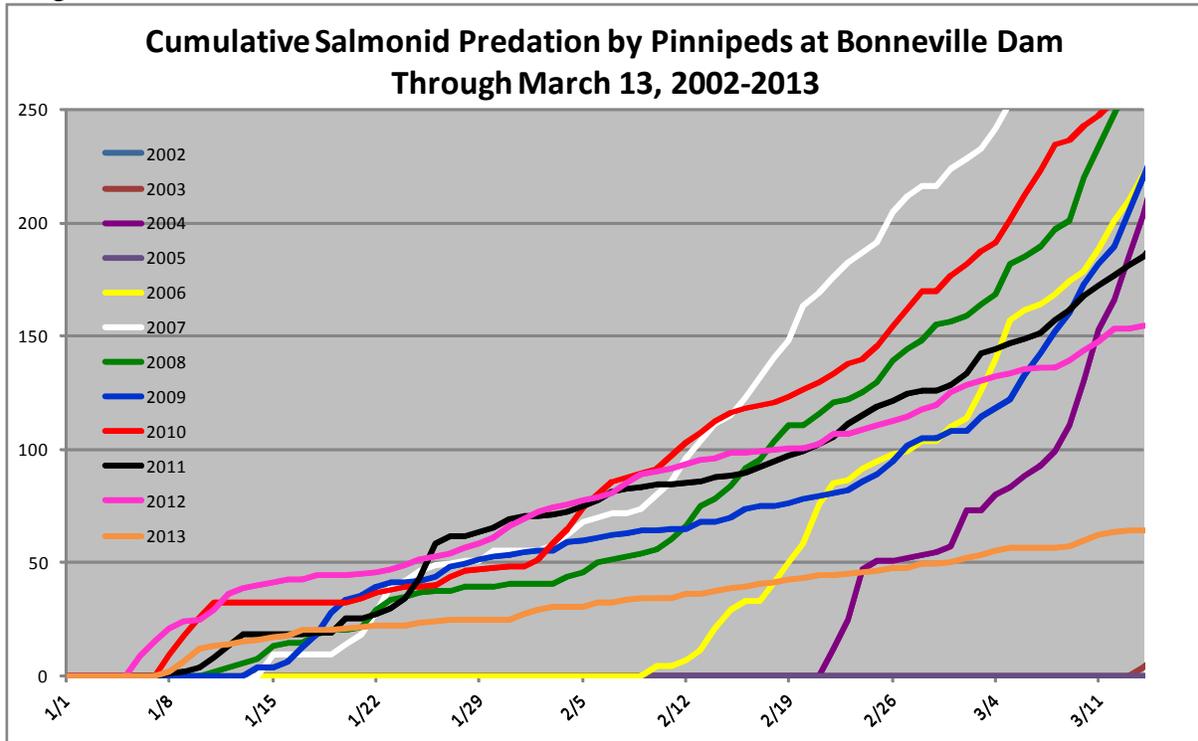


Figure 6. Cumulative salmonid passage at Bonneville Dam for 2013 and the 10 year average to date.

