



Trinity River Mainstem Redd Survey Update December 16, 2016

The [Arcata Fish and Wildlife Office](#) along with the [California Department of Fish and Wildlife](#), [Yurok Tribal Fisheries Program](#), [Hoopa Valley Tribal Fisheries Department](#), and [Shasta-Trinity National Forest](#) survey the mainstem Trinity River to recover salmonid carcasses and count and map Chinook Salmon (*Oncorhynchus tshawytscha*) redds. The distribution of Chinook Salmon spawning is expected to change in response to rehabilitation efforts of the [Trinity River Restoration Program](#) and to the relative run size of natural vs. [Trinity River Hatchery](#) origin fish. Spawning surveys are attempted weekly between [Lewiston Dam](#) and the North Fork Trinity River (reaches 1–7) and every other week on the survey reaches downstream of the North Fork Trinity River (Figure 1, Table 1).

This update provides preliminary data on 2016 redd observations encountered and entered into our database as of 12/16/2016 (Table 1). Figure 2 compares preliminary 2016 cumulative redd counts for Reaches 1–10 with the previous 14 years (2002–2015). At this point, redds constructed by Chinook and Coho salmon are not differentiated. After the end of the season, redds are apportioned by species (Chinook or Coho salmon) and origin (hatchery or natural) using carcass data.

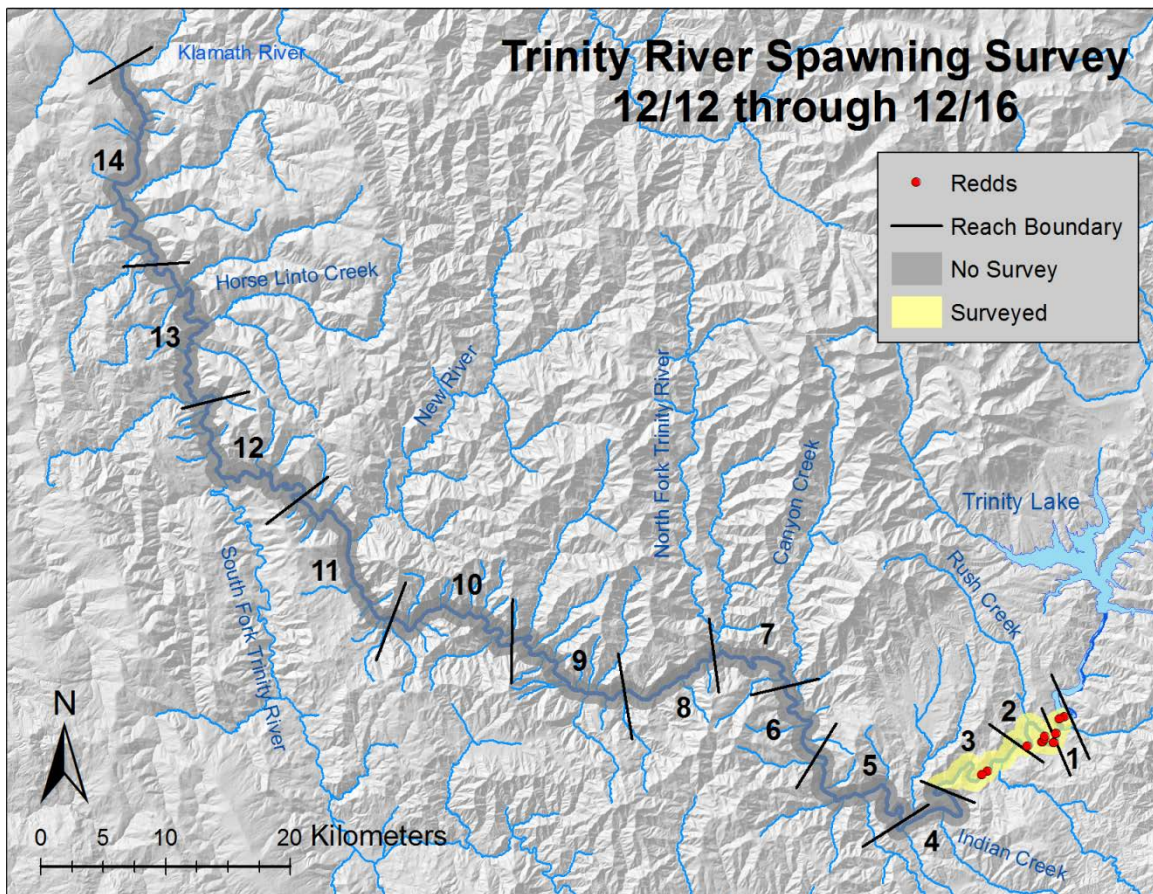


Figure 1. Mainstem Trinity River salmon spawn survey area for this week’s update.





Table 1. Preliminary count of redds by reach from the fall 2016 mainstem Trinity River redd survey. Reach 8 (Pigeon Point Run) and Reach 11 (Burnt Ranch Gorge) are not surveyed due to abundant whitewater.

Week start	Reach														Total	
	01	02	03	04	05	06	07	08	09	10	11	12	13	14		
08/29	1															1
09/05	0	0	0	0	0	0	0									0
09/12	1	1	7	0	1	1	1		0	0						12
09/19	11	18	17	2	13	7	0									68
09/26	18	43	35	39	62	29	14		7	4						251
10/03	10	41	41	15	85	90	42					0	0	0		324
10/10	12	28	32	13	55	96	64		NS	NS						300
10/17	10	18	13	27	36	49	21		126	72		NS	NS	NS		372
10/24	12	3	2	NS	10	15	10		NS	NS						52
10/31	11	12	5	2	11	7	8					NS	NS	NS		56
11/07	15	14	0	3	5	9	13		37	28						124
11/14	NS	4	4	1	1	3	1					40	NS	NS		54
11/21	15	10	NS	NS	NS	0	0		NS	NS						25
11/28	4	9	3	2	4	0	0		1	3		NS	NS	NS		26
12/05	0	8	5	0	0	NS	NS		NS	NS						13
12/12	4	7	2	NS	NS	NS	NS					NS	NS	NS		13
Total	124	216	166	104	283	306	174		171	107		40	0	0		1691

These data are preliminary and subject to revision.

“NS” = no survey

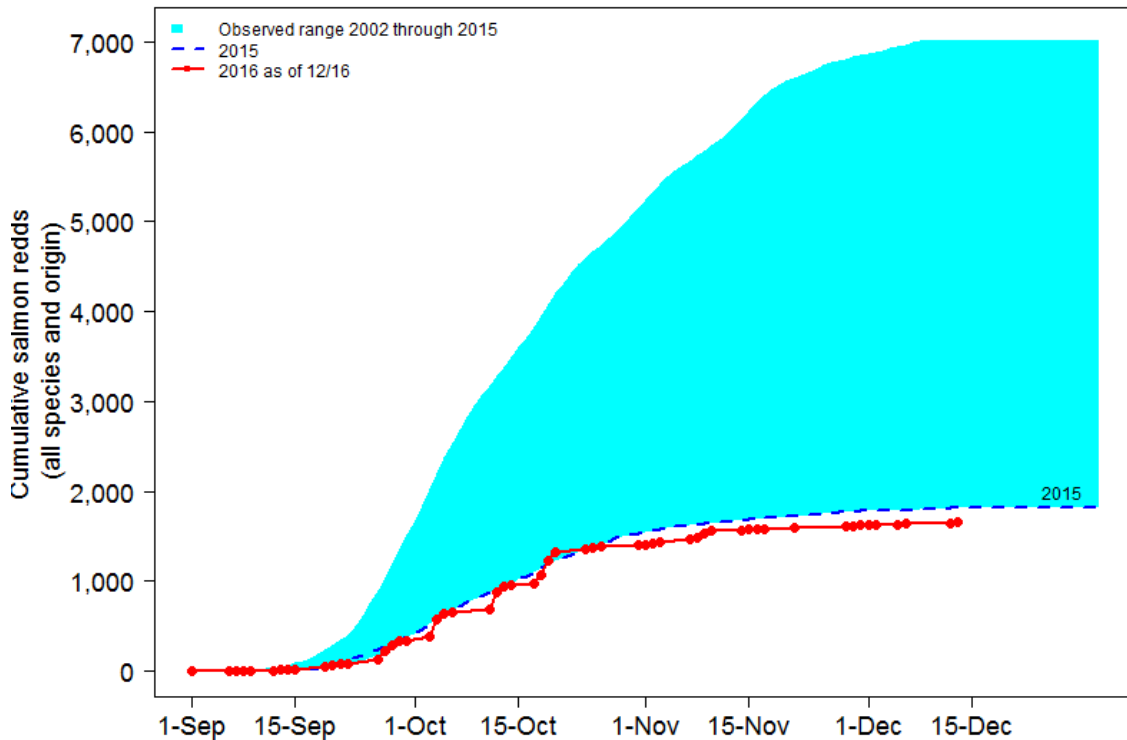


Figure 2. Fall 2016 cumulative Trinity River mainstem redd counts, reaches 1–10 (Reach 8 excluded), as of 12/16/2016 compared to 2015 (dashed line) and the range of counts from 2002 to 2015 (blue polygon).

We annually track spawning success rates (i.e., pre-spawn mortality versus partially and fully spawned) of female salmon throughout the Trinity River spawning survey season. As of December 16, we have encountered a total of 270 fresh female salmon carcasses, of which two (>1%) died before spawning (Figure 3).

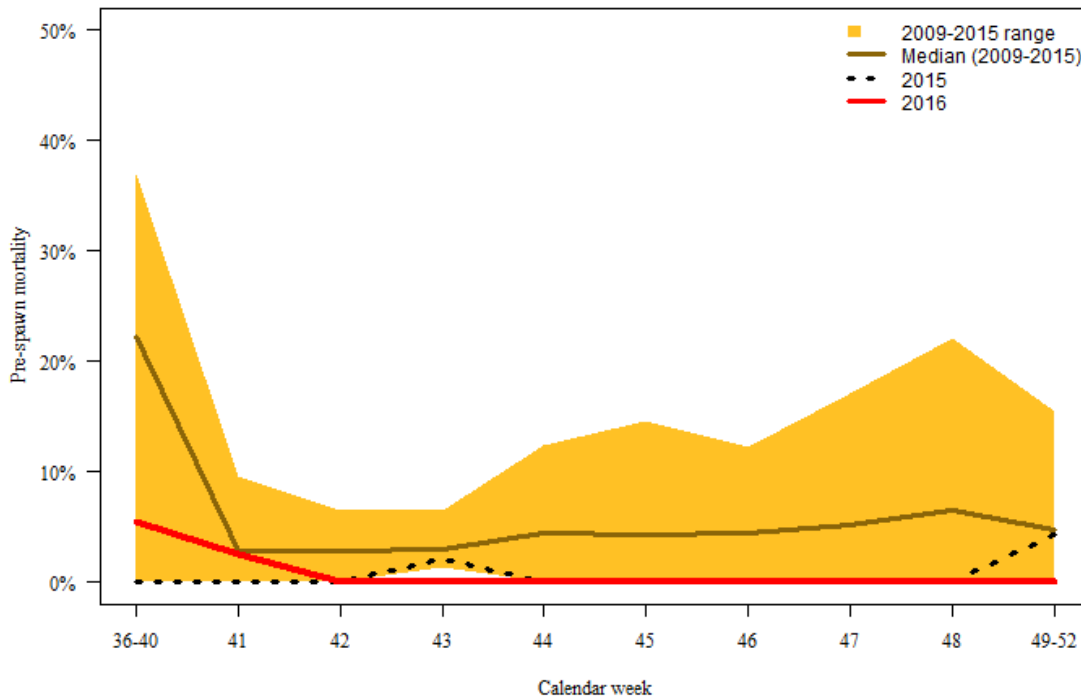


Figure 3. Weekly pre-spawn mortality rates of Chinook Salmon in the Trinity River in 2016 compared with 2009-2015.

A Keyhole Markup Language file has been created to view redd distribution data with Google Earth. This file is created directly from the data collected by our field crews. Each point is attributed with the date that the redd was initially marked (i.e. “10/2” = October, 2nd).

[Trinity Redds 2016 12 16](#)

If Google Earth fails to launch automatically, the file can be used by first saving it to your computer then launching the Google Earth application. Select the menu option **File**, locate the downloaded file (“Trinity_Redds_2016_12_16.kml”), and click the **Open** button.

For more information regarding mainstem Trinity River redd surveys, please contact Steve Gough (707-825-5197; steve_gough@fws.gov) or Derek Rupert (530-623-1805; derek_rupert@fws.gov).