

## Mad River Summer Steelhead Dive Summary 2015



*Mad River Adult Summer Steelhead (photo by Jacob Pounds)*

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June 2016

## Summary

From July 30 to August 1, 2015, personnel from Blue Lake Rancheria, Bureau of Land Management, California Department of Fish and Wildlife, Green Diamond Resource Company, Mad River Alliance, Stillwater Sciences, Wiyot Tribe, National Oceanic and Atmospheric Administration, United States Forest Service, National Fish and Wildlife Service, National Marine Fisheries Service, Timberland Resources Company, and several community volunteers performed a dive survey to count summer-run steelhead in Mad River. Teams of snorkelers covered approximately 47.1 river miles within the 74.4-mile stretch of river between R.W. Matthews Dam and the Highway 101 bridge. Divers counted a total of 336 adult ( $\geq 16$  inches fork length) and 222 half-pounder ( $< 16$  inches fork length) summer-run steelhead. Presence of other aquatic species, including Pacific lamprey and lamprey redds, freshwater mussels, and western pond turtles were also noted.

No adult summer-run steelhead were counted above the Humbug Creek barrier, leading us to believe that summer-run steelhead likely did not migrate upstream of the barrier prior to the 2015 survey. Drought and persistent low-flow conditions in 2015 are believed to have limited upstream passage. We believe that the survey covered the majority of habitat in mainstem Mad River where summer-run steelhead were present.

Several factors limited the total distance surveyed this year: rescheduling of the dives due to private land access issues, personal injuries, and lightning-sparked wildfires negatively influenced the number of participating volunteers and total survey distance. Additionally, accessing roughly 10 river miles around the confluence of Mad River and Pilot Creek continues to be a perennial issue that impacts this effort, due to the proliferation of marijuana farms. Only one injury was recorded for this year, an ear infection on the Green Diamond crew, reported after the survey was completed.

Table 1 describes the total count of adult and half-pounder summer steelhead, and distance surveyed for each year. Data is provisional from 1980 – 2008, as it has not been checked since entered into the database.

## 2015 Dive Survey

Goals of the 2015 Mad River survey were:

1. Obtain a count of summer-run steelhead from R.W. Matthews Dam to the Kadle Hole (upstream of the Highway 101 bridge)
2. Gain access through private property to reaches of the river near Pilot Creek that have not been surveyed in several years
3. Provide dive training on the lower Mad River to community volunteers so they may learn surveying techniques and effective data collection. This training could lead to future volunteer recruitment for more difficult and remote survey reaches

Table 1. Mad River summer-run steelhead dive survey results 1980 - 2015

Year	Miles Surveyed	Adults			Half-Pounders		
		Live	Dead	Total	Live	Dead	Total
1980 <sup>P</sup>	17.9	0	0	0	0	0	0
1981 <sup>P</sup>	17.5	2	0	2	0	0	0
1982 <sup>P</sup>	32.4	167	0	167	0	0	0
1983 <sup>P</sup>	22.8	31	0	31	0	0	0
1984 <sup>P</sup>	14.1	111	0	111	0	0	0
1985 <sup>P</sup>	14.8	52	0	52	0	0	0
1986 <sup>P</sup>	7.8	10	0	10	0	0	0
1987 <sup>P</sup>	20.2	18	0	18	0	0	0
1988 <sup>P</sup>	10.6	60	0	60	0	0	0
1989 <sup>P</sup>	10.6	20	0	20	0	0	0
1990 <sup>P</sup>	10.6	33	0	33	0	0	0
1991 <sup>P</sup>	14.7	59	0	59	0	0	0
1992 <sup>P</sup>	10.6	34	0	34	0	0	0
1993 <sup>P</sup>	10.6	48	0	48	0	0	0
1994 <sup>P</sup>	51.6	305	0	305	166	0	166
1995 <sup>P</sup>	66.6	541	1	542	10	0	10
1996 <sup>P</sup>	60.7	427	1	428	19	0	19
1997 <sup>P</sup>	66.6	292	5	297	12	0	12
1998 <sup>P</sup>	57.0	191	0	191	20	0	20
1999 <sup>P</sup>	46.4	82	0	82	15	0	15
2000 <sup>P</sup>	53.5	170	0	170	62	0	62
2001 <sup>P</sup>	12.5	194	0	194	583	0	583
2002 <sup>P</sup>	19.7	185	0	185	80	0	80
2003 <sup>P</sup>	18.7	483	0	483	5	0	5
2004 <sup>P</sup>	5.8	209	0	209	9	0	9
2005 <sup>P</sup>	5.6	211	0	211	10	0	10
2006	No Survey						
2007	No Survey						
2008 <sup>P</sup>	5.1	110	0	110	20	0	20
2009	No Survey						
2010	No Survey						
2011	No Survey						
2012	No Survey						
2013	50.0	280	2	282	28	0	28
2014	61.0	322	0	322	92	0	92
2015	47.1	336	0	336	222	0	222

p = Provisional data

## **Recommendations and Environmental Considerations**

Goals for future summer steelhead dive surveys:

1. Survey the entire river from R.W. Matthews Dam to the Kadle Hole
2. Survey all reaches within a few days (as short a period of time as possible)
3. Rely on trained and experienced divers for the most strenuous and difficult reaches (H and I)
4. Produce annual summary reports detailing survey effort, including distance surveyed, total count, participating entities, other observations, and considerations for future years
5. Maintain a database and/or spreadsheet of the results. This will help assist in understanding and assessing population viability
6. Ensure every participant returns after every survey day
7. Prior to the 2015 dives, the group discussed using data from the CDFW-operated ARIS sonar camera to target survey dates, with the idea that survey dates will be conducted after the entire run has entered the river. Although this was not implemented, comparing survey data to ARIS sonar counts can be one way to determine if trends in dive counts parallel the ARIS-observed run size. Dive counts would then be used as an index of adult summer-run steelhead population abundance and to assess in-stream distribution

This effort would not be possible without the generous assistance and participation from all volunteers and surveyors who dedicated time towards planning and implementing this survey and creating and editing this report to ensure safety and success for all involved. We would also like to acknowledge the private landowners who helped facilitate crucial access points in remote stretches of the river. Thank you all very much for being a critical part of this effort!