

**DEPARTMENT OF FISH AND GAME**<http://www.dfg.ca.gov>

Northern Region

Trinity River Project

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August 20, 2010

**M e m o r a n d u m**

**To:** Files

**From:** Andrew Hill, Fishery Biologist  
California Department of Fish and Game – Northern Region

**Subject:** South Fork Trinity River Spring Chinook and  
Summer Steelhead Snorkel Survey Totals

The annual South Fork Trinity River snorkel survey was completed this year on August 17 and 18, 2010 thanks to help from the U.S. Fish & Wildlife Service, U.S. Forest Service, Yurok Tribal Fisheries, Americorps, California Department of Fish and Game, N.O.A.A. Fisheries, Hayfork Watershed Research and Training Center, and interested volunteers. Approximately 61.4 river miles were surveyed this year by two to four person crews snorkeling downstream and diving to look into crevasses. A total of 105 adult Chinook, 15 Chinook grilse, 88 adult steelhead, and 71 steelhead half pounders were observed in the South Fork Trinity River (Table 1). Approximately 15.3 river miles of Hayfork Creek were surveyed separately this year on July 27, 2010 in hopes of better visibility due to increased turbidity over the years in Hayfork Creek (Table 3).

The following tables show the numbers of fish observed in this year's survey, and the numbers of fish observed in surveys since 1996. Spring Chinook are divided into the following two categories; >22" is a Chinook and <22" is a Jack or Grisle Chinook. Summer Steelhead are also divided into two categories; >16" is an adult Steelhead and < 16" is a half pounder. Half pounder counts carry less weight in counts of Summer Steelhead because they are easily confused with large resident, non-anadromous steelhead. Therefore, their numbers are not included in annual counts of Summer Steelhead (Table2).

The South Fork Trinity River snorkel survey has expanded over the years since the 1964 flood deposited massive amounts of sediment in the river. The summer survey originally consisted of one index reach and has extended downstream over the years to eventually include Hayfork Creek. A mark-recapture estimate of the 1963/64 escapement of 11,604 Chinook and 3,5000 steelhead to the South Fork Trinity was a pretty rough estimate, but local residents and fishermen talk of huge runs before the 1964 flood deposited massive amounts of sediment in the river bed, filling in many huge, deep holes. Chinook and steelhead runs since then have been much smaller, and luckily there is still enough interest to attempt to enumerate these summer fish.

**Table 1: South Fork Trinity River Snorkel Survey Total on August 17 and 18, 2010 and previous averages per reach since 1996**

<b>Section</b>	<b>Chinook</b>	<b>Jacks</b>	<b>Steelhead</b>	<b>½ pounders</b>
<b>East Fork of the South Fork to the Confluence with the South Fork</b>	0 ave.= 0.3	0 ave. 0	0 ave.=0.3	0 ave.=0.2
<b>Raspberry Gulch to the Confluence with the East Fork</b>	0 ave.=0	0 ave. 0	2 ave.=0.3	3 ave.=0.2
<b>Confluence with East Fork to Red Mountain Creek</b>	7 ave.=7.6	1 ave.=0.7	2 ave.=2.3	0 ave.=1.5
<b>Red Mountain Creek to Silver Creek Ranch</b>	12 ave.= 16.7	4 ave.=0.8	13 ave.=4	2 ave.=5.1
<b>Silver Creek Ranch to Scott Flat</b>	35 ave.=26	7 ave.=1.6	9 ave.=7.2	13 ave.=13.4
<b>Scott Flat to Forest Glen Campground</b>	1 ave.=0	0 ave.=0.3	0 ave.=1	1 ave.=1.3
<b>Forest Glen Campground to Hidden Valley Ranch</b>	17 ave.=50.1	2 ave.=4.3	15 ave.=10.3	3 ave.=14
<b>Hidden Valley Ranch to River Spirit</b>	8 ave.=51.2	1 ave.=1.5	20 ave.=7	21 ave.=12.5
<b>River Spirit to Hitchcock Creek</b>	15 ave.=28.6	0 ave.=0.6	13 ave.=3	16 ave.=4.9
<b>Hitchcock Creek to Lover's Leap</b>	no survey ave.=11.7	no survey ave.=0.2	no survey ave.=2.6	no survey ave.=7.4
<b>Lover's Leap to Big Slide Campground</b>	0 ave.=12.1	0 ave.=0.7	0 ave.=1.4	9 ave.=3
<b>Big Slide to Mule Bridge</b>	9 ave.=11	0 ave.=2.5	13 ave.=3.1	3 ave.=3.1
<b>Mule Bridge to Surprise Creek</b>	no survey ave.=5.3	no survey ave.=0.3	no survey ave.=5.6	no survey ave.=1
<b>Surprise Creek to Todd River Ranch</b>	1 ave.=1.4	0 ave.=0.6	1 ave.=0.9	0 ave.=0
<b>Todd River Ranch to Low Bridge</b>	0 ave.=0	0 ave.=0	0 ave.=2	0 ave.=0
<b>Low Bridge to Sandy Bar (confluence with Trinity River)</b>	ave.=1.8	ave.=0	ave.=0	ave.=0

**Table 2: Previous years fish count totals**

Year	Spring Chinook	Steelhead	Limitations/comments
1964	11604	3500	11,604 from petersen mark-recapture estimate; steelhead estimate without basis
1965	NS	NS	
1966	NS	NS	
1967	0	*	EastForkSouthFork(EFSE)-(up one mile) to Bierce Creek (4 mile section)
1968	0	*	EFSF to three miles downstream
1969	1	*	EFSF to three miles downstream
1970	36	2	EFSF to Hells Gate (Forest Glen), steelhead were 1/2lbers-approximately 14"
1971	98	*	EFSF to Hells Gate (Forest Glen)
1972	13	*	EFSF to Hells Gate (Forest Glen)
1973	2	*	Silver Creek to Hells Gate, July Survey {930,900 Chinook stocked in South Fork Trinity }
1974	53	1	EFSF to Plummer Creek, July Survey
1975	289-299+	*	EFSF to Forest Glen; 75% adults
1976	342	*	EFSF to Hitchcock Creek, September survey
1977	NS	NS	Lowest water year
1978	NS	NS	
1979	301	91	September Survey by Ron Medel (USFS), surveyed by foot, not snorkeled
1980	25	*	8 miles above Forest Glen to Forest Glen; only 25% adults, rest are jacks
1981	NS	NS	
1982	161	27	
1983	NS	NS	
1984	27	8	No USFS/DFG survey due to marijuana problems, HSU survey above Forest Glen
1985	26	3	Two index sections-Silver Creek to Rough Creek,Ostrat Ranch to Spot Creek
1986	183	73	EFSF confluence to Klondike Mine; No survey below Klondike due to manpower
1987	153		No USFS survey due to fires
1988	59	26	
1989	7	37	
1990	82	66	
1991	66	8	DFG only
1992	166	21	
1993	284	23	Surveys below Hitchcock creek impeded by turbidity
1994	235	22	August Survey, Sections M and N not surveyed; July survey yielded 243 Spring KS, 16 steelhead

1995	579	42	
1996	1097	11	
1997	655	95	
1998	172	37	
1999	175	38	5 sections left unsurveyed below Hitchcock Creek due to turbidity
2000	256	76	
2001	166	76	
2002	386	35	
2003	260	37	
2004	59	34	
2005	72	73	
2006	146	105	
2007	212	130	Mule Bridge to Surprise Creek not surveyed due to manpower.
2008	NS	NS	No survey due to wildfires and manpower
2009	118	61	Mule to Low Bridge not surveyed. Hayfork Creek not surveyed due to major road construction on Hyampom Road.
2010	120	88	South Fork only survey in August, reach I not surveyed due to bodies and Reach L not surveyed due to equipment failure.
2010	3	11	Hayfork Creek Only survey in July

**Table 3. Hayfork Creek snorkel results.**

<b>Section</b>	<b>Chinook</b>	<b>Jacks</b>	<b>Steelhead</b>	<b>½ pounders</b>
Nine mile bridge to Halfway Ridge	2 ave.=6.6	0 ave.=0.4	1 ave.=11.9	3 ave.=7.8
Halfway Ridge to Bar 717 Camp Trinity	0 ave.=11.8	0 ave.=0.3	3 ave.=7.6	2 ave.=4.7
Bar 717 Camp Trinity to confluence with the South Fork Trinity	1 ave.=9.8	0 ave.=0.4	7 ave.=1.6	4 ave.=4.7

I thank all of the participants in the dive and all of the landowners who have allowed us to access the river for this survey. Hopefully we can observe at least as many fish next year as we did this year.

Sincerely,

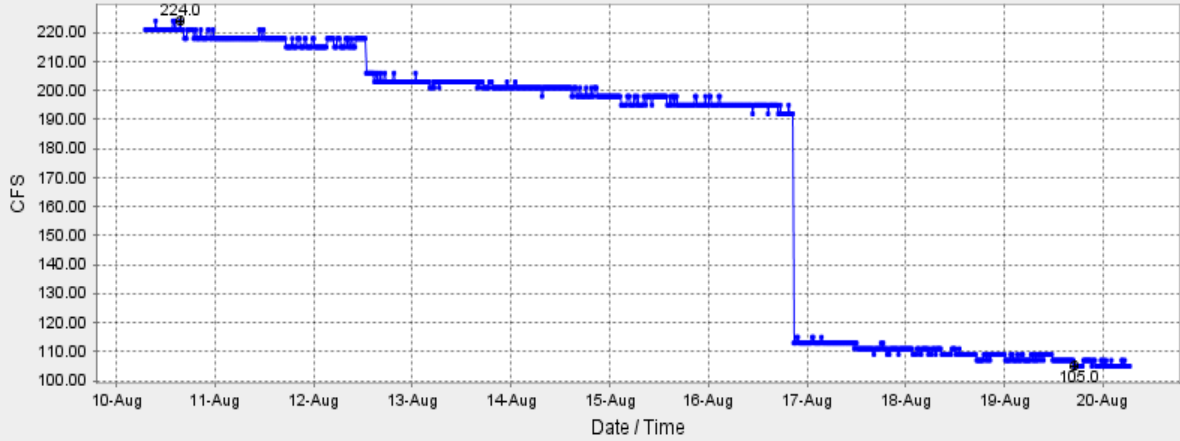
Andrew Hill  
Marine/Fisheries Biologist

**Appendix 1.** U.S.G.S. gauging station river flows below Hayfork Creek confluence from California Department of Water Resources Current River Conditions website

**SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )**

Date from 08/10/2010 06:52 through 08/20/2010 06:52 Duration : 10 days

Max of period : (08/10/2010 15:30, 224.0) Min of period : (08/19/2010 17:00, 105.0)



— FLOW, RIVER DISCHARGE - CFS (9275)

**SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )**

Date from 08/05/2009 06:44 through 08/25/2009 06:44 Duration : 20 days

Max of period : (08/06/2009 14:00, 86.0) Min of period : (08/23/2009 17:45, 37.0)

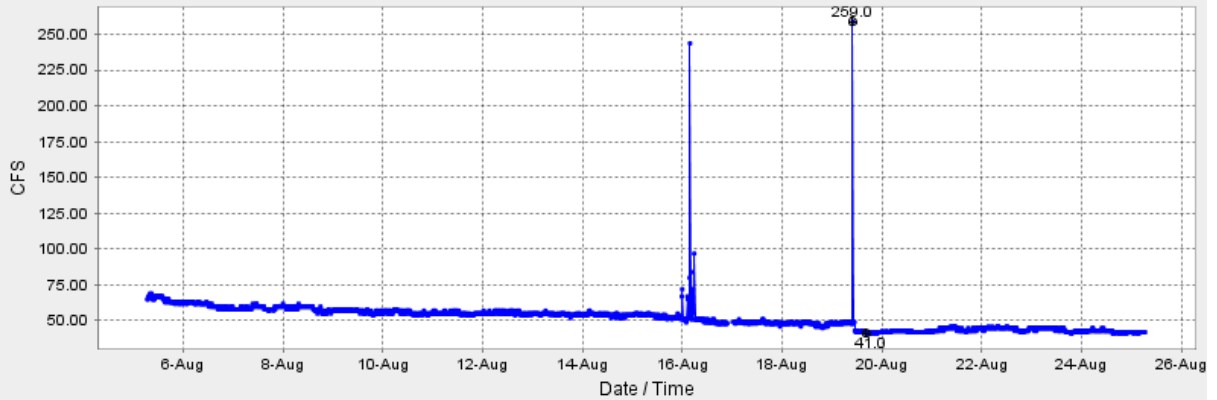


— FLOW, RIVER DISCHARGE - CFS (9275)

**SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )**

Date from 08/05/2008 06:44 through 08/25/2008 06:44 Duration : 20 days

Max of period : (08/19/2008 10:00, 259.0) Min of period : (08/19/2008 16:30, 41.0)

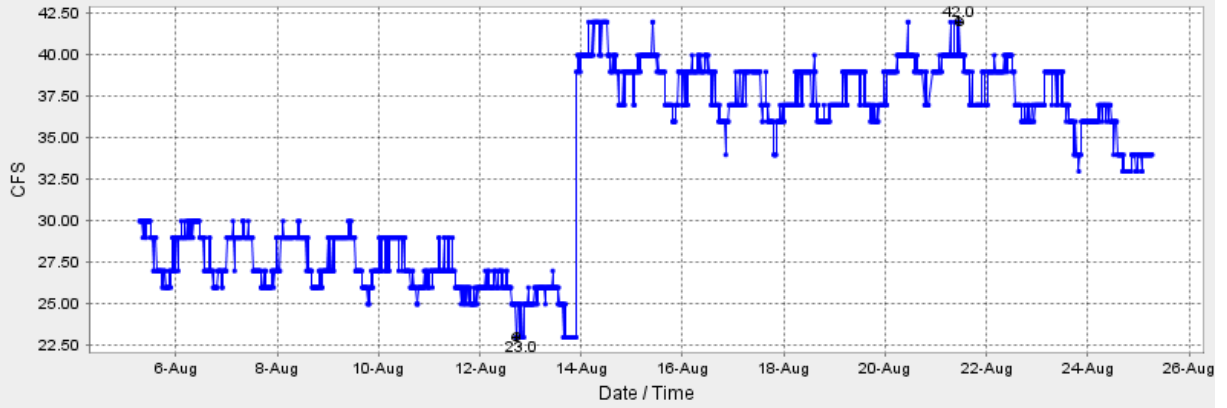


— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2007 06:44 through 08/25/2007 06:44 Duration : 20 days

Max of period : (08/21/2007 11:00, 42.0) Min of period: (08/12/2007 17:00, 23.0)

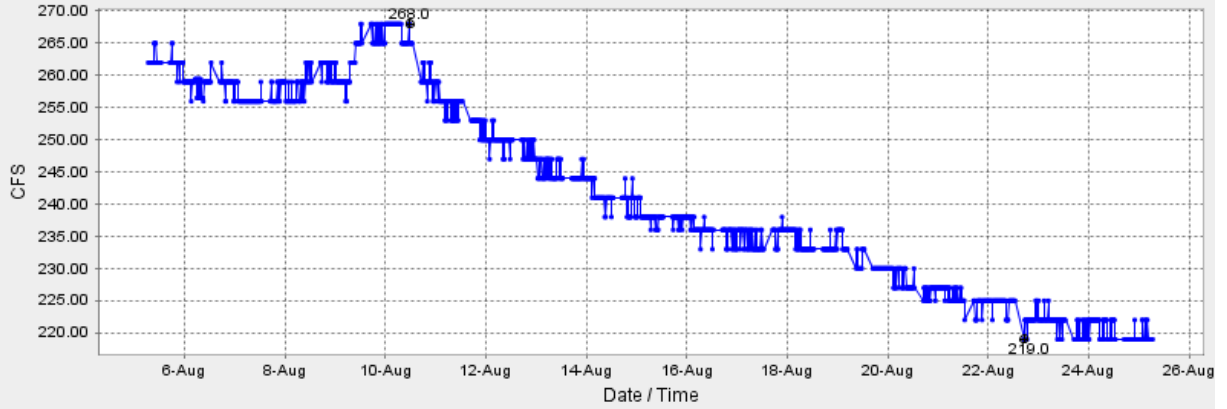


— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2006 06:44 through 08/25/2006 06:44 Duration : 20 days

Max of period : (08/10/2006 11:30, 268.0) Min of period: (08/22/2006 17:00, 219.0)

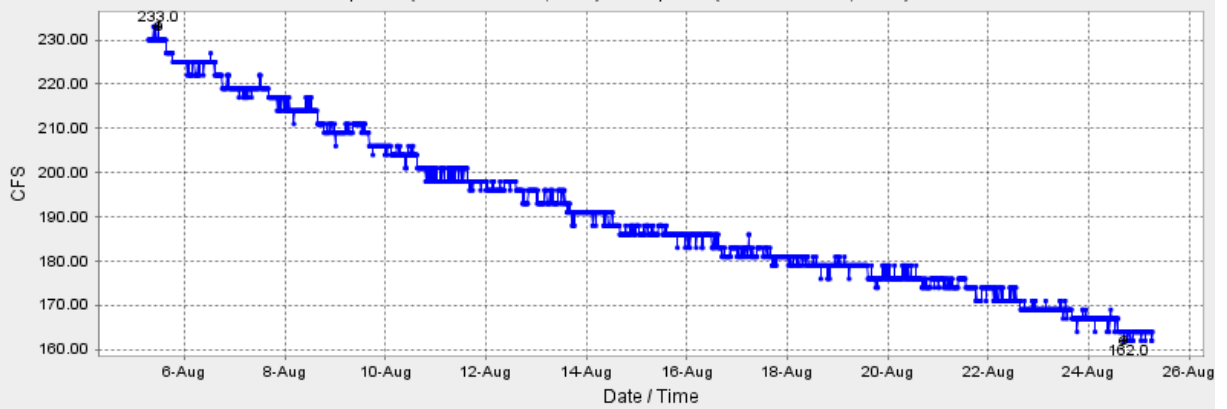


— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2005 06:44 through 08/25/2005 06:44 Duration : 20 days

Max of period : (08/05/2005 11:15, 233.0) Min of period: (08/24/2005 16:45, 162.0)



— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2004 06:44 through 08/25/2004 06:44 Duration : 20 days

Max of period : (08/05/2004 23:30, 115.0) Min of period: (08/21/2004 18:45, 38.0)

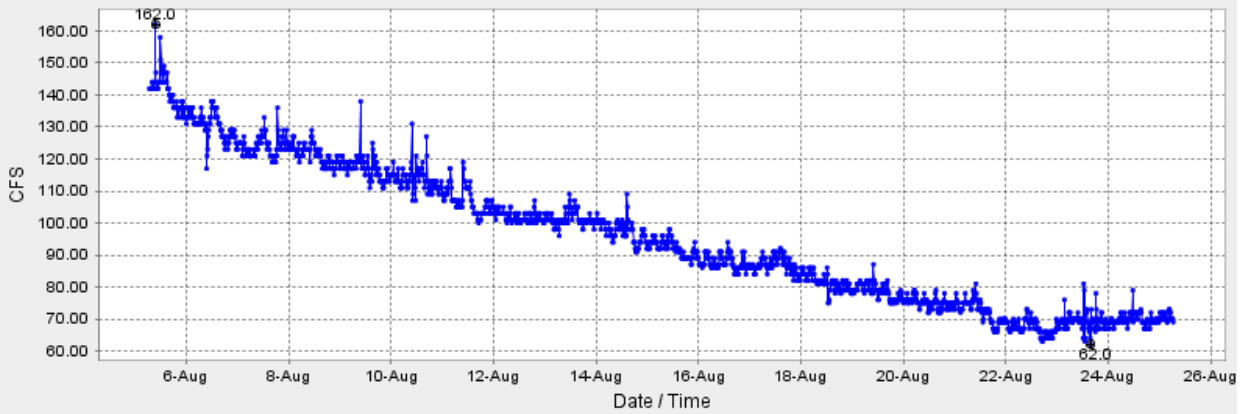


— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2003 06:44 through 08/25/2003 06:44 Duration : 20 days

Max of period : (08/05/2003 09:30, 162.0) Min of period: (08/23/2003 15:45, 62.0)

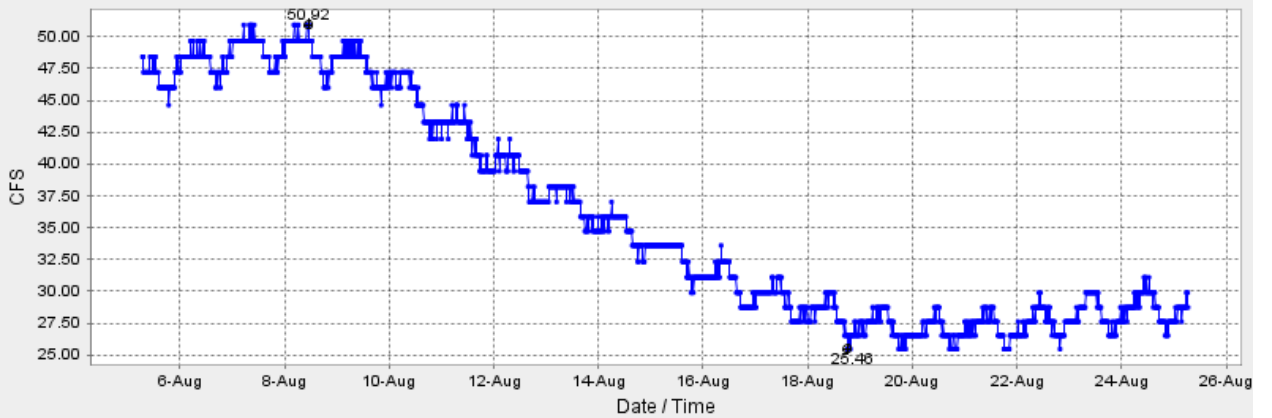


— FLOW, RIVER DISCHARGE - CFS (9275)

### SOUTH FORK TRINITY RIVER BELOW HYAMPOM ( TBH )

Date from 08/05/2002 06:44 through 08/25/2002 06:44 Duration : 20 days

Max of period : (08/08/2002 11:00, 50.92) Min of period: (08/18/2002 18:15, 25.46)



— FLOW, RIVER DISCHARGE - CFS (9275)