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**State of California**  
**Department of Fish and Wildlife**

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

Date: January 13, 2015

To: Kevin Thomas  
Senior Environmental Scientist Supervisor  
Department of Fish and Wildlife

From: Ben Ewing  
District Fisheries Biologist  
Alpine, Amador, Calaveras, and Lake Counties  
Ca. Fish and Wildlife

Cc: Fish Files

Re: 2015 St. Helena Creek Backpack Electrofishing Survey

On January 12, 2015, four California Department of Fish and Wildlife (Department) employees and one public volunteer conducted a backpack electrofishing survey on St. Helena Creek (Lake County). The purpose of the survey was to gather information on the fishery due to planned work in the riparian area by California Department of Transportation (CalTrans). Information collected would be used to inform CalTrans of possible fish species mitigation measures that might be needed due to possible creek disturbance created by the project. A single electrofishing pass was made on an approximately 300 foot stretch of water beginning at 38.68118 N 122.59197 W at 10:35 and ending at 38.68116 N 122.59092 W at 11:05. The location of the survey was at 1,489 feet above mean sea level (Figure 1).

The shoreline of St. Helena Creek, in the survey area, was a mix of chaparral, rocks, and montane hardwood-conifers. The creek bottom appears mostly rock (Figure 2). The estimated depth of the creek where the survey was conducted ranged from approximately six inches to two and a half feet. The creek receives water from rain runoff from the local area where it then flows into Putah Creek. Salmonids, Sacramento sucker (*Catostomus occidentalis*), California roach (*Lavinia symmetricus*), and Sacramento pikeminnow (*Ptychocheilus grandis*) have been documented in the St. Helena Creek (DFG Files).

Table 1 presents the species, number, mean length and weight, and length ranges for species collected from the survey.

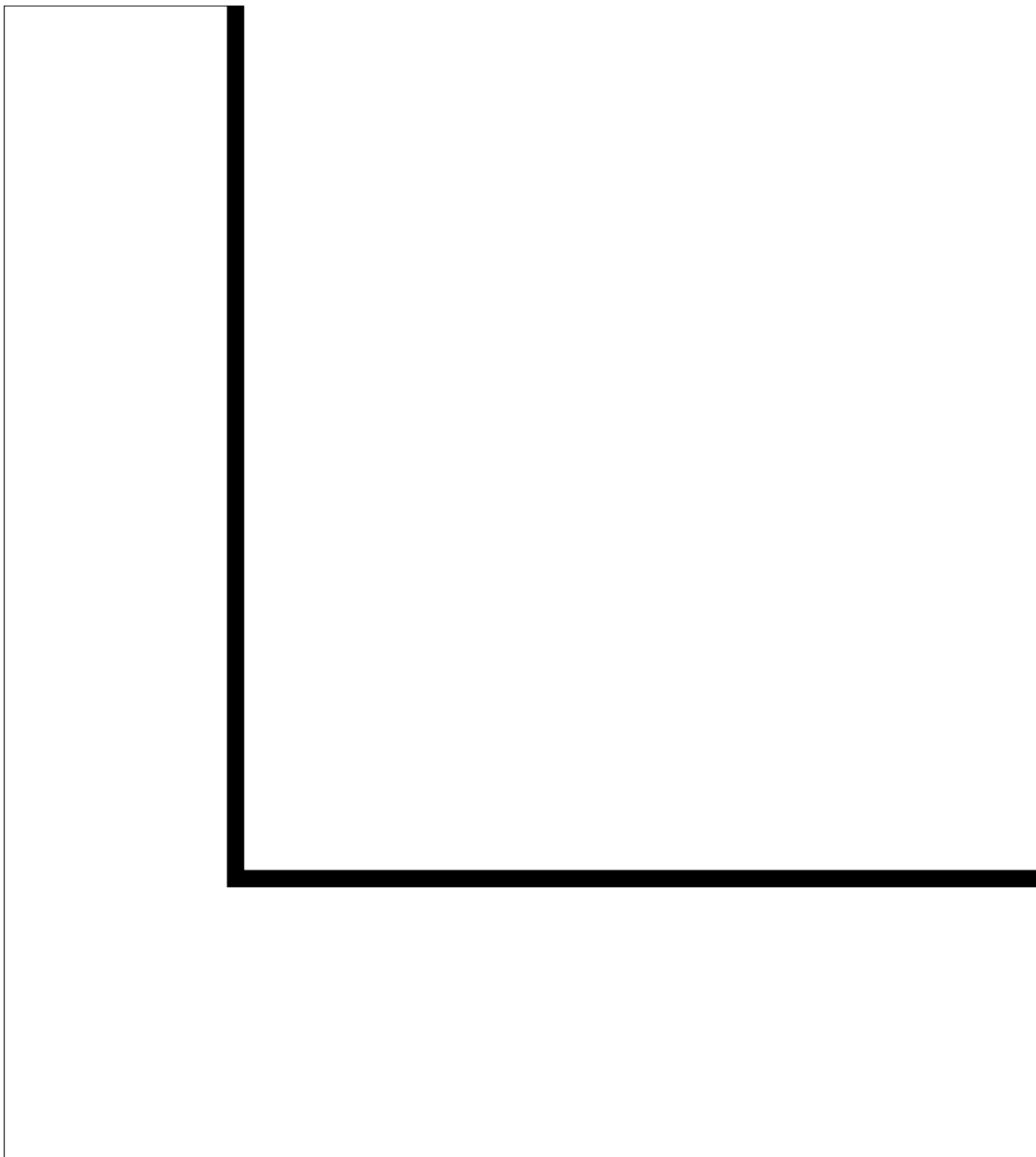




Figure 2. St. Helena Creek (B. Ewing, 1/12/2015)

Table 1. Species composition from St. Helena Creek, January 12, 2014.  
**Mean Total Length (TL) was measured in millimeters (mm). Average Weight was in grams (g)**

	<b>Species</b>	<b>Number</b>	<b>Percent</b>	<b>(TL)</b>	<b>Weight *</b>	<b>Length Ranges</b>
1	Riffle sculpin	18	52.9%	60.7	4.0	46 - 77
2	Rainbow trout	8	23.5%	76.9	4.7	55 - 115
3	California roach	7	20.6%	48.0	2.0	35 - 65
4	Signal crayfish	1	2.9%	NA	NA	NA
	<b>Total</b>	<b>34</b>				

Water Temperature      46° F

\* Average weights were only taken on fish 60 mm and greater in total length

The survey yielded a combined 34 fish and crayfish with four species collected. Riffle sculpin (*Cottus gulosus*) (Figure 3) made up 52.9% of the total catch and was the greatest number of a given species collected. Rainbow trout (*Oncorhynchus mykiss*), California roach (Figure 4), and signal crayfish (*Pacifastacus leniusculus*) made up 23.5%, 20.6% and 2.9% of the remaining catch.



Figure 3. Riffle sculpin collected from St. Helena Creek (Ewing, 1/12/15)



Figure 4. California roach collected from Putah Creek (Ewing, 1/12/15)

A post-project survey could be done by the Department in order to perform a comparison between pre and post project information.

