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State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: June 1, 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 Putah Creek Backpack Electrofishing Survey and Demonstration for Lake County Elementary Schools

On May 20, 2015, three California Department of Fish and Wildlife (Department) employees conducted a backpack electrofishing demonstration on Putah Creek (Lake County). The purpose of the demonstration was to inform elementary students as to how the Department uses electrofishing to gather information on fisheries. Multiple electrofishing passes were made on a 75 foot stretch of water at 38° 45' 33.37 N 122 36' 42.67 W situated at 1,083 feet above mean sea level (Figure 1). These passes were in the same location as the 2013 and 2014 surveys.

The shoreline is a mix of grass, rocks, and oak woodland. The creek bottom appears mostly rock. The estimated depth of the creek where the survey was conducted was six inches to one foot. The creek receives water from rain and snowmelt runoff from the Mayacamas Mountain range where it then flows into Lake Berryessa. Rainbow trout (*Oncorhynchus mykiss*), Sacramento sucker (*Catostomus occidentalis*), riffle sculpin (*Cottus gulosus*), smallmouth bass (*Micropterus dolomieu*), California roach (*Lavinia symmetricus*), green sunfish (*Lepomis cyanellus*), and Sacramento pikeminnow (*Ptychocheilus grandis*) have been documented in the upper part of Putah Creek before it reaches Lake Berryessa (CDFW Files).

Table 1 presents the species, number, mean length and weight, and length ranges for species collected from the 2013, 2014, and 2015 surveys.

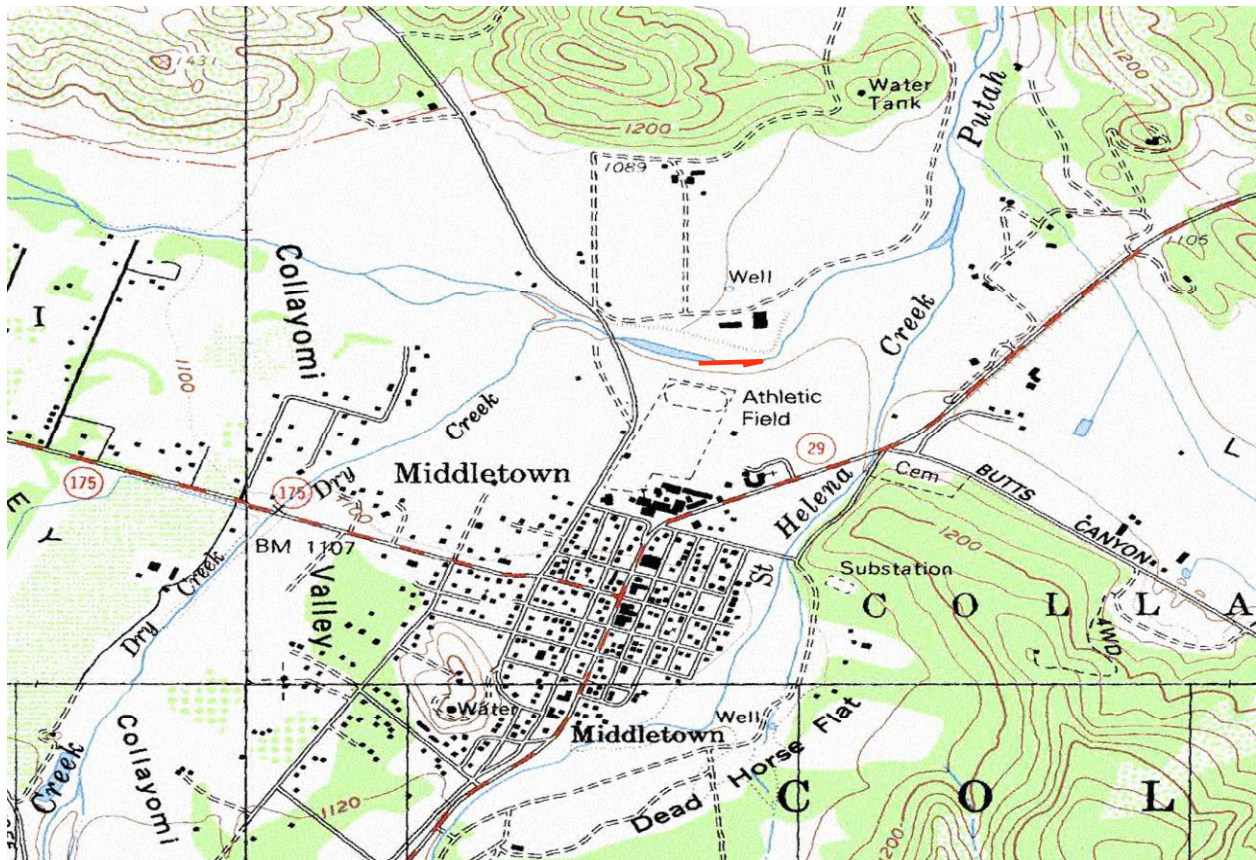


Figure 1. Putah Creek Electrofishing Transect (Lake County, CA).

Table 1. Species composition comparison from Putah Creek E-fishing surveys on May 3, 2013, May 20, 2014, and May 20, 2015.

Mean total length (TL) was measured in millimeters (mm). Average weight was in grams (g)

Species	Number			(TL)			Weight			Length Ranges		
	2015	2014	2013	2015	2014	2013	2015*	2014	2013	2015	2014	2013
California roach	7	NA	NA	64.9	NA	NA	3.3	NA	NA	60 - 72	NA	NA
Rainbow trout	18	22	5	62.2	68.7	70.4	3.5	3.8	4.7	38 - 86	50 - 84	50 - 95
Riffle sculpin	6	3	NA	40.5	54.3	NA	NA	6.7	NA	35 - 51	40 - 83	NA
American bullfrog	NA	NA	3	NA	NA	86.7	NA	NA	12.4	NA	NA	35 - 115
Green sunfish	NA	NA	1	NA	NA	57.0	NA	NA	5.9	NA	NA	NA
Unidentified Sculpin spp.	NA	NA	4	NA	NA	68.5	NA	NA	4.7	NA	NA	60 - 75
Sacramento pikeminnow	1	NA	NA	46	NA	NA	NA	NA	NA	NA	NA	NA
Sacramento sucker	8	3	NA	47.8	35.3	NA	2	NA	NA	31 - 55	30 - 40	NA
Speckled dace	3	NA	NA	44	NA	NA	1	NA	NA	40 - 50	NA	NA

Total

43 28 13

2015 2014 2013

Water Temperature

NA 64° F 66° F

Electrofishing time

19.2 min.

CPUE**

2.24

Weights were only taken on rainbow trout 50 mm and greater, 55 mm and greater for Sacramento sucker, 40 mm and greater for speckled dace, 60 mm and greater for California roach

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More fish were collected but were not identified, measured, or tallied due to time constraints.

The 2015 survey yielded more fish than both the 2013 and 2014 surveys. There was a decrease in rainbow trout (RT) from last year but three species collected this year not seen in prior years were the California roach, speckled dace (*Rhinichthys osculus*), and Sacramento pikeminnow (Figure 2). Rainbow trout were again the most numerous fish for a third straight year, making up 42% of the total catch in 2015. Total lengths, weights, and length ranges were a little lower for RT in 2015 than those collected in 2013 and 2014.



Figure 2. Sacramento pikeminnow collected from Putah Creek (Richardson, 5/20/15).

The Department collected more fish but due to time constraints of the presentation, these fish were released without being measured or identified.

