

Memorandum

Date: January 2, 2026

To: Leslie Call
Sierra District (Fisheries) Supervisor
Department of Fish and Wildlife

From: Ben Ewing
District Fisheries Biologist (Alpine, Amador, Calaveras, and Lake Counties)
Department of Fish and Wildlife

Cc: Region 2 Fish Files

Re: 2025 Putah Creek Backpack Electrofishing Survey and Demonstration for Lake County
Elementary Schools

On April 10, 2025, 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. Additionally, the data collected is used to inform the Department of the relative status of the local fishery on Putah Creek. 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 2013–2018 and 2022–2024 surveys. Surveys were conducted in April or May each year (**Table 1**).

The shoreline is a mix of grass, rocks, and oak woodland. The creek bottom appears to be 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*) (RT), Sacramento Sucker (*Catostomus occidentalis*), Riffle Sculpin (*Cottus gulosus*), Smallmouth Bass (*Micropterus dolomieu*), California Roach (*Lavinia symmetricus*), Green Sunfish (*Lepomis cyanellus*), Bluegill (*Lepomis macrochirus*), Speckled Dace (*Rhinichthys osculus*), and Sacramento Pikeminnow (*Ptychocheilus grandis*) have been documented in the upper part of Putah Creek before it reaches Lake Berryessa (Ewing 2014a, 2014b, 2015, 2016, 2017; Harris 2018).

The species, number, mean length and weight, and length ranges for species collected from the 2013–2025 surveys are presented in Tables 1-5. Due to staffing issues and COVID-19 restrictions, no surveys were done from 2019–2021.

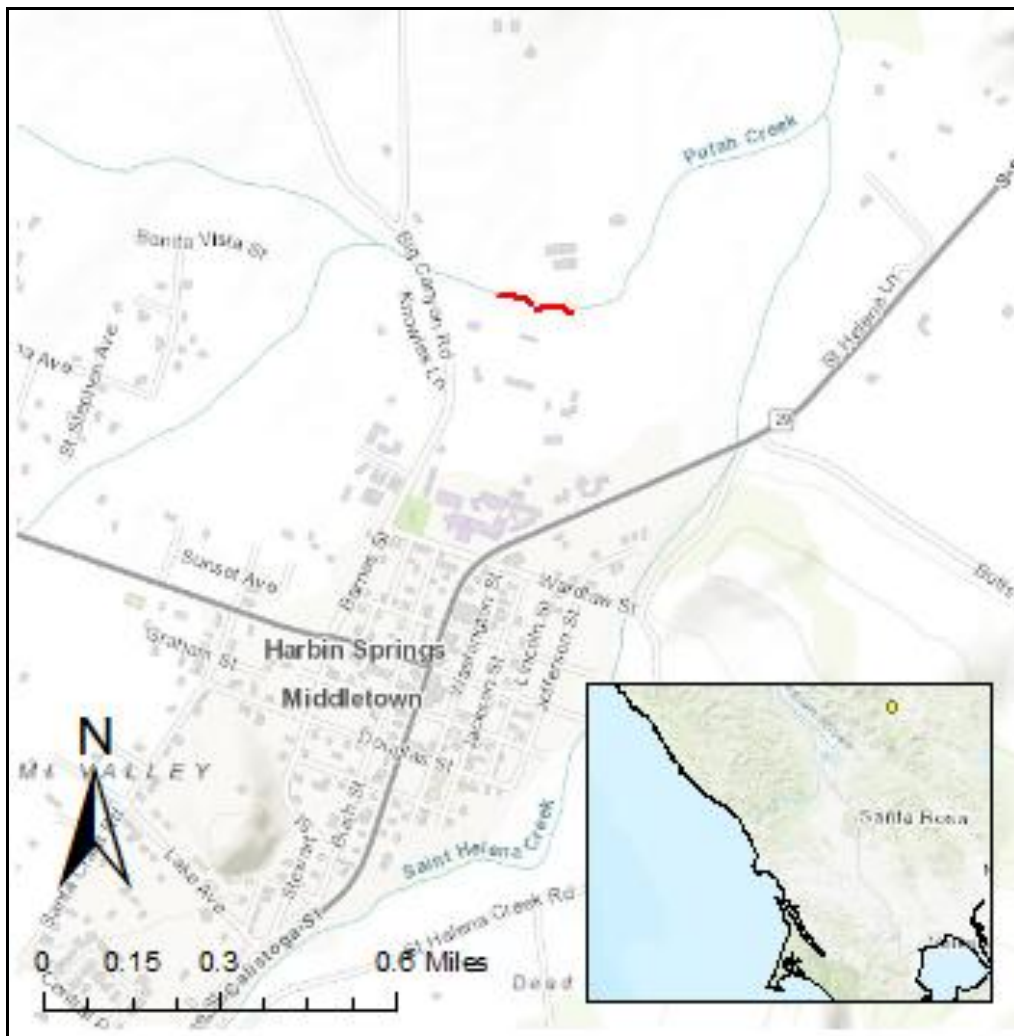


Figure 1. Putah Creek (Lake County) electrofishing location labeled in red. Putah Creek is also indicated by yellow dot on the inset map in relation to Santa Rosa and San Francisco Bay Area.

Table 1. Species composition comparison of fish captured during Putah Creek E-fishing surveys on May 3, 2013, May 20, 2014, May 20, 2015, May 25, 2016, May 24, 2017, May 17, 2018, May 18, 2022, May 25, 2023, April 24, 2024, and April 10, 2025.

Species	Number									
	2025	2024	2023	2022	2018	2017	2016	2015	2014	2013
California Roach	1	8	0	5	4	5	0	7	0	0
Rainbow Trout	2	0	2	20	8	0	11	18	22	5
Riffle Sculpin	8	0	4	0	8	8	0	6	3	0
American Bullfrog	0	0	0	0	0	0	0	0	0	3
Foothill Yellow Legged Frog	0	0	0	0	1	0	0	0	0	0
Green Sunfish	0	0	0	0	0	0	0	0	0	1
Lamprey	0	1	0	0	1	0	0	0	0	0
Sculpin spp.	0	0	0	10	0	0	0	0	0	4
Sacramento Pikeminnow	0	0	0	0	1	0	0	1	0	0
Sacramento Sucker	1	6	3	1	0	12	0	8	3	0
Speckled Dace	0	0	0	0	0	0	11	3	0	0
Hardhead	0	21	0	0	0	0	0	0	0	0
Bluegill	0	0	1	0	0	0	0	0	0	0
Prickly Sculpin	0	3	0	0	0	0	0	0	0	0
Total	12	39	10	36	23	25	22	43	28	13

Table 2. Comparison of mean total length (TL) measured in millimeters (mm) by species captured during Putah Creek Electrofishing surveys on May 3, 2013, May 20, 2014, May 20, 2015, May 25, 2016, May 24, 2017, May 17, 2018, May 18, 2022, May 25, 2023, April 24, 2024, and April 10, 2025.

Species	Total Length									
	2025	2024	2023	2022	2018	2017	2016	2015	2014	2013
California Roach	50.0	40.4	NA	62.4	60	57.2	NA	64.9	NA	NA
Rainbow Trout	41.0	NA	86.0	64.0	54	NA	71.5	62.2	68.7	70.4
Riffle Sculpin	61.0	NA	70.0	NA	63.8	78	NA	40.5	54.3	NA
American Bullfrog	NA	NA	NA	NA	NA	NA	NA	NA	NA	86.7
Foothill Yellow Legged Frog	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Green Sunfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	57.0
Lamprey	NA	1	NA	NA	NA	NA	NA	NA	NA	NA
Sculpin spp.	NA	NA	NA	37.6	NA	NA	NA	NA	NA	68.5
Sacramento Pikeminnow	NA	NA	NA	NA	90	NA	NA	46.0	NA	NA
Sacramento Sucker	90.0	86.7	100.0	NA	NA	59.5	NA	47.8	35.3	NA
Speckled Dace	NA	NA	NA	NA	NA	NA	45.9	44.0	NA	NA
Hardhead	NA	61.4	NA	NA	NA	NA	NA	NA	NA	NA
Bluegill	NA	NA	68.0	NA	NA	NA	NA	NA	NA	NA
Prickly Sculpin	NA	56.3	68.0	NA	NA	NA	NA	NA	NA	NA

Table 3. Comparison of average weight in grams (g) by species captured during Putah Creek Electrofishing surveys on May 3, 2013, May 20, 2014, May 20, 2015, May 25, 2016, May 24, 2017, May 17, 2018, May 18, 2022, May 24, 2023, April 24, 2024, and April 10, 2025.

Species	Weight								
	2025	2024	2023	2022	2018	2016*	2015*	2014	2013
California Roach	1.0	2.0	NA	3.2	2.3	NA	3.3	NA	NA
Rainbow Trout	NA	NA	6.0	2.7	2.7	3.9	3.5	3.8	4.7
Riffle Sculpin	4.0	NA	6.8	NA	5.4	NA	NA	6.7	NA
American Bullfrog	NA	NA	NA	NA	NA	NA	NA	NA	12.4
Foothill Yellow Legged Frog	NA	NA	NA	NA	NA	NA	NA	NA	NA
Green Sunfish	NA	NA	NA	NA	NA	NA	NA	NA	5.9
Lamprey	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpin spp.	NA	NA	NA	1.0	NA	NA	NA	NA	4.7
Sacramento Pikeminnow	NA	NA	NA	NA	6	NA	NA	NA	NA
Sacramento Sucker	8.0	8.3	36.5	NA	NA	NA	2.0	NA	NA
Speckled Dace	NA	NA	NA	NA	NA	2.4	1.0	NA	NA
Hardhead	NA	2.3	NA	NA	NA	NA	NA	NA	NA
Bluegill	NA	NA	2.0	NA	NA	NA	NA	NA	NA
Prickly Sculpin	NA	3.3	NA	NA	NA	NA	NA	NA	NA

*No weights were taken in 2017 due to scale issues.

*Weights were only taken on Rainbow Trout 50 mm and greater, Sacramento Sucker 55 mm and greater, Speckled Dace 40 mm and greater, and California Roach 60 mm and greater.

Table 4. Comparison of mean total length (TL) ranges measured in millimeters (mm) by species captured during Putah Creek Electrofishing surveys on May 3, 2013, May 20, 2014, May 20, 2015, May 25, 2016, May 24, 2017, May 17, 2018, May 18, 2022, May 24, 2023, April 24, 2024, and April 10, 2025.

Species	Length Ranges									
	2025	2024	2023	2022	2018	2017	2016	2015	2014	2013
California Roach	NA	32-53	NA	55-70	55-75	38-64	NA	60 - 72	NA	NA
Rainbow Trout	37-45	NA	85-87	55-80	40-82	NA	60-83	38-86	50-84	50-95
Riffle Sculpin	50-70	NA	60-79	NA	50-87	70-89	NA	35-51	40-83	NA
American Bullfrog	NA	NA	NA	NA	NA	NA	NA	NA	NA	35-115
Foothill Yellow Legged Frog	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Green Sunfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lamprey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpin spp.	NA	NA	NA	32-42	NA	NA	NA	NA	NA	60-75
Sacramento Pikeminnow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sacramento Sucker	NA	75-95	40-165	NA	NA	25- 121	NA	31-55	30-40	NA
Speckled Dace	NA	NA	NA	NA	NA	NA	24-70	40-50	NA	NA
Hardhead	NA	52-75	NA	NA	NA	NA	NA	NA	NA	NA
Prickly Sculpin	NA	52-62	NA	NA	NA	NA	NA	NA	NA	NA

The 2025 survey yielded the second least total number of fish in the 10 years the surveys have been conducted. It is possible that the high flows at the time of the survey forced a lot of fish to travel further downstream. Additionally, the depth of one of the regularly surveyed pools was too deep to safely shock, possibly limiting the amount of fish collected. Despite the absence of many previously collected species, there were four different species collected. The demonstration surveys continue to go well, and the educational tool it provides continues to be the priority. The feedback from the involved students and teachers is positive, including receiving thank you cards. In addition to educating the local community by observing the study, the continued sampling of this area at the same time of year is an added bonus which gathers further information on the Putah Creek fishery. The information gathered will allow the Department to monitor any possible changes to the fishery resulting from the 2015 fire, the record rainfall in late 2022-early spring 2023, and other water-year variations.

Literature Cited

Ewing, B. 2014a. 2013 Putah Creek Backpack Electrofishing Survey and Demonstration for Lake County Elementary Schools. California Fish and Wildlife Region 2 Fish Files. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=78560>

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