

Memorandum

Date: 7/29/2020

To: Sarah Mussulman
Senior Environmental Scientist, Supervisor
Department of Fish and Wildlife

From: Ben Ewing
District Fishery Biologist (Alpine, Amador, Calaveras, and Lake Counties)

Subject: **Granite Lake (14633) Fish and Amphibian Survey**

On July 8, 2020, California Department of Fish and Wildlife (Department) completed a fish and frog evaluation at Granite Lake (Granite). The purpose of the surveys was to determine if there were any trout inhabiting the lake from prior stockings, determine if any Sierra Nevada Mountain Yellow-Legged Frog (SNYLF, *Rana sierra*) were present, and to assess if the lake could be added to the Department fish stocking list.

Granite is a small, 5 acre lake in Amador County located at 38.650104 N, 120.109849 W situated at 7,607 feet above mean sea level (**Figure 1**). The shoreline is a mix of bedrock, sand, and conifer forest (**Figures 2 and 3**). The lake bottom appears mostly sand and various sized rock substrate. At the time of the survey Granite appeared to be full, with a small amount of outflow present (**Figures 4 and 5**). When Granite spills, water drains into the South Fork American River watershed. Granite receives water from rain and snowmelt runoff from the immediate area. Granite has historically received fingerling-size stockings of Brook Trout (*Salvelinus fontinalis*) and Rainbow Trout (*Oncorhynchus mykiss*) with the last recorded allotment of Brook Trout in 2000.

A 120 foot long variable mesh size gillnet was set at 10:15 on July 8, on the southern part of the lake's shoreline extending towards the middle of the lake (**Figure 3**). Water temperature was 68°F at 10:39. The gillnet was pulled at 16:11 on July 8. No fish were collected in the net.



Figure 1. Granite Lake in relation to Silver Lake and California. Gillnet placement in Granite Lake on July 8, 2020 indicated in red.



Figure 2. Granite Lake shoreline facing east on 7/8/2020. (Photo by B. Ewing)



Figure 3. Granite Lake gillnet set facing northeast on 7/8/2020. (Photo by B. Ewing)



Figure 4. Granite Lake outlet looking downstream on 7/8/2020. (Photo by B. Ewing)



Figure 5. Granite Lake outlet looking downstream on 7/8/2020. (Photo by B. Ewing)

Department personnel conducted the Fellers and Freel (1995) Visual Encounter Survey (VES) Protocol as modified by the Department to conduct the amphibian survey at Granite. The VES began at 10:51 and ended at 12:08 on July 8, where the entire lake shoreline was surveyed. Twenty-four SNYLF tadpoles and one Mountain Garter Snake (*Thamnophis elegans elegans*) were observed during the survey (**Figures 6, 7, and 8**). On July 27, 2013, Sonoma County Water Agency observed SNYLF at Granite (CNDDDB 2020). On August 17, 2016, Department staff observed SNYLF at Granite (California Fish and Wildlife Region 2 High Mountain Lakes Database).

Based on the results of the evaluations completed, a pre-stocking evaluation will not be written to add Granite Lake to the Department fish stocking list.



Figure 6. Sierra Nevada Yellow-Legged Frog tadpole observed during V.E.S. at Granite Lake, Amador County on 7/8/2020. (Photo by B. Ewing).



Figure 7. Sierra Nevada Yellow-Legged Frog tadpoles observed during V.E.S. at Granite Lake, Amador County on 7/8/2020. (Photo by B. Ewing).



Figure 8. Mountain Garter Snake observed during V.E.S. at Granite Lake, Amador County on 7/8/2020. (Photo by B. Ewing).

Literature Cited:

1. California Department of Fish and Wildlife, High Mountain Lakes Database, July 29, 2020. Accessed by B. Ewing, CDFW.
2. California Natural Diversity Database. 2020.

3. Fellers, G. M. and K. L. Freel. 1995. A standardized protocol for surveying aquatic amphibians. National Biological Service Cooperative Park Studies Unit, University of California Division of Environmental Studies, Davis, CA. Technical Report No. NPS/WRUC/NRTR95-01 (UC CPSU TR # 58).

