

Memorandum

Date: 9/15/2021

To: Sarah Mussulman
Senior Fisheries Supervisor, Region 2 Sierra District
Department of Fish and Wildlife

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

Subject: **2021 Heenan Lake (2593) Amphibian Survey**

On July 9, 2021, California Department of Fish and Wildlife (Department) completed an amphibian survey at Heenan Lake. The purpose of the survey was to determine if any Sierra Nevada Mountain Yellow-Legged Frog (*Rana sierra*) were present, and to assess if the Heenan Lake pre-stocking evaluation (PSE) could be re-approved.

Heenan Lake is a 129-surface acre lake in Alpine County located at 38.651549 N, 119.658693 W situated at 7,100 feet above mean sea level. Heenan Lake is a Department designated wildlife area in which the land and water rights belong to the state of California. Heenan Lake is used as the broodstock source for the state's Lahontan Cutthroat Trout (*Oncorhynchus clarkii henshawi*, LCT) stocking program. The shoreline is a mix of rocks, sand, willows, and conifer forest (**Figures 1 and 2**). The lake bottom appears mostly mud and various sized rock substrate (**Figure 3**). When Heenan Lake spills, water drains into Monitor Creek and eventually into the East Carson River. Heenan Lake receives snow and rain runoff from the immediate area and Heenan Creek. Heenan Lake has historically had stockings of LCT and Paiute Cutthroat Trout (*Oncorhynchus clarkii seleniris*) with the last recorded stocking of LCT in 2021.



Figure 1. Heenan Lake's southern shoreline looking north on July 9, 2021 (Photo by B. Ewing).



Figure 2. Heenan Lake's northern shoreline looking south on July 9, 2021 (Photo by B. Ewing).



Figure 3. A section of Heenan Lake's shoreline on July 9, 2021 (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 Heenan Lake. The VES began at 10:03 and ended at 12:18 on July 9 where the majority of Heenan Lake's shoreline was surveyed. Four Mountain Garter Snakes (*Thamno elegans elegans*) were observed (**Figure 4**). In 2004 during a High Mountain Lakes survey at Heenan Lake, Mountain Garter Snakes were observed (CDFW HML Database 2021). No Sierra Nevada Yellow-Legged Frog have been documented at Heenan Lake according to the California Natural Diversity Database (CNDDDB 2021). Based on the results of the evaluation completed, Heenan Lake is still appropriate for fish stocking. These data will be used to create a new PSE.



Figure 4. Mountain Garter Snake observed at Heenan Lake on July 9, 2021 (Photo by B. Ewing).

Literature Cited:

1. California Department of Fish and Wildlife, High Mountain Lakes Database. September 14, 2021. Accessed by B. Ewing.
2. California Natural Diversity Database. September 14, 2021. Accessed by B. Ewing, CDFW.
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).