

Memorandum

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From: Isaac Chellman
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Cc: Region 2 Fish Files

Subject: Fisheries monitoring in Placer County – Needle Lake (13616).

On August 10–11, 2016, California Department of Fish and Wildlife (CDFW) conducted fisheries monitoring surveys at Needle Lake (CA Lakes ID 13616, Figure 1) in Placer County. One gill net was set for 14 hours and returned 17 brook trout (*Salvelinus fontinalis*). Due to the number of brook trout captured, CDFW will not resume plants at the lake and will manage Needle Lake as a self-sustaining brook trout fishery.



Figure 1: Needle Lake, looking northwest, on 8/10/2016 (CDFW).

INTRODUCTION

Needle Lake is a small lake located directly below Needle Peak in Placer County (Figure 2). CDFW planted Needle Lake with fingerling brook trout between 1951 and 1966. Later, between 1968 and 1997, CDFW planted Needle Lake with golden trout (*Oncorhynchus mykiss aguabonita*). CDFW detected fish that were assumed to be golden trout in the lake during a visual fishery survey in 2003. However, the species identification was not definitive, and because trout planting occurred until 1997, an additional survey was necessary to determine the status of the fishery.

As directed by the Hatchery Operations EIS/EIR (Jones and Stokes 2010), CDFW is currently evaluating the location and status of stocked and formerly stocked backcountry fisheries. All data gathered as part of this study will be incorporated into the High Mountain Lakes database and made available to both federal and state agencies. Data from this memorandum will benefit CDFW in future efforts for fish stocking and wild trout management in the North Central Region.

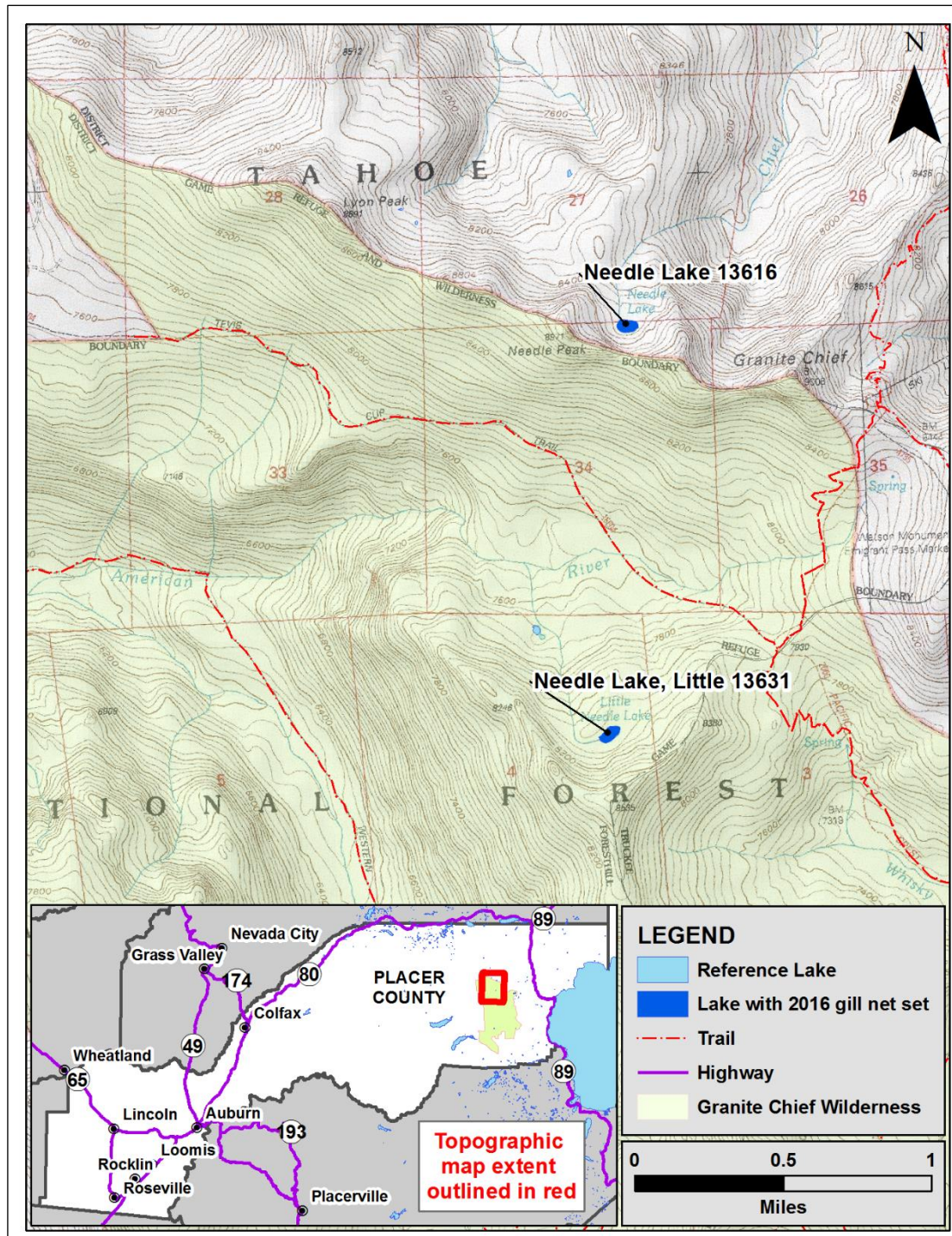


Figure 2: Location of the survey area in eastern Placer County, CA. Needle Lake was surveyed on August 10–11, 2016.

ENVIRONMENTAL SETTING

Needle Lake has a surface area of 0.64 hectares and a maximum recorded depth of 5.6 meters. Littoral zone habitat consists primarily of silt, woody debris, sand, and gravel. Terrestrial habitat consists of mixed conifer forest, meadows, and rocky cliffs at an elevation of approximately 2600 meters above mean sea level (Figure 3).

Access to Needle Lake is via an off-trail hike along the ridgeline between Granite Chief and Needle Peaks. Access to the off-trail section is provided by the Five Lakes trailhead, which is located off Alpine Meadows Road, just south of Squaw Valley Ski Resort. The Five Lakes Trail connects to the Pacific Crest Trail, which leads north to the Granite Chief ridgeline. Needle Lake sits in a small, north-facing cirque just north of the Granite Chief Wilderness boundary. Needle Lake has no perennial inlet, but the lake does have one outlet stream, which forms the headwaters of Chief Creek. The watershed drains into the North Fork American River. Tahoe National Forest manages the land in the watershed.

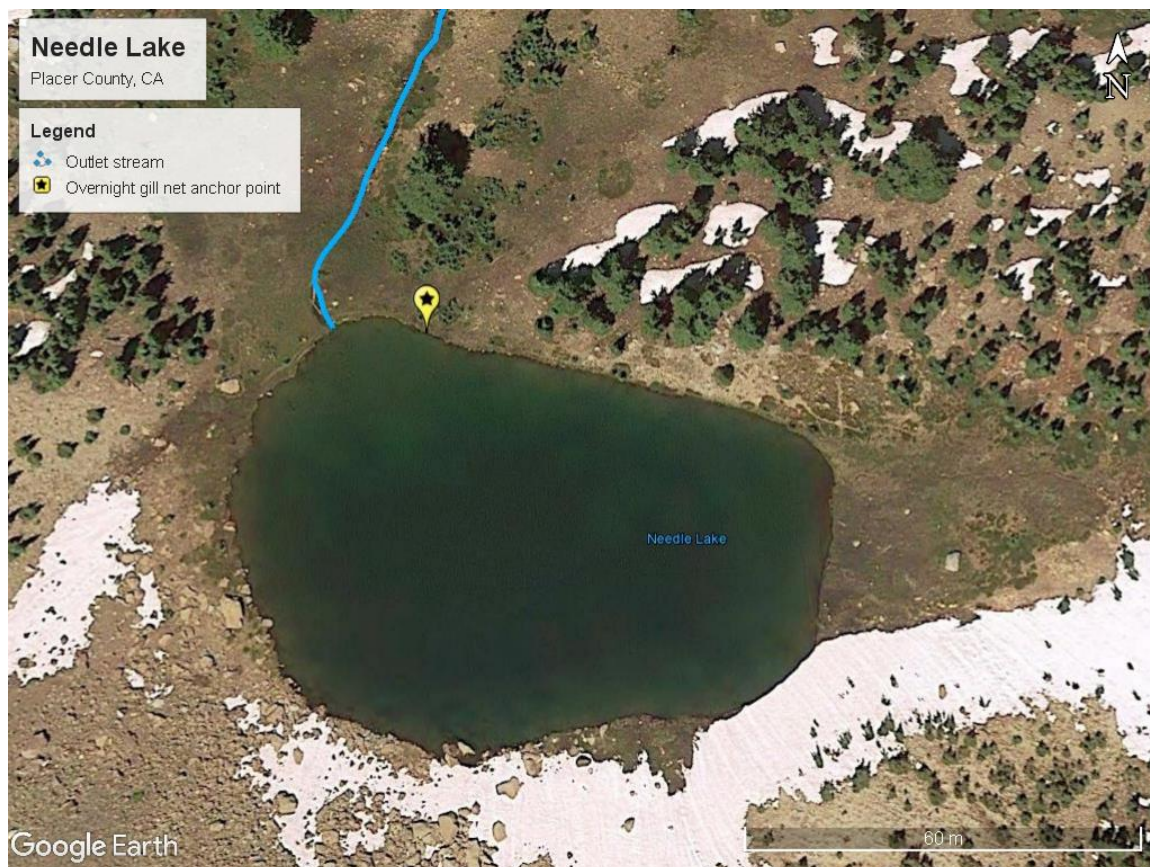


Figure 3. Aerial image of Needle Lake from July 2016. The gill net was set near the outlet (anchor point at the yellow icon).

RESULTS

On August 10, 2016, one standard, variable mesh sinking gill net was set for a total of 14 hours and returned 17 brook trout (Figure 4). Based on the number and size classes of trout captured during the 2016 survey (Figure 5), CDFW expects that brook trout will persist in the lake; therefore, fish plants at Needle Lake will not resume, and CDFW will manage the lake as a self-sustaining brook trout fishery.



Figure 4: Brook trout captured during an overnight gill net set at Needle Lake, Placer County, CA on August 10–11, 2016.

Incidentally, CDFW conducted a visual encounter survey for herpetofauna on August 10, 2016, and did not observe any amphibians.

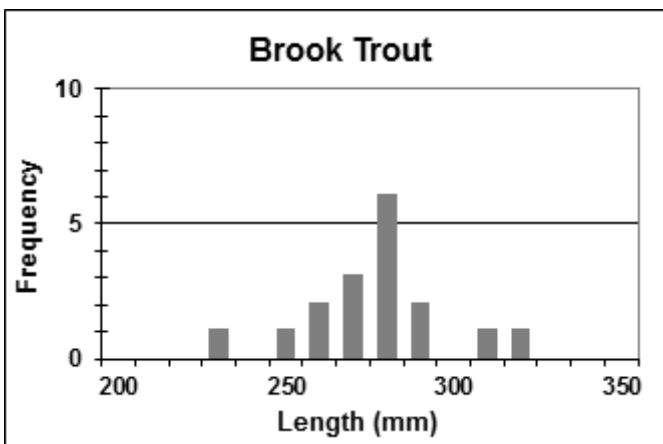


Figure 5: Brook trout histogram from August 10–11, 2016 gill net survey at Needle Lake, Placer County, CA.

LITERATURE CITED:

Jones & Stokes. 2010. Hatchery and Stocking Program Environmental Impact Report/Environmental Impact Statement. State clearinghouse #2008082025.