

# Memorandum

**Date:** 11/23/2015

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**Cc:** Region 2 Fish Files

**Subject: Fisheries monitoring in Alpine County – Emigrant Lake (14604).**

On July 2-3, 2014, California Department of Fish and Wildlife (CDFW) conducted fisheries monitoring surveys at Emigrant Lake (CA Lakes ID 14604, Figure 1) in Alpine County. One overnight gill net set for 10.5 hours returned 44 brook trout (*Salvelinus fontinalis*). Due to the numbers of brook trout captured CDFW will not resume plants at the lake and will manage Emigrant Lake as a self-sustaining brook trout fishery.



Figure 1: Emigrant Lake looking north on 7/3/2014 (CDFW).

## INTRODUCTION

Emigrant Lake is a relatively large isolated lake in a small watershed in western Alpine County formerly planted with fingerling trout by CDFW (Figure 2). A 2003 CDFW fishery survey suggested brook trout might persist at Emigrant Lake but brook trout were consistently planted through 2000 and 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 is 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.

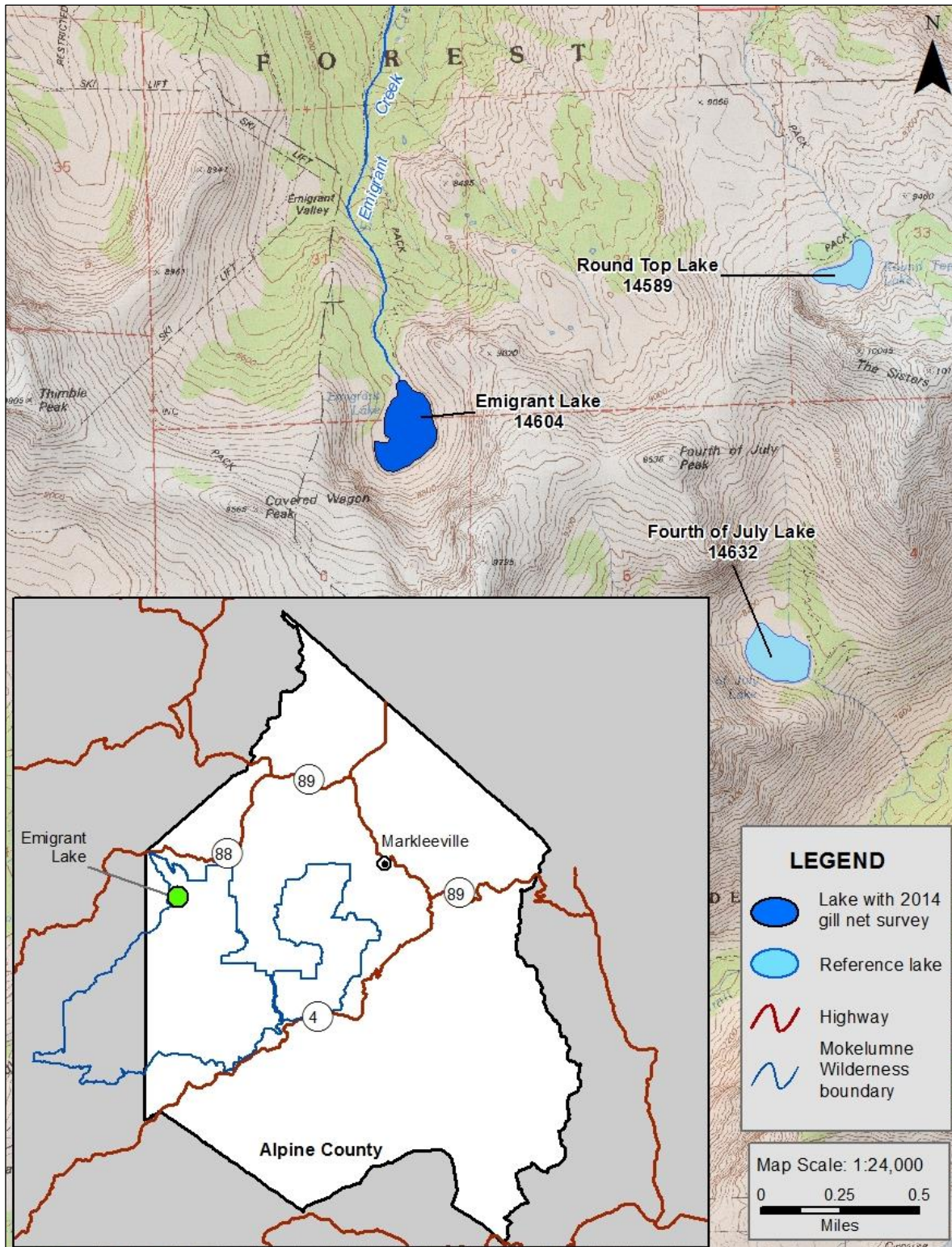


Figure 2: Location of the survey area in western Alpine County. Emigrant Lake was surveyed on July 2-3, 2014.

## ENVIRONMENTAL SETTING

Emigrant Lake has a surface area of 9.25 hectares and a maximum recorded depth of 8.3 meters. Littoral zone habitat consists primarily of boulders, bedrock and gravel. Terrestrial habitat consists of mixed conifer forest, meadows and rocky cliffs at an elevation of approximately 2620 meters above mean sea level. Surveyors observed brook trout of all sizes in the outlet stream and a number of small inlets entering the lake from steep meadow terrain on the western shore.

Access to Emigrant Lake is via a four mile hike along a well maintained trail from Caples Reservoir on state Highway 88. A number of campsites and fire rings are present along the south shore and multiple parties of anglers were observed by CDFW crews during the 2014 survey. The watershed drains into Caples Lake and eventually into the Silver Fork American River. Emigrant Lake is within the Mokelumne Wilderness and Eldorado National Forest manages the land in the watershed.

## RESULTS

On July 2-3, 2014 one standard variable mesh sinking gill net set overnight for a total of 10.5 hours returned 44 brook trout (Figure 3). A gill net fishery survey in 2003 suggested brook trout might persist at the lake (Figure 4) but brook trout were planted from 1930 through 2000 and an additional survey was needed to confirm the status of the fishery. Rainbow trout (*Onchorynchus mykiss*) plants occurred in from 1932 through 1947. Based on the number and size classes of brook trout captured during the 2014 survey CDFW believes brook trout will persist at the lake; therefore, fish plants at Emigrant Lake will not be resumed and the lake will be managed as a self-sustaining brook trout fishery.

Incidentally, CDFW conducted amphibian surveys on July 3, 2014 and observed 500 larval tree frogs (*Pseudacris regilla*, *Hyla regilla*) in fringing habitat and tributaries.

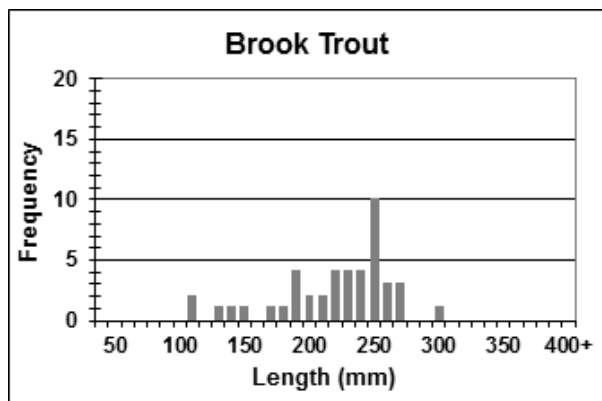


Figure 3: Brook trout histogram from July 2-3, 2014 gill net survey at Emigrant Lake.

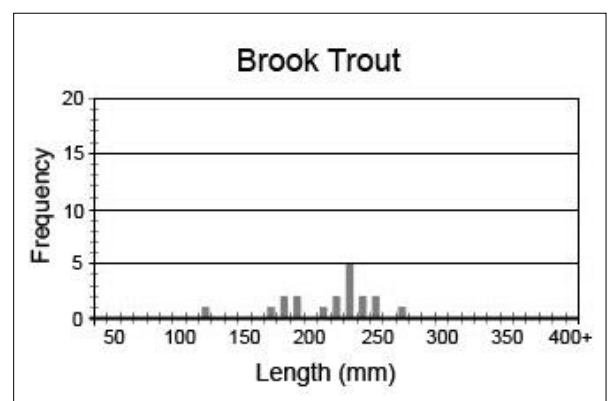


Figure 4: Brook trout histogram from July 29, 2003 gill net survey at Emigrant Lake.

## LITERATURE CITED:

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