

## Memorandum

**Date:** 2/6/2015

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**Cc:** Region 2 Fish Files

**Subject: Fisheries monitoring in El Dorado County – Sixteen Shot Lake (13818).**

On July 8, 2014, California Department of Fish and Wildlife (CDFW) conducted fisheries and amphibian monitoring surveys at Sixteen Shot Lake (CA Lakes ID 13818, Fig. 1) in the Desolation Wilderness. Two gill nets were set for a combined total of 8.5 hours and returned no fish. Accessing the lake requires cross-country travel and it is small and partially filled with lily pads, therefore CDFW will not resume fish plants at Sixteen Shot Lake.



Figure 1: Sixteen Shot Lake looking southwest on July 8, 2014 (CDFW).

### INTRODUCTION

Sixteen Shot Lake was identified as a fishless lake in the *Aquatic Biodiversity Management Plan for the Desolation Wilderness* (CDFW 2012). However, the lake was planted with fish through 2000 and a visual survey conducted in 2004 was insufficient to determine the fishery status due to the size and depth of the lake. Sixteen Shot Lake is one of seven currently or formerly stocked lakes east of Loon Lake on the northern edge of the Desolation Wilderness with uncertain fish status (Fig. 2). Lake Winifred, Sixteen Shot and Schuler Lakes were surveyed in 2014; Spider, Buck Island, Fawn and Rockbound will be surveyed as funding and workloads permit. 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 the Department in future efforts for fish stocking and wild trout management in the North Central Region.

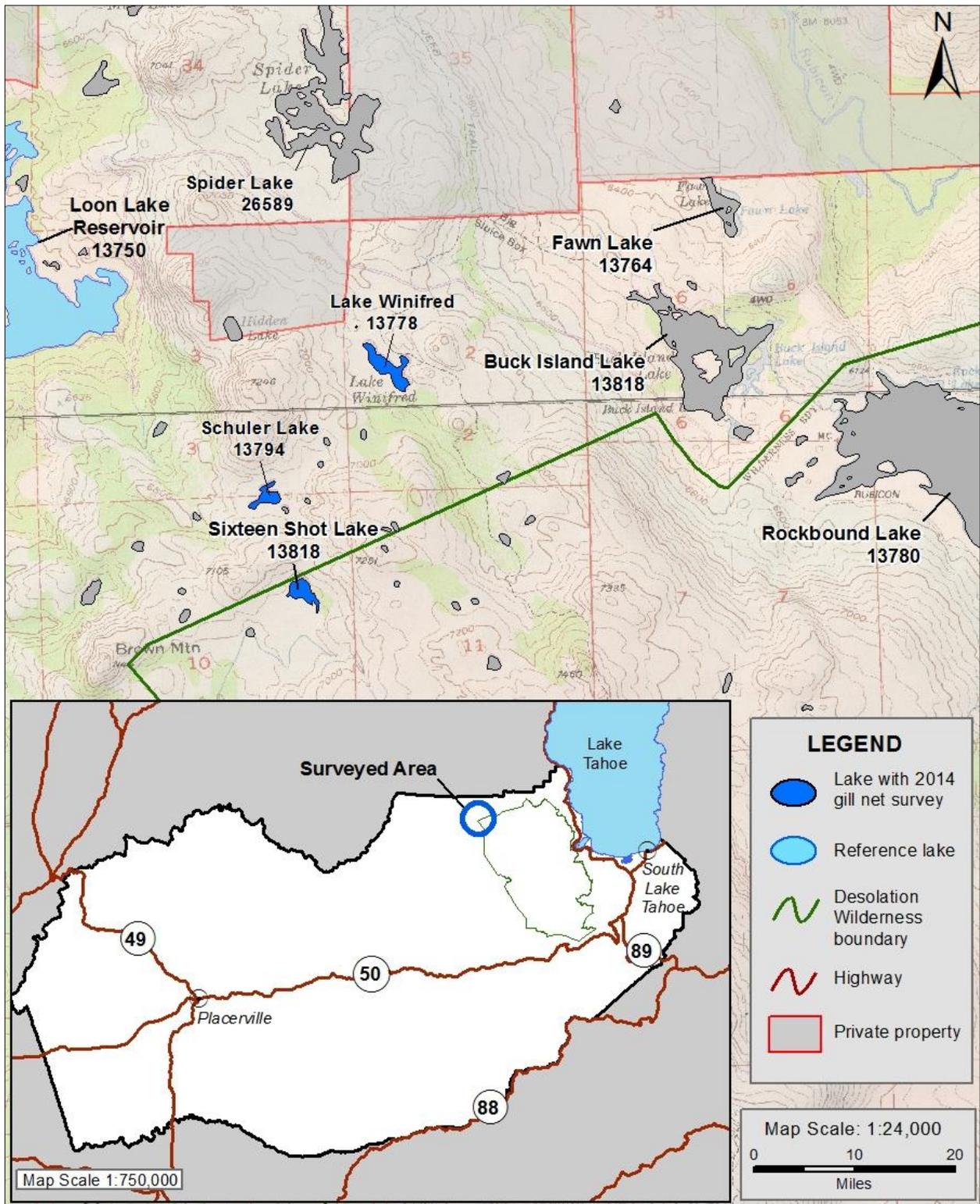


Figure 2: Location of the survey area in northeastern El Dorado County. Dark blue lakes had gill net surveys in 2014.

## ENVIRONMENTAL SETTING

Sixteen Shot Lake has a surface area of 1.19 hectares and a maximum recorded depth of 6.8 meters. Lily pads are present around the edges of the lake and littoral habitat consists of primarily of silt and woody debris with small amounts of cobbles, boulders and bedrock. Surveyors did not observe any tributaries. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 2160 meters above mean sea level. Access to Sixteen Shot Lake is via well-maintained dirt roads and at least a five mile hike; accessing the lake requires some cross-country hiking. The watershed drains into the Rubicon River and eventually into the Middle Fork American River. Eldorado National Forest manages the land in the watershed.

## RESULTS

On July 8, 2014 two CDFW gill nets were set for a combined total of 8.5 hours and captured no fish; due to the gill net survey results, CDFW believes the lake is fishless. Sixteen Shot Lake was planted with brook trout (*Salvelinus fontinalis*) between 1957 and 2000. No fish were observed during a 2004 visual fish survey, but due to the size and depth of the lake uncertainty remained about the presence of fish. Due to the shallow character of the lake and its relative remoteness, planting will not be resumed at Sixteen Shot Lake and CDFW will not actively manage the lake.

Incidentally, CDFW conducted amphibian monitoring surveys at Sixteen Shot Lake on July 8, 2014 and observed 3 garter snakes (*Thamnophis spp*). Water temperature at the surface of the lake was 20° C at the time of survey.

## LITERATURE CITED:

CDFW, 2012. *Aquatic Biodiversity Management Plan for the Desolation Wilderness*. California Department of Fish and Wildlife; 12/19/2012. Available from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=59961>

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