

Memorandum

Date: 7/27/2016

To: Kevin Thomas
Environmental Program Manager, Fisheries
North Central Region

From: Sarah Mussulman
Environmental Scientist – High Mountain Lakes
North Central Region

Cc: Region 2 Fish Files

Subject: Fisheries monitoring in Placer County – Lower Loch Leven Lake (13534).

On June 7-8, 2016, California Department of Fish and Wildlife (CDFW) conducted fisheries and amphibian monitoring surveys at Lower Loch Leven Lake (CA Lakes ID 13534, Fig. 1) in northeastern Placer County. Two overnight gill nets were set for a combined total of 46.7 hours and returned no fish. The lake has a long history as a popular backcountry trout fishery and based on the data gathered in 2016, CDFW will consider resuming rainbow trout plants at the lake.



Figure 1: Lower Loch Leven Lake looking north on July 7, 2016 (CDFW).

INTRODUCTION

Lower Loch Leven Lake is one of four associated lakes formerly planted with fingerling trout by CDFW in a small watershed in northern Placer County (Fig. 2). Due to lack of recent fish surveys uncertainty exists about the status of fisheries at High, Upper and Lower Loch Leven Lakes. 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 are 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. Lower Loch Leven Lake is addressed in this memo: the other lakes in the watershed will be addressed in separate memos.

ENVIRONMENTAL SETTING

Lower Loch Leven Lake has a surface area of 4.6 hectares and a maximum recorded depth of 5.1 meters. Surveyors observed two channelized inlets and a small dam at the outlet. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 2060 meters above mean sea level. The Loch Leven Lakes are easily accessed from a popular trailhead next to Interstate 80 and a well-maintained hiking trail. Incidentally, crews observed multiple groups of visitors at the lake on both days and many campsites are present around the lake. The watershed drains into the North Fork American River via Little Granite Creek. Tahoe National Forest manages the land in the watershed.

HISTORY

Due to their location near Interstate 80 Loch Leven Lakes have a documented history of management for trout fishing dating back to the 1930s. General fish surveys conducted in 1938 indicate species present at that time included brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*) and chub (probably *Gila bicolor*) (Curtis, 1938). Between 1930 and 1967 multiple attempts were made to remove chub from the lakes including an unsuccessful attempt to remove fish with dynamite in 1936; however a general fish survey in 1982 captured no chub and chub appear to have been eradicated from the system (Curtis, 1938 and Richard, 1982). At various times throughout the last century the lakes were known for their trout fishing, although as early as 1954 biologists noted that most likely trout are unable to reproduce in the system (Curtis, 1938; Richard, 1954 and 1982).

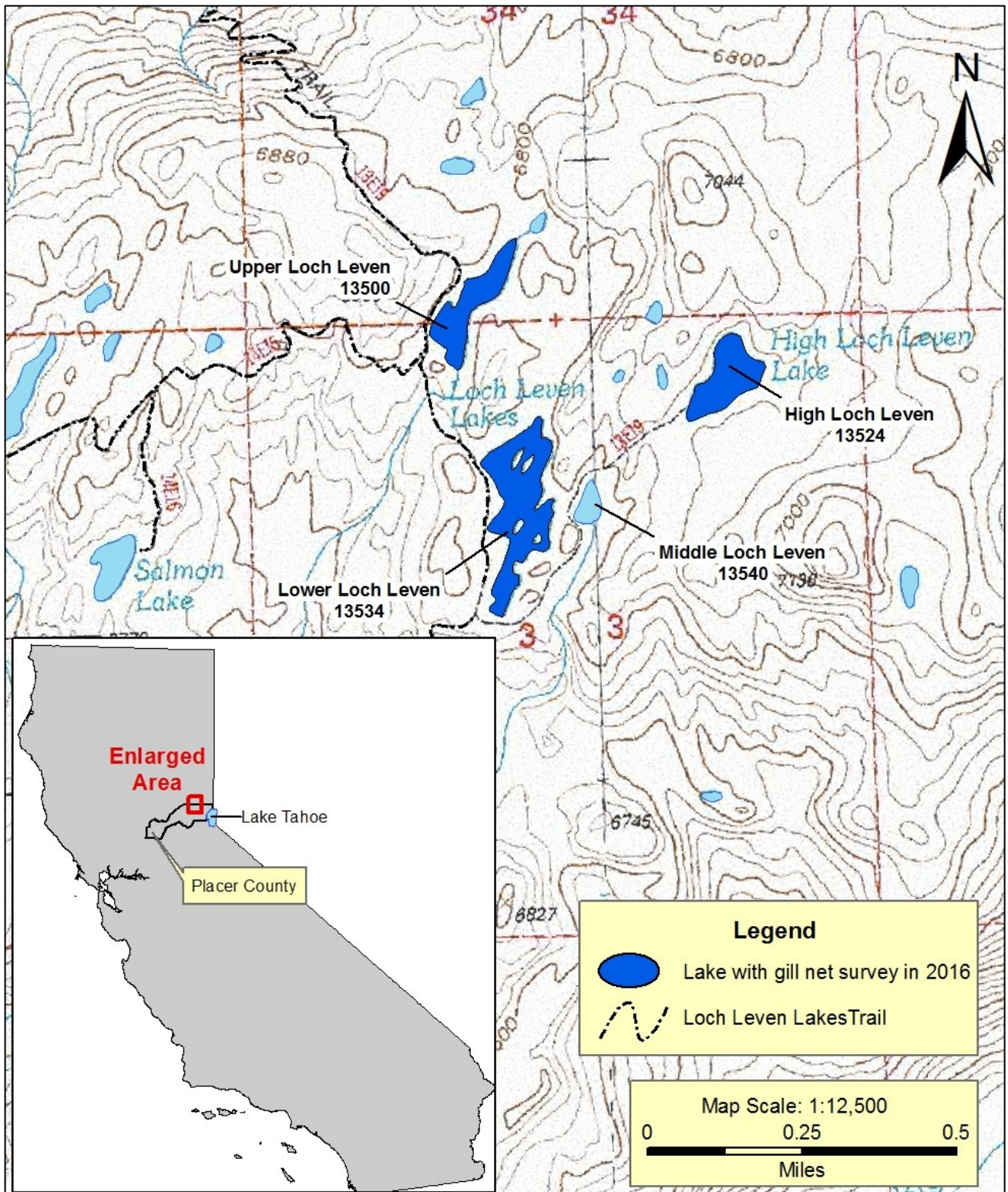


Figure 2: Location of the survey area in northeastern Placer County. Dark blue lakes had gill net surveys in 2016.

RESULTS

On June 7-8, 2016 two 6-panel, 36-meter x 1.8 meter variable mesh gill nets were set overnight for a combined total of 46.7 hours and returned no fish; due to the gill net survey results, CDFW believes the lake is fishless. Most recently, Lower Loch Leven Lake was planted with brook trout in 1998 and 2000; brook trout plants also occurred between 1938 and 1973. Rainbow trout (*Onchorynchus mykiss*) were regularly planted from 1966 through 1997. A single rainbow trout was captured during a 2003 gill net survey in which one net was set for 12 hours. Because no fish were captured in 2016 it is unlikely that trout can reproduce in Lower Loch Leven and due to the lake's history as a popular backcountry trout fishery as well as the lack of special status amphibians, CDFW will consider resuming rainbow trout plants at Lower Loch Leven.

Incidentally, CDFW conducted amphibian monitoring surveys at Lower Loch Leven Lake on June 7, 2016 and observed 22 Pacific tree frog (*Psuedacris regilla*) egg masses and 3 garter snakes (*Thamnophis spp*). Water temperature at the surface of the lake was 20.5° C at the time of survey.

LITERATURE CITED:

Curtis, B. Loch Leven Lakes fish survey, 1938. CDFW; 8/1938. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128258>

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

Richard, J. B. Loch Leven Lakes fish survey, 1954. CDFW; 6/1954. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128259>

Richard, J. B. Loch Leven Lakes fish survey, 1982. CDFW; 9/7/1982. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128260>