

State of California
Department of Fish and Wildlife

Memorandum

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Cc: Region 2 Fish Files

Subject: Fisheries Monitoring in Plumas County – Silver Lake (12246).

On July 22-23, 2013, California Department of Fish and Wildlife (CDFW) personnel conducted fisheries and amphibian monitoring surveys at Silver Lake (CA Lakes ID 12246) (Figure 1) in southern Plumas County. An overnight gill net was set for a total of 17.7 hours and returned twenty-five brook trout (*Salvelinus fontinalis*) and three speckled dace (*Rhinichthys osculus*). Due to the persistence of brook trout in the lake CDFW will not resume fish plants at Silver Lake and will manage it as a self-sustaining brook trout fishery.

Figure 1: Silver Lake from the northeast (CDFW 2010).



INTRODUCTION

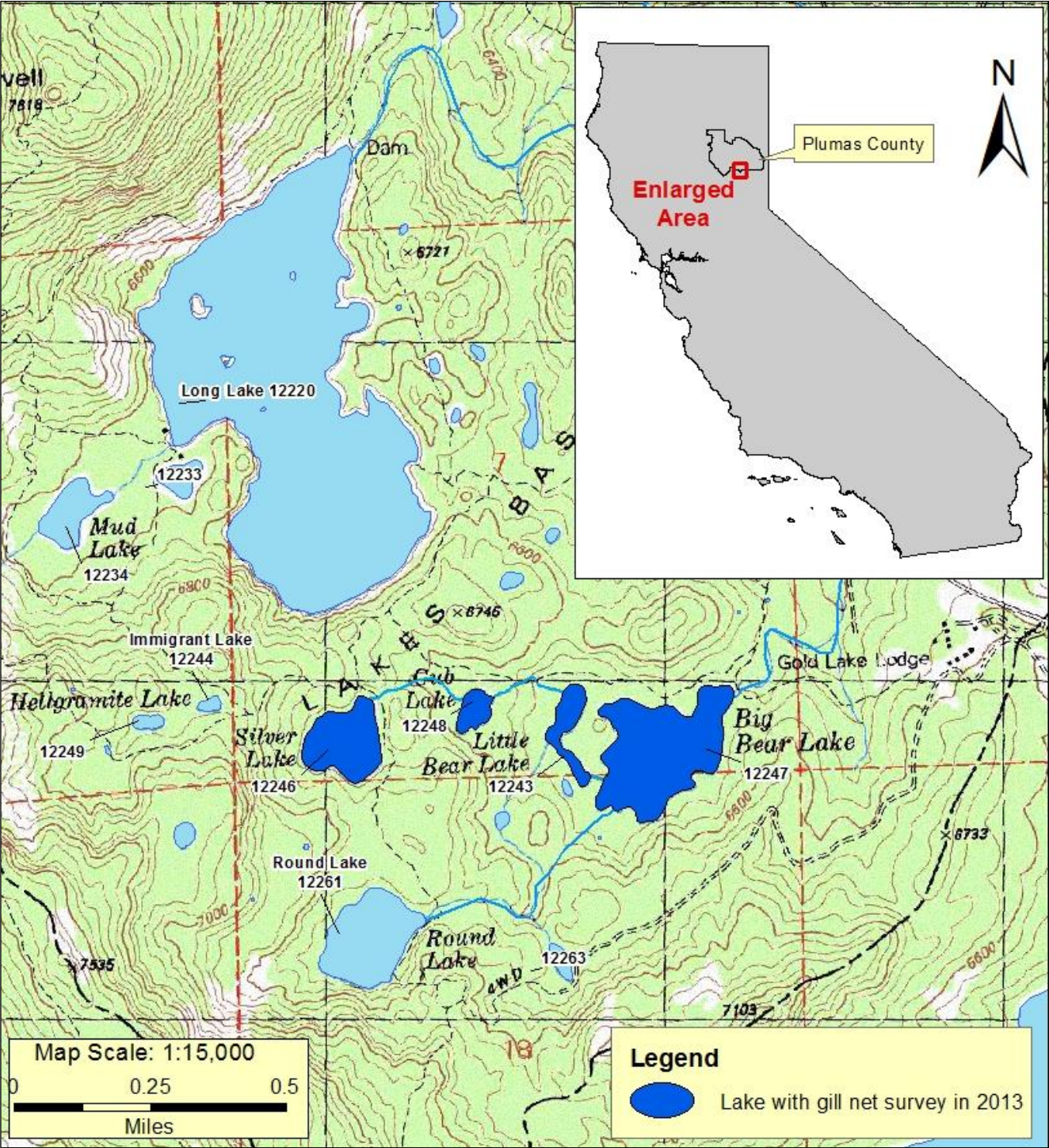
Silver Lake is one of five associated lakes formerly planted with fingerling trout by CDFW in the Lakes Basin watershed in southern Plumas County (Figure 2). Fish planting was halted in the area in 2000 and plants have not been resumed. The following lakes have not had a fish survey since fish plants were halted and the status of their fisheries was unknown: Little Bear Lake (CA Lakes ID 12243), Silver Lake (CA Lakes ID 12246) and Cub Lake (CA Lakes ID 12248). A fish survey was conducted at Big Bear Lake in 2012 and no fish were captured but due to the size of the lake and reports of trout in the upper watershed uncertainty remained about the status of the fishery at Big Bear Lake. Incidentally, nearby Long Lake (CA Lakes ID 12220) and Mud Lake (CA Lakes ID 12234) are both managed as wild trout fisheries and contain both brook trout and rainbow trout (*Oncorhynchus mykiss*).

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. Silver Lake is addressed in this memorandum.

ENVIRONMENTAL SETTING

Silver Lake has a surface area of 4.0 hectares and a maximum recorded depth of 10.7 meters. Littoral zone habitat consists primarily of boulders and cobbles. Surveyors observed a flowing outlet stream containing fish and no inlet streams. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 2020 meters above mean sea level. Access to Silver Lake is via well-maintained trails and requires approximately a 1.5 mile moderate hike from a trailhead. The watershed drains into Gray Eagle Creek and eventually into the Middle Fork of the Feather River. Plumas National Forest manages the land in the watershed.

Figure 2: Location of the Lakes Basin area in southern Plumas County. Dark blue lakes had gill net surveys in 2013.



RESULTS

On July 22-23, 2013 a standard 36 meter long x 1.8 meter high 6 panel variable mesh gill net was set overnight in Silver Lake for a total of 17.7 hours and 25 brook trout (Figure 3) and 3 speckled dace were captured. Most recently, Silver Lake was planted with brook trout from 1996 through 2000; brook trout were also planted from 1954 through 1978. Rainbow trout plants occurred 1992 and 1994 and golden trout (*Oncorhynchus mykiss aquabonita*) were planted in 1980. A 2001 CDFW gill net survey captured fifteen large brook trout and it was unclear if the trout fishery would persist in the absence of fish plants (Figure 4). Due to the number and size classes of brook trout captured during the 2013 survey CDFW believes brook trout will likely persist in the lake, therefore fish plants will not be resumed at Silver Lake and CDFW will manage the lake as a self-sustaining brook trout fishery.

Incidentally CDFW conducted amphibian monitoring surveys at Silver Lake on July 23, 2013 and observed no amphibians in the lake or its outlet.

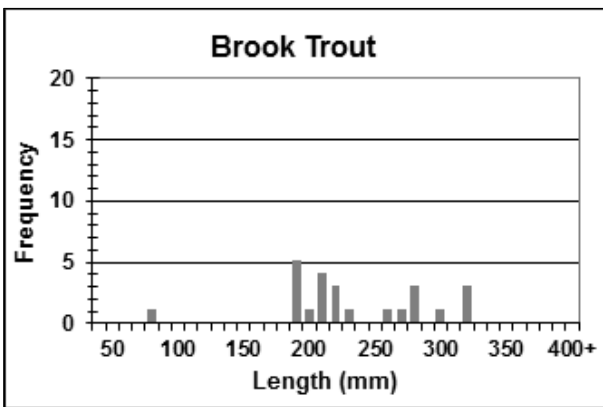


Figure 3: Brook trout histogram from CDFW Silver Lake survey conducted on June 5, 2013.

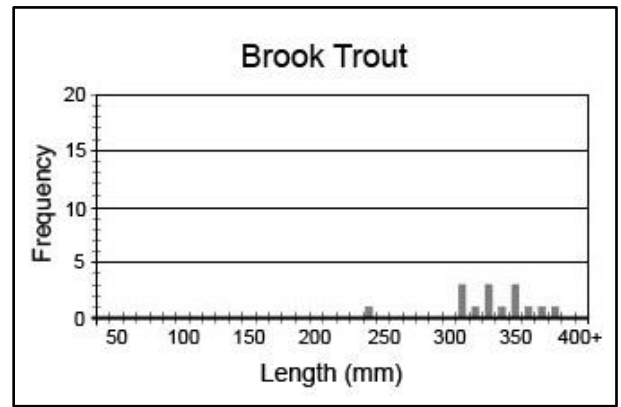


Figure 4: Brook trout histogram from Silver Lake survey conducted on June 12, 2001.

LITERATURE CITED:

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