

Memorandum

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From: Sarah Mussulman
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Cc: Region 2 Fish Files

Subject: Fisheries Monitoring in Plumas County – Cub Lake, Lakes Basin (12248).

On July 22-23, 2013, California Department of Fish and Wildlife (CDFW) personnel conducted fisheries and amphibian monitoring surveys at Cub Lake (CA Lakes ID 12248) (Figure 1) in southern Plumas County. One gill net was set for a total of 22 hours and returned twenty-seven brook trout (*Salvelinus fontinalis*) of varying sizes and fifteen speckled dace (*Rhinichthys osculus*). Due to the gill net survey results CDFW believes brook trout will persist and Cub Lake will be managed as a self-sustaining brook trout fishery.



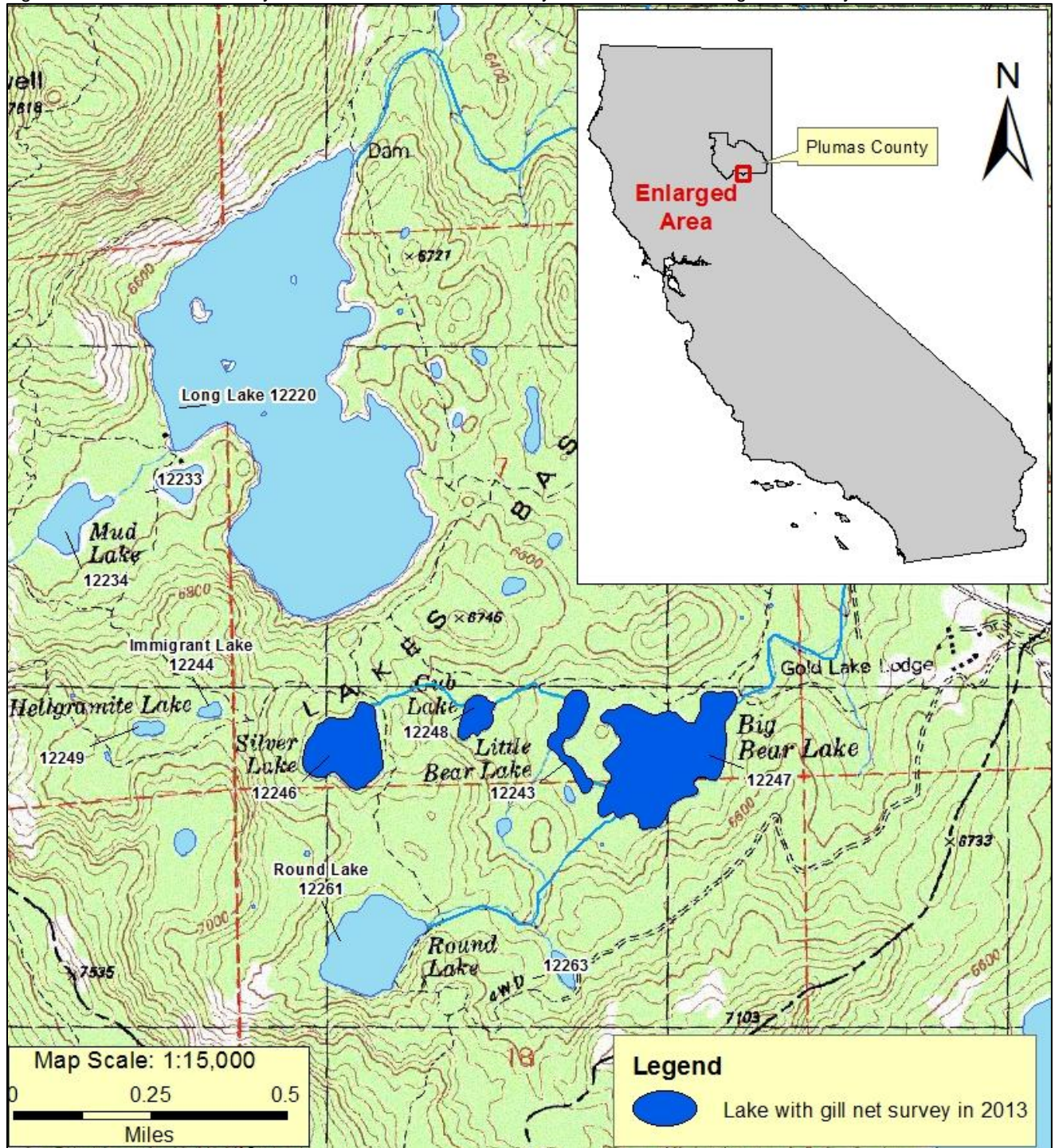
Figure 1: Cub Lake southeast on October 31, 2015 (Amber Mauser).

INTRODUCTION

Cub Lake is one of five associated lakes formerly planted with fingerling trout by CDFW in the Gray Eagle Creek 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. Cub Lake is addressed in this memorandum.

Figure 1: Location of the survey area in southern Plumas County. Dark blue lakes had gill net surveys in 2013.



ENVIRONMENTAL SETTING

Cub Lake has a surface area of 0.73 hectares and a maximum recorded depth of 3 meters. Littoral zone habitat consists of silt with approximately 45% cobbles and boulders. Surveyors observed a small inlet stream and a slightly larger outlet stream exiting the lake. Terrestrial habitat consists of mixed conifer forest and non-woody vegetation at an elevation of approximately 2000 meters above mean sea level. Access to Cub Lake is via paved roads and approximately a 1 mile hike along a well-maintained trail. 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.

RESULTS

On July 22-23, 2013 two CDFW biologists set a standard 36 meter long x 1.8 meter high 6 panel variable mesh gill net for a total of 22 hours and captured twenty-seven brook trout ranging in size from 75 to 380 millimeters total length (Figure 3). Cub Lake is one of three lakes in the watershed formerly planted with trout by CDFW which have not had a fisheries survey since 2001, thus the status of its fishery was uncertain. Cub Lake was planted with brook trout between 1950 and 1973. A 2001 CDFW gill net survey captured four medium-sized brook trout in (Figure 4) and due to the fact that Silver Lake received brook trout plants through 2000 and drains into Cub Lake it was unclear if brook trout would persist. Due to the number and sizes of brook trout captured during the 2013 survey CDFW believes brook trout will persist at Cub Lake and will manage the lake as a self-sustaining brook trout fishery. Incidentally, speckled dace were captured during both the 2013 and 2001 gill net surveys.

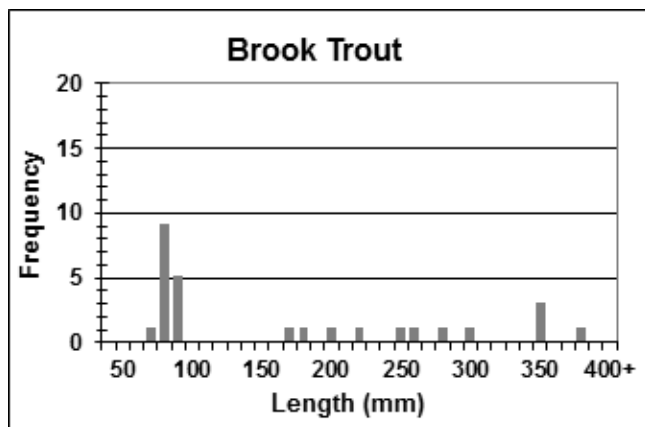


Figure 3: Brook trout histogram from 7/22-32/2013 CDFW gill net survey at Cub Lake.

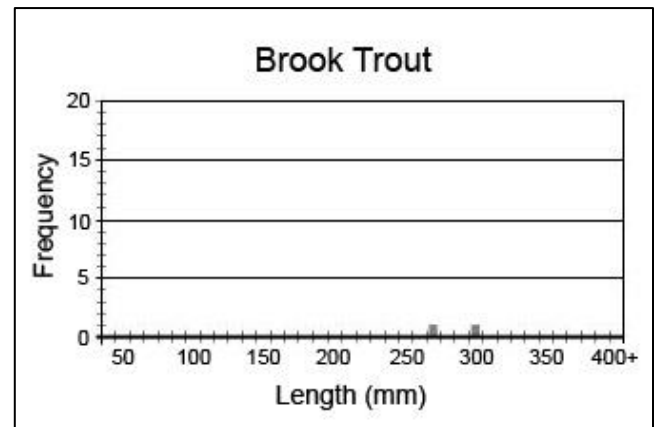


Figure 4: Brook trout histogram from 6/12/2001 CDFW gill net survey at Cub Lake.

Incidentally CDFW conducted amphibian monitoring surveys at Cub Lake on July 22, 2013 and observed no amphibians in the lake or its outlet. Surface water temperature was 25 degrees Celsius at time of survey.

LITERATURE CITED:

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