

Memorandum

Date: 11/16/2015

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Cc: Region 2 Fish Files

Subject: Fisheries Monitoring in Plumas County – Little Bear Lake, Lakes Basin (12243).

On July 22, 2013, California Department of Fish and Wildlife (CDFW) conducted fisheries and amphibian monitoring surveys at Little Bear Lake (CA Lakes ID 12243, Fig. 1) in southern Plumas County. One gill net was set for a total of 6.9 hours and returned eleven brook trout of varying sizes. Due to numbers and sizes of fish captured CDFW believes brook trout will persist in the lake and Little Bear Lake will be managed as a self-sustaining brook trout fishery.



Figure 1: Little Bear Lake looking south on July 22, 2013 (CDFW).

INTRODUCTION

Little Bear 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. Little Bear Lake is addressed in this memorandum.

ENVIRONMENTAL SETTING

Little Bear Lake has a surface area of 1.56 hectares and a maximum recorded depth of 3.4 meters. Littoral zone habitat consists primarily of silt with approximately 25% boulders and cobbles. Surveyors observed a flowing outlet stream and a small inlet stream. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 1980 meters above mean sea level. Access to Little Bear Lake is via well-maintained trails and requires approximately a 0.5 mile flat 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.

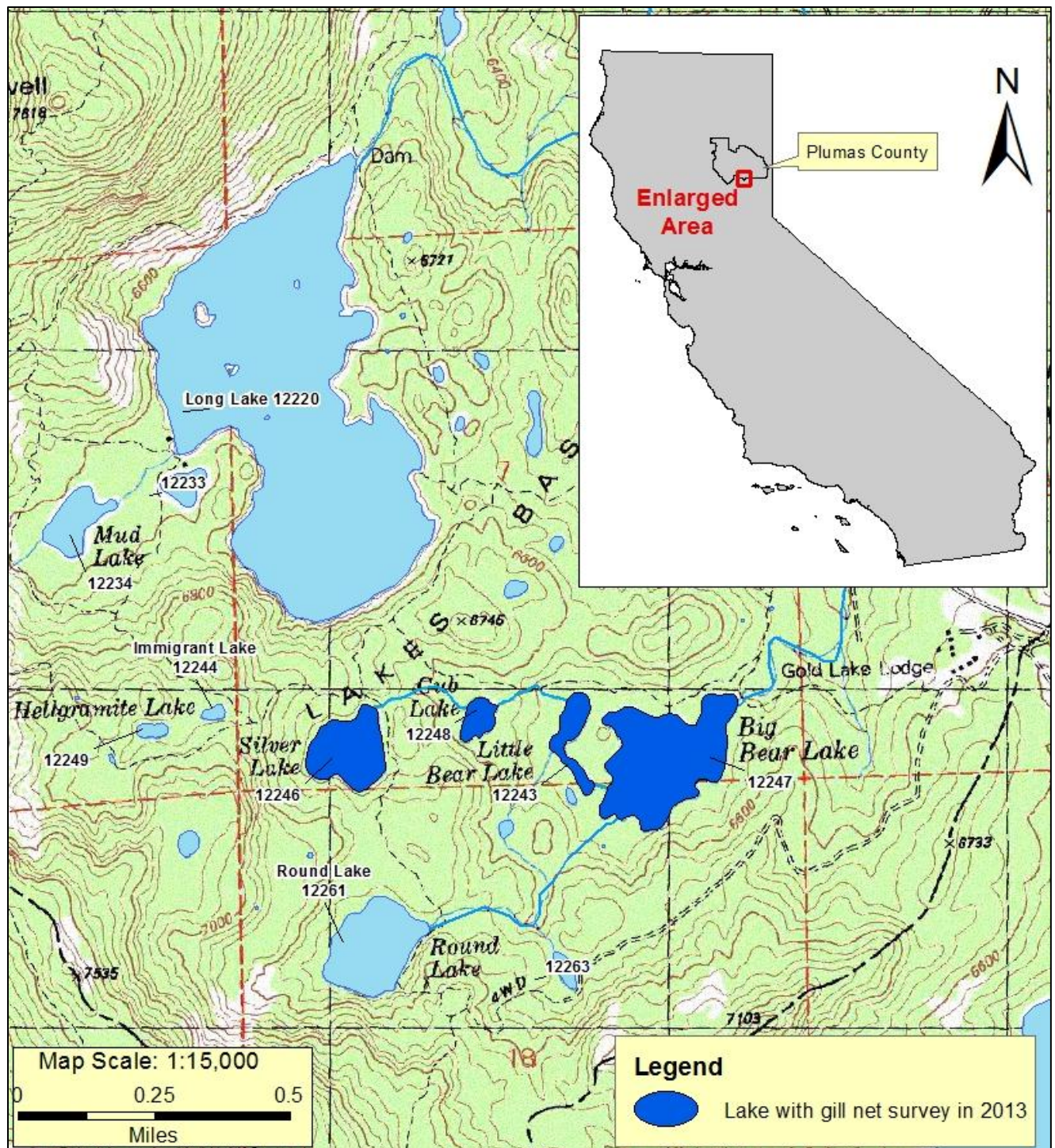


Figure 2: Location of the survey area in southern Plumas County. Dark blue lakes had gill net surveys in 2013.

RESULTS

On July 22, 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 6.9 hours and captured eleven brook trout (*Salvelinus fontinalis*) ranging in size from 90 to 400 millimeters total length (Fig. 3). Little Bear 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. Little Bear Lake was planted with rainbow trout (*Onchorynchus mykiss*) between 1956 and 2000. A single brook trout plant occurred in 1995. A 2001 CDFW gill net survey captured two medium-sized rainbow trout in good condition (Fig. 4) and it was unclear if this fishery would persist in the absence of fish plants. Based on the number and size classes of brook trout captured during the 2013 survey CDFW believes brook trout will persist at Little Bear Lake and will manage the lake as a self-sustaining brook trout fishery.

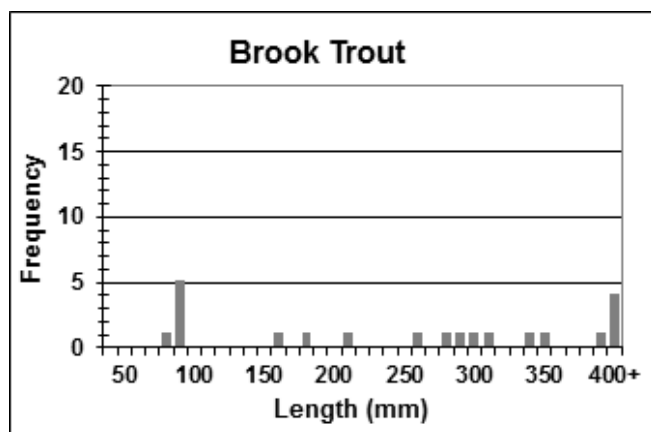


Figure 3: Brook trout histogram from 7/22/2013 CDFW gill net survey at Little Bear Lake.

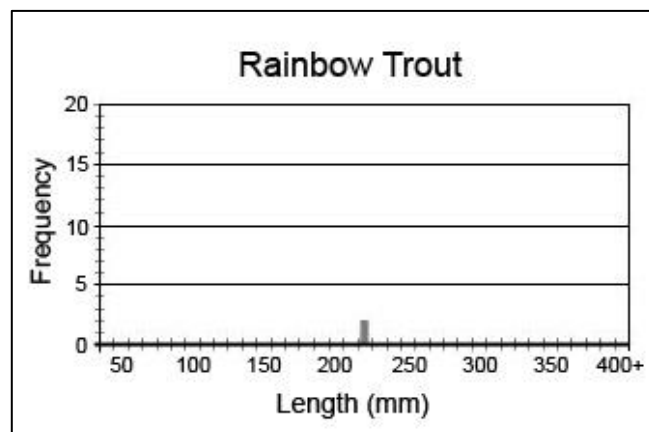


Figure 4: Rainbow trout histogram from 6/13/2001 CDFW gill net survey at Little Bear Lake.

Incidentally CDFW conducted amphibian monitoring surveys at Little Bear Lake on July 22, 2013 and observed no amphibians in the lake or its outlet.

LITERATURE CITED:

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