

State of California

Memorandum

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Cc: Region 2 Fish Files

Subject: Fish monitoring in Plumas County – Campbell (11961) and Long (11971) Lakes.

On June 5, 2013, California Department of Fish and Wildlife (CDFW) conducted fisheries monitoring surveys at Campbell Lake (Figure 1) and Long Lake (Figure 2) in Plumas County. Brook trout (*Salvelinus fontinalis*) and low numbers of brown trout (*Salmo trutta*) were captured in both lakes, along with large numbers of golden shiners (*Notemigonus crysoleucas*). Due to the persistence of two trout species in the watershed CDFW will not resume fish plants at Long and Campbell and will manage both lakes as self-sustaining trout fisheries.



Figure 1: Campbell Lake from the northeast (CDFW 2013).



Figure 2: Long Lake from the east (CDFW 2013).

INTRODUCTION

The High Lakes are a group of lakes in western Plumas County on a bench above the North Fork Feather River (Figure 3). The lakes are approximately 6,000' in elevation above mean sea level and can be accessed via a rugged OHV trail or steep hiking trails from the Feather River. 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: Saddle Lake (CA Lakes ID 11986), Campbell Lake (CA Lakes ID 11961), Long Lake (CA Lakes ID 11971), Morris Lake (CA Lakes ID 11914), Murphy Lake (CA Lakes ID 11980), and Chips Lake (CA Lakes ID 11919). 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. Fishery monitoring surveys were conducted at each lake in 2013 in order to determine fish population status and future management direction for each lake.

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. In order to fully assess the lakes for stocking potential, amphibian surveys were simultaneously conducted. Long Lake and Campbell Lake are discussed in this memorandum.

ENVIRONMENTAL SETTING

Long Lake is the first lake accessed by the High Lakes OHV trail (Figure 3). A road runs along its western shore and there are many campsites and fire rings around the edge of the lake. The lake has a 6.22 hectare surface area and is 4.4 meters deep. Campbell Lake is located 200 meters upstream of Long Lake. The two lakes are connected by a short section of stream flowing from Campbell down into Long Lake. Campbell Lake sits in a small meadow and is fed by a number of springs. It has a 2.5 hectare surface area and is 7.5 meters deep. Shoreline habitat at both lakes consists of mixed conifer forest and meadows, while littoral substrate is primarily silt with small sections of cobbles. The High Lakes OHV trail passes next to the lakes providing access to small boats.

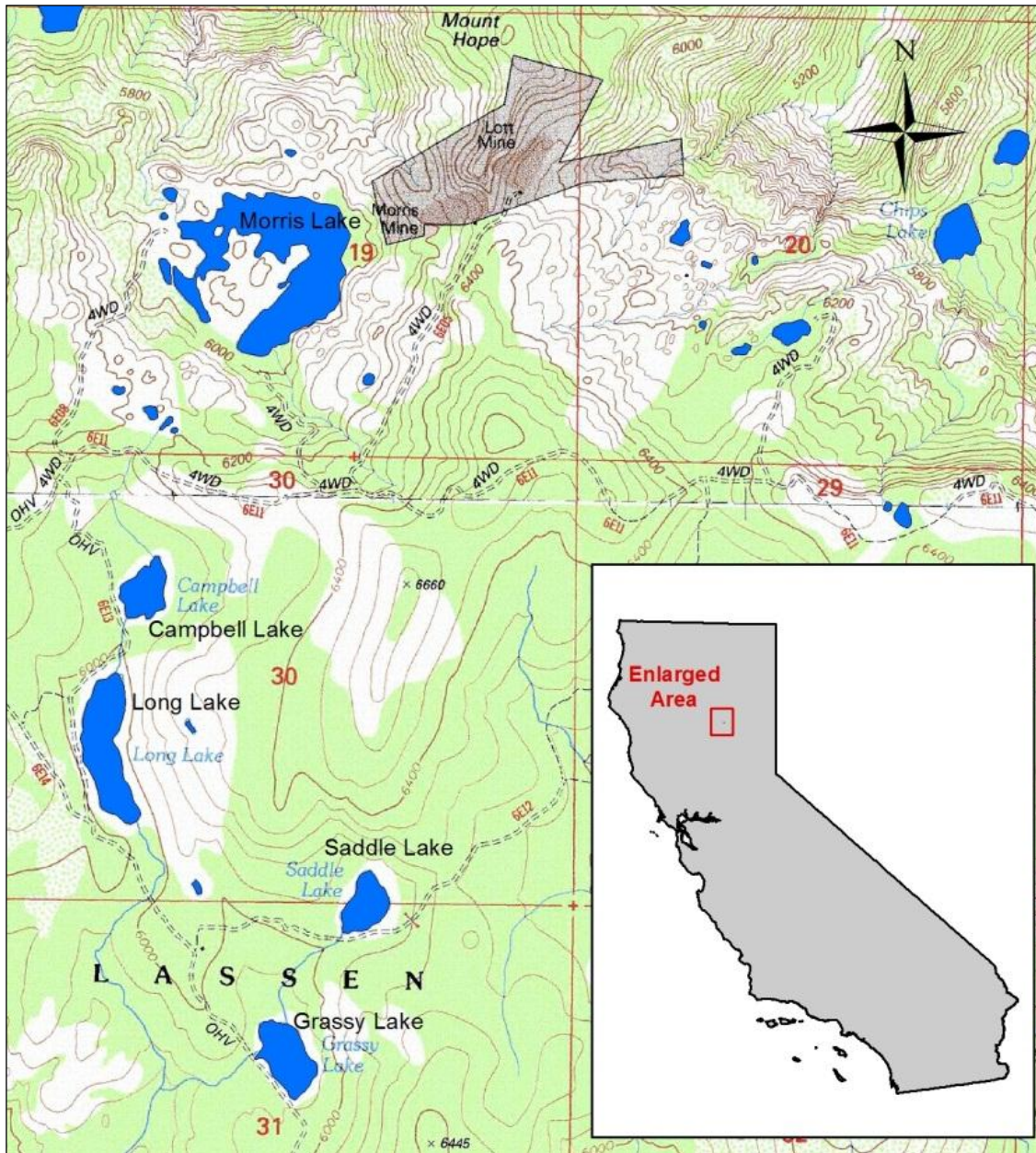


Figure 3: Location of Long, Campbell, Saddle and Morris Lakes in Plumas County, Lassen National Forest. The High Lakes OHV trail is also displayed.

RESULTS AND DISCUSSION

On June 5, 2013 a standard 36 meter long x 1.8 meter high 6-panel variable mesh gill net was set in Campbell Lake for 45 minutes; this net returned 22 brook trout (Figure 4), 2 brown trout (Figure 5) and 98 golden shiners. Most recently Campbell Lake was planted with brown trout from 1984 through 2000. Brook trout plants occurred from 1955 through 1966 and in 1974 and 1992. Rainbow trout plants occurred from 1967 through 1973. A CDFW survey in 2001 returned 29 brook trout (Figure 6) as well as 3 brown trout (Figure 7) but it was unclear whether brown trout would remain in the fishery.

CDFW conducted amphibian monitoring surveys at Campbell Lake on July 5, 2013 and observed two Western toad (*Anaxyrus boreas*) larvae, one garter snake (*Thamnophis* spp.) and one adult Pacific tree frog (*Pseudacris regilla*, *Hyla regilla*) within the lake.

Because no special status herpetofauna were observed at Campbell Lake, and gill net results suggest a high likelihood that both brook trout and brown trout will persist at the lake, CDFW will not resume plants at Campbell Lake and will manage it as a self-sustaining brook and brown trout fishery.

On June 5, 2013 California Department of Fish and Wildlife (CDFW) crews set a standard 36 meter long x 1.8 meter high 6-panel variable mesh gill net for 2 hours in Long Lake and captured 20 brook trout (Figure 8), a single brown trout (Figure 9) and 12 golden shiners. Long Lake was planted with brown trout from 1986 through 2000. Brook trout plants occurred between 1955 and 1974. CDFW crews surveyed the lake in 2001 and found a persistent brook trout population (Figure 10) and captured 3 brown trout (Figure 11) but it was unclear whether brown trout would remain in the fishery.

CDFW conducted amphibian monitoring surveys at Long Lake on July 6, 2013 and observed two adult Western toads (*Anaxyrus boreas*), five garter snakes (*Thamnophis* spp.) and twenty-five Pacific tree frog (*Pseudacris regilla*, *Hyla regilla*) egg masses within the lake. Because no special status herpetofauna were observed at Long Lake, and gill net results suggest a high likelihood that both brook trout and brown trout will persist at the lake, CDFW will not resume plants at Long Lake and will manage it as a self-sustaining brook and brown trout fishery.

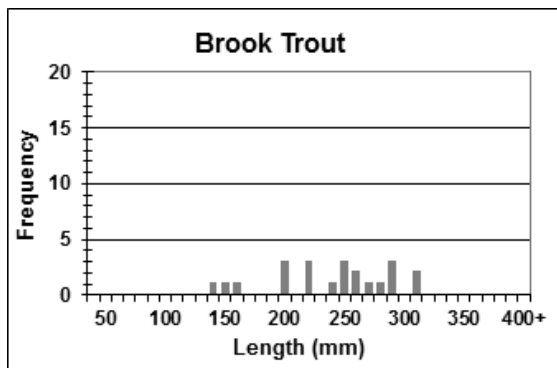


Figure 4: Brook trout histogram from CDFW Campbell Lake survey conducted on June 5, 2013.

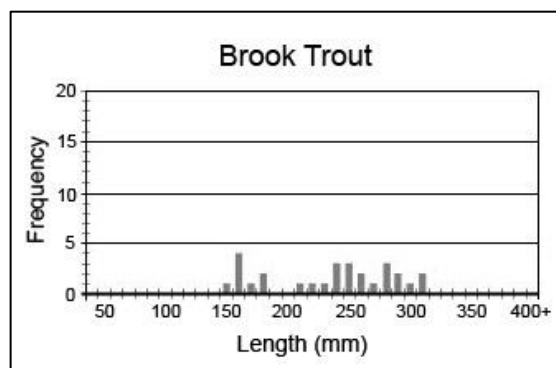


Figure 6: Brook trout histogram from CDFW Campbell Lake survey conducted on August 10, 2001.

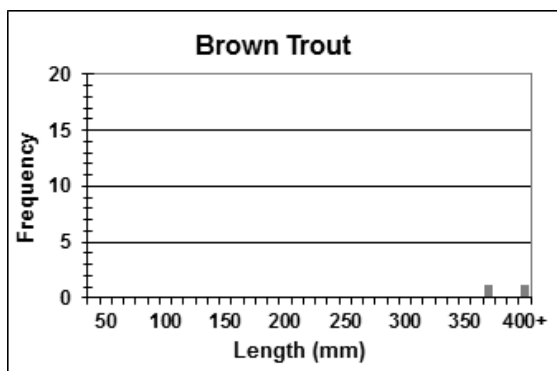


Figure 5 : Brown trout histogram from CDFW Campbell Lake survey conducted on June 5, 2013.

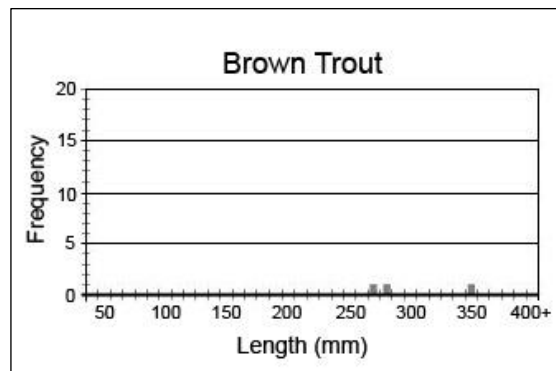


Figure 7: Brown trout histogram from CDFW Campbell Lake survey conducted on August 10, 2001.

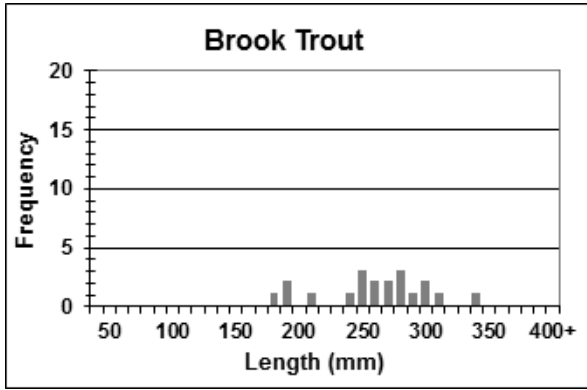


Figure 8: Brook trout histogram from Long Lake on June 6, 2013.

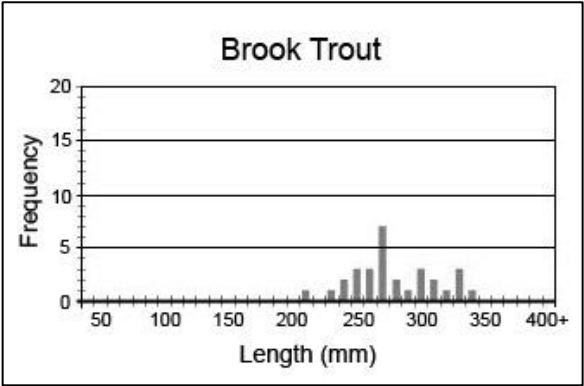


Figure 10: Brook trout histogram from Long Lake on August 10, 2001.

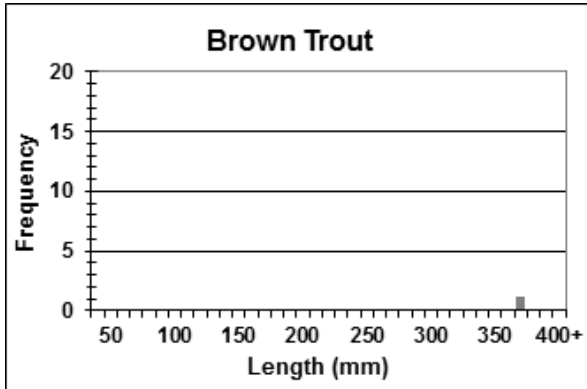


Figure 9: Brown trout histogram from Long Lake on June 6, 2013.

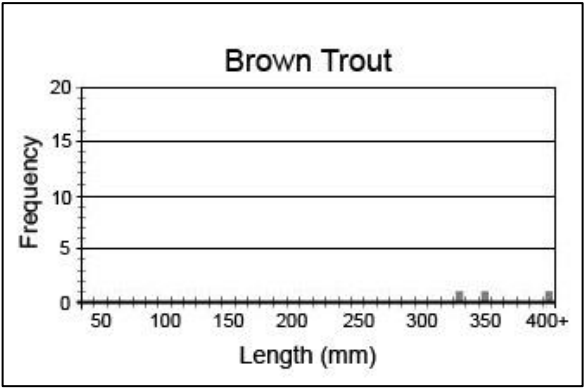


Figure 11: Brown trout histogram from Long Lake on August 10, 2001.

LITERATURE CITED

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