

State of California

# Memorandum

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Cc: Region 2 Fish Files

## Subject: Fish monitoring in Plumas County – Murphy Lake (11980).

On June 7, 2013, California Department of Fish and Wildlife (CDFW) conducted fisheries monitoring surveys at Murphy Lake (Figure 1) in Plumas County. Six brook trout (*Salvelinus fontinalis*) were captured. Due to the persistence of brook trout species in the watershed CDFW will manage Murphy Lake as a self-sustaining brook trout fishery.

Figure 1: Murphy Lake from the north on June 8<sup>th</sup>, 2013 (CDFW).



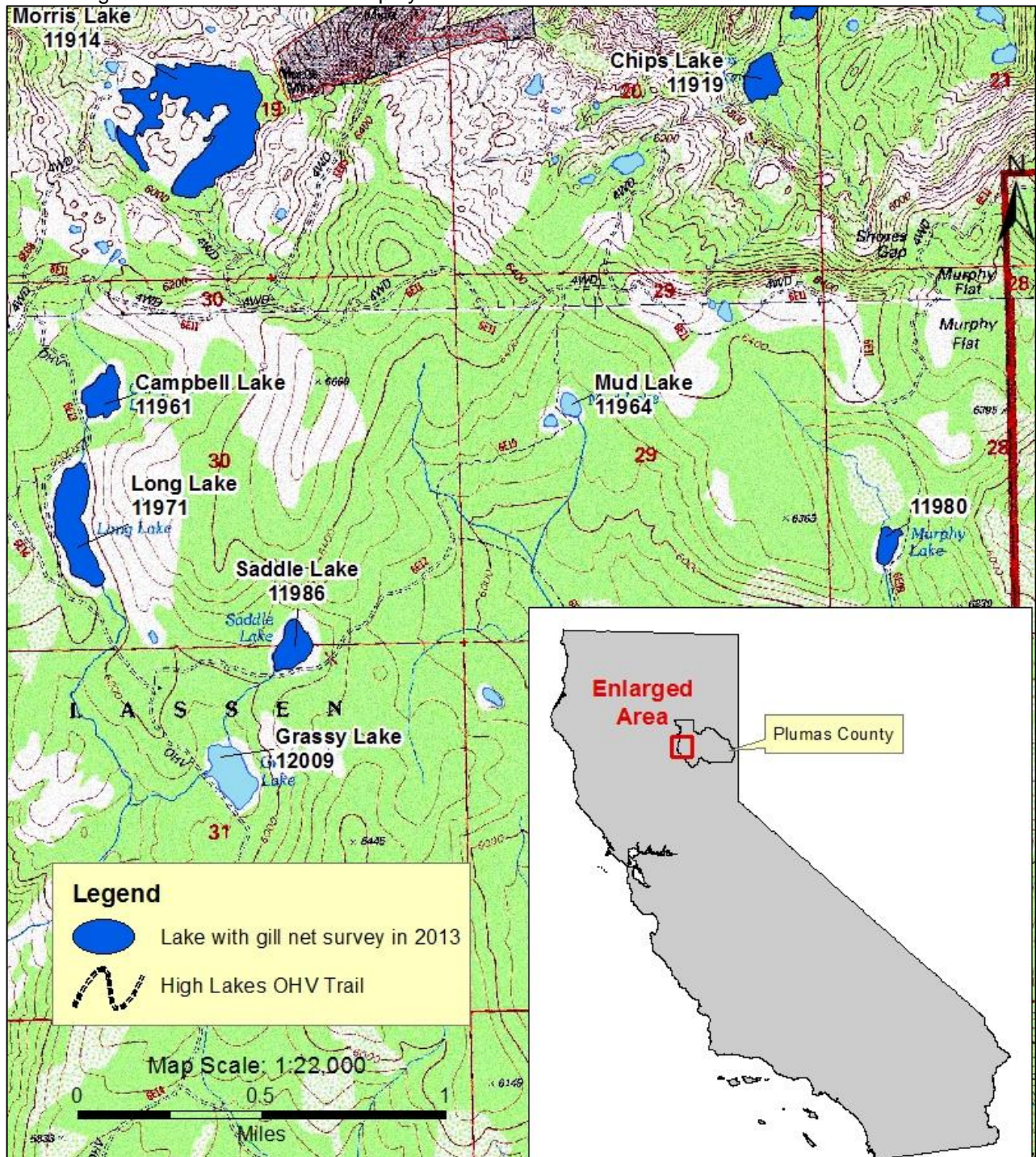
### INTRODUCTION

The High Lakes are a group of lakes in western Plumas County on a bench above the North Fork Feather River (Figure 2). 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), Chips Lake (CA Lakes ID 11919) and Unnamed Lake (11899). 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. Murphy Lake is discussed in this memorandum.

Figure 2: Location of Long, Campbell, Saddle, Morris and Murphy Lakes in Plumas County, Lassen National Forest. High Lakes OHV trail is also displayed.



## ENVIRONMENTAL SETTING

Murphy Lake is accessible via a long drive on a rugged OHV trail and a steep hike up an unmaintained trail. The lake is basically a large meadow pond and multiple small streams flow from the upper meadow into the lake; a single rocky channel drains the site. Murphy Lake has a 1.2 hectare surface area and a maximum recorded depth of 1.3 meters. Shoreline habitat at both lakes consists of meadows and mixed conifer forest, while littoral substrate is primarily silt. Lassen National Forest manages the land.

## RESULTS AND DISCUSSION

On June 7-8, 2013 a standard 36 meter long x 1.8 meter high 6-panel variable mesh gill net was set overnight in Murphy Lake for 11.8 hours and returned 6 robust brook trout. Historically, brook trout plants occurred in Murphy Lake between 1992 and 1994 and twice in the 1950s. A CDFW visual survey observed no fish in 2001 but due to the size of the lake a gill net survey was necessary to determine fish presence. Based on 2013 gill net survey results brook trout are likely to persist in Murphy Lake and CDFW will manage the lake as a self-sustaining brook trout fishery.

Incidentally, CDFW conducted amphibian monitoring surveys at Murphy Lake on June 7, 2013 and observed 132 Western Toad (*Anaxyrus boreas*, *Bufo boreas*) larvae in the outlet stream and 327 Pacific Tree Frog (*Pseudacris regilla*, *Hyla regilla*) larvae within the lake.

## LITERATURE CITED

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