

## Memorandum

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Cc: Region 2 Fish Files

### **Subject: Fisheries monitoring in Plumas County – Ridge Lake (11517).**

On July 23-24, 2014, California Department of Fish and Wildlife (CDFW) conducted fisheries and amphibian monitoring surveys at Ridge Lake (CA Lakes ID 11517, Fig. 1) in northern Plumas County. An overnight gill net was set for 17.5 hours and returned no fish. The lake is shallow and may not provide overwintering habitat for fingerling trout, therefore CDFW will not resume fish plants at Ridge Lake.



Figure 1: Ridge Lake looking northwest on July 23, 2014 (CDFW).

#### INTRODUCTION

Ridge Lake is one of four associated lakes formerly planted with fingerling trout by CDFW in a small watershed in northern Plumas County (Fig. 2). Due to lack of recent fish surveys uncertainty existed about the status of fisheries at Duck, Blue, Elizabeth, and Ridge Lakes. 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. Ridge Lake is addressed in this memo: the other lakes in the watershed will be addressed in separate memos.

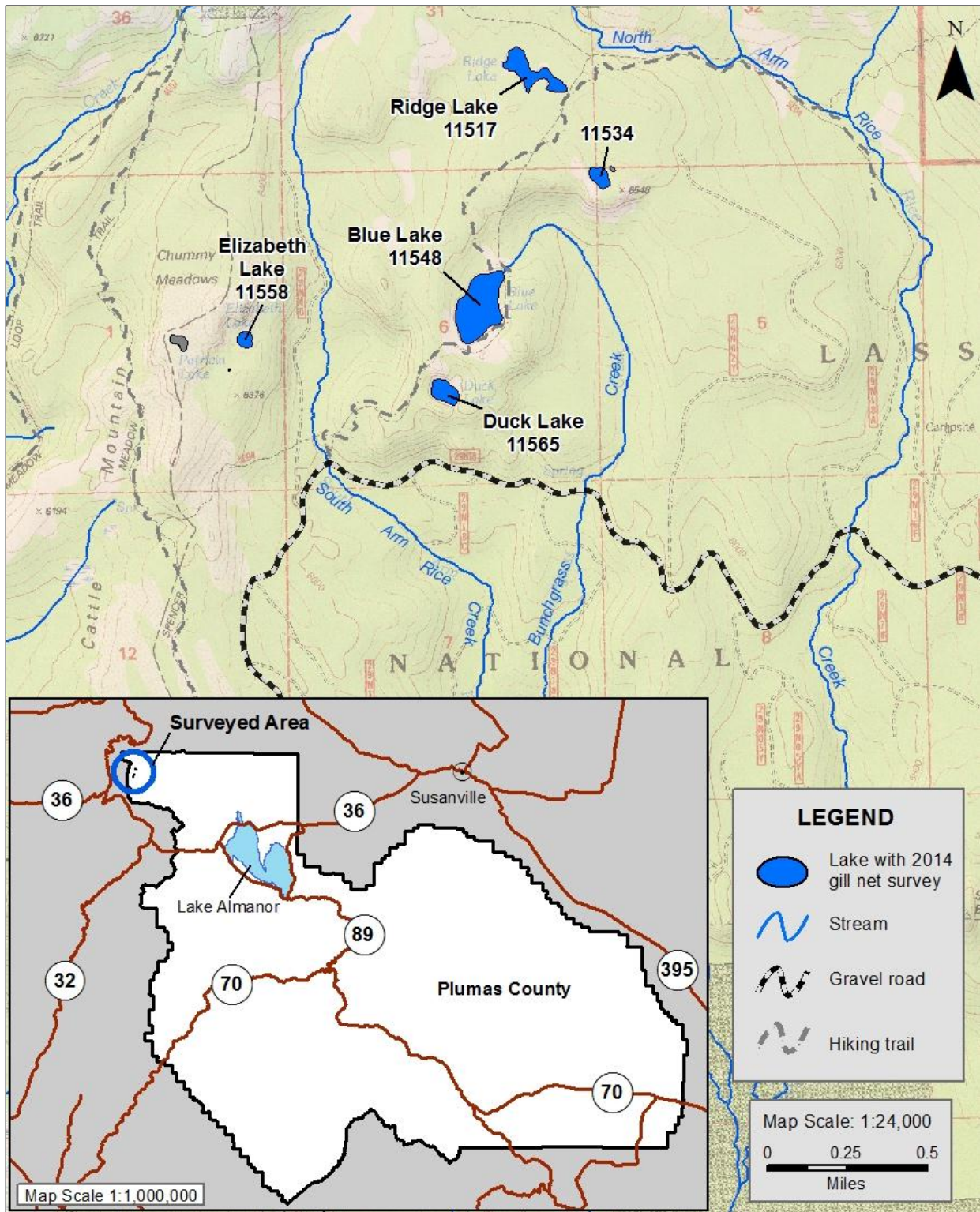


Figure 2: Location of the survey area in northwestern Plumas County. Dark blue lakes had gill net surveys in 2014.

## ENVIRONMENTAL SETTING

Ridge Lake has a surface area of 2.67 hectares and a maximum depth of 2 meters. Aquatic vegetation is present around the edges of the lake and littoral zone habitat consists of shallow (0-30cm) water and a mixture of woody debris and silt. Surveyors did not observe any tributaries. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 2000 meters above mean sea level. Access to Ridge Lake is via well-maintained gravel roads and a short hike along a trail. Incidentally, crews noted extremely dense forest in this area with large amounts of dead wood on the ground. Additionally, no campsites were seen around the lake. The watershed drains into Rice Creek and eventually into the Feather River. Lassen National Forest manages the land in the watershed.

## HISTORY

CDFW conducted regular fishery surveys in this area between 1968 and 1987. Five reports summarize survey results and provide justifications for changes in fish planting (Johnson 1968; Flint 1974; Flint 1975; Flint 1986; Flint 1987). Comments in 1974 suggest much greater public use, noting that 10 people were camped at Blue Lake at the time of the surveys (Flint).

## RESULTS

On July 24, 2014 two scientific aides set a standard 36 meter long x 1.8 meter high 6 panel variable mesh gill net for 17.5 hours and captured no fish; due to the size and depth of the lake as well as the gill net survey results, CDFW believes the lake is fishless. Ridge Lake is one of four lakes in the watershed formerly planted with trout by CDFW which have not had a fisheries survey since 2002, thus the status of its fishery was uncertain. Most recently, Ridge Lake was planted with brook trout (*Salvelinus fontinalis*) between 1974 and 2000. Rainbow trout (*Onchorynchus mykiss*) plants occurred from 1958 through 1973. A 2002 CDFW gill net survey captured nine medium-sized brook trout in good condition (Fig. 3) but it was unclear if this fishery would persist in the absence of fish plants. Historic surveys state that fish often do not survive overwinter at Ridge Lake due to its maximum depth of 7 feet (Flint, 1986).

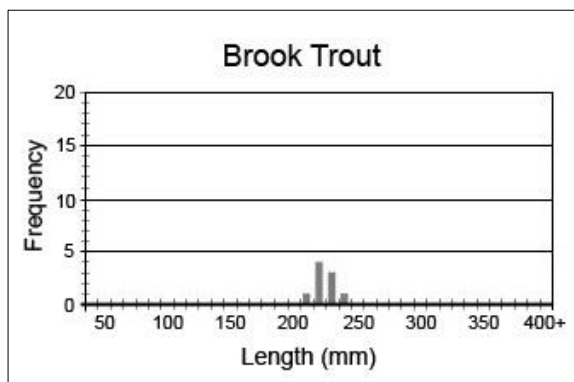


Figure 3: Brook trout histogram from 6/26/2002 CDFW gill net survey at Ridge Lake.

CDFW conducted amphibian monitoring surveys at Ridge Lake on July 23, 2014 and observed 20 long-toed salamander (*Ambystoma macrodactylum*, AMMA) larvae as well as Pacific tree frog (*Pseudacris regilla*, *Hyla regilla*) larvae within the lake. AMMA are listed as a “Species of special concern” by the state of California (Jennings and Hayes, 1994). Due to the presence of AMMA and the likelihood that it is fishless, Ridge Lake will no longer receive fish plants and will be managed as an amphibian resource.

LITERATURE CITED:

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