

## Memorandum

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Cc: Region 2 Fish Files

**Subject: Fisheries Monitoring in Nevada County – Barbara and Sam Lakes.**

On June 23, 2013, California Department of Fish and Wildlife (CDFW) conducted fisheries monitoring surveys at Barbara and Sam Lakes in Nevada County. No fish were captured at either lake. Although the lakes are near the Grouse Ridge trailhead in Tahoe National Forest accessing them requires a challenging cross-country hike, therefore CDFW has decided not to resume fish plants at either lake.

### INTRODUCTION

The *Aquatic biodiversity management plan for the South Yuba River Management Unit* was finalized in 2014 (CDFW). Within the management unit, Fordyce Creek planning watershed contains the entire watershed of Fordyce Creek between Fordyce Lake and Lake Spaulding and includes Barbara and Sam Lakes. The management plan proposes a number of stocked lakes near the Grouse Ridge trailhead including Barbara and Sam Lakes, however, when the plan was written a limited amount of data was available about these two lakes, including current status of their fisheries. 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.

### ENVIRONMENTAL SETTING

Barbara Lake and Sam Lake are two small off-trail lakes located in Nevada County near the Grouse Ridge trailhead north of Interstate 80 (Figure 1). Both lakes were historically stocked with brook trout (*Salvelinus fontinalis*) and Lahontan cutthroat trout (*Oncorhynchus clarki henshaw*). Barbara Lake sits in a small granite basin, is 10.7 meters deep, 0.76 hectares surface area and has a 377 meter perimeter. Sam Lake is located in mixed conifer forest, has a depth of 4 meters a surface area of 0.16 hectares and a perimeter of 150 meters. The lakes are at approximately 2000 meters elevation above mean sea level and located on land managed by Tahoe National Forest.

## RESULTS AND DISCUSSION

On June 23, 2013 CDFW crews set a standard 36 meter long x 1.8 meter high 6-panel variable mesh gill net for 12 hours in Barbara Lake and captured no fish. Surveyors looked for spawning habitat and signs of fish during the survey and observed neither. Barbara Lake was historically planted with brook trout from 1940 through 1966 and Lahontan cutthroat trout plants occurred between 1968 and 2000. A CDFW gill net survey in 1972 and a visual survey in 2001 found cutthroat trout in good condition but no brook trout. The lake is off trail and challenging to access from the trailhead at Grouse Ridge Campground. As a result, CDFW will no longer plant this lake and it will not be actively managed.

On June 23, 2013 CDFW crews set a standard 36 meter long x 1.8 meter high 6-panel variable mesh gill net in Sam Lake which extended from one shore to the other. The net was set overnight for a total of 12.45 hours soak time. No fish were captured or observed during the survey and the lake is shallow and small. Sam Lake was regularly planted with brook trout between 1940 and 1995 and cutthroat trout were stocked in 1982. CDFW survey crews observed no fish in 2002 but a gill net survey is necessary to determine the status of the fishery due to the size and depth of the lake. As a result of its current fishless state, CDFW will no longer plant Sam Lake and it will not be actively managed.



Figure 1: Location of Barbara and Sam Lakes relative to each other and Downey Lake (Google Earth 2014).

CITED:

CDFW 2014. *Aquatic biodiversity management plan for the South Yuba River Management Unit*. California Department of Fish and Wildlife; 6/9/2014. Available from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=85427>