

Memorandum

Date: 11/17/2014

To: Kevin Thomas
Senior Environmental Scientist, Supervisor
Department of Fish and Wildlife

From: Ben Ewing
District Fishery Biologist (Alpine, Amador, Calaveras, and Lake Counties)

Subject: Sawmill Lake Gillnet Survey May 7 and 8, 2014

Sawmill Lake, located in Nevada County, is a 3040 acre-foot, 114 surface acre lake located at 5700 above mean sea level in the Tahoe National Forest north of Interstate 80 and northwest of Truckee, CA (Figure 1). Sawmill Lake's main source of water is Canyon Creek which is part of the Yuba River drainage. This tributary provides the primary spawning habitat for salmonid species in the lake.

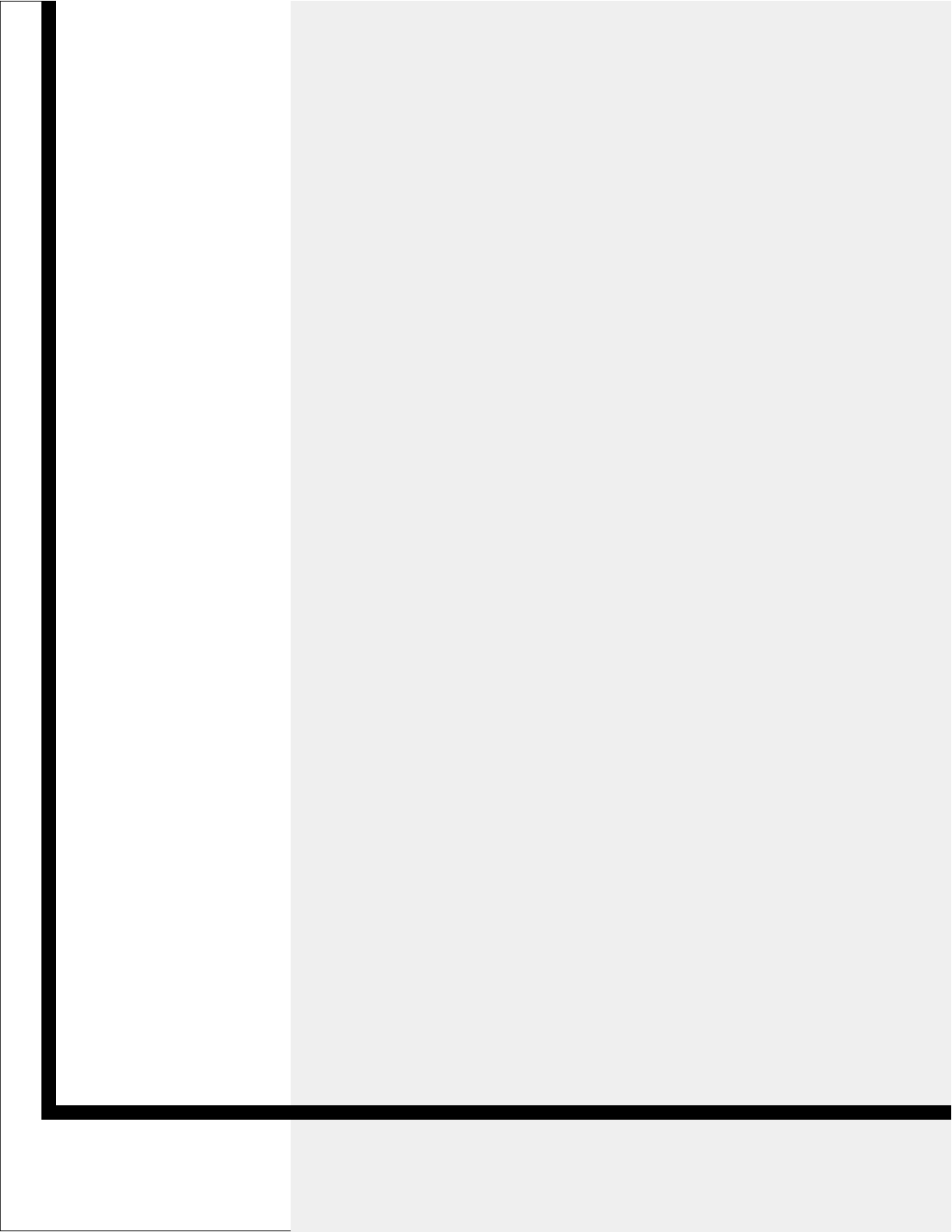
From 1971 to 2014, The California Department of Fish and Wildlife (Department) has stocked Sawmill Lake with rainbow trout (*Oncorhynchus mykiss*) and brook trout (*Salvelinus fontinalis*) to provide recreational angling opportunities and supplement natural production. Currently, the Department employs a put-and-grow rainbow trout fishery.

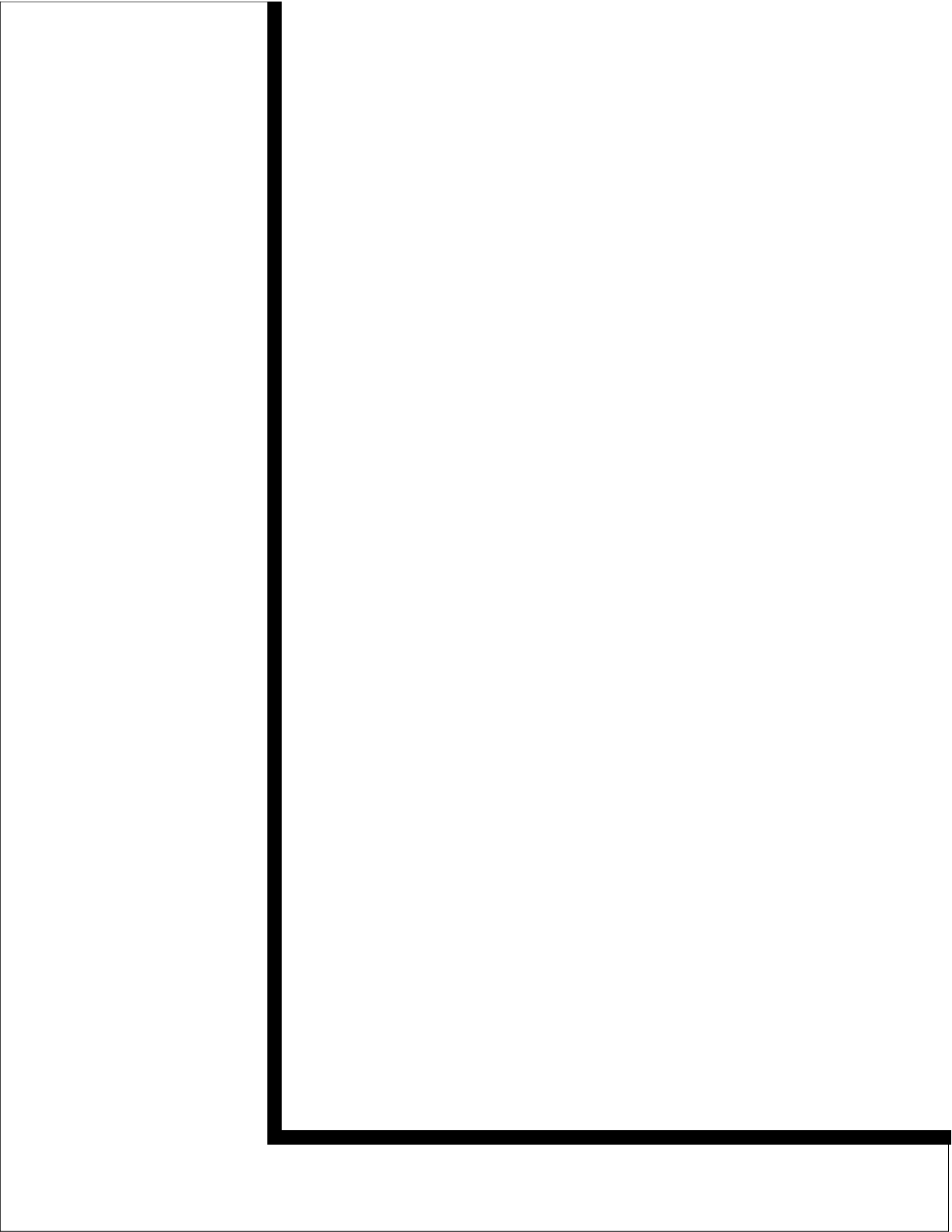
On May 7 and 8, fishery biologist Ken Kundargi and scientific aides Mike Mamola, Nick Hood, and Kassie Hickey conducted a first phase general fish survey via gillnet. The purpose of this first phase sampling effort is to gather basic fisheries information at low cost, an effort which will guide fisheries managers in making management decisions or guide further research and assessment efforts if necessary. One variable mesh gillnet was set in the north end of the lake in order to conduct a general fish survey (Figure 2). The net set was perpendicular to the shoreline for a distance of approximately 100 feet. Set time for the gillnet was 15:49 on May 7, 2014 and pull time was 12:29 on May 8, 2014. Water temperature was 11°C. Fish captured were identified to species and measured to the nearest millimeter total length.

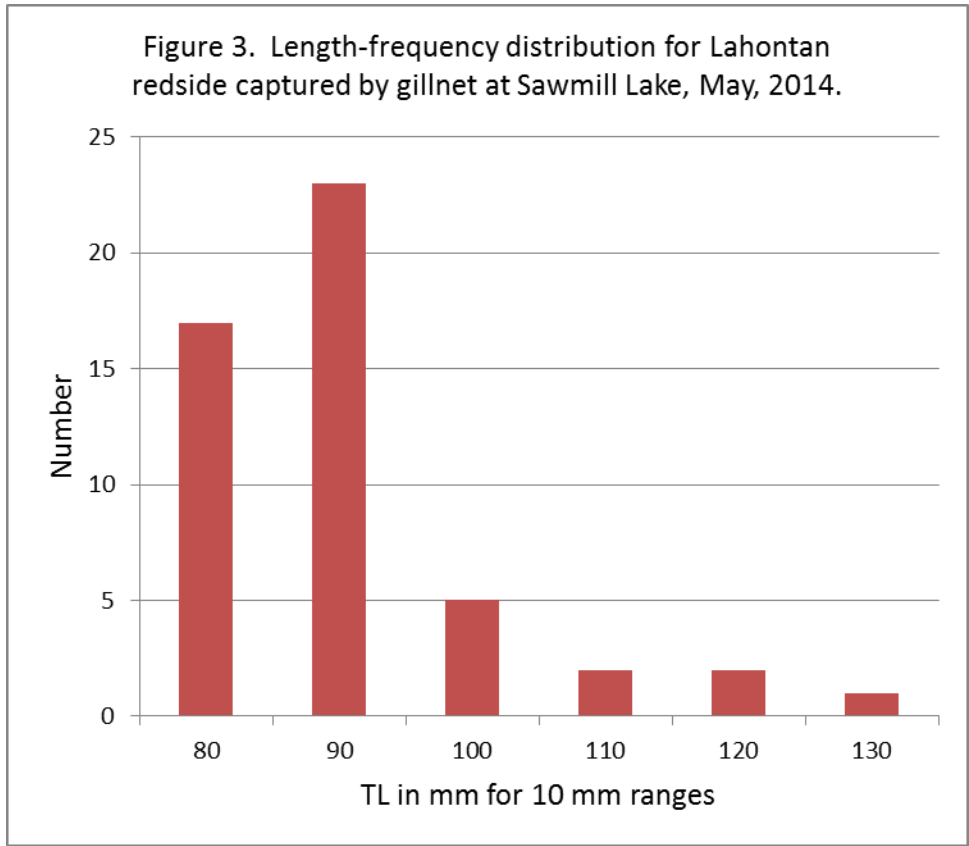
Two species of fish, brown trout (*Salmo trutta*) and Lahontan redbreast (*Richardsonius egregious*) were collected during the survey. Out of 127 fish collected, 123 of them were Lahontan redbreast. Lahontan redbreast collected and measured ranged from 82 mm (3.2 in.) to 133 mm (5.2 in.) with the 90 mm length class having the greatest number of individuals (Figure 3). These fish are likely four years of age and/or greater (Moyle 2002). Average size of the Lahontan redbreasts was 94.6 mm (3.7 in.).

The four brown trout collected measured 400 mm (15.7 in.), 246 mm (9.7 in.), 293 mm (11.5 in.), and 137 mm (5.4 in.) with an average size of 269 mm (10.6 in.). The low number of brown trout captured prevents robust statistical analysis.

Overall, the results of this general fish survey do not give the Department a lot of information on the fisheries. Conducting this survey in the early spring with more gillnets and/or fall when salmonids of all species tend to be up in shallower water could help collect more fish if this survey is repeated.







References

Moyle, P. 2002. Inland Fishes of California. University of California Press, Berkeley and Los Angeles, California. Pg. 135.