

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: Union Valley Reservoir Gillnet Survey June 4 and 5, 2014

Union Valley Reservoir, located in El Dorado County, is a 2,860 surface acre 271,000 acre foot reservoir located at 4883 feet above mean sea level in the Eldorado National Forest north of Highway 50 (Figure 1). Union Valley Dam impounds Silver Creek which is part of the South Fork American River drainage. This tributary provides the primary spawning habitat for salmonid species in the lake.

From 1962 – 2014, The California Department of Fish and Wildlife (Department) has stocked Union Valley Reservoir with rainbow trout (*Oncorhynchus mykiss*), kokanee salmon (*Oncorhynchus nerka*), brown trout (*Salmo trutta*), and lake trout (*Salvelinus namaycush*) to provide recreational angling opportunities and supplement natural production. Currently, the Department employs a put-and-grow stocking strategy utilizing kokanee salmon fingerling plants as well and put-and-take rainbow trout fishery. Kokanee and rainbow trout were not captured nor expected to be captured due to their pelagic nature during this time of year. Other methods such as spawning and angler surveys are more utilitarian for evaluating these two species' population status and angler harvest rates.

On June 4 and 5, scientific aides Kevin Langham and Ben Onanian 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. Two variable mesh gillnets were set in the southwest and north end of the lake in order to conduct a general fish survey (Figure 1). The net sets were perpendicular to the shoreline for a distance of approximately 100 feet. Set time for gillnet one was 18:00 on June 4, 2014 and pull time was 08:15 on June 5, 2014. Water temperature was 64°F. Set time for gillnet two was 18:40 on June 4, 2014 and pull time was 08:45 on June 5, 2014. Water temperature was 65°F. Fish captured were identified to species and measured to the nearest millimeter total length.

Two species of fish, brown trout and smallmouth bass (*Micropterus dolomieu*) were collected during the survey with only three fish total. Two brown trout were collected in gillnet #1, measuring 656 mm (25.8 in.) and 342 mm (13.5 in.) and one smallmouth bass measuring 280 mm (11.0 in.). The low number of fish 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 and/or fall when water temperatures are generally cooler, and fish tend to be up shallower where gillnets can

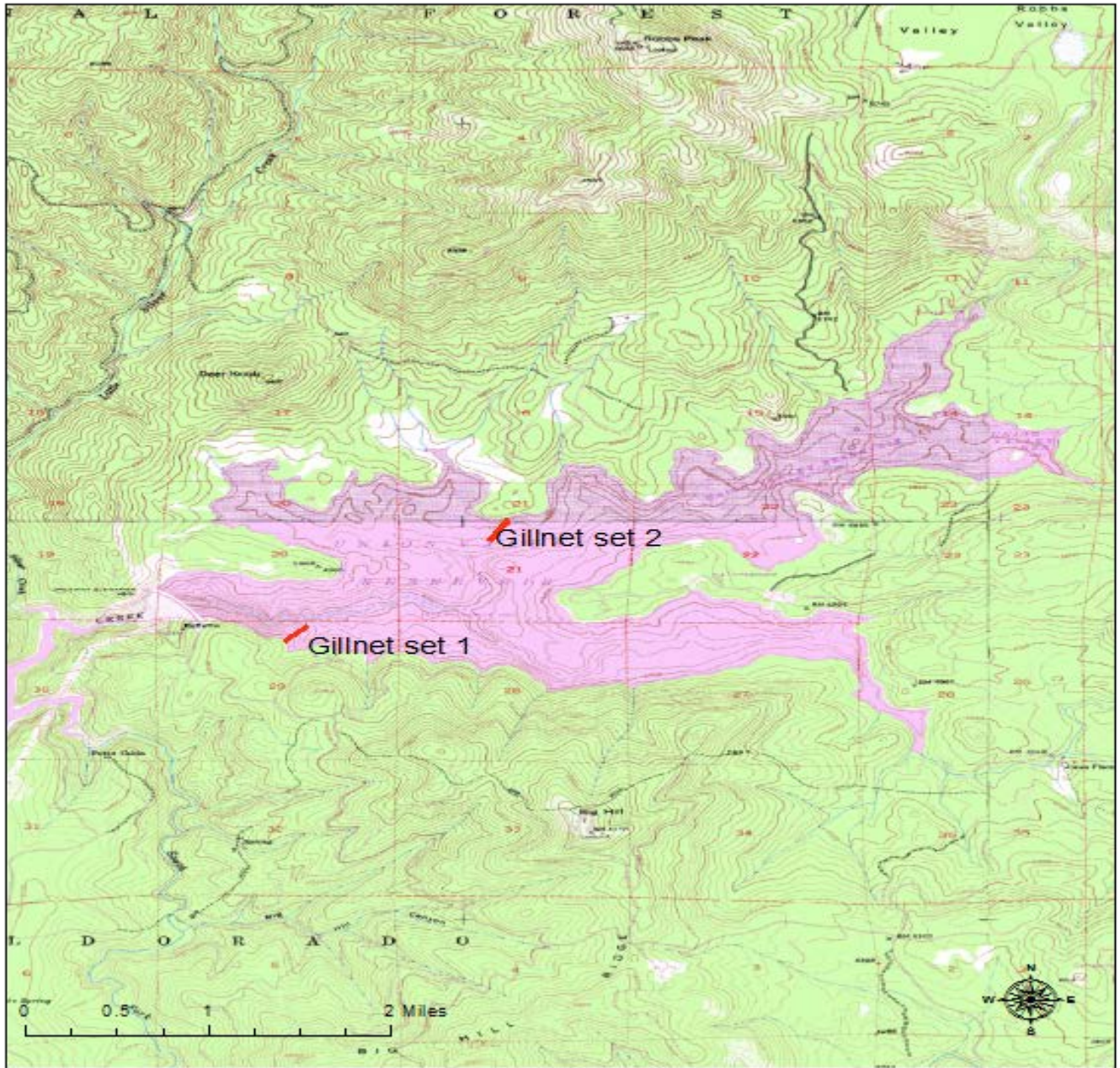


Figure 1. Union Valley Reservoir and location of gillnet sets June 4 - 5, 2014.