

Memorandum

Date: 7/31/2015

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: Thurston Lake Fish Survey

On July 29, 2015, California Department of Fish and Wildlife (Department) personnel completed a boat-based electrofishing evaluation at Thurston Lake, Lake County. The purpose of the survey was to determine if any Clear Lake hitch (*Lavinia exilicauda chi*) (CLH) were present in the watershed.

Thurston Lake is a private lake located at 38.931 N 122.676 W in Lake County, just south of Clear Lake (Figure 1). The elevation of the lake is 1,410 feet above mean sea level. At the time of the survey the lake was far from full capacity due to the fourth year in a row of drought. The lake receives water from Thurston Creek which was mostly dry upstream of the lake. Largemouth bass (*Micropterus salmoides*) (LMB), inland silversides (*Menidia beryllina*), brown bullhead (*Ameiurus nebulosus*), CLH, and white catfish (*Ameiurus catus*) have all been reported to inhabit Thurston Lake (CDFW Fish Files, 1948).



Figure 1. Thurston Lake Electrofishing Transect (7/29/15) (Lake County, CA).

Department personnel surveyed the entire shoreline at Thurston Lake. Largemouth bass, black crappie (*Pomoxis nigromaculatus*) (BCR), Ictaluridae spp., and Clear Lake hitch were collected during the survey. Average total length and weight for the seven CLH collected was 136.6 mm (5.4 in.) and 25 grams (Figure 2). Average total length for the 10 Ictaluridae

spp. collected was 161.5 mm (6.4 in.) and 243.3 grams for Ictaluridae spp. greater than 82 mm (3.2 in.). Average total length and weight for the two BCR collected was 359.5 mm (14.2 in.) and 731.5 grams. The one LMB collected was 485 mm (19.1 in.) and 1702 grams (3.7 lbs.). Catch per unit effort for the entire survey was 0.26 fish/minute of actual shock time. Based on the results of the evaluations completed, a self-sustaining, non-native warmwater fish population exists as well as a native fish population. It is likely the CLH are using Thurston Creek as their spawning grounds since the lake shoreline didn't appear to offer viable spawning habitat.



Figure 2. Clear Lake hitch, Lake Co. (J. Torres, 7/29/2015).

Due to the very turbid water, it is likely the Department missed capturing many fish during the survey (Figure 3).



Figure 3. Thurston Lake, Lake Co. (J. Torres, 7/29/2015).