Quarry Lakes Fisheries Report 2013

EBRPD Fisheries Department

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Introduction

The purpose of this report is to give the public an overall view of the condition of the fisheries in the District's managed lakes. The surveys conducted for this report serve the purpose of identifying general trends in fish communities which aid in making management decisions. By analyzing these trends over time, our goal is to make decisions that ultimately improve recreational fisheries and the overall health of our lake ecosystems. We hope this information will help you understand the fisheries dynamics in our beautiful lakes.

Methods

Fish community surveys are conducted annually at the same sites from June-July. Surveys are conducted at night using an electro-fishing boat. This method utilizes an electrical current sent from the boat through the water which temporarily stuns the fish for easy collection. Upon collection, fishes are identified, measured for length and weight, and released back into the lake. Four lakes are annually sampled at Quarry Lakes: Horseshoe Lake (4 sites), Lago Los Osos (3 sites), Rainbow Lake (2 sites), and Shinn Pond (2 sites). However, due to the low water levels in 2013, only Horseshoe and Rainbow lakes are included in this report. Results for this report include year 2008-2013.

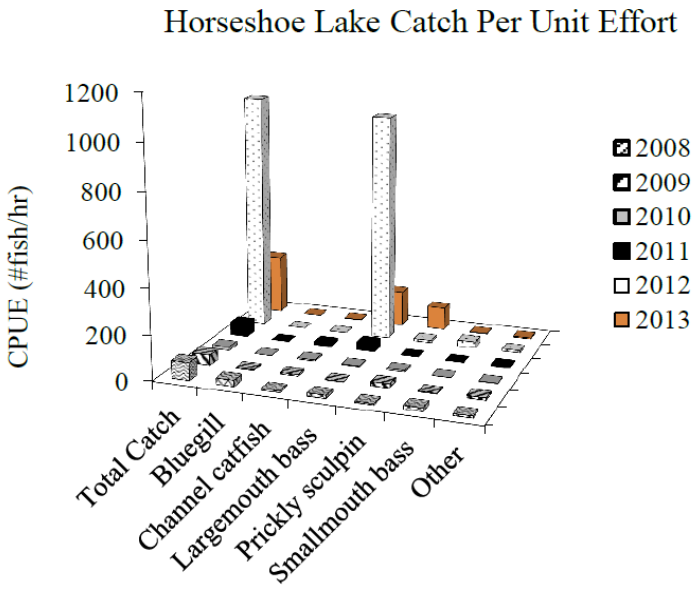

Figure 1: Catch results from fish community surveys from 2008-2013. CPUE is total number of fish caught per hour.

Results

Horseshoe Lake

The Quarry Lakes are experiencing some of the lowest water levels of their existence. This phenomenon is due primarily to the fact that water is not being pumped into the lake system by the Alameda County Water District. The low water conditions at all of the Quarry Lakes

have concentrated the fishery and eliminated a substantial volume of the lakes to fishing. The highest catch rates for our surveys in Horseshoe Lake were observed during 2012 (Fig. 1). Largemouth bass made up the majority of the catch, especially the past two years (Fig. 2). The largemouth bass population appears to have had good reproduction most years, especially in 2012 (Fig. 3). Due to the structure of the lake, adult largemouth bass can not be effectively sampled because they are likely in the deeper zones where electrofishing is ineffective. However, the presence of younger age class bass suggests they are successfully reproducing. In 2013 the District installed 800 Christmas trees on the western shore of Horseshoe lake to provide better habitat for fish. We hope to continue installing Christmas tree reefs in Horseshoe Lake in order to provide important nursery rearing areas for fish.

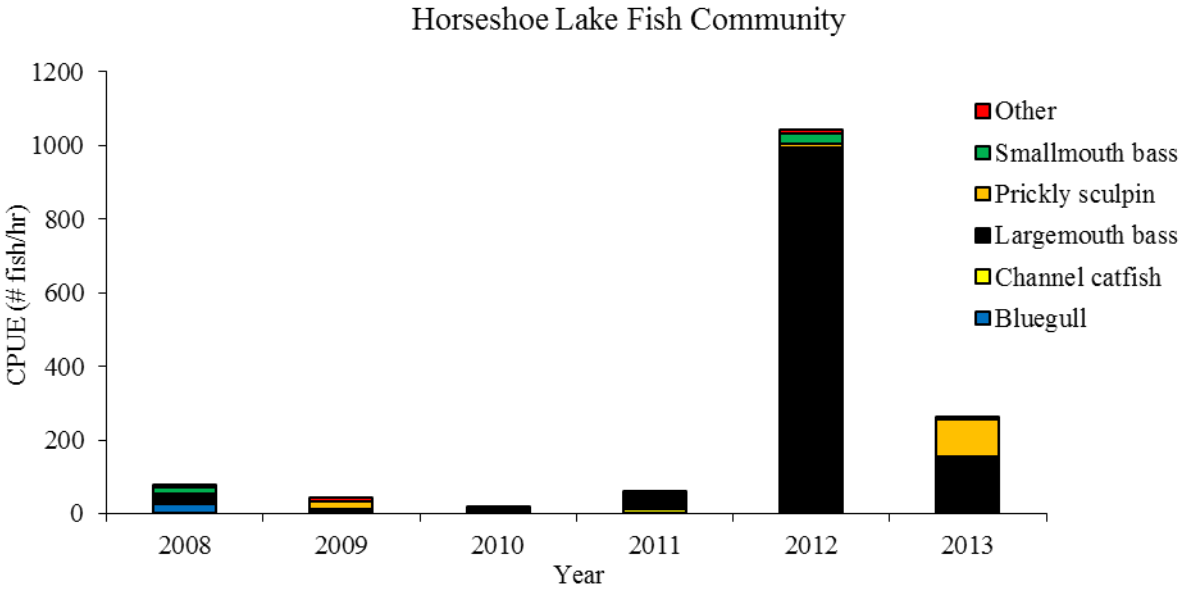

Figure 2: Total number of fish species caught per hour during fish community surveys from years 2008-2013.

Rainbow Lake

Rainbow Lake support the highest numbers of largemouth bass, (primarily young of the year), out of all the Quarry Lakes. Catch rates were very high this past year, and catches were dominated by largemouth bass (Figs. 4 and 5). In addition to largemouth bass, the fish community consists of inland silverside, prickly sculpin, and channel catfish; bluegill have not been observed since 2008. Much like Horseshoe Lake, Rainbow lake supports healthy numbers of younger age class largemouth bass and we will continue to enhance habitat for them by installing Christmas tree reefs (Fig. 6). Rainbow lake received 850

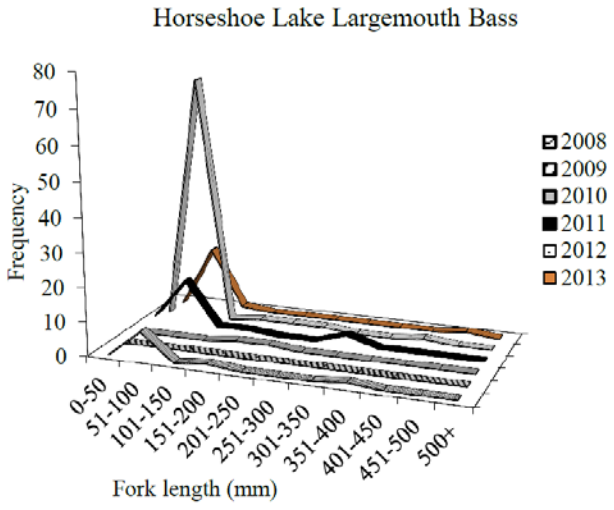

Figure 3: Size class distribution of largemouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

Christmas trees in both 2011 and 2012. These reefs were placed on the south east end of the lake where the depth is relatively shallow and the prevailing winds drive the warm surface water. These conditions provide the best largemouth and smallmouth bass spawning and rearing conditions. Neither the District nor Department of Fish and Wildlife plant rainbow trout or channel catfish directly into Rainbow Lake; however, these species do migrate into Rainbow Lake via an underground pipeline.

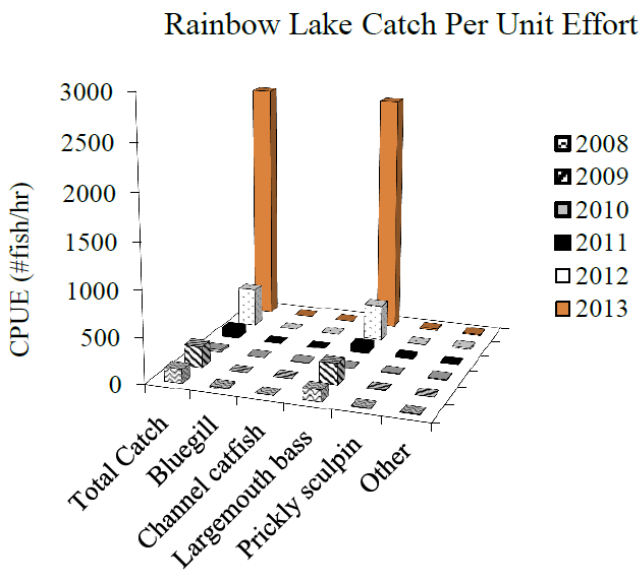

Figure 4: Catch results from fish community surveys from 2008-2013. CPUE is total number of fish caught per hour.

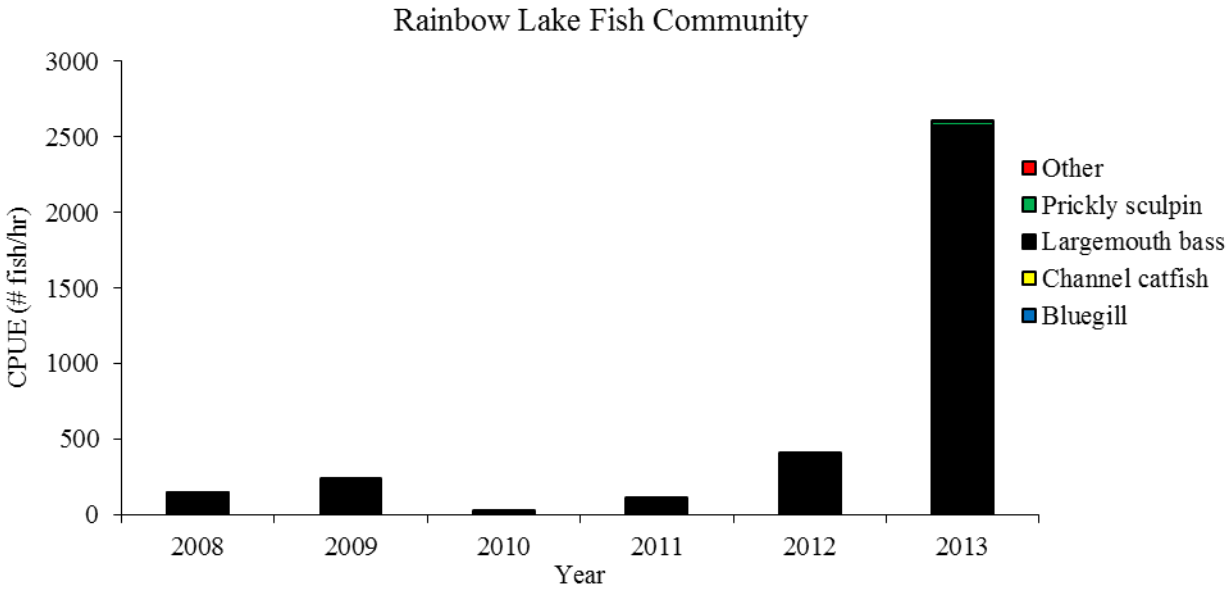

Figure 5: Total number of fish species caught per hour during fish community surveys from years 2008-2013.

Put –n- take fisheries

Besides the naturally reproducing fish species discussed here, Horseshoe Lake supports a popular put –n – take fishery for rainbow trout and channel catfish. Funded by the District's Fishing Access permit program, Quarry Lakes Regional Park generated nearly $68,000 in revenues and expended over $100,000 on fish plants in 2013. Horseshoe Lake received 26,000 pounds of rainbow trout from EBRPD and an additional 8,050 pounds of trout from the California Department of Fish and Wildlife in 2013. The District also planted 3,000 pounds of

channel catfish during the summer months. Some of the largest fishes caught and reported by anglers in 2013 include: a several channel catfish over 16 lbs. including two that were 17 lb. 4 oz., a 12 lb. 6 oz. rainbow trout, a 3 lb. smallmouth bass, and a 4 lb. 8 oz. largemouth bass!

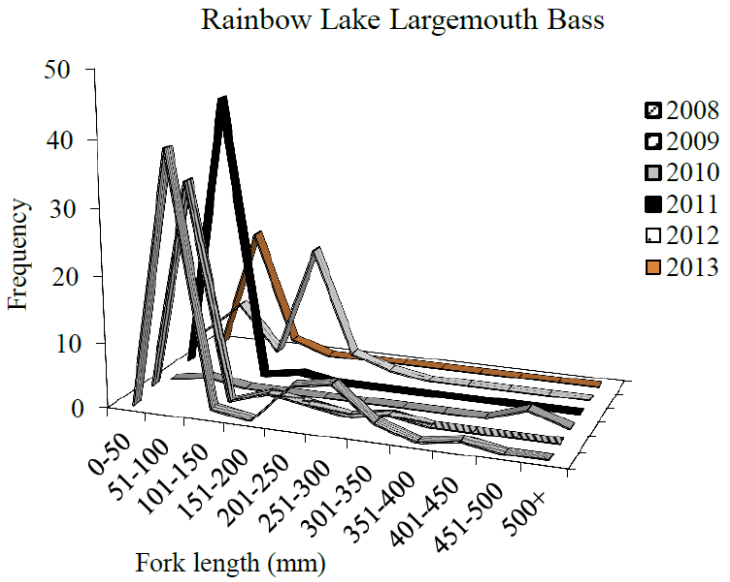

Figure 6: Size class distribution of largemouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

Conclusions

Quarry Lakes remains an important east bay fishery not only for planted rainbow trout and channel catfish, but also for largemouth bass. By continuing to improve the nearshore structure of the lakes using Christmas tree reefs we hope to see bass and sunfish populations gradually increase. Due to the depth of the lakes it is difficult to track certain fish species; however, anglers are continuing to catch large fish and fill their limits. It is important that we continue to monitor these fish communities because the more we can learn about them, the better we can make decisions to manage this important fisheries resource.