



Contra Loma Fisheries Report 2013

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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 communities

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. Five sites were chosen at Contra Loma along the nearshore zones. Results for this report include year 2008-2013.

Bass populations

Adult largemouth bass populations are estimated annually during the spring months (March-May) using a simple mark-recapture method. Bass are collected and tagged just behind the dorsal fin with an individually numbered yellow Floy tag. This procedure is repeated one or two more times over weekly intervals and the number of bass recaptured is recorded. From these data, the number of adult bass can be estimated. For this report, we estimated bass populations in Contra Loma from 2007 to 2013.

Contra Loma Catch Per Unit Effort

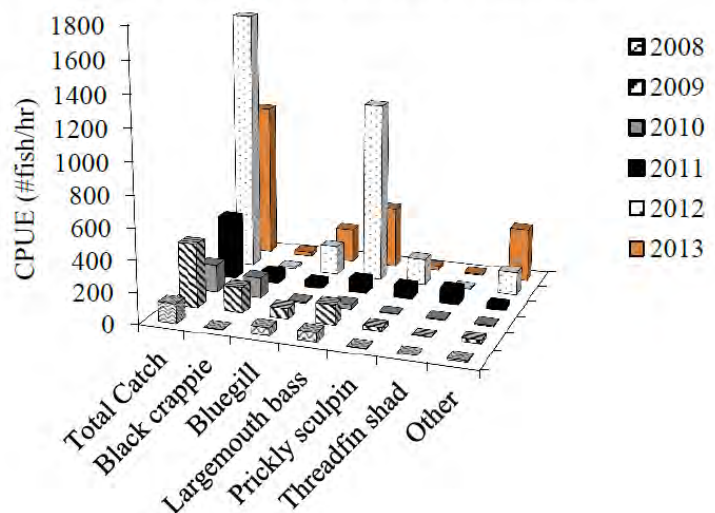


Figure 1: Catch results from fish community surveys from 2008-2013. CPUE is total number of fish caught per hour.

Results

Fish communities

Fish catch rates greatly increased in 2012 and 2013, with largemouth bass and bluegill comprising most of the species caught during those years (Figs. 1 and 2). The “other” category represents the grouping of unidentified species and species with low catch rates; during 2012 and 2013 this category was largely comprised of sunfish that were observed but not captured. Figure 3 displays the size class distributions of largemouth bass. The bass population in Contra

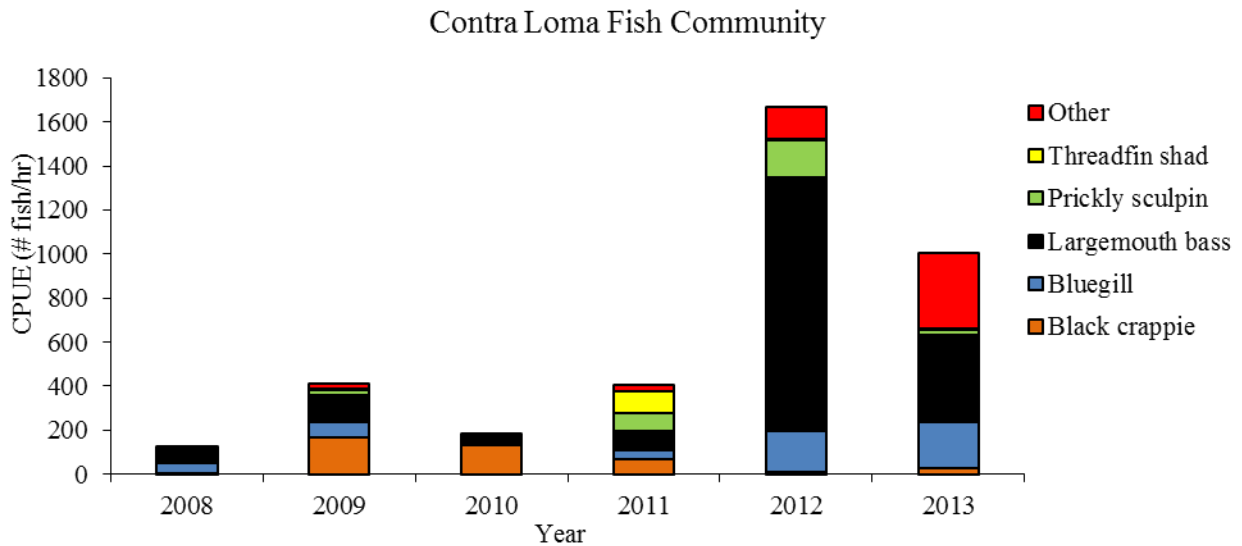


Figure 2: Total number of fish species caught per hour during fish community surveys from years 2008-2013.

Loma has good numbers of young and adult fish. During 2009 and 2012 there were high numbers of juveniles (0-100 mm) observed which suggests good reproductive years. Black crappie and bluegill populations consist largely of adults (100-200 mm) and fewer juveniles (Figs. 4 and 5). However, a large portion of the juvenile sunfish were observed and not netted as mentioned earlier. Overall, the warmwater fishery in Contra Loma appears to remain healthy with plenty of adults reproducing to support future catchable fish.

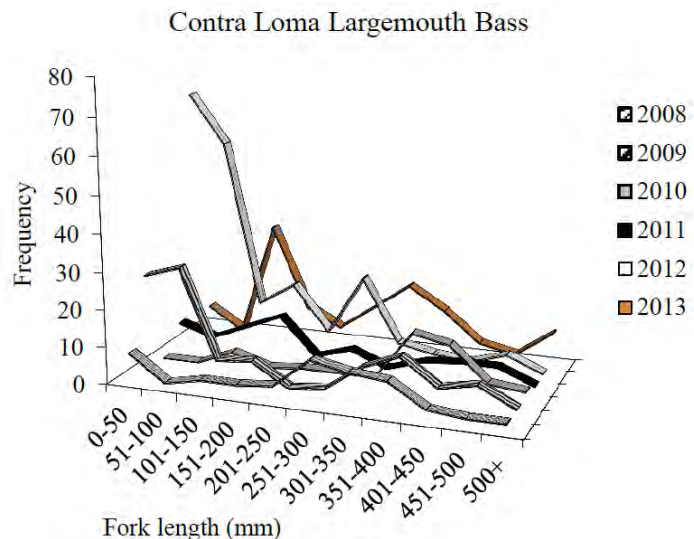


Figure 3: Size class distribution of largemouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

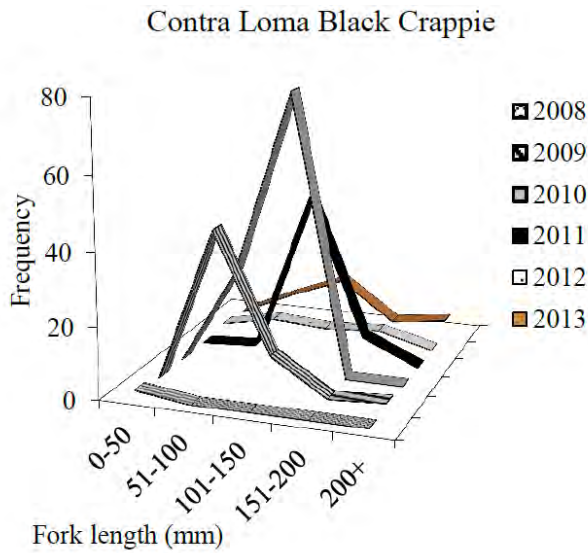


Figure 4: Size class distribution of black crappie during years 2008-2013. Frequency is the total number of fish in a given size class.

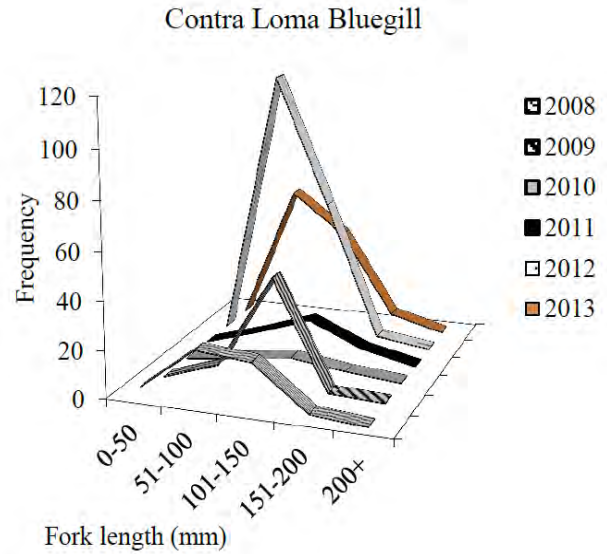


Figure 5: Size class distribution of bluegill during 2008-2013. Frequency is the total number of fish in a given size class.

Largemouth bass populations

The highest estimates of the adult largemouth bass population in Contra Loma were during years 2007, 2009 and 2010 (Fig. 6). However, the large error bars during these years represent less confidence in the calculation, and the actual estimate could fall anywhere within those ranges. During the past 3 years the population appears to have remained fairly stable and the shorter error bars represent more confidence in these estimates. It is important to note that these are estimates of fish larger than about 280 mm (11 in.) total length, due to the fact that this is the smallest size we tag. However, 11 inches is near the minimum size anglers can catch. Thus, these estimates are a good indicator for the amount of bass available to anglers. Florida strain largemouth bass introduced to Contra Loma in 2004 have probably contributed to the large size of the bass as well as the relatively large numbers of largemouth bass in the reservoir. In Contra Loma there remains good spawning and rearing habitat as well as good numbers of forage fish present and we expect the population to remain relatively steady over time.

Contra Loma Largemouth Bass Population

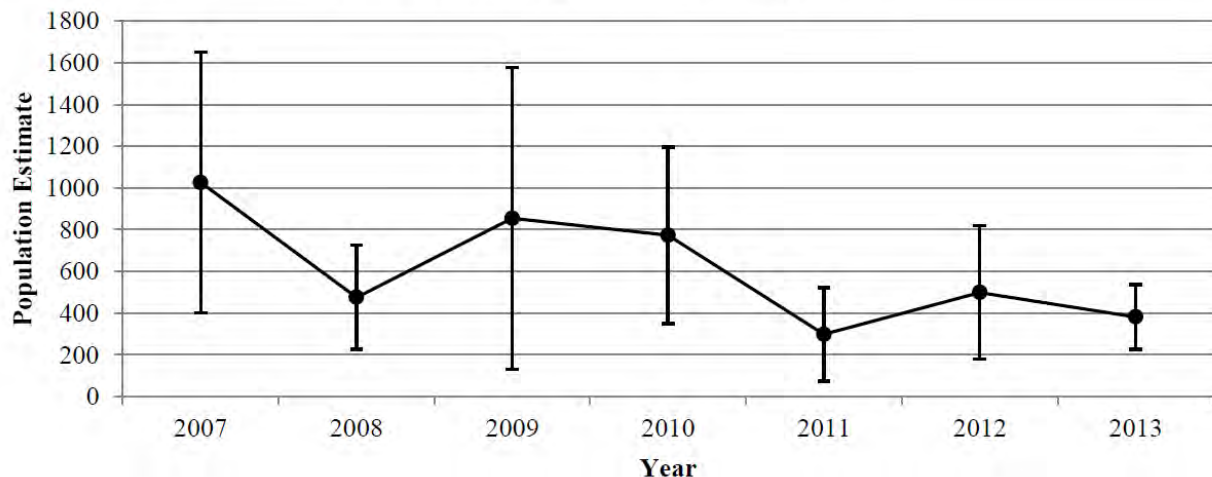


Figure 6: Estimation of number of adult largemouth bass in Contra Loma. 'Adults' are bass that were greater than 11 inches total length. Error bars represent 95% confidence interval that the estimate falls within that range.

Put- n – take fisheries

Besides the naturally reproducing fish species discussed here, Contra Loma reservoir supports a popular put –n – take fishery for rainbow trout and channel catfish. Funded by the District’s Fishing Access permit program, Contra Loma generated more than \$39,000 in revenues and more than \$51,000 was expended on fish plants in 2013. Contra Loma received 11,950 pounds of rainbow trout from EBRPD and an additional 7,500 pounds of trout from the California Department of Fish and Wildlife in 2013. The District also planted 2,500 pounds of channel catfish during the summer months. Some of the largest fish caught and reported by anglers in 2013 include: one 15 lb. 9 oz. channel catfish, an 11 lb. rainbow trout, one 20 lb. 12 oz. striped bass, and a 15 lb. 8 oz. largemouth bass which is a new lake record!

In late October, Contra Loma hosts the most popular fishing derbies of any of the Bay Area reservoirs! The Parks Express sponsored “Special Kids Derby” followed by the Parks Express Senior’s derby and culminated by the Striped Bass Association’s Kid’s Derby over 300 anglers in 2013! These anglers caught a total of 437 rainbow trout which were donated by the District’s trout contractor, Mt. Lassen Trout Farms!

Conclusions

As you can see, fish communities and individual populations in Contra Loma fluctuate over time. Changes in fish populations may be caused by natural cycles, interactions among fishes (competition and predation), or habitat fluctuations (water temperature, spawning habitat, etc.). Thus, the more we monitor these patterns the more we can learn about them, which will help us make decisions to manage this important resource.

