



Del Valle Fisheries Report 2013

EBRPD Fisheries Department

Joe Sullivan

Fisheries Resource Analyst

Peter Alexander

Fisheries Program Manager

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. Nine sites were chosen at Del Valle 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. Surveys are conducted only in the south end of the lake. This area of the lake is also the primary nursery grounds for bass as well as other warm water fish species. The prevailing winds from the northwest force warm surface water to the south end where shallow, weedy conditions make ideal rearing habitat for warm water species. Bass are collected and tagged just behind the dorsal fin with an individually numbered yellow Floy tag. This procedure is repeated one or two

Del Valle Catch Per Unit Effort

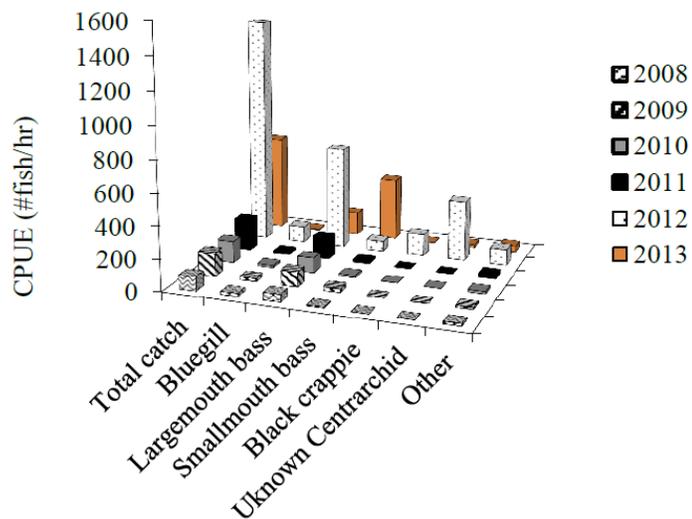


Figure 1: Catch results from fish community surveys from 2008-2013. CPUE is total number of fish caught per hour.

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 Del Valle from 2007 to 2013. A population survey was not conducted in 2012 due to abnormally low water levels (Fig 6).

Results

Fish communities

Del Valle hosts the most diverse fisheries of any Bay Area lake or reservoir! Anglers target: rainbow trout, channel catfish, two species of salmon, bluegill, redear sunfish, black crappie, striped bass, largemouth bass, smallmouth bass, as well as several other species of fish.

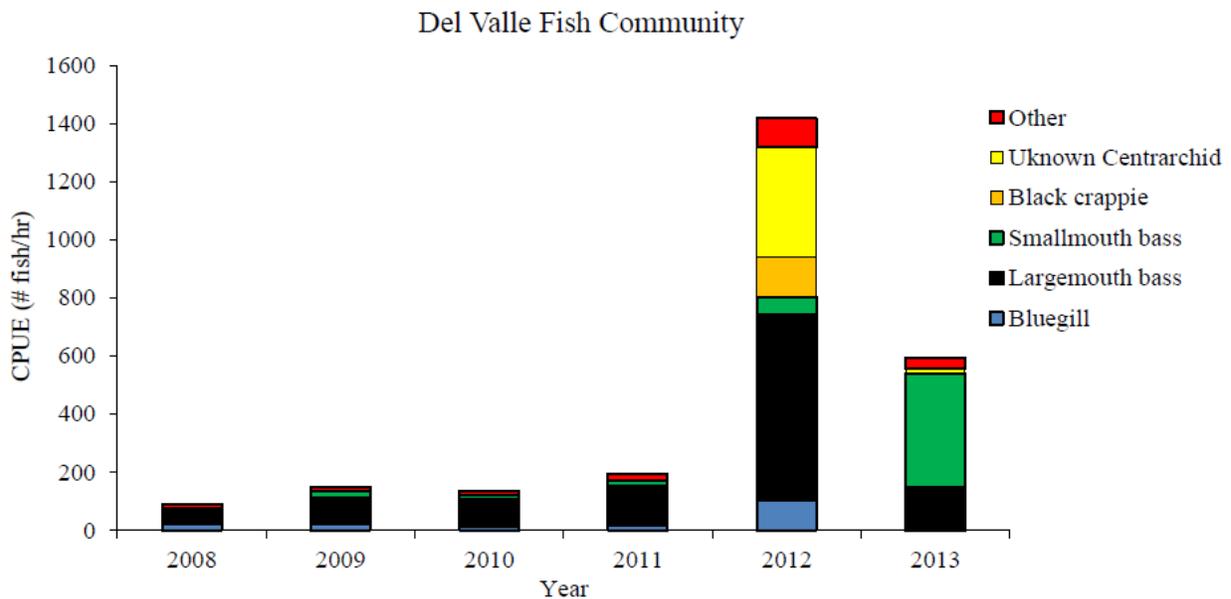


Figure 2: Total number of fish species caught per hour during fish community surveys from years 2008-2013.

Fish catch rates were highest the past two years (Figs. 1 and 2). Largemouth bass comprised the most numerous fish species captured most years, except in 2013 when large numbers of smallmouth bass were observed (Figs. 1 and 2). In 2011 a large number of sunfish species (Centrarchids) were observed during the survey. These sunfish were not captured and identified but presumable were made up of the lake's most numerous species including redeared sunfish, bluegill and black crappie. The size class distributions of largemouth bass look very good for all years, with high numbers of juveniles and adults as a result of successful spawning and recruitment (Fig. 3). Smallmouth bass had a very good

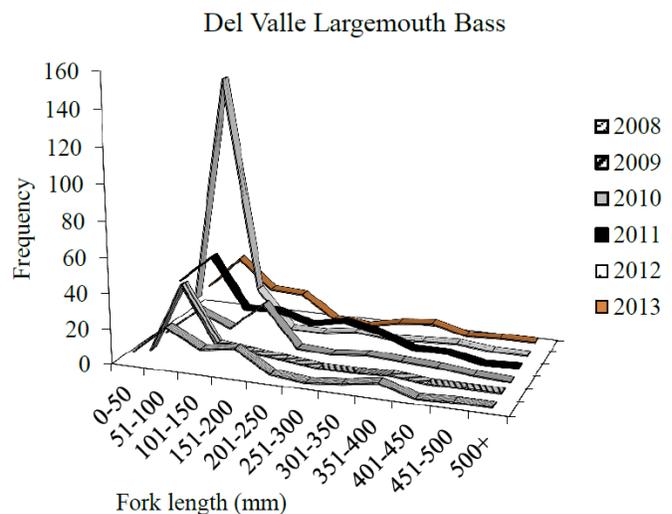


Figure 3: Size class distribution of largemouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

reproductive year in 2011 and that cohort appears to have survived strongly the following year (Fig. 4). Based on these observations we expect the smallmouth bass fishery to be very good the next couple years! Although we observed fewer bluegill in 2013 compared to 2012, their size class distribution suggests the population is remaining very stable with good numbers of juveniles and adults present (Fig. 5). Inland silversides are a very important forage fish for the larger predators in Del Valle. Although they are not included in this report, we continue to see very large numbers of silversides on an annual basis and this important forage fish may be supporting several gamefish populations as well as piscivorous birds such as Western and Clark’s grebes at Del Valle!

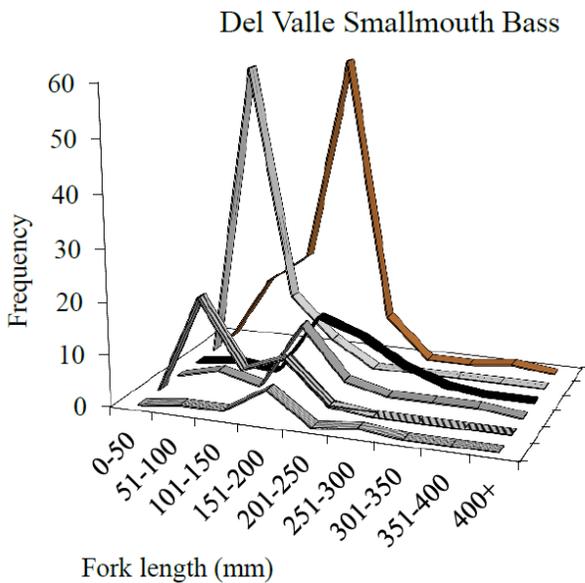


Figure 4: Size class distribution of smallmouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

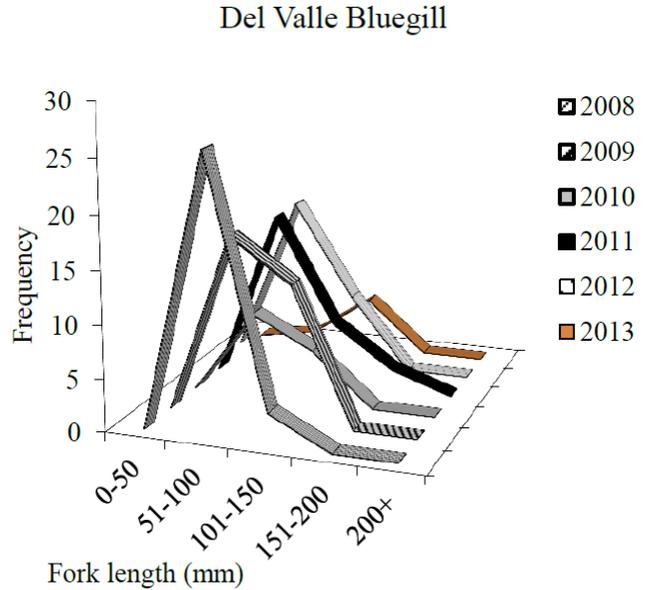


Figure 5: Size class distribution of bluegill during 2008-2013. Frequency is the total number of fish in a given size class.

Largemouth bass populations

The adult largemouth bass population appears to be steady at around 500-1,000 individuals (Fig. 6). Two important notes: 1) only individuals greater than 11 in. are included in the estimate, and 2) surveys are conducted only in the south end of the lake (where the highest concentrations of largemouth bass are observed). There was an increase in the population during 2011; however, the large error bars represent less confidence in the estimation. These results indicate that the largemouth bass population in Del Valle is remaining fairly stable and this trend is likely to continue due to the successful spawning and good recruitment of juvenile largemouth bass growing to the adult stage!

Del Valle Largemouth Bass Population

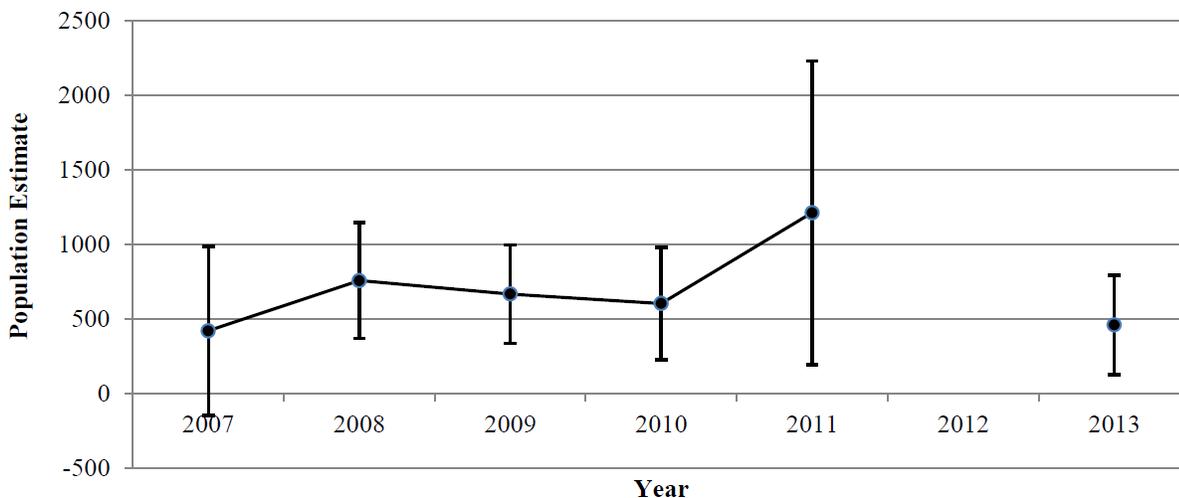


Figure 6: Estimation of number of adult largemouth bass in Del Valle. ‘Adults’ are bass that were greater than 11 inches total length. Error bars represent 95% confidence interval that the estimate falls within that range.

Put –n- take fisheries

Besides the naturally reproducing fish species discussed here, Del Valle reservoir supports the District’s most popular and heavily stocked put –n – take fishery for rainbow trout and channel catfish! Funded by the District’s Fishing Access permit program, Del Valle generated over \$115,000 in revenues and over \$131,000 was expended on fish plants in 2013. Del Valle received 34,290 pounds of rainbow trout from EBRPD and an additional 22,300 pounds of trout from the California Department of Fish and Wildlife in 2013. The District also planted 4,250 pounds of channel catfish during the summer months. Some of the largest fish caught and reported by anglers in 2013 include: an 18 lb. channel catfish, a 9 lb. 4 oz. largemouth bass, a 9 lb. 4 oz. rainbow trout, several striped bass ranging from 14 lbs. up to 19 lbs., two smallmouth bass over 2 lbs., and a 3 lb. black crappie! In November of 2012 a 100+ lb. white sturgeon set a new lake record! This fish is probably one of three white sturgeon that were planted in the lake 20 years ago, in 1993. Del Valle also receives plants of inland chinook salmon and kokanee fingerlings from the CDFW. Plants of 20,000 chinook and 20,000 kokanee took place in May. Relatively few anglers target the adults of these two species which prefer the deepest section of the reservoir near the dam and in Hetch Hetchy Cove. However, a few of these salmon are caught each year by trout anglers! Also in the fall of 2013, anglers enjoyed an increase in the striped bass action with many striper tipping over 15 lbs. We expect to see some real whoppers coming out of Del Valle over the next couple years!

Conclusions

The fish communities in Del Valle, especially largemouth bass, appear to be fairly robust. There is a good distribution of sizes of largemouth bass in the population which should continue to provide excellent fishing opportunities over the next few years. All indicators point toward the smallmouth bass fishery improving over the next couple years, further improving the high diversity angling that Del Valle is noted for! Thus, it is important 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.

