

Modest Creek Lake – 2016

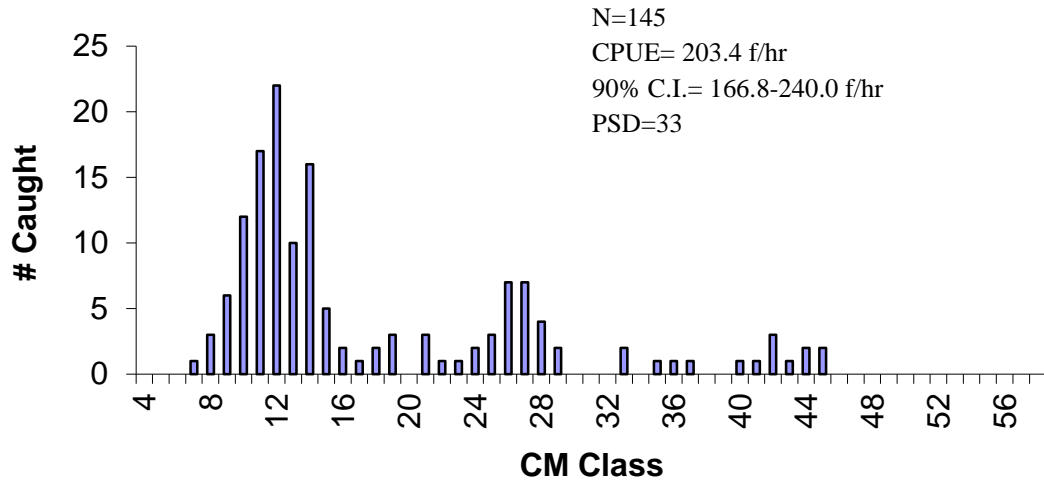


Figure 1. Length-frequency distribution for Largemouth Bass collected by electrofishing Modest Creek Lake in April 2015.

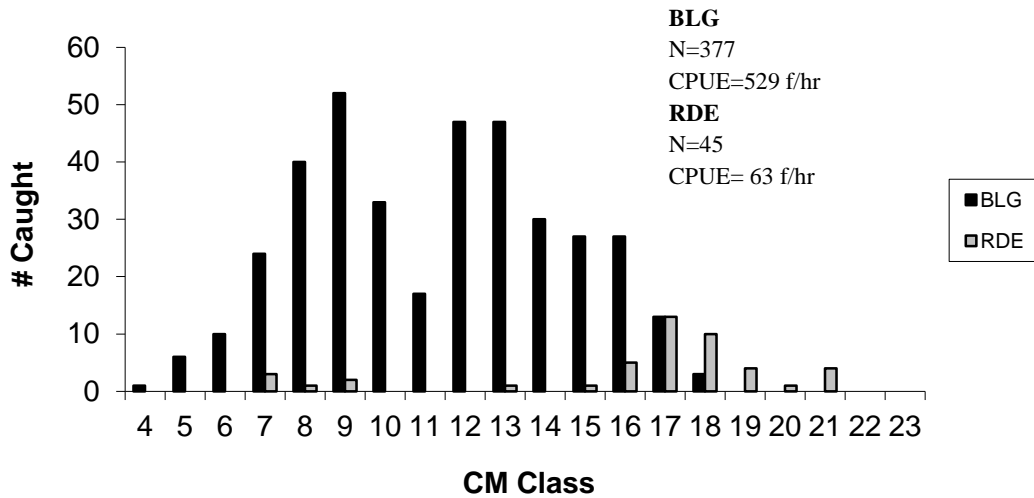


Figure 2. Length-frequency distribution for Bluegill and Redear Sunfish collected by electrofishing Modest Creek Lake in April 2015.

Table 1. Electrofishing CPUE (#/hr) data collected from Modest Creek Lake 2000, 2001, and 2015.

Year/Sp	Effort (s)	Young	Stock	Quality	Preferred	Memorable	Total
LMB		(0-19cm)	(20-29 cm)	(30-37 cm)	(38-50 cm)	(51-62 cm)	
2015	2566	140.3	42.1	7.0	14.0		203.4
2001	2400	31.5	21.0	4.5	3.0		60.0
2000	3584	15.1	40.2	2.0	1.0	2.0	60.3
BLG		(0-7 cm)	(8-14 cm)	(15-19 cm)	(20-24 cm)	(25-29 cm)	
2015	2566	58	373	98			529
2001	1200	18	156	60			234
2000	1800	54	118	8			180
RDE		(0-9 cm)	(10-17 cm)	(18-22 cm)	(23-27 cm)	(28-32 cm)	
2015	2566	8	28	27			63
2001	1200	0	39	33			72
2000	1800	14	22	14			50
BLC		(0-12 cm)	(13-19 cm)	(20-24 cm)	(25-29 cm)	(30-37 cm)	
2015	2566	1	20	10			31
2001	2400						0
2000	1800	2	6				8

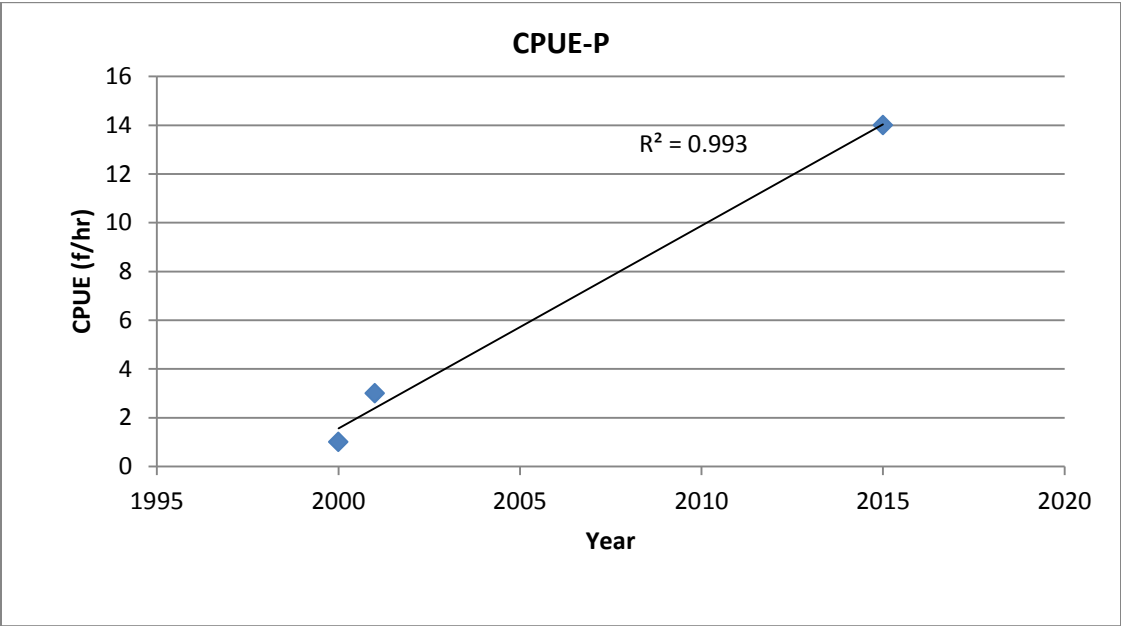
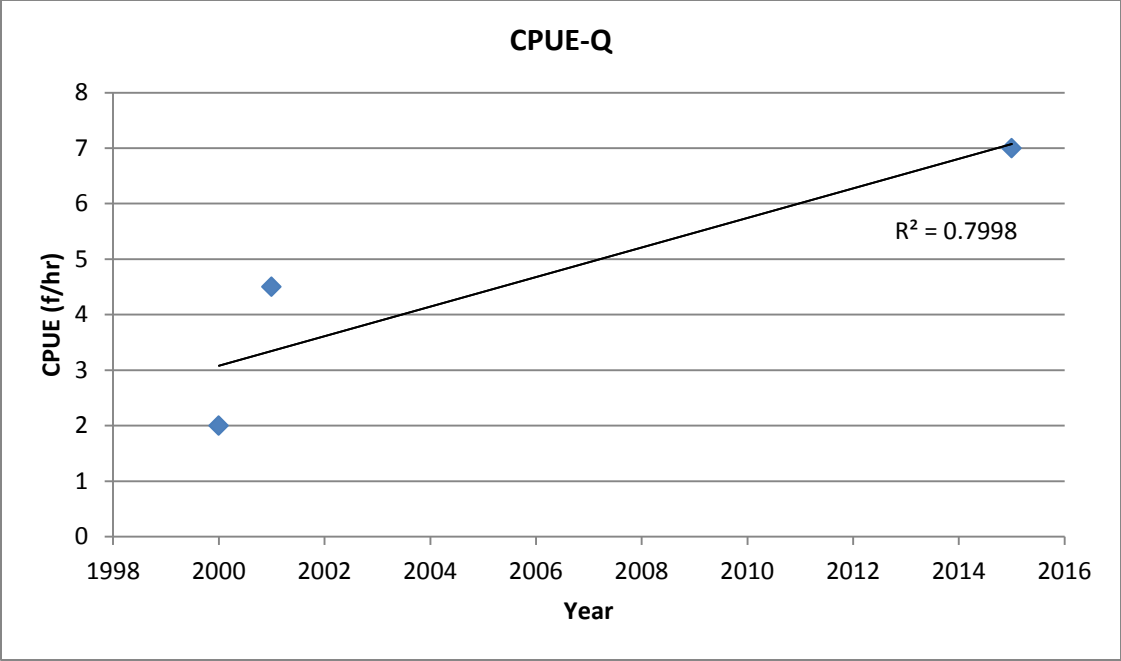


Figure 3. Largemouth Bass stock indices collected from Modest Creek Lake. ($P > 0.1$ for Quality and $P = 0.05$ for Preferred).

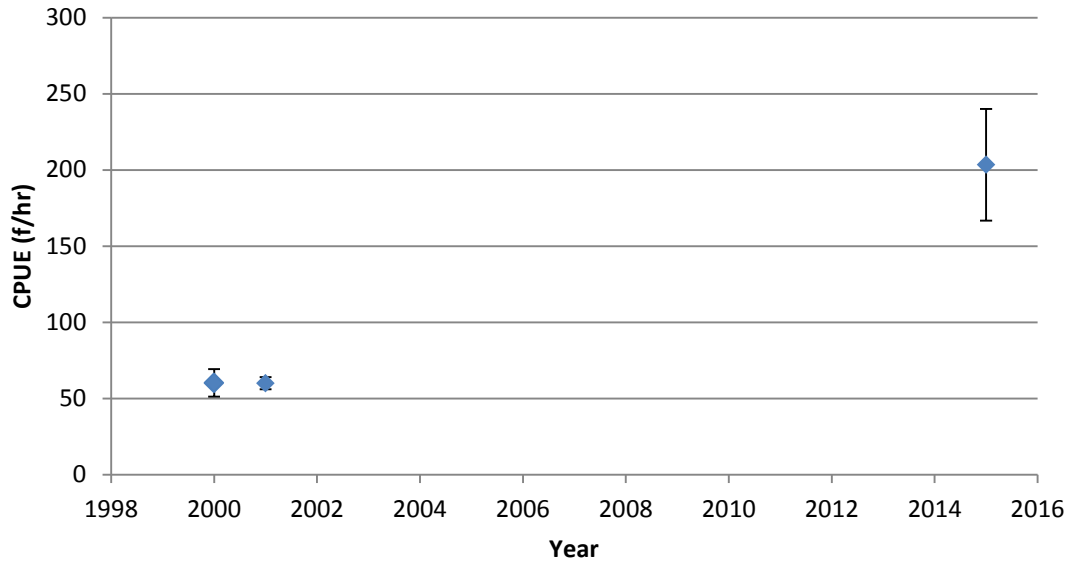


Figure 4. Largemouth Bass total CPUE at Modest Creek Lake. Lines are 90% confidence intervals.

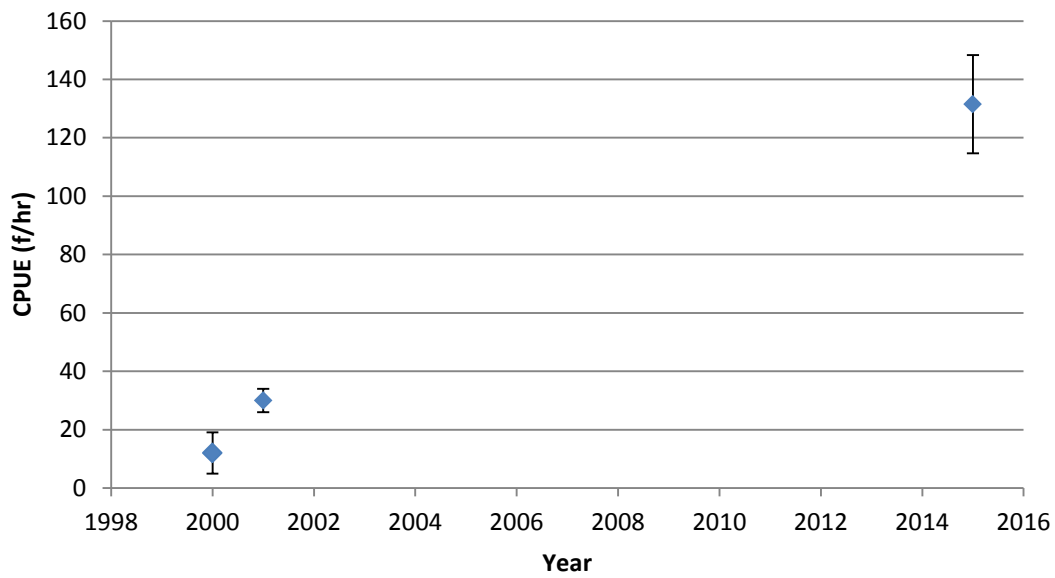


Figure 5. Age-1 Largemouth Bass CPUE collected at Modest Creek Lake. Lines are 90% confidence intervals.

Table 2. Proportional and relative stock densities for Largemouth Bass, Bluegill, Redear Sunfish, and crappie.

Species	Year	PSD	RSD-P	RSD-M
LMB	2015	33	22	0
	2001	26	11	0
	2000	11	7	4
BLG	2015	21	0	0
	2001	28	0	0
	2000	6	0	0
RDE	2015	49	0	0
	2001	46	0	0
	2000	39	0	0
Crappie	2015	33	0	0
	2001	0	0	0
	2000	0	0	0

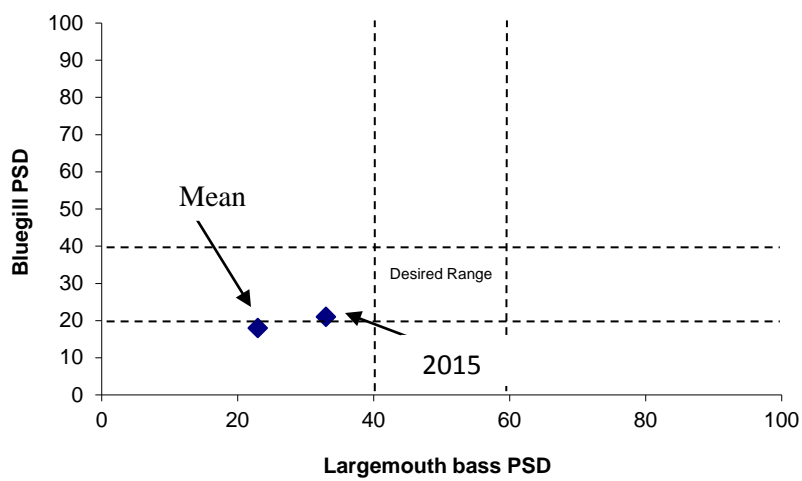


Figure 6. Largemouth Bass/Bluegill PSD relationship based on spring electrofishing surveys at Modest Creek Lake.

Methods

- Four runs (0.71 hrs) of daytime, boat electrofishing were conducted on 29 April 2015 for community assessment and Largemouth Bass population dynamics data. All fish were collected on all runs. Water temperature was 18° C.

KEY FINDINGS

- The Largemouth Bass size distribution is dominated by smaller fish with bass only up to 457 mm (18 inches) sampled in 2015. Density of bass in all size classes were better in the 2015 sample than in previous samples taken in 2000 and 2001.
- Relative abundance was high with a total CPUE of 203.4 f/hr. Historic samples in 2000 and 2001 had much lower CPUE's around 60 f/hr. Most of the increase comes from high density of Young bass with a CPUE-Y of 140.3 f/hr. CPUE-P was 14.0 f/hr and no bass were sampled in the Memorable size range.
- Size indice trends increased greatly in 2015. With 14 years between samples it is hard to track a real trend in abundance but density in all size classes increased in 2015 compared to previous samples.

- Recruitment of Largemouth Bass increased significantly in 2015 with an age-1 CPUE of 131.5 f/hr. Previous age-1 densities in the early 2000's were less than 35 f/hr. This will hopefully result in high angler satisfaction for several years as this year class matures.
- Size structure indices for Largemouth Bass at Modest Creek are slightly lower than desired with a Proportional Stock Density (PSD) of 33 and Relative Stock Density (RSD-P) of 22.
- Bluegill relative abundance was very high with a CPUE of 529 f/hr with most Bluegill sampled in the Stock size class. No Bluegill greater than 200 mm (8 inches) were sampled in 2015. Redear Sunfish density was low with a CPUE of 63 f/hr and no redear sampled in the Preferred size range. The largest redear measured was 215 mm (8.5 inches). Size distribution for both sunfish species were very similar to sizes observed in 2000 and 2001.
- Size structure indices for Bluegill were lower than desired with a PSD of 21 and no measureable RSD. Redear Sunfish PSD was higher with a value of 49 but, like Bluegill, there were no redear larger than Quality size in the sample.
- Black Crappie were present in the 2015 sample but at low abundance. CPUE was 31 f/hr and no fish above Quality size were sampled. The largest crappie measured was 218 mm (8.5 inches) and only seven fish greater than 200 mm were sampled.

Management Recommendations

- Monitor Largemouth Bass population density and size structure as needed to track any changes in the populations of bass and sunfish.
- Evaluate current Largemouth Bass harvest regulation.
- Continue to stock 10 Channel Catfish per acre annually to maintain the fishery.
- Work with the town of Victoria to potentially improve habitat at the reservoir with hinge tree introductions.

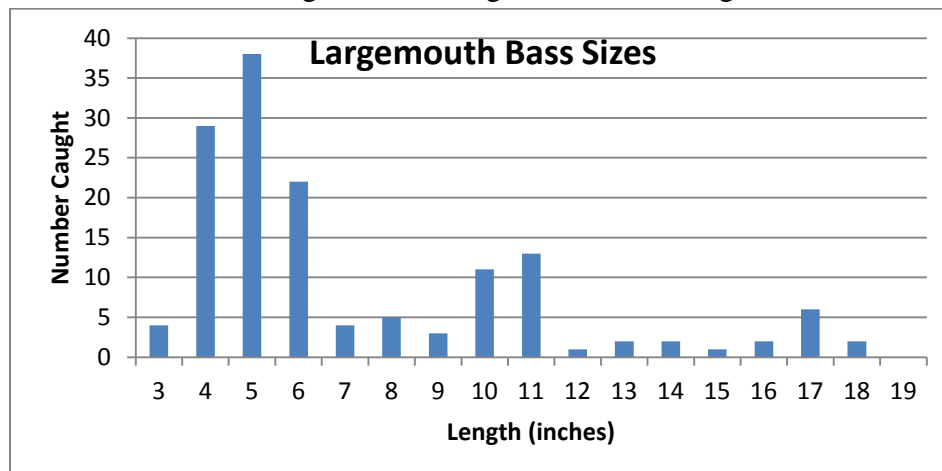


Modest Creek Lake 2016

Modest Creek Lake is a 29-acre impoundment located in Lunenburg County, Virginia. The lake is owned by the Town of Victoria and serves as a drinking water supply reservoir. Fisheries management has been provided since 1983 by the Virginia Department of Game and Inland Fisheries (VDGIF) after reconstruction of the dam in that year. Modest Creek Lake is located just north of the town of Victoria and offers anglers fishing opportunities in a picturesque, rural setting. Gasoline engines are not allowed at Modest Creek but electric motors can get you around this reservoir. Habitat in the lake consists of hinge tree fish attractors placed by VDGIF, other natural woody debris and some aquatic vegetation. Other prohibited activities at Modest Creek Lake include swimming, open-air fires, trotlines, fishing tournaments involving prizes, littering, waterfowl hunting, camping, and seining.

Anglers fishing Modest Creek are likely to catch Largemouth Bass, Channel Catfish, Bluegill, Redear Sunfish (AKA shellcracker), and Black Crappie. Largemouth Bass harvest is regulated with a 15-inch minimum length limit and a two bass per day bag limit. All other fish species are regulated by statewide limits.

The Largemouth Bass fishery at Modest Creek Lake is average. Based on spring electrofishing samples, Largemouth Bass were historically low in abundance but density of bass in the 2015 sample was much higher than previous years. This difference was mostly for small bass which will hopefully result in good fishing years to come. Largemouth Bass size structure is average with few fish over 15 inches in length and the largest fish measuring 18 inches.



Bluegill, Redear Sunfish, and crappie are common in Great Creek Lake with Bluegill being the most abundant of the panfish species. Redear Sunfish tend to be larger than Bluegill but shellcracker densities were low in 2015. Anglers can expect to catch Bluegill, redear, and crappie up to 8 inches. Beginning in late April, anglers should be able to catch a lot of fish as they begin to move into shallow water to spawn.

In addition to these species, the VDGIF stocks 290, 10-inch Channel Catfish every year. Natural reproduction in small lakes is generally insufficient to support a viable population so the population is supplemented through annual stockings. Fishing is generally better for catfish during the summer and at night.

The hours of use at Modest Creek Lake are 6:00 AM – midnight. To get to the lake, take Route 49 north out of Victoria to Burkeville Road then turn left on Reservoir Road.