



Horsepen Lake – 2013

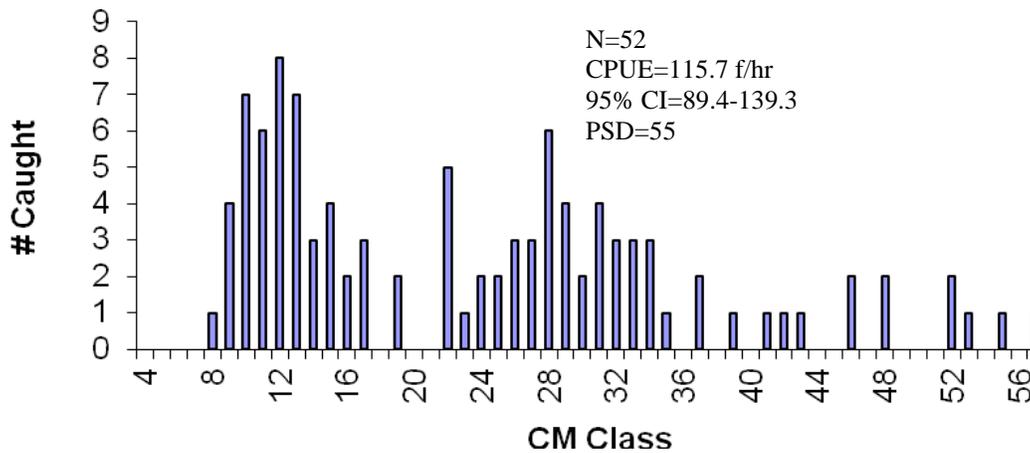


Figure 1. Length-frequency distribution for largemouth bass collected by electrofishing Horsepen Lake in April 2012.

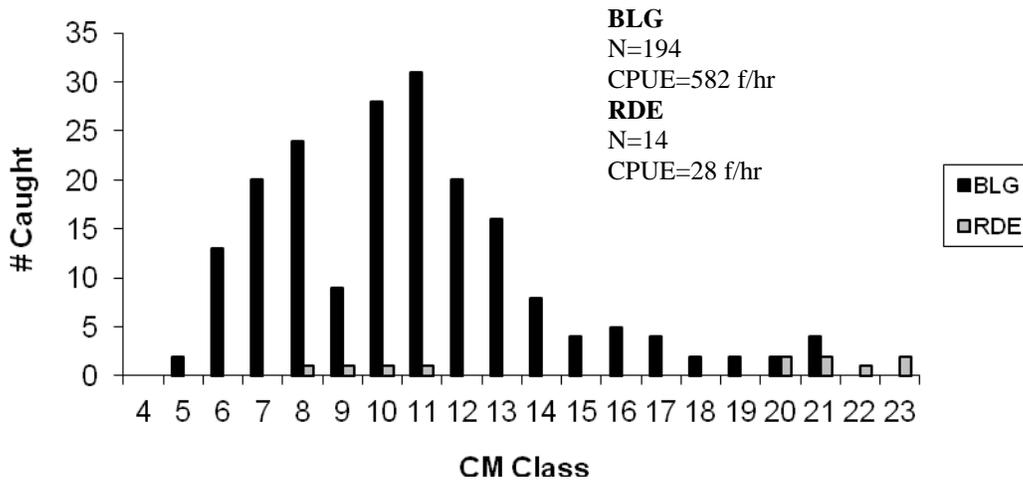


Figure 2. Length-frequency distribution for bluegill and redear sunfish collected by electrofishing Horsepen Lake in April 2012.

Table 1. Electrofishing CPUE (#/hr) data collected from Horsepen Lake, 2004 – 2012.

Species	Year	Effort (s)	Young	Stock	Quality	Preferred	Memor.	Total
LMB			(0-19cm)	(20-29cm)	(30-37cm)	(38-50cm)	(≥51cm)	
	2012	3235	52.3	28.9	20.0	8.9	5.6	115.7
	2011	3195	91.3	67.6	24.8	15.8	3.4	202.8
	2010	3598	122.1	55	26	11	2	216.1
	2009	3651	39.4	66.1	18.7	11.8	1.0	137.1
	2008	3594	58.1	35.1	12.0	3.3	1.0	109.2
	2007	4487	65.0	47.3	20.9	12.0	0.8	146.0
	2006	3307	98	17.4	31.6	17.4	0	164.4
	2005	4155	35.5	17.3	32.1	11.3	0	96.2
2004	2856	7.6	23.9	17.6	1.3	0	50.4	
BLG			(0-7cm)	(8-14cm)	(15-19cm)	(20-24cm)	(≥25cm)	
	2012	1200	105	408	51	18	0	582
	2011	1200	66	231	21	6	0	324
	2010	1952	13	105	18	7	0	144
	2009	2586	10	136	21	7	0	174
	2008	902	44	48	0	4	0	96
	2007	1353	24	43	32	0	0	98
	2006	929	54	97	85	0	0	236
	2005	900	12	72	16	0	0	100
2004	1307	3	226	28	0	0	256	
RDE			(0-9cm)	(10-17cm)	(18-22cm)	(23-27cm)	(≥28cm)	
	2012	1200	6	6	15	15	0	42
	2011	1200	0	39	63	60	0	162
	2010	1952	0	44	28	0	0	72
	2009	2586	0	74	21	0	0	95
	2008	902	0	44	0	0	0	44
	2007	1353	3	35	11	0	0	48
	2006	929	4	39	35	0	0	78
	2005	900	0	44	0	0	0	44
2004	1307	6	39	3	0	0	47	

Table 2. Proportional and relative stock indices for largemouth bass, bluegill, and redear sunfish collected during electrofishing in Horsepen Lake, 2004-2012.

SPECIES	YEAR	PSD	RSD-38	RSD-51
LMB	2012	55	24	10
	2011	39	17	3
	2010	41	14	2
	2009	32	13	1
	2008	31	8	2
	2007	42	16	1
	2006	74	26	0
	2005	71	19	0
	2004	44	3	0
BLG		PSD	RSD-20	RSD-25
	2012	14	4	0
	2011	10	2	0
	2010	20	6	0
	2009	17	4	0
	2008	8	8	0
	2007	43	0	0
	2006	47	0	0
	2005	18	0	0
2004	11	0	0	
RDE		PSD	RSD-23	RSD-28
	2012	83	42	0
	2011	76	37	0
	2010	38	0	0
	2009	22	0	0
	2008	0	0	0
	2007	24	0	0
	2006	14	0	0
	2005	0	0	0
2004	7	0	0	

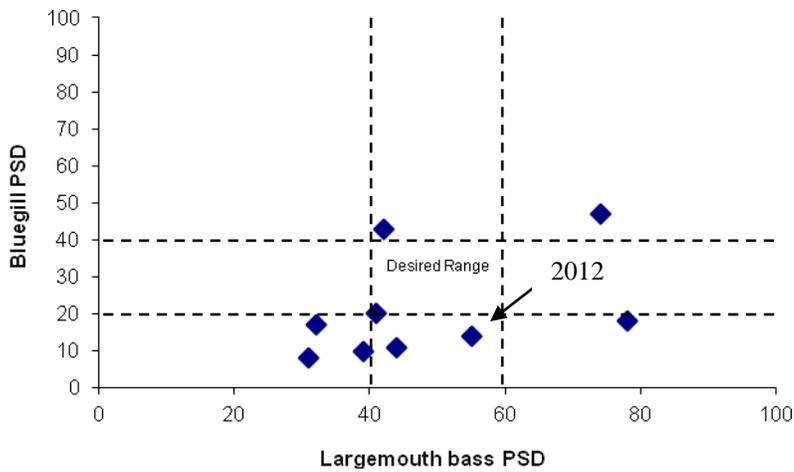


Figure 3. Largemouth bass/bluegill PSD relationship based on April 2012 electroshocking surveys at Horsepen Lake.

Methods

- Four runs (0.9 hr) of daytime, boat electrofishing were conducted on 7 May 2012 for community assessment and largemouth bass population dynamics data. All fish were collected on two runs while bass were collected on all runs. Water temperature was 22° C.

KEY FINDINGS

- The largemouth bass size distribution continues its consistent pattern but most size classes declined in 2012. As in recent years, bass were represented in all size classes with six largemouth over 20 inches and with 3 over 22 inches (569 mm), the trophy minimum size limit.
- Relative abundance declined sharply in 2012 with 115.7 f/hr sampled after consecutive years of relative abundance over 200 f/hr. Largest declines were in the Young and Stock size classes and, more concerning, in the Preferred size class (8.9 f/hr). Bass in the Memorable size class were more dense than in any year since the lake was restocked in 2003 at 5.6 f/hr.

- Stock indices increased due to the reduction of smaller bass in the population with a proportional stock density (PSD) of 55. RSD-P was also high with a value of 24 and RSD-M was at an all-time high of 10.
- Sunfish densities remain inconsistent at Horsepen with another steep increase in relative abundance of bluegill (582 f/hr) and a steep decrease in CPUE of redear sunfish (42 f/hr). Bluegill population increases occurred in all size classes but there were still no fish in the Memorable class. Likewise, redear sunfish population decreases occurred in all size classes except Young. Redear sunfish of larger sizes were still sampled but many fewer than in 2011. Redear sunfish CPUE-P was 15 f/hr in 2012 compared to 60 f/hr in 2011.
- Bluegill size indices were very similar to the values calculated in 2011 with a PSD of 14. RSD-P was 4. Redear sunfish indices were also consistent with 2011 with a PSD of 83 and an RSD-P of 42.

Management Recommendations

- Continue to monitor the largemouth bass population with spring electrofish sampling.
- Stock channel catfish at 15 fish/acre to maintain the fishery.
- Continue to fertilize to improve/increase productivity in the lake.