

Fishing access:

The boat ramp is located on the northwest shore. There is also shore fishing access around the ramp area as well as around the entire shoreline, which may be limited somewhat by vegetation.

Condition of all structures (i.e. spillway, boat ramps, level regulators, etc.):

The dam grade and spillway are in good condition. The gravel area around the boat ramp needs some work as there are large ruts from heavy runoff.

Field observations of aquatic vegetation condition:

Jones Lake is completely surrounded with submergent aquatic vegetation of various species to a depth of 4-6 feet, with heavy amounts in the creek arms. The emergent vegetation at Jones Lake is mainly cattails and bulrushes and covers the entire shoreline in the upper 2/3 of the lake.

CHEMICAL DATA**Field observations of water quality and pollution problems:**

The major pollution concern in Jones Lake is the effects of siltation, which has entered the system during periods of heavy rainfall. Other than that no other problems are evident. Water clarity is fair with a secchi disc reading of 2.5 ft. Other water quality characteristics were measured in the field on July 8, 2013, using a HACH water quality kit and a Hanna multiparameter meter. Results are found in Table 1.

Presence of a thermocline and depth from surface: No

Station for water chemistry located on attached map: Yes

Table 1. Water chemistry results from Jones Lake, Hand County, July 8, 2013.

Station	Depth (ft)	Temp (F)	DO (ppm)	CO ₂ (ppm)	ALK (mg/L)	HRD (mg/L)	pH	Cond. (µS/cm)	TDS (ppm)	Sal.	ORP	Secchi (ft)
A	Surface	78.95	6.40	39.4	173	225	8.26	454	227	0.22	-179.5	2.5
A	12.6	75.43	1.62	35.6	189	278	7.55	492	247	0.24	-186.4	

BIOLOGICAL DATA**Methods:**

Jones Lake was sampled on July 8-10, 2013, with ten overnight trap net sets. The trap nets have 3ft x 5ft frames, 60ft leads, and ¾ inch knotted mesh. No experimental gill nets were set this survey. On the evening of October 1, 2013, Jones Lake was electrofished for 60 minutes (6-ten minute transects) to sample the largemouth bass population. The boat was set up with 120 pulses per second of DC current at 340 volts with around 10 amps to electrofish the lake that had a conductivity of 559µS/cm with a water temperature of 62.1°F. Fish indices and statistics were completed using Winfin.

Results and Discussion:

Trap Net Catch

Table 2. Total catch of ten, overnight ¾-inch frame nets at Jones Lake, Hand County, July 8-10, 2013.

Species	#	%	CPUE	80% C.I.	Mean CPUE*	PSD	RSD-P	Mean Wr
Black Bullhead	5,840	97.5	584.0	± 224.9	187.9	44	2	86
Black Crappie	88	1.5	8.8	± 5.0	2.6	4	2	109
Yellow Perch	54	0.9	5.4	± 3.8	4.2	4	0	97
Bluegill	7	0.1	0.7	± 0.7	18.6	--	--	125

* Sixteen year mean (1976, 1982-84, 1986-88, 1990, 1993, 1995, 1998, 2001, 2002, 2006, 2008, 2011)

Electrofishing Catch

Table 3. Total catch from six ten-minute runs of fall nighttime electrofishing at Jones Lake, Hand County, October 1, 2013.

Species	#	%	CPUE	80% C.I.	Mean CPUE*	PSD	RSD-P	Mean Wr
Largemouth Bass	138	100	138	± 30.0	151.2	100	70	122

* Three year mean (2002, 2008, 2011)

Largemouth Bass

The largemouth bass population in Jones Lake has rebounded nicely from the previous survey. The CPUE of 138 fish per hour of electrofishing is well above the 47.0 from the 2011 survey (Table 8) but still slightly below the 151.2 three year mean (Table 3). Figures 1 through 3 illustrate the length frequency histograms for the last three surveys. Size has increased with a PSD of 100 and an RSD-P of 70 compared to the 82 and 0, respectively, from the 2011 survey. These numbers will decrease in the next survey as the big year class of substock fish move into the population as those fish are not calculated in the PSD and RSD-P. Growth is good with means right on to slightly above statewide, regional and SLI means (Table 4). Condition is good with a mean Wr of 122.

Table 4. Average back calculated lengths (mm) for each age class of largemouth bass sampled from Jones Lake, Hand County, 2013.

Year Class	Age	N	Back-calculated Age				
			1	2	3	4	5
2013	0	115					
2011	2	8	161	298			
2010	3	9	114	318	372		
2009	4	2	116	232	335	368	
2008	5	1	87	147	226	340	391
All Classes		135	119	249	311	354	391
Statewide Mean			96	182	250	305	342
Region II Mean			105	183	246	296	328
SLI* Mean			99	183	246	299	332

* Small Lakes and Impoundments

Figure 1. Length frequency histogram for largemouth bass sampled from Jones Lake, Hand County, 2013.

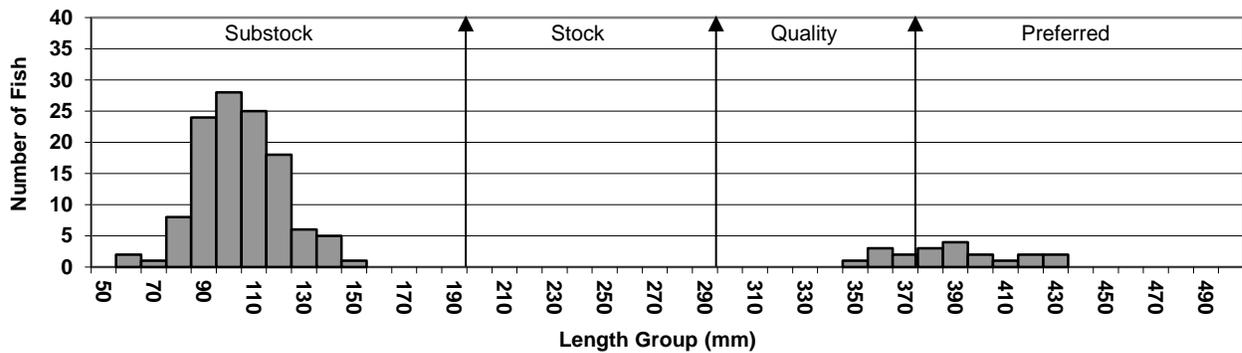


Figure 2. Length frequency histogram for largemouth bass sampled from Jones Lake, Hand County, 2011.

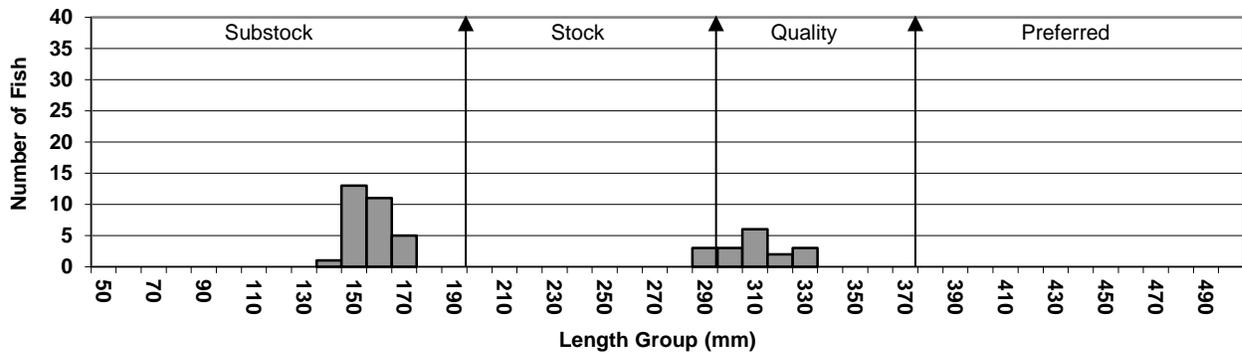
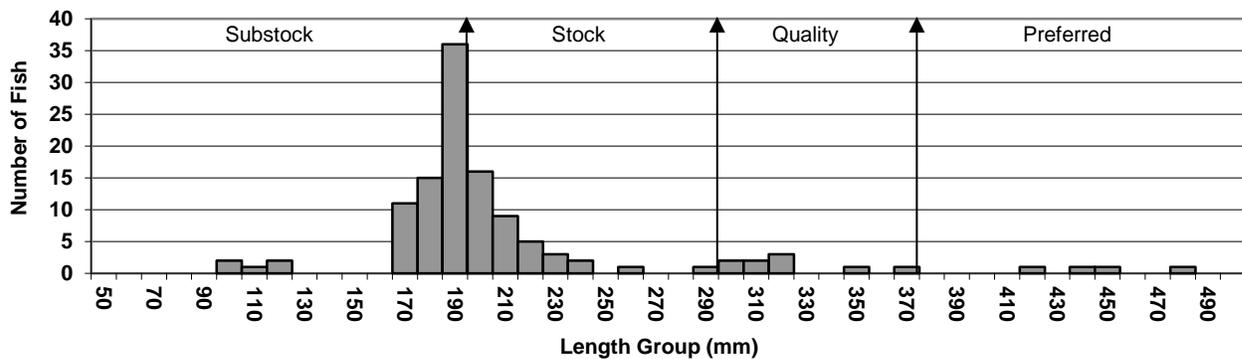


Figure 3. Length frequency histogram for largemouth bass sampled from Jones Lake, Hand County, 2008.



Black Crappie

Black crappies continue to be the dominant panfish species present in Jones Lake. The CPUE of 8.8 fish per net night is above the 1.0 from the 2011 survey (Table 8) but it is above the 2.6 sixteen year mean (Table 2). Figures 4 through 6 illustrate the length frequency histograms for the last three surveys. They all look fairly similar except for the large year class that just moved into the stock category. Growth is good with means right on with statewide, regional and SLI means (Table 5). Condition is good with a mean W_r of 109.

Table 5. Average back calculated lengths (mm) for each age class of black crappie sampled from Jones Lake, Hand County, 2013.

Year Class	Age	N	Back-calculated Age							
			1	2	3	4	5	6	7	
2012	1	1	86							
2011	2	84	77	118						
2009	4	1	71	148	188	252				
2008	5	1	78	207	214	216	218			
2006	7	1	100	143	188	228	257	282	290	
All Classes		88	82	154	197	232	238	282	290	
Statewide Mean			83	147	195	229	249			
Region II Mean			75	132	177	209	235			
SLI*Mean			78	134	180	209	226			

* Small Lakes and Impoundments

Figure 4. Length frequency histogram for black crappie sampled from Jones Lake, Hand County, 2013.

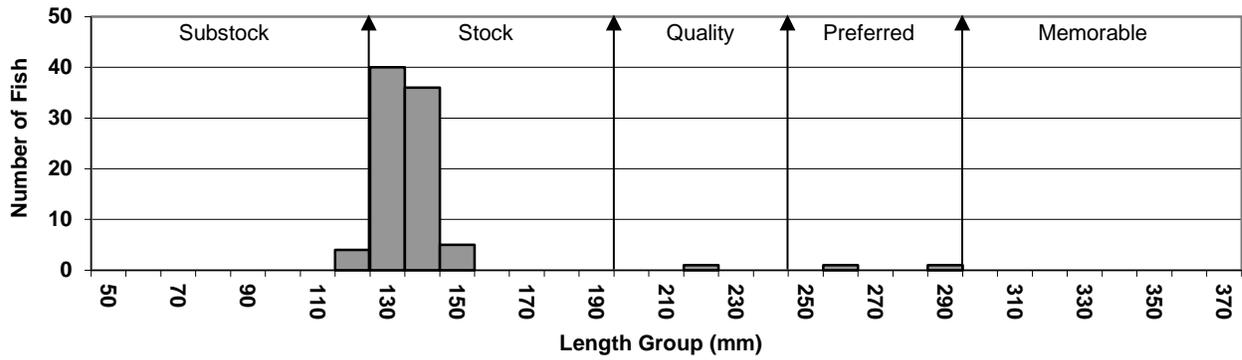


Figure 5. Length frequency histogram for black crappie sampled from Jones Lake, Hand County, 2011.

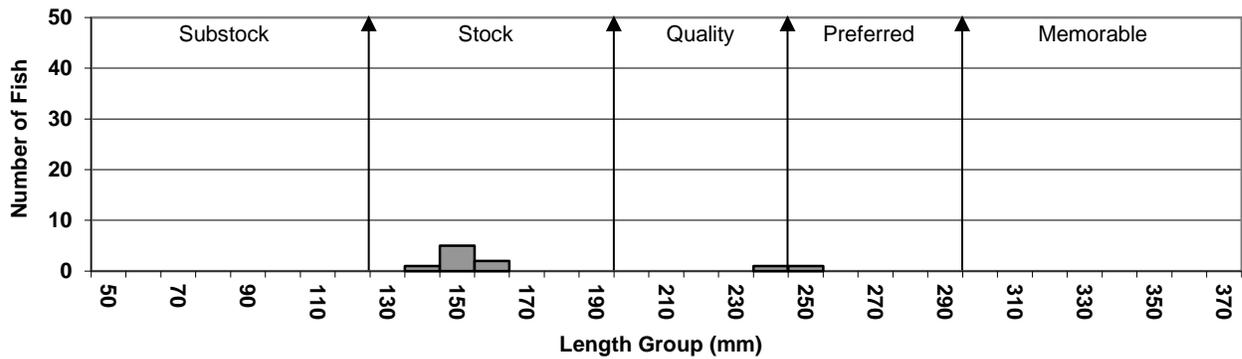
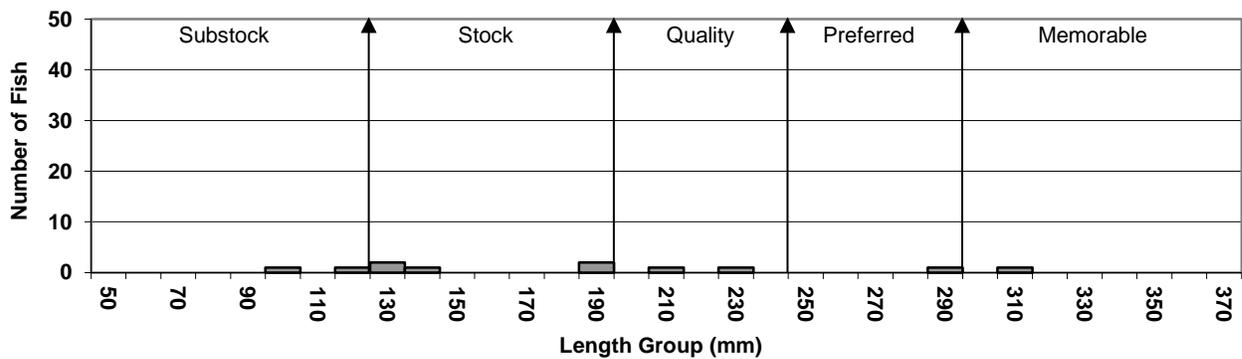


Figure 6. Length frequency histogram for black crappie sampled from Jones Lake, Hand County, 2008.



Yellow Perch

Yellow perch are the second most abundant panfish species present in Jones Lake. The CPUE of 5.4 is above the 1.3 from the 2011 survey (Table 8) as well as the 4.2 sixteen year mean (Table 2). Figures 7 through 9 illustrate the length frequency histograms for the last three surveys and show there really has not been a lot of change over the years other than density. Growth is good with means right on with statewide, regional and SLI means (Table 6). Condition is good with a mean Wr of 97. It would have been interesting to run a couple gill nets to see what that CPUE would have been as perch don't always catch very well this time of year in frame nets.

Table 6. Average back calculated lengths (mm) for each age class of yellow perch sampled from Jones Lake, Hand County, 2013.

Year Class	Age	N	Back-calculated Age			
			1	2	3	4
2011	2	48	113	142		
2010	3	5	99	140	165	
2009	4	1	98	140	204	216
All Classes		54	103	141	185	216
Statewide Mean			86	145	190	220
Region II Mean			91	152	196	219
SLI* Mean			87	142	185	205

* Small Lakes and Impoundments

Figure 7. Length frequency histogram for yellow perch sampled from Jones Lake, Hand County, 2013.

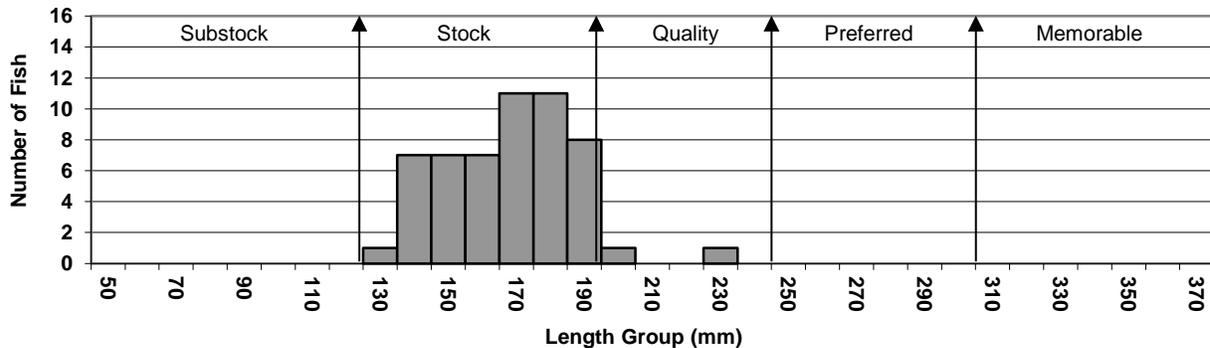


Figure 8. Length frequency histogram for yellow perch sampled from Jones Lake, Hand County, 2011.

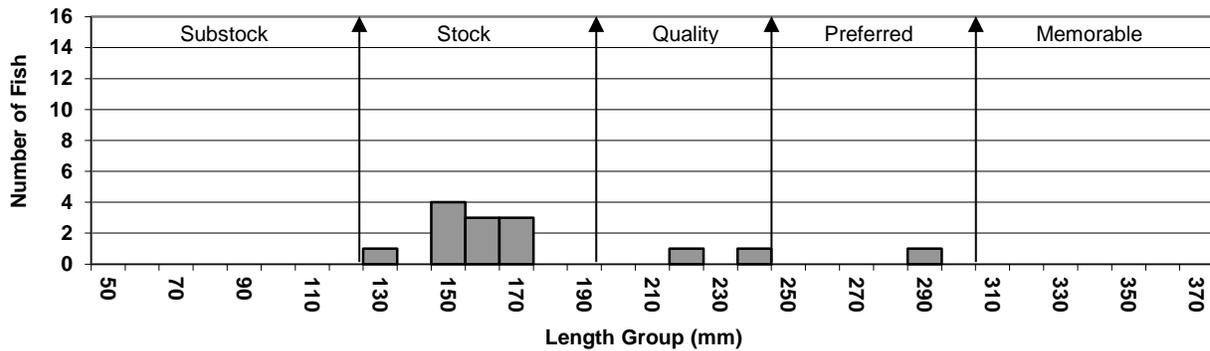
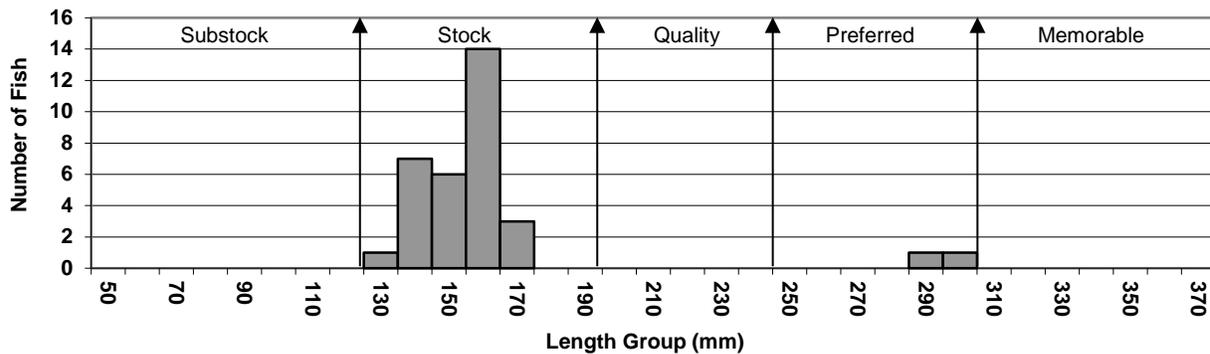


Figure 9. Length frequency histogram for yellow perch sampled from Jones Lake, Hand County, 2008.



Black Bullhead

Black bullheads continue to be the most abundant species sampled in Jones Lake. The CPUE of 584.0 fish per net night is significantly above the 71.1 from the 2011 survey (Table 8) as well as the 187.9 sixteen year mean (Table 2). Figures 10 through 16 illustrate the length frequency histograms for the last seven surveys. Some pretty good variations exist in the size structures over the years, although there appears to be very little difference between this survey and the 2011 survey. This minimal difference is also seen by the through the current PSD of 44 with an RSD-P of 2 compared to the 40 and 3, respectively, from the 2011 survey. The similarity is very surprising due to the drastic change in density. It would have been thought that is survey the size structure would have been greatly reduced and dominated by young fish. Condition is fine with a mean Wr of 86.

Figure 10. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2013.

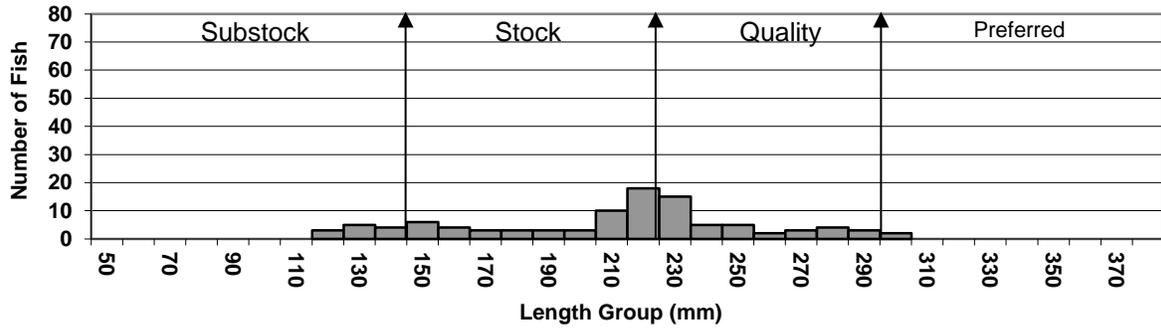


Figure 11. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2011.

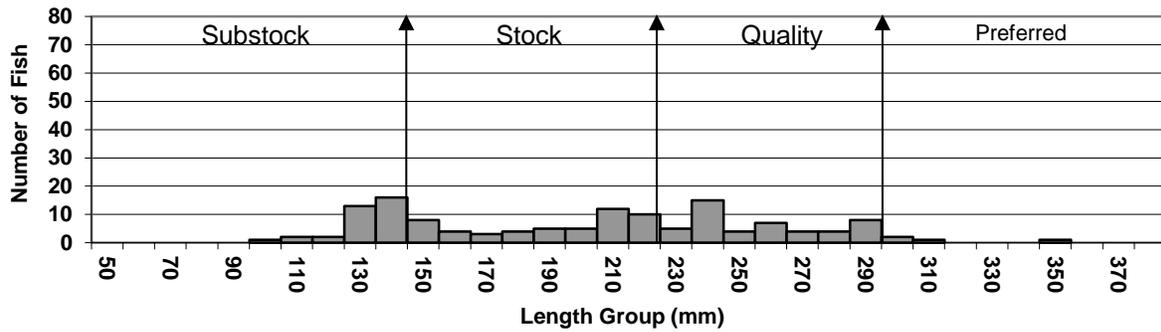


Figure 12. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2008.

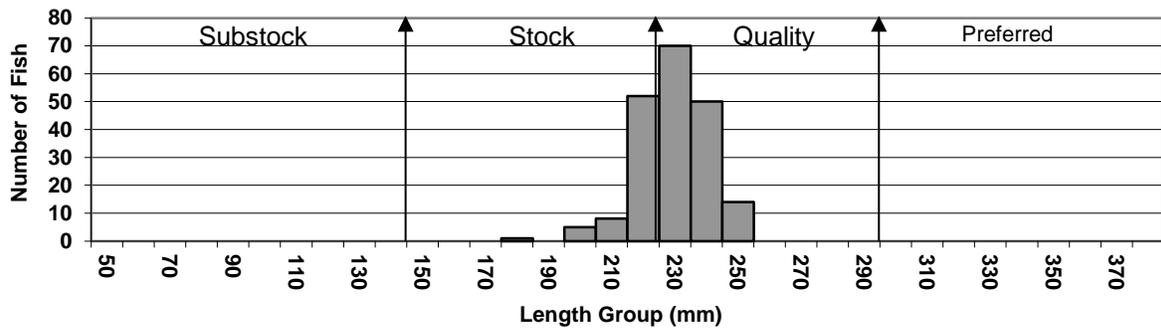


Figure 13. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2006.

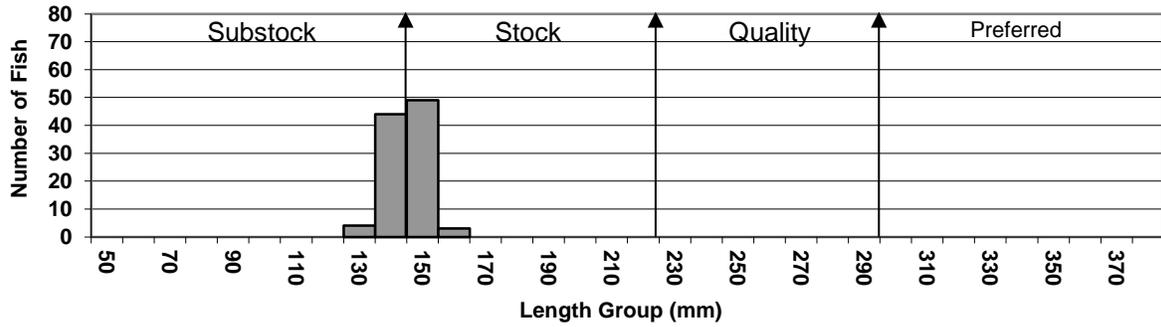


Figure 14. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2002.

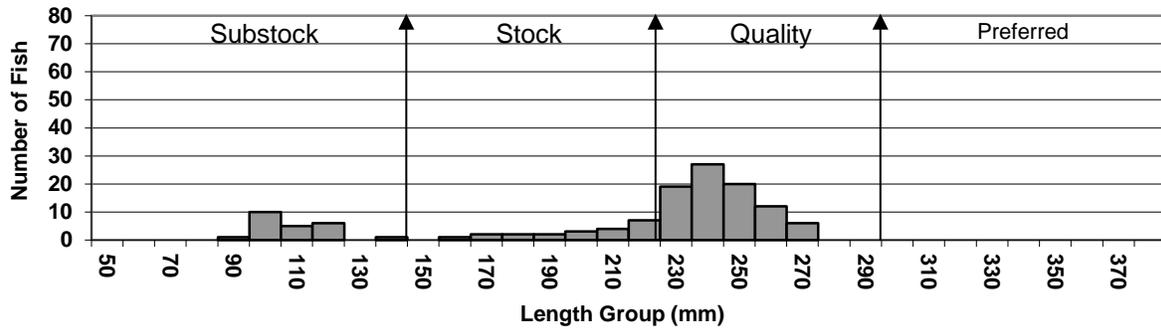


Figure 15. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 2001.

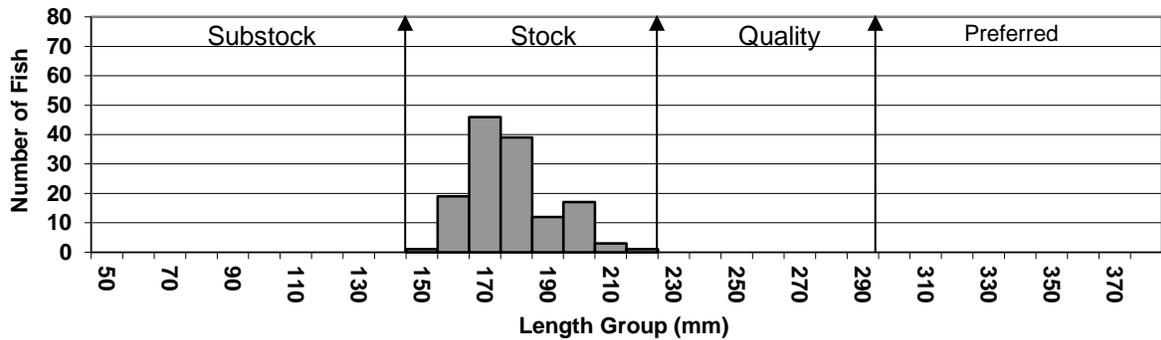
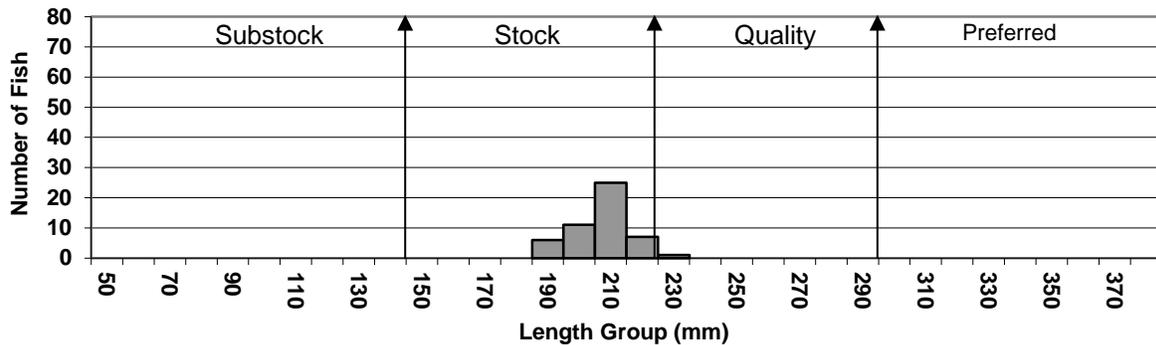


Figure 16. Length frequency histogram for black bullheads sampled from Jones Lake, Hand County, 1998.



Other Species

Bluegills were the only other species sampled this survey. The CPUE of 0.7 is actually above the 0.1 from the 2011 survey (Table 8), but is well below the 18.6 sixteen year mean (Table 2). Condition is good with a mean Wr of 125.

Northern pike, walleye, green sunfish and golden shiner were the species not sampled this survey that had been in years past (Table 8).

Table 7. Stocking records from 2001 (winterkill year) to present for Jones Lake, Hand County.

Year	Number	Species	Size
2001	103	Largemouth Bass	Adult
2001	2500	Walleye	Fingerling
2001	8400	Largemouth Bass	Fingerling
2001	100	Largemouth Bass	Adult
2001	900	Yellow Perch	Adult
2006	8,580	Largemouth Bass	Fingerling

RECOMMENDATIONS

1. Resurvey in 2016 to further monitor the fish populations that are rebuilding.
2. Stock largemouth bass, walleye and yellow perch to reestablish populations as stated in the current management plan.

Table 8. Gill net (GN), trap net (TN) and electrofishing (EF) CPUE for all fish species sampled in Jones Lake, Hand County since survey records started in 1976.

Species	1976	1982	1983	1984	1986	1987	1988	1990	1993	1995	1998	2001	2002	2006	2008	2011	2013
BLB (GN)	11.0	173.0	--	--	--	--	--	--	--	--	--	--	--	32.0	90.0	13.0	--
BLB (TN)	7.8	144.0	493.8	396.3	182.5	91.5	218.1	51.1	143.1	322.0	304.0	36.1	42.2	398.7	104.7	71.1	584.0
BLC (GN)	4.0	--	--	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--
BLC (TN)	6.0	0.2	0.1	0.5	5.1	1.6	6.8	0.3	--	2.0	10.3	0.1	5.0	1.8	0.7	1.0	8.8
YEP (GN)	40.0	--	--	--	--	--	--	--	--	--	--	--	--	--	16.5	0.5	--
YEP (TN)	2.3	0.7	1.4	3.0	7.3	6.3	9.3	3.9	6.6	1.0	15.8	1.6	5.1	--	1.6	1.3	5.4
LMB (EF)	--	--	--	--	--	--	--	--	--	--	--	--	145.5	--	261.0	47.0	138.0
LMB (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5	--	--
LMB (TN)	1.0	--	--	0.5	--	--	0.8	--	0.3	0.1	--	--	0.4	--	0.2	--	--
NOP (GN)	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOP (TN)	1.2	0.5	0.2	0.9	0.6	0.8	1.3	--	0.1	0.4	2.0	--	--	0.1	--	--	--
WAE (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WAE (TN)	--	0.1	--	0.03	--	0.04	0.08	0.1	--	--	0.9	--	--	--	--	--	--
BLG (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BLG (TN)	67.3	1.1	0.1	3.5	21.8	35.0	117.4	20.6	22.3	6.3	2.0	--	--	--	--	0.1	0.7
GSF (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSF (TN)	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--
GOS (GN)	3.0	--	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	--
GOS (TN)	0.3	--	--	--	0.03	0.3	0.2	--	--	--	--	0.6	0.2	--	2.5	0.3	--

BLB-Black Bullhead, BLC-Black Crappie, YEP-Yellow Perch, LMB-Largemouth Bass, NOP-Northern Pike, WAE-Walleye, BLG-Bluegill, GSF-Green Sunfish, OSF-Orangespotted Sunfish, GOS-Golden Shiner