

Fishing access:

The lake is privately owned but contains an easement to the State of South Dakota for fishing access to the lake and a strip of land varying from 66 feet to 12 feet above the high-water contour. A boat ramp exists on the east side for water access. There is also good shore access around much of the lake within the easement boundaries.

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

Boat ramp and dock are in good condition. There is new gravel on the ramp area. The access road is in good shape, but may be hard to travel in wet conditions. The dam and spillway are also in good condition.

Field observations of aquatic vegetation condition:

The submergent vegetation surrounds the entire shoreline to depths of up to 8 feet and consisted of different species of pondweeds, coontail and milfoil. Emergent vegetation was found around about 60-70% of the shoreline and consisted of mainly cattails, sedges, and rushes.

CHEMICAL DATA

Field observations of water quality and pollution problems:

No pollution problems were evident at the time of the survey. Water clarity is good with a secchi disc reading of 4 feet. Other water quality characteristics were measured in the field on June 14, 2010, 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 Simon Dam, Potter County, June 14, 2010.

Station	Depth (ft)	Temp (F)	DO (ppm)	CO2 (ppm)	ALK (mg/L)	HRD (mg/L)	pH	Cond. (µS/cm)	TDS (ppm)	Sal.	ORP	Secchi (ft)
A	Surface	67.3	4.00	63.8	287	662	7.88	1798	899	0.92	128.3	4
A	14	67.3	3.20	66.8	260	635	8.08	1792	896	0.91	119.0	

BIOLOGICAL DATA

Methods:

Simon Dam was sampled on June 14-16, 2010, with ten overnight trap net sets. The trap nets have 3ft x 5ft frames, 60ft leads, and ¾ inch knotted mesh. Two experimental gill nets were also set. The gill nets are 150ft x 6ft with 25ft panels of ½, ¾, 1, 1-1/4, 1-1/2, and 2 inch monofilament mesh. On the evening of September 30, 2010, Simon Dam 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 20 amps to electrofish the lake that had a conductivity of 1997 µS/cm with a water temperature of 61.0°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 net sets at Simon Dam, Potter County, June 14-16, 2010.

Species	#	%	CPUE	80% C.I.	Mean CPUE*	PSD	RSD-P	Mean Wr
Black Crappie	297	92.2	29.7	± 16.4	0.0	0	0	117
Yellow Perch	24	7.5	2.4	± 1.3	1.0	10	0	103
Largemouth Bass	1	0.3	0.1	± 0.1	0.3	--	--	108

* One year (2008, Severe total winterkill in winter of 2006-07)

Table 3. Total catch of two, 150ft experimental gill net sets at Simon Dam, Potter County, June 14-16, 2010.

Species	#	%	CPUE	80% C.I.	Mean CPUE*	PSD	RSD-P	Mean Wr
Yellow Perch	33	75.0	16.5	± 20.0	1.5	0	0	109
Black Crappie	9	20.4	4.5	± 13.9	0.0	--	--	125
Channel Catfish	1	2.3	0.5	± 1.5	0.0	--	--	137
Northern Pike	1	2.3	0.5	± 1.5	0.0	--	--	104

* One year (2008, Severe total winterkill in winter of 2006-07)

Table 4. Total catch from six, ten-minute transects of fall nighttime electrofishing on Simon Dam, Potter County, September 30, 2010.

Species	#	%	CPUE	80% C.I.	Mean CPUE*	PSD	RSD-P	Mean Wr
Largemouth Bass	98	100	98.0	± 44.9	0.0	16	1	114

* Severe total winterkill in 2006-07, and no fish sampled in 2008

Largemouth Bass

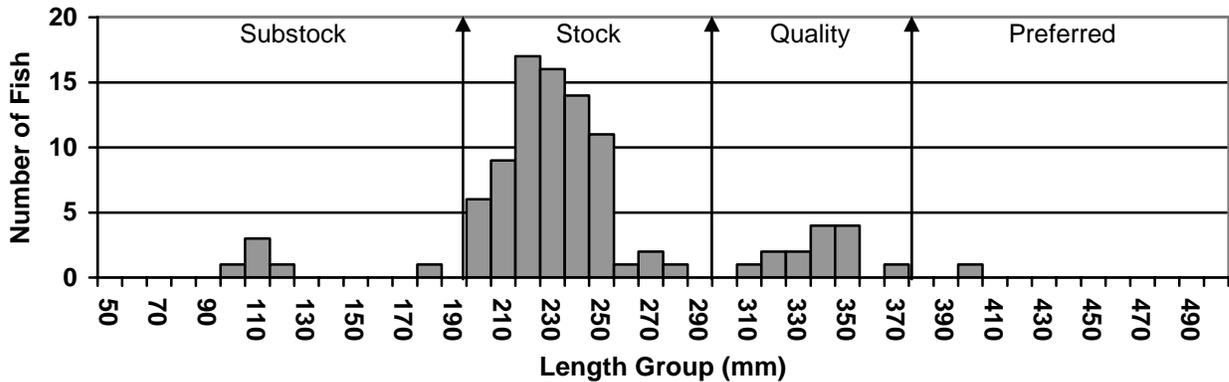
Simon Dam appears to be finally getting a largemouth bass population started. This has been an ongoing battle for years that had been limited in the past by the extremely over populated black bullhead population. The bullheads and all other fish were totally eliminated in the severe drought and winterkill from the winter of 2006-07. A number of stockings have taken place with results finally being seen. The CPUE for fall electrofishing was 98 fish per hour. The population is still dominated by young fish, which was expected and hopefully they will continue to recruit to the adult population. Condition is good with a mean Wr of 114. Growth is also fine with means right around statewide, regional and SLI means (Table 5). Figure 1 illustrates what the size structure of the population looks like at this point. Further monitoring will be done in the coming years to make sure this population continues to establish.

Table 5. Average back-calculated lengths (mm) for each age class of largemouth bass sampled from Simon Dam, Potter County, 2010.

Year Class	Age	N	Back-calculated Age					
			1	2	3	4	5	6
2010	0	4						
2009	1	19	80					
2008	2	62	63	105				
2007	3	8	70	146	270			
2006	4	1	77	158	229	281		
2005	5	2	91	141	200	251	286	
2004	6	1	97	153	199	307	359	397
All Classes		97	79	141	225	279	323	397
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 Simon Dam, Potter County, 2010.



Black Crappie

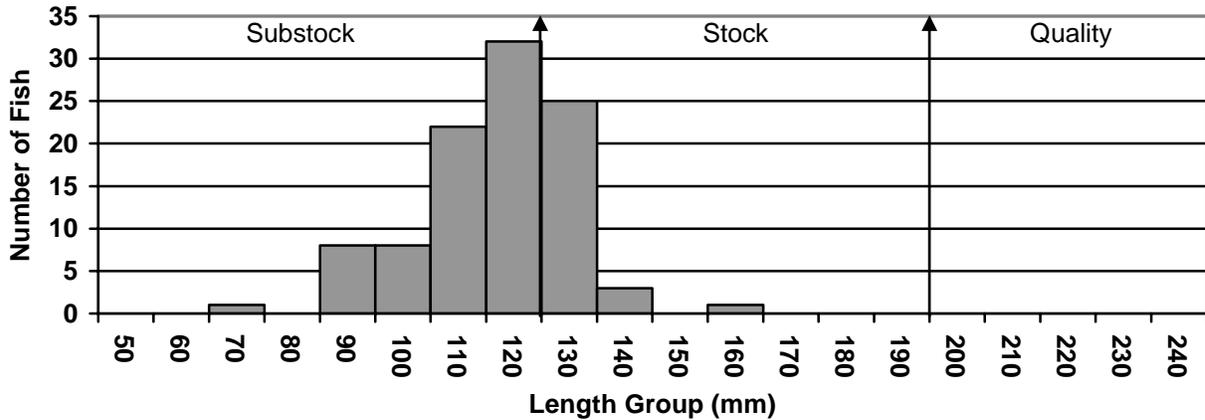
Simon Dam is getting a very good black crappie population established. The current numbers are a direct result of a small stocking of 21 adult prespawm fish in the spring of 2009. The CPUE was 29.7 (Table 2). Condition is good with a mean Wr of 117. Growth is good for one year old fish (Table 6). Figure 2 shows that size structure of the fish sampled during this survey. This population will continue to be monitored in the coming years to ensure that they continue to get established.

Table 6. Average back-calculated lengths (mm) for each age class of black crappie sampled from Simon Dam, Potter County, 2010.

Year Class	Age	N	Back-calculated Age
2009	1	100	105
All Classes		100	105
Statewide Mean			83
Region II Mean			75
SLI* Mean			78

* Small Lakes and Impoundments

Figure 2. Length frequency histogram for black crappie sampled from Simon Dam, Potter County, 2010.



Yellow Perch

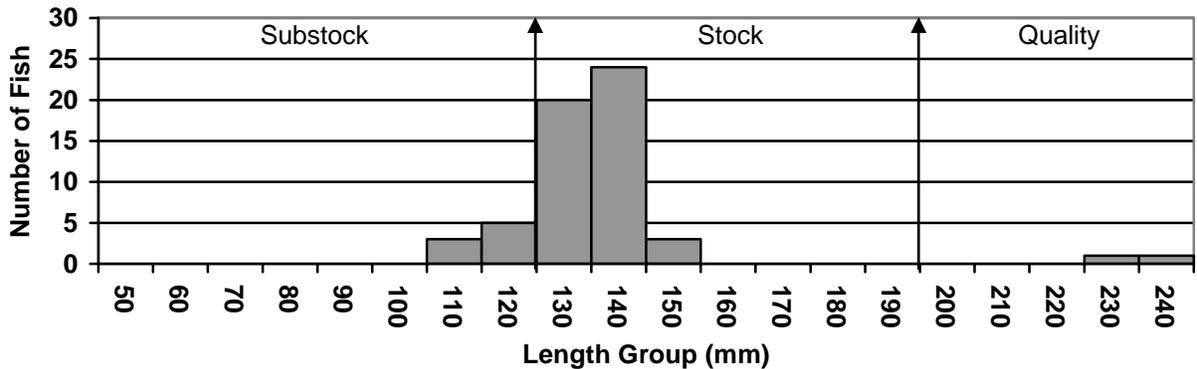
Simon Dam is also getting a yellow perch population established. These would be a good compliment to the largemouth bass and black crappie populations that are also starting to establish. The CPUE for gill nets was 16.5 (Table 3) and trap nets was 2.4 (Table 2). A couple of the adults that were stocked were sampled and the majority of the others were from the year class that was produced from the stocking that was made. Growth is good with means right around statewide, regional and SLI means (Table 7). Figure 3 illustrates the size distribution of the fish sampled from this survey. Condition is good with a mean W_r of 109.

Table 7. Average back-calculated lengths (mm) for each age class of yellow perch sampled from Simon Dam, Potter County, 2010.

Year Class	Age	N	Back-calculated Age		
			1	2	3
2009	1	50	116		
2007	3	2	101	160	207
All Classes		52	109	160	207
Statewide Mean			86	145	190
Region II Mean			91	152	196
SLI* Mean			87	142	185

* Small Lakes and Impoundments

Figure 3. Length frequency histogram for yellow perch sampled from Simon Dam, Potter County, 2010.



Other species

Northern pike and channel catfish were the only other species sampled this survey. Each one only had one fish sampled in the gill nets. Black bullheads have still not been sampled since the total winterkill in 2006-07, which is a good thing considering their tendency to easily over populate in Simon Dam. White crappie, white sucker, walleye, bluegill, smallmouth bass, and golden shiner were the other species that were not sampled this survey and none were expected as none had been restocked.

Table 8. Stocking records for the last ten years for Simon Dam, Potter County.

Year	Number	Species	Size
2001	93	Channel Catfish	Adult
2001	500	Walleye	Fingerling
2002	101	Largemouth Bass	Adult
2002	5,520	Largemouth Bass	Fingerling
2007	250,000	Walleye	Fry
2007	70	Yellow Perch	Adult
2007	100	Largemouth Bass	Adult
2008	50	Largemouth Bass	Juvenile
2008	4,160	Largemouth Bass	Fingerling
2009	21	Black Crappie	Adult
2009	14	Northern Pike	Adult
2009	105	Yellow Perch	Juvenile
2009	4,140	Largemouth Bass	Fingerling
2009	161	Largemouth Bass	Adult

RECOMMENDATIONS

1. Resurvey in 2011 to monitor the fish populations.
2. Continue to stock largemouth bass till a CPUE of 20 or greater is reached for fish over stock length.
3. Stock yellow perch till a CPUE of between 5 and 15 reached.

Table 9. Gill net (GN), trap net (TN) and electrofishing (EF) CPUE for all fish species sampled in Simon Dam since surveys started in 1968.

Species	1968	1970	1973	1975	1977	1981	1982	1985	1986	1988	1990	1993	1994	1996	1998	2001	2004	2006	2008	2010	
BLB (GN)	--	--	--	2.0	--	--	--	--	125.0	--	--	54.0	--	94.0	175.0	--	--	--	--	--	
BLB (TN)	240.3	44.9	735.0	1133	885.1	--	270.0	274.9	152.5	1071	117.5	95.8	1.6	1627	247.5	479.6	442.0	947.0	--	--	
BLC (GN)	--	--	--	--	--	--	17.0	--	--	--	--	1.0	--	2.0	--	--	--	--	--	4.5	
BLC (TN)	15.3	12.6	3.5	46.5	2.4	--	266.0	71.5	51.1	79.5	59.3	2.5	1.0	2.5	--	--	0.2	--	--	29.7	
WHC (GN)	--	--	--	--	--	--	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	
WHC (TN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
YEP (GN)	--	--	--	--	--	--	22.0	--	--	--	--	38.0	30.0	21.0	1.0	--	--	--	--	1.5	16.5
YEP (TN)	3.3	3.8	1.9	4.5	0.6	--	53.0	1.1	1.9	4.3	6.3	3.8	2.5	9.1	2.6	1.4	1.2	0.1	1.0	2.4	
LMB (EF)	--	--	--	--	--	--	--	--	--	5.3	4.5	6.5	0.5	5.7	0.0	19.0	18.0	--	--	98.0	
LMB (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LMB (TN)	--	0.2	--	--	--	--	--	--	--	1.1	--	--	--	--	--	--	0.2	--	0.3	0.1	
NOP (GN)	--	--	--	--	--	--	1.0	--	--	--	--	1.0	--	11.0	6.0	--	--	--	--	0.5	
NOP (TN)	1.1	0.7	1.0	--	1.5	--	1.3	1.9	0.6	2.0	0.9	1.0	2.4	2.1	4.1	0.5	0.9	1.5	--	--	
CCF (GN)	--	--	--	1.0	--	--	1.0	--	--	--	--	--	--	--	--	--	--	--	--	0.5	
CCF (TN)	--	--	--	--	--	--	--	--	--	--	--	0.3	--	--	--	--	--	--	--	--	
WHS (GN)	--	--	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
WHS (TN)	0.1	0.2	--	1.1	5.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
WAE (GN)	--	--	--	2.0	--	--	1.0	--	--	--	--	--	--	--	1.0	--	--	--	--	--	
WAE (TN)	--	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	
BLG (GN)	--	--	--	--	--	--	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	
BLG (TN)	2.5	1.3	3.5	3.4	--	--	133.0	0.5	0.9	9.6	8.1	7.5	0.3	0.4	--	--	3.2	0.2	--	--	
SMB (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SMB (TN)	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	
GOS (GN)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
GOS (TN)	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	

BLB-Black Bullhead, BLC-Black Crappie, WHC-White Crappie, YEP-Yellow Perch, LMB-Largemouth Bass, NOP-Northern Pike, CCF-Channel Catfish, WHS-White Sucker, WAE-Walleye, BLG-Bluegill, SMB-Smallmouth Bass, GOS-Golden Shiner