

2-9-99

Mr. Kevin Bevard
R.R. #5 Lake Santa Fe Estates
Box 17
Metamora, IL 61548

Dear Mr. Bevard:

We sampled Santa Fe Lake for 20 minutes during daytime and 20 minutes after dark using the 240 volt A.C. electro fish shocker. We were able to collect a good number of fish upon which to base our analysis. At the time of our sample the physical conditions were:

p.H. - 8.4
Total alkalinity - 85 ppm
Water temperature - 76 F
Water clarity - 60" (Secchi dish)
Conductivity - 510 ul.

Aquatic vegetation was present and moderately abundant (5% coverage) at the time of our sample. The vegetation consisted of brittle and southern naiad with some filamentous algae. The aquatic vegetation was providing habitat for young forage fish. They were present in good numbers within the beds of vegetation. The bluegill were far more abundant than seen in our 1994 sample when aquatic vegetation was absent from your lake. The aquatic coverages of naiads was adequate to insure reproductive and recruitment success in your lake.

We collected 129 largemouth bass during the 40 minutes of collection effort for a rate of 3.23 fish per minute. It appears that the very dense, dominant year class of bass spawned in 1994 are finally getting large. Because of their density, these largemouth controlled bass spawns until this year, when a very large year bass was again spawned. You have an excellent fishery for moderate sized bass based on our sample. Of the fish collected over 8 inches in length, almost 68% were over 14.0 inches in length and 25% were over 15 inches in length. All of the largemouth exhibited good to fast growth characteristics, unlike our sample in 1994. This is a result of improved amounts of forage as a function of increased aquatic vegetation cover.

We collected 64 bluegill. Our collection rate for bluegill was 1.6 fish per minute. Most of the bluegill collected were small and resulted from recent spawns. The majority of the bluegill collected were 1 to 3.0 inches in length and will be excellent forage for continued good large mouth bass growth. Once again, the presence of some aquatic weeds are beneficial for habitat that provides food and cover for your bluegill population. Like the collected largemouth bass, the bluegill growth and condition ranged from average to good for fish over 3.0 inches in length.

Other fishes collected include: 2 large channel catfish; 3 bluegill hybrids; 1 stocked smallmouth bass and 1 green sunfish. Not collected were walleye, redear or grass carp.

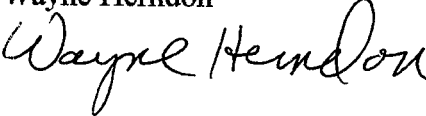
Based on the results of our sample, I recommend the following:

1. Do not stock addition grass carp.
2. Treat only problem algae areas using copper sulfate at the rate of 5 lbs per 1000 ft of shoreline. (See previous recommendations).

3. Stock channel catfish every 2nd year at a rate of 10 fish per acre, 10-12 inches long.
 4. Stock walleye every other year at a rate 20 fish per acre, 4-6 inches long.
 5. Continue the 12-15 slot length limit for largemouth bass.
 6. Stock 50-60 adult breeder redear as available.
 7. We should re-sample Santa Fe Lake in the Fall of 2000. Please contact me to set this up.
- If I can be of further assistance, please call.

Sincerely,

Wayne Herndon



Encl.- Fish tables.

1998 (FAL1) SANTA FE LAKE. LMB CPUE IN NUMBER/HOUR OR SET

MILLIMETERS	INCHES	1N
60-69	2.4-2.8	2.0
70-79	2.8-3.1	21.0
80-89	3.1-3.5	26.0
90-99	3.5-3.9	11.0
100-109	3.9-4.3	4.0
110-119	4.3-4.7	3.0
120-129	4.7-5.1	1.0
130-139	5.1-5.5	-
140-149	5.5-5.9	-
150-159	5.9-6.3	-
160-169	6.3-6.7	1.0
170-179	6.7-7.1	-
180-189	7.1-7.5	-
190-199	7.5-7.9	1.0
200-209	7.9-8.3	-
210-219	8.3-8.7	-
220-229	8.7-9.1	-
230-239	9.1-9.4	1.0
240-249	9.4-9.8	2.0
250-259	9.8-10.2	-
260-269	10.2-10.6	-
270-279	10.6-11.0	-
280-289	11.0-11.4	1.0
290-299	11.4-11.8	-
300-309	11.8-12.2	2.0
310-319	12.2-12.6	2.0
320-329	12.6-13.0	2.0
330-339	13.0-13.4	4.0
340-349	13.4-13.8	5.0
350-359	13.8-14.2	5.0
360-369	14.2-14.6	12.0
370-379	14.6-15.0	8.0
380-389	15.0-15.4	4.0
390-399	15.4-15.7	2.0
400-409	15.7-16.1	6.0
410-419	16.1-16.5	2.0
420-429	16.5-16.9	1.0

1998(FAL1) SANTA FE LAKE. BLG CPUE IN NUMBER/HOUR OR SET

MILLIMETERS	INCHES	1N
20-29	0.8-1.2	3.0
30-39	1.2-1.6	8.0
40-49	1.6-2.0	11.0
50-59	2.0-2.4	14.0
60-69	2.4-2.8	7.0
70-79	2.8-3.1	7.0
80-89	3.1-3.5	2.0
90-99	3.5-3.9	3.0
100-109	3.9-4.3	2.0
110-119	4.3-4.7	3.0
120-129	4.7-5.1	2.0
130-139	5.1-5.5	1.0
140-149	5.5-5.9	-
150-159	5.9-6.3	-
160-169	6.3-6.7	-
170-179	6.7-7.1	-
180-189	7.1-7.5	1.0

1998 (FAL1) SANTA FE LAKE. BLG STOCK INDEX TABLE

YEAR	STOCK N 8cm, 3.1in	YAR (N) 9cm, 3.5in	PSD (N) 15cm, 5.9in	RSD1 (N) 15cm, 5.9in	RSD2 (N) 17cm, 6.7in	RSD3 (N) 18cm, 7.1in
1998	14	55.0 (55)	7.1 (1)	7.1 (1)	7.1 (1)	7.1 (1)

1998(FAL1) SANTA FE LAKE. LMB STOCK INDEX TABLE

YEAR	STOCK N 20cm, 7.9in	YAR (N) 9cm, 3.5in	PSD (N) 30cm, 11.8in	RSD1 (N) 30cm, 11.8in	RSD2 (N) 35cm, 13.8in	RSD3 (N) 38cm, 15.0in
1998	59	1.1 (60)	93.2 (55)	93.2 (55)	67.8 (40)	25.4 (15)

1998 (FAL1) SANTA FE LAKE. SMB STOCK INDEX TABLE

YEAR	STOCK 18cm, 7.1in	N	YAR 9cm, 3.5in	(N)	PSD 28cm, 11.0in	(N)	RSD1 25cm, 9.8in	(N)	RSD2 30cm, 11.8in	(N)	RSD3 35cm, 13.8in	(N)
1998	1		0.0	(0)	100.0	(1)	100.0	(1)	100.0	(1)	100.0	(1)

1998 SANTA FE LAKE. LMB LENGTH FREQUENCY/CONDITION

LENGTH MM	GROUP INCHES	TOTAL L-FREQ	MEAN WEIGHT		NO. WEIGHED	MEAN CONDITION	
			GRAMS	LBS		WR (95%)	KN (95%)
60 - 69	2.4 - 2.8	2	4.0	0.01	2	166 (102)	1.55 (0.9)
70 - 79	2.8 - 3.1	21	4.0	0.01	3	91 (123)	0.86 (1.2)
80 - 89	3.1 - 3.5	26	6.0	0.01	3	106 (16)	1.01 (0.2)
90 - 99	3.5 - 3.9	11	9.3	0.02	3	112 (51)	1.07 (0.5)
100 - 109	3.9 - 4.3	4	12.0	0.03	3	103 (38)	0.99 (0.4)
110 - 119	4.3 - 4.7	3	15.0	0.03	3	95 (24)	0.92 (0.2)
120 - 129	4.7 - 5.1	1	22.0	0.05	1	102	0.99
130 - 139	5.1 - 5.5	0	-	-	0	-	-
140 - 149	5.5 - 5.9	0	-	-	0	-	-
150 - 159	5.9 - 6.3	0	-	-	0	-	-
160 - 169	6.3 - 6.7	1	70.0	0.15	1	125	1.24
170 - 179	6.7 - 7.1	0	-	-	0	-	-
180 - 189	7.1 - 7.5	0	-	-	0	-	-
190 - 199	7.5 - 7.9	1	50.0	0.11	1	54	0.54
200 - 209	7.9 - 8.3	0	-	-	0	-	-
210 - 219	8.3 - 8.7	0	-	-	0	-	-
220 - 229	8.7 - 9.1	0	-	-	0	-	-
230 - 239	9.1 - 9.4	1	175.0	0.39	1	104	1.05
240 - 249	9.4 - 9.8	2	212.5	0.47	2	105 (82)	1.07 (0.8)
250 - 259	9.8 - 10.2	0	-	-	0	-	-
260 - 269	10.2 - 10.6	0	-	-	0	-	-
270 - 279	10.6 - 11.0	0	-	-	0	-	-
280 - 289	11.0 - 11.4	1	228.0	0.50	1	69	0.71
290 - 299	11.4 - 11.8	0	-	-	0	-	-
300 - 309	11.8 - 12.2	2	395.0	0.87	2	100 (52)	1.03 (0.5)
310 - 319	12.2 - 12.6	2	485.0	1.07	2	110 (177)	1.13 (1.8)
320 - 329	12.6 - 13.0	2	547.5	1.21	2	108 (1)	1.12 (0.0)
330 - 339	13.0 - 13.4	4	555.7	1.22	3	102 (7)	1.05 (0.1)
340 - 349	13.4 - 13.8	5	554.7	1.22	3	92 (14)	0.95 (0.1)
350 - 359	13.8 - 14.2	5	677.7	1.49	3	103 (15)	1.06 (0.2)
360 - 369	14.2 - 14.6	12	776.0	1.71	3	108 (1)	1.12 (0.0)
370 - 379	14.6 - 15.0	8	738.3	1.63	3	94 (4)	0.98 (0.0)
380 - 389	15.0 - 15.4	4	800.0	1.76	3	94 (11)	0.98 (0.1)
390 - 399	15.4 - 15.7	2	937.5	2.07	2	101 (30)	1.06 (0.3)
400 - 409	15.7 - 16.1	6	1072.3	2.36	3	106 (11)	1.11 (0.1)
410 - 419	16.1 - 16.5	2	1005.0	2.22	2	92 (137)	0.96 (1.4)
420 - 429	16.5 - 16.9	1	1190.0	2.62	1	103	1.08
TOTALS:		129			56		

1998 SANTA FE LAKE. BLG LENGTH FREQUENCY/CONDITION

LENGTH MM	GROUP INCHES	TOTAL L-FREQ	MEAN WEIGHT		NO. WEIGHED	MEAN CONDITION	
			GRAMS	LBS		WR (95%)	KN (95%)
20 - 29	0.8 - 1.2	3	-	-	0	-	-
30 - 39	1.2 - 1.6	8	-	-	0	-	-
40 - 49	1.6 - 2.0	11	-	-	0	-	-
50 - 59	2.0 - 2.4	14	2.7	0.01	3	122 (74)	1.05 (0.6)
60 - 69	2.4 - 2.8	7	3.0	0.01	1	81	0.73
70 - 79	2.8 - 3.1	7	3.3	0.01	3	47 (18)	0.44 (0.2)
80 - 89	3.1 - 3.5	2	8.0	0.02	2	77 (263)	0.75 (2.5)
90 - 99	3.5 - 3.9	3	13.0	0.03	2	91 (6)	0.91 (0.1)
100 - 109	3.9 - 4.3	2	21.0	0.05	2	105 (360)	1.08 (3.7)
110 - 119	4.3 - 4.7	3	36.5	0.08	2	118 (116)	1.25 (1.2)
120 - 129	4.7 - 5.1	2	49.0	0.11	2	128 (70)	1.38 (0.7)
130 - 139	5.1 - 5.5	1	44.0	0.10	1	92	1.01
140 - 149	5.5 - 5.9	0	-	-	0	-	-
150 - 159	5.9 - 6.3	0	-	-	0	-	-
160 - 169	6.3 - 6.7	0	-	-	0	-	-
170 - 179	6.7 - 7.1	0	-	-	0	-	-
180 - 189	7.1 - 7.5	1	162.0	0.36	1	116	1.39
TOTALS:		64			19		

1998(FAL1) SANTA FE LAKE. SMB LENGTH FREQUENCY/CONDITION

LENGTH GROUP		TOTAL	MEAN WEIGHT		NO.	MEAN CONDITION	
MM	INCHES	L-FREQ	GRAMS	LBS	WEIGHED	WR (95%)	KN (95%)
380 - 389	15.0 - 15.4	1	710.0	1.56	1	87	- 0.87 -
TOTALS:		1			1		

1998(FAL1) SANTA FE LAKE. GSF LENGTH FREQUENCY/CONDITION

LENGTH GROUP		TOTAL L-FREQ	MEAN WEIGHT		NO. WEIGHED	MEAN CONDITION	
MM	INCHES		GRAMS	LBS		WR (95%)	KN (95%)
180 - 189	7.1 - 7.5	1	150.0	0.33	1	117	- 1.20 -
TOTALS:		1			1		

1998 SANTA FE LAKE. BGH LENGTH FREQUENCY/CONDITION

LENGTH GROUP		TOTAL	MEAN WEIGHT		NO.	MEAN CONDITION			
MM	INCHES	L-FREQ	GRAMS	LBS	WEIGHED	WR (95%)	KN (95%)		
90 - 99	3.5 - 3.9	1	18.0	0.04	1	0	-	1.08	-
100 - 109	3.9 - 4.3	1	26.0	0.06	1	0	-	1.22	-
110 - 119	4.3 - 4.7	2	31.5	0.07	2	0	(0)	1.23	(1.4)
TOTALS:		4			4				

1998 SANTA FE LAKE. CCF LENGTH FREQUENCY/CONDITION

LENGTH GROUP		TOTAL L-FREQ	MEAN WEIGHT		NO. WEIGHED	MEAN CONDITION	
MM	INCHES		GRAMS	LBS		WR (95%)	KN (95%)
660 - 669	26.0 - 26.4	1	6300.0	13.89	1	202	- 2.36 -
670 - 679	26.4 - 26.8	0	-	-	0	-	- - -
680 - 689	26.8 - 27.2	0	-	-	0	-	- - -
690 - 699	27.2 - 27.6	1	7000.0	15.43	1	187	- 2.18 -
TOTALS:		2			2		

1998 SANTA FE LAKE. SPECIES FREQUENCY

BGH 4 BLG 64 CCF 2 GSF 1 LMB 129 SMB 1

Total frequency: 201.