

Cedar Lake and Shriner Lake  
Whitley County  
Supplemental Evaluation

Date of Sampling at Cedar Lake: Aug 4, 2008

Date of Sampling at Shriner Lake: July 31, 2008

Biologist: Rod A. Edgell

Survey Objectives: To monitor water quality and available trout habitat at Cedar and Shriner Lakes.

Methods: Temperature and oxygen profiles were collected at the deepest point using a Hydrolab Quanta®. Temperature and dissolved oxygen measurements were recorded every two feet all the way to the bottom to determine if a “trout layer” was present. A trout layer is defined as a section of the lake that contains a dissolved oxygen concentration of at least 5 ppm and is less than 70°F. In order to measure dissolved oxygen at its lowest concentration profiles were collected just prior to sunrise.

Summary: The temperature of Cedar Lake ranged from 81.3 at the surface to 40.4°F at a depth of 70 ft. The dissolved oxygen concentration ranged from 6.6 at the surface to 0.0 ppm beginning at a depth of 44 ft and extending all the way to the bottom. A trout layer was present at Cedar Lake at a depth of approximately 18 to 34 ft. Although the layer observed in 2008 was slightly larger than recent years, it is considered typical for Cedar Lake (Figure 1).

The temperature of Shriner Lake ranged from 80.3 at the surface to 42.6°F at a depth of 72 ft. The dissolved oxygen concentration ranged from 6.9 at the surface to 0.0 ppm beginning at a depth of 32 ft and extending all the way to the bottom. A trout layer was not present at Shriner Lake at the time of sampling, and a layer has not been observed since 1984 (Figure 2).

Recommendations:

- The DFW should continue stocking 3,000 rainbow trout at Cedar Lake annually.
- Shriner Lake residents should continue working with the Whitley County Soil and Water Conservation District and DNR to help prevent any further declines in water quality. Due to the lack of a trout layer the DFW will not stock trout into Shriner Lake.
- Dissolved oxygen and temperature profiles should be completed at Cedar and Shriner Lakes on a regular basis to assess available trout habitat.

Submitted by: Rod A. Edgell, Assistant Biologist

Date: 10/9/2008

Approved by: Edward R. Braun, Biologist

Date: 10/9/2008

Approved by: Stuart T. Shipman, Fisheries Supervisor

Date: 1/22/2009

Figure 1. Thickness and location of temperature less than 70°F with a dissolved oxygen concentration of at least 5 ppm at Cedar Lake from 1967 to 2008.

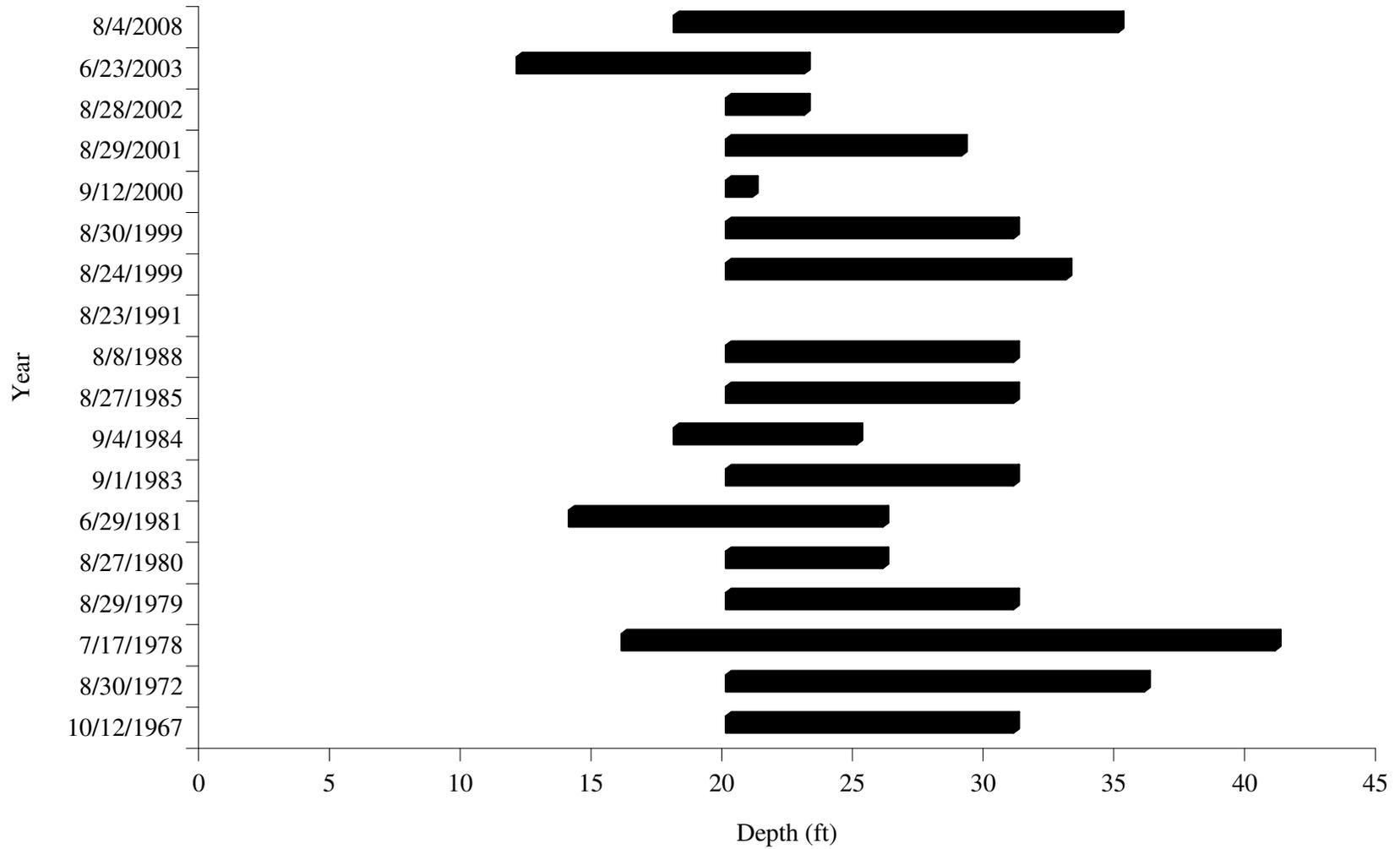
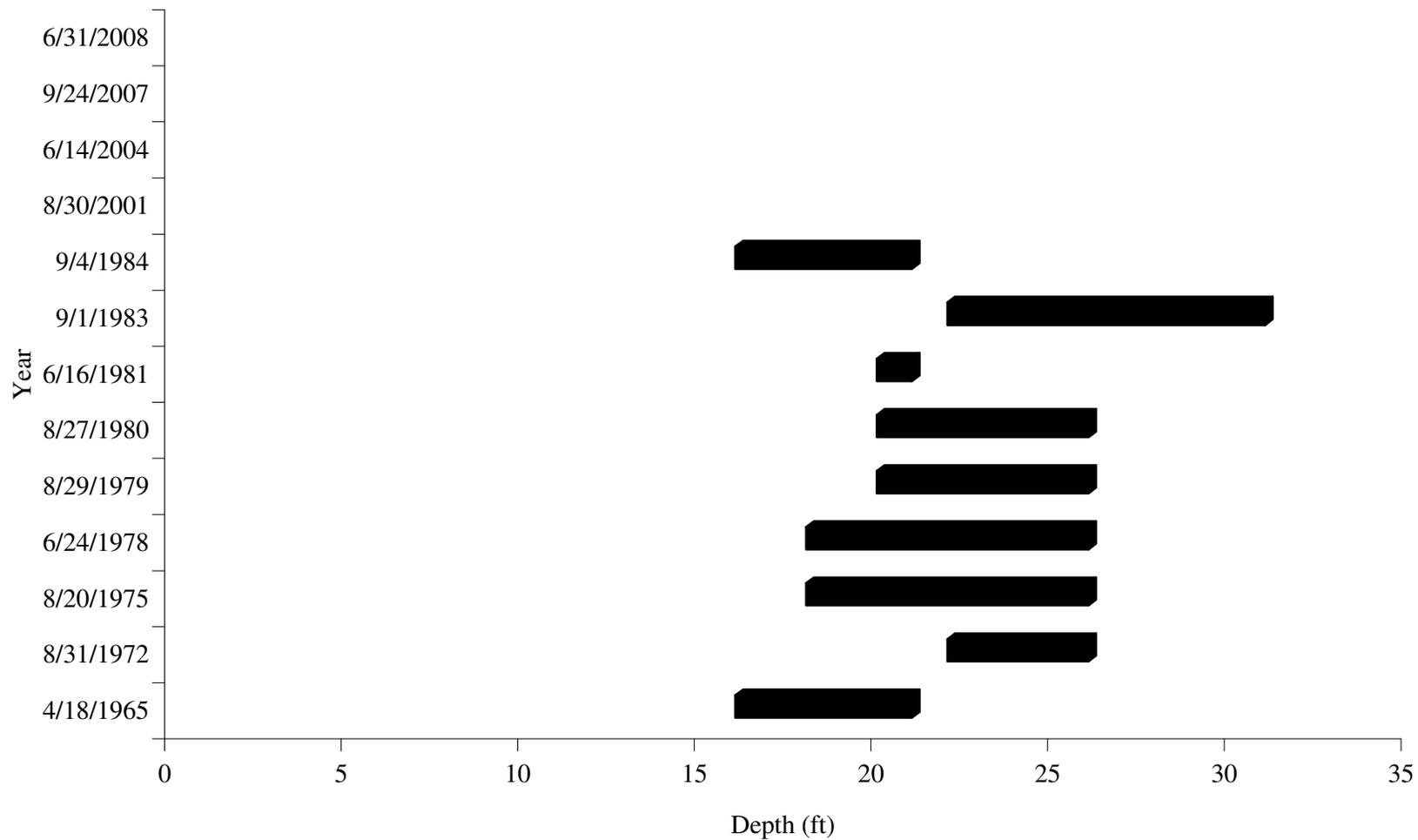


Figure 2. Thickness and location of temperature less than 70°F with a dissolved oxygen concentration of at least 5 ppm at Shriner Lake from 1965 to 2008.



## Lake Chemistry

CEDAR LAKE - 8/4/2008					
ELECTROFISHING	Day hours		Night Hours		Total Hours
					0
TRAP NETS	Number of Traps		Number of Lifts		Total Lifts
					0
GILL NETS	Number of Nets		Number of Lifts		Total Lifts
					0
ROTENONE	Gallons	ppm	Acre-feet Treated	SHORELINE SEINING	Number of 100 ft Seine Hauls

PHYSICAL AND CHEMICAL CHARACTERISTICS						
Color	Turbidity (Secchi Disk)			Air Temperature	64	F
	15	Feet	0	Inches	Water temperature	81.3 F
Water Chemistri GPS Coordinates		N		W		

WATER QUALITY PARAMETERS															
DEPTH (Feet)	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.	DEPTH	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.
SURFACE	81.3	6.7	0.4	8.2	0.2	71.6	95.4	52	41.1	0.0	0.4	6.7	0.3	0.0	44.5
2	81.3	6.2	0.4	8.2	0.2	65.8	90.7	54	40.9	0.0	0.4	6.7	0.3	0.0	54.1
4	81.3	5.7	0.4	8.1	0.2	61.4	83.0	56	40.7	0.0	0.4	6.7	0.3	0.0	41.8
6	81.3	5.8	0.4	8.1	0.2	62.0	75.3	58	40.6	0.0	0.4	6.7	0.3	0.0	41.2
8	81.3	5.6	0.4	8.1	0.2	59.7	69.9	60	40.5	0.0	0.4	6.7	0.3	0.0	40.3
10	81.3	5.7	0.4	8.1	0.2	60.9	67.2	62	40.5	0.0	0.4	6.7	0.3	0.0	39.9
12	80.8	5.6	0.4	8.1	0.2	59.6	64.8	64	40.4	0.0	0.4	6.6	0.3	0.0	38.8
14	79.8	5.5	0.4	8.0	0.2	57.9	65.2	66	40.4	0.0	0.4	6.6	0.3	0.0	37.3
16	75.9	6.1	0.4	7.9	0.2	61.5	82.5	68	40.4	0.0	0.4	6.6	0.3	0.0	35.6
18	69.0	6.1	0.4	7.8	0.2	57.1	90.2	70	40.4	0.0	0.4	6.6	0.3	0.0	35.5
20	62.1	6.2	0.4	7.5	0.3	53.5	89.4	72							
22	62.1	6.0	0.4	7.3	0.3	49.6	83.7	74							
24	53.8	5.6	0.4	7.3	0.3	43.8	72.0	76							
26	51.9	5.5	0.4	7.3	0.3	42.4	68.0	78							
28	50.1	5.5	0.4	7.2	0.3	41.3	66.3	80							
30	48.7	6.3	0.4	7.3	0.3	46.0	61.0	82							
32	47.5	6.4	0.4	7.3	0.3	46.4	61.2	84							
34	46.4	5.6	0.4	7.2	0.3	39.5	61.9	86							
36	46.4	2.8	0.4	6.9	0.3	19.3	54.9	88							
38	44.2	1.2	0.4	6.8	0.3	8.1	50.2	90							
40	43.6	0.6	..394	6.7	0.3	3.8	47.6	92							
42	43.1	0.5	0.4	6.8	0.3	3.6	47.0	94							
44	42.5	0.0	0.4	6.7	0.3	0.0	46.4	96							
46	41.8	0.0	0.4	6.7	0.3	0.0	46.4	98							
48	41.6	0.0	0.4	6.7	0.3	0.0	46.4	100							
50	41.3	0.0	0.4	6.7	0.3	0.0	45.1								
COMMENTS															
C=(F-32)*0.5555															

SHRINER LAKE - 7/31/2008						
ELECTROFISHING	Day hours			Night Hours		Total Hours
						0
TRAP NETS	Number of Traps			Number of Lifts		Total Lifts
						0
GILL NETS	Number of Nets			Number of Lifts		Total Lifts
						0
ROTENONE	Gallons	ppm	Acre-feet Treated	SHORELINE SEINING	Number of 100 ft Seine Hauls	

PHYSICAL AND CHEMICAL CHARACTERISTICS						
Color	Turbidity (Secchi Disk)				Air Temperature	70 F
	19	Feet	0	Inches	Water temperature	80.3 F
Water Chemistri GPS Coordinates			N	W		

WATER QUALITY PARAMETERS															
DEPTH (Feet)	Degrees ( F)	D.O.	SpC	pH	TDS	D.O.%	Turb.	DEPTH	Degrees ( F)	D.O.	SpC	pH	TDS	D.O.%	Turb.
SURFACE	80.3	6.93	0.376	8.34	0.2	72.9	87.5	52	43.1	0	0.41	6.67	0.3	0	35.8
2	80.4	6.76	0.376	8.31	0.2	71.1	79.8	54	43	0	0.41	6.66	0.3	0	37.7
4	80.4	6.53	0.376	8.28	0.2	68.7	72.2	56	43	0	0.411	6.65	0.3	0	38.1
6	80.5	6.41	0.376	8.28	0.2	67.4	69.4	58	42.9	0	0.413	6.64	0.3	0	37.5
8	80.4	6.16	0.375	8.26	0.2	64.8	66.8	60	42.8	0	0.413	6.65	0.3	0	37.1
10	80.4	6.16	0.376	8.23	0.2	64.6	65.7	62	42.8	0	0.414	6.64	0.3	0	37
12	80.4	6.04	0.376	8.21	0.2	63.5	64	64	42.8	0	0.415	6.63	0.3	0	36.6
14	80	6.22	0.376	8.17	0.2	65	64.2	66	42.7	0	0.419	6.61	0.3	0	37
16	77.7	5.84	0.378	8.02	0.2	59.8	73.6	68	42.7	0	0.42	6.6	0.3	0	37
18	71	5.55	0.391	7.77	0.3	52.9	91.4	70	42.7	0	0.423	6.57	0.3	0	37.6
20	62.1	4.09	0.402	7.32	0.3	35.2	92.1	72	42.6	0	0.426	6.54	0.3	0	115
22	57	2.99	0.406	7.12	0.3	24.3	85	74							
24	52.6	3.51	0.405	7.12	0.3	27	77.4	76							
26	50.1	5.18	0.402	7.25	0.3	38.6	69.2	78							
28	47.7	4.07	0.403	7.02	0.3	29.4	67	80							
30	46.4	1.54	0.403	6.81	0.3	10.9	61.4	82							
32	45.5	0	0.404	6.69	0.3	0	59.5	84							
34	44.8	0	0.403	6.66	0.3	0	58.1	86							
36	44.3	0	0.402	6.65	0.3	0	54.6	88							
38	44.1	0	0.403	6.67	0.3	0	51.9	90							
40	43.8	0	0.404	6.66	0.3	0	48.3	92							
42	43.6	0	0.403	6.66	0.3	0	43.4	94							
44	43.5	0	0.404	6.66	0.3	0	40.5	96							
46	43.4	0	0.404	6.66	0.3	0	38.8	98							
48	43.3	0	0.405	6.67	0.3	0	36.1	100							
50	43.1	0	0.407	6.68	0.3	0	35.1								
COMMENTS															
C=(F-32)*0.5555															