

Segment Completion Report

by
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FILE

TITLE

Inventory of Species Present in Lake Whitney, Texas.

OBJECTIVES

To determine the species present and their relative abundance as well as to determine the ecological factors influencing their distribution.

HISTORY OF LAKE

Whitney Dam is located on the Brazos River in Hill and Bosque Counties, Texas, approximately 38 river miles upstream from Waco, McLennan County, Texas and 19 miles southwest of Hillsboro, Hill County, Texas.

The Whitney Dam and Reservoir was constructed and is operated by the Corps of Army Engineers as a multiple purpose project for the control of floods, and development of hydroelectric power and for recreational purposes and other uses.

Construction of the dam was started May 12, 1947. Construction of the closure section was begun in May 1950 and completed in December 1950. During that period about 590 surface acres of water was impounded which extended upstream for a distance of ten miles. The gates of the dam were closed on December 10, 1951, which permitted the power pool to commence filling. The lake has never been closed to fishing.

PHYSICAL CHARACTERISTICS

Lake Whitney is a clear water lake, impounding 15,800 surface acres at normal pool level (elevation 520 feet above sea level.) The reservoir is approximately 37 miles long and has a shore line of 190 miles extending into the steeply sloping tributary valleys entering the reservoir. The lake varies in width from about 0.5 miles at the dam, to a maximum of two miles then narrows to a width of several hundred feet up river. The average width is one mile. The shore line is characterized by gently sloping valleys in some areas and limestone bluffs elsewhere.

Soils of the Lake Whitney area are of the Grand Prairie type, primarily of the Denton-San Saba group. The group is characterized by deep soils of brown to black in color underlaid with limestone, chalk or marl.

The lake bottom, prior to flooding, was about one-half cultivated, one-fourth grass, and one-fourth timbered land. Ninety percent of the timber was removed before flooding of the area began. The uncleared timber consisted primarily of cedar on the side slopes, or bottom hardwoods along the main streams and in the

tributary draws. The total contributing drainage area of the Brazos River watershed is 35,720 square miles of which 17,650 square miles is controlled by Whitney Dam. The land of the watershed is used for grazing and farming.

The maximum depth of the lake is 95 feet. About one-third of the lake area will be between 20 and 45 feet deep. For water depth areas, see Table 1. The expected fluctuation between the average annual minimum (elev. 517.2) and maximum (526.2) pools will be nine ft., which should prove no serious detriment to fish production.

CHEMICAL CHARACTERISTICS

One water analysis was made May 19, 1954. The pH ranged from 7.4 at a depth of 50 feet to 8.2 at the surface. The dissolved oxygen content varied from 1.7 ppm just above the lake bottom 68 feet deep to 10.2 ppm at the surface. Total alkalinity varied from 114 ppm at a depth of 68 feet to 104 ppm at the surface.

AQUATIC VEGETATION

Aquatic vegetation is not generally abundant and poses no problem in the lake. Some species of Utricularia (bladderwort) and Polygonum (smartweed) have been found in fair sized patches. In the early part of June 1954 large concentrations of Lemna (duckweed) were found in protected areas of small tributary creeks.

COLLECTING METHODS

Random samples of the fish population were taken by gill nets and minnow seines. Some net sets were made with gill nets 8 ft. deep by 100 ft. long with square mesh sizes of one inch to 3 inches. Other sets were made with gill nets 8 feet deep and 125 feet long which contained a series of 25 ft. sections in which the square mesh sizes were graduated in one-half inch intervals from one to three inches. Seining collections were made with 30 x 6 ft. straight seines and 30 x 6 ft. bag seines, each with $\frac{1}{4}$ inch mesh.

Data taken from fish caught in gill nets included the length, weight, sex, stomach content, and degree of parasitism if any from each fish. Scales from the game fish were collected for future age and growth studies. Table 2 records the checklist of fishes collected from Lake Whitney.

RESULTS OF SEINING COLLECTIONS

Two seining collections were made on the lake. One collection made June 26, 1953 yielded 594 specimens, representing 13 species. The other collection taken May 17, 1954 netted 619 fish in which 18 species were represented. Gizzard shad and plains red shiners were the most abundant species represented with largemouth bass fry accounting for the third largest group. Tabulations of the seining collections are found in Table 3.

RESULTS OF NETTING COLLECTIONS

Gill net sets equal to 135 nets 100 feet long were made on the lake from June 1953 until May 1954, yielding 2,927 fish. Game fish composed 30% of the catch and white crappie were the most abundant game fish taken. Kentucky spotted bass and largemouth bass were about equally represented in the catch. Gizzard shad were the most abundant species caught, followed by carp and smallmouth buffalo respectively. A comparison of the data representing game fish and rough fish species is recorded in Table 4.

The length, weight and coefficient of condition of all fish collected by gill nets are given in Table 5. The results of monthly catches of each species showing the number caught and the percent of the total monthly catch they represent is shown in Table 6. Corresponding information is listed in Table 7, except the catch is represented by weight and the percent column shows the percent of the total weight of that month's catch for each species.

The number of gill nets set each month varied from month to month. Table 8 shows the frequency of capture of each species as well as the number caught per 100 ft. net set and the seasonal variation in catches.

DISCUSSION

The fact that Lake Whitney is a new impoundment and has only recently reached its normal capacity of water storage indicates that the reservoir has not yet reached its peak of production. The lake has been subjected to rather heavy and regular fishing pressure its entire life. More than one million anglers fished the lake from June 1953 through May 1954. The rise in water level of the basin has been somewhat steady during the past year. There are many acres of grass and weed covered flats under water which should add to the productivity of the lake. The entire food chain is excellent and the "K" factors of the fish studied indicate rapid growth. A good bass spawn occurred in the spring of 1953 and a very large spawn was found in the spring of 1954.

There is a large population of rough fish in the lake but their presence has shown no noticeable harm to the game species to date. It is contemplated that rough fish removal by state contract fishermen will begin soon.

The opportunity to follow a new lake through its successive stages of biological development prompted the work of this project. Data resulting from the past year's work indicates that additional information can be obtained by prolonging the study.

Included in the tables of this report are records of a typical seine collection, gill net collection and impoundment survey form.

SUMMARY

Lake Whitney is a new lake located between Bosque and Hill Counties near Whitney, Texas. It is a fairly large, clear water lake about 37 miles long with a 190 mile shoreline.

The lake was random sampled with approximately 130 gill net sets which covered a period of one year. Netting yielded 2,927 fish which weighed 1,513 pounds.

Rough fish constituted 70% by number and 73% by weight of all fish taken. Shad were the most abundant rough fish and accounted for 28% of the total catch. White crappie were the most abundant game fish representing 7% of all specimens taken.

Two seining collections yielded 1,213 fish representing 20 specimens. Shad accounted for 37% and the plains red shiner represented 28% of all fish collected. Largemouth bass fry numbered 10% of all fish caught.

Data resulting from the project indicates that additional information can be obtained by continuing the study.

Table 1. Water Depth Areas of Lake Whitney

Depth Range Feet	Area, Acres	Percent of Area (Rounded)
0-5	2,700	17
5-10	2,290	15
10-20	3,170	20
20-45	5,010	32
45-70	2,040	12
70-95 (max. depth)	590	4
Total	15,800	100

Table 2. Checklist of Fish Species From
Lake Whitney, Texas, 1953 -54

Common Name	Scientific Name
1. Spotted Gar	<i>Lepisosteus productus</i>
2. Longnose Gar	<i>Lepisosteus osseus</i>
3. Gizzard Shad	<i>Dorosoma cepedianum</i>
4. Smallmouth buffalo	<i>Ictiobus bubalus</i>
5. River carpsucker	<i>Carpionodes carpio</i>
6. German Carp	<i>Cyprinus carpio</i>
7. Gray Redhorse Sucker	<i>Moxostoma congestum</i>
8. Pugnose Minnow	<i>Opsopoeodus emilae</i>
9. Pallid Shiner	<i>Notropis amnis</i>
10. Red Shiner (Redhorse)	<i>Notropis lutrensis</i>
11. Blacktail Shiner (Spottail)	<i>Notropis venustus</i>
12. Ghost mimic shiner	<i>Notropis volucellus</i>
13. Redfin Shiner	<i>Notropis umbratilis</i>
14. Parrot Minnow	<i>Pimephales vigilax</i>
15. Fathead Minnow	<i>Pimephales promelas</i>
16. Channel Catfish	<i>Ictalurus punctatus</i>
17. Yellow Catfish (Flathead Catfish)	<i>Pilodictus olivaris</i>
18. Mosquitofish	<i>Gambusia affinis</i>
19. White Bass (Sand Bass)	<i>Morone chrysops</i>
20. Largemouth Black Bass	<i>Micropterus salmoides</i>
21. Spotted Black Bass	<i>Micropterus punctulatus</i>
22. Blackstripe Topminnow	<i>Fundulus notatus</i>
23. Warmouth	<i>Chaenobryttus coronarius</i>
24. Bluegill Bream	<i>Lepomis macrochirus</i>
25. Green Sunfish	<i>Lepomis cyanellus</i>
26. Western Spotted Sunfish	<i>Lepomis punctatus</i>
27. Orangespotted sunfish	<i>Lepomis humilis</i>
28. Yellowbelly sunfish	<i>Lepomis auritus</i>
29. Black Crappie	<i>Pomoxis nigromaculatus</i>
30. White Crappie	<i>Pomoxis annularis</i>
31. Logperch	<i>Percina caprodes</i>
32. Plains Orangethroat Darter	<i>Poecilichthys spectabilis</i>
33. Drum	<i>Aplodinotus grunniens</i>
34. Black Bullhead Catfish	<i>Ameiurus natalis</i>
35. American Eel	<i>Anguilla rostrata</i>

Table 3. Results of Seining Collections by Number of each Species,
Lake Whitney, Texas, 1953 - 1954

Species	June 26, 1953	May 17, 1954	Total	Percent of Total
<i>Micropterus salmoides</i>	16	110	126	10.39
<i>Lepomis macrochirus</i>	42	25	67	5.52
<i>Lepomis punctatus</i>	7	6	13	1.07
<i>Lepomis cyanellus</i>	5	1	6	0.50
<i>Lepomis humilis</i>		9	9	0.74
<i>Notropis venustus</i>	7	39	46	3.79
<i>Notropis lutrensis</i>	91	247	338	27.87
<i>Notropis amnis</i>	1		1	0.08
<i>Notropis volucellus</i>		1	1	0.08
<i>Notropis umbratilis</i>		2	2	0.17
<i>Pimephales vigilax</i>		1	1	0.08
<i>Opsopoeodus emilae</i>		14	14	1.15
<i>Pimephales promelas</i>	1	2	3	0.25
<i>Gambusia affinis</i>	63	19	82	6.72
<i>Fundulus notatus</i>	4	2	6	0.50
<i>Dorosoma cepedianum</i>	331	122	453	37.34
<i>Cyprinus carpio</i>	10		10	0.83
<i>Percina caprodes</i>	16	17	33	2.72
<i>Poeciliichthys spectabilis</i>		1	1	0.08
<i>Pomoxis nigromaculatus</i>		1	1	0.08
Total	594	619	1,213	100.00

Table 4. A Comparison of the Rough and Game Fish Caught
By Gill Nets in Lake Whitney, Texas 1953- 54

Total Number of Specimens Caught	2,927
Total Weight of Specimens Caught	1,513.07
Average Weight Per Specimen	0.51
Total Weight of Rough Fish	1,108.06
*Total Weight of Game Fish	305.01
Total Number of Rough Fish	2,048
*Total Number of Game Fish	879
Average Weight Per Rough Fish	0.70
Average Weight Per Game Fish	0.30
Percent game fish (by weight)	26.78
Percent rough fish (by weight)	73.22
Percent rough fish (by number)	69.96
Percent game fish (by number)	30.04

* - Catfishes, drum and sand bass included in game fish.

IMPOUNDMENT SURVEY FORM, Job B-1

Name of Water: Lake Whitney Investigator: Hambric
Location: Between Bosque and Hill Counties in Texas Date: May 17, 1954
Surface Acres: 15,800 Avg. Depth: Approx. 25', Acr. ft. 387,000 Max. Depth 95'
Tributaries: Brazos, Nolan, Steele, Rocky and Mesquite, Drainage Area: 17,650 sq. mi.
Dam: Length: 1,674 ft., Height: 159 ft. Construct: earth-cement Built: 1950
Bottom Type: Shale, limestone, gravel and clay
Aquatic Vegetation: Amount - very little Locations: in backwater areas
Kinds: Utricularis Sp. and Polygonum sp.
Immediate shore: Vegetation - sunflowers and grasses Profile:
Surrounding Area: Land Use - Farming and Grazing Profile:
Water level fluctuation: Approx. 9 ft. per year in normal rainfall.
Water uses: Hydroelectric, irrigation and recreation
Types of Fishing: Still fishing, casting, fly fishing, trotline and trolling.
No. Fishermen Seen: ? Catch: Fair
Approx. No: Cottages: 7, Resorts: 40, Boat liveries: 40, Free Beaches: 190 mi.
Accessibility: Good - public lands.
Fishing Reputation: Good.
Previous Five Year Stocking: Largemouth bass and redear sunfish, also channel catfish.
Pollution: Some from Santa Fe Shops in Cleburne.
Remarks: None

Fish Card, Job B-1

Coll. No. B-1-S-2 Locality Lake Whitney Date 5/17/54 Collector Hambric

Time: 3:25 -4:00

Description _____

Shoreline Shallow and sloping

Bottom Gravel with some submerged terrestrial vegetation

Cover little other than submerged grasses

Weather Present Sky clear, wind calm, / ^{warm} Preceding clear and warm

Water: Temperature _____ Color clear

Surface 84°F Turbidity Clear

Bottom _____

Vegetation _____

Submerged Terrestrial grass recently covered.

Floating _____

Emerged _____

Predators none observed

Parasites and Disease none observed

Tackle Used Bag seine Length 30 ft. Mesh $\frac{1}{4}$ " Depth 6 ft.

No. of Hauls 2 Length of Hauls 50 ft.

Species	No.	Species	No.
Notropis lutrensis	136		
Dorosoma cepedianum	112		
Notropis venustus	23		
Pimephales promelas	1		
Micropterus salmoides	52		
Percina caprodes	14		
Gambusia affinis	11		
Lepomis macrochirus	9		
Lepomis cyanellus	1		
Lepomis notatus	2		
Poecilichthys spectabilis	1		
Opsopoeodus emilae	4		
Pomoxis nigromaculatus	1		
Notropis umbratilis	2		
Ceratichthys sp.	1		
Total	370		

Collection No. B-1, 20 Locality Lake Whitney, Sta. 6 Date 5-18-54

Tackle Used Gill net 100 ft. x 8 ft. x 1½ inch Time - overnight

No.	Species	Sex & Develo.	Length in mm. Stand.	Wt in Grams Total	"K"	Stomach No.	Remarks Stomach Contents
1	LM Bass	F-3	260 mm	350			Empty
2		F-4	245	277			Empty
3		F-4	245	295			One 5 inch shad
1	KS Bass	M-4	235	226			Empty
1	W Crappie	M-4	200	190			Fish remains
1	Bluegill	M-2	150	127			Insects
1	Drum	F-4	260	305			Empty
2		F-4	215	203			Empty
1	Ch. Cat	?	360	794			Algae
2		F-4	320	567			Algae
3		F-4	310	450			Algae
4		F-4	295	395			Algae
5		F-4	285	368			Algae
6		?	260	251			Algae and seeds
7		?	307	421			Algae and crayfish
8		F-4	275	293			Algae
9		F-4	250	252			Algae and fish eggs
10		?	285	365			Algae
11		?	265	309			Algae and fish eggs
12		?	263	279			Algae
13		?	255	316			Algae and fish
14		F-4	245	215			Algae
1-13	Shad	Avg.	215	181			?

Table 6. Results of Netting Collections by Number and Per Cent of Total Number for each Species, Lake Whitney, Texas 1953 - 1954

Species	June		July		Aug.		Sept.		Oct.		Nov.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Spot. Gar	1				1	1.10	1	0.46	6	1.64	25	18.94
L. N. Gar			20	20.41	8	8.80			15	4.09	45	34.09
Shad			21	21.43	1	1.10	13	6.01	30	8.18		
Buffalo	1	0.85	2	2.04			13	6.01	108	29.51		
Carp	41	34.74	21	21.43	12	13.18	17	7.87	25	6.85	2	1.51
Carp	59	50.00	28	28.57	33	36.26	130	60.17	61	16.66	3	2.27
R.H. Sucker									2	0.55	2	1.51
Ch. Cat	7	5.93			20	21.99	3	1.38	12	3.29	2	1.51
Y. Cat					1	1.10	1	0.46				
Y. Bullhead									1	0.27		
B. Bullhead												
W. Bass			1	1.02								
L. M. Bass	7	5.93			6	6.59	1	0.46	7	1.91	4	3.03
K. S. Bass							8	3.69	4	1.09	6	4.56
Bluegill					2	2.19	4	1.85	14	3.84	15	11.36
Y. Sunfish	1	0.85					3	1.38	4	1.09	4	3.03
Warmouth									1	0.27		
G. Sunfish												
W. Crappie	1	0.85	1	1.02	6	6.59	12	5.65	58	15.84	18	13.63
B. Crappie	1	0.85	4	4.08	1	1.10	1	0.46	18	4.92	6	4.56
Drum							9	4.15				
Total	118	100.00	98	100.00	91	100.00	216	100.00	366	100.00	132	100.00

Table 6 (Cont.). Results of Netting Collections by Number and Per Cent of Total Number for each Species, Lake Whitney, Texas 1953 -1954

Species	Dec.		Jan.		Feb.		March		April		May		Total	
	No.	%	No.	%										
Spot. Gar	116	50.43	86	32.95	100	28.49	226	51.02	4	1.58	3	1.02	15	0.51
L. N. Gar	7	3.04	18	6.89	50	14.24	24	5.42	11	4.33	7	2.42	61	2.08
Shad	9	3.91	18	6.90	29	8.26	28	6.32	25	9.84	69	23.79	808	27.60
Buffalo	1	0.43	6	2.29	6	1.71	73	16.48	12	4.73	17	5.86	431	14.73
Carp	7	3.04	6	2.30	8	2.28	4	0.90	12	4.73	52	17.93	231	7.89
R.H. Sucker	2	0.87	29	11.11	27	7.69	32	7.23	3	1.18	30	10.35	167	5.72
Ch. Cat			2	0.77	1	0.28			1	0.39			5	0.17
Y. Cat			1	0.38	4	1.15							2	0.06
Y. Bullhead					4	1.15	3	0.67					7	0.24
B. Bullhead					9	2.56	2	0.45					18	0.61
W. Bass	3	1.34	4	1.53	17	4.86	14	3.16	7	2.76	1	0.35	108	3.69
L. M. Bass	7	3.04	22	8.43	13	3.70	12	2.71	8	3.15	4	1.38	111	3.80
K. S. Bass	34	14.78	17	6.52	18	5.13	3	0.67	25	9.84	23	7.93	92	3.15
Bluegill	5	2.17	2	0.77			2	0.45	3	1.18			31	1.06
Y.B. Sunfish	14	6.08					2	0.45					3	0.10
Warmouth													1	0.03
G. Sunfish	19	8.26	28	10.73	35	9.97	10	2.26	1	0.39	7	2.42	209	7.14
W. Crappie	6	2.61	22	8.42	31	8.83	6	1.36	4	1.58			96	3.28
B. Crappie					3	0.85	2	0.45	2	0.78	17	5.86	38	1.29
Drum														
Total	230	100	261	100	351	100	443	100	254	100	290	100	2927	100

Table 7. Results of Netting Collections by Weight and Per Cent of Total Weight for each Species, Lake Whitney Texas 1953 - 1954

Species	June		July		Aug.		Sept.		Oct.		Nov.	
	Wt.*	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%
Spot. Gar					7.99	6.09			17.20	7.38		
L.N. Gar			1.50	4.27	38.00	28.97			23.48	10.08		
Shad			4.00	11.37	17.00	12.96	5.18	7.20	8.34	3.79	8.37	9.25
Buffalo	0.42	0.59	2.00	5.68	3.00	2.29	13.00	18.07	56.57	24.28	45.75	50.56
Carpsucker	24.49	34.52	11.00	31.27	6.25	4.76	8.62	11.98	17.00	7.30	1.06	1.17
Carp	34.94	49.26	14.25	40.51	19.39	14.78	25.24	35.07	51.40	22.06		
R.H. Sucker									2.24	0.96	1.77	1.96
Ch. Cat	5.22	7.36			24.48	18.66	8.49	11.80	20.36	8.74	2.12	2.34
Y. Cat					1.74	1.33						
Y. Bullhead									1.15	0.49		
B. Bullhead												
W. Bass			0.15	0.42								
L. M. Bass	5.08	7.16			5.40	4.12	0.56	0.78	0.31	0.13	3.93	4.34
K. S. Bass							5.65	7.85	6.12	2.63	4.50	4.97
Bluegill					1.56	1.19	3.24	4.50	5.06	2.17	8.37	9.25
Y. Sunfish	0.24	0.33					1.24	1.72				
Warmouth							0.74	1.03			0.71	0.79
G. Sunfish												
W. Crappie	0.26	0.37			4.93	3.76			19.84	8.52	11.90	13.15
B. Crappie	0.29	0.41	2.00	5.68	0.62	0.47			3.43	1.47	2.01	2.22
Drum					0.81	0.62						
Total	70.94	100.00	35.18	100.00	131.17	100.00	71.96	100.00	233.00	100.00	90.49	100.00

* Weight in pounds

Table 7. (Cont.) Results of Netting Collections by Weight and Per Cent of Total Weight for each Species, Lake Whitney, Texas 1953 - 1954

Species	Dec.		Jan.		Feb.		March		April		May		Total	
	Wt.*	%	Wt.	%										
Spot. Gar	35.26	37.62	28.14	21.99			49.23	28.81	6.00	3.82	5.25	3.43	36.44	2.40
L.N. Gar	6.80	7.25	16.99	13.28			12.72	7.41	33.00	20.99	9.00	5.87	104.98	6.93
Shad	7.84	8.36	18.04	14.10			15.85	9.23	35.48	22.57			211.51	13.97
Buffalo					50.79	27.17			28.41	18.07	19.00	12.40	255.45	16.84
Carpsucker					39.00	20.86			15.04	9.57	18.50	12.07	182.69	12.07
Carp			6.24	4.88	4.39	2.34	48.88	28.48	18.70	11.90	53.00	34.59	276.43	18.33
R.H. Sucker	7.90	8.43	7.49	5.84	11.20	5.99	3.22	1.88					33.82	2.33
Ch. Cat	1.31	1.40	12.18	9.51	25.07	13.40	23.20	13.51	1.78	1.13	30.13	19.66	124.09	8.23
Y. Cat									4.12	2.62			5.86	0.38
Y. Bullhead	0.75	0.80	0.93	0.73	0.56	0.30							3.39	0.23
B. Bullhead					2.34	1.25	1.01	0.59					3.35	0.22
W. Bass					5.61	3.00	0.61	0.35			0.51	0.33	11.68	0.77
L. M. Bass	7.16	7.63	11.38	8.89	12.11	6.48	9.20	5.36	3.75	2.39	9.00	5.87	79.35	5.24
K. S. Bass	19.08	20.36	10.00	7.82	9.84	5.26	4.52	2.63	4.21	2.68	2.63	1.72	66.95	4.42
Bluegill	1.23	1.31	0.62	0.49	2.00	1.07							6.65	0.44
Y. Sunfish	0.56	0.60					0.19	0.11	0.19	0.12			2.63	0.17
Warmouth							0.41	0.24					0.41	0.02
G. Sunfish									0.57	0.36			0.57	0.03
W. Crappie	3.80	4.05	6.24	4.88	12.72	6.80	1.41	0.82	3.76	2.39	1.75	1.14	66.63	4.40
B. Crappie	2.05	2.19	9.70	7.58	10.00	5.35	0.98	0.58	1.20	0.76			30.25	2.00
Drum					1.37	0.73			0.99	0.63	4.48	2.92	9.94	0.65
Total	93.74	100.00	127.95	100.00	188.00	100.00	171.63	100.00	157.20	100.00	103.55	100.00	1513.07	100.00

* Weight in pounds

Table 8. Number of Fish Caught Per Hundred Feet of Gill Net
(Set Overnight) Lake Whitney, Texas 1953 - 1954.

Species	No. 100' Nets												Aug, 100, Net		
	6	11	13	6	18	6.25	12.50	18.25	15.50	8.50	10	9.25			
Spot. Gar	0.00	0.00	0.08	0.14	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.51	0.11
L.N. Gar	0.00	1.82	0.62	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.51	0.41
Shad	0.00	1.90	0.08	2.17	1.67	4.00	9.28	4.71	5.10	14.59	12.10	5.02	12.10	5.02	6.99
S.M. Buffalo	0.17	0.18	0.00	2.17	6.00	0.72	0.56	0.99	3.23	1.41	2.50	3.13	2.50	3.13	3.19
Carp	6.83	1.90	0.92	2.83	1.39	0.32	0.72	0.99	1.90	1.65	1.20	1.24	1.20	1.24	1.71
R.H. Sucker	9.83	2.55	2.54	21.33	3.44	0.48	0.08	0.32	0.39	4.35	1.20	3.79	1.20	3.79	3.44
Ch. Cat	0.00	0.00	0.00	0.00	0.11	0.32	0.56	0.48	0.45	0.35	0.00	0.00	0.00	0.00	0.21
Y.Cat(Flathead)	1.17	0.00	1.54	0.50	0.67	0.32	0.16	1.58	1.74	1.88	0.30	2.19	0.30	2.19	1.23
Y. Bullhead	0.00	0.00	0.08	0.14	0.00	0.00	0.00	0.11	0.00	0.00	0.10	0.00	0.10	0.00	0.04
B. Bullhead	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.11	0.06	0.00	0.00	0.00	0.00	0.00	0.01
W. Bass	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.11	0.26	0.12	0.00	0.00	0.00	0.00	0.05
L.M. Bass	1.17	0.00	0.46	0.14	0.00	0.96	0.24	0.22	0.58	0.12	0.00	0.07	0.00	0.07	0.13
K.S. Bass	0.00	0.00	0.00	1.33	0.39	0.96	0.56	1.21	1.03	0.94	0.70	0.51	0.70	0.51	0.80
Bluegill	0.00	0.00	0.00	0.34	0.22	2.24	2.72	0.93	0.77	0.82	0.80	0.29	0.80	0.29	0.82
Y.B. Sunfish	0.00	0.00	0.16	0.00	0.39	0.00	0.40	0.11	1.14	0.35	2.50	1.67	2.50	1.67	0.68
Warmouth	0.17	0.00	0.00	0.50	0.39	0.64	1.12	0.00	0.00	0.12	0.30	0.00	0.30	0.00	0.23
G. Sunfish	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.02
W. Crappie	0.17	0.09	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.01
E. Crappie	0.17	0.00	0.08	2.00	3.22	5.12	1.52	1.53	2.26	0.59	1.50	0.51	1.50	0.51	1.55
Drum	0.17	0.36	0.00	0.14	1.00	0.96	0.48	1.20	2.00	0.35	0.40	0.00	0.40	0.00	0.71
	0.17	0.36	0.00	1.50	0.00	0.00	0.00	0.00	0.19	0.12	0.20	1.24	0.20	1.24	0.28

