

ILLINOIS NATURAL HISTORY SURVEY
 CENTER FOR AQUATIC ECOLOGY
 1999 CREEL SURVEY RESULTS

1999 REND LAKE
 16135 ACRES

STRATIFICATION SUMMARY:

Day creel only.
 Results cover 03/15/1999 through 10/31/1999
 Year periods stratified.
 Fishing modes (boat vs. shore) stratified.
 Day types (weekday vs. weekend/holiday) stratified.
 Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 439/693 = 63.3%

NUMBER OF INTERVIEWS: 3594

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI	HOURS/ACRE	95% CI	% EFF
BOAT	WEEKDAY	68960	59381-78539 (14%)	4	4-5 (14%)	5%
	HOLIDAY	62874	50750-74998 (19%)	4	3-5 (19%)	12%
	TOTAL	131834	116382-147285 (12%)	8	7-9 (12%)	8%
SHORE	WEEKDAY	20767	17143-24392 (17%)	1	1-2 (17%)	5%
	HOLIDAY	14345	11625-17065 (19%)	1	1-1 (19%)	9%
	TOTAL	35112	30581-39644 (13%)	2	2-2 (13%)	6%
BOAT & SHORE	WEEKDAY	89727	79485-99969 (11%)	6	5-6 (11%)	5%
	HOLIDAY	77219	64794-89645 (16%)	5	4-6 (16%)	11%
	TOTAL	166946	150844-183049 (10%)	10	9-11 (10%)	8%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
163482	142173-184791 (13%)	.650	.554-.746 (15%)	25.04	10.13	All species
		****	NOT RECORDED			Bigmouth buffalo
1029	572-1486 (44%)	.002	.001-.002 (57%)	0.16	0.06	Black crappie
4453	837-8069 (81%)	.029	.000-.061 (108%)	0.68	0.28	Bluegill
		****	NOT RECORDED			Bowfin
		****	NOT RECORDED			Carp
19300	16208-22393 (16%)	.078	.065-.092 (17%)	2.96	1.20	Channel catfish
273	150-396 (45%)	.001	.000-.002 (82%)	0.04	0.02	Flathead catfish
57	0-115 (103%)	.000	.000-.000 (99%)	0.01	0.00	Freshwater drum
54	0-133 (145%)	.000	.000-.001 (142%)	0.01	0.00	Gizzard shad
706	380-1031 (46%)	.005	.000-.013 (149%)	0.11	0.04	Largemouth bass
43	0-113 (165%)	.000	.000-.000 (195%)	0.01	0.00	Longear sunfish
121	0-276 (128%)	.000	.000-.001 (125%)	0.02	0.01	Orangespotted sunfi
1508	785-2232 (48%)	.006	.002-.009 (63%)	0.23	0.09	Striped bass hybrid
67	0-164 (145%)	.000	.000-.001 (182%)	0.01	0.00	Striped bass
		****	NOT RECORDED			Warmouth
32142	22815-41470 (29%)	.149	.094-.204 (37%)	4.92	1.99	White bass
103036	86634-119438 (16%)	.376	.313-.439 (17%)	15.78	6.39	White crappie
229	0-465 (103%)	.001	.000-.003 (125%)	0.04	0.01	Yellow bullhead
463	0-975 (110%)	.001	.000-.003 (126%)	0.07	0.03	Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
50846	44097-57596 (13%)	.216	.178-.253 (17%)	7.79	0.311	All species
		****	NOT RECORDED			Bigmouth buffalo
228	117-338 (49%)	.000	.000-.001 (57%)	0.03	0.221	Black crappie
380	17-743 (95%)	.002	.000-.004 (104%)	0.06	0.085	Bluegill
		****	NOT RECORDED			Bowfin
		****	NOT RECORDED			Carp
14978	12305-17652 (18%)	.062	.046-.078 (26%)	2.29	0.776	Channel catfish
734	319-1149 (57%)	.004	.000-.009 (111%)	0.11	2.698	Flathead catfish
30	0-69 (127%)	.000	.000-.000 (110%)	0.00	0.543	Freshwater drum
1	0-4 (181%)	.000	.000-.000 (148%)	0.00	0.024	Gizzard shad
595	339-850 (43%)	.004	.000-.010 (145%)	0.09	0.844	Largemouth bass
6	0-14 (149%)	.000	.000-.000 (148%)	0.00	0.135	Longear sunfish
3	0-7 (116%)	.000	.000-.000 (127%)	0.00	0.027	Orangespotted sunfi
858	389-1327 (55%)	.004	.000-.008 (101%)	0.13	0.569	Striped bass hybrid
77	0-190 (146%)	.000	.000-.001 (184%)	0.01	1.153	Striped bass
		****	NOT RECORDED			Warmouth
10773	7348-14197 (32%)	.054	.028-.080 (48%)	1.65	0.335	White bass
22040	18339-25742 (17%)	.084	.067-.101 (20%)	3.38	0.214	White crappie
93	4-182 (95%)	.001	.000-.001 (100%)	0.01	0.409	Yellow bullhead
49	0-100 (101%)	.000	.000-.000 (120%)	0.01	0.107	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI	LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
112097	97218-126976 (13%)	.476	.393-.558 (17%)	6.95	0.686	All species
		****	NOT RECORDED ****			Bigmouth buffalo
502	258-746 (49%)	.001	.000-.001 (57%)	0.03	0.487	Black crappie
838	38-1638 (95%)	.004	.000-.009 (104%)	0.05	0.188	Bluegill
		****	NOT RECORDED ****			Bowfin
		****	NOT RECORDED ****			Carp
33021	27127-38916 (18%)	.137	.102-.172 (26%)	2.05	1.711	Channel catfish
1618	703-2533 (57%)	.010	.000-.020 (111%)	0.10	5.948	Flathead catfish
67	0-152 (127%)	.000	.000-.000 (110%)	0.00	1.197	Freshwater drum
3	0-8 (181%)	.000	.000-.000 (148%)	0.00	0.053	Gizzard shad
1311	748-1875 (43%)	.009	.000-.022 (145%)	0.08	1.860	Largemouth bass
12	0-31 (149%)	.000	.000-.000 (148%)	0.00	0.297	Longear sunfish
7	0-16 (116%)	.000	.000-.000 (127%)	0.00	0.060	Orangespotted sunfi
1892	858-2925 (55%)	.009	.000-.017 (101%)	0.12	1.254	Striped bass hybrid
170	0-419 (146%)	.001	.000-.003 (184%)	0.01	2.541	Striped bass
		****	NOT RECORDED ****			Warmouth
23750	16200-31299 (32%)	.118	.061-.175 (48%)	1.47	0.739	White bass
48591	40431-56751 (17%)	.186	.149-.223 (20%)	3.01	0.472	White crappie
206	10-401 (95%)	.001	.000-.002 (100%)	0.01	0.901	Yellow bullhead
109	0-220 (101%)	.000	.000-.001 (120%)	0.01	0.235	Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
349007	303391-394623 (13%)	1.243	1.067-1.419 (14%)	53.45	21.63	All species
19	0-58 (209%)	.000	.000-.000 (209%)	0.00	0.00	Bigmouth buffalo
1103	635-1571 (42%)	.002	.001-.003 (54%)	0.17	0.07	Black crappie
7731	3007-12454 (61%)	.044	.009-.079 (80%)	1.18	0.48	Bluegill
18	0-54 (208%)	.000	.000-.000 (209%)	0.00	0.00	Bowfin
61	0-151 (149%)	.000	.000-.001 (180%)	0.01	0.00	Carp
22127	18657-25597 (16%)	.092	.076-.109 (18%)	3.39	1.37	Channel catfish
293	165-421 (44%)	.001	.000-.002 (79%)	0.04	0.02	Flathead catfish
1762	1219-2306 (31%)	.006	.003-.009 (50%)	0.27	0.11	Freshwater drum
54	0-133 (145%)	.000	.000-.001 (142%)	0.01	0.00	Gizzard shad
26164	20957-31370 (20%)	.064	.049-.080 (24%)	4.01	1.62	Largemouth bass
43	0-113 (165%)	.000	.000-.000 (195%)	0.01	0.00	Longear sunfish
277	0-566 (104%)	.004	.000-.009 (162%)	0.04	0.02	Orangespotted sunfi
2793	1154-4432 (59%)	.009	.004-.014 (55%)	0.43	0.17	Striped bass hybrid
67	0-164 (145%)	.000	.000-.001 (182%)	0.01	0.00	Striped bass
174	0-365 (109%)	.000	.000-.001 (158%)	0.03	0.01	Warmouth
70333	48519-92147 (31%)	.301	.187-.415 (38%)	10.77	4.36	White bass
211786	178823-244749 (16%)	.702	.595-.809 (15%)	32.43	13.13	White crappie
703	353-1053 (50%)	.003	.001-.005 (71%)	0.11	0.04	Yellow bullhead
3498	1646-5351 (53%)	.014	.006-.022 (54%)	0.54	0.22	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
80069	69551-90587 (13%)	.300	.251-.349 (16%)	12.26	0.229	All species
58	0-179 (209%)	.000	.000-.001 (209%)	0.01	3.214	Bigmouth buffalo
235	124-346 (47%)	.000	.000-.001 (55%)	0.04	0.213	Black crappie
490	86-893 (82%)	.003	.000-.005 (92%)	0.08	0.063	Bluegill
1	0-3 (208%)	.000	.000-.000 (208%)	0.00	0.048	Bowfin
79	0-211 (168%)	.000	.000-.001 (194%)	0.01	1.312	Carp
15501	12794-18208 (17%)	.064	.048-.080 (25%)	2.37	0.701	Channel catfish
741	325-1156 (56%)	.004	.000-.009 (111%)	0.11	2.527	Flathead catfish
834	538-1130 (36%)	.002	.001-.003 (55%)	0.13	0.473	Freshwater drum
1	0-4 (181%)	.000	.000-.000 (148%)	0.00	0.024	Gizzard shad
15699	12124-19274 (23%)	.037	.027-.047 (27%)	2.40	0.600	Largemouth bass
6	0-14 (149%)	.000	.000-.000 (148%)	0.00	0.135	Longear sunfish
7	1-14 (91%)	.000	.000-.000 (138%)	0.00	0.026	Orangespotted sunfi
1080	422-1738 (61%)	.004	.000-.008 (91%)	0.17	0.387	Striped bass hybrid
77	0-190 (146%)	.000	.000-.001 (184%)	0.01	1.153	Striped bass
29	0-62 (112%)	.000	.000-.000 (164%)	0.00	0.169	Warmouth
16869	11182-22557 (34%)	.079	.042-.116 (47%)	2.58	0.240	White bass
27901	23328-32474 (16%)	.103	.084-.122 (19%)	4.27	0.132	White crappie
298	153-444 (49%)	.001	.000-.002 (62%)	0.05	0.424	Yellow bullhead
164	81-246 (50%)	.001	.000-.001 (53%)	0.03	0.047	Yellow bass

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Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI	LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
176522	153334-199710 (13%)	.662	.554-.770 (16%)	10.94	0.506	All species
128	0-394 (209%)	.001	.000-.002 (209%)	0.01	7.085	Bigmouth buffalo
517	273-762 (47%)	.001	.000-.001 (55%)	0.03	0.469	Black crappie
1080	191-1969 (82%)	.006	.000-.011 (92%)	0.07	0.140	Bluegill
2	0-6 (209%)	.000	.000-.000 (208%)	0.00	0.106	Bowfin
174	0-466 (168%)	.001	.000-.002 (194%)	0.01	2.893	Carp
34174	28206-40141 (17%)	.141	.106-.177 (25%)	2.12	1.545	Channel catfish
1633	717-2548 (56%)	.010	.000-.020 (111%)	0.10	5.572	Flathead catfish
1838	1186-2491 (36%)	.004	.002-.007 (55%)	0.11	1.043	Freshwater drum
3	0-8 (181%)	.000	.000-.000 (148%)	0.00	0.053	Gizzard shad
34610	26729-42492 (23%)	.082	.060-.105 (27%)	2.15	1.323	Largemouth bass
12	0-31 (149%)	.000	.000-.000 (148%)	0.00	0.297	Longear sunfish
16	1-30 (91%)	.000	.000-.000 (138%)	0.00	0.057	Orangespotted sunfi
2381	930-3832 (61%)	.010	.001-.019 (91%)	0.15	0.853	Striped bass hybrid
170	0-419 (146%)	.001	.000-.003 (184%)	0.01	2.541	Striped bass
65	0-137 (112%)	.000	.000-.000 (164%)	0.00	0.373	Warmouth
37190	24652-49729 (34%)	.175	.093-.256 (47%)	2.30	0.529	White bass
61511	51429-71594 (16%)	.227	.184-.270 (19%)	3.81	0.290	White crappie
658	338-978 (49%)	.003	.001-.004 (62%)	0.04	0.936	Yellow bullhead
361	179-542 (50%)	.001	.001-.002 (53%)	0.02	0.103	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	4.3	4.0-4.5	(5%)	0.2	10.0	511
SHORE	2.4	2.1-2.7	(14%)	0.2	8.5	98
BOAT & SHORE	4.0	3.8-4.2	(5%)	0.2	10.0	609
MILES TRAVELED	73.3	69.5-77.1	(5%)	1	2500	2732
SUCCESS RATING (1-10)	3.9	3.8-4.0	(3%)	1	10	2728

*323 samples were from split interviews of completed trips.
 18.7% of all 3265 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 1 out of 3265 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	363	1947	139	37		4				
SHORE INTERVIEWS	294	338	81	45	9	7	1			

Table 10. Number of interviews (and %) per species sought for all interviews.

381 (11.7%)	ANY	All species
10 (0.3%)	BLG	Bluegill
2 (0.1%)	CAP	Carp
538 (16.5%)	CAT	Catfish spp.
11 (0.3%)	CCF	Channel catfish
1124 (34.4%)	CRP	Crappie spp.
27 (0.8%)	FCF	Flathead catfish
945 (28.9%)	LMB	Largemouth bass
201 (6.2%)	WHB	White bass
26 (0.8%)	WHC	White crappie

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Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	1130	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1134	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	1130	-	-	-	-	-	-	2	2	-	-	-	-	-	-	2
RELEASE	1117	6	6	2	-	4	-	-	-	-	1	-	-	-	-	-
Channel catfish																
HARVEST	979	61	36	30	13	7	1	-	-	4	1	-	1	-	1	2
RELEASE	1088	26	9	9	2	2	-	-	-	-	-	-	-	-	-	-
Flathead catfish																
HARVEST	1128	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1134	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater drum																
HARVEST	1136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1098	34	2	-	-	2	-	-	-	-	-	-	-	-	-	-
Gizzard shad																
HARVEST	1135	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	1112	21	2	1	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	725	271	63	21	27	13	8	2	3	-	1	-	2	-	-	-
Orangespotted sunfish																
HARVEST	1136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1134	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Striped bass hybrid (Wiper)																
HARVEST	1125	8	3	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1134	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Striped bass																
HARVEST	1134	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Warmouth																
HARVEST	1136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	1132	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
White bass																
HARVEST	1058	18	15	4	6	2	-	4	4	4	21	-	-	-	-	-
RELEASE	1049	31	22	2	3	4	-	3	4	-	7	-	-	-	-	11

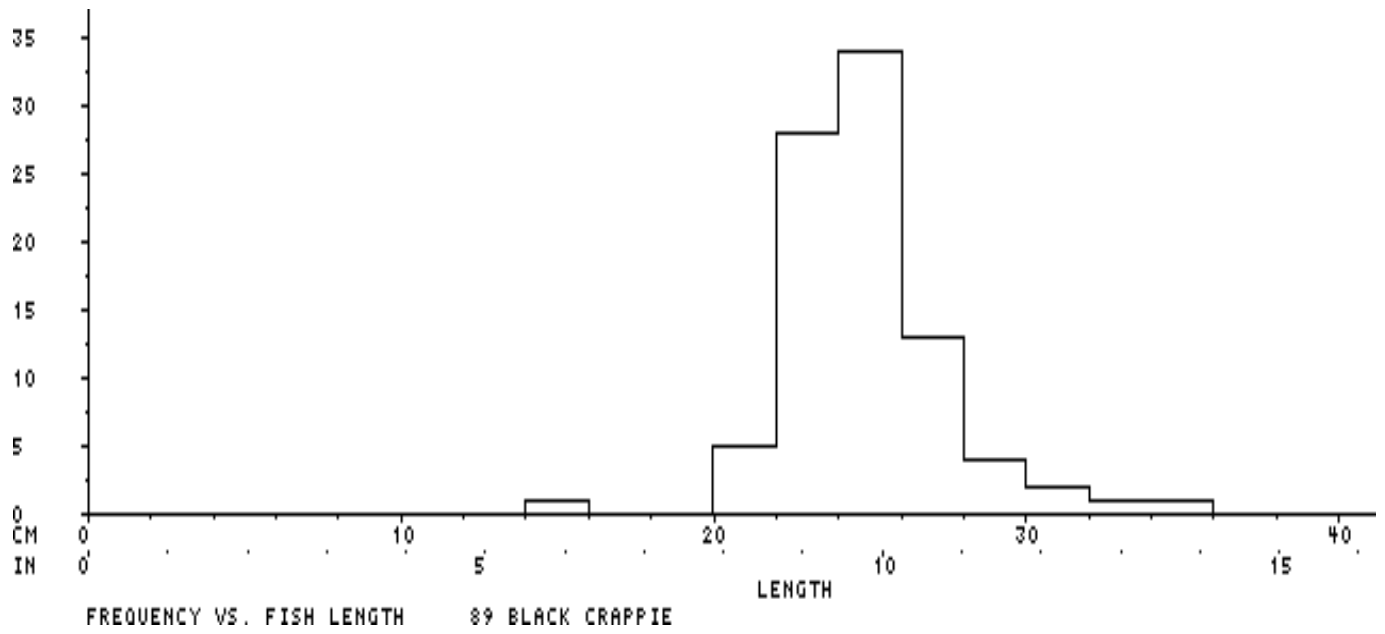


Figure 1. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of black crappie harvested by all anglers.

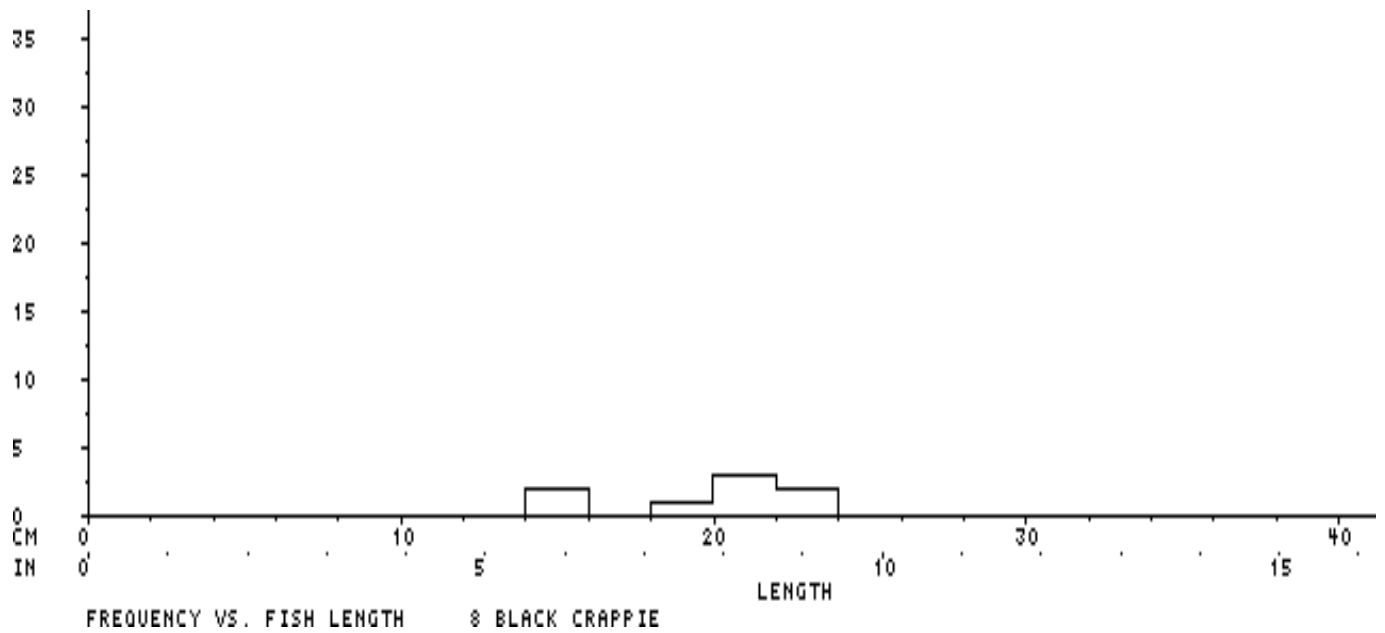


Figure 2. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of black crappie released by all anglers.

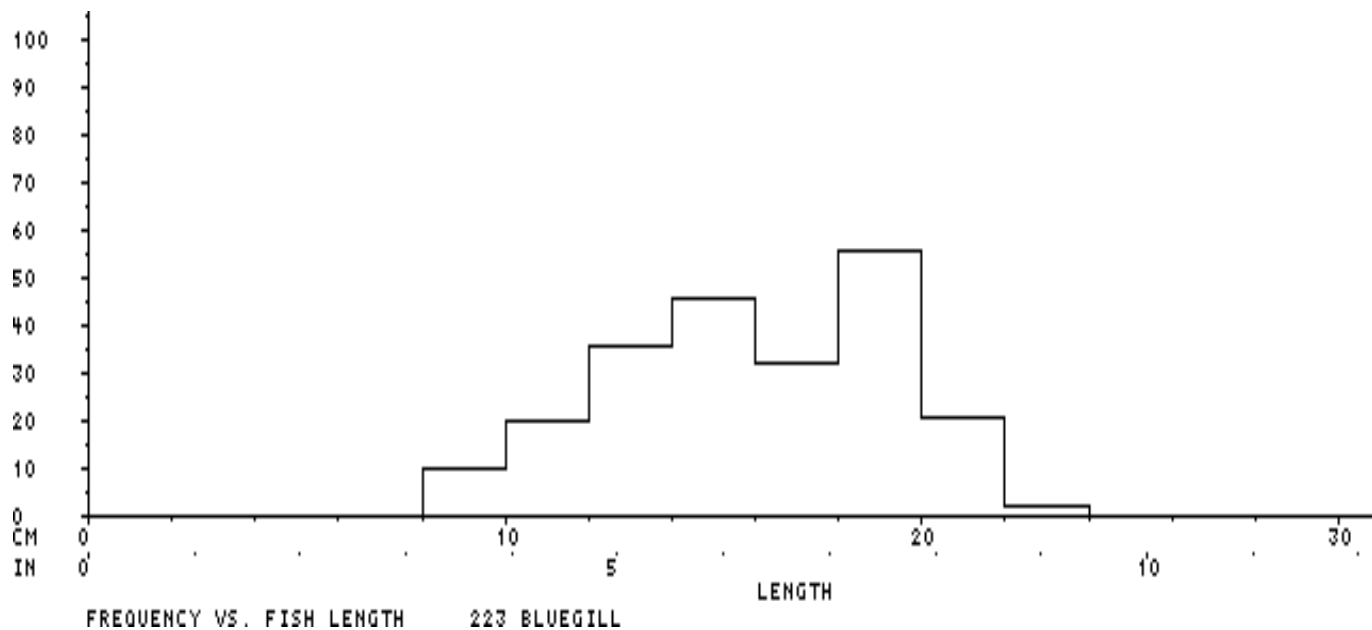


Figure 3. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of bluegill harvested by all anglers.

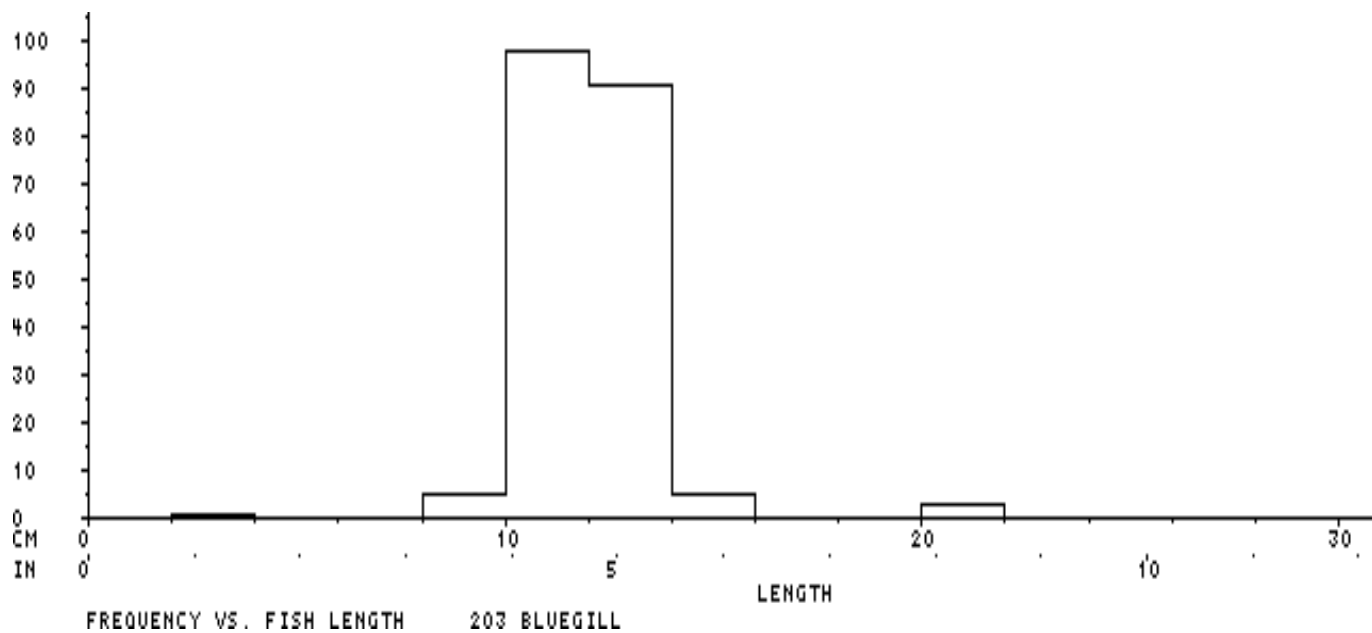


Figure 4. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of bluegill released by all anglers.

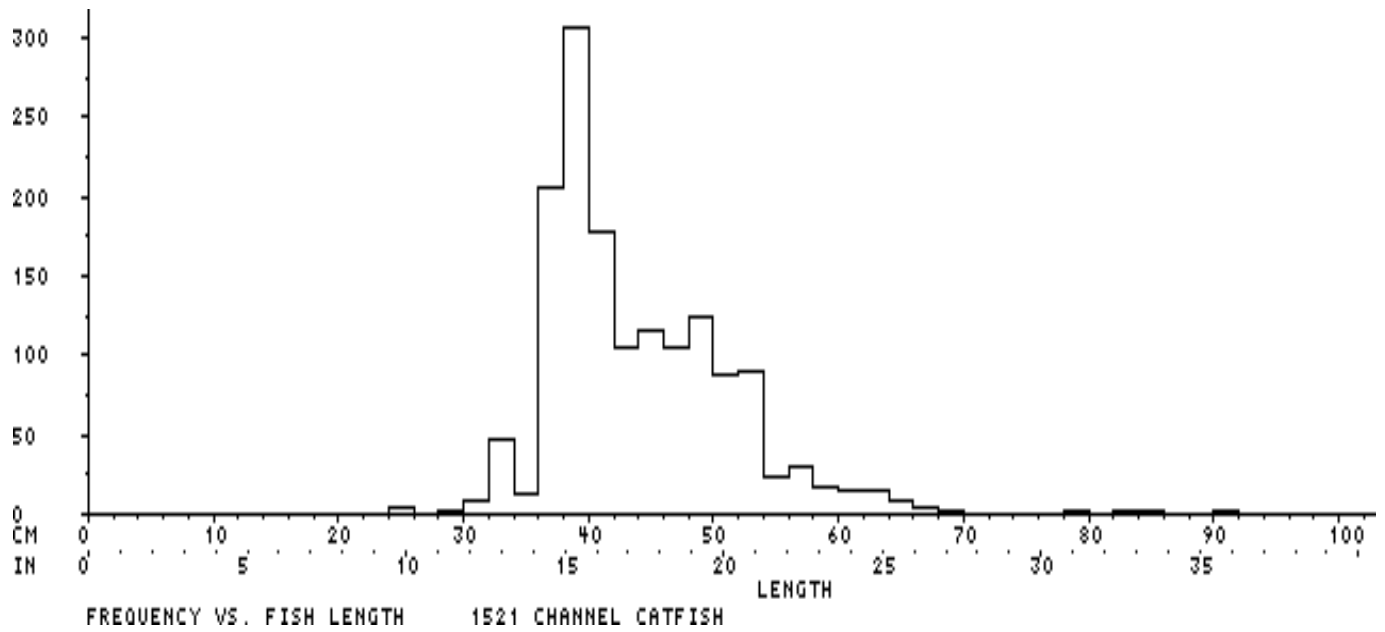


Figure 5. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish harvested by all anglers.

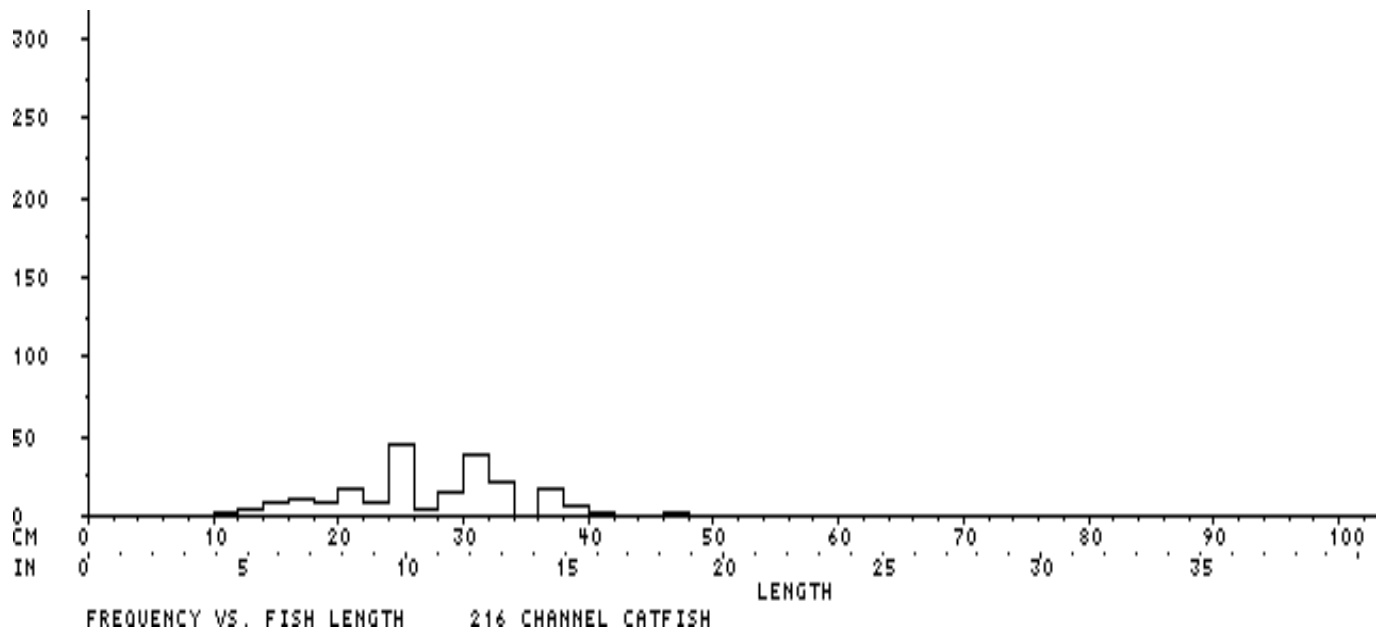


Figure 6. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish released by all anglers.

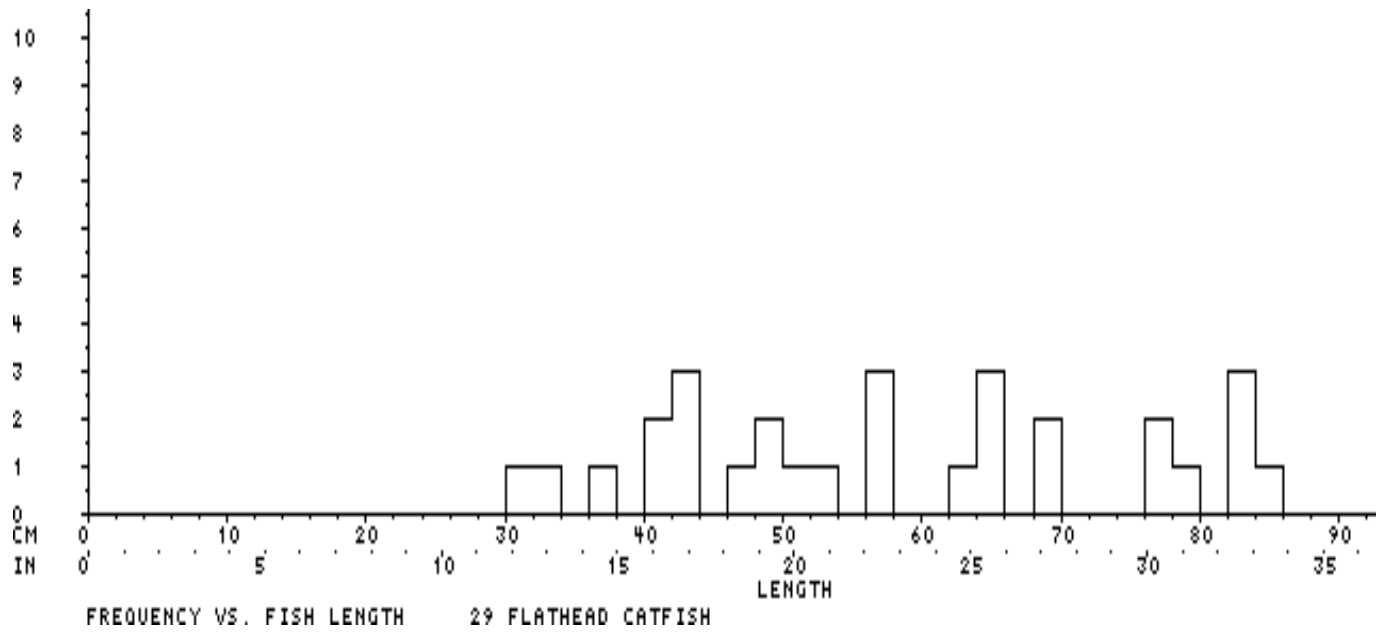


Figure 7. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of flathead catfish harvested by all anglers.

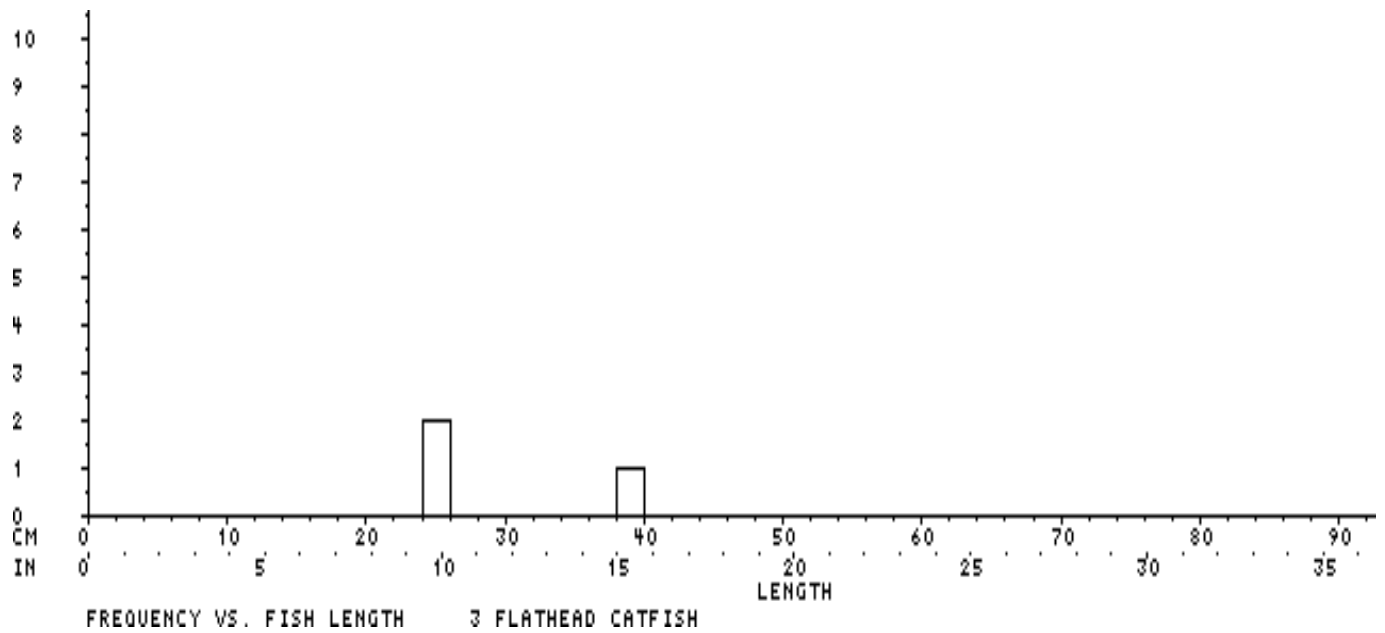


Figure 8. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of flathead catfish released by all anglers.

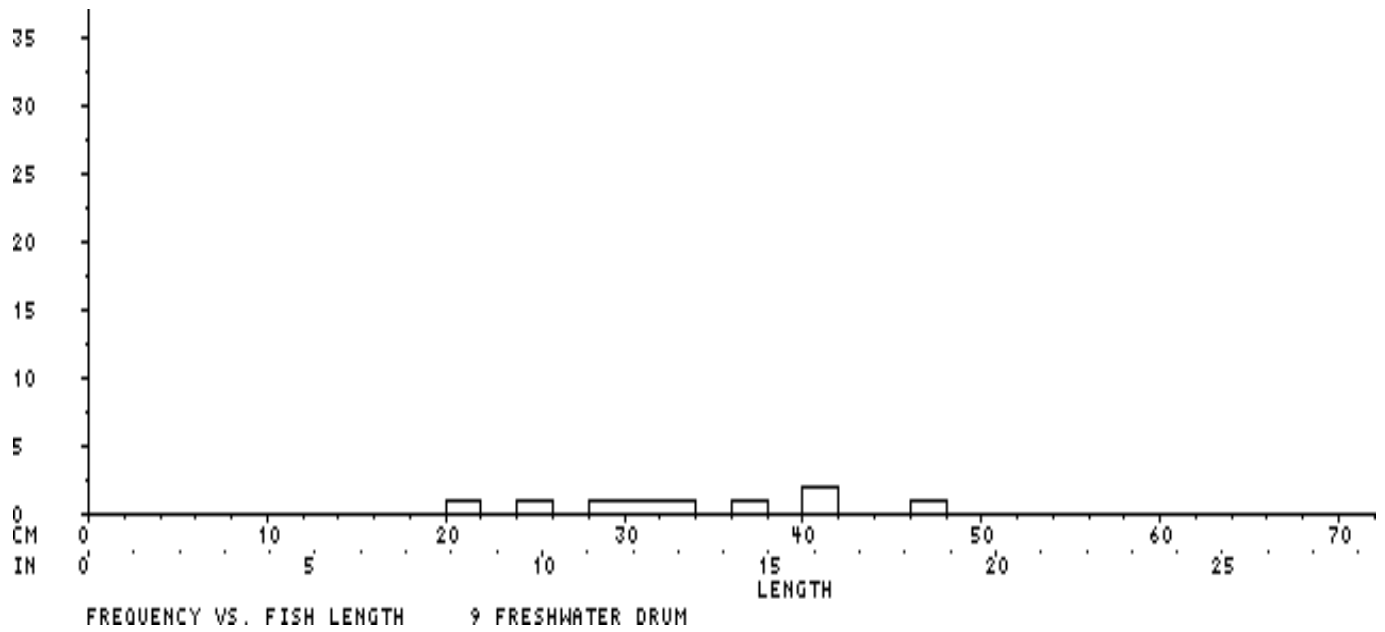


Figure 9. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of freshwater drum harvested by all anglers.

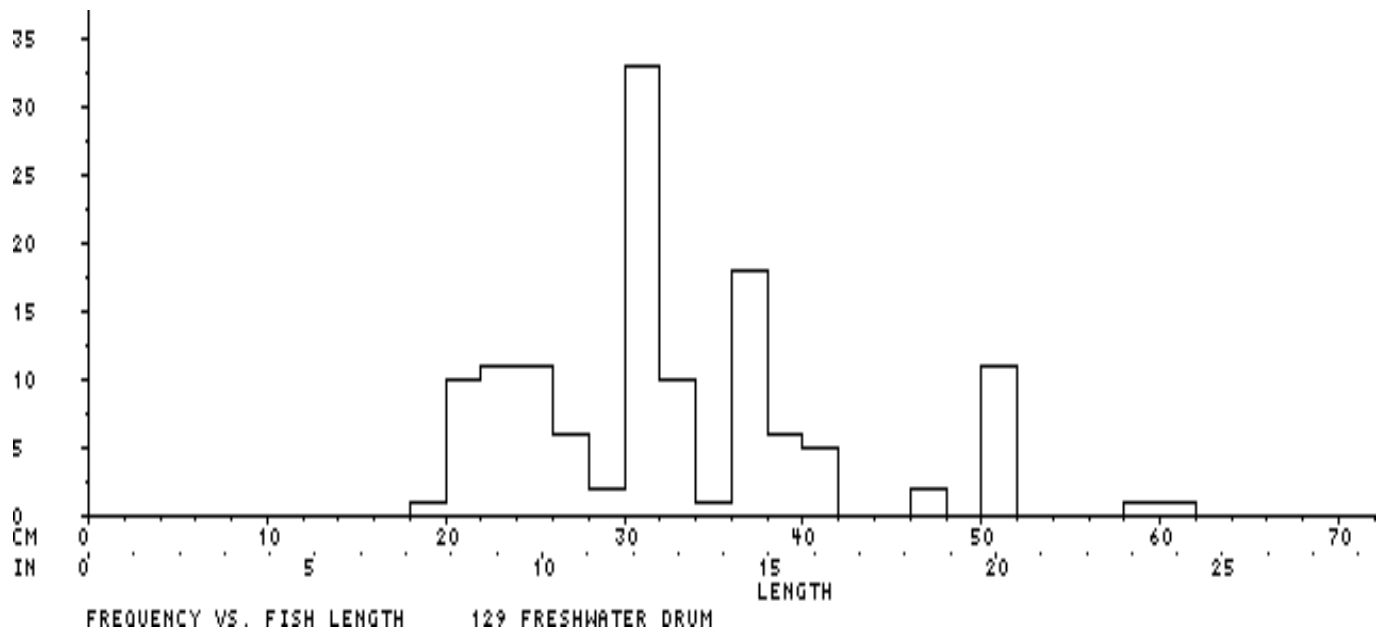


Figure 10. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of freshwater drum released by all anglers.

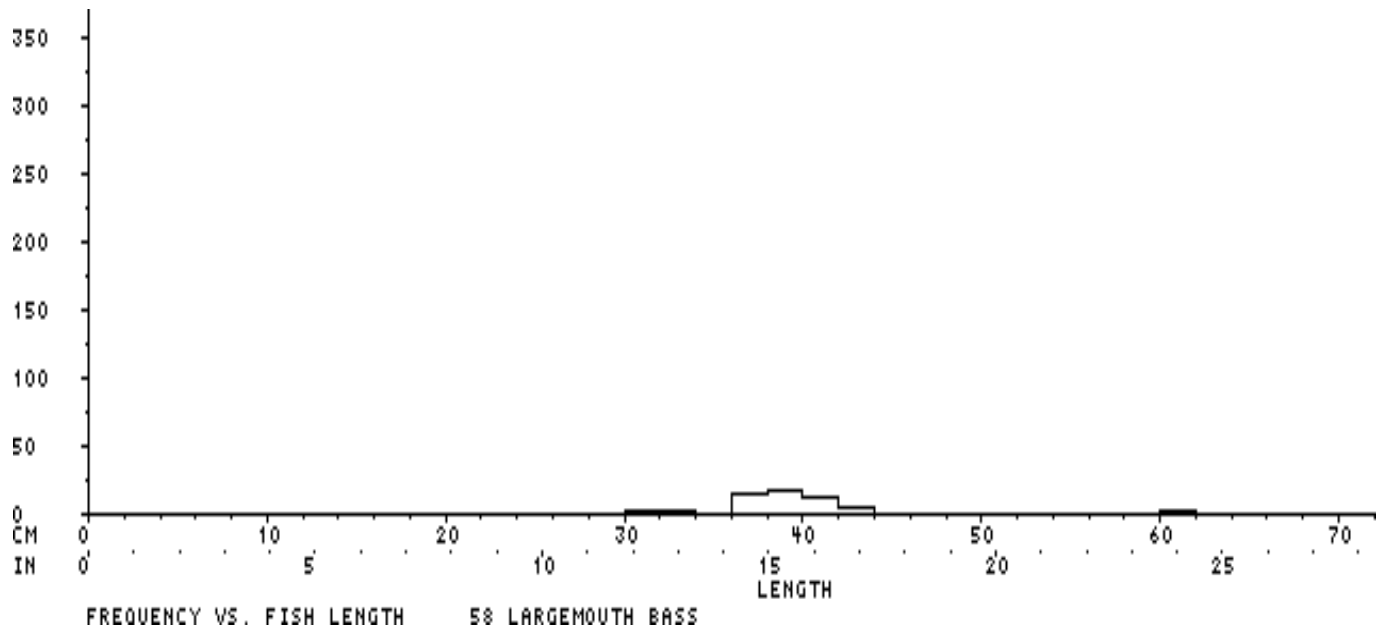


Figure 11. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass harvested by all anglers.

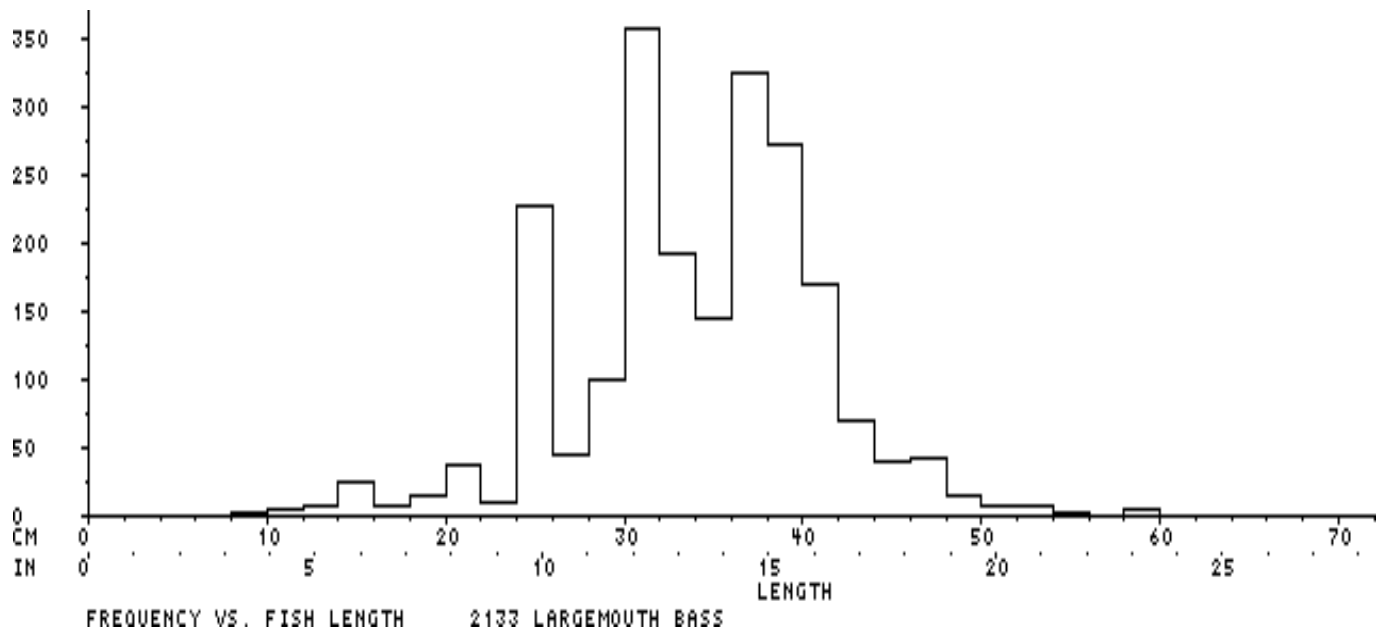


Figure 12. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass released by all anglers.

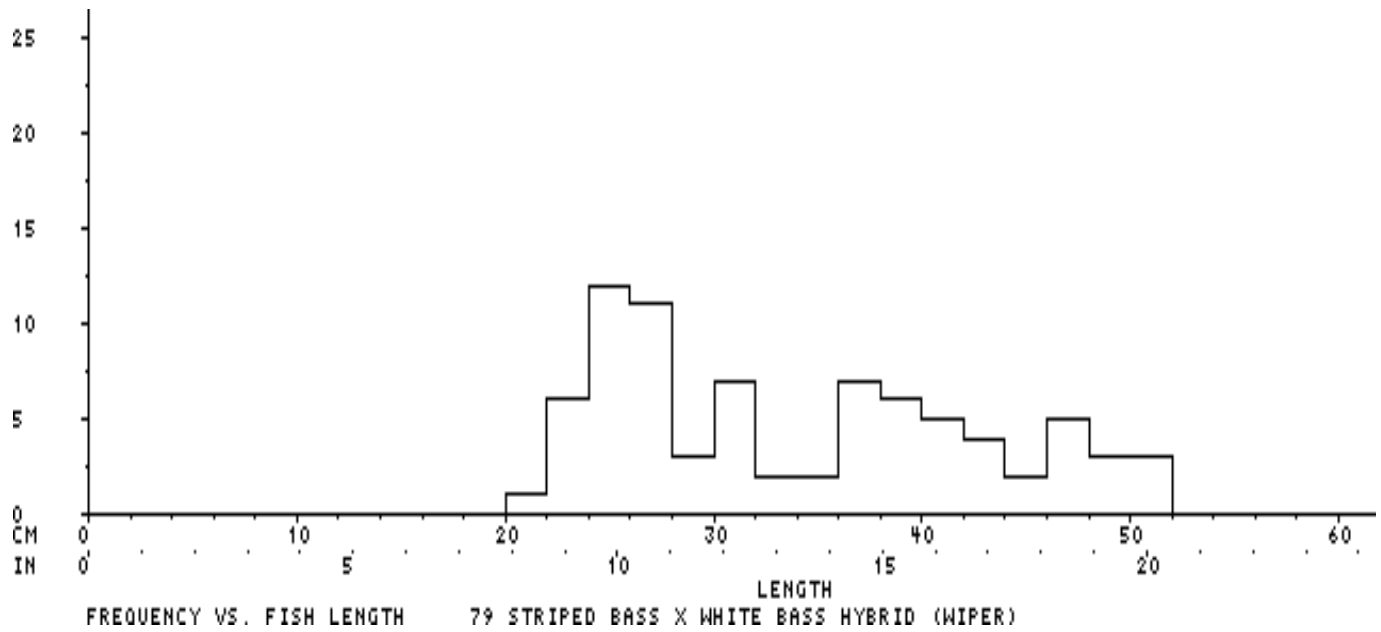


Figure 13. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of hybrid striped bass harvested by all anglers.

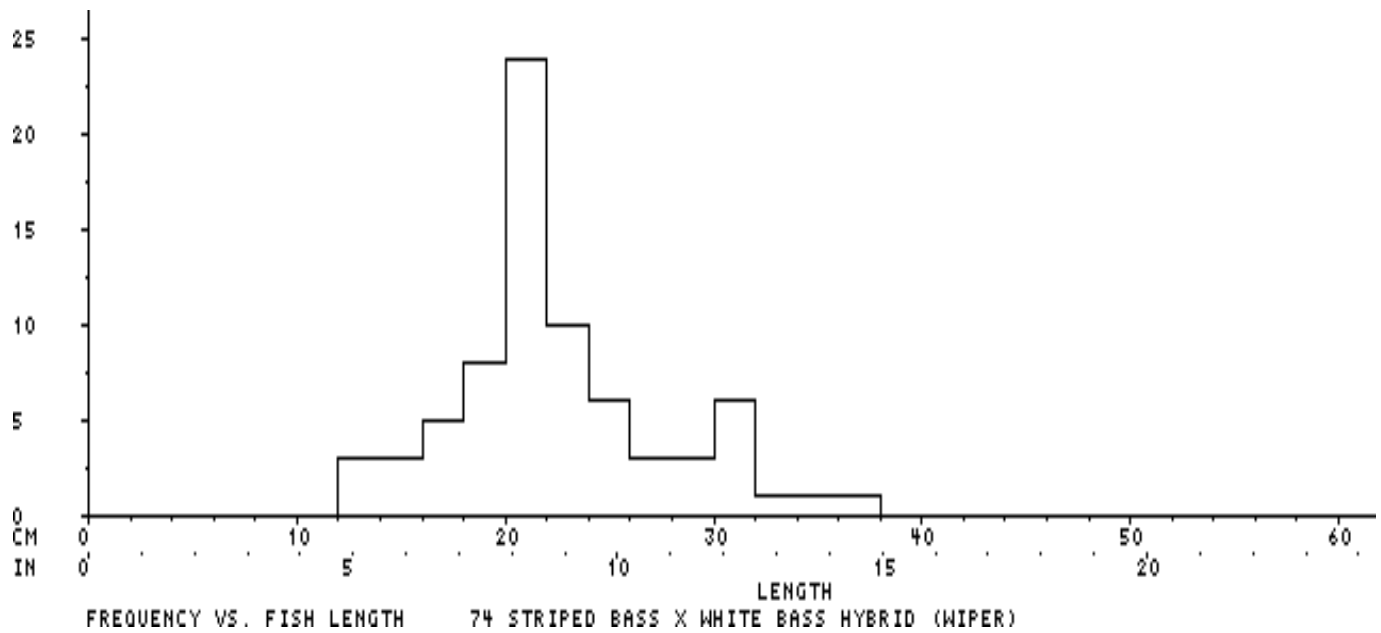


Figure 14. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of hybrid striped bass released by all anglers.

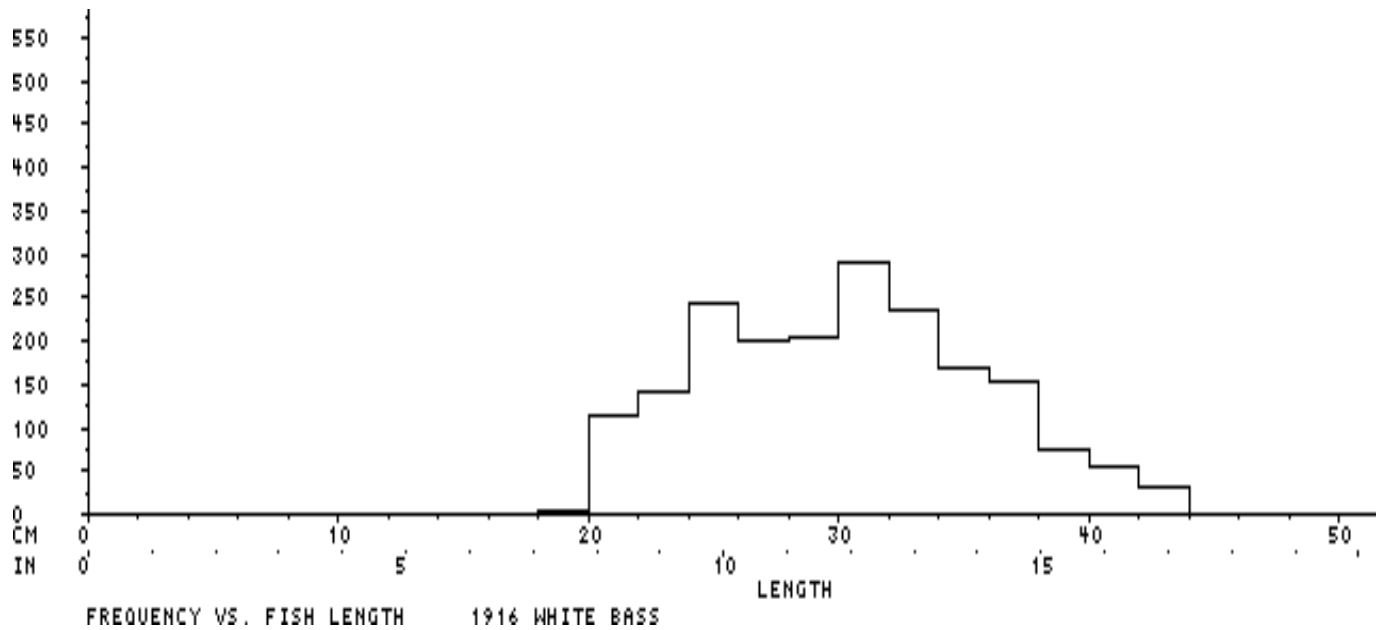


Figure 15. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white bass harvested by all anglers.

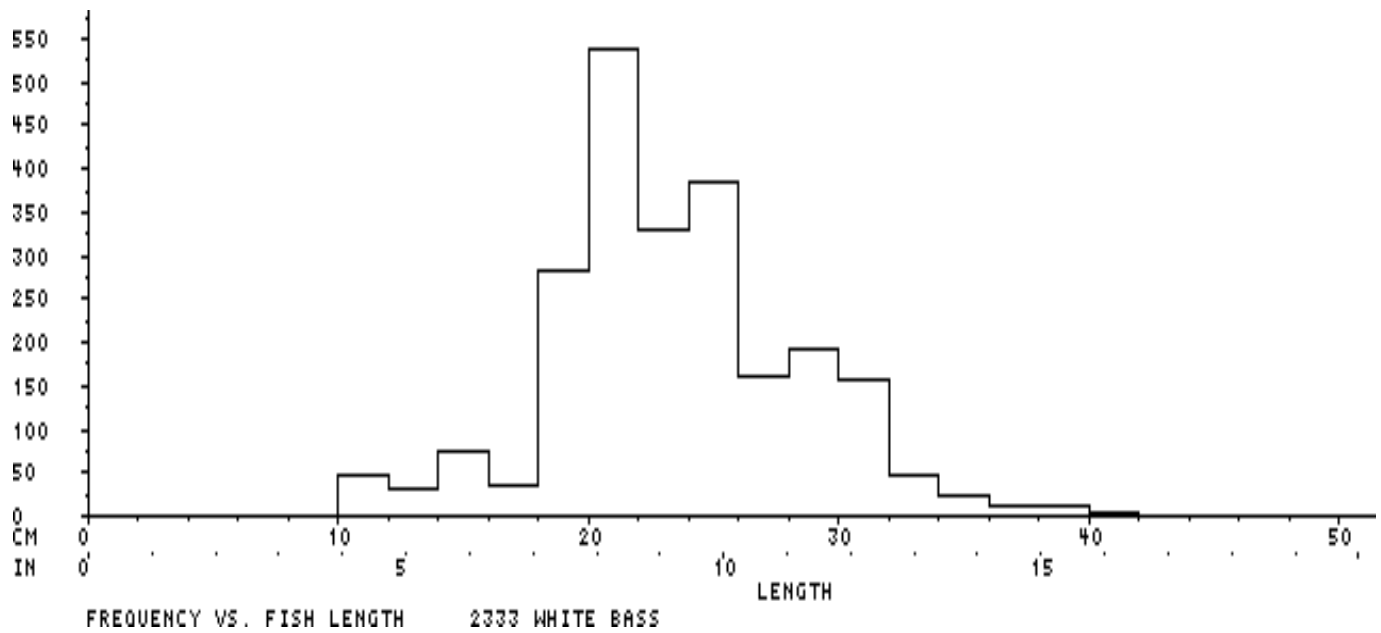


Figure 16. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white bass released by all anglers.

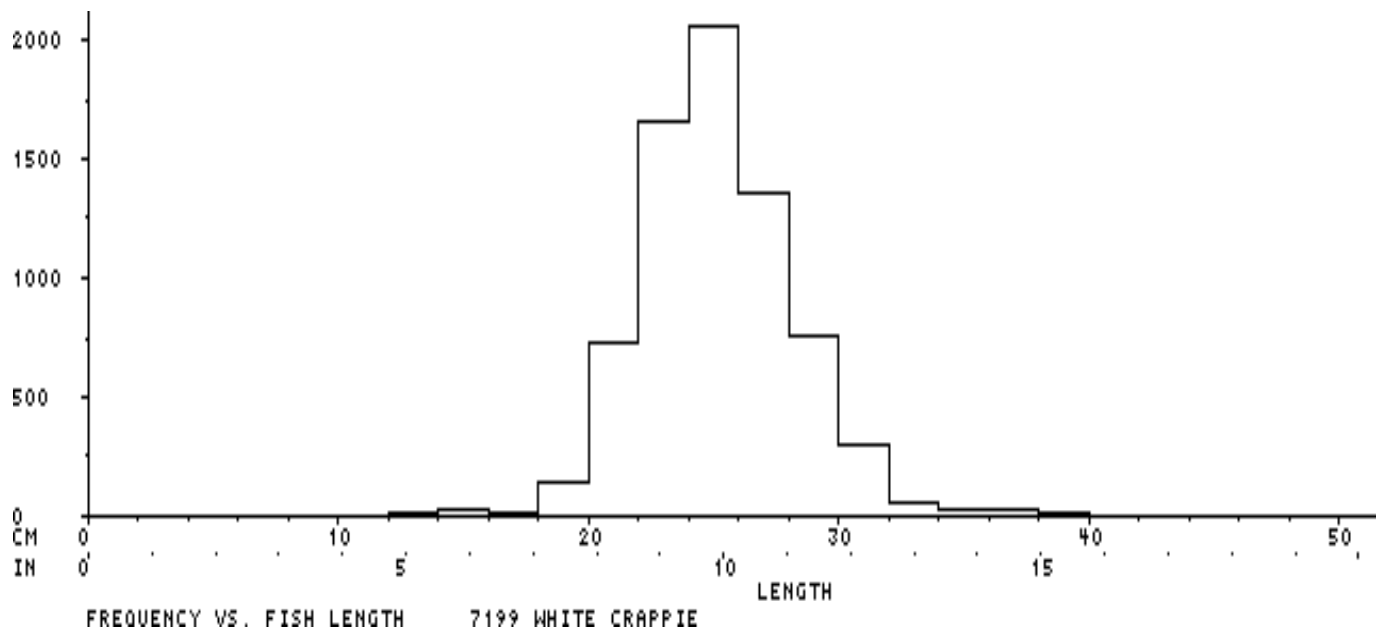


Figure 17. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white crappie harvested by all anglers.

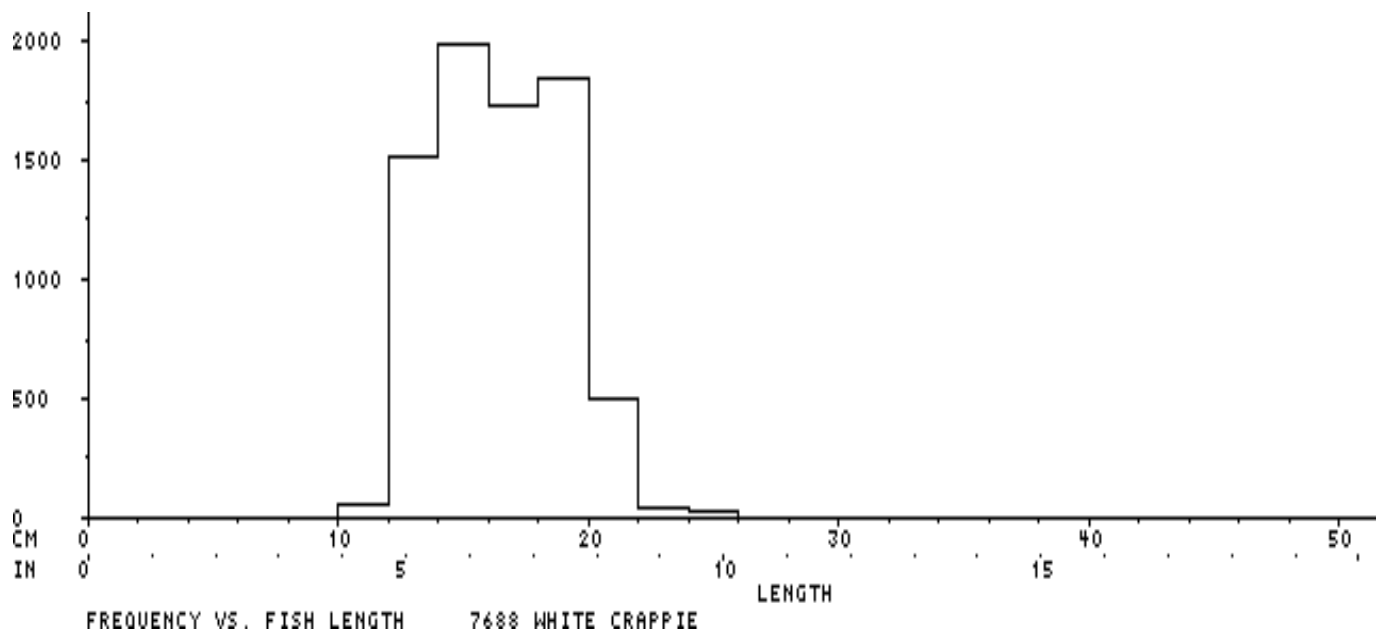


Figure 18. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white crappie released by all anglers.

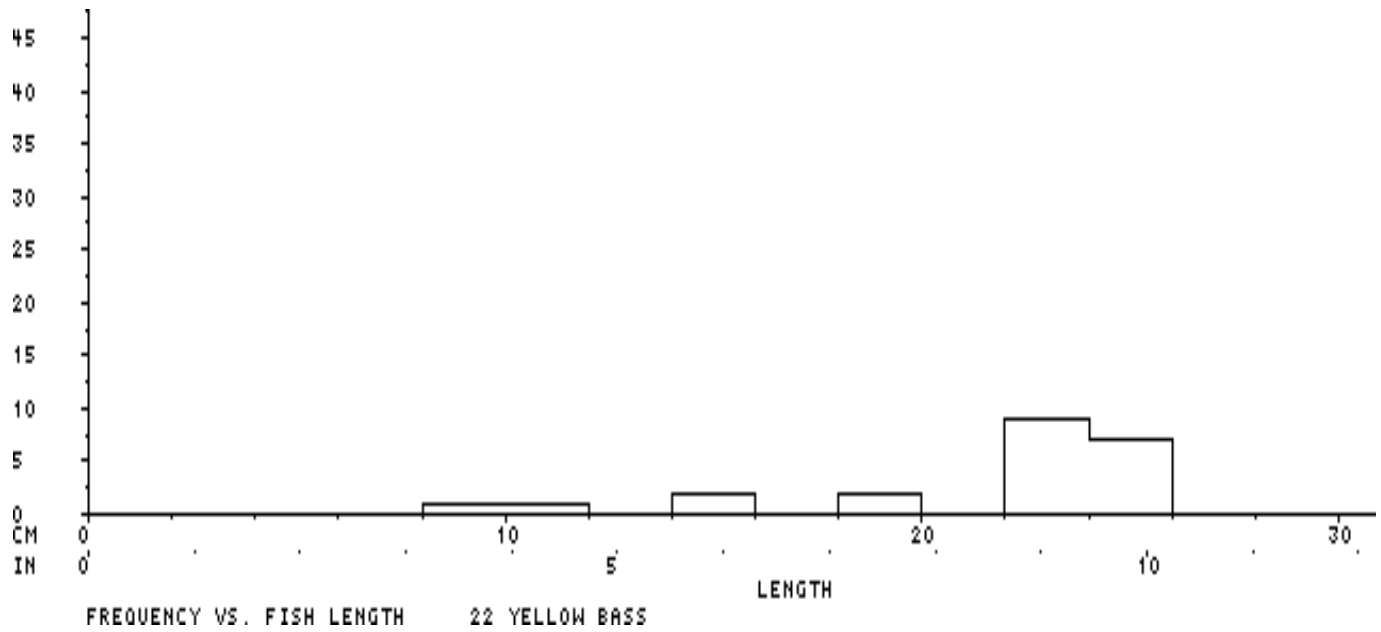


Figure 19. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of yellow bass harvested by all anglers.

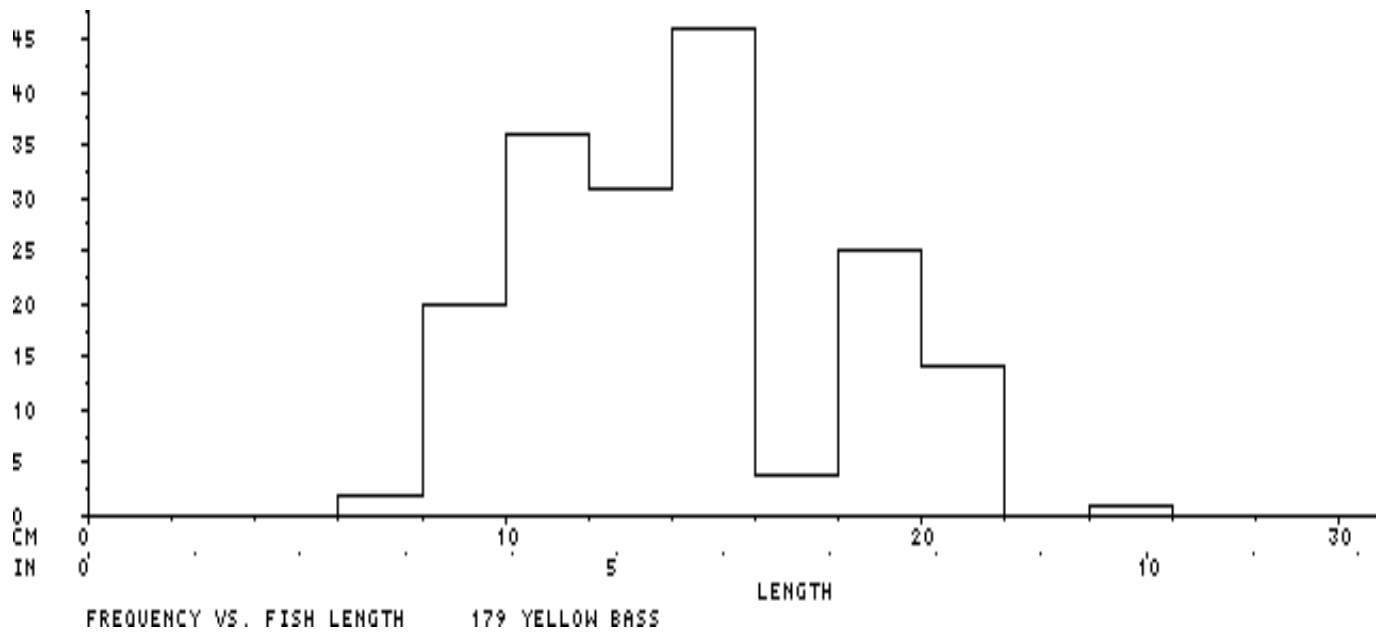


Figure 20. Rend Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of yellow bass released by all anglers.