APPENDIX A: PHYSICAL AND CHEMICAL DESCRIPTIONS OF 187 CORPS OF ENGINEERS RESERVOIRS GREATER THAN 500 ACRES IN SURFACE AREA

APPENDIX A

In the following tabulation. the reservoirs are listed alphabetically by drainage area. Definitions of characteristics listed in column headings are:

(a) Rese'l'voir name - official name of impoundment; "Lake" omitted from name when occurring as part of the official name.

(b) State - two-letter postal abbreviation of the state name where the reservoir is located. Interstate reservoirs are placed in tbe state where the dam is located.

(c) CE Division - Corps of Engineers administrative division having responsibility for the reservoir.

(d) Year impounded - first year in which a significant volume of water was stored.

(e) Use type - arbitrary classification of reservoirs into major or principal use types.
Key: L Hydropower
2. All other uses including navigation, flood control. irrigation. water supply, or fish and Wildlife.

(f) Chemical type - prevalent chemical type of inflowing rivers. according to Rainwater (1962). Composition of rivers of the conterminous United States. Hydrologic Investigations Atlas HA-61. Plate 2. U. S. Geological Survey. Delineation based on 50-percent breakpoint of major constituents. computed as equivalents/million.

Key: 1.	Ca-Mg, C03-HC03	3.	Na-K. C03-HC03
2.	Ca-Mg. 504-Cl	4.	Na-K. 504-C1

(g) Sediment type - sediment concentration (annual load/annual streamflow) of inflowing rivers according to Rainwater (1962). (Reference above. Plate 3.)

Key: 1.	0-280 ppm	4.	6300-14000 ppm
2.	280-1900 ppm	5.	14000-28000 ppm
3.	1900-6300 ppm	6.	28000-38000 ppm

(h) Drainage area - in square miles.

(1) Surface elevation - in feet above mean sea level. of reservoir surface at listed area.

(j) Surface area - in acres at average annual pool level where data were available; otherwise. conservation pool, summer pool. operating pool. or power pool area is listed.

(k) Volume - expressed in thousands of acre-feet. at the listed elevation.

(1) Total annual discharge - expressed 1n thousands of acre-feet.

(m) Storage ratio - the ratio of the reservoir volume at the listed elevation in acre-feet to the average annual discharge in acre-feet.

(n) Mean depth - in feet, at listed surface area.

(0) Maximum depth - in feet. at listed surface area.

(p) Outlet depth - midline depth of principal outlet. in feet. Where multilevel outlets exist, mean depth of all outlets is listed.

(q) Thermocline depth - in feet, of top of thermocline (water temperature change of 10C/metre) on or about 15 August. A plus sign (+) signifies that a stable thermocline does not form.

(r) Fluctuation - mean annual vertical fluctuation of reservoir surface level, in feet.

(s) Shoreline length - in miles.

(t) Shore development - the ratio of shoreline length to the circumference of a circle equal in area to that of the reservoir.

(u) Dissolved solids - residue on evaporation at 180^{0}C, in ppm. Mean values calculated from available data; rounded to nearest 5 ppm where data were limited. Primary data sources - U.S.G.S. Water Resources Data - Part 2. Water Quality 1970-1975.

(v) Specific conductance - in micromhos per centimetre at 250C. Primary data sources as referenced above.

(w) Growing season - average number of days between first and last frost. U. S. Weather Bureau data.

A dash (-) indicates data not available.

Reservoir Name a	State b	CE Division c	Year Impounded d	Use Type e	Chemical Type f	Sediment Type g	Drainage Area h	Surface Elevation i	Surface Area j	Volume k	Total Annual Discharge l	Storage Ratio m	Mean Depth m	Maximum Depth o	Outlet Depth p	Thermocline Depth q	Fluctuation r	Shoreline Length s	Shore Development t	Dissolved Solids u	Specific Conductance v	Growing Season w
New England Drainage Area																						
Colebrook River	CT	NED	1969	2	2	1	118	708	760	47	157	0.30	62	141	138	25	69	4	1.0	60	100	150
Waterbury	VT	NAD	1937	1	1	1	109	580	850	36	167	0.22	43	100	75	-	30	-	-	-	-	125
Middle Atlantic Drainage Area																						
Beltzville	PA	NAD	1971	2	2	1	96	628	947	41	153	0.27	44	124	11	20	0	20	4.7	75	115	150
Curwensville	PA	NAD	1965	2	2	1	365	1,162	790	10	451	0.02	12	32	21	18	7	19	4.9	125	190	120
John H. Kerr	NC	SAD	1953	1	1	1	1,780	302	53,100	1,530	5,283	0.29	29	112	67	35	11	770	23.9	70	100	205
Foster J. Sayers	PA	NAD	1971	2	2	1	339	630	1,730	29	308	0.09	17	42	33	12	20	23	4.0	150	275	150
Philpott	VA	SAD	1951	1	1	1	2U	974	2,880	164	204	0.80	57	167	93	25	13	100	13.3	40	55	200
Raystown	PA	NAD	1972	2	2	1	960	786	8,300	514	797	0.64	62	181	52	20	7	118	9.2	.130	155	150
Whitney Point	NY	HAD	1963	2	1	1	255	973	1,200	13	274	0.05	10	33	26	+	7	11	2.2	100	150	140
Gulf and South Atlantic Drainage Area																						
Allatoona	CA	SAD	1950	1	1	1	1,110	840	11,860	368	1,338	0.28	31	150	75	25	]0	270	17.8	40	60	210
Claiborne	AL	SAD	1969	2	1	2	21,520	35	5,930	96	23,538	*	16	36	20	+	1	204	18.9	60	100	265
Clark Hill	CA	SAD	1952	1	1	1	6,150	330	70,000	2,510	6,004	0.42	36	144	75	35	8	1,060	28.6	55	80	230
Hartwell	GA	SAD	1961	1	1	1	2,088	660	56,000	2,550	3,071	0.83	46	195	105	25	8	962	29.0	30	45	210
Jonea Bluff	AL	SAD	1971	1	1	2	16,300	125	12,510	234	17,200	0.01	19	50	25	+	1	368	23.5	55	80	270
Millers Ferry	AL	SAD	1968	1	1	2	20,700	80	17,200	331	20,500	0.02	19	64	36	+	1	516	28.1	55	80	265
Ocklawaha	FL	SAD	1968	2	2	1	2,840	18	9,050	60	1,409	0.04	7	31	12	+	1	67	5.0	260	460	285
Okatibbee	MS	SAD	1968	2	1	2	235	342	3,350	37	208	0.18	11	32	32	16	8	25	3.1	40	60	230
Seminole	FL	SAD	1957	1	1	1	17,150	17	37,500	367	15,986	0.02	10	40	25	+	2	250	9.2	50	75	250
Sidney Lanier	CA	SAD	1957	1	1	1	1,040	1,070	38,000	1,917	1,553	1.23	50	151	139	20	6	540	19.8	60	85	205
W. Kerr Scott	NC	SAD	1962	2	1	1	348	1,030	1,470	41	485	0.08	28	65	59	10	5	55	10.2	35	45	160
Walter F. George	CA	SAD	1962	1	1	1	7,460	190	45,180	934	7,935	0.12	20	96	18	+	6	641	21.5	60	90	240
Ohio Basin Drainage Area																						
Allegheny	PA	ORD	1967	1	2	1	2,180	1,325	11,600	537	2,729	0.20	46	127	no	35	50	91	6.1	190	255	120
Atwood	OH	ORD	1937	2	2	1	70	928	1,540	24	50	0.47	15	38	34	15	10	28	.5.1	175	270	160
Barkley	KY	ORD	1966	1	1	1	17,598	]59	57,920	869	25,759	0.03	15	80	49	+	5	118	3.5	100	175	200
Barren River	KY	ORD	1964	2	1	2	940	552	10,000	256	1,061	0.24	26	79	39	20	27	140	10.0	140	235	190
Berlin	OH	ORD	1943	2	2	2	249	1,019	2,600	41	162	0.25	15	70	61	18	25	64	9.0	330	490	150
Bluestone	WV	ORO	1949	2	1	1	4,603	1,409	1,970	37	4,051	0.01	19	39	1	+	48	33	5.3	-	-	174

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Reservoir Name	State	CE Division	Year Impounded	Use Type	Chemical Type	Sediment Type	Drainage Area	Surface Elevation	Surface Area	Volume	Total Annual Discharge	Storage Ratio	Mean Depth	Maximum Depth	Outlet Depth	Thermocline Depth	Fluctuation	Shoreline Length	Shore Development	Dissolved Solids	Specific Conductance	Growing Season
Buckhorn	KY	ORD	1961	2	1	1	408	782	1,230	32	458	0.01	28	67	18	17	25	65	13.3	140	240	185
C. K. Harden	IN	ORD	1960	2	1	1	216	III	2,060	49	III	0.30	24	II	II	10	ZI	28	4.1	220	IIO	185
Cagles Mill	IN	ORD	1952	2	1	1	295	636	1,400	27	211	0.13	19	54	11	12	0	20	J.8	215	320	18'
Center Hill	TN	ORD	1949	1	1	1	2,195	III	18,200	1,330	2,302	0.58	73	178	90	30	18	370	19.6	115	180	200
Charles Mill	OH	ORD	1936	2	1	1	215	III	1,350	'	1JS	0.06	'	1'	'	+	10	33	,',	J00	430	160
Cheatham	TN	ORD	1956	1	1	1	14,160	385	7,450	1OJ	16,380	0.01	14	45	2J	+	4	320	25.0	120	180	200
Clendening	OH	ORD	1931	2	2	1	II	898	1,800	28	44	0.61	15	18	32		8	41	,II			160
Cumberland	KY	ORD	1950	1	1	1	5,190	723	50,250	3.995	6,417	0.62	80	18'	102	25	34	1,085	34.6	80	130	180
Dale Hollow	TN	ORD	1943	1	1	1	935	651	21,700	1,353	1,165	1.16	49	147	81	25	14	'90	25.3	120	180	190
Deer Creek	OH	ORD	1968	2	1	2	277	810	1,211	ZI	16	0.13	16	40	II		25	19	'.8	395	"O	167
Delaware	OH	ORD	1950	2	1	1	III	915	1,300	14	24	0.06	11	50	47		ZI	II	,',	400	570	161
Dewey	KY	ORD	1950	2	2	1	20'	645	1,100	17	1"	0.11	16	II	'	15	30	52	11.2	II	100	180
Dillon	OH	ORD	1960	2	2	1	742	734	1,325	11	553	0.02	10	34	II		II	31	'.1	315	530	III
E. Br. Clarion River	PA	ORD	1952	2	2	1	72	1,658	1,020	52	II	0.54	S1	1JS	106	25	40	20	4.5	81	125	120
East Lynn	WV	ORD	1972	2	2	1	138	"2	1,005		94											190
Fishtrap	KY	ORD	1962	2	4	1	395	'51	1,131	27	'90	0.01	24	84	42	16	55	43	'.1	275	425	200
Grayson	KY	ORD	1968	2	2	1	19	645	1,500	29	145	0.20	II	45	40		15	74	13.6	120	19	185
Green River	KY	ORD	1969	2	1	1	'82	675	8,210	III	812	0.28	27	83	70	15	11	81	,',	81	130	190
Greenup	KY	ORD	1962	2	2	1	62,000		11,200		54,000							401	21.1			181
Huntington	IH	ORD	1969	·2	1	1	70	749	.00	11	443	0.03	14	34	19	15	12	II	'.0	360	535	155
J. Percy Prieet	TN	ORD	1968	1	1	2	892	490	14,200	J90	1,050	0.31	27	IOJ	II	18	10	213	12.8	ISO	225	200
John W. FlsnnaSan	VA	ORD	1965	2	4	1	Z21	1,396	1,143	67	192	0.35	59	18'	160	40	SO	39	8.2	200	Joo	180
Leesville	OH	ORD	1937	2	2	1	II	963	1,000	19	37	0.52	19	40	31		●	28	'.J	120	175	"O
Kichsel J. Kirwan	OH	ORD	1967	2	2	2	81	.82	2,450	II	70	0."	20	54	25	25	10	20	2.'	2SO	390	150
Kiu iuineva	IN	ORD	1968	2	1	1	BO.	737	3,180	II	S08	0.15	24	II	32	18	25	SO	'.J	J20	505	155
Monroe	IH	ORD	.1966	2	1	1	441	538	10,750	182	345	0.53	17	II	16	21	0	130	'.O	95	140	185
Mosquito Creek	OH	ORD	1944	2	1	1	II	899	7,070	65	62	1.04	●	30	11	10	'	44	,',	145	240	150
Nolin	KY	ORD	1963	2	1	1	703	515	5,790	170	642	0.27	29	101	J1	18	25	172	16.1	180	245	190
Old Hickory	TN	ORD	1956	1	1	2	11,620	445	22,500	420	13,353	0.03	19	11	48	18	J	440	20.9	115	185	200
Piedmont	OH	ORD	1937	2	2	1	II	913	2,270	34	94	0.36	15	35	27		8	J8	,',	58'	890	160
Pleasant Hill	OH	ORD	1938	2	1	1	197	1,020	"O	14	137	0.10	16	50	44		4	11	3.2	215	345	149
Rough River	KY	ORD	1960	2	1	2	454	495	5,100	120	536	0.22	24	72	45	15	25	220	22.0	140	220	190
Salamonie	IN	ORD	1967	2	1	1	553	755	2,860	61	367	0.17	21	71	40	15	25	36	4.8	330	'10	155
Senecaville	OH	ORD	1937	2	2	2	118	832	3,550	4J	90	0.48	12	30	20	+	10	50	'.0	170	255	170
Shenan80 River	PA	ORD	1967	2	2	1	,II	894	3,JOO	34	520	0.07	10	28	20	20	●	44	,',	J20	480	140
Summersville	WV	ORD	1965	2	1	1	803	1,650	2,723	III	l,3S1	0.14	48	270	155	20	130	II	8.2	40	55	150
Sutton	WV	ORD	1960	2	2	1	537	925	1,520	64	781	0.08	42	118	95	35	7S	40	7.3	50	70	163

(Continued)

Appendix A (Continued)

Reservoir Name a	State b	CE Division c	Year Impounded d	Use Type 1/ e	Chemical Type f	Sediment Type g	Drainage Area h	Surface Elevation i	Surface Area j	Volume k	Total Annual Discharge l	Storage Ratio m	Mean Depth n	Maximum Depth o	Outlet Depth p	Thermocline Depth q	Fluctuation r	Shoreline Length s	Shore 1/ Development t	Dissolved Solids u	Specific Conductance 1/ v	Growing Season w
Tappan	OH	ORO	1936	2	2	1	71	899	2,350	35	53	0.66	15	34	25	-	8	41	6.0	370	525	160
Tionesta	PA	ORD	1940	2	2	1	478	1,090	570	10	625	0.02	18	47	32	15	48	12	3.6	160	230	130
Tygart	WV	ORO	1938	2	2	1	1,184	1,088	1,650	101	1,787	0.06	61	128	88	115	73	31	6.7	55	75	150
Wills Creek	OH	ORO	1937	2	2	1	842	742	900	4	641	0.01	5	17	5	+	23	52	12.4	395	565	160
Winfield	WV	ORD	-	1	2	1	11.,809	-	3,100	-	12,000	-	-	-	-	-	-	74	9.5	185	300	
Youghiogheny River	PA	ORO	1943	2	2	1	434	1,430	2,620	130	620	0.21	SO	117	103	30	55	38	5.3	50	70	130
									Upper Mississippi Drainage Area													
Ashtabula	ND	NCO	1949	2	1	1	7,470	1,266	5,430	71	84	0.84	13	50	28	+	6	65	6.3	385	500	122
Carlyle	IL	LMVD	1967	2	1	2	2,680	445	26,000	283	1,406	0.20	11	40	30	+	7	83	3.7	350	-	180
Coralville	IA	NCD	1959	2	1	2	3,115	480	4,900	53	1,100	0.05	11	30	18	+	25	68	6.9	315	475	162
Gull	MN	NCD	1912	2	1	1	287	1,196	13,139	71	76	0.94	5	6	0	+	1	32	2.0	250	450	133
Lac qui Parle	MN	NCO	1937	2	1	1	4,050	931	20,033	158	462	-	-	-	8	-	-	12	3.4	610	865	147
Leech	MN	NCO	1902	2	1	1	l.163	1.296	125,900	357	254	1.41	3	7	0	+	2	51	1.0	-	-	113
Pine River	MN	NCD	1886	2	1	1	562	1.231	13.810	98	154	0.64	7	13	0	+	2	36	2.2	-	-	110
Pokegallla	MN	NCD	1889	2	1	1	3,265	1,274	15,880	61	825	0.07	4	9	0	+	2	30	1.7	-	-	104
Red Rock	IA	NCO	1969	2	1	2	12,323	725	8,950	90	3.375	0.03	10	53	31	-	29	65	4.9	415	700	170
Rend	IL	LMVD	1970	2	2	3	488	395	18.900	51	450	0.11	3	-	-	+	3	-	-	-	-	195
Sandy	MN	NCD	19U	2	1	1	421	1,218	9,060	53	150	0.35	9	11	0	+	2	21	1.6	-	-	116
Shelbyville	XL	LMVD	1970	2	1	2	1,030	600	11,100	210	570	0.37	19	67	45	30	20	250	16.9	375	-	181
Traverse	SO	NCD	194)	2	2	1	1,160	982	13,98.5	137	60	-	-	17	-	-	-	55	-	945	1,265	138
Winn1bigosh1sh	MN	NCO	1884	2	1	1	1,442	1.300	69,160	568	370	1.53	8	12	0	+	2	40	1.1	-	-	129
									Lower Mississippi Drainage Area													
Arkabutla	MS	LMVD	1941	2	1	1	1,000	218	10,300	99	938	O.11	10	28	20	+	20	114	8.0	35	55	220
En1d	MS	LMVD	1952	2	1	1	560	243	11,900	173	605	0.29	15	67	33	+	25	125	8.2	40	60	224
Crenada	MS	LMVD	1954	2	1	1	1,320	208	25,610	335	1,271	0.26	13	62	30	+	27	148	6.6	40	60	231
Sardis	MS	LMVD	1940	2	1	1	1,545	250	22,500	336	1,607	0.21	15	71	22	+	30	110	5.2	35	50	217
Wappapello	MO	LMVD	1941	2	1	1	1,310	360	8,200	66	1,117	0.06	8	30	12	10	20	180	14.2	120	190	185
									Arkanaa./White/Red Drainage Area													
Arkansas:																						
Blue Mountain	AR	SWD	1947	2	1	2	488	384	2,910	25	391	0.06	9	35	15	15	10	50	6.6	35	55	220
Canton	OK	SWD	1948	2	2	4	U,483	1,615	7,500	116	147	0.79	15	40	33	+	15	44	3.6	945	1,545	210
Conchas	NM	SWD	1939	2	2	1	7,409	4.201	9,600	330	712	0.46	34	76	45	40	30	96	7.0	470	740	180
Council Crove	KS	SWD	1964	2	1	3	246	1.270	2,860	38	92	0.41	13	50	39	+	1	37	5.0	205	345	183
Dardanelle	AR	SWD	1964	1	4	1	153,666	338	36,000	486	26,070	0.20	14	52	47	+	3	315	11.9	475	635	225

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Reservoir Name ●	State b	CE Division c	Year Impounded d	Use Type e	Chemical Type f	Sediment Type g	Drainage Area h	Surface Elevation '	Surface Area j	Volume '	Tot'l Annual Discharge '	Storage Ratio '	Mean Depth '	Maximum Depth o	Outlet Depth p	Thermocline Depth q	Fluctuation r	Shoreline Length ●	Shore Development t	Dissolved Solids u	Specific Conductance v	Growing Season w
Eufaula	OK	SWD	1963	1	'	1	47,522	5as	102,500	2,329	3,964	0.59	23	87	"	22	15	'00	13.4	255	440	220
Fall River	KS	SWD	1949	2	1	2	585	949	2,450	24	245	0.10	10	48	20	●	20	40	5.'	no	535	190
Fort Gibson	OK	SWD	1953	1	1	1	12,492	554	19,900	365	4,836	0.08	18	72	54	25	4	22'	11.4	165	275	210
Fort Supply	OK	SWD	1942	2	2	4	1,135	2,004	1,880	14	49	0.29	1	11	10	+	15	26	4.3	650	960	200
Great Salt Plains	OK	SWD	1941	2	4	4	3,200	1,125	8,890	n	263	0.12	4	21	0	+	4	41	'.1	5,155	9,265	210
Heyburn	OK	SWD	1950	2	4	3	123	162	980	7	38	0.18	1	52	15	20	10	40	'.1	165	250	220
Hulah	OK	SWD	1951	2	1	2	732	133	3,600	35	255	0.14	10	48	22	+	15	62	7.4	300	495	200
John Redmond	KS	SWD	1964	2	1	3	3,015	1,036	1,180	54	1,209	0.04	7	23	'	+	0	50	4.'	290	4"	183
Keystone	OK	SWD	1964	'	4	3	14,506	721	26,300	618	4,794	0.13	23	73	30	26	10	259	11.4	875	1,535	220
Marion	KS	SWD	1968	2	1	2	200	1,351	6,160	86	72	1.19	14	63	52	+	1	60	'"'	355	555	183
Nimrod	AR	SWD	1942	2	1	2	680	342	3,550	29	634	0.05	●	"	21	15	7	77	'.2	25	40	220
Oologah	OK	SWD	1972	2	1	1	4,339	638	29,500	553	1,866	0.30	19	70	48	25	20	20'	'.7	265	425	210
Ozark	AR	SWD	1969	1	4	1	151,801	312	10,600	'48	24,375	0.01	14	70	45	+	5	173	12.0	450	700	225
Robert S. Kerr	OK	SWD	1910	1	4	1	147,756	460	42,000	500	18,890	0.03	12	47	10	+	5	250	'.7	500	830	215
Tenkiller Ferry	OK	SWD	1953	l	1	1	1,610	630	12,500	629	1,119	0.56	50	140	125	30	7	130	'.3	100	180	205
Toronto	KS	SWD	1960	2	1	3	730	902	2,800	23	371	0.06	●	46	5	15	15	51	'"'	300	510	185
Webbers Falla	OK	SWD	1972	1	4	1	97,033	490	10,900	165	14,140	0.01	15	45	20	+	'	70	4.'	130	1,200	216
Wister	OK	SWD	1949	2	1	1	'''	412	4,000	30	827	0.04	7	35	30	15	15	115	13.0	55	80	220
White:																						
Beaver	AR	SWD	1963	1	1	1	1,186	1,120	28,220	1,652	978	1.69	58	216	140	25	15	449	19.1	as	165	190
Bull Shoals	AR	SWD	1951	1	1	1	6,051	654	45,440	3,048	4,375	0.10	67	201	n,	25	16	740	24.8	150	250	200
Clearwater	MO	SWD	1948	2	1	1	89.	494	1,630	22	691	0.03	13	SO	22	20	30	21	4.'	120	215	175
Greers Ferry	AR	SWD	1962	1	1	2	1,153	461	31,500	1,911	1,267	1.51	61	221	130	30	15	276	11.1	30	50	210
Norfork	AR	SWD	1943	1	1	1	1,808	552	22,000	1,251	1,339	0.93	57	177	105	28	18	380	18.3	175	no	200
Table Rock	'O	SWD	1958	1	1	'	4,020	915	43,100	2,702	2,561	1.06	63	220	140	25	30	745	25.6	130	180	185
Red:																						
8rol<en Bow	OK	SWD	1968	1		1	754	600	14,200	91.	935	0.98	65	180	57	30	10	180	10.8	35	55	230
DeGray	AR	LMVD	1969	1		1	453	408	13,420	655	570	1.15	49	195	13	20	20	207	12.8	55	85	215
Greeson	AR	LMVD	1950	'	'	2	237	540	6,110	22'	295	0.77	37	143	55	25	19	120	11.0	30	50	215
Lake 0' the Pines	TX	LMVD	1957	2	4	. 2	850	229	19,780	255	5"	0.44	13	30	28		'	144	7.1	135	240	240
Millwood	AR	SWD	1966	2	1	1	4,144	259	29,500	19'	4,891	0.04	7	46	36	20	25	65	2.7	50	70	230
Ouachita	AR	LMVD	1952	1	1	1	1,105	572	36,740	1,920	1,018	1.78	52	200	80	25	13	'90	25.7	40	70	220
Pat Mayse	TX	SWD	1961	2	1	2	175	451	5,993	120	112	1.07	20	44	0	25	1	67	'.2	90	135	183
Pine Creek	OK	SWD	1969	2	1	1	635	438	3,800	54	680	0.08	14	70	21	25	20	74	●●●	50	85	235
Tellllrkana	TX	LMVD	1956	2	4	1	3,443	220	34,225	145			4	25	10	+	17	165	'.4	))0	525	235

(Contlnued)

Appendix A (Continued)

Reservoir Name	State	CE Division	Year Impounded	Use Type	Chemical Type	Sediment Type	Drainage Area	Surface Elevation	Surface Area	Volume	Total Annual Discharge	Storage Ratio	Mean Depth	Maximum Depth	Outlet Depth	Thermocline Depth	Fluctuation	Shoreline Length	Shore Development	Dissolved Solids	Specific Conductance	Growing Season
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
Texoma	Tlt	SWD	1944	1	4	1	39,719	617	89,000	2,733	3,446	0.79	31	115	95	+	10	580	13.9	790	1.405	230
Wallace	LA	LHVD	1946	2	4	1	266	142	2,300	7,800	-	-	3	32	0	+	-	30	4.5	-	-	270
									Rio Grande and Gulf Dralnase Area													
Bardwell	TX	SWD	1965	2	1	3	178	421	3.570	43	55	0.78	12	43	25	+	3	25	3.0	190	330	243
Belton	TX	SWD	1954	2	1	3	3,560	594	12,300	373	400	0.93	30	124	110	35	3	136	8.8	240	360	242
Benbrook	TX	SWD	1952	2	1	3	429	694	3,769	88	40	2.18	23	75	65	+	10	24	2.8	175	260	265
Canyon	TX	SWD	1964	2	1	2	1,432	909	8,240	366	217	1.69	45	159	129	50	5	80	6.3	230	420	243
Grapevlne	TX	SWD	1952	2	1	3	695	535	7,380	161	99	1.62	22	84	57	+	5	60	5.0	190	340	249
Hords Creek	TX	SWO	1948	2	4	3	48	1,900	510	6	1	4.66	11	52	40	+	7	11	3.5	440	750	235
Lavon	TX	SWD	1953	2	1	2	770	472	11,080	144	268	0.54	13	39	18	+	18	83	5.6	185	325	230
Lewisville	TX	SWD	1954	2	1	3	1,660	515	23,280	436	US	1.05	19	80	64	+	6	183	8.5	180	320	249
Navarro Killa	TX	SWD	1963	2	1	3	320	425	5,070	53	107	0.50	11	49	23	+	3	38	3.8	190	330	242
Proctor	TX	SWD	1963	2	4	3	1,265	1,162	4,610	31	89	0.35	7	42	33	+	4	38	4.0	440	750	242
Saa Rayburn	TX	SWD	1965	1	4	1	3,449	164	114.500	1,446	1,623	0.89	13	94	54	40	7	560	11.9	100	150	229
San Angelo	TIC	SWD	1952	2	1	2	1,511	1,908	5,440	80	7	10.88	15	72	64	+	27	27	2.6	240	430	222
Somerville	TX	SWD	1967	2	2	2	1,012	238	11,460	144	180	0.80	13	38	27	+	1	85	5.7	230	420	250
Stl11house Hollow	TX	SWD	1968	2	1	4	1,318	622	6,430	205	175	1.17	32	124	101	35	1	58	5.1	280	475	227
WacO	TX	SWD	1965	2	1	3	1,670	455	7,270	104	340	0.31	15	85	45	+	4	60	5.0	190	330	238
Whitney	TX	SWD	1952	1	4	3	26,170	522	16,700	loll	1,156	0.36	25	97	33	+	7	190	10.5	1,200	2,100	230
									Hle.ouri Baain Drainage Area													
Bowman-Haley	ND	MRD	1966	2	3	3	446	2,775	1,740	20	21	0.95	12	-	34	-	5	17	2.9	800	1,200	130
Cherry Creek	CO	MRD	1950	2	2	3	385	5,550	852	15	3	5.98	18	45	41	-	50	8	2.0	-	-	165
Fort Peck	MT	HaD	1937	1	2	1	57,500	2,246	215,000	17,930	6,876	2.61	83	196	126	40	10	1,520	23.4	400	600	125
Francis Case	SO	HaD	1953	1	2	1	263,500	1.365	104.028	4,834	17,290	0.28	46	138	57	+	35	575	12.7	440	-	150
Harlan County	NB	HaD	1952	2	1	2	20,752	1,946	13,468	350	254	1.38	26	70	67	+	13	58	3.6	310	490	160
Kanopolis	KS	MRD	1948	2	4	3	7,857	1,463	3,990	61	259	0.24	15	57	50	20	10	37	4.2	650	l,OSO	180
Lewis & Clark	SO	MRD	1955	1	2	1	279,500	1,208	31,300	477	18,670	0.03	15	48	25	+	4	100	4.0	450	750	162
Milford	KS	HaD	1967	2	1	3	24,880	1,144	16,000	415	656	0.63	26	74	S4	-	7	163	9.2	350	560	177
Oahe	SO	HRD	1958	1	2	1	243,500	1,617	313,000	22,530	19,000	1.18	72	200	67	70	20	2,250	28.7	490	775	155
Perry	KS	MRD	1969	2	1	3	1,117	892	12,200	243	300	0.81	20	60	55	-	9	160	10.3	230	390	200
Pomona	KS	HaD	1963	2	1	3	322	974	4,000	71	129	0.55	18	59	7	-	9	52	5.9	265	430	182
Pomme de Terre	HO	MRD	1961	2	1	1	611	839	7,820	242	338	0.71	31	89	17	25	15	113	9.1	215	330	180
Rathbun	IA	HRD	1969	2	2	3	549	904	11,013	205	224	0.92	19	52	46	-	4	180	12.2	250	-	172
S.kakawea	ND	MRD	1953	1	1	1	181,400	1.850	324,000	22,640	20,000	1.13	70	178	61	-	10	1,340	16.8	450	765	119
Sharpe	SO	HaD	1963	1	2	1	259,300	1,420	56,090	1,725	14,375	0.12	31	75	20	+	2	200	6.0	440	700	145

(Continued)

Reservoir Name	State	CE Division	Year Impounded	Use Type	Chemical Type	Sediment Type	Drainage Area	Surface Elevation	Surface Area	Volume	Total Annual Discharge	Storage Ratio	Mean Depth	Maximum Depth	Outlet Depth	Thermocline Depth	Fluctuation	Shoreline Length	Shore Development	Dissolved Solids	Specific Conductance	Growing Season
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
Stockton	HO	MRD	1970	1	1	2	1,160	867	24,900	912	710	1.28	37	109	SO	25	5	250	11.3	225	-	180
Tuttle Creek	KS	MRD	1962	2	1	3	9,628	1,075	15,800	425	1,419	0.30	27	80	14	+	15	112	6.4	280	430	175
WUs on	KS	MRD	1965	2	4	3	1,917	1,516	9,000	246	38	6.39	27	80	41	30	6	100	7.5	1,510	2.565	171
North Pacific Drsinage Area																						
Cottago Crove	OR	NPD	1942	2	1	1	104	790	1,135	32	203	0.16	28	71	67	+	40	9	2.3	45	70	161
Columbia Drainage Area																						
Blue River	OR	NPO	1968	2	1	1	88	1,350	940	83	345	0.24	88	248	218	35	170	–	–	50	75	165
Cougar	OR	NPO	1963	1	1	1	208	1,690	1,235	208	643	0.32	168	416	271	43	158	–	–	50	75	165
Detroit	OR	NPD	1953	1	1	1	438	1,564	3,455	436	1,692	0.26	126	364	167	27	114	38	4.6	40	65	165
Dexter	OR	NPO	1954	1	1	1	991	695	1,025	28	2,321	0.01	27	58	45	6	5	-	–	50	75	200
Dorena	OR	NPD	1949	2	1	1	265	832	1,815	72	546	0.13	40	97	93	30	62	12	2.0	45	70	160
Dworshak	ID	NPD	1973	1	-	1	–	-	16,970	–	–	–	–	–	–	–	–	–	–	–	–	159
Fall Creek	OR	NPO	1966	2	1	1	184	830	1.760	U8	422	0.28	67	160	160	+	102	–	–	50	75	200
Fern Ridge	OR	NPO	1941	2	1	1	252	374	9,340	101	393	0.26	11	35	35	3	20	32	2.4	45	70	200
oater	OR	NPD	1966	1	1	1	494	637	1,195	56	2,063	0.03	47	112	54	16	25	–	–	40	65	165
Craen Peter	OR	NPD	1966	1	1	1	277	1,010	3.605	410	1,293	0.32	114	310	207	23	88	–	–	40	65	165
Hills Creek	OR	NI'O	1961	1	1	1	389	1,541	2,710	350	828	0.42	129	296	157	40	93	35	4.8	70	105	165
Ice Harbor	WA	NPD	1962	1	1	1	109,000	440	9,200	–	36,000	–	–	–	–	–	–	56	–	–	–	185
Lookout Point	OR	NPD	1953	1	1	1	991	926	4,255	443	2,321	0.19	104	238	155	35	*101*	37	4.0	50	70	200
Lucky Peak	to	NPD	1954	2	1	1	2,650	3,015	2,200	195	2,200	0.09	89	195	180	20	105	38	5.8	30	45	159
Pend Oreille	ID	NPO	1952	1	1	1	*24,200*	2.063	94.600	58,000	18,870	3.07	613	1,237	30	40	13	226	1.7	95	155	121
RufQUS Woods	WA	NPO	1955	1	1	1	75,400	946	7.800	516	84,300	0.01	66	196	76	–	16	106	8.6	95	*160*	167
Central and South Pacific Drainage Area																						
Mendocino	CA	SP!)	1958	2	1	2	105	738	1,690	70	260	0.27	41	114	95	20	35	15	2.6	95	145	200
Santa Margarita	CA	SPD	1941	2	1	2	112	1.295	690	22	13	1.62	31	75	71	–	9	5	1.4	*300*	465	*280*
Central Valley Oreina8e Ar.a																						
Black Butte	CA	SPO	1963	2	1	1	736	*450*	2,845	74	481	0.15	26	75	63	–	40	25	3.4	211	325	250
Harry L. Eng1ebright	CA	SPO	–	1	1	1	1,108	527	815	70	1,868	*0.04*	86	241	84	-	–	24	*6.0*	–	-	270
Isabella	CA	SPD	1954	2	1	1	2,074	2,555	4,800	150	650	0.23	30	90	78	+	20	28	2.9	*150*	230	160
New Hogon	CA	SPO	1963	2	1	1	362	685	2,650	223	176	1. 27	84	150	140	–	40	24	3.3	–	–	220
Pine Flat	CA	SPD	1952	2	1	1	1,545	850	3,440	500	1,651	*0.30*	147	300	196	20	80	52	6.4	30	45	160

APPENDIX B: ESTIMATED ADJUS'IED S'IANDING CROP OF FISH SPECIES GROUPS AS DETERMINED FROM COVE ROTENONE SAMPLING IN SUMMER FOR CORPS OF ENGINEERS RESERVOIRS, ARRANGED ALPHABETICALLY BY DRAINAGE AREAS

APPENDIX B

In the following tabulation, the standing crop estimates are all in pounds per acre and represent mean values if data for two or more years were available. Definitions of characteristics listed in the column headings are:

(a) Reservoir name - official name of the impoundment; "Lake" omitted from name when occurring as part of the official name.

(b) Number of years sampled - number of years that data were available.

(c) Mean year of samples - simple mean of the years for which data were available.

(d) Gars and bowfin - estimated standing crop of all species of gars *(Lepisosteue* spp.) and bowfin *(Amia calva)*.

(e) Clupeids - estimated standing crop of Clupeidae (gizzard shad and threadfin shad [*Dorosoma* spp.] and herrings [*Alosa* spp.]).

(f) Carp - estimated standing crop of the carp, *Cyprinus carpio.*

(g) Minnows - estimated standing crop of all species of minnows (Cyprinidae, excluding the carp), all silversides (Atherinidae), all livebearers (Poeci1iidae). and all killifishes (Cyprinodontidae).

(h) Catostomids - estimated standing crop of all suckers. carpsuckers, hog suckers, buffalofishes, and redhorses (Catostomidae) .

(i) Catfishes - estimated standing crop of all bullheads, catfishes, and madtoms (Ictalur1dae).

(j) Temperate basses - estimated standing crop of white perch, white bass, yellow bass. and striped bass (Percichthyidae).

(k) Sunfishes - estimated standing crop of all rock bass, fliers, redbreast sunfish, green sunfish, pumpkinseed, warmouth, orangespotted sunfish, bluegill, longear sunfish, and spotted sunfish (Centrarchidae).

(1) Black basses - estimated standing crop of all smallmouth bass. largemouth bass, redeye bass, and spotted bass (Centrarchidae).

(m) Crappie - estimated standing crop of all black crappie and white crappie (Centrarchidae).

(n) Freshwater drum - estimated standing crop of the freshwater drum, *ApZodinotu8 grunniens*.

(0) All other species - estimated standing crop of all trouts (Salmonidae), pikes (Esocidae), and perches (Percidae).

(p) Total - estimated standing crop for all fish species groups combined.

t o <0.05 lb/acre

Appendix 8 (Continued)

Reservoir Name ●	No. of Years Slapled b	Mean Year 01 Sampl.t c	Gars, Bowfin !	Clupeid. ●	C.rp f	Minnows g	Catosto-aid, h	Cat-llah.. i	Temperate Basses ,	Sun-Il.h.. k	Black Basses ,	Crappie '	Fresh water Drua '	All Other Species 0	Total p
Middle Atlantic Drainage Area															
John H. Kerr	11	1962	0.1	50.2	●●●	1.1	●●●	37.3	0.'	12.6	1.'	,''		'.1	126.9
Gulf and South Atlantic Drainage Area															
Allatoona	●	1960	t	22.2	20.2	'.1	27.1	15.3	1.1	18.9	22.3	16.7		1.5	148.6
Clark Hill	11	1960	0.'	74.3	18.3	0.1	'' ,	•.1	,''	27.5	11.1	11.7		, ■	113.)
Hartwell	●	1965		38.3	21.5	1.'	1..	,''	0.,	28.7	10.9	20.7		I.'	131.6
Ocklawaha	1	1972	I.'	7.2		15.7		••0		52.4	20.6	'.0		16.5	127.8
Okatibb••	●	1972	●●●	146.7	●●●	0.1	●●●	3.'		37.2	25.1	30.9		1.1	264.5
Seminole	4	1966	1.'	55.4	47.4	0.'	62.8	13.9	t	22.4	14.5	,''		3.'	228.2
Sidney Lanier	,	1962		22.9	23.2	0••	1.'	•.1	0.,	ZO.3	8.8	14.8		●●●	103.9
W. Kerr Scott	●	1966			54.3	0.1	17.9	3.'	0.2	13.9	10,0	3.1			103.0
Walter F. Georg	3	1965	1.3	99.9	10.4	1.8	'.1	23.1	1.2	25.0	10.9	3.'		2.2	183.5
Ohio Basin Drainage Area															
Barren River	,	1966	,	135.2	68.5	0.I	47.4	7.5	2.1	29.7	21.4	'' ,		1.1	321.5
Buckhorn	4	1963	0.'	1..		0.'	62.6	H.1	1.'	28.2	18.2	'.1	11.8	0.'	142.5
Center Hill	3	1960		69.0	12.8	0.'	●●●	I.'	1..	10.8	I.'	●●●	20.2	0.1	141.0
Dale Hollow	●	1965	0.1	32.6	55.)	1.1	28.3	••0	0.I	15.0	'' ,	1.4	19.8	0.2	165.5
Dewey	15	1960		140.9	26.5	0.1	13.6	3.5	0.,	21.0	18.3	22.5		0.'	247.9
Fishtrap	1	1973		191.4	45.0	0.1	46.8	'.3	1.'	13.7	'.1	1.5		1.8	313.1
John W. Flanna••n	,	1973				0.'	1.'	1.3		19.4	'.1				28.9
Cumberland	●	1958	1.0	77.4	15.1	0.'	45.2	11.6	2.1	8.,	10.9	15.0	17.8	'.8	215.1
Nolin	,	1966	0.1	176.)	107.2	'.1	13.8	21.1	0.,	22.9	25.7	18.4		0.'	391.3
Old Hickory	3	1960		152.9	68.0	0.'	244.8	'.1	0.,	27.5	,''	'.1	30.2	1.1	552.0
Rough River	,	1964	0.'	122.1	11.4	0.'	82.2	30.2	1..	41.3	29.7	14.8	2.1	0.8	))8.2
Summersville	4	1970		1..		1.'		1.0		28.3	22.2	1.'		1.8	61.0
Sutton	●	1961		1.,	10,2	1.'	73.6	12.7		8.'	20.6	15.2		1..	146.4
Lower Hiaa1a,lepl Drainage Area															
Arkabutla	●	1964	14.5	44.5	1.0	3.'	88.4	36.7		I.'	'.1	26.5	21.8	0.'	245.2
Enid	16	1964	3.'	87.6	10.4	●●●	78.8	21.9	0.,	11.4	24.3	14.4	15.8	0.1	275.3
Grenada	17	1963	8.1	115.3	●●●	●●●	82.8	23.6	1.8	18.3	25.9	34.1	25.5	0.'	355.1
Sudit	16	1964	2.7	67.8	13.1	10.0	23.9	60.5	t	11,2	31.7	24.6	31.2	0.1	282.8
Wappapello	2	1955		no.S	44.8		314.2	H.8	0.'	29.6	20.8	10.6	113.6		676.4
Arkansas/White/Red Drainage Area															
Arkansas:															
Blue Mountain	,	1971	17.0	86.6	52.9		306.1	23.5	2.'	11.4	17.1	57.9	125.0	t	700.1
C"nton	11	1968	O••	73.4	70.0	1.'	54.8	20.9	75.J	,.I	12.0	25.5	47.7	0.'	)90.3
Dardanelle	●	1972	'.1	150.5	73.6	0.1	641.9	38.4	1.,	17.4	33.4	23.4	95.4	0.1	1079.9

(Con tl'II,lld)

Appendix B (Concluded)

Reservoir Name ●	No. of Years Sampled b	Mean Year of Sallples c	Gars & Bowfin d	Clupeids o	Carp f	Minnows g	Catosto-mids h	Cat-fishes '	Temperate Basses 1	Sun-fishes '	Black Basses 1	Crappie '	Fresh-water Drum '	All Other Species o	Total p
Eufaula	2	1973	0.'	225.5	85.8	0.3	128.1	44.8	•••	13.6	'.7	11.3	79.6	t	601.8
fall River	1	1952	36.8	343.8	84.0		215.7	42.6		4.4	21.6	18.8	53.8	,	821.5
Fort Gibson	●	1958	0.'	147.5	64.5	,	158.0	25.4	'.2	20.4	16.2	17.3	110.9	0.1	566.0
Fort Supply	1	1952		187.5	137.6		62.2	79.0	0.,		22.6	'.0			494.8
Great Salt Plains	1	1973		54.9	44.5	2.8		0.3		0.4			16.6	3.1	122.6
Heyburn	3	1955	1.3	37.5	39.8		52.7	47.2		'.0	20.5	17.5	34.9	0.1	256.5
Hulah	1	1956		152.5	55.4		249.5	52.9	7.1	1.8	6.2	92.0	141.1		758.5
Keystone	4	1971	0.2	653.2	94.9	0.8	280.0	27.6	23.1	24.9	12.6	'.2	64.5	t	1188.0
Nimrod	,	1971	34.2	80.6	23.7	4.3	391.7	12.9	23.6	24.2	43.9	26.3	40.3	0.1	705.2
Oologah	1	1973		25.9	33.9	t	53.0	10.0	1.4	51.8	16.5	15.9	26.2	0.2	234.8
Ozark	4	1912	2.'	253.0	47.5	0.1	236.0	20.3	10.1	14.4	'' ,	11.1	77.6	0.1	682.8
Robert S. Kerr	2	1912		151.9	57.6	0.7	144.2	'.1	0.'	49.6	26.8	35.S	21.5	t	497.8
Tenkiller ferry	,	1966	0.1	180.9	2.2	2.8	91.2	10.1	0.2	30.0	11.8	•••	27.2,	0.3	366.4
Toronto	1	1971	0.'	'.1	78.3		90.8	7.'	0.'	2.3	0.8	13.8	47.0	,	246.7
Webbers falla	1	1973	,	611.4	71.6	1.3	295.1	24.8	2.8	45.7	39.4	15.5	75.6	1.8	1185.0
Wister	4	1962	23.6	45.4	88.2	t	460.8	15.2	0.2	8.3	•••	26.3	68.2		746.1
White:															
Beaver	13	1969	0.1	180.7	78.6	0.8	47.4	12.5	'.2	28.7	15.5	13.0	2.'	2.3	387.3
Bull Shoals	21	1963	0.'	125.3	17.6	2.1	48.9	15.7	11.1	40.0	17.7	4.2	21.8	1.8	307.1
Clearwater	1	1958		128.6	'.7		16.6	|.'		23.5	11.4	3.6			191.0
Greers ferry	,	1971		30.5	10.2	,	167.8	10.4	4.0	7.1	29.1	0.'	4.0	2.0	265.7
Norfork	20	1962		102.7	3.4	4.'	60.4	24.1	'.7	23.5	15.6	13.0		3.2	260.5
T.ble Rock	2	1962		66.5	1.7		193.7	26.1		48.3	21.6	16.1		3.4	377.4
Red:															
Broken	1	1973		33.1		0.4	49.6	2.'		27.1	'.1	1.7		0.4	120.0
DeGray	,	1972	0.1	145.2	1.3	3.7	2.2	19.8	0.7	77.9	20.7	28.4		3.1	303.1
Greeson	●	1972	0.1	24.0		1..	11.7	13.6	3.8	18.9	12.1	'.4		1.8	93.0
Millwood	2	1971	•••	145.5	'.0	0.2	1.8	4.8	15.1	57.3	33.0	10.0	2.4	0.3	286.3
Ouachita	●	1966	1.0	44.7	0.2	1.,	39.7	10.1	0.2	·27.3	15.1	4.1	17.5	0.2	163.7
Texoma	1	1973	1.0	334.4	148.5	0.'	'.2	11.2	1.2	37.0	61.8	4.8	75.3	3.3	688.3
						Rio Grande and Gulf Drainase Area									
lavon	2	1955	1.,	70.8	88.7		0.3	17.9		15.8	8.'	46.6	2.4		252.7
						Missouri Basin Drainage Area									
Tuttle Creek	3	1970		252.4	46.4	0.'	263.0	14.6	14.2	'.4	3.8	17.6	42.5	0.'	661.1

APPENDIX C: SPORT AND COMMERCIAL FISH HARVEST

Appendix C: Part t

Annual Sport Fish Harvest for U. S. Reservoirs*

OralnBse Area and Reservoir	Years Data	Reservoir Area, Acres	total Sport Fish Harvest	Sport Flsh Harvest In Pounds Per Acre: Carp	Catfishes	Temperate Basees	Sunfiah...	Black Basses	Crappies	Walleye	SdllOnlda	Other Species
Central and South Pacific		4,950										
Cachuma, CA	1	3,100	10.5		0.4		5.2	1.6			3.3	
Bl Capitan, CA	2	500	78.2		31.2		26.2	4.4	16.3			
Plru, CA	1	500	94.0		5.0		71.0	6.0			12.0	
San Vicente, CA	3	850	20.3		0.4		14.9	4.3	0.7			
Centnl Valley		26,160										
Beardsley, CA	6	650	5.4								5.4	
FolsOll, CA	1	9,500	5.7		1.0		0.9	3.4			0.4	
l<:a House, CA	1	570	3.0								3.0	
Isabella, CA	2	4,800	125.4		1.8		30.7	12.9	76.8		3.2	
HUlerton, CA	4	4,000	5.5				3.1	2.4				
Pine Flat, CA	1	5,970	21.8		0.1		11.8	4.3	4.6		0.1	
Spaulding, CA	1	670	1.0								1.0	
Columbia Basin		90,220										
Anderson Ranch, 10	4	4,780	5.2								1.6	3.6
Brownlee, 10-01l	1	30,000	3.4		2.1			0.8	0.6			
Cascade, ID	4	28,300	2.2		0.1						0.8	1.3
Henry's Lake, ID	3	6,000	7.4								7.4	
Pal1••des, 10	4	15,150	2.6								2.6	
Ceorsatown, HT	2	3,000	31.1								31.1	
Wildhorse, NV	1	1,830	26.0								26.0	
Cottas. Crave, OR	1	1,160	20.1								20.1	
Great Ba.in		7,555										
Crowley, CA	1	4,800	33.4								33.4	
Adams-McGill, NV	2	625	3.4					3.4				
Deer Creek, UT	5	2,130	18.9								18.9	
Colorado Basin		334,456										
Apache, AZ	8	2,600	11.3	0.1	2.L		1.4	6.4	1.2			
Bartlett, AZ	6	2,768	16.1	0.1	1.4		1.2	11.2	2.2			
81S, AZ	1	570	liO.O								110.0	
Clnyon, AZ	8	900	18.1		1.5	0.6	5.6	10.2	0.1	0.1		
Mead, AZ-NV	2	115,000	5.1		0.8			3.8	0.3		0.1	0.1
Mohave, AZ-CA	4	26,100	4.9		0.1		0.1	1.8	0.1		2.7	
Pleasant, AZ	9	890	19.9	0.2	1.4	0.8	3.0	11.2	3.1			
Sasuaro, AZ	6	1,260	18.0		0.9	1.0	6.6	9.3	0.1			
Cranby, CO	2	5,900	13.2								13.2	
Na.vajo, NM	1	8,600	10.4				1.2	0.2			9.0	

* All reaervoirs for which harvest data are currently available In the National Reservoir Research Prosra. fil•• are included. Mean harveat valuea ware calculated if data for two or lDore years were available.

Drainage Area and Reservoir	Years Data	Reservoir Ar••, Acres	Total Sport Fish Harvelt	Sport Fish Harvest in Pounds Per Acre								
				Carp	Catfishes	telllper.te Basses	Sunfishes	Black Basses	Crappies	Walleye	Salmonids	Other Species
Plallling Gorge, UT	8	25,000	19.4								19.4	
Powell, UT	2	128,000	2.4		0.2		0.1	1.5	0.4		0.1	
Scofield, UT	1	2,800	12.7								12.7	
Starvation, UT	1	3,310	84.3								84.3	
Steinaker, UT	2	658	26.3								26.3	
Strawberry, UT	4	6,900	19.0								19.0	
Upper Lake Mary, UT	4	600	21.5		0.5		7.8				12.8	0.4
Big Sandy, WY	1	2,600	8.7								8.7	
Hissouri Basin		550,240										
Boyd, CO	4	1,670	5.1						1.8	2.2		1.1
Point or Rock., CO	2	1,500	3.5								3.5	
Kanopolis, KS	6	3,550	30.5	13.9	3.3	6.4	0.1	0.4	4.0	1.8		1.5
Lake of the Ozarks, HO	6	59,700	12.1	0.2	1.3	2.7	0.4	0.7	6.3	0.1		0.1
Pomme de Terre, MO	6	7,820	18.3	2.6	0.1	0.6	0.4	3.2	11.8			0.1
Stockton, MO	1	24,900	25.0	7.2	4.4		2.1	10.0	0.6	0.3		0.8
Thomas Hill, HO	3	4,400	13.0	2.9	2.2			3.2	4.6			0.2
Ennis, HT	1	3,800	4.8								4.3	0.5
Ft. Peck, MT	1	212,000	0.1									0.1
Gibson, MT	1	1,360	1.1								1.1	
Hebgen, MT	1	12,670	1.3								1.3	
Pishkin, MT	1	1,000	0.8								0.8	
Willow Creek (Harrison), MT	1	860	13.0								13.0	
Willow Creek (Sun R.), MT	1	1,450	0.2								0.2	
Rarry Strunk, NB	1	1,770	58.2	26.6	13.0		1.7	6.2	9.6	1.1		
Maloney, NB	2	1,550	20.6	2.5	1.6			0.1	13.8	2.0		0.4
Angostura, SD	2	4,830	14.0		0.2		0.9	0.2	0.2	1.4	2.2	5.5
Francis C•e, SD	3	88,000	0.8	0.1			0.1	0.2	0.2			0.2
Sbarpe, SD	1	55,800	2.9	0.1	0.1	0.1				1.9		0.7
Alcova, WY	2	2,250	16.6								16.6	
Boysen, WY	2	22,200	5.4						2.0	1.8		0.7
Buffalo Bill, WY	1	6,710	2.5								2.5	
Glendo, WY	1	7,800	36.9								36.9	
Ocean Lake, WY	4	6,150	12.7				0.2	0.6	11.2			0.8
Pathfinder, WY	2	4,500	10.4								10.4	
Seminoe, WY	1	12,000	2.6								2.6	
White River		138,230										
8eaver, AR	12	24,310	21.6	0.4	1.2	2.9	0.7	9.4	6.8	0.1		0.1
Bull Shoals, AR	12	45,440	27.7	0.1	4.8	5.7	0.9	9.2	6.4	0.3	0.2	0.1
Norfork, AR	1	22,000	19.7		4.2	9.0	0.5	4.7	1.0			
Clearwater, MO	4	1,650	35.2	1.7	4.4	0.6	3.4	4.4	20.6			
Table Rock, HO	12	43,100	26.8	0.3	1.2	1.8	2.2	U.S	8.6			
Taneyc:olllo, MO	10	1,730	83.8	0.2	1.1	0.3	2.4	2.1	3.1	0.2	72.1	0.3

(Continued)

Appendix Cl Part 1 (Continued)

Drainage Area and Reservoir	Tilar. Data	Reservoir Area, Acres	Sport Fish Harv••t 1n Poulld. Per Acre: Total Sport Fish Harvest	Carp	Catfish..	Temperate Basses	Sunfish..	Black Basses	Crappi..	Walleye	Salmonids	Other Speci..
Ark.llsas River		59,222										
Ft. Smith. AR	4	525	2.'		0.'		0.'	1.8	0.'			
Canton, OK	,	7,500	11.5	0.1	'.1	,',			0.'	0.'		0.'
[UChll, OK	19	2,880	36.1		'.2	'.2	0.1	15.0	12.4			0.2
Ft. Gibson, OK	,	19,900	16.4	2.2	11.4	22.3	'.1	'.0	28.4			2.0
Spavinaw, OK	15	1,631	21.8	0.'	4.3	'.1	1.2	l.'	•••			0.1
Tenkiller Fllrry, OK	3	12,500	30,S	1.,	3.'	'.l	'.0	'.0	10.1			0.3
Bluewater, NM	,	550	92.2								92.2	
Conchas, NM	,	9,600	11.3	2.2	11.0		'.3	'.2	28.0	23.2		0.'
Ute, NM	l	4,130	23.9		'.1			2.0	14.8	0.'		
Red River		65,105										
Greeson, AR	2	6,UO	•••		0.'	2.'	0.2	'' ,	1.4			
Bayou DeSiard, LA	2	1,215	30.0				14.8	•••	,■■			1.2
Black Bayou, LA	l	3,960	50.4				34.4	'.3	'.3			0.'
Bussey IIr.ke, LA	,	2,200	120.0				46.8	27.7	40.4			'.0
Caddo, LA	l	32,500	,''			0.'	1.2	1.7	0.'			••2
D'Arbonne, LA	2	14,610	75.2				19.4	18.8	34.6			2.'
LaFourche, LA	3	', OllO	15.8				'',	1.6	1.'			0.'
Cypress Sprtng., TX	,	3,450	49.9		'.2		15.3	'.1	17.6	1.,		0.'
Rio Grsnde .nd Gulf		46,356										
Storrie, NM	,	1,400	1.1						0.1		1.0	
B'lltrop, TX	2	'''	,''	0.1	,''		0.'	'.1	0.'			
Ilenbrook, tx	,	1,200	55.8	0.'	'.1		■■,	44.7	0.'			
Inks, TX	,		31.7	0.1	l.'	'',	l.'	10.3	2.7			1.3
Medina, TX	2	S,S10	27.7	2.'	'.0	3.3	•••	'.0	'.2			
N••worthy, TX	,	300	7.1	2.'	,',	1.0	0.'	1.4	0.'			0.2
S.n Angelo, TX	,	'OllO	,',	0.2	'.0		1.3	1.2	2.'			
Sheldon, TX	,	1,200	28,S		'.0		11.2	IS.0	0.3			
Spen"e, tX	l	14,950	11.0	0.'	1.2	2.2	0.'	,''	1.8			
Whitney, TX	2	15,800	131.6	3.'	18.4	,■■	12.8	50.4	44.8			2.'
Lower Mississippi		11,500										
Enid, MS	12	13,000	'',		0.'		0.'	0.'	,',			
Grenada, MS	12	25,600	10.1		0.'		0.3	1.'	•••			0.1
Sardis, MS	12	28,900	'.0		0.'		0.2	0••	'.0			0.1
Duck Creek, MO	,	1,800	11.0		36.1		23.1	•••	'.3			
W.ppspello, HO	2	8,200	■■,	0.2	0.2	0.1	0.2	0.'	'.0			
Upper Hississippi		24,210										
Carlyle, IL	,	17,500	11.8	,',	2.'		O••	,',	1.0			0.'

(Continued)

Appendix C: Part t (Continued)

Drainage Area .nd Reservoir	Years Data	Reservoir Area, Acres	Total Sport Fish Harvest	Carp	Catfishes	Temperate Basses	Sunfish••	Black Ba....	Cnppie.	Walleye	Salmonids	Other Spede.
			Sport Fish Harv..t in round. '.r Acre									
Forbes, IL	1	525	18.1		3.3		11.0	3.2	0.3			
Spring, IL	2	1.285	20.8	8.0	,",		'.8	1.7	'.0			0.8
Cor.lville. IA	1	4.900	13.3	7.1	6.0		0.1		0.1	0.1		
Tennessee Valley		296.210										
Wheeler, AL	1	67,100	,",		0.3	0.1	0.1	0.1	1.6			0.1
IIlue Ridge, GA	1	3,32D	2.2		0.,		0.2	0.'	0.6	0.1		
Nottely, GA	1	3,850	,",	0.3	1.6		0.'	1.1	0.6			
Kentucky, KY	4	158.300	10.6	0.'	'.7	1.7	0.'	1.0	3.'			1.1
Cherokee, TN	2	19,100	'.8	0.1	0.8	,",	0.7	1.5	2.1			0.2
Norris, TN	1	34,200	21.0	0.,	1.'	2.'	O••	6.0	'.8	,",		1.1
Watauga, TN	,	6,430	13.0	0.6	0.7		0.8	3.2	3.1	3.'	0.8	0.2
Woods, TN	6	3,910	32.6	0.'	1.3		6.6	6.8	16.2	0.6		0.7
Ohio Basin		88,943										
Mermet, IL	1	6"	)3.2	0.'	1.1		23.6	2.8	'.0			1.2
Barren River, KY	4	10.050	'.7	0.6	0.2	0.'	0.'	'.7	2.'			
Beshear, KY	1	712	[illegible]		3.3		2.7	1.9	1.3			0.1
Buckhorn, KY	,	1,230	20.5		1.6	2.8	'.0	,''	6.1	0.1		0.6
Dewey, KY	12	1.100	11.0	0.6	0.8	0.1	2.1	1.7	4''			
Fishtrap, ICY	2	1,131	,",	O.,	0.1	0.1	0.'	O.•	2.'			
Herrington, KY	7	1,600	25,4		2.8	6.0	'.0	'.6	'.2			2.1
Malone, KY	2	6"	30.0		13.7		14.0	2.3				
NoUn, KY	,	5.800	7.'	1.2	0.1		1.3	'.6	'.3			
Rough River. KY	4	4,860	11.7		1.1	0.7	3.1	'.2	2.7			
Deep Creek, MD	,	3,900	8.,		0.'		0.3	1.5	0.7	0.1		'.1
Bucke)'e, OH	3	3,140	16.2		'.1		2.'	1.2	3.0			'.1
Charles Kill, OK	3	1.350	'.0	2.'	0.'		0.6	0.'	0.8			
Loramie, OK	1	1,100	6.'		'.7		1.4	1.0	1.8			
Senecaville, OH	3	3.550	26.0	10.9			6.0	'.0	7.0			
Center H111, TN	3	18,220	17.4		0.'		6.'	,",	6.3			0.2
Dale Hollow, TN	8	21,100	8.'	0.1	0.7	1.0	1.0	2.8	[illegible]	0.'	0.'	0.1
Sutton, WV	2	1,520	28.8		1.4		1.0	18.6	0.8	0.'		0.2
South Atlantic - Gulf		105.nO										
Jordan, AL	2	6,800	2.'	0.1		0.6		1.4	0.'			
Mitchell, AL	2	5,850	'.8	0.2		0.2	0.2	I.,	0.,			
Thollocco, AL	,	600	••3		2.1		'.1	I.'	'.6			
Allaeoona, GA	2	11,860	8.0		0.'	0.3	0.'	'.0	3.1			
Blackshear, GA	1	1.000	7.,		1.1	1.7	1.8	0.'	1.7			
Sidney Lanier, GA	2	38,000	,",	0.'	0.'		0.2	0.8	0.'			
Bluff, MS	3	1.200	30.9		2.'		11.6	'.8	'.2			1.5

(Continued)

Appendix C Part I (Concluded)

Drainage Area and Reservoir	Years Data	Reservoir Area, Acres	Total Sport Fish Harvest	Sport Fish Harvest in Pounds Per Acre								
				Carp	Catfishes	Temperate Basses	Sunfishes	Black Basses	Crappies	Walleye	Salmonids	Other Species
Okatibbee, MS	[illegible]	2,800	40 4		5.4		7.8	11[illegible]	14 7			0.4
Ross Barnett		31,000	26 0		1.9		4.9	8 1	10 7			0.3
South Atlantic - Atlantic		235,747										
Jackson, GA	[illegible]	4,750	36.6	0.2	4.2	0.5	4.2		2[illegible].8			0.2
Sinclair, GA	[illegible]	15,350	10.2		2.7	0.	0.6		3.8			0.1
Badin, NC	2	5,973	9.0	0.6	0.5	1.	1.4		1.6			
High Rock, NC	6	15,180	3.0	0.2	0.5	0.	0.4		1.4			0.3
Tillery, NC	1	5,294	2.			0.	0.4	[illegible].4	0.7			0.4
Clark Hill, SC-GA	4	71,500			0.1	0.		1.0	0.6			
Greenwood, SC	3	10,500			1.5	1.		4.5	6.8			0.2
Hartwell, SC-GA	[illegible]	56,400	9.		0.2	1.[illegible]		3.0	3.9	0.3		
Murray, SC	[illegible]	50,800	10.2		0.4	2.[illegible]		3.8	3.0			0.4
Middle Atlantic		255										
Triadelphia, MD	2	790	13 [illegible]						13.[illegible]			
Round Valley, NJ	2	2 350	25 4			1 4	3.4	16.2	0.[illegible]			
Sprue Run, NJ	2	1 290	14 7				8.[illegible]	3.8				
Whitney Point, NY	1	1 2[illegible]0	28 6				1.	4.3				3.2
Cohoon, VA	1	7	14 8				7.	3.1	[illegible] 6			2.5
Meade, VA	[illegible]	5	23 5		0.1	0.1	15.	5.6	[illegible] 8			0.8
Prince, VA	[illegible]	[illegible]	26 9		0.4	0.1	19.	5.1				1.0
Smith-Whitehurst, VA	[illegible]	93	12 7		4.4		1.	5.0	0.[illegible]			1.0
Western Branch, VA	[illegible]	1,500	7 9		0.1		7.[illegible]	0.5	0.[illegible]			0.1
New England												
Quabbin, MA					0.7	0.5	0.2					0 4
Great Lakes and St Lawrence												
Carry Falls, NY								2				
St. Mary's, OH				0			0.2	2				

	Species Groups								
	ses	Crappies		Walleye		Salmonids		Other Spp.	
	% TH	lb/acre	% TH	lb/acre	% TH	lb/acre	% TH	lb/acre	% TH
Cer	10.2	1.8	6.5			3.3	12.0		
Cer	15.8	15.1	48.6			1.0	3.2		
Co:	6.2	0.2	4.2			3.1	64.6	0.6	12.5
Gr	1.1					26.5	98.9		
Co:	32.4	0.3	4.2			3.9	54.9		
Mi:	13.7	1.2	23.5	0.3	5.9	0.9	17.6	0.3	5.9
Wh:	36.3	6.4	24.7	0.2	0.8	1.0	3.9	0.1	0.4
Ar-	11.0	18.1	35.5	3.8	7.4	0.8	1.6	0.8	1.6
Re.	23.0	11.3	35.2	0.1	0.3			2.9	9.0
R'	38.1	16.8	29.2					0.8	1.4
Lo'	11.4	5.9	67.0					0.1	1.1
Up'	11.0	0.8	6.3					0.3	2.4
Te-	16.5	3.2	31.1	0.4	3.9			0.8	7.8
Oh	25.0	3.5	28.2	0.1	0.8	0.1	0.8	0.5	4.0
So	31.6	4.4	37.6					0.1	0.8
So	31.6	2.9	38.2	0.1	1.3	0.1	1.3	0.1	1.3
Mi	32.6	1.4	7.4			0.1	0.5	0.8	4.2
e	12.0					0.5	20.0	0.4	16.0
Gr	8.5	6.5	55.6						
To									
Av	24.0	3.5	28.9	0.3	2.5	1.2	9.9	0.4	3.3

*

3

Appendix C: Part III

Annual Commercial Fish Harvest by Drainage Areas

Drainage Area	No. Reservoirs In Sample	Total Reservoir Area, acres	Simple Average Commercial Harvest, lb/acre	Area-Weighted Commercial Harvest lb/acre	Area-Weighted Harvest by Species Groups In Pounds Per Acre		
					Buffalo fishes	Catfishes	Carp
Colorado Basin	1	10,000	3.0	3.0	2.0	0.7	0.3
Missouri Basin	6	693.070	17.3	2.4	1.6	0.6	0.2
Upper Mississippi	2	17,200	20.0	29.1	18.9	7.3	2.9
Rio Grande and Gulf	4	63,730	4.0	3.2	2.1	0.8	0.3
Arkansas River Basin	14	113,397	6.4	4.2	2.7	1.1	0.4
Red River Basin	2	123,700	1.0	1.0	0.6	0.3	0.1
Tennessee Valley	12	520,210	11.9	14.6	9.5	3.6	1.5
Ohio Basin	4	55.370	8.5	3.5	2.3	0.8	0.4
Great Lakes and St. Lawrence	1	13.440	38.0	38.0	24.7	9.5	3.8
Total	46	1,610,117					
Average		35,002	10.2	7.0	4.5	1.8	0.7

APPENDIX D: PREDICTED STANDING CROP AND SPORT FISH HARVEST IN CORPS OF ENGINEERS RESERVOIRS GREATER THAN 500 ACRES

APPENDIX D

Multiple Regression Formula Description

Formulas are based on the U. S. customary system of measures and all data transformed to base 10 logarithms. The formulas were derived from data on U. S. reservoirs greater than SOD acres in area at normal pool. Fish standing crop formulas estimate uncorrected standing crop. All estimates are based on reservoir age at the mean year of standing crop or harvest samples and do not necessarily reflect current conditions. Definitions of various types of reservoirs represented in subsamples and of environmental variables are as follows:

(a) All· total sample, representing all types of reservoirs.

(b) Chemical type 1 - most of the dissolved solids in the reservoir water are composed of calcium-magnesium. carbonate-bicarbonate (see Rainwater (1962). Hydrologic Invest. Atlas HA-61. Plate 2).

(c) Chemical type 2 - most of the dissolved solids are composed of calcium-magnesium, sulfate-chloride.

(d) Chemical type 3 - most of the dissolved solids are composed of sodium-potassium. carbonate-bicarbonate.

(e) Chemical type 4 - most of the dissolved solids are composed of sodium-potassium. sulfate-chloride.

(f) Hydropower storage - reservoirs with hydroelectric power generation operation and with storage ratio greater than 0.165 (water exchange lesS than once in 60 days).

(g) Hydropower mainstream - reservoirs with hydroelectric power generation operation and with storage ratio less than 0.165 (water exchange greater than once in 60 days).

(h) Nonhydropawer - reservoirs in sample that do not have hydroelectric generation function (flood control. irrigation. water supply. recreation reservoirs).

(i) "Selected" reservoirs (Formula E) - reservoirs less than 70,000 acres. with total dissolved solids lesS than 600 ppm. and growing season greater than 140 days.

(j) R2 - coefficient of determination (portion of total variability explained by formula); N - the number of reservoirs in sample.

(k) Area - surface area in acres at average annual pool level when data are available; otherwise. use power. conservation. summer. or operating pool area.

(l) Mean depth - in feet, at listed area.

(m) Outlet depth - midline depth, in feet, of outlet.

(n) Total dissolved solids - residue on evaporation at 180^{0}C, in ppm.

(o) Growing season - average number of days between first and last frost.

(p) Age of reservoir - in years, following closure of dam.

(q) Standing crop - estimated crop of fish in pounds per acre as-determined by recovery of fishes from coves or open water areas enclosed by blockoff nets following application of rotenone.

(r) Sport fish harvest - estimated harvest of fishes by sport fishermen, in pounds per acre per year.

<u>Reservoir fish Standing Crop Estimation Formulas (Part I)</u>

Formula 2. Estimation of total standing crop - All reservoir types.

log (total standing crop in pounds per acre) - 1.6720 + 0.1776 log (outlet depth) + 0.6925 log (dissolved solids/mean depth) - 0.2458 (log(dissolved solids/mean depth»2

N-173 R^2 _0.S1

Formula 5. Estimation of total standing crop in hydropower storage reservoirs.

log (total standing crop) • - 0.6126 + 2.3658 log (dissolved solids) - 0.46 (10g(disso1ved solids»2

N-44 R2·0.74

Formula 7. Estimation of total standing crop in hydropower mainstream reservoirs.

log (total standing crop) - 0.6150 + 2.2521 log (dissolved solids) - 0.3762 (log(dissolved solids»2

N=52 R^2 =O.70

Formula 9. Estimation of total standing crop in nonhydropower reservoirs of chemical types 1 and 3.

log (total standing crop) • 1.2867 + 0.1275 log age + 0.1373 log (area) + 0.7027 log (dissolved solid/mean depth) - 0.2459 (log(dissolved solids/mean depth»2

N-47 R2_ 0•S3

Formula 10. Estimation of total standing crop in nonhydropower reservoirs of chemical types 2 and 4.

log (total standing crop) = - 0.9914 + 2.3317 log (dissolved solids) - 0.417 (log(dissolved solids))^2

N = 30 R^2 = 0.64

<u>Reservoir Angler Harvest Estimation Formulas (Part II)</u>

Formula (D) Estimation of total annual sport fish harvest - All reservoir types.

log (total sport fish harvest) = - 0.8104 - 0.2266 log (area) + 0.2090 log (dissolved solids) + 1.1432 log (growing season) - 0.2713 log (age)

N = 103 R^2 = 0.22

Formula (E) Estimation of total annual sport fish harvest - selected reservoir types (see definition (i), page D3).

log (total sport fish harvest) = - 0.3892 - 0.1519 log (area) + 0.2027 log (dissolved solids) + 0.9796 log (growing season) - 0.3055 log (age)

N = 46 R^2 = 0.69

Formula (H) Estimation of annual sport fish harvest rate in terms of pounds harvested per angler-hour of effort - All reservoir types.

log (pounds/angler-hour) = - 0.7579 + 0.1187 log (area) - 0.1036 log (storage ratio) - 0.1285 log (age)

N = 103 R^2 = 0.13

Harvest estimates for the Arkansas-White-Red Basins, Rio Grande and Gulf Drainage, North Pacific Drainage, and Central Valley Drainage were derived from Formula E if the reservoirs met the selection criteria. Formula E was found to yield more accurate estimates of harvest for reservoirs in the above drainages than Formula D. Formula D was used to estimate harvest in reservoirs in all other drainages.

Appendix 0: Part I

Predicted Fish Standing Crop

Reservoir	Age of reservoir in years at the lIIean year of sunding crop samples	NUlllber of years aampled	Mean of standinl crop lamples	Formula 2 Estimate for all relervoir typel	Formula 5 Estimate for hydropower storage reservoirs	Formula 7 Estimate for hydropower mainstream reservoirs	Formula 9 Estimate for nonhydropower reaervot.rs of chemical types 1 and 3	Formula 10 Estimate for nonhydropower reaervoirl of chemical typel 2 and 4
			Middle Atlantic Drainage Area					
John H. Kerr	,	11	94.3	168	154			
			Gulf and south Atlantic Drainage Area					
Allatoona	10	,	98.4	120	"			
Clark HHI	,	11	131.3	133	129			
Hartwell	4	,	105.6	78	76			
Ocklawaha	4	,	117.Z	221				161
Okatibbee	4	4	204.0	178			145	
Seminole	,	4	145.4	"'		134		
Sidney Lanier	,	,	*74.0*	128	138			
W. Kerr SCOtt	4	4	64.3	112			72	
Walter F. George	J	J	144.6	148		158		
			Ohio Buin Drainage Area					
Barren River	,	,	*220.1*	214			181	
Buckhorn	,	4	85.2	213			135	
Center H111	11	J	96.6	140	'04			
Cumberland	,	,	134.8	10'	167			
Dale Hollow	22	,	100.1	175	'O'			
Dewey	10	15	183.6	130				"
F1shtrap	11	1	221.6	262				164
John W. Flannagan	,	J	27.8	230				147
Nolin	4	,	280.5	214			190	
Old !lickory	4	J	300.4	230		'68		
Rough River	,	,	228.3	225			190	
Summersville	,	4	54.2	"			41	
Sutton	7	,	74.3	11'				58
Lower Ht.sst.sst.ppt.								
Arkabutla	23	,	131.3	161			'O'	
Enid	|'	16	166.9	156			172	

(Continued)

Appendix D: Part I (Continued)

Reservoir	Age of reaervoir in years at the mean year of standina crop samples	NUlIlber of years sampled	Hean of .tandina crop samples	Fonula 2 Estimate for all reaervoir types	Formula 5 Estimate for hydropower storaae reservoirs	Formula 7 Estimate for hydropower IIain.trellllll reseTvoira	Formula 9 Estimate for nonhydropower rellervoirs of chemical types 1 and 3	Formula 10 Ei tilllau for nonhydropower reservoirs of chemical types 2 and 4
Grenada	,	17	213.9	"'			200	
Sardis	24	,'	182.7	136			192	
Wappspello	14	2	328.4	21.			284	
Arkansas/White/Red								
Arkans••:								
Blue Hountain	24	,	320.6	"O			,",	
Canton	20	11	210.0	247				,.O
Dardanelle	●	,	481.0	2••		552		
Eufaula	,	2	355.2	292	261			
Fall River	3	1	500.0	245			20'	
Fort Gibson	,	●	298.5	262		3J8		
Fort Supply	10	1	323.6	,.2				185
Great Salt Plaina	32	1	81.3	26				76
Heyburn	,	3	141.9	234				134
Hulah	,	1	367.0	"O		"	232	
Keystone	7	,	753.6	260		•		
Nimrod	"	,	336.4	162			175	
Oologah	1	1	150.7	276			24	
Ozark	3	●	379.3	2.2		515		
Robert S. Kerr	2	2	307.0	212		529		
Tenklller Ferry	11	,	238.6	170	" 0			
Toronto	11	1	109.9	189			245	
Webbers Fall.	1	1	755.3	235		561		
Wister	21	,	317.8	228			"O	
White:								
BeaveT	●	13	262.4	145	174			
Bull Shoals	12	21	207.0	179	228			
Clearwater	10	1	148.6	224			202	
Creers FeTry	,	,	128.1	"	76			
NorfoTk	19	20	173.8	20'	"O			
Table Rock	3	2	214.5	176	215			

(Continued)

Appendix 0: Part 1 (Concluded)

Reservoir	Age of reservoir in years at the mean year of standing crop samples	Number of years sampled	Mean of standing crop samplea	Formula 2 Estimate for all reservoir types	Formula 5 Estimate for hydropower storage reservoirs	Formula 7 Estimate for hydropower mainstream reservoirs	Formula 9 Estimate for nonhydropower reservoirs of chemical types 1 and 3	Formula 10 Estimate for nonhydropower reservoirs of chemical types 2 and 4
Red:								
Broken Bow	4	1	80.0	60	88			
DeGray	3	5	254.0	80	129			
Greeson	22	6	68.5	82	76			
Millwood	7	2	229.9	229			267	
Ouachita	14	6	105.6	85	99			
Texoma	2'	1	477.8	324	240			
Rio Grande and Gulf								
Lavon	2	2	169.5	233			231	
Missouri Basin								
Tuttle Creek	8	3	362.5	212			273	

Appendix D: Part II

Predicted Sport Fish Harvest

Reservoir	Age of reservoir in years at the mean year of harvest samples	Number of years sampled	Mean of harvest samples in pounds per acre	Formula D or E Estimated harvest in pounds per acre	Formula H Estimated harvest in pounds per hour
Middle Atlantic Drainage Area					
Whitney Point	3	1	28.6	18	0.49
Gulf and South Atlantic Drainage Area					
Allatoona	15	2	8.0	9	0.43
Clark Hill	12	4	2.1	7	0.56
Hartwell	12	1	9.3	6	0.52
Okatibbee	5	4	40.4	17	0.44
Sidney Lanier	5	2	2.4	9	0.49
Ohio Basin Drainage Area					
Barren River	3	4	6.7	17	0.54
Buckhorn	3	5	20.5	26	0.47
Center Hill	3	3	17.4	15	0.53
Charles Mill	11	3	5.0	17	0.41
Cheatham	4	1	11.0	16	0.63
Dale Hollow	21	8	8.9	7	0.39
Dewey	12	12	11.0	15	0.36
Fishtrap	12	2	4.4	22	0.38
Nolin	4	5	7.5	18	0.37
Old Hickory	4	1	20.0	13	0.59
Rough River	4	4	11.7	18	0.45
Senecaville	10	3	26.0	13	0.37
Sutton	2	2	28.8	19	0.50
Upper Mississippi Drainage Area					
Carlyle	2	2	8.0	16	0.63
Coralville	6	1	13.3	16	0.52
Lower Mississippi Drainage Area					
Enid	13	12	4.5	10	0.43
Grenada	11	12	10.7	9	0.50
Sardis	25	12	6.0	7	0.45
Wappapello	10	2	6.1	11	0.51
Arkansas/White/Red Drainage Area					
Arkansas:					
Canton	20	3	11.5	17	0.35
Conchas	21	1	77.3	23	0.38
Fort Gibson	3	1	76.4	40	0.65
Keystone	8	1	24.6	18	0.56
Tenkiller Ferry	5	3	30.5	28	0.46
White:					
Beaver	6	12	21.6	21	0.45
Bull Shoals	11	12	27.7	19	0.48
Clearwater	10	4	35.2	27	0.45
Norfork	15	1	19.7	20	0.41
Table Rock	7	12	26.8	20	0.48

(Continued)

Appendix D: Part II (Coneluded)

Reservoir	Age of reservoir in years at the mean year of harvest samples	Number of years sampled	Hean of harvest samples in pounds per acre	Formula D or E Estimated harvest in pounds per acre	Formula H Estimated harvest in pounds per hour
Red:					
Greeson	22	2	8.'	1.	0.34
	Rio Grande and Gulf Drainage Area				
Benbrook	3	1	55.8	"	0.38
San Angelo	3	1	7.'	50	0.34
Whitney	2	2	137.6	31	0.56
	Hissouri Basin Drainage Area				
Fort Peck	12	1	0.1	4	0.50
Francis Case	3	3	0.8	●	0.69
Kanopolis	10	●	30.5	1.	0.40
Pomme de Terre	7	●	18.3	1.	0.41
Sharpe	10	1	2.'	7	0.59
Stockton	1	1	25.0	18	0.57
	Horth Pacific Drainage Area				
COttage Grove	25	1	20.1	17	0.34
	Central Valley Drainage Area				
Isabella	10	2	125.4	22	0.41
Pine Flat	11	1	21.8	22	0.41

APPENDIX E: VOLUMETRIC FOOD HABITS DATA FOR RESERVOIR FISH SPECIES

APPENDIX E

All values in the following tabulation are expressed as a percentage of total volume of food contents in the stomach. The parenthetical entries under the detritus food column are: 0 = organic detritus, I = inorganic detritus, and U = unspecified detritus. Superscript references indicate the following:

1 Includes photoplankton.
2 Frogs = 10% of the diet.
3 Tadpoles = 7.3% of the diet.
4 Tadpoles = 13.3% of the diet.
5 Tadpoles - 37.4% of the diet.
6 Includes detritus.
7 All phytoplankton.
8 Includes terrestrial insects.
9 Frogs and salamanders - 1.0% of the diet.
10 Frogs and salamanders - 3.0% of the diet.
11 Frogs - 1.4% of the diet.
12 Frogs - 9.1% of the diet.

Fish SPlcies	Location or Study	Age of Length	Season	Plant Material	Terr..-trial Inverte-brates	Zoo-plankton	Benthic Inverte-brat..	Fish	Detritus	Reference
Paddlefish	Hilltl.tppt River	Adult?	7	≤30		≤95	≤100			Forbes and Richlrdlon (1920)
Spotted Gar	Tamiami Canal, FL	257-598 mm	Feb-Jun				23.7	16.)		Hunt (1952)
Longnose Gar	L. Handou, WI	278 mm IVI.	Aug-Sep					100		Pearse (921)
	L. Mendota, WI L. Hononl, WI L. Wingra, WI L. Waubesa, WI	180-652 llD (495 mm aVI.)	Jul,Sep		1.,		10.3	88,8		rllrll (1916)
Bowfin	Statewide IUtnoh	7	Apr-Sep				67	J3		Forbll Ind Rlchardlon (1920)
	L. Hendoll, WI L. Honona, WI L. Wingra, WI L. Wlube'I, WI	383-465 mm (461 mm ,VI.)	Jul-Sap				,''	90.1		Pearse (1916)
Gizzard Shld	L. Diversion, TX	Age I	Annual	12.7[1]		,',	'.1		85.5(U)	Dalquest and Peters (l966)
			Annual	10.7[1]		2.'	0.1		86.5(U)	
			Annual	11.01_		2.'	l.'		86.2(U)	
	North Twin L., IA	24-82 –		28.3[1]		10.1	t		61.0(U)	Kutkuhn (1958)
		53-115 –		26.,1		5'	1.'		66.0(U)	
		269-313 mm		12.9[1]		84.1	,		3.0(U)	
	L. Erie	24.5 mm	Summer	12.5		75.0			12.5(U)	Price (1963)
		49.0 mm		17.2		67.5	,''		11.5(U)	
		73.5 mm		'0.0		14.9	2.'		32.5(U)	
		98.0 ..		35.6		'.S	1.1		58.2(U)	
		122.5 mm		24.1		1.,	Z••		1.18(U)	
		147.0-193.5 mm		)).3			0.'		63.3(U)	
		196.0-242.5 mm				100.0				
		245.0-291.5 mm		Z.S		96,3	1.2			
		294.0-365.0 _				70.8	,''		25.6(U)	
		367.5-438.5 lllll				18.0			82.0(U)	
		Total Average		26.2		21.1	2.'		50.0(U)	
Threadfin Shad	L. ChlcOl, AR	36-119 _	Feb-Nov	54.1[1]		•••	39.1			Miller (1967)
	L. HIVIIU, CA & AZ			40[1]		52	●			Kimsey et al. (1951)
	Clrl Pleasant, Saquaro, & Sartlett Lks., AZ	68-113 mm	Dec-Aug	23.6[1]		7.'	5.'		25.0(0); 38.4(1)	Haskell (1959)

(Continued)

Appendix E (Continued)

FI.h Species	Loutlon of Study	Age of Length	Se••on	Plant Material	Terres- trial Inverte- brates	Zoo- plankton	Benthic Inverte- brat..	Fish	Detritus	teference
Lake Whitefish	Pend Oreille L., ID	,	?	57			''			Jeppson .nd Platts (1959)
Hount.ln Whitefish	CocoL.lla L., 10	,	1				100			Jepp.on .nd Platts (1959)
	Pend Oreille L., 10	?	1	4			96			Jeppson and Platts (1959)
	Pyramid L.• Alberta, C.n.d.	61-228 mm	May-Sep		6	29	57			Rawson and Elsey (1948)
Kokanee Salmon	Elk L.• O.	115-220 IIIII	Summer				100			Chapman et .1. (1967)
Cutthro.t Trout	Henry'. L.• ID		Jun-Sep			,'',	94.0	0.'		Irvlnl (1954)
	Pend Oreille, Heyden,	100-198 mm	1				100			Jepp.on .nd Pl.tta (1959)
	Cocolalla Lks., 10	198-294 mm		1			93	6		
		294-392 mm					100	,		
		392-490 ..					85	15		
Rainbow Trout	Paul L•• 8riU.h	<200 1IIIII.	May-Sep		'.2	48.8	43.0			Larkin Ind SeIth (1953)
	Columbia, Canada	200-240 mm	H.y-Sep		8.0	43.0	46.6	2.4		
		250-290 mm	May-Sep		4.0	33.2	52.2	10.6		
		300-340 ..	May-Sep		3.2	21.2	42.4	33.2		
		>350 IIIII	May-Sep		3.2	6.4	36.4	54.0		
	Elk L.• OR	150-300+ IIIII	Summer				100			Chapman et al. (1967)
	Pend Oreille, H'ydan.	1OG-L98 mm	?				100			Jeppson .nd Platts (1959)
	Cocolalla Lks.• 10	198-294 mm	1	6			96			
		294-392 mm	?	2			16	22		
		392-490 mm	1	1			,	90		
		490 mm	?					100		
	L. Handota. WI	126.5 mm	Aug		10		90			Pearse (1916)
	L. Honona. WI									
	L. Wingra, WI									
	L. Waubesa, WI									
	Kootenay L.•	200-330 mm	?		67.6	0.4	1.,	28.1	2.6(0)	Larkin et al. (1956)
	IIrltlah Columbia,	330-460 mm	?		73.9		0.2	25.8	0.1(0)	
	Canada	460-910 mm	1		13.1		,	83.3	3.5(0)	
	II1rch L.• MI	187-294 –	?	2	1	,	''	30	19(0)	Leonard .nd Leonllrd (1946)
		294-551 ...	?	●	3	,	24	48	19(0)	
	Pyramid L.• Alberta, Can.d.	59-228 mm	May-Sep		12		''	10		Rawson .nd Elsey (1948)

(Contlnuad)

Fish Species	Location of Study	Age of Length	Season	Plant Material	Terres-tr18l Inverte-brates	Zoo-plankton	Benthic Inverte-brat"s	Fish	Detritus	Reference
Brook Trout	West Lost L., MI	123-306 mm	Jan-Dec			23.4	76.6			Homot (1965)
	Elk L., OR	100-300+ mm	Summer				Loo			Chapman et al. (1967)
	L. Mendota, WI L. Honoma, WI L. Wingra, WI L. Waubesa, WI	87-160 .. (10) mm avg.)	Aug	0.1	'.O		92.9			Pearse (1916)
	Pyramid L., Alberta, Canada	132-272 mm	May-Sep		5		81	8		Rawson and Elsey (1948)
Lake Trout	Pyramid 1., Alberta, Canada	157-416 mm	May-Sep			2	91	'		Rawson and Elsey (1948)
Dolly Varden Trout	Pend Orei11e, Hayden, Cocolalla Lks., ID	100-198 mm	I				100			Jeppson and Platts (1959)
		198-294 mm	I				100			
		294-392 mm	I	8			17	75		
		392-490 1llll	I					100		
		>490 mm	?					100		
Ceotra1 Mudminnow	Houghton L., HI	I		t		4.'	59.1	4.5		Hunt and Carbine (1950)
	L. Opinicon, Ontario, Canada	Adult: 62-78 om	May-Oct				100			Keast and Webb (1966)
		Age 1: 30-60 mm	May-Oct			20	80			
	L. Mendota, WI L. Honona, WI L. Wlngra, WI L. Waubess, WI	15.1-179 mm (42 mm avg.)	Apr-Aug	13.6	'.2	4.'	67.8		5.2(U)	Pearse (1916)
Northern Plke	Maple L., MN	412 mm	SU1llller					100		Seaburg and Moyle (1964)
	Grove L., MN	363 mm	Summer					90[2]		Seaburg and Moyle (1964)
	Houghton L., MI	11-20 mm				67.3	32.7			Hunt and Carbine (1950)
		21-40 mm		t		15.7	47.3	27.7[3]		
		41-80 mm		0.8		1.5	20.0	64.4[4]		
		81-152 mm	?	2.0			t	60.6[5]		
	Green L., wt	100-665 llll (445 mm avg.)	Aug-Sep	2			L	II		Pearse (1921)
	L. Mendota, WI	408 mm avg.	Aug-Sep					93		Pearse (1921)
		>313.6 mm	Jul-Aug					100		Reighard (1913)

(Canttnued)

Fish Species	Loe.tlon of Study	Age of Length	Season	Plant Material	Terr..-trial Inv.rte-brates	Zoo-pllnkton	Benthic Inverte-brates	Fish	Detritus	Reference
Northern Pike(Cont.)	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waub.... WI	45-876 mm (293 mm avg.)	May-Sep		O. L	2.'	14.9	84.0	1.2(U)	Pear.. (1916)
Clrp	L. Diversion, TI	>Age I	AnnulI Annual AnnulI	59.7 37.5 42.3		0.' [illegible] .1	12.2 '.O '.O		28.1(U) 46.1(U) 46.1(U)	D.lqu..t Illd Peters (1966)
	Lewis & Clark L.• SO	Young-of-the-Year (20-99 mm)	Apr-Oct	'.O		21.0	19.0		51.0(0)	Walburg and Nelson (1966)
		Adult (100-619 mm)	Apr-Oct	10.0		10.0	19.0		61.0(0)	
	L. Carl Bllekw.U, OK	Young «230 mm)	Dec-Nov	15.5		16.5	15.4		49.8(0); 2.8(t)	Summerfelt et al. (1911)
		Adult (>230 mm)	Dec-Nov	35.9		'.7	13.9	t	41.7(0); 3.8(1)	
	Grand L., OK	Adult	Dec-Nov	6.5		1'	15.7		76.0(0); 0.5(I)	Su_rhlt et .1. (1971)
	L. Pt. aib.on, OK	Adult	Dec-Nov	20.1		0.7	22.9		55.3(0); 1.0(1)	Summerfelt et al. (1971)
	L. Eufaula, OK	Adult	Dec-Nov	25.2		0.'	11.0		62.1(0); 1.1(1)	Su_rh1t .t al. (197l)
	L. Texoma, OK	Adult	Dec-Nov	11.5		•••	16.1		62.1(O); 1.0(1)	Summerfelt et al. (1971)
	Clear L., MN	>270 III	JUII-Jul	30.0		11.0	38.0		3).0(U)	Scidmore .nd Wood. (1960)
		<210 mm	Jun-Jul	42.0		40.0	18.0			
		392-515 mm	Jun-Ju1	70.0		11.0	19.0			
		<245 mm	Jun-Ju1			t	70.0		30.0(U)	
		245-490 mm	Jun-Ju1						100.0(U)	
	Volney L., MN	>368 IIlII	Jun-Jul	44.0		t	12.0		44.0(U)	Scidmore and Woods (1960)
		>490 IIIIl	JUII-Ju1	18.0		60.0	12.0		10.0(U)	
		123-245 mm	Jun-Jul				90.0		10.0(0)	
		245-490 mm	Jun-Jut	40.0			to.O		30.0(U)	
		>490 mm	Jun-Jul	60.0			13.0		27.0(U)	
	Beaver L., MN	270-368 mm	Jun-Jul	20.0		t	49.0		23.0(0); 8.0(1)	Scidmore Ind Woods (1960)
		>392 mm	Jun-Jul	60.0			14.0		25.0(0); 1.0(1)	

(Contlnl,l,d)

Appendix E (Continued)

Fish Sp.d..	Location of Study	Age of Lensell	Season	Plant Material	Terres-trial lnvert.-brates	Zoo-plankton	flllnthic Inverte-brat••	Fish	Detritus	ReferenCI
Carp (Cont.)	Beaver L•• MN (Cont.)	>392 mm >392 mm	Jun-Jul Jun-Jul	13.0		27.0 17.0	57.0 ' .0		3.0{I) 75.0(O)	
	Green L•• WI	13]_	S.,	3.0		11.0	74.0		10.0(0) j 2.0(I)	Pearse (1921)
	L. M.ndota, WI	366 _ ,vl.	Aug-Sep	2.'			34.2	35.0	27.9(O)	Pearse (19ll)
	L. Mendota, WI L. Mononl. WI L. W1nlra, WI L. Waub.... VI	15-460 – (42 mm aV8.)	Apr,Jul-S.,	,",	,",	14.0	7]•5		1.5(U)	Pearse (1916)
	flro.d L•• 1L	Adult?	,	' ,,			33			Garmon (1888)
	L. Keow••, SC	,	Annual	2-18.7. ,",		]-8. x̄=5	7-25•5, 1"15		56.8-74•4(O)• x̄=65; 2.5-6.1(t)	Cherry .nd Cuthri. (1915)
Northern Squ.wfi.1I	Pend Oreille, Hayden, Cocolalla Lks., Ul	100-198 mm 198-294 mm 294-392 mm 392-490 mm >490 –	? , , , ,	3 , ,			50 " ● ,	50 18 " " 100		Jeppson .nd Pl.tta (1959)
Creek Chub	Houghton L., MI	,	,	14.4			,",	11.6		ll",n1 .nd Clrbine (1950)
Peamouth	Pend Ore111e L., ID	?	,	,			91			Jepplon and Pl. ttl (1959)
Common Shiner	Houghton L., Ht	,	,	16.7			83.3			Hunt .nd Carbine (1950)
		85.8 ••	,	t		"	33			Reighard (1913)
		,	,	35	,		60	t		Forbll Ind Richlrdson (1920)
Golden Shiner	Houghton L., MI	l	,	30.8		51.1	11.5			Hunt 'nd Carbine (1950)
	L. Opinicon, Ontario Canada	115-137 mm	May-Oct	t	20	20-90	10-30			Keast .nd Vebb (1966)
	L. Mendota, WI	96 mm avg.	Aug-Sep	25			75			Pear.. (1921)
	L. Hendota. WI L. Hononl. WI L. Winltl, WI L. W.ub.... WI	23.5-152 mm (68 – Ivg.)	Apr,Aug	4.'	0.1	74.1	16.2		2.2(U)	Pearse (1916)

(Continued)

Fish Species	Loc.tion of Study	Age of Length	Season	PI.nt Material	Terres-trial Inverte-brates	200-plankton	Benthic Inverte-brates	Fish	Detritus	Reference
8lackchin Shiner	L. Houghton, Hl	1	1	,		•••	8loS	14.1		Hunt .nd Carbine (1950)
	L. Mandota, WI	58 mm aVI.	Aug-Sep	0.'			99.2			Pearse (1921)
	L. Opinicon, Ontario Canada	40-70 mm	May-Aug	i .'		54.5	39.0			Keast (1965)
	L. Mendota, WI L. Monona, WI L. Win.r., WI L. Waubes", WI	16.8-54 mm (34 mm aVI.)	Apr-Aug	15.6	'.1	44.4	24.0		4.1(0) 2.4(I)	Pear.. (1916)
Steeleolor Shiner	I	1	I	"	"		34	t		Porbe--nd Richard.on (1920)
Spottail Shiner	00ug1as L., HI	Immature	I			100				Reighard (1913)
	HO"'lhton L.• HI	1	I	23.1		46.2	30.7			IIunt an, C.rbine (1950)
Blacknose Shloer	IIoulhton L•• ",	?	I	16.0		48.0	36.0			IIunt an, Carbine (1950)
Rosyface Shin.r	Houghton L.• ",	1	I			'.1	95.3			Hunt and Carbine (1950)
Mi..le Shiner	HO"lhton L.. ",	1	I	30.4		16.0	36.9			Hunt and Carbine (1950)
Spott.i1 Shin.r	Lake Erie	24.5 mm 49.0 mm 73.5 mm 98.0-144.5 mm 147.0-193.5 mm Tot.l Avg.	S__,	0.1 t		'.1 1.' 11.9 7.' '.i	47.8 27.6 57.4 63.4 100.0 60.1	 t	43.5(U) 65.1(U) 30.7(U) 2.8.7(U) 31.3(U)	Price (1963)
Redbelly Dace	IIoulhton L.• HI	7		18.8		t	21.2			IIIInt .nd Carbin' (1950)
Bluntnose Minnow	L. Opinleoo, Ontario, C.nad.	50-75 mm	May-Sep	'.O	I.i	38.2	15.8		42.4(0)	Keast (1965)
	Houghton L.• HI	7	I	97.0		t	2.2			IIunt .nd Carbin. (1950)
	L. Mendota. WI	46 ' 'V8·	Aug-Sep	24.3		45.5	26.9		4.3(0)	Pearse (1921)
	L. Kendota, WI L. Monon•• WI L. Wingra, WI L. W.ub•••• WI	23.ι 0 mm (40 1lII , vl.)	Jun-Aug Nov-Dec	20.2	4.5	27.7	27.6		2.0.0(U)	pearse (1916)
Ilr...y Minnow	Houghton L., HI	I	?	100						IIunt and Carbine (1950)

(Continued)

Fish Species	Location of Study	Age of Length	Season	Plant Material	Terrestrial Invertebrates	Zooplankton	Benthic Invertebrates	Fish	Q.tritUI	Reference
Suckermouth Minnow	,	,	1				100			Forbel end Ric:hardaon (1920)
Flathead Minnow	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waube.., WI	45-51 mm (49 ... avg.)	Sop	1.3		2.'	87.2		8.3(U)	Pearse (1916)
River Carpsucker	L. Diversion, TX	>Age 1	Annual Annual Annual	10.S '.O 2.'	t t t	16.0 14.6 7.0	,'' ,'' ,		12.0(U) 75.8(U) 84.4(U)	Dalquest and Peters (1966)
	Lewi.. & Clark L., SO	Young-of-the-Year (30-65 _)	Apr-Oct	t	t	2	,		87(0) j 6(1)	Walberl .nd Nelson (1966)
		>Age 1 (65-368 _)	Apr-Oct	3	t	15	3		61(0) j 12(1)	
	Grand L•• OK	Adult	Sep-Aug	0.1		'.3	20.5		15.0(0); 0.1(1)	Summerfelt et al. (1972)
	L. Ft. Gibton, OK	Adult	Sep-Aul	45.3		•••	1.5		43.1(0)j 0.2(1)	Su...erfelt et al. (1972)
	L. Eufaula, OK	Adult	Sep-Aul			2.0	1.5		96.5(0)	Summerfelt et al. (1972)
	L. Texoma, OK	Adult	Sep-Aug			10.6	1.1		11.8(0); 0.8(1)	Summerfelt et al. (1912)
White Sucker	CI.er L., MN	<245 mm 245-490 I:llll	Jun-Jul Jun-Jul			t	50 80		SO(U) 20(U)	Scidmore end Woods (1960)
	L. Mendota, WI L. Monon., WI L. Wingra, WI L. Waub.... WI	13-60 mm (29 IIIID .vg.)	JuI-Aul	3.0	0.'	18.4	13.1		1.6(U)	Pearse (1916)
	Douglas L., HI	42.9-49.0 mm	S.p			100				Reighard (1913)
	L. Mendota, WI	304 – avg.	Aug-Sep	20.0		1.7	66.6		11.1(0)	Pearse (1921)
	Green L•• WI	364-542 mm (44S ---VI.)	Aug			0.7	90.6		8.1(1)	Pearse (1921)
Longnose Sucker	Yellowstone L•• WY	Adults	Summer	18.1			65.6		15.7(U)	Brown and Graham (1953)
	Pyramid L.. Alberta, Canada	49 mm 49 mm	May-Sep			70 2	30 ••			Rayson and £1..y (1948)

(Continued)

Fish Species	Location of Study	**Age** of Length	SesIlon	Plant **Material**	Terres-trial Inverte-brates	Zoo-plankton	Benthic Inverte-brates	**Fish**	**Detritus**	Reference
Northern **Hogsucker**	**?**	?	**?**				100			Forbes and Richardson (1920)
Smallmouth Buffalo	L. Diversion, TX	Age 1	Annual **Annual** **Annual**	10.1 2.4 1.6		43.0 **55.7** 61.8	30.7 31.9 24.7		16.6(U) 9.8(U) 11.8(U)	Da1quest and Peters (1966)
	Lewis & Clark L., SO	Young-of-the-Year (35-64 **mm)**	Jun-Oct **Apr-Jun**			99			1(1)	**McComish** (1967)
		Subadult and **Adult** (250-400 **mm)**	Jun-Oct Apr-Jun	13	t	32	6		49(0)1 2(1)	
	Grand L., **OK**	Adult	Oct-Au8	1.0		13.7	1.0		85.3(0)	Tafanell1 et al. (1971)
	L. Ft. Gibaon, **OK**	**Adult**	Oct-Aug	t		12.8	4.1		83.1(0): 0.3(1)	Tafanel1i et al. (1971)
	L. **Texoma,** OK	Adult	Oct-Aug	t		17.5	0.9		81.2(0); 0.2 (I)	Tatane1li et al. (1971)
	Apache L., **AR**	Adults	Jan-Dec	6.4[1]		**5.4**	42.1		25.3(0): 20.6(1)	Kinckley et al. (1970)
	Mississippi & Illinoh R.	?	Apr-Oct	20 30		**25** 20	**55** SO			Forbes and Richardson (1920)
Bigmouth Buffalo	Lewis **&** Clark L., SO	Young-of-¥ear (16-47 IIIIII)	Jun-Aug			100				McComish (1967)
		Subadult and Adult (330-530 IIID)	Jun-Oct Kay-Sap	1		98			2(1)	
	Grand L., OK	**Adult**	Oct-Aug			6.7	1.1		92.3(0)	Tatanelli et al. (1971)
	L. Eufaula, OK	Adult	Oct-Aug			38.9	0.1		60·6	Tafanelli et al. (1971)
	L. TexolllB. OK	**Adult**	Oct-Aug			19.9	0.2		79.3(0); 0.1(1)	Tafanelli et al. (1971)
	L. Poinsett, SO	**Fry** **(12.5-21.0 mm)**	Jun			25.0	75.0			Starostka and Applegat (1970)
		Subadult and Adult (236-833 **mm)**	Jan-Nov	10.3[7]		88.S	1.2			

(Continued)

Fish Species	Locatioa of Study	Age or Length	Season	Plant Material	Terrestrial Invertebrates	Zooplankton	Benthic Invertebrates	Fish	Detrltua	Reference
Bigmouth Buffalo (Cont.)	Clear L., MN	Adults	Jun	t		70	4		13(0); 13(1)	Scidmore and Woods (1960)
	P..qua L., Saskatchewan, Canada	YOUOI-of-the-Y.ar (13-46 mm)	Su_r 55	4.4[7]		74.3	21.3			Johnson (1963)
			S__' 56			87.7	12.3			
		Juvenile and Adult (261-721 __)	May-Aug	1.1[7]		63.6	35.3			
	Echo L., S••katchewan, Canada	Juv.nile and Adult (261-721 __)	May-Aug	0.9		72.8	26.3			Johnson (1963)
	Illinois-Statewide	'	'	33		33	33			Forbes and Richardson (1920)
	Roosevelt L.• AZ	Adults	Jan-Dec	4.8[1]		61.6	0.1		25.1(0); 1.8(1)	Minckley et aI. (1910)
	Apache L•• AZ	Adults	Jan-Oct	35.8[1]		33.9	1.0		24.4(0); 5.8(I)	Minckley et a1. (1970)
Black Buffalo	Apache L•• AZ	Adults	Jan-Dec	3.0[1]		'.O	51.0		30.0(0); 10.1(1)	Minckley et II. (1910)
	Illinois-Statewide	'	'	33		13	54			Forbes and Richardson (1920)
Black Redhorse			'				100			Forbes and Richardson (1920)
Black Bullhead	Mitchell L., !II	Age 0 (10-60 _)	Summer			43.1	56.3			Williams (1910)
	Maple L., MN	198-216 ...	S__,	13		]0	53	4		Seaburg and Moyle (1964)
	Cedar Creek, WI	40-60 _	Sep	].4			81.5		15.1(0)	Dlrnell Ind Meierotto (1961)
	L. Mendota, WI L. Monona, WI L. W!nsra. WI L. Waubesa, WI	35-280 mm (119 mm IVi.)	Aug-Sep	1.]	,.1	4.2	16.0		6.3(U)	Pearse (1916)
	L. PoInsett, SO	Young-of-the-Year 143-304 mm	Aug-Sep Hlr-!lov	1.7		94.4 32.2	,'' 38.9	27.2		Replyl et . l. (1916)

(Continued)

Appendix E (Continu.d)

Fish Species	Location of Study	Age of Length	Season	Plant Material	Terres-trial Inverte-brates	Zoo-plankton	Benthic Inverte-brates	Fish	Detritus	Reference
Yellow Bullhead	Green L., WI	270, 290 _	Au	10.0		0.1	57.4	32.5		Pearse (1921)
	L. Mendota, WI	221 IIIIII avg.	Aug-Sep	10.1		;';	85.3		1.3(0)	Pearse (1921)
Brown Bullhead	L. Opinicon, Ontario, Canada	30-60 IIIIII	May-Sep			60	40			Keast and Webb (1966)
		120-130 –	May-Sep				100			
	Cocolalla L., 10	,	,	,			26	71		Jeppson and Plattl (1959)
	Hayden L., ID			38			19	43		Jepplon and Platts (1959)
	Green L., loll	265-320 ... (302_ avg.)	Aug	22.8		0.1	11.5		5.6(U)	Purae (I921)
	L. Mendota, WI	1)1 mm ava.	Aul-Sep	21.1		3.4	10.9		1.4(0)1 0.6(1)	'.ara. (I921)
	L. Mendota, loll L. Monona, WI L. Wingra, WI L. Waubesa, loll	25-94 – (46 mm avg.)	May-Jun, Au	0.'	;';	41.5	53.2		2.3{U)	Pearse (I916)
Flat Bullhead	L. Keowee, SC	,	Annual	3-35; 1.-10			12-65, x̄=32	0-12 x̄=;	12-38, x̄..21(0)1 6-42, lI"U(1)	Cherry and Guthrie (1915)
Blue Catfish	Ohio R., KY	105-172 mm	Mar-May				:il.3	,''	58.9(O)	Minckley (1961)
Channll Catfllh	Des Moines R., IA	<98 mm 98-194 mm 194-294 – >294 mm	Apr-Oct Apr-Oct Apr-Oct Apr-Oct	1 11 23 19			'' 81 65 47	1 ● 12 ''		Bailey and Harrison (1945)
	Reelfoot L., TN			''			65	7		McCormick (1940)
	Illinois and Mississippi R.	?	5pr1n8-Autumn	25			60	IS		Porbe. and Rlchard.on (1920)
	L. Erla	24.5-46.5 mm 49.0-71.0 mm 73.5-95.5 mm 98.0-144.5 mm 147.0-193.5 mm	Summer			 '.S 26.4 3.5 18.0	100 91.) 65.1 86.9 68.9	 0.7 0.'	 5.2(11) 8.S(U) 8.9(U) 12.9(U)	Price (1963)

(Continued)

Fish Species	Location 01 Study	Age of Lenath	Season	Plant Material	Terres-trial Inverte-brates	Zoo-plankton	Benthic Inverte-brataa	Fish	Detritus	Reference
Channel Catfish (Cont.)	L. Erie (Cont.)	196.0-242.5 mm		t		23.0	61.7	•••	13.4(U)	
		245.0-291.5 mm		,		7.'	76.1	,''	14.1(U)	
		294.0-365.0 _		1.0		12.0	39.8	32.1	15.1(U)	
		367.5-438.5 –					24.'	67.1	8.1(U)	
		441.0-512.0 mm						100		
		Total Average		'.0		13.5	55.9	16.5	13.7(U)	
Flathead Catli'h	L. Carl Blackwell, OK	Adults (>420 ..)	Annual	0.1				99.2	O.7(U)	Turner and Summerfelt (1971)
	L. Eufaula, OK	Adults (>420 mm)	Annual	,			0.)	99.4	0.2(U)	Turner and Sumerfelt (1971)
	L. Pt. GIb.on, OK	Adults (>420 mm)	Annual	0.2			0.'	98.4	0.6(U)	Turner and Summerfelt (1971)
	Grand L., OK	Adults (>420 1111)	Annual				t	99.8	0.2(U)	Turner and Summerfelt (1971)
	Hudaon L•• OK	Adults (>420 IIIII)	Annual					99.6	0.4(U)	Turner and Summerfelt (1971)
	L. Texoma, OK	Adults (>420 mm)	Annual	t				98.7	1.3(U)	Turner and Summerfelt (1971)
	Big 11ue Rivet, KS	<100 mm	S__,				92	)	5(U)	Hlnckley and Deacon (1959)
		100-245 mm	Summer				47	45	8(U)	
		>245 mm	S__,				●	79	I2 (U)	
	Mao,ho R., XS	<100 mm	Summer				''	2	2(U)	Minckley and Decon (1959)
		100-245 –	S__,				73	26	1(U)	
		>245 mm	Summer				63	37		
Tadpole HadtOlll	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waubeaa, WI	14-76 .. O4__ ava·)	May-Jun• Aug	'.0	2.'	14.0	77.4		3.0(U)	Paarae (1916)
Burbot	1	?	?				20	80		Forbaa and Richardaon (1920)
Banded Killifish	L. Opinicon, Ontario Canada	65-86 mm	May-Sep	,''		26.0	68.•			Keast (1965)
	Green L.• WI	18-55 IIIIII (44 mm avg.)	Aug			16.6	77.5		5.9(I)	'aaraa (1921)
	L. Mendota, WI	61 mm .vg.	Aug-Sep	I		30	''		9(1)	Pearse (1921)
	L. Hendota, WI L. Honona, WI L. Wingra, wt L. Wauba a, WI	25.4-67.5 mm (40 IIIII avg.)	Apr-Aug.• Dec	'.I	2.1	20.2	62.9		4.2(U)	Pearse (1916)

(Continued)

Ftsh **Species**	**Location of** Study	**Age** of Lenath	**Season**	Plant Material	Terres- trial Inverte- brates	Zoo- plankton	Benthic Invert._ brat..	Fish	Detritus	Referenc•
Brook Silveraide	B.....r L., AR	10-100 IIIII	Jen-D.e			29.8	39.6		0.4(0)	Hullen et a1. (1968)
	8ull Shoals L., AR	10-100 mm	Jan-Dee			19.9	50.4	,		Hullan et a1. (1968)
	L. Mendota, WI	59 mm avg	AUI-Sep			40.1	59.9			Pearse (1921)
	L. Lemon, IN	All ages	Jul-Nov	4 "			59.9		35.3(U)	Zimmerman (1910)
	Monroe L., IN	All ..ges	Jul-Nov	7.5			54.7		37.8tU)	ZI_nun (1910)
	L. Opinicon, Ontario, Canada	40-60 mm 61-81 mm	Aug-Sep Ha" AU8-S.p		8.5 29.1	77 16.3	14.5 54.0			Keast (1965)
	L. M.ndota, WI L. Honona, WI L. Winlr8, WI L. Waub..., WI	11.5-77 mm (41 mm a"g.)	Aug	'.O	28.6	40.7	24.3		1.6(U)	Peara" (1916)
I/Mr" Bass	L. Mendota, WI	235 _ a"g.	Aug-S.p	n.2			75.6	12.2		Pearse (1921)
	L. Texoma, OK	16-105 mm 23-165 mm	Jun-Oct Jun-Oct			t ,	● 4	94 "		Bonn (1952)
	L. Mendota, WI L. Honona, WI L. Wingra, WI L. Waubesa, WI	29-220 mm (66 mm avg.)	Jul, Aug- SO,		1.3	45.9	49.1	,",		Pearse (1916)
	L. Texoma, OK	0-50 -	Annual		t	2.2	3.'	94.3		Hoa"r (1968)
		51-100 -			0.'	0.1	1.2	98.6		
		101-150 _					1.4	98.6		
		151-200 mm			0.1	3.3	I.	93.2		
		201-250 mm			0.1	0.'	'.3	97.0		
		251-300 mm			0.3	,	,"	95.4		
		301-350 IIIII			0.3	t	,"	94.1		
		351-400 mm			0.'		1.2	98.7		
		401-450 mm					,	100.0		
	L. Erie	24.5-46.5 _	Summer			91.0	3.0	4"	1.6(U)	Price (1963)
		49.0-71.0 mm				".O	'.7	14.7	2.6(U)	
		73.5-95.5 _				29.S	16.2	53.6	0.7(U)	
		98.0-120.0 _				14.8	'.1	78.5	O.6(U)	
		147.G-193.5 _				34.2	•••	59.0	1.9tU)	
		196.0-242.5 mm				4 [illegible]	1.4	91.8	1.9(U)	
		245.0-291.5 mm				t	4.5	94.9	0.6(U)	
		294.0-365.0 IIIII					23.7	66.4	9.9(U)	
		Totel Average				21.3	•••	10.8	LI(U)	

(Continued)

Fish Species	Location of Study	**Age** of Length	**Season**	**Plant Material**	**Terres-trial Inverte-brates**	Zoo-plankton	!lenthic lnverte-**brates**	**Fish**	**Detritus**	Reference
Yellow Bass	Clear L., **IA**	170-230 IIIII	Jan-Dec			26.9	**49.7**	**23.4**		**Bulkley** (1910)
		15-70 **mm**	**Jun-Dec**			**99.4**	O.'			
Striped Bass	**Albermarle** Sound, **NC**	**125-714** IIIII	**Annual**	0.1			2.'	**97.***0*		Manooch **(1973)**
	Culture ponds, OK	**10-19 mm**	**Summer**			81.5	18.6			Harper et al. **(1969)**
		20-29 mm	**Summer**	1.7		61.2	31.2			
		30-39 **mm**	**Summer**			58.0	42.0			
		40-49 mm	SUlllllller			54.4	45.8			
		50-59 mm	**Summer**			61.5	32.5			
		60-69 mm	**Summer**			49.6	48.5	2.0		
		70-79 IIIII	**Summer**	O.'		37.9	59.2	2.'		
		80-89 lIIII	**Summer**	O.'		20.5	70.1	'.O		
		90-99 mm	**Summer**			0.2	80.0	19.8		
		100-109 **mm**	**Summer**				15.0	85.0		
Rock Basa	Green L., WI	30-213 **mm** (134 mm BVg.)	**Aug-Sep**			12.0	83.6		4.2(1)	**Pearse** (1921)
	Houghton L., HI		**?**				100.0			Ilunt and Carbine (1950)
	L. **Mendota,** WI	128 IIIII **avg.**	Aug-Sep	13.0		14.0	6L8		11.2(1)	Pearse (1921)
	L. Opinicon, Ontario, Canada	45-70 IIIII	May-Sep	**1.2**	7.8	17.6	n.4			**Keast** (1965)
		75-115 mm	**May-Sep**	O.'	J.4	'.2	83.g	'.O		
	L. Mendota, WI **L.** Monona, III **L. Wingra,** III **L.** Ilaubesa, WI	22.5-230 IIIII (73 **mm** aVE.)	**May-Dec**	J.J	7.J	4.'	8L2	2.0	1.2(U)	**Pearse** (1916)
Green Sunfish	!lull **Shoals** L., **AR**	0-49 **mm**	**?**	2	**12**	14	**72**			Applegate et a1. (1967)
		49-98 **mm**		1	8	12	68	10	1(U)	
		98-196 **mm**		**t**	13	**t**	7l	16	leU)	
	8eaver L., **AR**	50-100 **mm**	Jan-Dec	2.J	26.3	**t**	61.5		3.9(U)	**Mullan** and Applegate (1970)
		>100 **mm**	Jan-Dec	7.0	34.0		45.3	8.'	S.I(U)	
	?		**?**				**65**	35		**Forbes and Richardson** (1920)

(Continued)

Species	Location of Study	Age or Length	Season	Plant Material	Terrestrial Invertebrates	Zooplankton	Benthic Invertebrates	Fish	Detritus	Reference
Pumpkinseed	Maple L., MN	130 mm	Summer	3		1	94[8]		3(U)	Seaburg and Moyle (1964)
	Grove L., MN	147 mm	Summer	4		1	79[8]		16(U)	Seaburg and Moyle (1964)
	Beaver L., MN	98-135 mm	Jun-Jul	1		t	99[8]			Scidmore and Woods (1960)
		123-245 mm	Jun-Jul			2	98[8]			
		49-98 mm	Jun-Jul				100[8]			
		123-245 mm	Jun-Jul			20	80[8]			
	Houghton L.	?				t	96.8			Hunt and Carbine (1950)
	Green L., WI	73-168 mm (146 mm avg.)					100			Pearse (1921)
	L. Mendota, WI	118 mm avg.	Aug-Sep	5.5						Pearse (1921)
	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waubesa, WI	116-187 mm (146 mm avg.)	Apr, Aug, Oct	25.5						Pearse (1916)
	L. Opinicon, Ontario Canada	60-85 mm	May-Sep		8 8					Keast
		86-115 mm	May-Sep		[illegible] 2					
		130-170 mm	May-Sep		18 4					
Bluegill	Bull Shoals L.	0-49	Apr-Mar			30	70			Applegate et al
		49-98 mm	Apr-Mar	3		4	55		t(U	
		98-196 mm	Apr-Mar	23		t	46	6	1(U	
	Maple L. MN	123-196 mm	Summer	21		5	61[8]			Seaburg and Moyle (1964)
	Grove L MN	123-196 mm	Summer	16		19	46[8]	6		Seaburg and Moyle (1964)
	Beaver L. AR	<50 mm	May-Jun			7.4	92.6			Mullan and Applegate (1970)
		50-100 mm	Feb-Oct	1 1		13.7	68.5		1.7(U)	
		>100 mm	Jan-Dec	4 3		1.8	49.9	0.[illegible]	3.2(U)	
	Clear L.	56-86 mm	Jun-Jul			5	84[8]		11(U)	Scidmore and Woods
		110-159 mm	Jun-Jul			t	99[8]		t(U)	
	Beaver L., MN	135-159 mm	Jun-Jul			t	73[8]		7(U)	Scidmore and Woods
		123-270 mm	Jun-Jul			23	76[8]			
		61-98 mm	Jun-Jul				100[8]			
	St. Olaf L.	86-115 mm	Jun-Jul			19	27[8]			Scidmore and Woods (1960)
		<74 mm	Jun-Jul			9	47[8]			
		123-245 mm	Jun-Jul			100				
		<123 mm	Jun-Jul			30	70[8]			

Continued

Fish Species	Location of Study	Age of Length	Season	Plant **Material**	Terres-trial Inverte-brates	Zoo-plankton	Benthic Inverte-brates	**Fish**	Detritus	Reference
Bluegill (Con't)	Green L., WI	43-188 mm (165 mm avg.)	Aug-Sep	23.0		t	72.6		2.2(0); 2.2(1)	Pearse (1921)
	L. Mendota, WI	127 mm avg.	Aug-Sep	85.6			14.4			Pearse (1921)
	Houghton L., HI	?	?				100			Hunt and Carbine (1950)
	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waubesa, WI	15-115 mm (51 mm avg.)	Apr-Aug	5.2	1.3	24.5	66.6		2.2(U)	Pearse (1916)
Longear Sunfish	Bull Shoals L., AR	0-49 mm	Apr-Mar			44	56			Applegate et al. (1967)
		49-98 mm	Apr-Mar	2	9	1	83		5(U)	
		98-196 mm	Apr-Mar	5	37	3	24	29	3(U)	
	Beaver L., AR	50-100 mm	Feb-Dec		5.9		93.2		0.8(U)	Mullan and Applegate (1970)
		>100 mm	Jan-Dec	5.0	35.3	t	53.0	1.5	5.2(U)	
Smallmouth **Bass**	Bull Shoals t., AR	49-98 mm	Apr-Mar		2	21	33	38	6(U)	Applegate et al. (1967)
		98-196 mm	Apr-Mar	t	t	t	5	93	leU)	
		>196 mm	Apr-Mar		1		5	94	t(U)	
	Green L., WI	46-395 mm (114 mm avg.)	Aug	0.2		37.6	46.6	13.6	2.0(U)	Pearse (1921)
	L. Mendota, WI	356 mm avg.	Aug-Sep	5.0			85.5		9.5(0)	Pearse (1921)
	L. Mendota, WI L. Monona, WI L. Wingra, WI L. Waubesa, WI	29-181 mm (72 mm avg.)	Aug	1.4	13.9	3.4	63.5	14.7	1.5(U)	Pearse (1916)
			?				67	33		Forbes and Richardson (1920)
Spotted Bass	Beaver L•• AR	<50 mm	Jun		64.2	10.0	25.7			Mullan and Applegate (1970)
		50-100 mm	Jun-Oec		2.4	6.2	51.2	40.2		
		101-200 mm	Mar-Oct		26.0		25.6	48.1	0.2 (U)	
		>200 mm	Mar-Dec		11.5		46.8	40.3	1.4 (U)	
	Bull Shoals t., AR	0-49 mm	Apr-Mar			21	79			Applegate et al. (1967)
		49-98 mm	Apr-Mar		2	14	28	56		
		98-196 mm	Apr-Mar	1	2	t	11	85	l(U)	
		>196 mm	Apr-Mar				7	91	2(U)	

(Contioued)

Fish Species	Location of StudY	Age of Length	Season	Plant Material	Terrestrial Invertebrates	Zooplankton	Benthic Invertebrates	Fish	Detrltlle	Reference
Largemouth Ba••	Bull Shoals L., AR	0-49 mm	Apr-Mar			II	1			Appleg.te et al. (1967)
		49-98 mm	Apr-Mar				50	50		
		98-196 mm	Apr-Mar		t		1	II	t (U)	
		>196 mm	Apr-Mar		t		12	e0	t(U)	
	Beaver L., All	<50 mm	May-Aug		j"j	20.6	53.7	19.8		Mullan .nd Applegate (1970)
		50-100 mm	Apr-Dec		12.J	11.8	40.3	32.1	).5(U)	
		101-200 _	Jan-Dec		26.6		'.0	66.5	1.9(U)	
		>200 _	Jan-Dec		'.2		16.9	68.3[9]	4.6(U)	
	Maple L., MN	186 _	Summer	1				96[10]		Seaburg .nd Moyle (1964)
	St. Olaf L., MN	83-132 _	Jun-Jul			30	40[8]	30		Scidmore and Wood. (1960)
	Beaver L•• AR	Young-of-rhe-Ye.r (24-66 mm)	May			48.0	34.8[8]	17.2		Applelate and Hlillen (1967)
		Young-of-the-Year (24-66 _>	Jun			1.8	19.3[8]	18.9		
	11111 Shoals L.• AR	Young-of-the-Y••r (18-41 _)	May			99.9	0.1[8]			Applegate .nd Mllhn (1967)
		Young-of-the-Year (18-41 mm)	Jun			38.5	1.2[8]	60.)		
	Green L., WI	49-283 mm (78 _ aVI.)	Aug	'.2		24.8	61.6[8]	1.0	1.4(1)	Pears" (1921)
	L. Mendota, WI	135 _ aVI.	AIII-Sep	17.8		0.8	36.4[8]	45.0		Pearse (1921)
	L. Opintcon, Ont.rl0, Canada	30-50 _	Jun-S'p			46.0	48.5	j"j		Keast (196')
		51-70 _	Jun-S.p		0.8	6.'	17.9	'.8		
		80-120 mm	May-Sep	2.0			23.4	14.6		
	L. Mendota, WI L. Honon., WI L. Wingra, WI L. W.llb•••• Wt	29.S-470 _ (67 mm avg.)	Apr-Nov	I.'	'.6	18.0	61.'I	8.7	O.1(U)	Pearse (1916)
			7				7	93		Forbes and Richardsong (1920)
	Kllrpby Flow••, , WI	Adult	Summer	1.1	1.1		'9.0[8]	38.8		Snow (1971)
White Crappie	Conowingo L•• PA	Adult	Jun-Oec:			28.0	27.6	42.0	2.4(U)	Mathur (1972)
	COnovtn80 L.. PA	Young	JIII-Jun			100	t			Mathur .nd Robbins (1971)

(Continuad)

Fish Species	Location of Study	Age of Length	Season	Plant Material	Terres- trial Inverte- brates	Zoo- plankton	Benthic Inverte- brates	Fish	Detritus	Reference
White Crappie (Con't)	Volney L., MN	74-98 mm	Jun-Jul			100				Scidmore and Woods (1960)
	Beaver L.• MN	147-172 mm	Jun-Jul			79	7	,	10(U)	Scidmore and Woods (l960)
		123-270 mm	Jun-Jul			66	29	5		
		123-270 JIIIII	Jun-Jul			70	30			
	?					,	80	11		Forbes and Richardson (1920)
Black Crappie	Maple L.. MN	162 mm	Summer			1	36	60	3(U)	Seaburg and Koyle (1964)
	Grove L.• MN	165 _	Summer			12	49	23	16(U)	Seaburg and Moyle (l964)
	Clear L.• MN	86-105 mm	Jun-Jul			II	1			Scidmore and Woods (1960)
		140-164 mm	Jun-Jul			76	15		9(U)	
		49 mm	Jun-Jul	4		58	20	18		
		123-261 mm	Jun-Jul	,		'O	1			
		123-245 IIIII	Jun-Jul			95	t	5		
	Beaver L., MN	147 mm	Jun-Jul			85	t		l5(U)	Scidmore and Woods (1960)
		123-210 mm	Jun-Jul			72	28			
		123-270 ..	Jun-Jul			95	5			
	L. Hendota, WI L. Honona. WI L. Wingra, WI L. Waubesa. WI	35-221 IIIII (90 mm avg.)	Apr-May Jul-Nov	1.3	'.2	35.2	51.6	7.1	O.l(U)	Pearse (1916)
	L. Mendota. WI	131 mm avg.	AU8-Sep	13.3		20.2	49.9	16.6		Pearse (1921)
	Orange L., FL	Adult	Jun-May			5	5	90		Reid (1949)
	Pend Orel11e L.. ID		1			t	t	100		Jeppson and Platts (1959)
	Hayden L., ID		1	4		●	82	10		Jeppson and Platts (1959)
	L. Opinteon. Ontario, Canada	15-115 mm	May-Sep	1.2	8.'	21.6	57.4	5II		Keast (1965)
	L. Opinicon. Ontario, Canada	60-115 mm	May-Sep		4.4	18.8	70.2	•••		Keast (1968)
		116-160 mm	May-Sep		,",	10.6	68.4	11.8		
		161-240 mm	May-Sep		0.'	1.0	63.6	34.8		
Logperch	Beaver L., AR	1	Apr-Nov				98.6		1.4(U)	Mullan et al. (1968)
	Bull Shoals L•• AR	I	Apr-Nov			23.7	74.0		2.3(0)	Mullan et a1. (1968)
	L. Vermilion, MN	61 mm	Summer			1.2	98.8	t		DObie (1959)

(Continued)

Fish Species	Location of Study	Age of Length	**Season**	**Plant Material**	Terree-**trial Inverte-brates**	Zoo-plankton	Benthic Inverte-**brates**	**Fish**	Detritu8	Reference
Logpereh (Can't)	L. Oplnieon. Ont.do, Canada	Adults	**May-Oct**				100			Kea.t and **Webb** (1966)
	L. **Mendota, WI** L. Kanona. **WI** L. **WinIra·** WI L. W.ub.... WI	44-100 **mm** (73 **mm** avg.)	Apr, Jun-Sep		0.6	0.4	93.4		5.7(U)	**Pearse** (1916)
		?	?			33	67			Forbes **and** Richard80n (1920)
Iowa Darter	Houlhton L.. I'll	?	**?**	t		3.8	96.2			Hunt and Carbina *(1950)*
	L. Mandote, WI L. Monona, WI L. **Wingra,** WI L. **Waubesa,** WI	48 **mm** avg.	Jul-Aul				99.6		**0.4(U)**	**Pearse** (1916)
Blackside Darter	Houlhton L•• HI	?	**?**			t	100			Hunt and Carbine *(1950)*
Johnny Darter	**Green** L•• **WI**	32-47 **mm** (38 **mm** **avg.**)	**Aug**				84.7		IS.3(I)	**Pearse** (1921)
	L. Mendota. WI	46 _ avg.	AUI-Sep	13.6			62.8		2.9(0); 20.7(1)	**Pearse** (1921)
	L. Hendota. WI L. Konona, WI L. Wingra, WI L. **Waubesa,** WI	**21.5-48.5 mm** (31 **mm** avg.)	Jul-Sap	t	0.1	13.0	84.6		3.1(1)	**Pearse** (1916)
		?	?				100			Forbes **and** Richardson *(1920)*
Fantailed Darter	L. **Mendota,** WI L. Honona, **WI** L. **Wingra,** WI L. **Waubesa, WI**	29.6-48.3 **mm** **(37 mm** avg.)	Jul-Sep, Dec	**1.0**	0.2	0.2	98.5			**Pearse** (1916)
		?	?			8	92			**Forbes** end **Richardson** *(1920)*
Eastern Sand Darter	?	?	1				100			Forbe. and Richardson (1920)

(Continued)

Fish Species	Location of Study	Age of Length	**Season**	Plant **Material**	**Terres-trial** Inverte-braus	Zoo-plankton	Benthic Inverte-brates	**Fish**	Detritus	Refarence
Blueside Darter	7	?	?				100			Forbae and Richardson (1920)
Swamp Darter	**?**	?	**?**				100			Forbes **and** Richardson (1920)
Yellow Perch	**Maple** L., **MN**	130 _	**Summer**			1	37	59	3(U)	S.aburl and **Moyle** (1964)
	Crove L., **MN**	147 _	**Summer**			3	41	39	l7(U)	Seaburl and Hoyle (1964)
	Beavar L., **MN**	**135-147 mm** **123-270 mm** 98-123 IIIIII	Jun-Ju1 Jun-JlIl Jun-J1l1				100 **100** 100			**Scidmore** and Woodl (1960)
	St. Olaf L•• **MN**	<123 **mm**	Jun-Jul			9	85	6		Scid.ora and Wooda (1960)
	L. Op1n1coD, Ontario, Canada	60-110 _	**May-Sep**			12.8	72.6	14.6		**Keast** (1965)
	Cocolall. L., ID	1	**?**				**100**			Jeppaon and Platts (1959)
	Pend Orei11e L., 10	?	?	1		t	95	4		Jeppson and Platts (1959)
	lIayden L., to	**?**	?	t			**93**	7		Jeppson and Platta (1959)
	Houlhton L., HI	?	7			1.7	35.4	62.7		HUDt and Carbine (1950)
	L. Hendota, **WI** L. Honona, WI L. **Wingra, WI** L. "aube.., WI	25-280 IIIIII (100 1IIID avg.)	May-Oct, **Dec**	1.5		25.4	68.5	3.0[11]	1.1(U)	**Pearse** (1916)
		7	7				94	6		Vorbee **and** Richardeon (1920)
	Green L., **WI**	73-268 1IIID (112 1IIID ava.)	Aug-Sep	3.8		10.7	83.1	0.5	0.9(0); 1.0(1)	Peeree (1921)
	L. **Mendota,** WI	166 **mm** ava.	Aug-Sep	7.0		42.3	49.8		0.9(0)	**Pearse** (1921)
	L. **Erie**	**24.5-46.5 mm** 49.0-71.0 **mm** 73.5-95.51111D 98.0-144.5 **mm** 147.0-193.5 **mm** 196.0-242.5 _ Total Average	**Summer**			100 65.6 48.4 28.6 19.4 10.1 19.4	 32.9 50.8 65.2 67.3 50.7 65.0	 2.5 10.7 34.5 12.6	 1.5(U) 0.8(U) 3.7(U) 2.6(U) 4.7(U) 3.0(U)	**Price** (1963)
Sauger	7	?	**?**					100		Forbe. and Richard.on (1920)

(Continued)

Fish Species	Location of Study	Age of Length	Sea.on	Plant Material	Terres-ttial Invette-brates	Zoo-plankton	Benthic Invette-brstes	Fish	Detritus	Reference
Walleye	Clear L.• MN	118-125 mm	Jun-Jul	6		51	43			Scidmore and Woods (1960)
		123-267 _	Jun-Jul	5		90			5(U)	
		245 mm	Jun-Jul					100		
	L. Mendota. WI	410 mm avg.	Aug-Sep					100		Pearse (1921)
	L. Mendota, WI L. Honona, WI L. Wingra, WI L. Wsubess, WI	425. 448 mm	Sep, Nov					90.9[12]		Pearse (1916)
		,						100		Forbel Ind Richardson (1920)
	L. Erie	24.5-193.5 mm	Summer					100.0		Price (1963)
		196.0-242.5 mm						97.5	2.5(U)	
		245.0-291.5 mm						100.0		
		294.0-365.0 Dlll				,	0.1	99.4	0.4(V)	
		367.5-438.5 ıı1ı		,			1.5	96.5	2.0(U)	
		441.0-512.0 mm					0.2	99,0	0.8(U)	
		514.5-585.5 mm						100.0		
		Totsl Average		t		t	0.4	98.9	O,,(U)	
Freshwater Drum	Grand L., OK	Adults (254-322 _)	Sep-Aug				1.0	94.6	4.4(0)	Summerfelt et al. (1972)
	L. Ft. Gibson, OK	Adults (254-322 mm)	Sep-Aug				32.0	63.9	4.0(0)	Summerfelt et al. (1972)
	L. Eufaula, OK	Adults (254-322 _)	Sep-Aug				61.9	0.,	37.4(0)	SUlDllerfelt ., al. (1972)
	L. Texoma, OK	Adults (254-322 mm)	Sep-Aug				11.4	80.0	8.6(0)	Summerfelt et al. (1972)
	Lewis and Clark L., SD	Age 0 (6-120 mm)	Jul-Sep			18.3	81.7			Swedberg (1968)
		Age 0 (6-120 _)	Jun-Nov			57.8	42.2			
		Age I	Apr-Nov			24.4	75.0	O.'		
		Adult	Apr-Nov			12.8	84.4	2.8		
	Clear L" MN	93-140 mm	Jun-Jul			t	ıı			Scidmore snd Woods (1960)
		<74 mm	Jun-Jul	11		t	89			
		<245 mm	Jun-Jul				40		60(U)	

(Continued)

Appendix I. (Concluded)

Fish Species	Location of St"dy	Age of Length	Season	Plant Material	Terr..-trial Inverte-bute.	Zoo-plankton	Benthic Inverte-br.te.	Fish	Oetrit".	R.f.unc.
Fr..hwater Dr... (Con't)	Voln.y L•• MN	264-392 mm	Jun-Jul				100			Scidmore and Wood. (1960)
		123-267 mm	Jun-Ju1				100			
		264-392 mm	Jun-Jul	,			••			
		123-243 mm	Jun-Jul				100			
		245-368 11i	Jun-Jul				100			
	L. Erie	24.5-46.5 mm	Summer			22.7	72.7		4.6{U)	Price (963)
		49.0-71.0 _				26.6	66.2		7.2(U)	
		73.5-95.5 _				11.9	81.0		7.l(U)	
		98.0-144.5 mm				21.2	75.2		3.6(U)	
		147.0-193.5 mm				13.5	79.4	S.1	2.0(U)	
		196.0-242.5 mm				S.I	91.3	O.'	3.0{U)	
		245.0-291.5 _		t		1.9	86.8	•••	6.7(U)	
		294.0-365.0 _		0.1		0.8	64.4	29.1	6.4(U)	
		367.5-438.5 _				0.1	37.7	58.0	4.2(U)	
		441.0-512.0 _					13.5	83.6	2.9(U)	
		Total Average		,		J.l	68.2	23.5	5.2(U)	
Common Sculpin	,	,	,				75.0	25.0		Forbes and lich.rd.on (920)
	L. Hendon, WI L. Honon., WI L. Wingra, WJ L. Waubesa, WI	20.5-57.5 _ (40 _ avg.)	Jul-Oct	1.1	1.0	I.J	95.0		0.2(1)	Pearse (916)
Brook Stickleback	L. Houlhton, HI	,	,			32.'	67.6			H"nt .nd Carbina (1950)
	L. Mendota, wt L. Monona, WI L. W{nlta, WI L. Waubesa, WI	9.4-51.0 mm (29 mm aVI.)	Apr,Jun-Jul	,",	'.J	35.3	48.3		3.7(U)	Pearse (1916)

APPENDIX F: DISTRIBUTION OF FISH BIOMASS AMONG FISH FOOD COMPARTMENTS ARRANGED BY MAJOR RESERVOIR GROUPS (SIMILAR SPECIES COMPOSITION AND STANDING CROPS) AND DISTRIBUTION OF CARRYING CAPACITY BIOMASS, ANNUAL FISH PRODUCTION, AND YOUNG-OF-THE-YEAR (Y-O-Y) PRODUCTION AMONG THE FOOD COMPARTMENTS

Reservoir Croup: **White** River Baa1n

Expected annual **production: 148.0 lb/acre**

A. V-O-V Sh.d **component** **42.9 lb/acre**
1. **Detritus** 10.7
2. **Benthos** ,",
3. **Zooplankton** 30.0

B. **Y-O-Y component** ••ludinl Sh.d **23.7 lb/acre**
1. **Detritus** 1.1
2. **Benthos** 1.1
3. Zooplankton 5.'
4. **Fish** ,''
5. **Terrestrial** I.,

C. **Age** 1 … c_ponint **81.4 lb/acre**
I. **Detritus** **35.9**
,' **Benthos** **25.2**
3. Zooplankton 1.3
•• **Fish** **11.4**
,• Tlrrl.trial I.'

	Detritus	Benthos	Zooplankton	Fish	Terrestrial
•. **Expected** annu.l production, **lb/acre**	**53.70**	34.50	43.Z0	n .80	2.80
b. **Expected** Innull **production, g/m^2 (dry weight)** (. × 0.0280)	**1.50**	**0.97**	1.21	0.)9	0.08
c. **Food needed** to produci onl ar.. of **the** .nnual **production,** *a* **(dry weight)**	1.00	1,00	**0.50**	**1.25**	1.00
d. **Food** naadld to **produce** thl **expected annual production, g/m^2 (dry weight)** (b × c)	**1.50**	0.97	0.61	0.49	0.08
I. **Carrying capacity standing** crop, Ib/acre	*93.20*	**65.30**	**17.90**	30.60	4.30
f. **Carrying capacity standing crop,** *1/.^{2}* (dry **weight) (e ×** 0.02BO)	2.61	**1.83**	*0."*	0.86	0.12
I. **Food needed** to lupport on. **gram** of carryin, c.pacity **standing** crop, , **(dry weight)**	**0.25**	*0.25*	0.125	**0.3125**	**0.25**
h. **Food needed** to lupport the tot.l **carrying** cap.city **standing crop,** *1/.^{2}* **(dry** wliaht) **(f ×** *a)*	0.65	0.46	0.06	0.21	0.03
i. **Annual food transfer** to fllh, 1,.2 **(dry weight)** (d **+ h)**	**2.15**	**1.43**	0.67	0.76	0.11

(Continuld)

Reservoir Croup: Red River Basin

Expected annual production: 137.7 lb/acre

A. Y-O-Y Shad component 39.9 lb/acre
1. Detritus 10.0
2. Benthos 2.0
3. Zooplankton 27.9

B. Y-O-Y component exluding Shad 22.0 lb/acre
I. Detritus b.b
2. Benthos b.b
3. Zooplankton ;";
4. Fish 2.2
5. Terrestrial 1.1

C. Age 1 + component 75.7 lb/acre
1. Detritu' 31.0
2. Benthoa 25.1
,• Zooplankton 1.b
b. Piah 15.1
,• Terrestrial 2.'

	Detritus	Benthos	Zooplankton	Fish	Terrestrial
ıı Expected annual production, lb/acre	47.60	33.70	35.00	17.30	'.00
b. Expected annual production, g/m^2 (dry weight) (a " 0.0280)	1.33	0.94	0.98	0.48	0.11
c. Food needed to produce one gram of the annual production, g (dry ....ight)	1.00	1.00	0.50	1.25	LOO
d. Food needed to produce the expected annual production, g/m^2 (dry weight) (b • c)	1.33	0.94	0.49	0.60	0.11
e. Carrying capacity standing crop, lb/acre	80.40	65.30	4.10	39.30	7.50
f. Carrying capacity atanding crop, g/m^2 (dry we1ght) (e " 0.02g0)	2.25	L83	0.11	LIO	0.21
g. Food needed to aupport one gram of carrying capacity standing crop, g (dry weight)	0.25	0.25	0.125	0.3125	0.25
h. Food needed to aupport the total carrying capacity standing crop, g/m^2 (dry weight) (f " g)	0.56	0.46	0.01	0.34	0.05
i. Annual food tranafer to fish, g/m^2 (dry weight) (d + h)	1.89	1.40	0.50	0.94	0.16

(Continued]

Reservoir Croup: **Green** and Cumberland Rivers and Dewey

Expected annual production: **135.8 lb/acre**

A. **Y-O-Y** Shad **component**	39.4 1b/acre	
1. Detritus	9.B	
2. Benthoa	2.0	
3. Zooplankton	27.6	

B. **Y-O-Y component** exluding Shad	**21.**7 1b/acre
1. Detritus	6.'
2. Benthos	6.'
3. **Zooplankton**	**5.4**
4. Fish	2.2
,• **Terrestrial**	Ll

C. **Age** I + component	74.7 Ib/acre
1. Detritus	36.4
2. Benthos	20.7
3. **Zooplankton**	,',
4. Fish	10.6
,• **Terrestrial**	**1.4**

	Detritus	Benthoe	**Zooplankton**	**Fish**	**Terrestrial**
ıı **Expected** annual production, **lb/acre**	52.70	*29.20*	**38.50**	12.80	**2.50**
b. Expected annual **production,** *g/.2* (dry **weight) (a ×** 0.0280)	**1.48**	0.82	1.08	0.36	0.07
ıı **Food** needed **to** produce **one gram** of the annual ptoduction, **g** (dry weight)	Loo	**1.00**	**0.50**	**1.25**	1.00
d. Food needed **to produce the expected** annusl **production,** *g/.2* (dry weight) (b × c)	**1.48**	0.82	**0.54**	0.45	0.07
•• Carrying capacity atanding **crop,** 1b/acre	94.40	53.70	14.30	27.50	3.50
f. **Carrying** capacity standing crop, **g/m^2** (dry **weight) (e ×** 0.0280)	2.64	**1.50**	0.40	0.77	0.10
,• Food **needed to support one gram** of **carrying** capacity **standing** crop, g (dry welght)	*0.25*	0.25	0.125	0.3125	*0.25*
b. rood needed **to** support **the** total carrying capacity **standing** crop, **g/m^2** (dry **weight) (f ×** ,)	**0.66**	0.38	0.05	0.24	0.03
i. Annual food trsnsfer to flsh, *g/.2* (dry weisht) (d + h)	2.14	**1.20**	*0.59*	*0.69*	0.10

(Continued)

ReleNolr GrOUpl Blue Mountain, Nimrod, and Wister

xpected annual production: 354.4 lb/acre

A. y-o-y Shad component	70.9 lb/lcre	B. Y-o-Y component exluding Shad	88.6 lb/acre	C. Age 1 + component	194.9 Ib/lcre
1. Detritus	17.7	1. Detritus	26.6	1. Detritus	77.6
2. Benthos	3.6	2. Bentholl	26.6	2. Bentholl	29.2
3. Zooplanltton	49.6	3. Zooplankton	22.2	3. Zooplankton	55.0
		4. Fish	8.9	4. Fish	31.8
		S. Terrestrial	4.4	S. Terrestrial	1.2

	Detritul	Benthos	Zooplankton	Fish	Terrestrial
a. Expected annual production, Ib/acre	121.90	59.4	126.80	40.70	5.60
b. Expected annual production, g/m^2 (dry weight) (a × 0.0280)	3.41	1.66	3.55	1.14	0.16
c. Food needed to produce one gram of the annual production, g (dry weight)	1.00	1.00	0.50	1.25	1.00
d. Food needed to produce the expected annual production, g/m^2 (dry weight) (b × c)	3.41	1.66	1.78	1.43	0.16
e. Carrying capacity Itanding crop. Ib/acre	201.50	75.90	142.80	82.50	3.00
f. Carrying capacity standina crop, g/m^2 (dry weight) (e × 0.0280)	5.64	2.13	4.00	2.31	0.08
a. Food needed to suPpOrt one gram of clrrying capacity Itanding crop, I (dry weiaht)	0.25	0.25	0.125	0.3125	0.25
h. Food needed to eupport the total clrryioa capacity Itlndina crop, a/m2 (dry weiaht) (f × g)	1.41	0.53	0.50	0.72	0.02
1. Annual food trlnsfer to fish, g/m^2 (dry weight) (d + h)	4.82	2.19	2.28	2.15	0.18

(Continued)

Reserv01r Croup: Lower M1slil.1pp1 Valley

Expected annual production: 177.2 Ib/acre

A. Y-o-Y Shad component	39.0 Ib/acre	B. Y-o-Y **component** eXlud1n8 Shsd	40.8 Ib/scr	C. **Age** l + component	97.5 lb/acre
1. Detritus	9.8	1. Detritus	12.2	1. Detritus	39.8
2. Benthos	2.0	2. Bentho.	12.2	2. **Benthos**	16.5
3. Zooplankton	27.3	3. Zooplankton	10.2	3. **Zooplankton**	16.8
		4. **Fish**	4.1	4. **Fish**	23.2
		5. Terrestrial	2.0	5. **Terrestrial**	1.1

	Detritua	Santhoa	Zooplankton	**Fish**	Terreatrial
a. **Expected** annual production, Ib/acre	61.80	30.70	54.30	27.30	3.10
b. **Expected** annual production, **g/m^2** (dry weight) (a × 0.0280)	1.7J	0.86	1.52	0.76	0.09
c. Food **needed** to produce one **gram** of the annual production, g (dry weight)	1.00	1.00	0.50	1.25	1.00
d, Food needed to produce **the** expected annual production, **g/m^2** (dry weight) (b × 0)	1.73	0.86	0.76	0.95	0.09
Carrying capacity standing crop, Ib/acre	103.30	42.80	43.50	60.20	2.80
f. Carrying capscity standing crop, **g/m^2** (dry weight) (e x 0.0280)	2.S9	1.20	1.22	1.69	0.08
g. Food needed to eupport one **gram** of carrying capacity atanding crop, **g** (dry weight)	**0.25**	0.25	0.125	0.3125	0.25
h. Food needed to support the **total** carrying capacity standing crop, g/m^2 (dry weight) **(f** x g)	0.72	0.30	**0.15**	**0.53**	0.02
i. Annual food transfer to fish, g/m^2 **(dry** weight) (d + h)	2.45	1.16	0.91	1.48	0.11

(Continued)

l•••rvoir Group: Gulf .nd South Atlantic

Expected .nnull production: 79.0 lb/acre

A. Y-O-Y Shad component 17.4 lb/acre
1. Detritus '',
2. Benthos 0.'
). Zooplankton 12.2

B. Y-o-Y component exluding Shad 18.2 Ib/lcre
1. Detritus ;'';
2. Benthos ;'';
). Zooplankton ;''
4. Fish 1.,
5. Terrestrial 0.'

C. Age 1 + component 43.4 Ib/acre
,• Detrit..1 17.5
2. Benthos 12.9
,' Zooplankton 1.,
;' nih ■■;
,' Terrlltria1 1.'

	Dlttit..1	Benthos	Zooplankton	Fish	Terrestrial
I. Expected annual produetion, Ib/lcre	27.40	19.30	18.10	11.)0	2.40
b. Expected annual production, 8/.^{2} (dry weight) (a " 0.0280)	0.16	0.54	0.52	0.)2	0.01
c. Food n••ded to produce one gram of the annulI production, g (dry weight)	1.00	1.00	0.50	1.25	1.00
d. Food needed to produce the expected annual production, 1/..^{2} (dry weight) (b " c)	0.16	0.54	0.26	0.40	0.01
e. Carrying clplcity Itlndin, crop, Ib/lcre	45.60	33.50	'.00	24.60	3.90
f. Carrying capacity standing crop, 1/.^{2} (dry weight) (I " 0.0280)	1.28	0.94	0.14	0.69	0.11
g. Food needed to support one 11''' of carrying clplclty .tandlng crop, g (dry weight)	0.25	0.25	0.125	0.3125	0.25
h. Food needed to support the total carrying capacity standing crop, g/m^2 (dry weight) (f " .)	0.32	0.24	0.02	0.22	0.0)
i. Annual food transfer to fish, g/m^2 (dry weight) (d + h)	1.08	0.18	0.28	0.62	0.10

(Continued)

Reservoir Group: Buckhorn, Sutton, Summersville, and Flannagan

Expected .nnu.l **production:** **42.7** lb/.cte

A. y-o-y Sh.d **component**	**0.4 lb/acre**	B. **Y-O-Y** co.ponent exludinl Shad	12.8 Ib/.tr.	C. **Ag** 1 + **component**	**29.5** Ib/etr.
1. **Detritus**	0.1	1. **Detritus**	[. '	1. **Detritus**	' .0
2. **Benthos**	0	2. **Benthos**	,''	2. **Benthos**	**20.6**
3. **Zooplankton**	0.'	3. Zoopl.nkton	].2	,• Zooplankton	1.,
		4. **Fish**	1.]	4. n ah	' .0
		5. Terr..rtl.l	O.'	5. **Terrestrial**	**1.5**

	Detritus	**Benthos**	Zooplankton	**Fish**	**Terrestrial**
'. **Expected** .nnu.l **production,** Ib/'cre	6.90	**24.40**	5.00	*4.30*	2.30
b. **Expected** .nnual production, **g/m^2 (dry weight)** (a × 0.0280)	0.19	0.68	0.14	0.12	0.06
c. food **needed** to **produce** one **gram** of **the** .nnual **production, g (dry weight)**	1.00	1.00	0.**50**	**1.25**	1.00
d. **Food needed** to **produce** the **expected** .nnu.l **production,** a/.^{2} **(dry weight) (b · c)**	0.19	0.68	0.01	**0.15**	0.06
e. **Carrying capacity** .t.ndina trop, **lb/acre**	6.10	42.70	'.00	6.10	'.00
f. **Carrying capacity** .tandinl **crop,** a/.^{2} **(dry weight)** (e x *0.0280)*	0.11	1.20	0.06	**0.17**	0.06
I. Food **needed** to .upport **one gram** of **carrying capacity standing** erop, **g (dry** veilht)	**0.25**	**0.25**	**0.125**	**0.3125**	**0.25**
h. **Food needed** to **support the** tot.l **carrying capacity** .undinl ttop, **g/m^2 (dry weight)** (f • I)	0.06	0.30	0.01	**0.05**	0.02
i. **Annual food transfer** to fL.h, a/.^{2} (dry **weight) (d +** h)	0.23	0.98	0.06	0.20	0.06

(Continued)

Appendix F (Concluded)

Reservoir Croup: **Arkansas River Basin***

Expected annual production: **312.8** lb/acre

A. Y-o-Y Shad **component** 90.8 Ib/acre

1.	Detritus	22.7
2.	Benthos	**4.5**
3.	Zooplankton	63.6

B. Y-O-Y **component** exluding Shad 50.0 lb/llcre

1.	Detritua	15.0
2.	Benthol	15.0
3.	Zooplankton	12.5
4.	**Fish**	5.0
5.	**Terrestrial**	2.5

C. **Age** 1 + **component** 172.0 **lb/acre**

1.	**Detritus**	88.4
2.	Benthoa	33.0
3.	Zooplankton	22.4
4.	**Fish**	26.7
5.	Terrestrial	**1.5**

		Detritus	Benthos	Zooplankton	Fish	Terrestrial
a.	**Expected annual** production, lb/acre	126.10	**52.50**	**98.50**	31.70	4.00
b.	**Expected** annual production, g/m^2 (dry weight) (a × 0.0280)	3.53	**1.47**	2.76	0.89	0.11
c.	Food needed to produce one **gram** of the annual production, **g** (dry weight)	**1.00**	1.00	0.50	**1.25**	1.00
d.	Food needed to produce the **expected** annual production, $8/.^2$ (dry wei8ht) (b × c)	3.53	**1.47**	1.38	1.11	0.11
e.	Carrying capacity atandinl crop, lb/acre	229.70	85.80	**58.10**	69.30	3.90
f.	**Carrying capacity** atandina **crop,** g/m^2 (dry **weight)** (e × 0.0280)	6.43	2.40	1.63	1.94	0.11
I.	Food needed to RUpport one **gram** of **carrying capacity standing crop, g** (dry weight)	0.25	**0.25**	0.125	**0.3125**	*0.25*
h.	Pood needed to aupport the total **carrying capacity** standina crop, $g/.^2$ (dry wdlhtl (f × g)	**1.61**	*0.60*	*0.20*	*0.61*	0.03
1.	Annual food transfer to fiah, $81m^2$ **(dry** weight) (d + h)	5.14	2.07	1.58	1.72	*0.14*

*Excluding Blue Mountain, Nimrod, Wister, and Great Salt Plaina.