

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

FISHERIES DIVISION
JOB PROGRESS REPORT

STATE: Montana PROJECT TITLE: Statewide Fisheries Investigations
PROJECT NO.: F-46-R-1 STUDY TITLE: Survey and Inventory of Warmwater Lakes
JOB NO.: IV-d JOB TITLE: Southeast Montana Warmwater Lakes Investigations
PROJECT PERIOD: July 1, 1987 through June 30, 1988
REPORT PERIOD: April 1, 1987 through March 30, 1988

ABSTRACT

A total of 92 reservoirs were sampled for physical and/or biological information in 1987. Seventy-eight of these were reservoirs under department management, surveyed to determine the status of fish populations and to evaluate past management practices. The remaining 14 reservoirs were ponds surveyed for the first time to determine suitability for producing sport fishing. Nine of the fourteen were planted with fish. Of 31 reservoirs planted with fingerling largemouth bass in July, 1986, 29 had bass populations in summer 1987.

OBJECTIVES AND DEGREE OF ATTAINMENT

1. To maintain sport fishing for suitable species in the 84 small reservoirs presently under management, and in new reservoirs added. This objective was met, as evidenced by fish populations sampled. Results are shown in Table 2 of the RESULTS AND DISCUSSION section.
2. To add 40 new reservoirs to the number of ponds supplying public fishing. A total of 30 new ponds was added to the Region 7 public pond list; six old ponds were lost from the public pond system during the report period for a net gain of 24 ponds.
3. To keep the angling public informed of pond fishing opportunities. An updated booklet for public distribution was completed and printed in February 1988. The booklet lists and describes fishing opportunities in the 108 ponds presently under management. Each pond is located on a map. Two thousand five hundred copies were printed and most have been distributed to the public.

PROCEDURES

Pond depths were determined by sounding with a calibrated rope and sash weight. Fish populations were sampled with 125-foot long sinking experimental gill nets, 1/4-inch mesh bag seines 100-foot long and boat mounted electrofishing gear operated at night. Gill nets were always fished overnight.

RESULTS AND DISCUSSION

Survey of New Ponds

Requests were received to plant 14 ponds. Of these 11 were considered suitable for plantings (Table 1), but only 9 were actually planted. Two landowners changed their minds and decided they did not want to allow public fishing. Five ponds were planted with largemouth bass and four with rainbow trout.

Survey of Previously Planted Reservoirs

Carter County

A total of 13 reservoirs were sampled in Carter County. Results are shown in Table 2. Two ponds were planted with largemouth bass fingerlings in July 1986 (Rath and Richardson ponds) both plants survived the first winter with good to fair growth. The LaBree pond was planted with largemouth bass fry in early June 1987. It was seined in mid July to check fingerling survival. Good numbers of two-inch bass were found. Green sunfish were sampled for the first time at Gardner Reservoir. Although the 1987 rainbow trout plant survived well, past experience indicates future trout plants will not survive when green sunfish become abundant. Sampling at other reservoirs gave only expected results.

Custer County

Nine reservoirs were sampled in Custer County (Table 2). All three reservoirs (Taylor, Jim Beardsley #1 and 2) planted with largemouth bass fingerlings in 1986 had overwinter survival. Northern pike were found in the Haughian bass pond. These fish could only be present by illegal introduction. No action will be taken at this pond for the present time. Northern pike may not spawn here. Some trout at the Pat Beardsley pond had grown to 3 1/2 pounds. Crappies and channel catfish are not reaching a desirable size at Spotted Eagle pond. A plant of largemouth bass was made at Spotted Eagle in June 1988.

Dawson County

Fingerling largemouth bass plants at Shaw and Wielgosh ponds were successful, with both showing overwinter survival. Lindsay Reservoir had once been a good yellow perch pond, but sampling in 1985 found only insignificant perch numbers. One thousand four hundred fifty perch were transplanted in April 1986 and a large

number of yellow perch YOY were sampled in 1987 (Table 2). Yellowstone River rough fish species have already reached Hollecker pond following refilling in 1986. This pond is filled with Yellowstone River ditch water. Largemouth bass were not sampled in two seine hauls at Hollecker pond, but this species is known to be present in angler catches. Big Drop and Camp Reservoirs were only three to four feet deep. These reservoirs, even if filled, would be marginal in depth and will not be replanted.

Fallon County

Largemouth bass plants at Baker Lake, Rush Hall and Pinnow #3 reservoirs were successful. No bass were sampled at Sieler Reservoir in 1987 following a fingerling plant in 1986. Bass were observed at Lorbiecke Reservoir, but the pond was nearly dry.

Baker lake had a large winterkill early in 1986. Northern pike were planted later in 1986 and largemouth bass in 1987. The city of Baker applied the herbicide "Sonar" in May 1987. The herbicide was extremely effective; vascular plants were eliminated for the entire year. Northern pike caught late in 1987 had developed a decaying plant taste. This was thought to be caused by decaying plant material. Summer 1987 sampling showed good survival, but poor growth of northern pike. Largemouth bass numbers were low, probably because of the lack of vascular plants for cover. Few black bullheads and yellow perch were present in summer 1987, because of 1986 winterkill, but average size for both species was already much improved over previous years. The city of Baker has agreed to not reapply herbicide in 1988 until significant vascular plant growth has occurred and then at a much lower concentration.

Decreasing the rainbow trout plant at Meccage Reservoir from 4000 to 1000 fingerlings per year has resulted in some trout up to one pound. These were not present in 1985 when the pond was last sampled.

Good numbers of walleye and northern pike are present at South Sandstone Reservoir, but no evidence was found for survival of walleye fry planted in 1987. Yellow perch and black bullheads continue to be mostly too small to interest anglers.

Garfield County

Largemouth bass fingerling were planted at nine Garfield County reservoirs in July 1986. These plants were all successful, with many of the bass reaching a half pound by August 1987 (Table 2). The Dale Krieder #1 Reservoir was gill-netted three weeks after treatment with rotenone in early September, 1987. No fish were found. This reservoir previously had carp, white suckers and walleye, but was supporting very little fishing. It has since been replanted with largemouth and smallmouth bass. Rainbow trout up to 4 1/2 pounds were sampled at Olson Reservoir.

Powder River County

The two Williams reservoirs were sampled in August 1987 to check survival of largemouth bass fry planted in June 1987 (Table 2). Survival was indicated at both reservoirs, but growth was much better at #2 reservoir. Fingerling bass planted in July 1986 at Yonkee reservoir survived but grew poorly. Mud Turtle reservoir has not shown any overwinter survival of planted rainbow trout. Because it is on U.S. Forest Service land, future plants will be catchables.

Prairie County

Overwintering of rainbow trout was found at Harms pond. South Fork Reservoir has produced a northern population from a fry plant, but the reservoir is very low. Homestead Reservoir sampling found largemouth bass up to nearly two pounds.

Largemouth bass survival was found at both Cottontail and Marshall reservoirs. Some crappie at Silvertip Reservoir weighed almost one pound.

Richland County

Only two ponds were sampled in Richland County. Fingerling largemouth bass planted at LaBonte Reservoir survived over winter and grew well. Largemouth bass are prospering at Ericksen Reservoir but the landowner has closed access.

Rosebud County

Five reservoirs were planted in July 1986 with fingerling largemouth bass (Lee #1, #2, Ringstveidt, Newman and Schlesinger #2). All five plants survived the first winter and some bass reached a half pound weight by July 1987 (Table 2). Both Hook Ranch ponds had good rainbow trout populations, with the average rainbow weighing over a pound at Hook Ranch #3 Reservoir. Large trout (up to 2 1/2 pounds) were also present at Zemple Reservoir. Good numbers of yellow perch YOY resulted at Schlesinger Reservoir #1 from the 1986 perch plant.

Fish populations are still doing well at Castle Rock Reservoir. More and larger largemouth bass were sampled than in any other previous year. The largest weighed almost 1 1/2 pounds. Northern pike were sampled up to four pounds and a few bluegill weighed up to 1/2 pound. Walleye fry plants in recent years appear to survive poorly. Very few seem to be present in the reservoir.

Wibaux County

Wibaux pond and Banister reservoir were planted with fingerling largemouth bass in July 1986. Sampling showed good overwinter survival at both reservoirs (Table 2), although growth was much better at Banister Reservoir. Meeke Reservoir will not be

replanted. Rainbow trout have not over-wintered both times the pond has been sampled in recent years. Houck Reservoir was planted with rainbow trout for the first time in 1987; growth was good. Miske pond had rainbow trout from 1986 and 1987 plants. Most rainbows from the 1986 plant weighed about a pound.

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Waters Referrred to:

Baker Lake	21-1778
Castle Rock Lake	21-2527
South Sandstone Reservoir	21-8775

Keywords

small reservoirs	yellow perch
largemouth bass	blue gill
smallmouth bass	black bullhead
rainbow trout	northern pike

Table 1. Results of New Pond Surveys in 1987,

Pond Name	County	Location			Max. Depth (Ft.)	Fish Species Present	Recommendations
		T	R	S			
Enos, Pete	Carter	4N	58E	33	9	Black bullhead Fathead minnows	Don't plant
Grebe, Ed #2	Rosebud	11N	32E	24	12	Channel catfish	Plant rainbow trout
Grebe, Ed #3	Rosebud	12N	32E	33	12	None	Plant LMB
Johnson, Rick	Treasure	7N	35E	17	15	Green Sunfish	Plant largemouth bass
Kvaalen, Oscar	Richland	22N	56E	33	8	Flathead chub Longnose sucker Black bullhead	Plant largemouth bass
Moore, John	Custer	9N	46E	5	7	Unknown	Don't plant
Mysse, Sievert	Rosebud	11N	36E	11	13	None	Plant largemouth bass
Olson, Norman #2	Garfield	19N	39E	6 & 7	9	Fathead minnows	Don't plant
Roberts, Dave	Rosebud	13N	31E	36	12	Rainbow trout	Plant rainbow trout
Saylor, Irven	Garfield	19N	34E	32	11	Rainbow trout	Plant rainbow trout
Severson, Geo. #1	Garfield	14N	34E	1	13	None	Plant Largemouth bass
Severson, Geo. #2	Garfield	14N	34E	2	12	None	Plant Largemouth bass
Severson, Geo. #3	Garfield	15N	35E	31	13	None	Plant Rainbow trout
Severson, Geo. #4	Garfield	14N	34E	13	12	None	Plant Rainbow trout

Table 2. Results of fish sampling for Southeastern Montana Ponds, Summer 1987

Pond Name	Type of Sample	Species ^a	Number Caught	Mean	Mean	Length	Weight
				Length (mm)	Weight (gm)	Range (mm)	Range (gm)
CARTER COUNTY							
Labree, Pat Res.	1 seine haul	LMB (YOY)	25	48	--	42-55	
Rath, Edwin Res.	2 seine hauls	YP	215	98	20	52-146	15-30
		BBH	12	115	--	96-147	
	1 gill net	LMB	4	195	100	183-211	70-130
		YP	35	193	105	141-325	30-500
		BBH	72	154	64	128-285	20-390
Craft, Gerald #1	1 gill net	NP	8	433	579	391-449	410-635
Craft, Gerald #2	2 seine hauls	LMB	32	126	64	91-230	15-170
	1 gill net	LMB	3	226	160	220-232	140-180
Richardson, Geo. Res	1 seine haul	LMB	24	139	33	123-166	20-60
		BBH	6	136	35	97-172	10-60
Talcott Res.	4 seine hauls	YP	200 approx.	--	--	50-80	--
Frigid Res.	1 seine haul	RBT	5	219	130	193-250	80-175
Gardner, Doug Res.	2 gill nets	RBT	78	260	335	162-492	40-1350
		GSF	3	112	30	100-126	20-40
		FHC	7	166	47	160-177	40-50
Cheisman Res.	1 gill net	SMB	3	341	537	321-362	410-630
		GSF	11	164	87	148-180	60-110
Bucholtz Res.	1 seine haul	BCR	10	169	70	152-190	50-100
		LMB	195	82	--	53-119	--
		BBH	1	237	200	--	--
West Plum Res.	1 seine haul	30 fathead minnows					
	1 gill net	RBT	1	305	230	--	--

^a Abbreviations: LMB = largemouth bass; YOY = young of year; BBH = black bullhead; YP = yellow perch; NP = northern pike; RBT = rainbow trout; GSF = green sunfish; FHC = flathead chub; SMB = smallmouth bass; BCR = black crappie.

Table 2 Continued.

MacNab Res.	2 seine hauls	RBT FHM NP	6 250 1	186 - 582	62 - 1460	138-220 - -	20-100 - -
Rolph Dam	1 gill net	BBH WS Carp FHM BBH Carp	12 9 26	220	168	181-245	90-230
	1 seine haul						
CUSTER COUNTY							
Rogers, Huston	1 gill net	RBT	44	198	126	141-335	40-370
Haughian, Dan #3 Res	1 seine haul	LMB	243	106	28	70-179	10-70
	2 gill nets	LMB NP	13 1	155 412	86 610	122-345	20-700
	2 hours	LMB	15	334	681	228-395	180-980
	electrofishing	NP	1	570	1280	-	-
Taylor, Cody Res.	1 seine haul	LMB BBH	17 1	127 265	28 275	105-157	10-60
Ft. Keogh Pond	1 seine haul	RBT SMB LMB	1 13 20	218 113 125	90 15 24	- 100-124 109-178	- 10-20 15-75
Holmes, Homer Res.	1 seine haul	LMB	16	72	-	56-95	-
Beardsley, Pat	1 gill net	RBT	53	228	243	185-475	80-1610
	1 seine haul		No fish				
Beardsley, Jim #1	2 seine hauls	LMB	0	Bass observed visually			
Beardsley, Jim #2	4 seine hauls	-	fathead minnows only				
	2 gill nets	LMB	5	172	-	150-200	-

^a Abbreviations: FHM = fathead minnow; WS = white sucker

Table 2 Continued.

Spotted Eagle Pond	4 seine hauls								
WCR	48	169	50	163-177	35-60				
WCR	78	71	-	33-104	-				
WE	2	220	60	216-224	55-65				
PS	8	33	-	30-37	-				
CARP	7	362	569	342-388	500-740				
CCAT	5	307	198	271-342	130-300				
BG	2	162	102	151-172	75-130				
WSu	2	309	285	302-316	260-310				
CCAT	108	305	192	265-410	120-460				
WCR	49	173	59	158-206	40-90				
CARP	19	366	569	350-390	520-770				
YP	1	175	70	-	-				
WSu	6	303	293	270-342	200-380				
NP	2	642	1660	605-680	1320-2000				
WE	5	282	222	209-434	65-590				
GE	2	336	353	320-353	305-400				
RHSu	2	396	773	343-450	440-1105				

DAWSON COUNTY

Shaw, James	1 seine haul	LMB	10	145	35	132-156	30-40
		BBH	1	-	-	-	-
Lindsay Res	1 seine haul	YP(YOY)	1000(approx)	-	-	-	-
		YP	1	210	120	-	-
		NP	1	264	120	-	-
		CARP	1	217	140	-	-
		BBH	1	183	140	-	-
		BBH(YOY)	1000(approx)	-	-	-	-
		FHM	200(approx)	-	-	-	-

a Abbreviations: WCR = White crappie; WE = Walleye; PS = pumpkinseed; Coat = Channel catfish; BG = bluegill; RHSu = Shorthead redhorse

Table 2 Continued

Lindsay Res.	2 gill nets	NP	9	763	2810	607-847	1480-3620
		NP(YOY)	4	-	-	-	-
		CARP	13	247	235	204-506	110-1370
		BBH	10	177	64	140-191	30-80
		YP	14	207	114	175-226	60-150
		WSu	1	391	660	-	-
Burman, Marvin Res.	1 gill net	RBT	83	243	176	148-336	30-400
Wielgosh, John Res.	1 seine haul	LMB	2	174	85	160-189	60-110
Hollecker Pond	2 seine hauls	RCS	4	203	113	191-215	90-130
		BCR	35	107	107	82-262	20-260
		WCR	7	91	-	70-108	-
		BBH	2	131	-	129-133	-
		RHSu	1	-	-	-	-
FALLON COUNTY							
Maier Reservoir	2 seine hauls	BCR	27	111	143	83-245	20-255
		WC	1	230	170	-	-
		CR(YOY)	6	36	-	26-45	-
		CR	115	-	-	70-120	-
		LMB	29	182	84	152-231	50-200
		LMB(YOY)	23	58	-	48-71	-
Maier Reservoir	2 gill nets	LMB	41	216	163	136-362	30-800
		BCR	10	152	-	101-273	-
		YP	2	210	135	209-210	130-140
South Sandstone Res.	4 seine hauls	BBH	16	163	50	150-176	40-60
		YP	685	92	29	57-150	-
		GS	2	103	-	69-137	-

^a Abbreviations: RCS = river carpsucker; BCR = black crappie; CR = unidentified crappie

Table 2 Continued

South Sandstone Res.		3 gill nets	WE	15	398	677	269-538	150-1470
			YP	18	168	49	140-225	20-130
			NP	7	599	1360	527-665	990-1690
			BBH	14	162	48	147-175	30-60
			BCR	2	190	95	188-192	90-100
Hall, Rush Res.		2 seine hauls	LMB	3	43	35-50	-	-
			FHM	Not counted, but numerous				
			BSB	Not counted, but numerous				
		1 gill net	NP	1	620	1550	-	-
			WSU	2	342	430	300-385	290-570
			RBT	3	430	927	414-440	780-1050
Baker Lake		4 seine hauls	YP	10	86	-	77-94	-
			LMB	3	85	7	78-95	-
			NP	3	355	263	322-402	195-360
		3 gill nets	BBH	87	244	311	129-275	30-445
			YP	6	232	218	150-262	40-290
			NP	32	377	367	311-591	195-1400
			GSF	1	200	170	-	-
Sieler, Simon Res.		2 seine hauls	FHM	Abundant				
		1 gill net no fish	RBT	43	262	308	208-443	130-1040
Pinnow, Arnold Res.		1 gill net	YP	28	222	175	165-275	70-320
Pinnow, Arnold #3		1 seine haul	no fish	13	249	257	208-272	110-340
		1 gill net	LMB					
Meccage Res.		1 seine haul	FHM					
		1 gill net	RBT	21	204	106	155-339	40-460

a Abbreviations: BSB = brook stickleback

Table 2 Continued

GARFIELD COUNTY									
Brooks, L. C. #1	1 seine haul	LMB	3	58	-	52-63	-		
Brooks, L. C. #2	2 gill nets	LMB	84	160	61	128-202	20-130		
Krieder, Dale #1	4 gill nets	No fish							
Olson, Norman #1	1 seine haul	FHM - numerous							
	1 gill net	RBT	14	323	576	189-544	70-2000		
Chamberlain, Curtis	1 seine haul	LMB	21	183	71	149-212	50-120		
Watt, K. V. Res.	1 gill net	RBT	6	228	150	215-245	110-180		
Clark, Emmett Res.	1 gill net	LMB	8	197	96	175-220	70-150		
Jardan, Don #1 Res.	2 seine hauls	LMB	3	274	350	269-278	340-360		
		RBT	26	250	221	231-270	150-300		
Jardan, Don #2 Res.	1 gill net	RBT	7	380	641	334-418	520-810		
Harbaugh, Carl Res.	1 seine haul	RBT	6	328	371	305-354	310-470		
	1 gill net	RBT	38	358	486	325-393	330-680		
		LMB	7	207	140	177-235	70-220		
Engdahl, Lester									
Bass Pond	2 seine hauls - no fish								
	1 gill net	LMB	2	209	125	195-223	90-160		
Engdahl Cottonwood									
Res.	1 seine haul	LMB	2	209	140	193-226	100-180		
		LMB YOY	9	61	-	55-67	-		
		YP	1	81	-	-	-		
Smith Cattle Co. #3 Res.	1 seine haul	LMB	2	236	230	233-240	230-230		
Tripp Res.	1 seine haul	LMB	6	224	155	216-229	100-190		
POWDER RIVER COUNTY									
Williams #1 Res.	1 seine haul	LMB	12	58	-	80-106	-		
	2 gill nets	LMB	2	325	675	318-331	670-680		

Table 2 Continued

Williams #2	1 seine haul	LMB	26	135	35	122-154	20-60
Yonkee Res.	1 gill net -	no fish					
	1 seine haul	LMB	2	151	40	143-160	40-40
Mud Turtle Res.	1 gill net	RBT	18	181	72	153-204	50-90
PRAIRIE COUNTY							
Harms Res.	1 seine haul	RBT	2	140	38	131-148	35-40
	1 gill net	RBT	12	274	246	151-310	40-320
South Fork Res.	1 seine haul	CR	36	63	-	51-81	-
	2 gill net	WCR	17	282	323	234-289	160-400
		BCR	4	242	242	210-257	160-280
		NP	37	381	349	330-426	190-530
Homestead Res.	1 seine haul	LMB	180	74	-	59-90	-
	1 gill net	LMB	5	338	650	314-360	520-790
Cottontail Res.	2 seine hauls	LMB	2	166	63	156-176	50-75
Marshall Res.	2 seine hauls	LMB	12	52	-	42-57	-
Silvertip Res.	2 seine hauls	CR	337	114	134	48-281	5-370
	2 gill nets	BCR	6	173	132	114-283	20-390
		WCR	2	282	405	280-284	400-410
		FHM	75				
RICHLAND COUNTY							
LaBonte, Dan Res.	1 seine haul	FHM	40	-	-	-	-
	1 gill net	LMB	2	240	220	239-241	220-220
Ericksen Res.	1 seine haul	LMB	148	129	27	76-172	5-70
	1 gill net	LMB	1	292	340	-	-

Table 2 Continued

ROSEBUD COUNTY									
Hook Ranch #1	1 gill net	RBT	29	278	360	140-402	35-830		
Hook Ranch #3	1 gill net	RBT	21	341	579	150-440	40-1000		
Lee, Al #1 Res.	1 seine haul	LMB	13	166	63	140-197	40-100		
		LMB YOY	11	50	-	41-59	-		
	1 gill net	LMB	88	172	72	125-193	30-100		
		BCR	1	133	30	-	-		
		WCR	1	127	20	-	-		
Lee, Al #2 Res.	1 seine haul	CR	1	45	-	-	-		
	2 gill nets	LMB	15	232	208	196-249	100-280		
		BCR	2	176	90	136-217	30-150		
Ringstveidt Pond	1 seine haul	No fish							
	2 gill nets	LMB	6	160	64	135-175	40-80		
Zemple Res.	1 seine haul	RBT	3	205	123	193-225	90-170		
	1 gill net	RBT	9	332	624	190-433	85-1120		
Newman, Albert	2 seine hauls	No fish							
Bass Pond	2 gill nets	LMB	16	187	99	167-232	60-210		
Schlesinger, Swede #1	2 seine hauls	FHM	110	-	-	-	-		
		YP	3	187	100	157-211	70-130		
		YP (YOY)	784	85	-	81-91	-		
Schlesinger, Swede #2	3 seine hauls	LMB	7	49	-	37-148	-		
		LMB	7	167	111	98-288	15-360		
Castle Rock Res.	5 seine hauls	LMB (YOY)	4	47	-	40-53	-		
		CR	11	108	23	74-188	5-100		
		CR (YOY)	11	44	-	39-55	-		
		BG (Large)	59	148	78	80-211	15-200		
		BG (Small)	259	53	-	42-67	-		
		NP	1	417	440	-	-		
		PS/GSF	3	-	-	-	-		

Table 2 Continued

Castle Rock Res.	4 gill nets	LMB NP BCr WE BG	7 17 1 1 133	280 478 267 258 154	350 689 310 120 84	251-340 365-655 - - 99-207	240-660 280-1730 - - 10-190
WIBAUX COUNTY							
Meeke Res.	1 seine haul	RBT FHM	1	150	-	-	-
Wibaux Pond	1 gill net	Several hundred	34	157	-	142-188	-
		RBT	10	160	50	153-177	40-70
		LMB	37	210	134	207-212	110-150
		BBH	14	92	-	64-180	-
		GS	39	216	145	180-235	90-180
Houck, Russell Res.	1 gill net	RBT					
Banister, Ray Res.	2 seine hauls	BSB	-	-	-	-	-
		LMB	23	225	206	191-257	110-280
		RBT	27	252	211	182-353	60-480
Miske Pond	1 gill net						

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12