MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
FISHERIES DIVISION
JOB PROGRESS REPORT

STATE: Montana PROJECT TITLE: Statewide Fisheries Investigations
PROJECT NO: F-46-R-2 STUDY TITLE: Survey and Inventory of Warmwater Lakes
JOB NO: IV-d JOB TITLE: Southeast Montana Warmwater Lakes Investigations

PROJECT PERIOD: July 1, 1988 through June 30, 1989
REPORT PERIOD: April 1, 1988 through March 30, 1989

ABSTRACT

Small fishing reservoirs in 11 southeastern counties were sampled for physical and biological information in 1988. Requests from landowners were received to plant two new reservoirs. Only one was considered suitable for fish. Three reservoirs were treated with rotenone to eliminate undesirable fish populations. A total fish kill was desired at two of these reservoirs and a partial kill was desired at the third.

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. Five new ponds were added to the public fishing list during the report period, but 17 were lost because of low water and resulting winterkill of fish. Most of the 17 lost will be replanted and so will not be permanently lost to public use.

3. To keep the angling public informed of pond fishing opportunities. Two thousand copies of an updated booklet for public distribution were printed in March 1989. This booklet lists and describes fishing opportunities in the ponds presently under management. Each pond is located on a map.

PROCEDURES

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

RESULTS AND DISCUSSION

Survey of New Ponds

Landowners requested fish plants at only two ponds (Table 1). Only one of these was considered suitable for supporting fish populations. The John Trumbo pond was planted with largemouth bass and yellow perch.

Survey of Previously Planted Reservoirs

Big Horn County

Indian Creek Reservoir was sampled by seine and gill net (Table 2). Only smaller largemouth bass and bluegill were sampled, but anglers report catching larger bass. No northern pike were sampled, although they have previously been present.

Carter County

Largemouth bass have overwintered at Pat LaBree Reservoir despite large numbers of bullheads (Table 2). If largemouth bass do not survive into 1989, a rehab will be considered. Only smaller bass were sampled in a seine haul at Sidehill Reservoir, but larger bass are thought to be present.

Sidney Reservoir was treated with rotenone because of a large population of golden shiners and complete failure to survive of the 1988 fingerling trout plant. On 8/25/88 a total of 9 gallons of Nusyn Noxfish (2 1/2% rotenone from Russell Bio. Corp.) was applied to the reservoir, estimated to contain 10 acre-feet of water. Both dead trout and golden shiners were observed following application. The reservoir was not resampled after rotenone application.

Sampling at both Horton and Frigid reservoirs found rainbow trout from 1987 and 1988 plants. Trout growth was about average at both reservoirs.

Both yellow perch and northern pike have done well at Talcott Reservoir since being planted in 1986, with perch reaching a maximum of nearly one pound.

Custer County

Trout from 1987 and 1988 fingerling plants were sampled at Henry Haughian Reservoir (Table 2). This pond is now under control of Les Billing, but still open for public fishing. Bass from the 1987 fry plant at Holmes Reservoir grew rather slowly. Growth should improve after 1st spawning. Beardsley Reservoir was nearly dry and no fish sampling was attempted. Marshall Reservoir was only four feet deep. No further fish planting is planned here. Even if the reservoir refills maximum depth would be only approximately 11 feet.

Dawson County

Prairie Goat and Rattlesnake reservoirs both had survival of the 1987 largemouth bass fry plants (Table 2). Growth was excellent at Rattlesnake Reservoir with some bass weighing over 300 grams by summer 1988. Both ponds were very low with maximum depths of 5 and 6 feet, so survival of bass into 1989 is unlikely.

Hollecker pond at Glendive contains the largemouth bass, crappie and yellow perch planted there, but several other species are present from the Yellowstone River water supply. Additional perch planting is planned and northern pike fingerlings when available.

Fallon County

Fish sampling at Rush Hall Reservoir (Table 2) found only young-of-the-year (YOY) largemouth bass, but some northern pike exceeded 2 kg. White suckers, brook stickleback and fathead minnows are also present. Largemouth bass at McKay Ranch Reservoir exceeded 300 mm total length.

Baker Lake now has very large black bullheads, low numbers of large yellow perch and large numbers of small northern pike. No indication of largemouth bass survival was found. All largemouth sampled probably originated from the 1988 fry plant.

South Sandstone Reservoir now has an excellent walleye population. Some walleye from gill nets weighed almost three kg. Northern pike seemed less abundant. Larger perch were almost absent and black bullheads remain small. A plant of largemouth or smallmouth bass, or possibly both species, is being considered for this reservoir.

The Schweigert Trout Reservoir was only four feet deep. No additional trout will be planted here until the pond receives significant runoff.

Garfield County

Both Brooks Reservoirs were devoid of fish (Table 2). Fish in both reservoirs were probably lost to winterkill. The following four reservoirs were only four feet deep: Pat Murnion, Meckel #1 and #3 and the Al Newman Trout Pond. None of these were sampled for fish and will be replanted when they refill.

Smith Cattle Reservoir #1 had trout from both the 1987 and 1988 plants, but growth was poor. This reservoir remains turbid and poor trout growth was expected. Trout at the Ralph Clark Reservoir weighed as much as 1.6 kg, but no trout from the 1988 plant were sampled. Trout growth at the Dale Kreider pond was good, with some fish from the 1987 fingerling plant weighing up to 0.6 kg. Trout were especially large at the Bobby Phipps pond, with at least 3 year classes present in gill net samples.

Bass planting at the Engdahl Cottonwood pond has been successful (Table 1). Good numbers of medium sized yellow perch are also present.

Largemouth bass from the fry plant at the Claude Saylor reservoir grew well.

No evidence of a 1988 walleye year class was found at the Whiteside pond and adult walleye average size is still small. Yellow perch planted in 1987 have grown well, but no YOY perch were sampled in a seine haul.

Powder River County

Only three reservoirs were sampled in the report period. Growth was good from largemouth bass fry plants in 1987 at both of the Williams bass Reservoirs (Table 2). Williams Reservoir #3, planted with trout for the first time in 1987 was only 8 feet deep and abundant black bullheads were observed. No further fish planting is planned here.

Prairie County

Silvertip Reservoir was planted in June 1987 with an experimental plant of saugeye fingerling to add a predator to a reservoir with crappie and fathead minnows. Sampling early and late in summer 1988 failed to find any of the saugeye (Table 2). A nearby landowner reported seeing dead fish that could have been saugeye in early June 1988. Sampling found crappie weighing over 500 grams but yellow perch, white suckers and green sunfish were also present. These last 3 species could have been present only by illegal introduction. By late summer the reservoir was only seven feet deep, so it's unlikely that any fish remain in 1989.

Oil pump reservoir contained at least two year classes of trout, b ut growth of the 1988 fingerling plant was poor. Clark Reservoir was poisoned in August 1988 to remove illegally planted northern pike and green sunfish. The decision was mutually made with BLM personnel to keep this as a rainbow trout reservoir. On 8-24-88 we applied 65 gallons of 2 1/2 percent rotenone (Nusyn Noxfish, Roussel Bro. Corp.) to an estimated 80 acre-feet of water. Sampling 2 weeks later found one white sucker and one green sunfish in eight gill net sets. Hopefully, the shallow maximum depth (7 feet) in late 1988 will not allow these species to overwinter.

No Name and Marshall reservoirs were nearly dry in 1988. No additional fish planting is planned.

Richland County

Yellow perch are doing well at Buxbaum West Reservoir. Perch up to 360 grams were sampled. White suckers are still present. Sampling at Buxbaum Reservoir found at least 3 year classes of rainbow trout. Wicks reservoir was only 5 feet deep and no trout were present. A summer kill situation may have killed the 1988 fingerling plant.

An attempt was made to gain access to factory lake, the Holly Sugar Company water supply reservoir at Sidney. The reservoir has several

species of game fish, but the company finally decided against public access.

Rosebud and Wibaux Counties

Castle Rock Lake continues to have excellent fish population (Table 2). Northern pike and bluegill continue to be abundant. Some bluegill in gill net samples weighed up to 300 grams. Largemouth bass numbers are increasing. Walleye numbers will remain low until fingerlings are available for planting. Reports of ling at the reservoir were received for the first time in 1988. The Yellowstone River water supply is probably the source.

Big Timber Trout Reservoir had 2 year classes of rainbow trout, with the largest fish exceeding 800 grams. Houck Reservoir had only the 1988 plant of rainbow trout.

Witkowski Reservoir was treated to effect a partial kill of yellow perch. Sampling in summer 1988 found that most perch were small. One quart of 2 1/2 % rotenone was applied on 8-25-88 to the shoreline of the reservoir estimated at 3-4 acre feet of water. Several thousand yellow perch and 6 northern pike were observed dead the day of application. One seine haul 18 days later sampled 3 white suckers, 4 northern pike, 26 yellow perch and several hundred fathead minnows.

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Date: August 10, 1989

Waters referred to:

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

Keywords

small reservoirs	bluegill
largemouth bass	black bullhead
rainbow trout	northern pike
yellow perch	walleye

Table 1. Results of New Pond Survey In 1988

Pond Name	County	Location T	R	S	Max. Depth (Ft.)	Fish Species Present	Recommendations
Franklin, Joe	Garfield	15N,	38E	34	5	Not sampled	Don't plant
Trumbo, John	Garfield	20N,	37E	5 or 8	15	Fathead minnows	Plant largemouth bass and yellow perch

Table 2. Results of fish sampling for southeastern Montana ponds, summer 1988.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
		Big Horn County					
Indian Cr Reservoir	2 seine hauls	BG	32	122	36	75-155	20-60
		BGyoy	3	13		12-14	
		LMB	6	155	62	118-200	20-110
		LMByoy	2	44		43-45	
	2 gill nets	BG	13	127	40	98-174	15-100
		WSU	6	353	458	327-366	400-570
		Carter County					
LaBree, Pat Res.	1 seine haul	BBh	148	137	23	126-163	15-30
		LMB	6	130	27	126-138	20-30
Sidehill Res.	1 seine haul	LMB	1	124			30
		LMByoy	14	35		29-42	
Sidney Res.	1 seine haul	GSh	75	(approx)		60-150	
	2 gill nets	GSh	50	(approx)		130-180	
		RRT	21	280	245	231-424	140-790
Horton Res.	1 seine haul	RBT	15	142	35	115-170	15-60
	1 gill net	RBT	59	255	245	143-328	40-420
Frigid Res.	1 gill net	RBT	47	300	348	149-366	30-590

Table 2 (cont'd.)

Talcott Res.	2 seine hauls	YP	500 (appr)	131	40	83-235	5-200
		NP	1	645	2150		
		FHM	2000 (appr)				
	2 gill nets	YP	116	224	212	140-295	30-440
		NP	16	546	1247	475-628	770-1810
			Custer County				
Haughian Henry Res.	1 seine haul	RBT	11	156	42	124-185	20-60
	1 gill net	RBT	16	294	304	258-320	250-380
Holmes, Res.	1 seine haul	LMB	7	173	58	149-184	35-70
			Dawson County				
Prairie Goat Res.	1 seine haul	LMB	1	178	80		
Rattlesnake Res.	2 seine hauls	no fish					
	1 gill net	LMB	6	261	292	252-269	260-330
Hollecker Pond	2 seine hauls	LMB	2	198	90	191-204	80-100
		LMByoy	1	58			
		GrSu	1	127	37		
		BCr	19	132	27	118-141	10-40
	2 gill nets	BCr	3	129	25	110-139	15-35
		WCr	7	134	23	123-140	15-30
		NP	1	467	660		
		YP	1	198	80		
		LNSu	4	280	252	229-331	130-420
		RhSu	3	343	430	333-362	360-550
		WSu	3	325	365	306-347	315-420
		RcSu	4	270	295	201-326	100-480
			Fallon County				
Rush Hall Res.	2 seine hauls	LMByoy	92	42		36-60	
		FHM	6				
		BrSt	6				
	2 gill nets	NP	2	665	2075	662-668	2050-2100
		WSu	1	437	1000		
McKay Ranch Res.	1 seine haul	LMB	9	118		66-316	

Table 2 (cont'd.)

Baker Lake	5 seine hauls	NP	12	386	309	314-418	150-420
		YP	2	135		134-137	
		YPyoy	39	61		58-66	
		LMByoy	30	57		53-64	
		BBh	1	265			
	3 gill nets	NP	71	429	512	368-632	260-1780
		YP	3	260	320	240-282	260-390
		BBh	299	198	182	115-315	20-670
South Sandstone Res.	4 seine hauls	YP	362	118		106-134	
		YPyoy	471	59		55-62	
		LMByoy	1	45			
		WEyoy	3	73		70-76	
		GS	1	89			
	3 gill nets	WE	20	422	876	285-635	210-2940
		NP	7	606	1460	575-620	1320-1590
		YP	121	173	53	150-231	25-150
		BBh	66	175	65	161-191	40-100
		CCat	1	271	130		
		WS	1	431	880		

Garfield County

Brook, L.C. #1	2 seine hauls	No fish					
	1 gill net	No fish					
Brook, L.C. #3	1 seine haul	No fish					
	2 gill nets	No fish					
Smith Cattle #1	1 seine haul	RRt	10	173	78	123-291	30-240
Engdahl, Cottonwood	3 seine hauls	LMB	2	225	145	223-227	140-150
		YP	4	110		105-113	
		YPyoy	16	37		34-38	
		Carp	6	295	338	285-310	280-370
	2 gill nets	LMB	2	202	115	200-205	110-120
		YP	11	196	88	178-217	60-110
		WSu	2	324	390	321-328	380-400
		Carp	7	319	401	265-416	250-780
Clark, Ralph	2 seine hauls	FHM	numerous				
		Dace	numerous				
	1 gill net	RBT	16	404	868	352-483	600-1600
Saylor, Bass Pond	1 seine haul	LMB	3	215	133	208-219	120-150

Table 2 (cont'd.)

Kreider, Trout Pond	1 seine haul	FHM	750 (approx)				
	2 gill nets	RBT	101	32	420	156-360	40-600
Phipps, Bobby	1 seine haul	RBT	1	483	1190		
		FHM	24 (approx)				
	2 gill nets	RBT	150	313	735	150-553	45-2390
Whiteside Charles	1 seine haul a/	YP	3	232	160	215-251	130-210
		WE	4	206	85	173-236	60-110
	1 gill net	YP	31	215	135	190-257	80-230
		WE	19	275	213	173-430	40-600
		WSU	6	354	503	335-394	450-640
Powder River County							
Williams Res. #1	1 gill net	LMB	26	172	84	149-215	50-170
Williams Res. #2	1 gill net	LMB	4	212	132	201-224	120-150
Prairie County							
Silvertip Res. (6-23-88)	1 seine haul	BCr	1	142	50		
		FHM	12 (approx)				
	2 gill nets	WCr	9	155	90	109-285	10-350
		BCr	2	130	30	123-136	20-40
		WSu	1	166	50		
		YP	3	206	133	158-230	50-200
Silvertip Res. (9/6/88)	2 seine hauls	Cr	57	149	107	87-312	10-530
	2 gill nets	Cr	29	168	104	111-299	10-400
		WSu	4	237	112	225-249	100-120
Clarks Res.	1 seine haul	GSf	3	61		47-75	
	2 gill nets	RBt	60	370	610	282-498	280-1390
		NP	3	669	2433	103-744	1800-3100
		GS	5	127	60	106-198	20-200
Oil Pump Res.	2 seine hauls	RBT	53	169	106	89-394	5-650
Richland County							
Buxbaum West Res.	1 seine haul	YP	32	109	42	80-200	20-80
		FHM	4				
	1 gill net	YP	19	205	139	118-307	20-360
		WSu	5	400	782	362-439	540-1040
		LNSU	1	368			

a/ Fathead minnows, flathead chub and green sunfish also seen in seine haul.

Table 2 (cont'd.)

Buxbaum Res	2 seine hauls	RBT	5	379	848	132-496	20-1480
		FHM	100 (approx)				
Wicks, Casper Res.	1 gill net	No fish caught					
			Rosebud County				
Castle Rock Lake	5 seine hauls	BG (small)	118	40		20-48	
		BG (large)	63	115	68	60-182	10-140
		BG counted only	474				
		LMB	10	139	47	114-235	20-200
		LMByoy	6	47		37-58	
		Cr	3	130	23	125-135	20-30
		Cryoy	107				
	4 gill nets	NP	31	483	794	295-682	155-1940
		LMB	1	240	190		
		WE	3	430	737	333-495	310-1100
		BG	69	154	79	93-245	10-300
Big Timber Res #1	1 gill net	RBT	29	230	240	143-387	30-810
Hofer, Joe Res.	1 seine haul	No fish caught					
			Wibaux County				
Hauck Res.	1 gill net	RBT	16	149	38	134-167	20-50
Witkowski Res.	1 seine haul	YP	500 a/ (approx)				
				134	30	109-193	10-80
		NP	1	241	70		
		WE	1	557	1750		
	1 gill net	YP	35	178	72	157-283	40-250
		NP	25	525	1054	448-652	600-2000
		WSu	2	365	550	356-374	500-600

a/ weight and length based on sample of 20.