

Montana Department of Fish, Wildlife and Parks  
Fisheries Division

Job Progress Report

STATE: Montana PROJECT: Statewide Fisheries Investigations  
PROJECT NO. F-78-R-4 STUDY TITLE: Survey and Inventory of  
Warmwater Lakes  
JOB NO: IV-D JOB TITLE: Southeast Montana Warmwater Lakes  
Investigations  
PROJECT PERIOD: July 1, 1997 through June 30, 1998  
REPORT PERIOD: April 1, 1997 through March 31, 1998

ABSTRACT

Small fishing reservoirs in 8 counties were sampled to obtain fisheries information in 1997. A total of 21 reservoirs were sampled and information on one additional reservoir was supplied by BLM personnel. Two of these had never been planted with fish and were determined to have sufficient fisheries potential to warrant a plant. Of the remaining reservoirs, four were determined to have varying degrees of winter kill. Twelve reservoirs had fishable populations of target fish species.

PROCEDURES

Pond depths were determined by sounding with a calibrated, weighted rope. Fish populations were sampled with 125 feet long sinking experimental gill nets and a 1/4 inch bag seine of 100 feet length.

RESULTS AND DISCUSSION

Survey of New Ponds

Two new ponds were surveyed to determine suitability for producing fish (Table 1). The Pott's Reservoir had no fish present and was planted with largemouth bass. The Four Deer Reservoir information was provided by BLM personnel. It was planted with rainbow trout and largemouth bass. The trout will provide some fishing while the bass are becoming established.

## Survey of Previously Planted Reservoirs

### Carter County

Rainbow trout were observed to be dying at Gardner Trout Reservoir probably as a result of summer kill conditions. Gill netting, however, produced good numbers of trout (Table 2). Green sunfish present in previous years were not sampled in 1997. Largemouth bass and yellow perch were sampled in Gardner #2 Reservoir.

### Custer County

Smallmouth bass were not sampled in Dan Haughian Reservoir but largemouth bass and northern pike were present. This reservoir continues to be popular with fishermen in the region.

### Dawson County

Adult and young-of-the-year yellow perch and smallmouth bass were sampled in Johnson Reservoir (Table 2). This rebuilt reservoir was first planted with perch in 1995 and bass in 1996.

### Fallon County

Pinnow #3 Reservoir is susceptible to winter kill if not mostly full, but largemouth bass were present in 1997.

### Garfield County

Rainbow trout are overwintering in the two Fred Murnion Reservoirs; the stocking rate will be reduced to improve the growth rate. John Trumbo Reservoir sampling produced some nice largemouth bass and walleye and abundant yellow perch (Table 2). Twitchel Reservoir overwintered rainbow trout. Illegally introduced walleye were also sampled. Rainbow trout did not survive the winter at Gary Helm Reservoir as only the current spring plant was sampled.

### Prairie County

Fingerling largemouth bass were first planted in Clark Reservoir in 1996. Sampling in 1997 produced only one bass (Table 2). Bass survival may have been poor due to competition from green sunfish. Yearling bass were transplanted to Clark Reservoir in 1997 to help

get bass established. Gill netting produced largemouth bass in Homestead and Silvertip Reservoirs but no smallmouth bass were sampled.

### Richland County

Darryl Buxbaum Reservoir was replanted after 1997 sampling with largemouth and smallmouth bass because of severe winter kill. Seven fish species were sampled at Gartside Reservoir (Table 2). Crappie and yellow perch were less abundant in 1997 than in 1996, but perch were larger. Smallmouth bass and walleye were not sampled.

### Rosebud County

Walleyes averaging nearly 1.5 pounds were the most abundant fish in gill net catches at Castle Rock Reservoir (Table 2). Largemouth bass and northern pike are also doing well. Gill net catch rates for bluegill have trended downward while walleye numbers have been increasing (Table 3). The stocking rate for walleyes has been reduced from 5,000 to 1,000 fingerlings in hopes of increasing bluegill numbers.

Lee Pit Reservoir had young-of-the-year largemouth bass, but no adult bass were sampled. Lee Pit #2 Reservoir had bluegill, green sunfish and fathead minnows, but all fish sampled were small. Lee #2 and Lee #3 Reservoirs winter killed and were replanted with largemouth bass in summer 1997.

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### Water referred to:

Gartside Reservoir	21-3250
Castle Rock Lake	21-2527

### Keywords

Small reservoirs	Yellow perch	Rainbow trout
Largemouth bass	Crappie	
Smallmouth bass	Northern pike	

Table 1. Results of new pond surveys in 1997.

Pond Name	County	<u>Location</u>			Max. Depth (ft.)	Fish Species Present	Management Plan
		T	R	S			
Potts, Dave #2	Rosebud	9N, 40E, 2			14	None	Plant bass
Four Deer Reservoir	Carter	3S, 58E, 19			30	None	Plant RBT/Bass

Table 2. Results of sampling previously planted reservoirs, 1997.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>CARTER COUNTY</u>							
Gardner, Doug	2 gill nets	RBT	34	275	298	145-416	30-650
Gardner, Doug #2	2 gill nets	LMB	2	305	430	288-321	320-540
		YP	2	165	60	158-172	50-70
<u>CUSTER COUNTY</u>							
Haughian, Dan	2 Seine	LMBYOY	142	40	----	34-45	-----
	Hauls	NP	1	200	35	-----	-----
	2 Gill nets	LMB	1	355	700	-----	-----
		NP	23	413	471	240-486	100-780
<u>DAWSON COUNTY</u>							
Johnson Res.	4 seine	YP	36	156	50	135-183	30-80
	Hauls	YP YOY	8	65	---	56-82	-----
		SMB	2	174	75	161-186	60-90
	2 Gill Nets	YP	326	209	154	141-291	40-330
		SMB	1	211	140	-----	-----
<u>FALLON COUNTY</u>							
Pinnow #3 Res.	2 Gill nets	LMB	3	262	387	140-330	20-580

Table 2. Results of sampling previously planted reservoirs, 1997.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
GARFIELD COUNTY							
Murnion, Fred #1	2 Gill nets	RBT	88	232	187	188-255	100-250
Murnion, Fred #2	2 Gill nets	RBT	39	213	138	141-250	40-240
Trumbo, John	1 Seine	YP	17	158	49	109-206	10-100
	Haul	YP-Juvinal	31	60	---	45-98	-----
		LMB YOY	10	45	---	40-53	-----
		WE YOY	1	105	10	---	-----
	2 Gill nets	LMB	8	302	400	208-317	350-470
YP		77	173	64	146-217	40-110	
WE		4	408	683	392-435	600-850	
Twitchel Res.	1 Gill net	RBT	17	252	155	185-283	80-210
		WE	5	236	96	223-255	90-100
Helm, Gary Res.	1 Gill net	RBT	7	148	33	138-158	30-40
		WSU	5	270	258	258-275	230-270
PRAIRIE COUNTY							
Clark Reservoir	1 Seine	GS	29	87	---	57-102	-----
	Haul	FHM	6	Counted only			
	2 Gill nets	GS	175	119	41	99-208	10-230
		LMB	1	177	80	-----	-----
		RBT	10	292	264	245-398	150-610
Homestead Res.	2 Gill nets	LMB	23	204	130	175-285	70-350
Silvertip Res.	2 Gill nets	LMB	66	204	166	133-330	30-640
RICHLAND COUNTY							
Buxbaum, Darryle Gartside	4 Gill nets	BCR	2	103	---	102-103	-----
	3 Seine	LMB	13	181	80	163-195	50-100
	Hauls	YP	5	153	54	109-217	10-120
		YP YOY	2	42	---	40-43	-----
		BCR	81	170	78	127-220	20-230
		CR YOY	21	26	---	20-33	-----
		2 Gill nets	LMB	3	192	90	185-200
	YP		30	198	112	165-238	60-180
	BCR		12	170	78	120-220	20-160
	WCR		1	175	60	-----	-----
	CCAT		1	640	4500	-----	-----
	SNS		1	612	1000	-----	-----
	NP		1	646	2250	-----	-----

Table 2. Results of sampling previously planted reservoirs, 1997.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>ROSEBUD COUNTY</u>							
Castle Rock Res.	3 Seine Hauls	BG	58	113	40	70-191	5-160
		BGYOY	3420	44	---	32-51	----
		SMB	4	189	110	160-206	70-140
		SMBYOY	4	60	---	50-68	----
		LMB	2	133	35	60-165	10-60
		LMBYOY	37	61	---	41-77	----
		BCR	1	237	220	----	----
		NP	2	208	60	148-267	10-110
	4 Gill Nets	WE	46	396	626	250-535	140-1460
		NP	7	491	752	387-565	360-1200
		LMB	4	266	408	162-337	70-750
		SMB	1	374	910	----	----
		WCR	1	275	270	----	----
		BG	1	182	140	----	----
Lee Pit Reservoir	1 Seine Haul	LMBYOY	7	36-43	40	----	----
	1 Gill Net	No Fish					
Lee Pit #2 Reservoir	1 Seine Haul	BG	19	45-72	62	----	----
		FHM	6	54-70	60	----	----
		GS	13	43-95	62	----	----
	1 Gill Net	No Fish					
Lee #2 Reservoir	2 Gill Nets	No Fish					
Lee #3 Reservoir	1 Seine Haul	No Fish					
	2 Gill Nets	No Fish					

Table 3. Mean total length and catch rate (average number per gill net set) of bluegill, walleye and northern pike at Castle Rock Lake.

Year	<u>BLUEGILL</u>		<u>WALLEYE</u>		<u>NORTHERN PIKE</u>	
	Catch Rate	Mean Length (mm)	Catch Rate	Mean Length (mm)	Catch Rate	Mean Length (mm)
1983	3.0	126	0.3	517	7.0	364
1984	10.5	124	0.5	250	12.8	450
1987	33.3	154	0.2	258	4.2	478
1988	17.2	154	0.7	430	7.8	483
1989	10.0	156	0.0	---	6.7	445
1990	13.7	164	0.3	321	3.3	494
1991	21.8	170	3.0	409	4.0	422
1992	3.7	162	3.7	408	3.7	476
1994	4.8	176	7.8	408	1.5	466
1995	6.3	165	8.0	415	2.3	495
1996	3.3	172	10.0	334	1.0	506
1997	0.3	182	11.5	396	1.8	491