

Montana Department of Fish, Wildlife and Parks  
Fisheries Division

Job Progress Report

STATE: Montana PROJECT: Statewide Fisheries Investigations

PROJECT NO. F-78-R-3 STUDY TITLE: Survey and Inventory of  
Warmwater Lakes

JOB NO: IV-D JOB TITLE: Southeast Montana Warmwater Lakes  
Investigations

PROJECT PERIOD: July 1, 1996 through June 30, 1997

REPORT PERIOD: April 1, 1996 through March 31, 1997

ABSTRACT

Small fishing reservoirs in 6 counties were sampled to obtain fisheries information in 1996. A total of 23 reservoirs were sampled. Four of these had never been planted or had not been planted in recent years. They were visited to determine fisheries potential. Three of these were determined to have sufficient potential that a fish plant was warranted. Of the remaining reservoirs only one was found to be devoid of fish, probably from lack of water or winterkill. Eighteen 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**

Four new ponds were surveyed to determine suitability for producing fish (Table 1). The one Helm pond had carp present which makes it difficult to develop a good sport fishery. The second Helm pond had no fish and was more accessible. It was planted with rainbow trout as was the Twitchel Reservoir. Bluegills were planted in the Philbrick Reservoir and it will get bass in 1997.

### **Survey of Previously Planted Reservoirs**

#### **Custer County**

Seining at Beardsley and Smith Cattle Trail Creek Reservoirs showed yearling largemouth bass to be present (Table 2). Young-of-the-year largemouth bass were observed at Beardsley Reservoir.

#### **Dawson County**

Lindsay Reservoir has yellow perch, northern pike black bullheads and carp present. This reservoir occasionally suffers some winterkill.

### Fallon County

Yellow perch are small but abundant in South Sandstone Reservoir (Table 2), but large walleye and northern pike are present. Bass and crappie are not abundant. Black bullheads are the most abundant fish in Baker Lake and weigh up to 400 grams. Northern pike, yellow perch and white crappie are scarce. Rainbow trout were present in both of the Pinnow reservoirs. Maier Reservoir had an abundance of one-year-old largemouth and smallmouth bass and should provide some excellent fishing.

### Garfield County

Rainbow trout made it through the first winter at the two Fred Murnion reservoirs. No fish were found at The FitzGerald Reservoir and it will not be replanted. Whiteside Reservoir had walleye to three pounds and yellow perch to one half pound. Flathead chubs, golden shiners, redhorse suckers, white suckers and carp are also present here.

### Richland County

Sampling at Gartside Reservoir found seven fish species present (Table 2). The average weight of northern pike is continuing to increase. Crappie and yellow perch were more abundant in 1996 than in 1995 but are small. Smallmouth bass were not sampled and only one small walleye was sampled. Seining at Daryle Buxbaum Reservoir found largemouth bass, smallmouth bass and crappie young-of-the-year to be present. Walter Buxbaum Reservoir has yellow perch.

### Rosebud County

Walleye averaging one pound were the most abundant fish in gill net catches at Castle Rock Reservoir (Table 2). Large bluegill continue to be the mainstay of the fishery but northern pike, largemouth and smallmouth bass are also doing well.

Table 3 shows historic size and gill net catch rate for important Castle Rock Lake fish species. Planting of 500 walleye fingerlings per year has greatly increased the number of adult walleye present.

At the same time bluegill catch rate has decreased sharply. Beginning in 1997 the walleye plant will be reduced to 1,000 per year in hope of increasing bluegill abundance.

Largemouth bass planted as fingerlings in John Killen Reservoir in 1995 could not be found in 1996. Probably do to competition from tremendous numbers of minnows and crayfish. Adult bass were planted later in 1996 to better compete with existing fish and crayfish. Rainbow trout and largemouth bass are present in Zemple Reservoir but the landowner no longer wishes to participate in the pond program.

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Date: February 13, 1997

Water referred to:

Baker Lake	21-1778
South Sandstone Res.	21-8775
Gartside Reservoir	21-3250
Castle Rock Lake	21-2527

Keywords

Small reservoirs	yellow perch
largemouth bass	crappie
smallmouth bass	northern pike
rainbow trout	

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Table 1. Results of new pond surveys in 1996.

Pond Name	County	Location			Max. Depth (ft.)	Fish Species Present	Management Plan
		T	R	S			
Helm, Gary #1	Garfield	17N	43E	27	15	carp FHM	Don't plant
Helm, Gary #2	Garfield	17N	43E	33	12	None	Plant RBT
Twitchel Reservoir	Garfield	21N	42E	17	11	None	Plant RBT
Philbric, Newel	Rosebud	3N	42E	15	19	None	Plant bass

Table 2. Results of sampling previously planted reservoirs, 1996.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>CUSTER COUNTY</u>							
Smith Cattle - Trail Creek	1 Seine Haul	LMB	12	194	114	167-218	70-150
Jim Beardsley Res	1 Seine Haul	LMB	16	132	29	112-171	20-50
		LMB (YOY)	3	39	0	34-42	0
<u>DAWSON COUNTY</u>							
Linsey Reservoir	2 Seine Hauls	YP	6	118	13	104-146	10-30
		NP	1	355	200	---	---
		NP (YOY)	2	106	---	95-117	---
	2 Gill Nets	BBH	22	152	49	130-200	30-110
		YP	2	173	50	---	---
		NP	3	582	1260	434-735	380-2510
		Carp	4	405	773	394-416	710-850

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>FALLON COUNTY</u>							
Pinnow Trout Res	2 Gill Nets	RBT	16	293	329	164-340	70-450
Pinnow #2 Res.	1 Gill Net	RBT	2	377	795	333-420	610-980
Maier Res.	2 Gill Nets	LMB	58	186	92	172-211	60-140
		SMB	85	157	45	132-188	30-70
		GS	1	135	30	---	---
Baker Lake	4 Seine Hauls	YP	17	201	130	172-230	60-200
		YP (YOY)	20	69	---	62-78	---
		CR (YOY)	3	36	---	32-40	---
		BBH	5	264	293	255-278	240-350
		BBH (small)	60	98	---	64-130	---
	2 Gill Nets	NP	2	419	400	402-436	300-500
		YP	9	218	182	160-277	50-350
		BCR	1	203	150	---	---
		BBH (large)	79	267	289	203-283	100-400
		BBH (small)	59	123	---	113-136	---
S. Sandstone Res	4 Seine Hauls	WE (YOY)	4	87	---	80-102	---
		YP	440	108	17	87-194	5-85
		YP (YOY)	2	57	---	56-58	---
		NP	3	123	---	102-143	---
		CR (YOY)	6	41	---	36-51	---

# Fallon County Continued

<u>Pond Name</u>	<u>Type of Sample</u>	<u>Species</u>	<u>No. Caught</u>	<u>Mean Length (mm)</u>	<u>Mean Weight (gm)</u>	<u>Length Range (mm)</u>	<u>Wt. Range (gm)</u>
S.							
Sandstone							
Res. (cont)							
	4 Seine Hauls	GS	1	165	90	---	---
		BBH	1	270	300	---	---
	3 Gill Nets	WE	24	453	938	336-617	370-2550
		YP	163	193	86	166-207	60-110
		NP	42	507	884	383-745	350-2600
		BCR	3	265	287	255-276	250-330
		BBH	6	271	330	258-292	300-380

## GARFIELD COUNTY PONDS

Murnion,							
Fred#1	2 Gill Nets	RBT	34	184	87	161-203	60-130
Murnion,							
Fred#2	2 Gill Nets	RBT	10	176	70	142-195	30-110
FitzGerald,							
Tom	1 Gill Net	0	---	---	---	---	---
Whiteside	1 Seine Haul	YP	104	85	---	73-114	---
Res.		G Shiner	3	76	---	68-88	---
		RHSU	1	224	110	---	---
		WE	9	449	826	385-558	500-1500
	2 Gill Nets	YP	5	203	140	163-293	50-380
		FHC	1	188	60	---	---
		Carp	1	296	370	---	---
		WSU	6	384	690	332-456	450-1020



Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>RICHLAND COUNTY</u>							
Buxbaum, Daryl	2 Seine Hauls	LMB	2	191	105	188-193	100-110
		SMB	1	160	50	---	---
		CR (YOY)	2	36	---	35-37	---
Buxbaum, Walter	2 Gill Nets	YP	8	232	76	164-253	40-160
Gartside Res.	3 Seine Hauls	LMB	14	137	35	116-173	20-50
	2 Gill Nets	NP	5	739	2670	611-847	1360-3870
		YP	54	174	101	135-210	60-150
		WE	1	216	110	---	---
		BCR	138	170	107	105-202	30-150
		BG	1	96	30	---	---
		WSU	2	433	990	415-450	880-1100

ROSEBUD COUNTY

<u>Pond Name</u>	<u>Type of Sample</u>	<u>Species</u>	<u>No. Caught</u>	<u>Mean Length (mm)</u>	<u>Mean Weight (gm)</u>	<u>Length Range (mm)</u>	<u>Weight Range (gm)</u>
John Killen #1	3 Seine Hauls	RBT	11	146	---	88-310	---
		Minnows	3000	---	---	---	---
		RBT	14	270	256	148-419	30-770
John Killen #2	2 Gill Nets	FHC	2	156	30	138-174	20-40
		RBT	1	172	60	---	---
		FHC	30	---	---	---	---
Zemple Res.	2 Gill Nets	RBT	30	255	210	144-363	20-510
		RBT	4	490	1360	483-503	1200-1520
		LMB	8	164	93	150-191	70-140
Castle Rock Res.	5 Seine Hauls	LMB	18	164	98	105-282	10-410
		LMB (YOY)	2	36	---	35-37	---
		BG	81	120	45	90-216	10-230
		BG (small)	156	62	---	37-93	---
		GS	3	47	---	37-66	---
		WCR	2	135	43	90-180	5-80
		NP	1	363	270	---	---
		NP (YOY)	2	73	---	72-73	---

Rosebud County (Cont.)

<u>Pond Name</u>	<u>Type of Sample</u>	<u>Species</u>	<u>No. Caught</u>	<u>Mean Length (mm)</u>	<u>Mean Wt (gm)</u>	<u>Length Range (mm)</u>	<u>Wt Range (gm)</u>
Castle Rock Res.	3 Gill Nets	WE	30	334	448	202-567	140-1860
		LMB	2	253	285	245-261	270-300
		NP	3	506	767	460-562	570-1070
		BG	10	172	138	92-227	30-270
		WSU	1	460	1400	---	---

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	Mean	Catch	Mean	Catch	Mean
	Rate	Length(mm)	Rate	Length(mm)	Rate	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