

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

STATE: Montana **PROJECT TITLE:** Statewide Fisheries Investigations

PROJECT NO: F-46-R-3 **STUDY TITLE:** Survey and Inventory of Warm-
water Lakes

JOB NO: IV-d **JOB TITLE:** Southeast Montana Warmwater Lakes
Investigations

PROJECT PERIOD: July 1, 1989 through June 30, 1990

REPORT PERIOD: April 1, 1989 through March 30, 1990

ABSTRACT

Small fishing reservoirs in 11 southeastern counties were sampled for physical and biological information in 1989. Requests were received from landowners to plant 24 previously unplanted ponds. Only nine of these were considered suitable for fish. Four reservoirs were treated with rotenone to eliminate undesirable fish populations.

OBJECTIVES AND DEGREE OF ATTAINMENT

1. To maintain sport fishing for suitable species in the 84 small reservoirs presently under management and 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. Nine new ponds were added to the public fishing list during the report period.
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 1990. 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.

Rotenone was used to chemically remove undesirable fish populations. The product used was 2½% synergized rotenone from the Roussel Bio Corp. This material was applied to the outboard motor prop wash in deeper water. A hand sprayer was used to apply rotenone to shallow or weedy areas.

RESULTS AND DISCUSSION

Survey of New Ponds

Local newspaper advertising was used in March 1989 to obtain new ponds for public fishing. As a result we received more than the usual number of requests to plant new ponds. Requests were received to plant 24 new ponds (Table 1). Nine of these were considered suitable and were planted with either rainbow trout or largemouth bass.

Survey of Previously Planted Reservoirs

Carter County

Results of sampling Carter County reservoirs are shown in Table 2. Both green sunfish and trout survived the winter of 1988-89 despite low water levels. Trout growth and survival remain good despite the presence of green sunfish.

Following lack of survival of several largemouth bass plants at the LaBree reservoir, 180 gallons of rotenone were used to remove black bullheads. Later sampling indicated that the bullhead kill was complete.

Custer County

Sampling at the Dan Haughian Reservoir showed that northern pike have become established through illegal planting. At least two year classes of northern pike were found. Numbers of adult largemouth bass seemed lower than in past years.

With full operation of the Miles City Hatchery, Spotted Eagle Pond is receiving large amounts of water enriched with nutrients and organic matter. Sampling found that size of adult crappie has increased, although channel catfish remain small.

Dawson County

Hollecker pond continues to have only small game fish. The presence of large numbers of fish from the Yellowstone River, though the ditch that fills the pond, will probably continue to inhibit game fish growth and survival. Rattlesnake Reservoir did not winterkill as was expected. Largemouth bass over 700 grams weight were sampled. The Shaw pond was treated with 45 gallons of rotenone to remove bullheads, following the failure of largemouth bass survival.

Fallon County

Baker Lake had fish winterkill early in 1989. No perch were sampled and only a few northern pike. The largemouth bass were from a plant in 1989. Surprisingly no northern pike were sampled in South Sandstone Reservoir. This may be a "fluke" of sampling because this species has been common to abundant in the past. The Pruett Reservoir carried trout over the winter 1988-89.

Garfield County

Largemouth bass at the Chamberlain Reservoir have grown slowly, following the 1986 plant. These fish spawned for the first time in 1989 and growth should improve. No largemouth were found at the Engdahl Bass Pond, probably due to winterkill early in 1989. This pond is of marginal depth, even if full, and no further attempts will be made to produce fishing here. No trout overwintered in the Engdahl Trout Pond. If this occurs one more winter, no additional fish plants will be made because pond depth is probably insufficient here also. Growth of perch and bass at the Engdahl Cottonwood Pond has been only fair, but size should improve with time.

No adult bass were sampled at the Jarden Bass Pond, but anglers report catching adult bass and a large number of largemouth YOY were sampled. Both adult and YOY of both smallmouth and largemouth bass are present at Kreider #1 Pond. The Jarden, O'Conner, Ryan and Watt ponds showed no evidence of over-wintered trout. These four ponds are expected to over-winter trout with more normal water levels.

Growth of largemouth bass from the 1988 fingerling plant at the Trumbo Pond was excellent and YOY yellow perch were sampled despite a very small plant of perch in 1988.

Powder River County

No fish survival was found at Sam's Pond. This pond had only a few feet of water and no further management is planned. Largemouth bass failed to survive at Yonkee Reservoir and only lake chubs were present. This pond was poisoned on October 23, 1989, with five gallons of rotenone. Water temperature was approximately 50° F. Rainbow trout fingerlings were planted in April 1990.

Prairie and Richland Counties

Seining and gill netting at Homestead Reservoir failed to sample any of the bigger largemouth bass, but 1 hour of night electrofishing collected several largemouth bass in the 400-900 gram range. Initial growth of largemouth bass at Silvertip Reservoir was good. Largemouth bass at Kvalen Reservoir survived the winter and growth of some individuals was excellent.

Rosebud and Wibaux Counties

Construction of Black's Reservoir on the Custer National Forest was completed in fall 1989. Three small ponds, known to have black bullheads and possibly other species, were located in the basin that would be inundated by the new reservoir. A total of 10 gallons of rotenone was used to remove fish. Blacks Pond partially filled early in 1990 and rainbow trout fingerlings were planted in April 1990.

No YOY walleye were seined at Castle Rock Reservoir despite a plant of 5,000 fingerlings in June 1989. Northern pike remain abundant, but relatively small. The Hofer, Neuman, and Ringstveidt reservoirs probably had no fish present, but these will be replanted now that water levels are better. Largemouth bass growth has been disappointing at Wibaux Pond and very few crappie seem to be present.

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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 surveys in 1989.

Pond Name	County	Location T R S	Max Depth (ft)	Fish Species Present	Management Plan
Hanley, Pat	Carter	4N, 58E, 21	11	None	Plant trout
Haughian, Alan	Custer	11N, 47E, 25	10	None	Don't plant
Klaboe, Rick	Custer	10N, 49E, 31	5	Unknown	Don't plant
Murray	Custer	7N, 48E, 14	10	Bluegill	Don't plant
Pettersen, Frank	Dawson	16N, 56E, 7	7	Unknown	Don't plant
Coulter, Rod	Garfield	21N, 34E, 13	8	Unknown	Don't plant
Coulter, Rod	Garfield	21N, 35E, 8	12	None	Plant trout
Lyman Res.	Garfield	18N, 31E, 2	12	None	Plant LMB
Murnion, Fred	Garfield	14N, 42E, 6	11	Unknown	Don't plant
Stanton, Ronnie	Garfield	20N, 33E, 13	14	None	Plant LMB
Kirkpatrick, Gary	Prairie	11N, 52E, 4	13	None	Don't plant
Baue, Donald	Richland	25N, 57E, 22	10	Unknown	Don't plant
Buxbaum, Darrell	Richland	21N, 60E, 31	11½	Brook stickleback	
Beecher, Ray	Rosebud	12N, 40E, 21	11	None	Don't plant
Big Timber	Rosebud	10N, 34E, 2	17	None	Don't plant
Livestock					Plant trout
Killen, John	Rosebud	12N, 42E, 7	7 ^a	None	Don't plant
McDaniel, Jerry	Rosebud	9N, 40E, 20	13	None	Plant LMB
McDaniel, Jerry	Rosebud	9N, 40E, 20	9	Unknown	Don't plant
Miller, Tim	Rosebud	13N, 37E, 28	11	None	Don't plant
Potts, Dave	Rosebud	9N, 40E, 13	14	Fathead minnow	Plant trout
Blankenship, Van	Rosebud	4N, 44E, 13	6	None	Don't plant
Blankenship, Van	Rosebud	3N, 44E, 11	9½	Unknown	Don't plant
Kicker, Robert	Treasure	8N, 33E, 9	16	None	Plant LMB
Kicker, Robert	Treasure	8N, 33E, 7	14½	None	Plant LMB

^a Could be much deeper if dam was repaired.

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
<u>Carter County</u>							
Craft #1 Res	1 gill net	No fish					
Craft #2 Res	1 gill net	No fish					
Gardner Res	1 seine haul	FHM	100				
	2 gill nets	RBT	43	262	297	159-395	45-870
		GS	15				
Labree, Pat Res	5 seine hauls	BBH	164	5-8 inch range			
McNab Res	2 seine hauls	RBT	2	199	70	190-208	60-80
Richardson, George Res	1 seine haul	BBH	60	3-5 inch range			
Talcott Res	1 gill net	NP	1	613	1630		
		YP	18	164	51	134-218	20-100
<u>Custer County</u>							
Beardsley, Jim #2 Res	1 seine haul	LMB	2	134	35	129-140	30-40
		FHM	100				
Haughian, Dan Res	1 seine haul	LMB YOY	311	64	-	50-80	-
		SMB YOY	13	58		51-76	
	2 gill nets	LMB	2	328	540	-	-
	Night shocking	LMB	9	270	313	213-314	150-480
		LMB YOY	95	73	-	60-88	-
		SMB YOY	1	70	-	-	-
		NP	4	422	580	315-670	190-1600

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Holmes Res	1 seine haul	LMB	3	199	82	190-212	70-100
		LMB YOY	1	69	-	-	-
Spotted Eagle Res	6 seine hauls	LMB YOY	1	61	-	61-98	-
		SMB YOY	7	78	-	163-203	50-90
		WC	5	181	69	35-92	
		Cr YOY	146	69	86	80-92	
		YP	5	86	210		
		CCat	1	315	690		
		Carp	1	400			
		FHC	4	78		62-96	
	2 gill nets	WE	4	277	179	248-325	115-270
		CCat	42	340	272	302-382	175-390
		WCr	11	204	110	189-242	80-190
		NP	1	475	650		
		Carp	1	370	580		
		RCSu	1	635	3875		
Taylor, Cody Res	2 seine hauls	BBH	15	261	267	236-298	170-450
<u>Dawson County</u>							
Hollecker Res	2 seine hauls	LMB YOY	3	61		57-65	
		SMB YOY	13	53		50-62	
		YP	1	112	10		
	2 gill nets	WCR	28	138	23	133-148	20-30
		RCSu	6	348	577	253-383	200-770
		BBH	1	164	60		
Prairie Goat Res	2 gill nets	No fish					
Rattlesnake Res	1 seine haul	LMB YOY	495	54	-	44-66	
	2 gill nets	LMB	2	335	695	325-345	650-740

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Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Fallon County							
Shaw Res	2 seine hauls	BBH	2	165	-	160-170	-
	1 gill net	BBH	67	158	49	140-183	30-70
Baker Lake	5 seine hauls	LMB YOY	35	71		57-78	
		NP	3	364	317	276-412	210-380
	3 gill nets	NP	5	398	346	375-415	250-390
		BBH	231	234	241	194-292	150-550
Maier Res	1 seine haul	LMB YOY	40	59		40-86	
		Cr YOY	156	35		28-48	
	1 gill net	YP YOY	4	62		50-67	
		LMB	3	280	288	266-293	250-330
		YP	1	137	40		
		WSu	1	368	600		
Pruett, Clyde Res	1 seine haul	RBT	1	165	60		
	1 gill net	RBT	38	195	111	153-357	45-480
S Sandstone Res	6 seine hauls	LMB	3	148	50	146-150	40-60
		LMB YOY	8	56		49-60	
		SMB YOY	4	45		40-48	
		WE YOY	2	97	10	83-112	
		YP	372	110	14	88-132	5-30
		YP YOY	566	57	-	54-62	
		BC YOY	1	40			
		BBH	5	173	71	170-175	65-80

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
South Sandstone Res	3 gill nets	GS	4	82		66-98	
		WE	19	467	1057	365-605	430-2500
		YP	48	144	22	129-161	10-40
		BBH	9	191	86	175-209	50-200
<u>Garfield County</u>							
Brooks, L.C.	1 seine haul	No fish					
Chamberlain, Curtis Res	1 seine haul	LMB YOY	3	46		43-49	
	2 gill nets	LMB	12	185	90	142-248	40-185
Clark, Emmett Res	1 seine haul	LMB YOY	103	53		48-64	
	2 gill nets	LMB	1	296	340		
		WCr	1	313	560		
Engdahl Bass Res	1 seine haul	No fish					
	2 gill nets	No fish					
Engdahl #2 Trout Res	1 seine haul	FHM	200				
	1 gill net	RBT	31	166	50	151-187	30-70
Engdahl Cottonwood Res	1 seine haul	LMB	2	200	90	174-227	60-120
		LMB YOY	2	32		27-38	
		YP	10	129	31	60-183	5-60
		YP YOY	13	44		39-47	
	2 gill nets	LMB	6	248	178	233-264	110-230
		YP	2	174	55	165-184	50-60
		Carp	3	289	300	253-321	200-400
		WSu	2	289	265	287-291	260-270

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Harbaugh, Carl Res	1 seine haul	LMB YOY	120	47		31-69	
	2 gill nets	LMB	4	279	342	251-291	270-400
Jardan, Don #1 (Bass) Res	1 seine haul	LMB YOY	1020	60		43-95	
	2 gill nets	RBT	2	366	560	338-395	520-600
Jarden, Don #2 (trout) Res	1 gill net	RBT	1	206	100		
Kreider, Dale # 1 Res	1 seine haul	LMB	3	202	150	148-294	50-350
		LMB YOY	540	44		30-52	
	2 gill nets	SMB YOY	12	56		47-68	
		LMB	7	194	140	147-286	50-370
		SMB	2	326	485	314-339	420-550
O'Conner, L.P. # 1 (Bill) Res	1 gill net	RBT	19	203	98	173-228	55-135
Ryan, John #1 Res	1 gill net	RBT	4	223	160	198-253	105-240
Saylor, Irvin Res	1 seine haul	No fish					
	1 gill net	RBT	19	281	392	205-400	100-985
Severson #1 Res	1 gill net	No fish					
Severson #2 Res	1 gill net	LMB	17	197	121	178-217	80-180
Severson #3 Res	1 gill net	RBT	66	247	249	179-404	70-780

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Severson #4 Res	1 seine haul 1 gill net	no fish RBT	1	188	90		
Trumbo, John Res	2 seine hauls	LMB YP YOY FHM	2 45	219 46	155	195-243 41-53	100-210
Watt, K.V. (Doug) Res	1 seine haul 1 gill net	RBT FHM RBT FHC	1 100 14 1	175 181 162	60 74 30		40-170
<u>Powder River County</u>							
Sams Pond	1 seine haul	No fish					
Yonkee Res	1 seine haul 1 gill net	Lake chub no fish	50				
<u>Prairie County</u>							
Grant Res	1 gill net	No fish					
Homestead Res	1 seine haul 2 gill nets Night shocking	LMB SMB YOY LMB LMB LMB YOY SMB YOY	1 8 14 87 42 2	207 60 217 226 65 66	130	55-66 186-267 188-383 53-100 62-70	85-270 80-820
Silvertip Res	1 seine haul	LMB YOY SMB YOY FHM	4 13 100	98 76		96-100 62-94	

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Prairie County Cont.							
Silvertip Res.	2 gill nets	LMB YOY	4	124	27	120-131	20-355
<u>Richland County</u>							
Kvallen, Res	2 seine hauls	LMB	10	174	114	134-256	30-315
		BBH	9	163	67	147-230	30-200
		WSu	148	156	47	111-188	10-70
		? minnow	4				
<u>Rosebud County</u>							
Castle Rock Res	6 seine hauls	LMB	16	168	72	125-262	30-240
		LMB YOY	2	34		30-38	
		NP	1	330	180		
		NP YOY	1	83			
		BCr	5	182	82	169-201	70-110
		BG	60	150	75	93-205	30-120
		BG YOY	132	44		25-75	
		Pseed	1	78			
		WE	3	564	1607	522-623	
						1121-2330	
	4 gill nets	NP	20	445	508	253-555	60-860
		LMB	1	206	90		
		BG	40	156	81	99-214	20-200
		WC	1	302	310		
Grebe #2 Res	1 seine haul	RBT	6	194	100	167-205	50-120
	1 gill net	RBT	16	205	110	158-227	30-150
Grebe #3 Res	1 seine haul	LMB YOY	1	79			
	2 gill nets	No fish					

Table 2. Results of sampling previously planted reservoirs, 1989.

Pond Name	Type of Sample	Species	No. Caught	Mean Length (mm)	Mean Weight (gm)	Length Range (mm)	Weight Range (gm)
Hofer, Joe Res	2 gill nets	No fish					
Mysse, Sievert	1 seine haul	No fish					
	2 gill nets	No fish					
Newman, Albert	1 seine haul	No fish					
Ringstveidt, Ray Beecher)	2 seine hauls	No fish					
Res	2 gill nets	No fish					
Schlessinger # 1 Res	2 seine hauls	YP	1	120	30	48-67	
		YP YOY	12	60			
	2 gill nets	NP	3	546	1233	430-606	410-1710
		YP	18	190	93	174-214	60-140
Schlessinger # 2 Res	1 seine haul	LMB	7	219	123	200-241	90-160
		LMB YOY	8	35		30-42	
<u>Wibaux County</u>							
Wibaux Pond	1 seine haul	LMB	6	146	33	135-184	25-65
		LMB YOY	13	51		43-62	
		GS	24	87		48-124	
	1 gill net	LMB	1	227	165		
		WCr	1	302	450		
		BBH	36	217	136	183-251	90-220
		GS	8	131	46	109-145	20-65