Montana Department of Fish, Wildlife and Parks
Fisheries Division

Job Progress Report

STATE: Montana **PROJECT: Statewide Fisheries Management**

TITLE: Yellowstone River Drainage Investigations

JOB: Southeast Montana Warmwater Lakes Investigations

FEDERAL GRANT: F-113-R-7

FISCAL YEAR: 2014 (July 1, 2013 through June 30, 2014)

REPORT PERIOD: March 1, 2014 through November 1, 2014

ABSTRACT

Forty-six managed ponds were visited in 2014. Thirty-one of the managed ponds had fishable populations of target species, thirteen were void of fish or only had non-target species, and two ponds were only checked for depth. Five new ponds were visited in 2014 and three were stocked with fish in 2014; Rieger Reservoir in Fallon County was stocked with crappie from Tongue River Reservoir, Grants Reservoir in Prairie County was stocked with female Yellow Perch and Dale Kreider #3 in Garfield County was stocked with Largemouth Bass. Deadhorse Reservoir, Mowbray #2 and Mowbray #3 were all less than five feet deep and would not likely overwinter fish if stocked. Wild fish were transferred into five ponds by Montana Fish, Wildlife & Parks (FWP) in 2014. Yellow Perch were transferred from Maier Reservoir into Baker Lake, Grants Reservoir, and Spotted Eagle. In addition, Spotted Eagle was stocked with Channel Catfish, Walleye, and Northern Pike from the Yellowstone River. Crappies were transferred from Tongue River Reservoir into Rattlesnake Reservoir, Baker Lake and Rieger Reservoir. Pond anglers should have ample opportunity in 2015 based on positive survey results and improved water levels throughout much of FWP region 7 during 2014.

PROCEDURES

Ponds are classified as either managed or new. Managed ponds are those that are currently stocked by Fish, Wildlife & Parks (FWP). New ponds are those that have not been sampled or stocked by FWP in the last 20 years. Pond depths were collected using a Hummingbird SmartCast portable depth finder. Pond locations were documented using township, range and section and GPS coordinates in decimal degrees, geographic projection NAD 1983. Fish populations were sampled using one or a combination of the following: modified fyke nets with 4 x 6 foot frames of 0.5-inch mesh (bar measure), experimental sinking gill nets with 25 ft panels of 0.75, 1.0, 1.25, 1.5, and 2.0-inch mesh (bar measure) for an overall length of 125 feet, bag seine 100 foot long by 0.25 inch mesh, mini-fyke nets with a 4 x 2 foot frame of $1/8^{th}$ inch mesh (bar measure) and/or hook and line. Fish were counted and a sub-sample of up to 20 fish for each species were weighed (grams), and measured in millimeters total length (TL) in the field. Precise metric measurements can be found in table seven at the end of the report. Metric measurements were converted to English equivalents and can be found throughout this report. English

measurements are used to provide consistency in use of measurements between this report, stocking records, and the Region 7 Pond Fishing Guide.

RESULTS AND DISCUSSION

Wild Fish Transfer and Hatchery Stocking

Wild fish transfers are currently being used as a tool to either 1.) Augment populations of game fish in urban fisheries to improve angling opportunity or 2.) Start new populations in an effort to diversify the suite of species available to angling communities throughout the region. Wild fish were transferred into five ponds in 2014 (Table 1). A crappie transfer to Rattlesnake Reservoir was needed because the fishery had recently suffered winter kill and a previous transfer of a limited number of Black Crappie (19) in 2012 appears to have been unsuccessful. A robust number of both White and Black Crappie were transferred into Rattlesnake Reservoir in pre-spawn condition in 2014. Rattlesnake was near full pool and appeared to have an abundance of Fathead Minnows, making this stocking more likely to result in a fishable population than the 2012 stocking. Yellow Perch were transferred from Maier Reservoir into Baker Lake and Spotted Eagle to augment existing populations in these urban fisheries. A new pond for the program, Rieger Reservoir was established with a stocking of 100 crappie from Tongue River Reservoir. Grants Reservoir received only female Yellow Perch in an experimental effort to establish a trophy population. Yellow Perch are sexually dimorphic with females maturing later allowing more time for energy to be put into body growth. This biological principle in the absence of density dependant factors should result in a population of all female Yellow Perch that exceed ten inches total length in a relatively short period of time.

Table 1. Wild fish transfers conducted in 2014.

Date	Receiveing Water	County	Species	Number Transferred	Donor Water	County
4/14/2014	Baker Lake	Fallon	Yellow Perch	186	Maier Reservoir	Fallon
4/16/2014	Grants Reservoir	Prairie	Yellow Perch	200	Maier Reservoir	Fallon
4/18/2014	Spotted Eagle	Custer	Yellow Perch	540	Maier Reservoir	Fallon
5/7/2014	Baker Lake	Fallon	crappie	233	Tongue River Reservoir	Bighorn
6/4/2014	Rattlesnake Reservoir	Dawson	Black Crappie	129	Tongue River Reservoir	Bighorn
6/4/2014	Rattlesnake Reservoir	Dawson	White Crappie	86	Tongue River Reservoir	Bighorn
9/26/2014	Spotted Eagle	Custer	Walleye	2	Yellowstone River	Custer
9/26/2014	Spotted Eagle	Custer	Northern Pike	1	Yellowstone River	Custer
9/26/2014	Spotted Eagle	Custer	Channel Catfish	11	Yellowstone River	Custer
10/16/2014	Rieger Reservoir	Fallon	crappie	100	Tongue River Reservoir	Bighorn

11 ponds have proposed wild fish transfers in 2015 (Table 2) including Chamberlain #2, Grants Reservoir and Kreider #3 will be the highest priority wild fish transfers in the spring of 2015. Grants Reservoir will be supplemented with female only Yellow Perch from Homestead Reservoir and the two ponds in Garfield County will receive crappie from Tongue River Reservoir.

Table 2. Wild fish transfers proposed for 2015.

Date	Receiveing Water	County	Species	Donor Water	County
Spring/Summer 2015	Johnson Reservoir	Dawson	crappie	Tongue River Reservoir	Bighorn
Spring/Summer 2015	Chamberlain # 2	Garfield	crappie	Tongue River Reservoir	Bighorn
Spring/Summer 2015	Krieder # 3	Garfield	crappie	Tongue River Reservoir	Bighorn
Spring/Summer 2015	Lake Harold	Treasure	crappie	Tongue River Reservoir	Bighorn
Spring/Summer 2015	Baker Lake	Fallon	Yellow Perch	Maier Reservoir	Fallon
Spring/Summer 2015	Daryle Buxbaum	Richland	Yellow Perch	Homestead Reservoir	Prairie
Spring/Summer 2015	Grants Reservoir	Prairie	Yellow Perch	Homestead Reservoir	Prairie
Spring/Summer 2015	Lake Harold	Treasure	Yellow Perch	Homestead Reservoir	Prairie
Spring/Summer 2015	Spotted Eagle	Custer	Yellow Perch	Homestead Reservoir	Prairie
Spring/Summer 2015	AG Lee Pit	Rosebud	Northern Pike	South Sandstone	Fallon
Spring/Summer 2015	Cody Taylor	Custer	bullhead	South Sandstone	Fallon

Five trout ponds were stocked with catchable trout (7-10 inches) from Bluewater Springs Hatchery and one pond from Ft. Peck Hatchery (Table 3) in 2014. Miles City Hatchery stocked trout fingerlings (2 inches) into fifty-five ponds, Walleye fry (<1 inch) and fingerlings into four ponds, Largemouth Bass fingerlings into nine ponds, and Smallmouth Bass fingerlings into two ponds (Appendix 1) in 2014. Appendix 1 is missing the stocking of Rainbow Trout fingerlings into Mud Turtle Reservoir in 2014. Fort Peck Hatchery stocked northern pike fry and fingerlings into five ponds (Appendix 2) in 2014.

Table 3. Catchable rainbow trout stockings in 2014

Date	Water Name	Number	Strain	Length(in)	Hatchery	Latitude	Longitude
4/21/2014	Hansen	1007	Arlee	7.1	Bluewater Springs	45.51704	-104.41127
4/21/2014	Hollecker Lake	301	Arlee	7.1	Bluewater Springs	47.12810	-104.72890
4/21/2014	McNabb	1007	Arlee	7.1	Bluewater Springs	45.81575	-104.42258
4/28/2014	Roerick	204	Arlee	7.1	Bluewater Springs	45.37556	-105.30163
6/5/2014	Baker Lake	300	Arlee x Erwin	6.8	Ennis/Ft Peck	46.36337	-104.27070
6/11/2014	Dean S	1059	Arlee	7.4	Bluewater Springs	46.37900	-105.66570
6/13/2014	Baker Lake	700	Arlee	8.4	Giant Springs/Ft Peck	46.36337	-104.27070
8/28/2014	Dean S	500	Arlee	10.4	Bluewater Springs	46.37900	-105.66570

Ponds with bass species planted receive a onetime only stocking of fish to establish a population that will reproduce on its own. 11 ponds were stocked with bass in 2014 (Table 4). Three ponds need to be stocked with bass in 2015.

Table 4. Summary of one time stocking requests for 2014.

Date	Water Name	Number	Species	Hatchery	Latitude	Longitude
7/18/2014	Hansen	500	Largemouth Bass	Miles City	45.51704	-104.41127
7/18/2014	McNabb	1000	Largemouth Bass	Miles City	45.81575	-104.42258
7/18/2014	Pinnow	500	Largemouth Bass	Miles City	46.27822	-104.20039
7/18/2014	Pinnow #2	500	Largemouth Bass	Miles City	46.27911	-104.21082
7/29/2014	Wilgosh	1000	Largemouth Bass	Miles City	47.32690	-105.20750
7/30/2014	Gaskill #2	1000	Largemouth Bass	Miles City	45.65850	-105.81440
8/12/2014	Jim Beardsley	1500	Largemouth Bass	Miles City	46.45190	-105.00030
8/12/2014	Doug Singleton	1000	Largemouth Bass	Miles City	46.54676	-105.16380
8/27/2014	Kreider #1	4000	Largemouth Bass	Miles City	47.09576	-107.47637
9/2/2014	Castle Rock	4000	Smallmouth Bass	Miles City	45.87800	-106.63160
9/2/2014	Spotted Eagle	1500	Smallmouth Bass	Miles City	46.39090	-105.85447

Survey of New Ponds

Five new ponds were inspected in 2014 (Table 5). Rieger Reservoir in Fallon County and Dale Kreider #3 in Garfield County were added to the ponds program. Both will be managed as crappie ponds with the potential addition of Largemouth Bass. Deadhorse Reservoir, Mowbray #2, and Mowbray #3 lacked suitable fish habitat and were not added to the ponds program.

Table 5. Summary of new ponds visited in 2014.

		Pond Location		Depth	Depth		Species Present
Pond Name	County	Latitude	Longitude	(feet) *	(feet)**	Actions	in 2014 survey
Dale Krieder #3	Garfield	N47.12988	W107.52335	16	0	to be stocked with crappie	Fathead Minnow
Deadhorse Reservoir	Carter	N45.67521	W104.24448	3	0	pond not to be managed	none
Mowbray #2	Carter	N45.70818	W104.18639	2	3.5	pond not to be managed	none
Mowbray #3	Carter	N45.7093	W104.18989	2	0	pond not to be managed	none
Reiger Reservoir	Fallon	N45.67176	W105.81429	12	3	stocked with crappie	none

* Water depth when sampled.

** Depth between current water level and normal high water mark.

Survey of Managed Ponds

Carter County

Craft #2 had fish with a (12 inch average), Frigid (15 inch average), Pat LeBree (7 inch average) and Spring Canyon all had Rainbow Trout in 2014 confirmed through experimental gillnets, hook and line or visual sampling.

Cheesman and Frigid had Green sunfish that averaged 5 inches. Three new ponds were sampled on the Custer National Forest; Deadhorse, Mowbray #2 and Mowbray #3. No fish were collected and water levels were too low to support stocking fish. Craft #1 had abundant Largemouth Bass averaging 6 inches. The Doug Gardner Pond was sampled and Yellow Perch averaged 6 inches and a single 32 inch northern pike was captured. Doug Gardner #2 had abundant Golden Shiners and Yellow Perch, both averaging 8 inches. Largemouth Bass were also collected in Gardner #2 and averaged 14 inches. Talcott was sampled with an experimental gillnet and found to have abundant, Yellow Perch (10 inch average) and northern pike (24 inch average). The spillway at Talcott was starting to wash out but the landowner said he plans to fix the problem this year.

Custer County

Dean S likely winterkilled during the winter of 2013/2014. Trout were restocked in June 2014 and were caught by hook and line when checked in July 2014. Cody Taylor was sampled with a seine and no fish were captured, we will attempt to restock it with fish in 2015. The dam at Jim Beardsley washed out in 2011. It has been rebuilt by the landowner and a depth check in July indicated the pond had mostly refilled and is 5 feet from full pool. A stocking of bass was requested to re-establish the fishery and in August 1,500 fingerling Largemouth Bass were planted by the Miles City Hatchery.

Spotted Eagle in Miles City continues to be a popular destination for local fisherman and other recreationist. Several community groups have contributed to cleaning and mowing the area and adding park benches and picnic shelters. The City of Miles City constructed a walking path, including three bridges, which cross the outlet channel. Walleyes Unlimited built a handicap accessible fishing pier near the outlet channel. In 2014 the City of Miles City installed a restroom purchased by Walleyes Unlimited. An outdoor classroom is to be completed in the spring of 2015. Increased public use of Spotted Eagle demands continued monitoring and improvements to the fishery. Christmas trees were sunk to provide fish habitat in 2014, an effort that has occurred annually since 2005. The Christmas tree project will be continued in 2015. Wet conditions in 2010, 2011, 2013, and 2014 has provided ample opportunity for riverine species such as; Adult Common Carp, River Carpsuckers, Goldeye, Shorthead Redhorse Suckers, Small and Largemouth Buffalo to migrate into Spotted Eagle through the outlet channel or across the floodplain. The low elevation change from Spotted Eagle to the Tongue River makes fish movement into the pond easier when water levels rise in the Tongue River. Walleyes Unlimited and FWP are developing plans for a fish barrier in the outlet channel in 2015 or 2016. The proposed barrier is intended to reduce, but not eliminate the frequency of these migrations which will make mechanical removal efforts between migrations more effective. The barrier will have six feet of drop from the outlet of Spotted Eagle to the Tongue River (at base flow). River Carpsuckers were the only river species found in abundance in Spotted Eagle during 2014 samples. Bigmouth buffalo, Common Carp, Freshwater Drum, Goldeye, Shorthead Redhorse, and Smallmouth Buffalo were found in low abundances. Efforts to mechanically remove non-target fish with gill nets and electrofishing were conducted in 2012 and 2013 but not in 2014. Focused efforts to mechanically remove non-target species will resume upon completion of the drop structure fish barrier.

Efforts continued in 2014 to augment angling opportunities at Spotted Eagle by transferring adult sport fish. Yellow Perch were transferred from Maier Reservoir in April 2014; Channel Catfish, Walleye, and Northern Pike from the Yellowstone River in September 2014 (Table 6). The Miles City Hatchery planted 1,500 surplus Smallmouth Bass fingerlings in September 2014 (Table 4). Anecdotal evidence suggests anglers are reaping benefits from removing non-target fish, and transfers of sport fish.

Table 6. Summary of sport fish transferred to Spotted Eagle in 2014.

Species	Count	Mean total length (in)	Mean weight (lbs)	Length range (in)	Weight range (lbs)
Yellow Perch	540	5	.4	3 - 11	.2 - .7
Channel Catfish	11	22	4	18 - 27	2 - 6.5
Northern Pike	1	29	5	29	5
Walleye	2	19	2.3	18 - 20	2 - 2.6

Dawson County

Seven species were collected in Hollecker Lake when sampled in 2014. Largemouth Bass averaged 11 inches and Bluegill averaged 4 inches. Largemouth Bass, Fathead Minnow and Rainbow Trout are the only species FWP has stocked since the lake was drained in the fall of 2005. All other species present entered Hollecker through the irrigation water supply or from illegal introductions. The relative abundance of all introduced species is low with the exception of Bluegill.

The abundance of Bluegill provides opportunity for anglers, particularly young anglers. Hollecker Lake Kid's Fishing Pond Proposal contains a detailed description of proposed management for this pond (Appendix 3). The original proposal was to create a bass/perch fishery; however, presence and proliferation of Bluegill has made this species a suitable alternative to Yellow Perch. The Largemouth Bass and Bluegill population dynamics should continue to be monitored to assure that the assemblage is meeting the needs and management goals of Hollecker Lake. The current management plan allows for mechanical draining of the lake if the species composition and abundances are undesirable.

Johnson Reservoir was sampled and Yellow Perch were caught indicating that they survived after being transplanted in 2013. Yellow perch up to 11 inches were captured, but overall abundance was very low compared to surveys from 2011 to 2012. Johnson Reservoir remains a candidate for a crappie transfer in 2015. Lindsay Reservoir was sampled in April 2014. Sport fish were found in low abundances, while Black Bullhead very abundant. Northern Pike were planted in June 2014 from the Fort Peck Hatchery. Walleye were collected in Lindsay Reservoir for the first time with an average weight per fish of 3.4 pounds. Rattlesnake Reservoir received crappie from Tongue River Reservoir to re-establish the crappie fishery that died out from winterkill. Marvin Burman and Wilgosh were sampled and no fish were found but both were near full pool. Wilgosh was planted with Largemouth Bass and Marvin Burman was planted with Rainbow Trout in 2014.

Fallon County

Efforts to provide angling opportunity at Baker Lake continued in 2014. From 2010 to 2014, 3,267 pre-spawn Yellow Perch, 305,000 Northern Pike fry, 4,626 Northern Pike fingerlings and 513 crappie have been transferred to Baker Lake. In 2014, one Yellow Perch, two Northern Pike, and two Rainbow Trout, were found in gill net and seine samples. Only Black Bullheads were found in abundance. Both Yellow Perch and crappie were transferred in 2014 in an attempt to establish this population in Baker Lake. In spite of substantial stocking/transfer efforts since 2010 Baker Lake appears to only provide suitable habitat for Black Bullheads a species tolerant of the low oxygen conditions. If the community of Baker desires a quality fishery for sport fish species with multiple age and size classes lake

management practices influencing water quality and quantity must be addressed. If Baker Lake remained near full pool and aerators were run throughout the winter dissolved oxygen levels would be more conducive to overwintering sport fish species. Annual put and take transfers alone will never be effective in providing quality angling opportunity. Habitat conditions for consistent overwintering, natural reproduction, and recruitment of sport fish is necessary to provide fish abundances that will yield quality angling.

Green Sunfish first appeared in both Pinnow ponds in 2004. Sometime between 2004 and 2010 Black Bullheads also became established in the Pinnow ponds. While the origin of these introductions is unknown their presence is undesirable for the continued management of sport fish. Successful reproduction of both of these species appears to be preventing survival and growth of Rainbow Trout. Bullheads still appear to be in low numbers at Pinnow #1 with seven found in 2013. Trout numbers were low in Pinnow #1 in 2013 with five trout sampled. No trout were sampled at Pinnow #2 in 2013, only Green Sunfish and Black Bullheads. Rainbow Trout stocking was stopped in 2014 because the bullhead and sunfish population reached the point of precluding growth and survival of stocked trout. Largemouth Bass were planted in 2014 in hopes they will be better suited to compete with bullheads and sunfish and replace some of the angling opportunity lost from cessation of trout stockings. Bass stocked as fingerlings will likely undergo heavy predation and competition in the juvenile life stage from adult bullheads and sunfish. If bass make it to adulthood they may provide some measure of control of annual bullhead and sunfish reproduction.

Aquatic nuisance species (ANS) and disease testing was completed on Maier Reservoir so it could be used as a transfer source for Yellow Perch in 2013. Trap nets at Maier in 2014 yielded 931 Yellow Perch transferred to ponds around the region (Table 1). Maier had four species present in 2014: Yellow Perch, White Sucker, Creek Chub and Green Sunfish, with Yellow Perch accounting for the majority of the catch.

Black Bullhead continues to be the most abundant species sampled in gill nets at South Sandstone Reservoir (Figure 1). Catch rates for Yellow Perch have also been low in recent years but size structure is improving. Yellow Perch caught in gill nets averaged 7 inches and some were over 8 inches in the 2014 sample. Walleye caught in gill nets averaged 17 inches with fish up to 29 inches. Northern Pike caught in gill nets averaged 24 inches with fish up to 31 inches. Angler opportunity for Yellow Perch, Northern Pike, and crappie at South Sandstone continue to make this reservoir one of the best in the region.

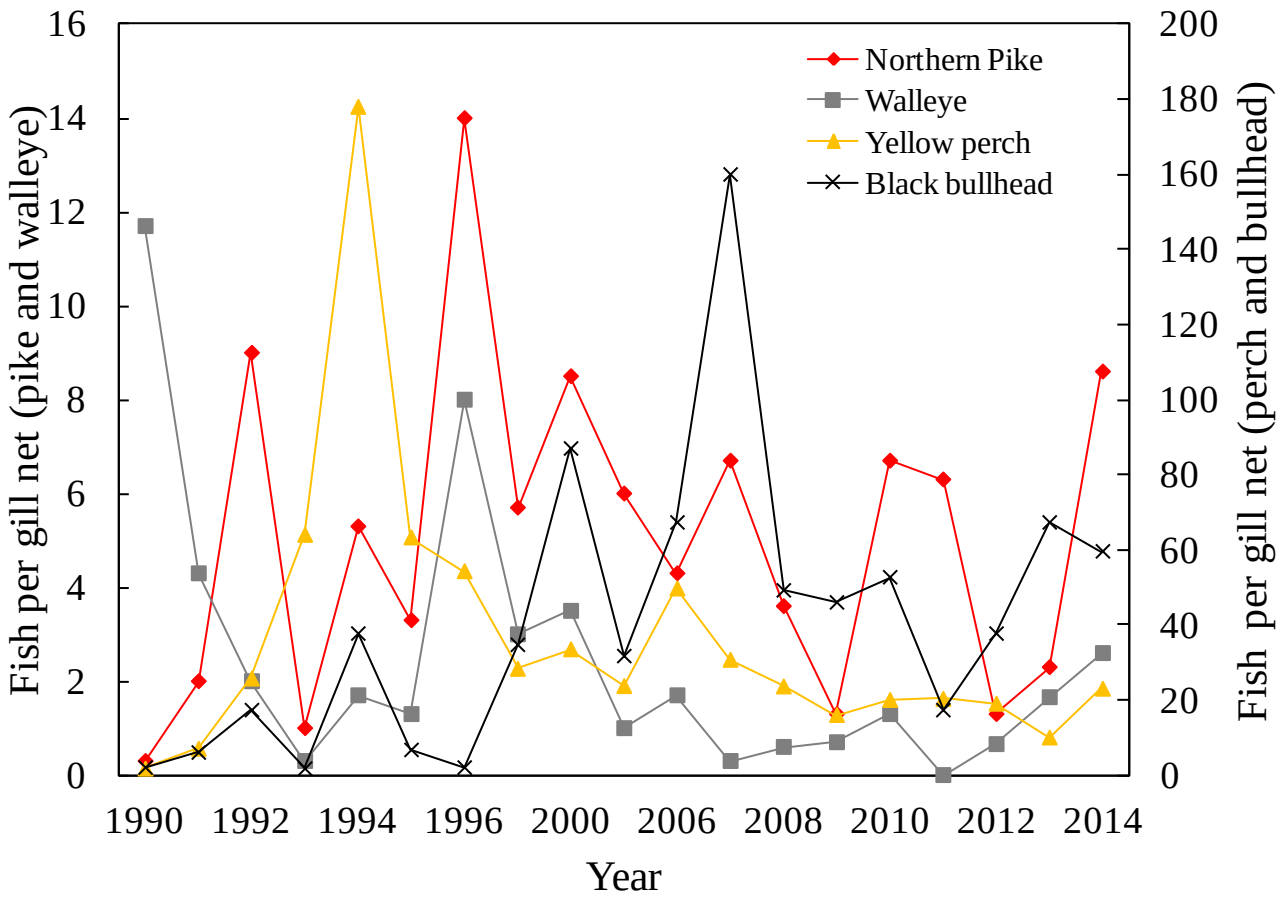

Figure 1. Catch per gill net for Northern Pike, Walleye, Yellow Perch and Black Bullhead in South Sandstone Reservoir, 1990-2014.

Meccage was sampled with gill nets in August. Black Crappie averaged 7.5 inches, Largemouth Bass averaged 9.2 inches, and Yellow Perch averaged 9.7 inches. Rieger Reservoir is a new pond and management was initiated in 2014 with a crappie transfer from Tongue River Reservoir completed in October.

Garfield County

Don Jarden #2 had rainbow trout up to 16 inches. Dan Meckel #1 was checked for depth and it was only 5 feet deep. Don Jarden #1 was 10 feet deep but no fish were present. John Ryan #1 was 16 feet deep and at full pool but no fish were caught. Dale Kreider #1 was 18 feet deep but no fish were present. Kreider #3 is a new pond that is a candidate for a crappie transfer in 2015. Jack McRae #1 had Rainbow Trout averaging 14.4 inches. Jason Phipps was sampled for the first time and Rainbow Trout up to 15 inches were found.

Powder River County

No ponds were sampled in Powder River County in 2014.

Prairie County

Reukauf (Harms) was only 5 feet deep in 2013 but sampling in 2014 produced two year classes of Rainbow Trout indicating that fish overwintered in spite of the low water level. Trout up to 16 inches were sampled. Haughian bass pond was checked for depth and it was at full pool. Silvertip Reservoir was sampled with hook and line in October of 2014 but no fish were caught. Homestead Reservoir was AIS tested in 2014 authorizing it a source for Yellow Perch transfers for 2015 to 2016. Yellow Perch were numerous in Homestead. Although there has been some anecdotal evidence of natural reproduction from the adult Northern Pike planted in 2012, sampling had not substantiated these claims. Fingerling Northern Pike were stocked in Homestead in 2014 to augment the population of wild adults that were transferred into the reservoir in 2012.

Grants Reservoir is a new pond in 2014 that received only female Yellow Perch in an experimental effort to establish a trophy population. Yellow Perch are capable of reaching 14 inches in length and 2 pounds in weight, but fecundity and annual reproductive success often cause density dependant factors to result in populations with high relative abundance but small average size.

Yellow Perch are sexually dimorphic with females maturing later allowing more time for energy to be put into body growth. This biological principle in the absence of density dependant factors should result in a population of all female Yellow Perch that can be expected to exceed ten inches relatively quickly. Yellow Perch averaged 5.2 inches and .05 pounds when transferred into Grants on April 16, 2014. When sampled on October 1st they averaged 9.4 inches (Figure 2). If these Yellow Perch grow at the same rate (0.76 inches per month) during the next growing season they will exceed 14 inches by October 2015.

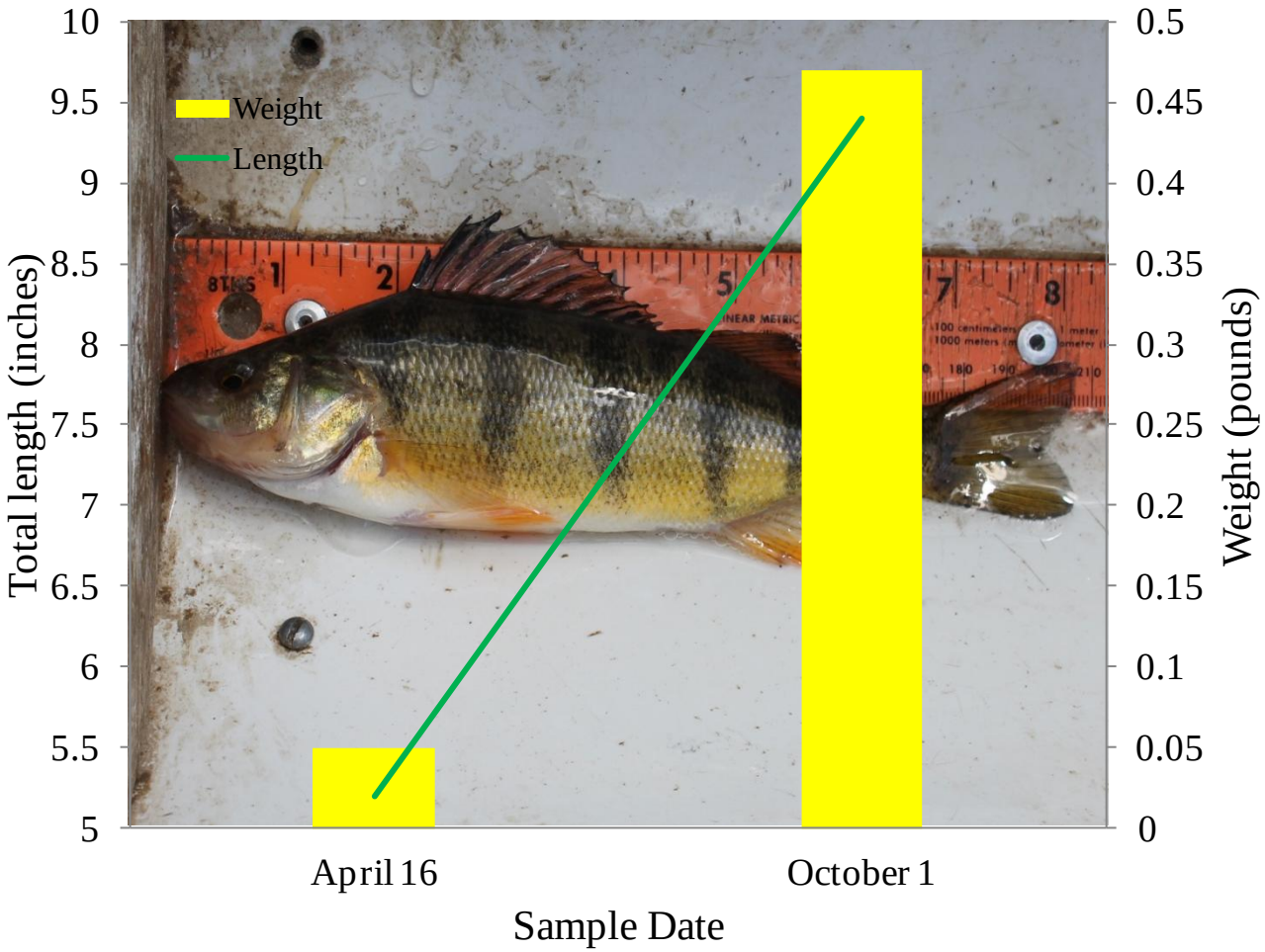

Figure 2. Observed growth of female Yellow Perch in Grants Reservoir 2014.

Richland County

Natural reproduction for Northern Pike has generally been successful at Gartside Reservoir. Northern Pike stocking was discontinued in 2004 to evaluate natural spawning and recruitment at Gartside Reservoir. Catch rates of Northern Pike were above average in 2014 following below average catch rates in 2011 (Figure 3). The peak in 2010 was partially attributed to increased sampling efficiency of gill nets while pool level was reduced for construction of a fishing pier.

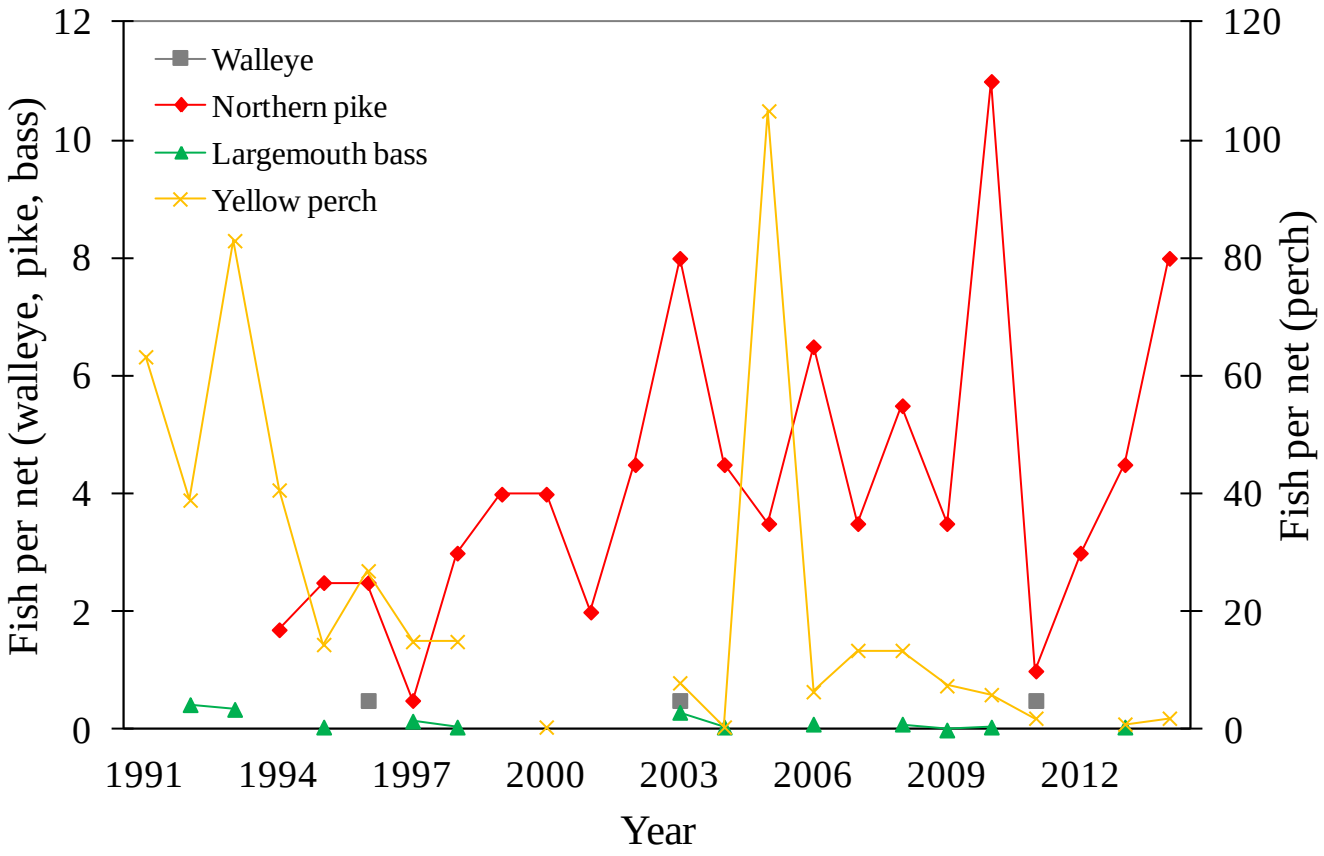

Figure 3. Catch rate (fish per gill net) of Walleye, Northern Pike, Largemouth Bass, and Yellow Perch from Gartside Reservoir, 1991-2014.

Gartside Reservoir received an experimental stocking of 400 Tiger Muskellunge approximately 10 inches long in October 2010. The fish were purchased from a certified, disease-free private hatchery in South Dakota. Tiger Muskellunge were stocked to improve pan-fish population size structure and to provide additional angler opportunity at Gartside. Tiger Muskellunge stocking and associated sampling goals are described in a five year stocking proposal, (Backes 2006). Tiger Muskies were supposed to be stocked annually, but the outbreak of viral hemorrhagic septicemia (VHS) virus in the Great Lakes region eliminated the muskellunge egg supply. The stocking proposal has expired for Tiger Muskellunge at Gartside. Survival of the first stocking in 2006 was not successful. Survival of individuals from the 2010 stocking was thought to be low. Three Tiger Muskie were sampled in 2011 gill net and seine haul efforts, but have not been sampled since.

Daryle Buxbaum (Yellow Perch, Black Crappie, and bass) and Walter Buxbaum (Yellow Perch) were sampled in 2014 and no fish were present. Both ponds were near full pool and are candidates for stocking or transfer in 2015. Largemouth Bass and White Suckers were caught in gill nets in John Kvaalen with White Suckers dominating the catch.

Rosebud County

The dam at Dave Potts Bass washed out in 2011, the landowner has repaired the dam and the pond was 11 feet deep in 2014. Largemouth Bass are proposed to be planted in 2015. Dave Potts Trout was sampled and no fish were present. The pond was 9 feet deep at full pool. Green Sunfish were abundant in A.G. Lee #2 and Al Lee requested that a predator species be stocked into the pond to control Green Sunfish abundances. Since bass have struggled to overwinter in the shallow pond Northern Pike will be stocked in 2015. Lee Pit #1 was hook and line sampled but no fish were caught. Lee Pit #2 was 8 feet deep, 6 feet from full pool. Largemouth Bass from a 2013 stocking were caught hook and line sampling in Lee Pit #2 in June 2014.

Castle Rock Lake was renowned for large and abundant Bluegill in the 1980s and early 1990s. In 1996 Bluegill catch rates dropped to a record low of 3.3 per gill net. An expanding Walleye population was thought to be suppressing Bluegill abundance. Management decided to reduce annual walleye stocking rates from 5,000 fingerlings to 1,000 fingerlings in 1997 to improve Bluegill abundance (Stewart 1996). Review of historic Dingell Johnson (DJ) reports and data indicated the abundant Bluegill population was not sustainable. The high Bluegill abundance resulted from a new and expanding population. Castle Rock Lake was constructed from 1974 to 1975 and Bluegills were stocked in 1979 to establish a forage base for Northern Pike. With little competition for forage the Bluegill population expanded, reaching a peak in 1987. The Bluegill population stabilized around 1998 and has produced relatively consistent catch rates since (Figure 4).

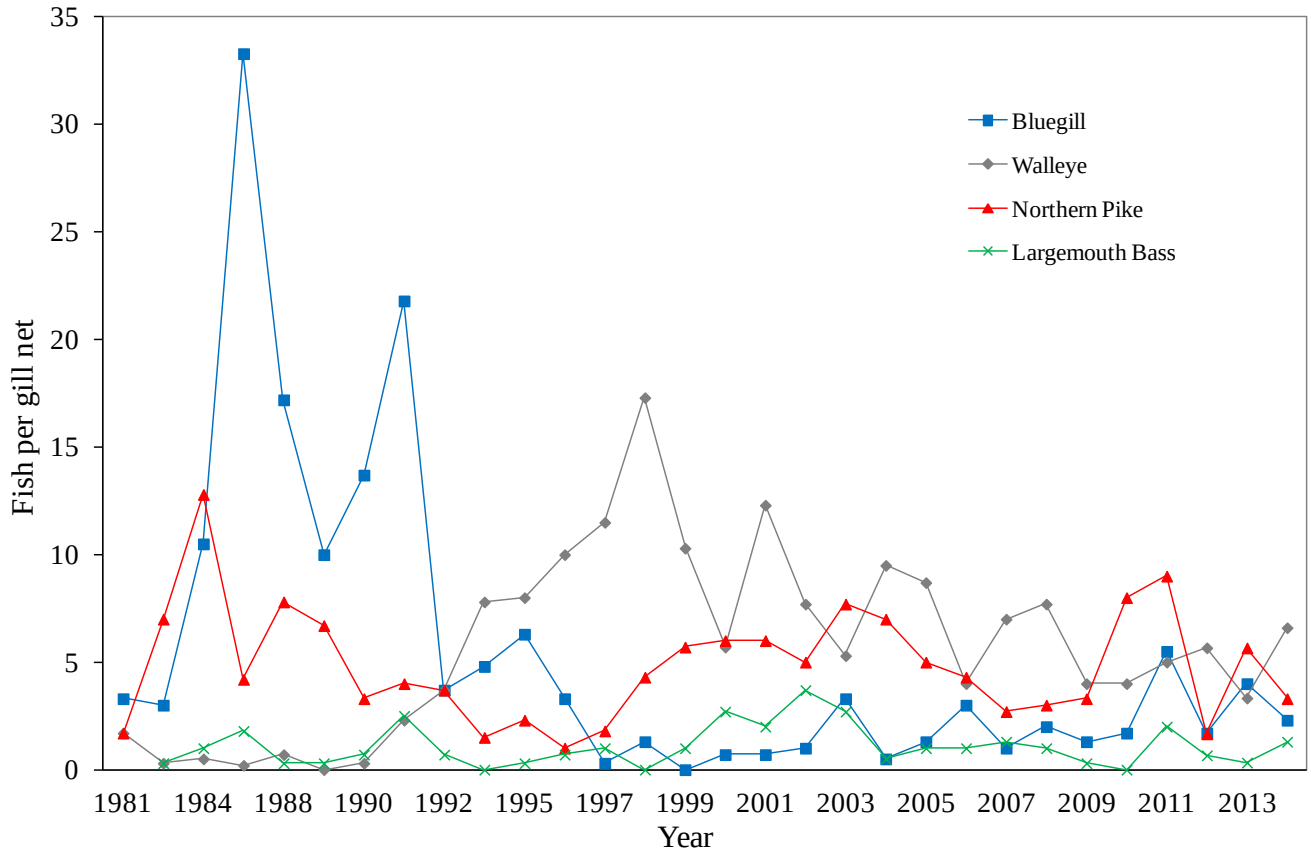

Figure 4. Catch per gill net for bluegill, walleye, northern pike and largemouth bass from Castle Rock Lake, 1981-2014.

Treasure

No ponds were sampled in Treasure County in 2014.

Wibaux

Rainbow Trout up to 17 inches were caught in gill nets at Greg Temple in 2014. Rainbow Trout in the catch averaged 9 inches.

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Waters referred to:

Gartside	21-3250
Castle Rock	21-2527
Spotted Eagle	21-8815

Keywords

Small ponds	Yellow perch
Largemouth bass	Smallmouth bass
Northern pike	Bluegill
Rainbow trout	Walleye
Crappie	Black & yellow bullhead

Literature Cited

Backes, K. M. 2006. Southeastern Montana Warmwater Lakes Investigations. Federal Grant Job Progress Report. Appendix B.

Backes, K. M. 2008. Southeastern Montana Warmwater Lakes Investigations. Federal Grant Job Progress Report. F-113-R-7.

Stewart, P.A. 1996. Southeastern Montana Warmwater Lakes Investigations. Federal Grant Job Progress Report. F-78-R-3.

Table 7. Results of sampling managed reservoirs in 2014.

Reservoir Name	Date	Depth 10/Full (feet) *	Type of Sample	Species	Number Caught	Mean Length (mm)	Mean Weight (gr)	Length Range (mm)	Weight Range (gm)
				Carter County					
Cheesman Reservoir	7/16/2014	10/0	gillnet (1)	Green Sunfish	2	161	95	134-187	50-140
			mini-fyke (1)	Green Sunfish	95	96	36	59-188	20-120
			1/4" dip net	Green Sunfish	27	99	29	63-131	20-50
Craft #1	7/10/2014	14/1	gillnet (2)	Largemouth Bass	64	161	66	136-177	30-90
Craft #2	7/10/2014	12/1	gillnet (1)	Rainbow Trout	11	315	434	138-440	20-1100
				Green Sunfish	1	104	20	104	20
Deadhorse Reservoir	7/16/2014	3/0	mini-fyke (1)	No fish	0				
			seine haul (1)	No fish	0				
Doug Gardner	6/12/2014	28/?	gillnet (2)	Northern Pike	1	810	3440	810	3440
				white Sucker	6	419	950	372-460	730-1210
				Yellow Perch	66	157	39	143-235	30-140
Doug Gardner #2	6/12/2014	27/?	gillnet (2)	Golden Shiner	220	200	114	177-220	70-160
				Largemouth Bass	3	359	637	352-366	560-700
				Yellow Perch	224	211	99	182-258	60-180
Frigid Reservoir	9/22/2014	12/4	gillnet (1)	Green Sunfish	31	144	74	103-200	15-190
				Rainbow Trout	6	369	633	212-438	120-940
Mowbray #2	7/16/2014	2/3.5	mini-fyke (1)	No fish	0				
			seine haul (1)	No fish	0				
Mowbray #3	7/16/2014	2/0	mini-fyke (1)	No fish	0				
			seine haul (1)	No fish	0				
Pat LeBree	8/6/2014	14/3	gillnet (2)	Rainbow Trout	39	173	74	137-193	40-120
Spring Canyon	7/16/2014	?/0	hook and line	Rainbow Trout	2				
Talcott	7/10/2014	6/6	gillnet (1)	Northern Pike	26	610	1563	459-817	340-3450
				Yellow Perch	27	247	228	123-292	40-340
				Custer County					
Cody Taylor	8/8/2014		seine haul (1)	No fish	0				
Dean S Reservoir	7/14/2014	?/2	hook and line	Rainbow Trout	17				
Jim Beardsley	7/14/2014	?/5	depth check						
Spotted Eagle	9/26/2014	10/0	Fish Transfer In	Channel Catfish	11	563	1760	460-699	1020-2940
				Northern Pike	1	738	2260	738	2260
				Walleye	2	491	1030	473-508	900-1160

Table 7. Results of sampling managed reservoirs in 2014 continued.

Reservoir Name	Date	Depth 10/Full (feet) *	Type of Sample	Species	Number Caught	Mean Length (mm)	Mean Weight (gr)	Length Range (mm)	Weight Range (gm)
				Custer County					
Spotted Eagle	6/19/2014	10/0	fyke net (6)	Bluegill	13	119	54	105-136	30-70
				Black Bullhead	1	168	60	168	60
				Black Crappie	153	172	78	90-225	10-140
				Channel Catfish	23	467	1067	257-736	220-3070
				Common Carp	2	327	520	295-359	410-630
				Freshwater Drum	1	303	310	303	310
				Green Sunfish	2	137	70	128-145	60-80
				Goldeye	4	329	265	272-360	160-340
				Northern Pike	1	912	4300	912	4300
				Pumpkinseed	2	99	20	90-107	20
				River Carpsucker	44	359	716	218-525	170-2220
				Shorthead Redhorse	5	353	456	292-395	230-720
				Smallmouth Buffalo	7	282	349	244-304	200-460
				White Sucker	2	317	350	286-347	270-430
				Walleye	4	418	903	286-611	230-2270
				White Crappie	48	195	87	100-294	10-330
			mini-fyke (2)	Bluegill	8	129	39	123-142	30-50
				Black Crappie	1	153	40	153	40
				Common Carp	1	289	300	289	300
				Emerald Shiner	1	102		102	
				Fathead Minnow	3	54		48-63	
				Green Sunfish	4	121	47	75-149	30-60
				Largemouth Bass yoy	1	21		21	
				Pumpkinseed	1	101	20	101	20
				White Crappie	2	199	75	189-208	70-80
				Yellow Perch yoy	1	30		30	
			seine haul (5)	Bluegill	17	605	1550	605	1550
				Black Crappie	23	173	71	153-204	50-100
				Bigmouth Buffalo	5	413	1240	337-541	740-2320
				Common Carp	2	317	490	251-383	240-740
				Freshwater Drum	2	243	205	215-270	110-300
				Emerald Shiner	1	96		96	
				Goldeye	2	298	205	283-313	200-210
				River Carpsucker	4	344	653	270-430	230-1290
				Shorthead Redhorse	2	233	160	218-247	150-170
				White Sucker	2	193	100	140-245	30-170
				Walleye	2	283	180	267-299	160-200
				Western Silvery Min.	10	95	35	79-145	20-50
				Yellow Perch	12	103	20	94-159	10--50
				Yellow Perch yoy	11	27		24-30	
Spotted Eagle	4/18/2014	10/0	Fish Transfer In	Yellow Perch	540	129	175	96-285	100-330

Table 7. Results of sampling managed reservoirs in 2014 continued.

Reservoir Name	Date	Depth 10/Full (feet) *	Type of Sample	Species	Number Caught	Mean Length (mm)	Mean Weight (gr)	Length Range (mm)	Weight Range (gm)
				Dawson County					
Hollecker	8/4/2014		gillnet (2)	Largemouth Bass	3	280	313	259-310	240-440
				Shorthead Redhorse	2	405	755	403-407	750-760
				White Sucker	1	341	460	341	460
				White Crappie	15	159	45	134-174	20-60
			seine haul (1)	Bluegill	50	96	28	58-133	10--40
				Largemouth Bass yoy	1	51		51	
				River Carpsucker	1	503	2020	503	2020
				Yellow Perch yoy	5	55		49-60	
Johnson Reservoir	6/10/2014	?/0	gillnet (2)	White Sucker	1	308	390	308	390
				Yellow Perch	5	225	146	195-277	100-300
Lindsay Reservoir	4/28/2014		fyke net (2)	Black Bulhead	90	153	46	137-185	40-60
				Common Carp	1	444	970	444	970
				Walleye	2	534	1545	512-555	1350-1740
				Yellow Perch	8	108	120	85-205	120
Marvin Burman	6/26/2014	14/0	gillnet (2)	No fish	0				
Rattlesnake	6/4/2014		Fish Transfer In	Black Crappie	129				
				White Crappie	86				
Wilgosh Reservoir	6/10/2014	13/1	gillnet (2)	No fish	0				
				Fallon County					
Rieger Reservoir	10/16/2014	?/3	Fish Transfer In	crappie	100				
Baker Lake	7/8/2014		seine haul (1)	Black Bullhead	112	135	27	123-143	20-40
				Northern Pike	1	122	10	122	10
				Yellow Perch	1	152	40	152	40
			gillnet (2)	Black Bullhead	113	138	38	128-151	20-60
				Northern Pike	1	741	3210	741	3210
				Rainbow Trout	2	222	120	216-227	120
	5/7/2014		Fish Transfer In	crappie	233				
Maier Reservoir	4/14/2014		Fish Transfer Ou	Yellow Perch	191	111		98-135	
	4/16/2014		Fish Transfer Ou	Yellow Perch	200	132	22	113-263	5-230
	4/18/2014		Fish Transfer Ou	Yellow Perch	540	129		96-285	
Meccage	8/6/2014	12/0	gillnet (2)	Black Crappie	41	191	108	103-234	10-200
				Green Sunfish	2	219	230	212-226	200-260
				Largemouth Bass	9	233	285	178-371	70-890
				Yellow Perch	118	246	226	192-300	90-390

Table 7. Results of sampling managed reservoirs in 2014 continued.

Reservoir Name	Date	Depth 10/Full (feet) *	Type of Sample	Species	Number Caught	Mean Length (mm)	Mean Weight (gr)	Length Range (mm)	Weight Range (gm)
				Fallon County					
South Sandstone	7/31/2014		mini-fyke (2)	Black Bullhead	15	171	145	67-244	10-210
				Yellow Perch	33	131	31	109-211	10-110
			gillnet (3)	Black Bullhead	179	205	134	136-262	40-290
				Northern Pike	30	596	1390	423-783	740-2500
				Walleye	8	447	1091	356-728	410-3710
				Yellow Perch	69	177	68	143-256	20-220
			seine haul (2)	Largemouth Bass	1	122	30	122	30
				Largemouth Bass yoy	1	43		43	
				Northern Pike yoy	1	120	20	120	20
				Garfield County					
Dan Meckel #1	7/2/2014	5/4	depth check						
Don Jarden #1	7/22/2014	10/3	gillnet (1)	No fish	0				
			mini-fyke (1)	No fish	0				
Don Jarden #2	7/22/2014	10/3	gillnet (1)	Rainbow Trout	39	188	173	152-402	50-1000
Jack McRae #1	7/22/2014	7/3	gillnet (1)	Rainbow Trout	8	365	741	265-404	600-880
Jason Phipps	9/15/2014	10/0	gillnet (1)	Rainbow Trout	45	278	366	149-390	60-770
John Ryan #1	9/15/2014	16/0	gillnet (1)	No fish	0				
Kreider #1	7/2/2014	18/6	gillnet (2)	No fish	0				
Kreider #3	7/2/2014	16/0	gillnet (2)	No fish	0				
			mini-fyke (1)	Fathead Minnow	750				
				Prairie County					
Grants Reservoir	10/1/2014	10/2	gillnet (1)	Yellow Perch	68	239	211	218-299	140-470
	4/16/2014	12/0	Fish Transfer In	Yellow Perch	200	132	22	113-263	5-230
Harms	10/1/2014	?/4	hook and line	Rainbow Trout	27	285	346	210-405	110-800
Haughian Bass	10/1/2014	?/0	hook and line	Smallmouth Bass	1				
				Yellow Perch	1				
Homestead Resevoir	4/28/2014		fyke net (1)	Yellow Perch	36	142	31	90-173	20-50
Silvertip	10/1/2014	?/2	hook and line	No fish	0				
				Richland County					
Darryle Buxbaum	8/28/2014	13/2	gillnet (2)	No fish	0				
Gartside	8/4/2014		gillnet (2)	Bluegill	2	120	80	93-147	80
				Northern Pike	16	550	1132	357-666	240-2150
				Yellow Perch	4	139	45	134-143	40-60
			mini-fyke (1)	Bluegill	11	114	44	67-162	20-80
				Largemouth Bass	1	105	20	105	20
				Largemouth Bass yoy	11	61		52-77	

Table 7. Results of sampling managed reservoirs in 2014 continued.

Reservoir Name	Date	Depth 10/Full (feet) *	Type of Sample	Species	Number Caught	Mean Length (mm)	Mean Weight (gr)	Length Range (mm)	Weight Range (gm)
				Richland County					
Gartside	8/4/2014		seine haul (2)	Bluegill	144	112	44	42-169	20-100
				bluegill/green sunfish	1	218	320	218	320
				crappie yoy	1	42		42	
				Largemouth Bass	3	240	267	200-268	140-380
				Largemouth Bass yoy	10	55		49-62	
				White Sucker	1	419	980	419	980
				Yellow Perch	44	141	43	94-184	10-100
				Yellow Perch yoy	8	57		41-63	
John Kvaalen	8/28/2014	10/0	gillnet (2)	Largemouth Bass	3	266	227	253-274	200-270
				White Sucker	61	373	729	237-457	420-1170
Walter Buxbaum	8/28/2014	15/2	gillnet (2)	No fish	0				
				Rosebud County					
Castle Rock Lake	7/24/2014		gillnet (3)	Bluegill	7	145	106	89-172	90-120
				Black Crappie	3	173	100	104-212	30-170
				Largemouth Bass	4	222	278	142-337	50-660
				Northern Pike	10	477	746	221-675	200-1730
				Smallmouth Bass	2	213	185	145-280	50-320
				Walleye	20	417	781	267-600	170-1880
			mini-fyke (2)	Bluegill	133	90	61	47-150	30-100
				Green Sunfish	2	79		75-82	
				Largemouth Bass yoy	141	50		40-60	
				Northern Pike yoy	2	120	25	108-131	20-30
			seine haul (3)	Bluegill	499	106	93	43-228	30-270
				Black Crappie	5	210	156	202-214	130-180
				crappie yoy	2	34		32-36	
				Green Sunfish	5	84		65-99	
				Largemouth Bass	18	198	223	113-367	20-950
				Largemouth Bass yoy	64	50		43-89	
				Northern Pike	3	316	220	248-447	80-500
				Northern Pike yoy	1	104		104	
Dave Potts Bass	9/8/2014	11/1	gillnet (2)	No fish	0				
Dave Potts Trout	9/8/2014	9/0	gillnet (2)	No fish	0				
Lee Pit #1	6/23/2014	6/0	hook and line	No fish	0				
Lee Pit #2	6/23/2014	8/6	hook and line	Largemouth Bass	6	156	57	139-177	30-90
Lee Pond #2	6/23/2014	10/0	gillnet (2)	Green Sunfish	13	115	37	100-134	20-60
				Wibaux County					
Greg Temple	6/26/2014	14/1	gillnet (1)	Rainbow Trout	39	226	227	130-427	30-750

Appendix 1. 2014 Miles City Hatchery Stocking Summary

Montana Fish, Wildlife & Parks

Miles City Fish Hatchery

Fish Planting Report - By Date

Date Range: 01-01-14 - 09-19-14
Selections: All Current Lots All Archived Species Region 7

Date / Rgn	Wtr Cd / Latitude	Water Name / Longitude	Nbr Fish / Lot Nbr	Species / Strain	Sterile	Len / Wt	Miles / Cost	Prdm / Emp	Cnd / Mrk	Tmp
04/14/2014	164433	Beecher Trout Reservoir	1,500	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.78500	-106.69410	A025213E01 HELICOPTER PLANT	Arlee		4.90	98.65	CH		
04/14/2014	211886	Big Timber Trout Pond #1	1,000	001A - Rainbow Trout	Not Sterile	3.00	8	0.63	1	
7	46.59833	-107.36502	A025213E01 HELICOPTER PLANTS	Arlee		3.27	98.65	CH		
04/14/2014	164549	Brooks Reservoir #3	200	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.94100	-106.89185	A025213E01 HELICOPTER PLANTS	Arlee		6.50	98.65	CH		
04/14/2014	187725	Grebe Reservoir #1	2,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.66306	-107.57733	A025213E01 HELICOPTER PLANT	Arlee		6.50	98.65	CH		
04/14/2014	165305	Grebe Reservoir #2	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.69334	-107.64098	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	CH		
04/14/2014	213570	Haughian Reservoir #1	2,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.83530	-105.76030	A025213E01 HELICOPTER PLANT	Arlee		6.40	98.65	MR		
04/14/2014	213845	Hook Reservoir #1	600	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.59722	-106.21485	A025213E01 HELICOPTER PLANT	Arlee		1.96	98.65	CH		
04/14/2014	166199	Killen, John #2 Res.	1,500	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.80359	-106.48830	A025213E01 HELICOPTER PLANTS	Arlee		4.90	98.65	CH		
04/14/2014	167108	Murnion, Fred #1	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	47.01189	-106.43500	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	CH		
04/14/2014	167109	Murnion, Fred #2	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.98280	-106.47750	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	CH		
04/14/2014	167210	Newman Reservoir #1	800	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.94840	-107.42910	A025213E01 HELICOPTER PLANT	Arlee		2.60	98.65	CH		
04/14/2014	213985	Phipps Pond	2,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.89500	-107.19795	A025213E01 HELICOPTER PLANTS	Arlee		5.50	98.65	CH		
04/14/2014	217302	Potts Reservoir	2,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63		
7	46.52872	-106.62675	A025213E01 HELICOPTER PLANT	Arlee		6.50	98.65	CH		
04/14/2014	217846	Reukauf Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.84156	-105.68956	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	MR		
04/14/2014	217870	Ringstveit Lake	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.82625	-106.71735	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	CH		
04/14/2014	218352	Schlesinger Reservoir #1	500	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.76980	-107.19630	A025213E01 HELICOPTER PLANTS	Arlee		1.60	98.65	CH		
04/14/2014	218650	Silvertip Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.86693	-105.59117	A025213E01 HELICOPTER PALNT	Arlee		3.20	98.65	MR		
04/14/2014	218760	South Fork Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	8	0.63	1	
7	46.88244	-105.67190	A025213E01 HELICOPTER PLANT	Arlee		3.20	98.65	MR		
04/15/2014	211769	Ayers Pond #1	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.63554	-104.82539	A025213E01 HELICOPTER PLANT	Arlee		3.20	129.00	CH		

Appendix 1. Continued

Montana Fish, Wildlife & Parks
Miles City Fish Hatchery
Fish Planting Report - By Date

Date Range: 01-01-14 - 09-19-14
Selections: All Current Lots All Archived Species Region 7

Date / Rgn	Wtr Cd / Latitude	Water Name / Longitude	Nbr Fish / Lot Nbr	Species / Strain	Sterile	Len / Wt	Miles / Cost	Prdm / Emp	Cnd / Mrk	Tmp
04/15/2014	211821	Beardsley Pond	2,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.53500	-105.13680	A025213E01	Arlee		6.40	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	211915	Blacks Sawmill Pond	2,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.34750	-106.28680	A025213E01	Arlee		6.50	129.00	JMR		
			HELICOPTER PLANT							
04/15/2014	212240	Burman Pond	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	47.11561	-104.40818	A025213E01	Arlee		3.20	129.00	CH		
			HELICOPTER PLANTS							
04/15/2014	121051	Craft Pond #2	1,500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.12303	-104.88123	A025213E01	Arlee		4.90	129.00	JMR		
			HELICOPTER PLANT							
04/15/2014	210000	DICK GASKILL	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.67160	-105.81429	A025213E01	Arlee		3.20	129.00	JMR		
			HELICOPTER PLANT							
04/15/2014	121308	Frigid Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.46226	-104.60713	A025213E01	Arlee		3.20	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	121310	Gardner Reservoir	5,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.26494	-104.84123	A025213E01	Arlee		16.30	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	213976	Janssen Reservoir	2,500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.72170	-105.47190	A025213E01	Arlee		7.20	129.00	JMR		
			HELICOPTER							
04/15/2014	214800	Labree Reservoir	2,500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.99950	-104.79110	A025213E01	Arlee		8.00	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	215117	Losinski Reservoir #3	400	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.63704	-105.73283	A025213E01	Arlee		1.10	129.00	JMR		
			HELICOPTER PLANT							
04/15/2014	210000	LYLE LAKE	4,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7			A025213E01	Arlee		12.80	129.00	CH		
			HELICOPTER							
04/15/2014	210000	NORM SAMUELSON	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.57032	-105.85175	A025213E01	Arlee		3.20	129.00	JMR		
			HELICOPTER PLANT							
04/15/2014	216238	Oil Pump Reservoir	2,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.85404	-104.66796	A025213E01	Arlee		65.40	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	217275	Pinnow Reservoir	1,500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.27822	-104.20039	A025213E01	Arlee		4.90	129.00	CH		
			HELICOPTER PLANTS							
04/15/2014	217276	Pinnow Reservoir #2	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.27911	-104.21082	A025213E01	Arlee		3.20	129.00	CH		
			HELICOPTER PLANTS							
04/15/2014	217305	Pruett Pond	500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.58795	-104.40959	A025213E01	Arlee		1.60	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	124000	Schweigert Dam	500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	46.49862	-104.21142	A025213E01	Arlee		1.60	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	124050	Sidney Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.36900	-104.47350	A025213E01	Arlee		3.20	129.00	CH		
			HELICOPTER PLANT							
04/15/2014	124112	Spring Canyon Reservoir	400	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.70525	-104.20183	A025213E01	Arlee		1.30	129.00	CH		
			HELICOPTER PLANT							

Appendix 1. Continued

Montana Fish, Wildlife & Parks

Miles City Fish Hatchery

Fish Planting Report - By Date

Date Range: 01-01-14 - 09-19-14
Selections: All Current Lots All Archived Species Region 7

Date / Rgn	Wtr Cd / Latitude	Water Name / Longitude	Nbr Fish / Lot Nbr	Species / Strain	Sterile	Len / Wt	Miles / Cost	Prdm / Emp	Cnd / Mrk	Tmp
04/15/2014	229396	Temple Pond (Greg)	1,500	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	47.27428	-104.32621	A025213E01 HELICOPTER PLANT	Arlee		4.90	98.65	CH		
04/15/2014	125150	West Plum Reservoir	600	001A - Rainbow Trout	Not Sterile	2.00	19	0.78	1	
7	45.62910	-104.10100	A025213E01 HELICOPTER PLANT	Arlee		1.90	129.00	CH		
04/16/2014	164650	Chamberlain Reservoir #3	1,500	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.47960	-107.52080	A025213E01 HELICOPTER PLANT	Arlee		4.90	152.58	CH		
04/16/2014	164660	Childers Pond	1,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.47630	-107.54500	A025213E01 HELICOPTER PLANT	Arlee		3.20	152.58	CH		
04/16/2014	164703	Clark Reservoir	2,500	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.47021	-107.40700	A025213E01 HELICOPTER PLANT	Arlee		8.00	152.58	CH		
04/16/2014	164725	Clyde Saylor Pond	1,500	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.38160	-107.40685	A025213E01 HELICOPTER PLANT	Arlee		4.90	152.58	CH		
04/16/2014	213198	Fort Keogh Bass Pond	1,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	46.40850	-105.95990	A025213E01 HELICOPTER PLANT	Arlee		3.20	152.58	CH		
04/16/2014	166092	Jarden Reservoir #2	1,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.23610	-107.27320	A025213E01 HELICOPTER PLANT	Arlee		3.20	152.58	CH		
04/16/2014	166415	Kreider Reservoir #2	1,500	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.18540	-107.48470	A025213E01 HELICOPTER PLAANT	Arlee		4.90	152.58	CH		
04/16/2014	166967	McRae Reservoir #1, Jack	2,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.36740	-106.45450	A025213E01 HELICOPTER PLANT	Arlee		6.50	152.58	CH		
04/16/2014	166970	Meckle Reservoir #1	700	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.21560	-107.43830	A025213E01 HELICOPTER PLANT	Arlee		2.20	152.58	1		
04/16/2014	168045	Ryan Ponds	1,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.41800	-107.52450	A025213E01 HELICOPTER PLANT	Arlee		3.20	152.58	CH		
04/16/2014	168056	Saylor Reservoir	1,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.36680	-107.41310	A025213E01 HELICOPTER PLANT	Arlee		3.20	152.58	CH		
04/16/2014	168709	Watt Reservoir	2,000	001A - Rainbow Trout	Not Sterile	2.00	20	1.00	1	
7	47.53290	-107.27410	A025213E01 HELICOPTER PLANT	Arlee		6.50	152.58	CH		
04/18/2014	212450	Clarks Reservoir	4,000	001A - Rainbow Trout	Not Sterile	2.00	120	0.00	1	
7	46.88742	-105.70442	A025213E01	Arlee		13.07	54.00	CH		
05/09/2014	219000	Tongue River Reservoir	1,000,000	082F - Walleye	Not Sterile	0.25	340	6.00	1	
7	45.08357	-106.80005	F141414W01	Fort Peck		45.00	153.00	BS		
06/18/2014	120100	Beaver Creek	2,000	082F - Walleye	Not Sterile	1.40	125	6.00	1	
7	47.32981	-103.65609	F141414W01 POND 14	Fort Peck		4.00	56.25	CH		
06/18/2014	218775	Sandstone Reservoir	10,000	082F - Walleye	Not Sterile	1.30	125	6.00	1	
7	46.32745	-104.43631	F141414W01 POND 13	Fort Peck		19.30	56.25	CH		
06/24/2014	212527	Castle Rock Lake	1,000	082F - Walleye	Not Sterile	1.25	75	6.00	1	
7	45.87800	-106.63160	F141414W01 From Pond 39 in truck 1580	Fort Peck		1.75	33.75	LB		
06/24/2014	219000	Tongue River Reservoir	50,000	082F - Walleye	Not Sterile	1.25	340	12.00	1	

Appendix 1. Continued

Montana Fish, Wildlife & Parks
Miles City Fish Hatchery
Fish Planting Report - By Date

Date Range: 01-01-14 - 09-19-14
Selections: All Current Lots All Archived Species Region 7

Date / Rgn	Wtr Cd / Latitude	Water Name / Longitude	Nbr Fish / Lot Nbr	Species / Strain	Sterile	Len / Wt	Miles / Cost	Prdm / Emp	Cnd / Mrk	Tmp
7	45.08357	-106.80005	F141414W01 From pond 35, 36, 39 in truck 1580	Fort Peck		86.00	153.00	LB		
07/18/2014 7	121425 45.51704	Hansen Pond -104.41127	500 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.00 2.00	75 36.00	1.50 MR	1	
07/18/2014 7	122640 45.81575	McNabb Reservoir -104.42258	1,000 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.00 4.00	75 36.00	1.50 CH	1	
07/18/2014 7	217275 46.27822	Pinnow Reservoir -104.20039	500 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.00 2.00	75 36.00	1.50 MR	1	
07/18/2014 7	217276 46.27911	Pinnow Reservoir #2 -104.21082	500 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.00 2.00	75 36.00	1.50 MR	1	
07/29/2014 7	219687 47.32690	Wilgosh Reservoir -105.20750	1,000 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.00 4.00	340 163.20	6.00 BS		
07/30/2014 7	210000 45.65850	DICK GASKILL BASS POND -105.81440	1,000 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	1.65 3.78	135 64.80	6.00 JMR	1	
08/12/2014 7	211816 46.45190	Beardsley Jim #1 -105.00030	1,500 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	1.90 5.70	75 36.00	3.00 CH	1	
08/12/2014 7	218654 46.54676	Singleton Reservoir -105.16380	1,000 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	1.90 3.80	75 36.00	3.00 CH	1	
08/27/2014 7	166410 47.09576	Kreider Reservoir #1 -107.47637	4,000 M141414L01	017M - Largemouth Bass Miles City	Not Sterile	2.20 19.23	226 101.70	6.00 BS	1	
09/02/2014 7	212527 45.87800	Castle Rock Lake -106.63160	4,000 M141414S01	073M - Smallmouth Bass Miles City	Not Sterile	2.50 26.60	150 84.79	0.00 BS	1	
09/02/2014 7	218815 46.39090	Spotted Eagle Reservoir -105.85447	1,500 M141414S01	073M - Smallmouth Bass Miles City	Not Sterile	2.50 10.00	10 4.80	0.00 CH	1	
09/04/2014 7	218775 46.32745	South Sandstone Reservoir -104.43631	8,400 F141414W01	082F - Walleye Fort Peck	Not Sterile	5.00 210.00	170 81.60	6.00 BS	1	
09/11/2014 7	000000	NEW MEXICO	2,384 M141414L01 PICKED UP BY NEW MEXICO	017M - Largemouth Bass Miles City	Not Sterile	40.00 91.00	0 0.00	0.00 JMR	1	
09/11/2014 7	000000	NEW MEXICO	31,184 M141414L01 PICKED UP BY nW MEXICO - MARK YOST	017M - Largemouth Bass Miles City	Not Sterile	2.00 108.00	0 0.00	0.00 JMR	1	
09/11/2014 7	000000	NEW MEXICO	16,104 M141414S01 PICKED UP BY NEW MEXICO MARK YOST	073M - Smallmouth Bass Miles City	Not Sterile	2.00 79.00	0 0.00	0.00 JMR	1	

Ttl Nbr Fish: 1,213,272 **Ttl Miles:** 3,408 **Ttl Perdiem:** 112.50
Ttl Weight: 1,034.36 **Ttl Veh Cost:** 7,637.45

Appendix 2. 2014 Fort Peck Hatchery Stocking Summary.

Montana Fish, Wildlife & Parks

Fort Peck Hatchery

Fish Planting Report - By Date

Date Range: 1/1/2014 - 12/31/2014

Selections: All Current Lots Selected Archived Lots Region 7

Date / Rgn	Wtr Cd / Latitude	Water Name / Longitude	Nbr Fish / Lot Nbr	Species / Strain	Sterile	Len / Wt	Miles / Cost	Prdm / Emp	Cnd / Mrk	Tmp
04/17/2014	214155	Johnson Reservoir	2,500	001A - Rainbow Trout	Not Sterile	2.08	20	1.09	1	
7	47.84628	-104.53942	A025213E01	Arlee		9.00	145.55	M&B	none	
			Helicopter plant							
05/15/2014	211778	Baker Lake	100,000	023F - Northern Pike		0.75	172	4.50	1	
7	46.36337	-104.27070	F525214N01	Fort Peck		10.55	47.30	MB	none	
05/15/2014	218775	South Sandstone Reservoir	300,000	023F - Northern Pike		0.75	172	4.50	1	
7	46.32745	-104.43631	F525214N01	Fort Peck		31.64	47.30	MB	none	
05/15/2014	124135	Talcott Pond	10,000	023F - Northern Pike		0.75	172	4.50	1	
7	45.24317	-104.88550	F525214N01	Fort Peck		1.05	47.30	MB	none	
06/05/2014	211778	Baker Lake	300	001R - Rainbow Trout		6.81	109	3.60	1	
7	46.36337	-104.27070	R225213E02	Arlee X Erwin - Ennis		37.90	29.98	MB	none	
06/05/2014	211778	Baker Lake	1,501	023F - Northern Pike		2.59	109	3.60	1	
7	46.36337	-104.27070	F525214N01	Fort Peck		6.53	29.98	RL	none	
06/05/2014	213840	Homestead Reservoir	1,000	023F - Northern Pike		2.59	109	3.60	1	
7	46.99125	-105.56265	F525214N01	Fort Peck		4.35	29.98	RL	none	
			PPU							
06/05/2014	215050	Lindsay Dam	1,000	023F - Northern Pike		2.59	109	3.60	1	
7	47.21854	-105.15444	F525214N01	Fort Peck		4.35	29.98	RL	none	
			PPU							
06/05/2014	218775	South Sandstone Reservoir	1,501	023F - Northern Pike		2.59	109	3.60	1	
7	46.32745	-104.43631	F525214N01	Fort Peck		6.53	29.98	RL	none	
06/13/2014	211778	Baker Lake	700	001A - Rainbow Trout		8.42	561	53.20	1	
7	46.36337	-104.27070	A020612A01	Arlee		167.46	154.28	MB	none	
			From GSSFH to finish up catchable stocks							

Ttl Nbr Fish: 418,502 **Ttl Miles:** 1,642 **Ttl Perdiem:** 85.79

Ttl Weight: 279.36 **Ttl Veh Cost:** 591.63

Appendix 3. Hollecker Lake Kid's Fishing Pond Proposal, 2005.

PROJECT SUMMARY:

Hollecker Lake does not support a socially desirable fishery, despite a variety of attempted management alternatives over the past 40 years. From 1964 to 2005 cool and warm-water species (rainbow trout, brook trout, Yellowstone cutthroat trout, bluegill, crappie, largemouth bass, smallmouth bass, yellow perch, northern pike, channel catfish) were stocked at various densities, sizes, and seasons. However, viable fisheries failed to establish; stocked species were infrequently sampled in the years following stocking and sampling efforts indicated an assemblage dominated by Yellowstone River fishes. Yellowstone River fishes access Hollecker Lake through the Buffalo Rapids Canal, which is the lone inlet. Although an inlet screen was installed to prevent invasion from the canal, design and maintenance logistics reduced its effectiveness; large mesh size and removal when debris accumulation was common allowed invasion. Hollecker Lake was chemically treated in 1994 to eliminate nonstocked species but was again dominated by Yellowstone River fishes the following year. Because of the difficulty of establishing stocked fish, Hollecker Lake is currently managed as a put-and-take trout pond; 1000 to 2000 catchable rainbow trout are stocked each spring and autumn. However, local angling and sporting groups have indicated that this management strategy is undesirable and establishment of a warmwater kid's fishing pond is preferred. Therefore, the goal of this project is to modify the Hollecker Lake stocking strategy, angling regulations, inlet screen, and spawning and rearing habitats to establish a viable warmwater kid's fishery.

A largemouth bass-yellow perch fishery will be established in Hollecker Lake. During December 2005 the lake will be drained and allowed to freeze to remove all fish. Largemouth bass fingerlings will be stocked in spring 2006 and 2007 at a density of 250 fish per hectare (Dauwalter and Jackson 2005). Because of the short growing season in eastern Montana, largemouth bass will likely not reach sexual maturity until the second or third season following stocking (Ball 1952, Salia 1952). Accordingly, adult yellow perch will be stocked in autumn 2007 or spring 2008 so their progeny will provide forage to the first lake-produced year class of juvenile bass (Ball 1952, Dauwalter and Jackson 2005). Delayed perch stocking will also safeguard against stunting while bass become established. Adult perch will be stocked at a density of 250 fish per hectare (Dauwalter and Jackson 2005). To provide angling opportunities while largemouth bass become established, 1000 catchable rainbow trout will be stocked in spring 2006 and 2007. Largemouth bass and rainbow trout will be obtained from the Miles City State Fish Hatchery and yellow perch will be transplanted from Johnson's Reservoir, Baker Lake, or Castle Rock Reservoir.

Hollecker Lake will be managed for high densities of small largemouth bass and low densities of large yellow perch. High densities of largemouth bass will create a high-quality kid's fishing pond (i.e., large numbers of catchable fish) and large yellow perch will provide a year-round angling opportunity for a highly desirable species. This management option requires overpopulation of small largemouth bass, which will reduce perch densities thereby preventing stunting and allowing attainment of large size (Guy and Willis 1991, Flinckinger et al. 1999). Accordingly, a 38-cm minimum length limit for largemouth bass will be imposed to establish high densities (Flinckinger et al. 1999). Management goals are a largemouth bass PSD of 20 and a yellow perch PSD of at least 50 by 2009 (Guy and Willis 1991). Largemouth bass will be annually sampled by night electrofishing and yellow perch by trap netting to assess attainment of management goals. Signs describing this management strategy, and all phases of the project, will be installed.

New screen installation and maintenance practices will reduce invasion and competition by canal fishes and enhance the foraging ability of largemouth bass. The primary factor contributing to the failure of

previous stocking efforts has been invasion of fish from the Buffalo Rapids Canal. To reduce the likelihood of invasion, the Glendive Chapter of Walleyes Unlimited has installed a new head gate structure with removable screens of two mesh sizes and a gate that will shut off all flow to the lake. Smaller mesh sizes will prevent access by juvenile or smaller-bodied fishes and the head gate can be closed to reduce access by larval fishes. Additionally, Walleyes Unlimited will assume responsibility for screen cleaning and maintenance to ensure that barriers to canal fish are in place at all times. The canal head gate will also be closed during periods of high turbidities to maintain clear water in the lake. Because largemouth bass are visual predators their growth and survival is positively correlated with water clarity (Stone and Modde 1982). Maintenance of water clarity to depths of at least 46 cm is essential to allow adequate largemouth bass predation to prevent overpopulation and stunting by yellow perch (Flinckinger et al. 1999).

Habitat enhancement will improve bass and perch spawning habitats and concentrate fish to improve angling opportunities. Christmas tree clusters will be placed throughout the lake to provide perch spawning habitat (Kratz 2005) and concentrate perch and bass for anglers (Johnson and Lynch 1992, Rogers and Bergersen 1999). Christmas trees will be placed at depths (4 feet) and orientation to prevailing winds (north and southeast edges) to maximize perch egg deposition (Kratz 2005). Littoral shallow-water bass spawning grounds will be constructed using gravel, logs, and boulders. A floating island will be installed to concentrate fish within casting distance of the handicap fishing access. Use and efficacy of all habitat features will be assessed with annual SCUBA surveys. All materials will be obtained and installed by the Glendive Chapter of Walleyes Unlimited and Montana Fish, Wildlife and Parks during winter 2006 when the lake is drained.

Literature Cited:

Ball, R. C. 1952. Farm pond management in Michigan. Journal of Wildlife Management 16:266-269.

Dauwalter, D. C., and J. R. Jackson. 2005. A re-evaluation of U.S. state fish-stocking recommendations for small, private, warmwater impoundments. Fisheries 30:18-28.

Flickinger, S. A., F. J. Bulow, D. W. Willis. 1999. Small Impoundments. Pages 561-587 *in* C. C. Kohler and W. A. Hubert, editors. Inland fisheries management in North America. American Fisheries Society, Bethesda.

Guy, C. S., and D. W. Willis. 1991. Evaluation of largemouth bass-yellow perch communities in small South Dakota impoundments. North American Journal of Fisheries Management 11:43-49.

Johnson, D. L., and W. E. Lynch. 1992. Panfish use of and angler success at evergreen tree, brush, and stake-bed structures. North American Journal of Fisheries Management 12:222-229.

Kratz, B. J. 2005. Spawning use of selectively placed Christmas trees by yellow perch. Special Project Fact Sheet number 1:05, North Dakota Game and Fish Department, Jamestown.

Rodgers, K. B., and E. P. Bergersen. Utility of synthetic structures for concentrating adult northern pike and largemouth bass. . North American Journal of Fisheries Management 19:1054-1065.

Saila, S. B. 1952. Some results of farm pond management studies in New York. Journal of Wildlife Management 16:279-282.

Stone, C. C., and T. Modde. 1982. Growth and survival of largemouth bass in newly stocked South Dakota ponds. North American Journal of Fisheries Management 4:326-333.