

Rob Roy Reservoir Programmed Creel Survey 2011

Leland R. McDonald, Fisheries Biologist, Wyoming Game and Fish Department, 528 South Adams, Laramie, WY 82072

Abstract

This programmed creel survey was conducted from July 1 through September 11, 2011 to evaluate management changes that occurred in 2007. During the survey an estimated 3,529 anglers fished for 13,586 hours. More anglers fished in July than August or September and were most successful in July with a catch rate of 0.58 fish per hour. The overall catch rate for boat anglers (0.58 fish per hour) was faster than for bank anglers (0.37 fish per hour). The overall catch rate for all anglers was 0.46 fish per hour. The 95 percent confidence limits (0.34 to 0.58 fish per hour) overlap the catch rate objective of 0.5 fish per hour. Most measured parameters improved over the last creel survey in 2004 (Hahn 2006). The overall catch rate increased from 0.18 to 0.46 fish per hour. The bank angler catch rate increased from 0.13 to 0.37 and boat angler catch rate improved from 0.21 to 0.58 fish per hour. The total number of anglers, angler hours and total catch all increased from 2004 to 2011. Stocking Bear River cutthroat failed to meet the objective of increasing bank angler catch rate. Management objectives from the 5UP Basin Management Plan (WGFD 2010b) are a catch rate of 0.5 fish per hour and a mean rainbow trout length of 12 inches. Management recommendations include adding 16,000 brook trout annually to the stocking schedule and continuing annual stocking of 35,000 rainbow trout and 5,000 splake. Bear River cutthroat stocking should be discontinued.

Introduction

Rob Roy Reservoir is located 40 miles west of Laramie, Wyoming, in Albany County, in the Medicine Bow / Routt National Forest. The reservoir is oligotrophic and was built at an elevation of 9,470 feet. When full the surface area is 800 acres and the volume is 35,400 acre feet. Water levels fluctuate with draw downs occurring through the fall and winter months and filling during the spring and summer.

The reservoir was formed by damming Douglas Creek six miles downstream from the headwaters. Several small tributary streams also provide water to the reservoir. The reservoir is owned by the City of Cheyenne, Board of Public Utilities and is part of both the Stage I and Stage II projects. Originally built in 1963 (Stage I) the reservoir was enlarged to its present capacity in 1982 (Stage II). Water for the Stage II Project is now taken directly from Douglas Creek below the reservoir and transported trans basin to Cheyenne via Lake Owen and a gravity fed pipeline. Douglas Creek receives a minimum flow of 5.5 cubic feet per second from the reservoir (Oster 1990).

Campgrounds, outhouses and a boat ramp are all present at the reservoir. Facility maintenance is provided by the United States Forest Service (USFS). Dispersed camping is popular in the vicinity. Due to the many recreational opportunities available at Rob Roy Reservoir it is a major attraction in the Laramie region.

Fish have been stocked in the reservoir since 1965. Species present in the reservoir include; rainbow trout (RBT), brook trout (BKT), brown trout (BNT), Bear River cutthroat trout (BRC), Splake (SPK), longnose suckers (LNS) and white suckers (WHS). Limited spawning occurs in Douglas Creek and the other tributary streams but the fishery is sustained by stocking RBT, SPK and BRC. Various strains of RBT have been stocked including Eagle Lake Rainbow (ELR), fall rainbow trout (FRB) and Firehole River rainbow (FHR) (Table 1).

TABLE 1. Fish stocked in Rob Roy Reservoir from 1996 through 2011.

Year	Species	Number Stocked	Length (Inches)
1996	SPK	5,004	4.7
	ELR	48,690	5.0
	ELR	4,750	4.0
1997	FRB	53,761	3.9
1998	ELR	55,229	3.7
1999	FRB	72,259	3.8
2000	ELR	50,093	4.2
2001	ELR	51,548	5.8
2002	FRB	54,980	3.5
	SPK	5,252	5.3
	FRB	35,190	4.4
2003	FRB	38,492	4.1
2004	FRB	38,016	4.1
2006	SPK	6,653	4.2
	RBT*	89,740	4.7
	BKT	6,000	3.7
2007	FRB	19,018	5.1
	BRC	16,200	5.0
2008	FRB	18,060	4.9
	BRC	13,566	4.9
2009	FRB	20,009	5.3
	BRC	14,952	4.7
2010	FRB	19,008	5.1
	SPK	5,004	3.2
	BRC	15,015	4.2
2011	FRB	20,550	5.5
	SPK	4,522	3.7
	BRC	16,464	3.7

* RBT made up of FRB, FHR and ELR.

A creel survey in 2004 documented that the fishery was not meeting all goals established by Snigg (1996). The 1996 goals specified a mean RBT length of 9 inches for fish caught by anglers and a catch rate for 1.4 fish per day. The length goal of $RBT \geq 9$ inches was met but the catch of 1.4 fish per trip was not. New management goals were established setting an angler catch rate of 0.5 fish per hour and ≥ 1 pound of fish caught per pound of fish stocked (Hahn 2006). Recommendations from Hahn (2006) included a decrease in RBT stocking by 10,000 fish and added the stocking of 10,000 Snake River cutthroat (SRC) annually. Bear River cutthroat were stocked instead of SRC because they were more available. The management change occurred in 2007. Cutthroat stocking was intended to increase overall catch rates and provide a more littoral oriented fish. Splake stocking was added to the stocking mix in 2002 and 2006 to prey on abundant LNS and provide a trophy element (Hahn 2006). Annual SPK stocking began in 2010 to match stocking recommendations in other Snowy Range alpine lakes. The increased numbers of RBT stocked in 2006 were extra RBT available from the Fish Culture Section (Table 1). Current management of the reservoir is under the Basic Yield concept. The stocking request is 15,000 BRC, 20,000 RBT and 5,000 SPK annually. The stocking rate is 44 fish/surface acre. From 2007 through 2011 an average of 1,709 pounds of fish of all species were stocked annually. The stocking rate is within the range recommended by Wiley (2003) for oligotrophic lakes. The mean size of fish stocked from 1998 to 2003 was 4.2 inches. The mean size increased to 5.1 inches from 2004 through 2010.

This creel survey was conducted to evaluate the fishery management changes that occurred in 2007 and to update information for the 5UP Basin Management Plan.

Methods

A programmed creel survey for Rob Roy Reservoir was designed and estimates were generated by Kevin Gelwicks, Aquatic Assessment Crew Supervisor, using stat method one of WyoCreel version 1.63, a WGFD designed computer program. Statistical Method 1 of Program Wyocreel was used to perform a standard uniform probability creel survey. Information was entered into the Fish Division's Creel.mdb Access database, and submitted to Kevin Gelwicks for statistical analysis. Empirical data were summarized using Excel and reported separately from statistical estimates. The survey ran from July 7, 2011 through September 11, 2011. Four weekdays and 4 weekend days were sampled each month. Counts of fishing boats, non-fishing boats and bank anglers were done at 3 selected times on each survey day. Counts were made with a spotting scope and binoculars. Bank angler interviews were made by contacting anglers around the shoreline. Boat angler interviews were obtained at the boat ramp. Anglers who were not finished angling for the day were given a return card and asked to record hours fished and catch data for their trip. The creel cards could be dropped in boxes at the reservoir or mailed. Data collected during interviews included time, hours fished, completed or incomplete trip, bank or boat angling, number of poles used, license type, residence, tackle, species preference and species kept or released. Length and weight of fish kept by anglers were measured when time allowed. The creel suffered due to lack of boat angler interviews for August week days and September week days and weekend days. The lack of boat angler interviews required the season average completed trip length and season average number of anglers per boat to be used when calculating the estimates. A summary of creel estimates is included in Appendix A. The ratio of pounds of fish caught by anglers, fish kept and released, to pounds of fish stocked was calculated

as follows. Total fish caught of each stocked species and total fish caught was multiplied by the mean weight of each species caught by anglers. Mean annual pounds stocked from 2007 through 2011 for each species was then compared to pounds caught during the survey period. Fish sampling in the pelagic habits of the lake were sampled with floating gill nets and littoral habitats were sampled with sinking gill nets. Netting was done at standardized sites with standard mesh array gillnets (Whaley et al. 2002).

Results

From July through mid September a total of 60 instantaneous counts were made at Rob Roy Reservoir. Bank anglers on weekends in July had the highest counts. Boats were least numerous on weekdays in September (Table 2).

TABLE 2. Average number of bank anglers and fishing boats per count for weekdays and weekend days, Rob Roy Reservoir, July – September 11, 2011.

Month	Weekday		Weekend	
	Bank	Boat	Bank	Boat
July	5.2	1.5	17.7	5.7
August	4.5	1.3	13.0	4.7
Early September	1.0	0.2	9.8	2.5

A total of 528 anglers were interviewed during the creel survey. Sixty three % of all anglers were from Laramie and Albany Counties. Wyoming residents made up 69 % of the total anglers. Colorado residents were the most numerous nonresidents. Seventeen states and eight Wyoming counties were represented in the angler numbers (Table 3).

TABLE 3. Residency of interviewed anglers, Rob Roy Reservoir, July –September 11, 2011.

Resident			Non-resident		
County (County Number)	Number	% of Resident Anglers	State	Number	% of Non Resident Anglers
Natrona (01)	3	< 1	AZ	2	< 1
Laramie (02)	179	40	CA	2	< 1
Albany (05)	156	30	CO	86	16
Carbon (06)	5	1	IA	6	1
Goshen (07)	4	1	IL	2	< 1
Platte (08)	15	3	KS	16	3
Park (11)	1	< 1	KY	1	< 1
Campbell (17)	2	< 1	MO	2	< 1
			MT	3	< 1
			ND	1	< 1
			NE	31	6
			NH	1	< 1
			NM	2	< 1
			NV	1	< 1
			SC	1	< 1
			TX	5	1
			WA	1	< 1
Total	365		TOTAL	163	

The majority of resident anglers purchased annual licenses. Among nonresident anglers the most common license type was the daily license. Together these two types of licenses made up 62 % of all licenses (Table 4).

TABLE 4. License summary for resident and non-resident anglers, Rob Roy Reservoir, July – September 11, 2011.

Resident			Non-Resident		
	#	%		#	%
Annual	216	41	Annual	23	>4
Daily	33	> 6	Daily	112	21
Underage	44	>8	Underage	17	3
Youth	28	5	Youth	8	<2
Pioneer	18	>3			
Lifetime	29	>5			
Total	368		TOTAL	160	

Of the 528 anglers interviewed 294 or 56 % used bait. One hundred fourteen anglers fished with lures, 21 %. Fewer anglers used flies, 7%, or any combination of tackle types (Table 5).

TABLE 5. Summary of terminal tackle utilized by interviewed anglers, Rob Roy Reservoir, July – September 11, 2011.

Tackle Type	# of Anglers	% of Anglers
Bait	294	56
Flies	36	7
Lures	114	21
Bait and Flies	17	3
Bait and Lures	53	10
Flies and Lures	10	2
Bait, Flies and Lures	4	<1
Total	528	

An estimated 3,529 anglers spent 13,586 hours fishing during the creel survey (Table 6 and 7). Bank anglers were most numerous in July as were boat anglers. Bank anglers were more numerous than boat anglers and they fished more hours throughout the survey.

TABLE 6. Estimated hours fished (SE) by month for bank, boat and all anglers with angler days per acre (SE) , Rob Roy Reservoir, July – September 11, 2011.

Month	Bank	Boat	All	Per acre
July	4,206 (440)	3,251 (377)	5,457 (547)	9.3 (0.68)
August	2,857 (592)	2,275 (572)	5,132 (1,073)	6.4 (1.34)
Early September	628 (197)	369 (119)	997 (258)	1.2 (0.32)
Total	7,691 (763)	5,895 (695)	13,586 (1,403)	17.0 (1.75)

TABLE 7. Estimated number of anglers (SE) by month for bank, boat and all anglers combined with estimated hours fished per acre (SE) for all anglers combined, Rob Roy Reservoir, July –September 11, 2011.

Month	Bank	Boat	All	Per acre
July	1,166 (122)	770 (89)	1,936 (872)	2.4 (1.09)
August	792 (164)	539 (135)	1,331 (459)	1.7 (0.57)
Early September	174 (55)	87 (28)	261 (82)	1.0 (0.10)
Total	2,133 (212)	1,396 (165)	3,529 (969)	4.4 (1.21)

Catch rates and total catch were highest during July and lowest in August The 0.5 fish per hour catch rate objective was within the 95 percent confidence interval (0.34 - .058 fish per hour) of catch rates calculated in this creel survey (Table 8).

TABLE 8. Catch Rates (SE) and total catch (SE) by month. Rob Roy Reservoir, July – September 11, 2011.

Month	Catch Rate	Total Catch
July	0.58 (0.10)	4,331 (675)
Aug	0.30 (0.07)	1,524 (161)
Mid Sept	0.44 (0.26)	436 (236)
Total	0.46 (0.063)	6,291 (734)

During the creel survey an estimated 6,291 fish were caught. Rainbow trout were the most commonly caught species followed by BNT. Fewer BRC, BKT and SPK were caught. More RBT, BKT and SPK were released than kept. Brown trout and BRC were kept in larger numbers than those released (Table 9).

TABLE 9. Number kept (SE) number released (SE) and total number caught (SE) by species for Rob Roy Reservoir, July – September 11, 2011.

Species	Number Kept	Number Released	Total Catch
RBT	2,456 (369)	2,703 (387)	5,159 (539)
BKT	52 (28)	129 (54)	181 (66)
SPK	45 (38)	95 (47)	140 (60)
BNT	560 (453)	121 (49)	680 (430)
BRC	80 (43)	51 (38)	131 (33)
All	3,192 (441)	3,099 (405)	6,291 (734)

The catch rate was highest for RBT. Boat anglers had a faster catch rate than bank anglers (Table 10). Catch rates for BRC were the lowest of all game species present in the lake. Very few BRC were caught and the catch rate for BRC versus the number stocked is dismal. The number of trout caught per angler trip was 1.78.

TABLE 10. Season catch rate (SE) by species for bank anglers, boat anglers and all anglers combined. Rob Roy Reservoir, July –September 11, 2011.

Species	Bank	Boat	All anglers
RBT	0.33 (0.044)	0.45 (0.065)	0.38 (0.046)
BKT	0.02 (0.006)	0.01 (0.007)	0.01 (0.005)
SPK		0.02 (0.10)	0.01 (0.005)
BNT	0.02 (0.006)	0.09 (0.073)	0.05 (0.032)
BRC	0.01 (0.003)	0.01 (0.004)	0.01 (0.003)
All	0.37 (0.070)	0.58 (0.108)	0.46 (0.063)

The catch rate for all anglers has improved since the last survey in 2004 but has not reached the rates recorded in the 1989 survey. Bank, boat and all angler catch rates have significantly improved since 2004. Boat anglers continue to have the fastest catch rates as was true in 1989 and 2004 (Table 11). None of the values have reached the levels from the 1989 survey. Catch rates are not significantly different between 1989 and 2011 but the large standard error recorded in 1989 likely effects the lack of difference (Table 11).

TABLE 11. Catch rates (SE) by species and angler type from Rob Roy Reservoir from 1989, 2004 and 2011 with a comparison between 2004 to 2011 and 1989 to 2011.

	1989	2004	2011	2004 to z-score	2011 p-value	1989 to z-score	2011 p-value
Overall catch rate	.80 (.631)	.18 (.021)	0.46 (0.063)	-5.22	<.0001	0.69	.2451
Bank anglers	.73 (.671)	.13 (.025)	0.37 (0.070)	-3.88	.0001	0.72	.2358
Boat anglers	.91 (.497)	.21 (.028)	0.58 (0.108)	-4.44	<.0001	0.78	.2177
RBT	.59 (.511)	.14 (.018)	0.38 (0.044)	-5.77	<.0001	0.50	.3085

The estimated number of anglers and angler hours fished have both increased over estimates from 2004. Total catch has also increased. Estimates from 2011 still have not reached the numbers recorded in 1989 (Table 12).

TABLE 12. Number of anglers (SE), angler hours (SE) and total catch (SE) from Rob Roy Reservoir from 1989, 2004 and 2011.

	1989	2004	2011	2004 to z-score	2011 p-value
Anglers	12,849	2,456 (597)	3529 (969)	-0.99	.1611
Angler hours	30,525	8,742 (717)	13,586 (1,403)	-3.34	.0003
Total catch	31,071	1,548 (228)	6,291 (734)	-7.46	<.0001

Total catch for 1989 includes June catch. All other comparisons are July through September. No standard error was available for 1989 data. The number of anglers has not increased significantly but the number of hours fished and the total catch of fish has increased (Table 12).

The mass of fish captured exceeds the mass stocked when all species are totaled. Rainbow trout and SPK exceed a 1:1 ratio but BRC do not (Table 13). Therefore the management objective to catch \geq one pound of fish for each pound stocked is being was for RBT and SPK but not for BRC.

TABLE 13. Ratio of pounds of fish caught by species from July through September 11, 2011, to mean annual pounds stocked, Rob Roy Reservoir.

Species	Pounds Caught	Pounds Stocked	Ratio
RBT	5,571	1,098	5.1:1
BRC	98	575	0.2:1
SPK	147	77	1.9:1
Total	5,861	1,750	3.4:1

The mean length for all RBT from all gear types is 12.4 inches (n=37 stdev=1.56). The largest RBT captured was 14.9 inches (Tables 14, 15 and 16). Rainbow trout reach stock size but do not grow beyond that length. Relative weight of RBT is low as is expected from an alpine reservoir (Table 18). Only one BKT and two BRC were captured in sampling. Bear River cutthroat had only reached Stock size and had a very low relative weight. Low numbers of BNT were captured in all size ranges and all gear types. Brown trout also exhibited low relative weights (Table 18). Only three SPK were captured but they had grown to nearly 16 inches and were in good condition (Tables 14, 15, 16 and 17). Longnose suckers were the most abundant fish captured in ES (Table 15). Netting data further confirms that RBT use pelagic areas where they are more vulnerable to boat anglers (Tables 15 and 16) (WGFD 2011).

TABLE 14. Number, mean length (n; stdev) with ranges, and mean weight (n; stdev) with ranges of fish captured by anglers from Rob Roy Reservoir from July through September 11, 2011

Species	Number	Mean Length	Range	Mean Weight	Range
BNT	4	12.8 (4;0.57)	12.1 - 13.5	0.65 (4;0.07)	0.55 - 0.70
BRC	1	13.4		0.70	
RBT	14	12.9 (14;1.29)	10.2 - 15.4	1.08 (14;1.43)	0.45 - 6.00
SPK	1	15.3		1.04	
Total	20				

TABLE 15. Number, CPUE (stdev), mean length (n; stdev) with ranges, and mean weight (n; stdev) with ranges of fish captured in ES, Rob Roy Reservoir, August 26, 2011.

Species	Number	CPUE	Mean Length	Range	Mean Weight	Range
BKT	1	0.02 (0.03)	10.0		0.35	
BNT	4	0.06 (0.03)	20.3 (4;5.72)	12.5 - 25.3	3.85 (4;2.61)	0.70 - 6.00
LNS	176	2.67 (0.41)	12.1 (176;2.21)	7.2 - 17.2	0.74 (176;0.40)	0.15 - 1.95
RBT	3	0.05 (0.08)	10.2 (3;1.17)	8.9 - 11.2	0.42 (3;0.18)	0.25 - 0.60
SPK	2	0.03 (0.03)	15.4 (2;0.49)	15.0 - 15.7	1.05 (2;0.14)	0.95 - 1.15
Total	186					

TABLE 16. Number, CPUE (stdev), mean length (n; stdev) with ranges, and mean weight (n; stdev) with ranges of fish captured in FS Rob Roy Reservoir, August 26, 2011.

Species	Number	CPUE	Mean Length	Range	Mean Weight	Range
BNT	1	0.02 (0.03)	11.4		0.45	
BRC	1	0.02 (0.03)	13.2		0.80	
LNS	2	0.05 (0.07)	12.8 (2;1.20)	11.9 - 13.6	0.70 (2;0.28)	0.50 - 0.90
RBT	20	0.48 (0.14)	12.4 (20;1.55)	10.5 - 14.9	0.72 (20;0.24)	0.45 - 1.15
Total	24					

TABLE 17. Traditional Relative Stock Density fish captured by all gear from Rob Roy Reservoir, July through September, 2011.

Species	n >= S	RSD-Q	RSD-P	RSD-M	RSD-T
BKT	1				
BNT	9	89	33	22	11
BRC	2				
RBT	36				
SPK	3	100	100		

TABLE 18. Mean relative weights (n; stdev) with ranges and relative weights by length category (n; stdev) for selected fish species in all gear, Rob Roy Reservoir, July through September, 2011.

Species	Mean Wr	Range	S - Q	Q - P	P - M	M - T	T
BKT	83	83 - 83	83				
BNT	79 (9;7.9)	67 - 95	74	77(5;6.89)	80	95	77
BRC	77 (2;9.9)	70 - 84	77				
RBT	82 (37;12.1)	36 - 110	82 (36;12.31)				
SPK	80 (3;2.0)	78 - 82			80 (3;2.0)		

Discussion

Changes to fishery management and objectives that were in effect prior to 2007 were warranted based on recommendations from Hahn (2006). The management objectives were changed, in 2007, to a game fish catch rate of 0.5 fish per hour and ≥ 1 pound of fish caught per pound of fish stocked. Yet another change in the management objectives is designated in the latest basin management plan (WGFD 2010). These objectives set a catch rate of 0.5 fish per hour and a mean RBT length of 12 inches. The catch rate portion of all these management objectives is proving to be the most difficult to achieve (WGFD 2006).

In 2009 Rob Roy Reservoir was sampled by hydroacoustics. Mean total pelagic fish density was 16.38/acre (90% CI: 12.7, 21.5). In 1998, the density of open-water fish was estimated at 14.5/acre; however, because of differences in both technology and methodology, direct comparisons should not be made. Based on a pelagic surface area of 630 acres (i.e., the approximate area of the reservoir greater than 25 ft deep), the estimated pelagic fish population was 10,321 individuals (90% CI: 7,102, 13,540). This information combined with floating gill net results and boat angler catch rates indicate the pelagic fishery is capable of meeting the management objectives (WGFD 2010). Bank angler catch rates continue to be lower than objective. Clearly improving bank angler catch rates has not been accomplished by any of the management strategies tried to date.

The overall catch rate of 0.46 fish per hour is lower than the 0.5 fish per hour objective but does fall within the confidence interval (95% CI: 0.34, 0.58 fish per hour). Boat anglers continued to have faster catch rates and if only boat anglers were considered the catch rate would meet objective. Catch rates have improved in all categories since the last survey in 2004 but are still not at the levels observed in 1989. As RBT stocking replaces BRC stocking more RBT will be available to anglers. Observations of bank anglers during the creel survey indicate most bank anglers use the causeway area both upstream and downstream of a road crossing or the Douglas Creek Bay adjacent to the causeway and boat ramp. Many other shoreline areas of the lake are not as easily accessed. Efforts to improve bank angler success should focus on this area. Hog Park Reservoir in the Laramie Region is similar to Rob Roy Reservoir in size, elevation, stocking rate, size of fish stocked and angler use. It produces rainbow trout of similar mean length (11.2 inches) and condition ($W_r = 80$). The angler catch rate in Hog Park Reservoir was 0.70 fish per hour in 2002. Boat angler catch rates (0.74 fish per hour) exceeded bank anglers rates (0.64 fish per hour) (Covington 2003). One difference between the two reservoirs is the presence of a large population of LNS in Rob Roy Reservoir. Beyond the LNS population there is no identified reason why catch rates are different in similar reservoirs with similar management.

Lake Owen is a smaller shallower reservoir that receives water from Rob Roy Reservoir through a pipeline. It is managed by stocking catchable trout and advanced fingerling BKT. The stocked BKT provide nearly half of the catch from Lake Owen as Stock and Quality sized fish (McDonald 2012). Stocking advanced fingerling BKT may have potential to increase catch rates from Rob Roy Reservoir. Nearly three times more anglers fish Lake Owen than Rob Roy Reservoir. The difference is most likely due to the faster catch rates at Lake Owen, 0.97 fish per hour (McDonald 2012). Increasing catch rates at Rob Roy Reservoir would increase angler use.

Splake stocking has not yet had any effect on abundant LNS populations. The SPK are just now reaching a size and number (16,000) where they can effectively prey on LNS. Because

SPK grow slowly over a long period of time evaluation of SPK stocking will need to wait for several years.

Bear River cutthroat stocking is unsuccessful by all measures. Cutthroat stocking was added to requests beginning in 2007 to provide a species more oriented to littoral habitat in order to increase catch rates for bank anglers. Neither angler catch or management crew sampling have documented sufficient catch of BRC to justify continuation of this stocking program.

Recommendations

- The management objectives specified in the 5UP Basin Management Plan (WGFD 2010) to maintain an angler catch per unit effort of 0.5 fish per hour and a mean RBT size of 12 inches is recommended. Rob Roy Reservoir should be managed as a Basic Yield fishery.
- The stocking of BRC should be discontinued. Stocking of RBT should be increased to replace the discontinued BRC. Rainbow trout stocking will be based on a stocking rate of 44 fish per surface acre.
- Stock 35,000 RBT annually. The recommended size will not change from the current request of 20 fish per pound or 5 inch fish.
- Stock 5,000 SPK annually to add a trophy fishery and provide possible control of the large LNS population.
- Stock 16,000 advanced fingerling BKT annually for 3 years. Evaluate with intensive spot creel survey in July of the third year following stocking. The stocking rate for BKT would be 20 fish per acre.
- Evaluate the stocking program with trend netting every other year in odd years and a one month programmed creel survey every 5 years. The next creel survey will be scheduled for July 2016.

Acknowledgements

Data was collected by fisheries technician Derek Scott. This manuscript was greatly improved with suggestions from Mike Snigg, Steve Gale. Jason Burckhardt, Nathan Cook and Paul Gerrity reviewed the manuscript and provided constructive comments and insights that greatly improved the quality of the report.

Literature Cited

Covington, Scott. 2003. Hog Park Reservoir Angler Survey and Fish Management Review. Fish Division Administrative Report. Wyoming Game and Fish Department, Cheyenne.

Hahn, Matt. 2006. Rob Roy Reservoir Programmed Creel Survey – 2004. Fish Division Administrative Report. Wyoming Game and Fish Department, Cheyenne.

- Snigg, Mike. 1996. Basin Management Plan for Douglas Creek, Mullen Creek, Savage Run Creek, Walbright Creek, Sixmile Creek, Elkhorn Creek, Trail Creek and Stovepipe Creek Drainages. Wyoming Game and Fish Department, Cheyenne.
- McDonald, Leland R. 2012. Lake Owen Creel Survey 2009. Fish Division Administrative Report. Wyoming Game and Fish Department, Cheyenne.
- Oster, Jeanette. 1990. Rob Roy Reservoir, Lake Owen and Douglas Creek Fisherman Use and Harvest. Fish Division Administrative Report. Wyoming Game and Fish Department, Cheyenne.
- Wiley, Robert W. 2003. Trout Stocking Guidelines for Wyoming Fisheries. Fish Division Administrative Report. Wyoming Game and Fish Department, Cheyenne.
- WGFD. 2006. Progress on the 2005 Work Plan, Wyoming Game and Fish Department, Fish Division, Cheyenne.
- WGFDa. 2010. Progress on the 2009 Work Plan, Wyoming Game and Fish Department, Fish Division, Cheyenne.
- WGFDb. 2010. Upper North Platte River (5UP), Basin Management Plan, Wyoming Game and Fish Department, Fish Division, Cheyenne.
- WGFD. 2011. Progress on the 2010 Work Plan, Wyoming Game and Fish Department, Fish Division, Cheyenne.
- Whaley, R., K. Johnson, R. Keith, P. Mavrakis, M. Snigg, B. Stewart, and M. Welker. 2002. Standing waters fishery assessment manual. Wyoming Game and Fish Department, Cheyenne.