Wyoming Game and Fish Department
Green River Fisheries News

Spring 2007

"Conserving Wildlife – Serving People"

Welcome to the fourth annual issue of the Green River Region Fisheries News, released each spring to provide information about fisheries resources and their management in the Wyoming Game and Fish Department's Green River Region. This region covers the Green River drainage downstream from (and including) Fontenelle Reservoir, the Little Snake River drainage, and the upper portion of the Bear River drainage. Fisheries managers are responsible for all aquatic wildlife in the state of Wyoming. Therefore we not only manage sport fish, but also native non-game species and aquatic habitat. Our mission statement (opposite column), based on state statute, confirms that philosophy. Some readers may even notice the newsletter has a new name this year to better reflect our aquatic resource responsibilities.

Fisheries management personnel inventory and monitor fish populations to provide information for the protection and conservation of aquatic wildlife and habitat. We also manage fish populations through fish stocking, fishing regulations, and population restoration. The aquatic habitat biologist works to restore and manage habitat for the enhancement and sustainability of wildlife populations in perpetuity. We do our best to manage and conserve aquatic wildlife and their habitat, but only get to a fraction of the waters in the region each year. Therefore, in addition to our scientific sampling data, we rely on anglers and landowners for information to manage the fisheries resources in southwest Wyoming. We manage aquatic resources for you, the people of Wyoming, so your input is very important. We would appreciate any comments about the contents of this newsletter or any other fisheries concerns you may have. Please contact us using the information provided on the last page of the newsletter.

Fish Division Mission Statement

"As stewards of Wyoming's aquatic resources, we are committed to conservation and enhancement of all aquatic wildlife and their habitats for future generations through scientific resource management and informed public participation. We will use an integrated program of protection, regulation, propagation, restoration and control to provide diverse, quality fisheries resources and angling opportunities. Our efforts will balance the productive capacity of habitats with public desires."

In this Issue:	***Page:***

Green River Trout

Craig Amadio, Regional Fisheries Biologist

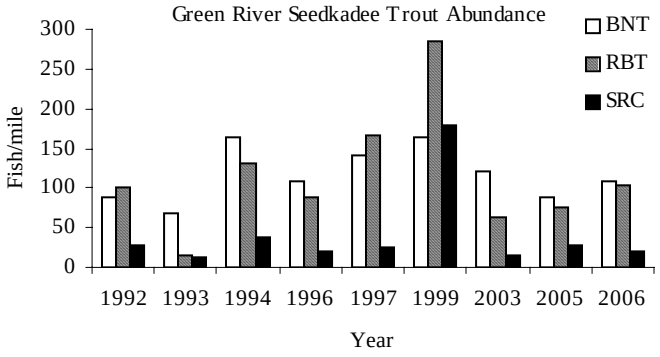
Like many other fisheries in Wyoming, the Green River has been impacted by drought in recent years resulting in low flows that have significantly reduced winter habitat for trout. The main channel habitat in the Green River lacks diversity and suitable winter habitat. Side channel and backwater habitats are important to trout during the winter, particularly juveniles, because these areas provide low-velocity refuges and protection from large predators that are confined to the main channel. Low winter flows between 2001 and 2004 reduced side channel and backwater habitat availability and likely caused increased juvenile trout mortality. The low flows also resulted in significant sediment deposition, allowing silt to accumulate over much of the stream bottom and negatively impacting the reproduction of wild brown trout and Kokanee salmon populations. If provided with adequate flows and spawning substrate these fish are capable of maintaining strong numbers through natural reproduction, but when silt covers spawning gravels eggs suffocate before they hatch and trout don't reproduce successfully. Silt also fills the spaces between rocks and gravel, decreasing the available surface area for macro-invertebrates (the bugs trout eat) and leading to declines in bug production.

The Green River basin finally began emerging from the drought with substantial winter precipitation in 2005. As a result, winter flows have improved and the river received a much needed flushing flow downstream of Fontenelle Dam during spring 2005 (first flushing flow since 1999). It appears that trout populations have responded to the improved habitat conditions as slight increases in trout numbers were documented in 2005 followed by more substantial improvements last year including increased juvenile abundance. We expect the Green River trout fishery to continue improving with adequate winter precipitation, but recovery to pre-drought levels will be slow and may take a number of years.

The Green River trout population is sampled using electrofishing gear in April each year. This allows us to determine trout population structure and abundance as well as assess survival of stocked trout. The Seedskadee NWR and town of Green River sections were sampled in 2006.

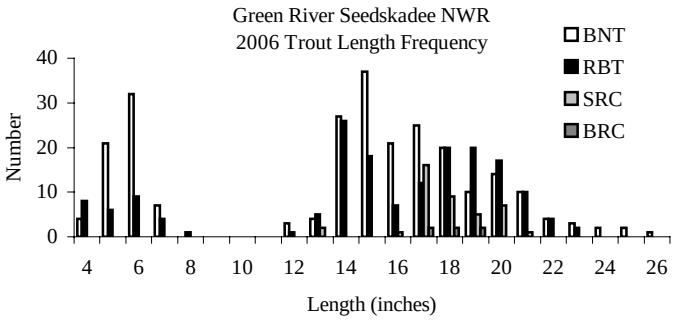
Seedskadee NWR

The abundance of trout, particularly juvenile trout, increased in the Seedskadee section of the Green River in 2006. The estimated abundance of all trout was 235 fish/mile compared to 198 fish/mile in 2005. The population consisted of mostly brown trout (46%) and rainbow trout (44%), while Snake River and Bear River cutthroat comprised a smaller component of the trout fishery (10%). Brown trout (BNT) abundance was 108 fish/mile, an increase of 18% compared to 89 fish/mile in 2005. Rainbow trout (RBT) estimated abundance was 104 fish/mile, a 27% increase from 2005 (76 fish/mile). In fact, rainbow abundance has increased by 41% the last two years in this section of the river. Snake River cutthroat (SRC) abundance remained similar to previous years at 21 fish/mile. Bear River cutthroat trout (BRC) represented only 1% of all trout sampled and abundance estimates could not be calculated due to the low numbers captured.



Aquatic Habitat Biologist Kevin Spence with a healthy Seedskadee NWR rainbow trout.

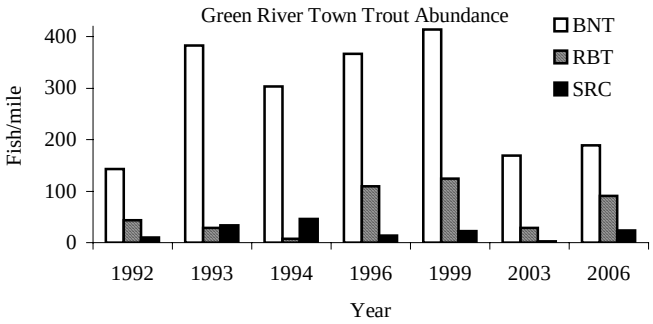
Average trout length slightly declined in 2006 but this is actually good news for anglers. The decline resulted from a much higher number of juveniles in the sample compared to the past few years, meaning natural reproduction and juvenile survival have improved recently. The population mainly consisted of trout between 14 and 21 inches, although fish up to 26 inches were captured. Average brown trout length was 14.5 inches while rainbow average length was 15.7 inches. Although not as numerous, both Snake River and Bear River cutthroat tended to be large with average lengths greater than 18 inches.



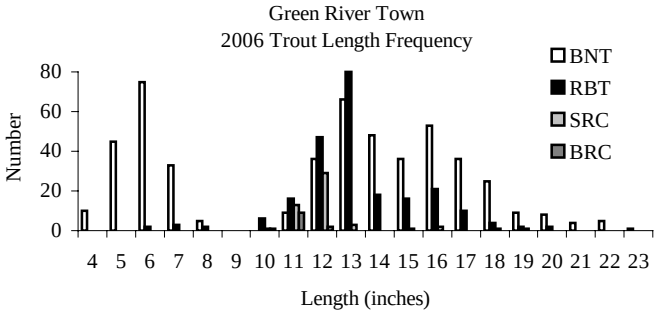
Town of Green River

Similar trout population trends were documented in the town section of the Green River, but overall trout abundance increased even more than the Seedskadee section. The abundance of all trout was 331 fish/mile compared to only 196 fish/mile the last time sampling occurred in 2003. Brown trout were the most abundant trout species representing 61% of the population, followed by rainbows (30%) and cutthroat (10%). Brown trout abundance increased slightly from 169 fish/mile in 2003 to 189 fish/mile but remains lower than most estimates in the 1990's. The greatest improvement in 2006 was increased abundance of rainbow trout. The rainbow population estimate was 91 fish/mile, much greater than 2003 (29 fish/mile) and similar to the highest rainbow estimates in the past 14 years. Cutthroat trout abundance (Snake River and Bear River combined) was 29 fish/mile also a significant increase from 2003 and similar to long-term population trends.

Green River brown trout captured in 2006.



As with the Seedskadee section, mean trout length slightly declined due to greater juvenile abundance. The population was dominated by fish ranging from 12 to 18 inches, but trout up to 23 inches were captured. Brown trout were most abundant among fish greater than 14 inches although average length was only 12.4 inches due to the numerous small juveniles in the sample. Rainbow trout were most numerous in the 10 - 14 inch size class with an average length of 13.7 inches. Average lengths of Snake River and Bear River cutthroat were around 13 inches.



Managers are very encouraged that overall trout abundance increased in 2006 (especially rainbows and juvenile brown trout) and habitat conditions have improved, but the Green River trout fishery has not fully recovered from the drought and juvenile trout survival will continue to be a major concern.

The Green River has numerous special regulation areas so anglers are reminded to consult their fishing regulations before wetting a line. Anglers are also alerted that the seasonal closure on the Green River from Fontenelle Dam downstream approximately one mile to the U.S. Geological Survey gauge station (cable crossing) at the Weeping Rock Campground in Sweetwater County was extended in 2006 and this area is now closed to fishing from October 1 - December 31.

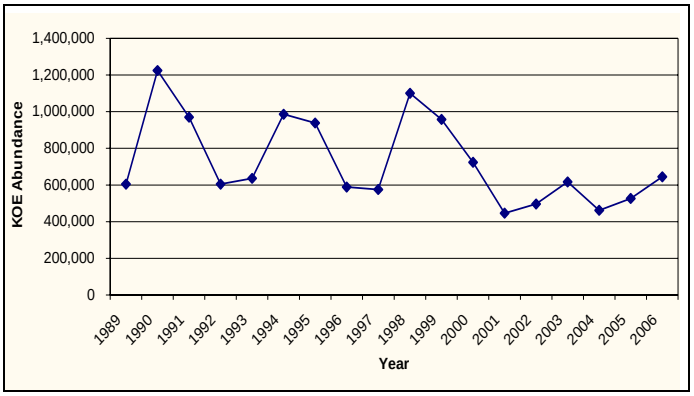
Flaming Gorge Update

Bill Wengert, Regional Fisheries Biologist

Water will again be an issue for Flaming Gorge Reservoir in 2007. The reservoir reached a maximum elevation of 6,024 feet in 2006 and is forecasted to reach only 6,026 feet in 2007. Once again snow pack in the Green River basin is below average and according to the Bureau of Reclamation (BOR) precipitation since March 2006 has only been 59% of normal. Unseasonably warm conditions caused March inflows to increase and the reservoir elevation has risen from a low of 6,023 feet in February to 6,025 feet as of April 1. This is mostly due to early snowmelt and will likely cause the forecasted inflow (currently 46% of normal) to decrease. Unfortunately snow conditions in the basin this spring are comparable to 2002, which was one of the worst inflow scenarios for the reservoir since the closure of Flaming Gorge Dam in 1962.

The BOR has done a commendable job managing Flaming Gorge water levels as the reservoir elevation dropped only 1 foot this past winter. Winter water levels are important because the period from early October to late May is a critical time for the incubation and hatching of kokanee (KOE) eggs in the shoreline gravels of the reservoir. A study estimating the impact of reservoir elevation in 1997 on KOE survival from egg to fry showed a decrease in survival of 8.3% for a 3.3 ft reduction in reservoir elevation. Since the elevation of Flaming Gorge has remained relatively stable since last fall when KOE spawned, there should be very little effect on KOE fry recruitment this spring.

Most anglers are aware that KOE numbers have been low in recent years. During the past decade, the 4-year population cycle fluctuated around 1 million KOE followed by 2 successive years of approximately 600,000. The 2001 abundance estimate was only 446,009 KOE, the lowest ever recorded and the third consecutive year of declines. The 2002 and 2003 estimates (496,225 and 616,900) showed a small, but encouraging increase in recruitment. The 2004 estimate (462,00) slightly declined while the 2005 and 2006 data (526,349 and 644,602 respectively) indicate another small, but steady increase in KOE abundance. Since the estimate for this year is based mostly on the numbers of age 1+ KOE in the population in 2004, angling prospects for 2007 do not appear very good. On the brighter side, approximately 1.2 million early run KOE will be stocked this year (the most KOE stocked in several years) and these fish will recruit to the fishery as 3 year olds in 2009.



Estimated abundance of KOE ≤ age 2+ from 1989 to 2006 in Flaming Gorge.

The lake trout (LAT) population in Flaming Gorge appears to be at an all time high, especially fish ≤ 25 inches. Experimental gill netting in 2006 caught 128 LAT and the catch rate has increased yearly since a low of 54 fish in 2000, indicating a trend of increased recruitment of catchable LAT. The 2006 catch was the highest since experimental netting began and 68% of all LAT netted last year were caught in the Inflow area. Average length of the LAT caught by Inflow nets was 19.5 inches, while the average LAT caught in the Open Hills and Canyon areas was 18.8 and 22.8 inches respectively. LAT found in Inflow nets ranged in length from 14.5 to 29.8 inches and most (56 %) were in the 15.0 to 19.9 inch size class, while 32% were between 20.0 and 24.9 inches. These smaller fish now dominate the LAT fishery in the Inflow area and we hope the new regulations implemented in 2006 (8 LAT, 1 over 28 inches) will help stem the increased recruitment of small LAT.

The catch rate of LAT over 30 inches decreased in 2006, including the number of trophy LAT (≥ 35 inches). The numbers of trophy LAT caught between 1990 and 2005 has averaged 24 fish/year, while

fluctuating between 14 fish in 2001 and 37 fish in 2005. The netting data show the numbers of trophy LAT decreased to 22 fish in 2006, which is 2 fish below the previous 16-year average. Two trophy LAT over 40 inches were netted in 2006, similar to the 16-year average of 2.5 fish/year.

Fisheries Biologist Craig Amadio displays a trophy LAT netted in 2006.

Diet analysis of LAT produced one unusual observation in 2006. A burbot (BBT) was found in the stomach of a 20 inch LAT, marking the first time BBT have been confirmed in the diet of LAT.

BBT populations in the reservoir are well distributed, robust and growing. BBT reports began to surface from ice anglers in 2004 and the first BBT was caught in a gill net in May 2005. Since that time a considerable number have been caught by anglers and additional netting for BBT was conducted in 2006. During spring netting, three gill nets were set in the Blacks Fork arm of the reservoir in areas with rocky habitat preferred by BBT. A total of 26 BBT were caught ranging in length from 9.2 to 18.0 inches with and average of 14.9 inches. Crayfish were identified in 23 of the BBT stomachs, along with a few Utah chubs a white suckers.

More extensive BBT netting was conducted last fall using trammel nets, which are much more effective at catching BBT than gill nets. Both the Inflow and Open Hills areas of the reservoir were sampled in early November. Similar to the spring BBT netting, sites with steep, rocky substrate were targeted. BBT were caught in every net and appear to be widely distributed in the reservoir. A total of 46 BBT were captured in the Inflow area, ranging in length from 10.5 to 23.7 inches (averaging 17.2 inches). Diet analysis of these fish found crayfish were the most common food item occurring in 41% of all BBT examined. Utah chubs were the most common prey fish, followed by white suckers, smallmouth bass and even juvenile BBT.

BBT catch rates were not quite as high in the Open Hills area compared to the Inflow area, but they appear to be present in substantial numbers in this portion of the reservoir as well. A total of 34 BBT were captured in the Open Hills and most (85%) were caught in the Holmes Crossing area while only 1 BBT was caught near the pipeline. BBT ranged in length from 11.7 to 21.1 inches with an average of 16.3 inches. Stomach analysis again found crayfish were the more abundant prey item, followed by SMB which were the only species of fish found in BBT diet in the Open Hills. In addition to the trammel netting last fall, BBT were also caught by numerous anglers in Linwood Bay while jigging for spawning LAT and these reports suggested BBT had LAT eggs in there stomachs.

This is not good news for anglers. BBT are going to be a major factor in the Flaming Gorge fishery for the long term. There appears to be at least 3 year classes represented in the 2006 sample, although larger fish are present. We know that crayfish and fish are going to be a major portion of their diet. And more specifically, SMB will be a major food item in the Open Hills and Canyon areas of the reservoir where UTC and WHS numbers are low. We also suspect BBT will prey upon LAT eggs. Whether BBT will prey on KOE eggs is among the factors we don't know and will need to explore. We are hoping LAT will utilize BBT as forage, but so far there is very little evidence to support our hopes and we would really like to hear from any anglers who find BBT in LAT stomachs. Should LAT learn to feed on BBT, there would be 2 controls (LAT and anglers) to help suppress BBT in Flaming Gorge.

In summary, anglers can expect some darn good fishing for rainbow trout, lake trout, smallmouth bass and channel catfish in 2007 but KOE fishing may be slow. And when the ice appears on Flaming Gorge in December, be ready for some great burbot fishing.

Regional Reservoir Roundup

Craig Amadio, Regional Fisheries Biologist

Fontenelle Reservoir

Recent sampling indicates that brown trout are doing well and are still the dominant sport fish in the reservoir. The catch rate of browns has increased since 2001 and is now near the highest levels documented in the past decade. The average size of brown trout has been 18 to 19 inches the past few years and fishing for browns should be excellent in 2007. Rainbow and Snake River cutthroat trout will also be available to anglers. The average length of both species is over 18 inches, but catch rates have been low in recent years. The low catch rate trend for rainbow trout is a likely indication that stocked fish have not survived well lately, probably due to high levels of predation by brown trout. In efforts to increase rainbow numbers in the reservoir, we altered our stocking strategy. Starting in 2007 rainbows will be stocked at a larger size in the spring. We hope that the time of year when they are stocked, combined with the larger size will allow these fish to avoid predators and survive better. Snake River cutthroat abundance is low because not many are stocked, but the few that are swimming around are big. That's because brood stock Snake River cuts have been stocked the past couple years. These fish are large adults that have been used for spawning in the hatchery and once they are no longer needed we stock them for anglers to catch.

Probably the most exciting news about the reservoir is that kokanee are back. Fontenelle produces large kokanee and recent stocking has restored that component of the fishery. Data from last summer indicates they are surviving well and growing fast. Anglers harvested a lot of 16 to 18 inch kokanee in 2006 and we expect to see 20+ inch fish in 2007. This is great news as anglers can once again look forward to quality kokanee fishing at Fontenelle where the daily creel limit is six kokanee compared to only three at Flaming Gorge.

The last bit of news about Fontenelle is not so good. Burbot were discovered in the reservoir in 2005 and biologists returned in 2006 to assess the population. A total of 15 were caught, confirming that they are present in substantial numbers. The lengths of burbot captured ranged from 15 to 24 inches with an average of 20 inches. Burbot length structure indicated that the population consisted of at least three age classes, including juveniles, suggesting these fish have been present in the reservoir for a number of years and natural reproduction is occurring. Now that burbot are in Fontenelle, they have access to the upper Green River and will likely establish populations in other areas of the drainage. Actually burbot have already been found in the New Fork River. This introduction to the Green River system is a huge problem for anglers and managers. Read more about this problem in the burbot article on page 9.

Viva Naughton Reservoir

The Viva Naughton Reservoir rainbow fishery has been outstanding in recent years and netting data from 2006 indicates the population continues to increase. Rainbow trout catch rates have increased approximately 40% since 2004. The average length of rainbows captured in gill nets was 17 inches and 63% of rainbows captured were 16 to 23 inches. Reports from anglers in 2006 were also outstanding, catch rates were high and most fish were 16-20 inches. Based on this information, rainbow trout survival and growth have been good and that should be reflected in fishing success this summer. Brown trout, splake (brook trout / lake trout hybrid), and mountain whitefish are also available to anglers in Viva Naughton even though the reservoir is primarily managed for rainbows. The average length of both brown trout and splake exceeds 18 inches, but these fish occur at low densities and catch rates are low.

Anglers may also notice that the Viva Naughton boat ramp and parking area have been improved. The Wyoming Game and Fish Department, in cooperation with the Naughton Power Plant, constructed a new boat ramp in 2005. The parking lot was also expanded and new restroom facilities were constructed. These improvements will provide immediate benefits to boat anglers.

Sulphur Creek Reservoir

The rainbow and Bonneville cutthroat trout populations in Sulphur Creek Reservoir have struggled in recent years. Our 2005 and 2006 data have shown slight improvements in trout catch rates,

but numbers are still low compared to the 1990's. Most anglers are aware that walleye were illegally introduced into Sulphur Creek Reservoir. This population was discovered in 2004 but were introduced a number of years earlier, likely coinciding with declining trout catch rates. Stocking strategies have been changed in attempts to improve hatchery fish survival. Larger rainbow and cutthroat trout are now stocked to avoid predation and survive better than the smaller fish that were previously planted. Managers are also assessing spring versus fall planting. Fall stocking may be more successful because walleye metabolism slows during fall and winter months allowing hatchery fish to better avoid predation.

The reservoir will continue to be managed for rainbow and Bear River cutthroat but walleye will undoubtedly have a negative impact on the trout fishery. Walleye are aggressive predators and won't have enough food to support a reproducing population. As a result they will prey on trout and the quality of the fishery will decline. The introduction of walleye to the Bear River system may also have disastrous consequences for downstream fish communities if they escape the reservoir and establish populations in other waters within the drainage like Woodruff Reservoir or Bear Lake.

Game and Fish personnel display walleye captured from Sulphur Creek Reservoir in 2006.

Walleye catch rates and mean length have increased each year since they were discovered. Average length was 15 inches in 2006 and walleye as large as 22 inches have been captured the past two years. Walleye length structure also shows increasing numbers of large adults (>16 inches), but the 13-14 inch size class was most abundant in 2006.

The population currently consists of at least five different age classes, including juveniles meaning walleye are successfully reproducing in the reservoir. Walleye also continued to exhibit outstanding body condition, in other words they are very fat. The reservoir currently has a very large Utah sucker population so walleye have an abundant forage base. This has made catching them difficult for anglers but rest assured, walleye are present in substantial numbers. As the population continues to expand and walleye deplete the sucker population, fishing will improve. The Department set a very liberal daily creel limit for walleye (25 per day or in possession) and will continue to aggressively manage against this species to minimize impacts on trout. We encourage anglers to harvest and remove as many as legally possible to help manage their fishery. Walleye are susceptible to overexploitation and populations can be controlled through angler harvest. The reservoir has limited walleye habitat and most fish congregate around the large points along the northern shoreline between the dam and the inlet of the reservoir. Walleye typically occupy shallow areas (<15 feet) during dusk and dawn periods when they are most active and move to deeper water (20-40 feet) during mid-day. Anglers will need a boat to access these areas and can try jigging or slow trolling spinner harnesses with bottom-bouncers.

Woodruff Reservoir

The Woodruff Reservoir fishery is not doing very well. Low water in recent years has created poor habitat conditions for fish with warm summer water temperatures and low winter reservoir levels. Bonneville cutthroat trout are stocked annually, but these fish do not appear to survive well under current conditions. Reservoir fishing opportunities in the Evanston area are limited so the Department will continue stocking the reservoir at a reduced rate each spring, but the trout fishing will remain poor until reservoir levels improve.

High Savery Reservoir

Bill Wengert, Regional Fisheries Biologist

The new High Savery Reservoir (pictured below) in south central Wyoming is producing a good fishery for native Colorado River cutthroat trout (CRC), Kokanee salmon and tiger trout.

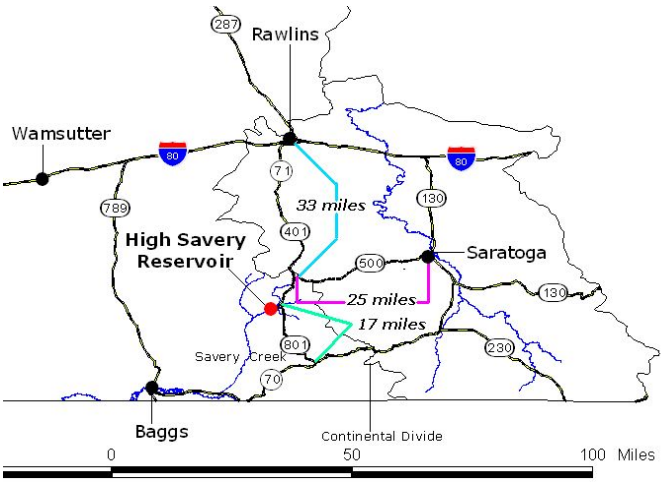
The reservoir is being primarily managed as a brood reservoir for native CRC. Almost 39,000 CRC of varying sizes were stocked in the new reservoir during 2005 and 2006. The bulk of these fish (94%) were stocked at an average size of 6 inches. The rest were catchable CRC plants ranging in size from 8 to 17 inches. The reservoir will receive an additional 15,000 CRC in June 2007 and the first brood fish run should occur during the spring 2008.

Kokanee salmon (KOE) were stocked in the new reservoir to compete with white suckers for the reservoirs abundant zooplankton forage base, diversify the fishery and provide a source of KOE eggs for the WGFD. Approximately 30,000 KOE have been stocked annually since 2004. A spawning run of 2 and 3 year old fish were found in 2006 in all three tributary streams and approximately 1 million early run KOE eggs were taken last September.

Tiger trout (brook trout / brown trout hybrids) are also stocked in the reservoir and this is the only fishery where this hybrid trout can be caught in Wyoming. A predatory trout was needed to utilize white suckers and creek chubs, which are colonizing the reservoir. TGT were chosen because they are completely sterile so numbers can be controlled through stocking. They are aggressive predators and tend to stay along the shorelines, preying mostly on creek chubs. TGT are stocked at only about 3 inches but grow extremely fast. Annual gill netting in 2006 found TGT planted in 2005 had already grown to 15 inches. In fact the first state record for TGT was established in 2006 (16.5 inches, 1.6 lbs) but there is no question this record will be broken in 2007.

The 2007 fishing season on High Savery Reservoir could provide some excellent fishing. The 4 year old KOE from the 2004 plant should easily average 16 inches or more by late summer. Some CRC should be pushing 20 inches this spring, but most will probably be in the 12 to 14 inch size class. The TGT should be at least 18 to 20 inches by spring and 4 to 5 lb fish will not be out of the question next fall.

Access and recreational facilities at High Savery Reservoir are the responsibility of the Wyoming Water Development Commission. The reservoir has a cement boat ramp, parking area and bathroom facilities. No overnight camping is allowed at the boat ramp or around the reservoir but camping facilities can be found to the north on BLM lands and to the south in the Medicine Bow National Forest. The reservoir is located west of Highway 401 (approximately 40 miles south of Rawlins). The access road to the boat ramp is not marked, but the reservoir is visible from the highway. Detailed directions to the reservoir can be found in the 2006 Green River Angler Newsletter on our web site at http://gf.state.wy.us/fish/fishing/Newsletters/.



Burbot in the Green River Drainage

Craig Amadio, Regional Fisheries Biologist

Most anglers are aware that burbot have been illegally introduced to the Green River drainage. These non-native predators have expanded rapidly since their initial introduction to Big Sandy Reservoir and populations are now established in Flaming Gorge Reservoir, Fontenelle Reservoir, the Green River and the Big Sandy drainage. All throughout the system burbot are reproducing and their populations are growing at an alarming rate, particularly in Flaming Gorge. Fontenelle Dam had been creating a barrier and preventing burbot from moving into the upper Green River system, but they were discovered in Fontenelle Reservoir in 2005. Subsequent sampling has confirmed they are present in substantial numbers and appear to be reproducing in the reservoir. The Fontenelle discovery marked the first time burbot were documented upstream of the dam. Unfortunately, now that burbot are in Fontenelle, they have access to the upper Green River and will likely move upstream and establish populations in other areas of the drainage. In fact burbot were found in the New Fork River last fall.

Burbot are aggressive predators and can grow very large. The Wyoming state record is 44 inches, weighing over 19 lbs. Burbot will compete with other sport fish for food and habitat, and will negatively impact native non-game fish and forage fish populations. Recent diet analysis of burbot in Flaming Gorge and Fontenelle indicates that they are feeding heavily on crayfish as well as juvenile smallmouth bass and Utah chubs. This is not a good situation for other species that also rely on crayfish for food like rainbow trout, brown trout, lake trout and smallmouth bass. Burbot will undoubtedly impact crayfish populations, possibly resulting in less prey availability for desired sport fish. Biologists are also extremely concerned about smallmouth bass because they not only utilize crayfish almost exclusively for food but juvenile smallmouth appear to be very vulnerable to burbot predation. Unlike other species, burbot are most active during winter months when other species, especially smallmouth bass, cannot avoid predators well. This situation could possibly have disastrous consequences for natural recruitment of smallmouth bass and other sport fish.

Green River Fisheries Supervisor Robb Keith displays a large burbot harvested in the Green River Drainage.

Managing illegally introduced species like burbot is very costly and much of the money must come from license fees paid by anglers and hunters. Mechanical and chemical removal of undesirable fish species is labor intensive and expensive, not to mention impossible in this case. Even monitoring fish populations becomes more costly when prolific species are introduced into new waters. Often times the only way to maintain a sport fishery in the face of introduced species is to stock larger trout. The cost of stocked trout increases significantly as the size at stocking increases, meaning more money to manage the fishery and fewer fish to stock.

The Wyoming Game & Fish Department aggressively manages against illegally introduced fish populations and will continue to do so. The creel limit for burbot in the Green River drainage is 25 fish per day or in possession and managers are considering unlimited harvest. The liberal regulation is intended to encourage anglers to remove as many as possible and help suppress these illegally introduced populations. Due to the significant threat illegal fish introductions pose to your fisheries, the Game & Fish is increasing enforcement of the laws concerning transportation and introduction of fish to new waters. We all have a responsibility to help conserve our fisheries so please report any suspicious fish transportation or introduction activity to the Game and Fish Stop Poaching Hotline (800) 442-4331 or the Green River office at (307) 875-3223.

2008 Proposed Fishing Regulation Changes

Robb Keith, Regional Fisheries Supervisor

The Wyoming Game and Fish Department is considering changes in fishing regulations for 2008-2009. Because the proposed changes are so numerous the Department felt it was necessary to have a more prolonged public involvement process. In February and March we conducted a preliminary scoping process. The goal of the scoping process was to get the ideas out to anglers and listen to their concerns and suggestions regarding the proposals. We held numerous meetings around the state and attended other meetings to explain our proposals and get feedback on the proposed changes. Public input was collected during this process and used to update the proposals prior to starting the rulemaking period. The updated proposals will be available starting April 30 at the regional offices and on the Internet at http://gf.state.wy.us/fish/regulations/.

The rulemaking process, between April 30 and June 13, is a public commenting period including a series of public meetings. Statewide public meetings will be held during the weeks of May 7 and May 14. The Green River public meeting is scheduled at the Green River regional office on May 7 at 7 pm. The public meetings will provide the Department an opportunity to present the current proposals and to accept comments from the public. The public will also be able to review the regulation proposals and learn how to provide written comments online. Anglers will have the opportunity to provide written comments either at the public meetings, online, through e-mail or by mailing their comments to the Department headquarters in Cheyenne. After the comment period closes we will prepare our final recommendations and present them to the Wyoming Game and Fish Commission in July.

The following is a partial list of proposed regulation changes for 2008-09:

- Separate trout limits for rivers and streams from lakes and reservoirs. For most rivers and streams in area 4 we are proposing a daily limit of three trout (only one over 16 inches) per day. The trout limit on most lakes and reservoirs will not change.
- Separate daily limit for brook trout. The proposed limit for brook trout is 16 per day only 6 over 8 inches.
- Unlimited harvest on ling (burbot) and walleye in all waters in area 4.
- Adding Flaming Gorge, Big Sandy, Fontenelle, Sulphur Creek and Woodruff reservoirs to the list of waters that allow the special winter ice fishing provision.
- Removing length limit on Kokanee Salmon in Fontenelle Reservoir. If adopted this will allow anglers to harvest six Kokanee of any size from Fontenelle Reservoir.
- Reducing the daily limit on mountain whitefish from 50 to 25.
- Closing North Fork Savery Creek to fishing between High Savery Reservoir and the concrete fish trap between September 1 and September 30.
- Allow spear fishing in any lake or reservoir in the state during the year, except where it is specifically excluded by regulation.
- Numerous changes to the live baitfish regulations are proposed. The majority of these changes do not impact area 4 anglers because live baitfish are not allowed in area 4.
- Close the Big Sandy River upstream of Big Sandy Reservoir to seining and trapping.

Green River Native Fish Research

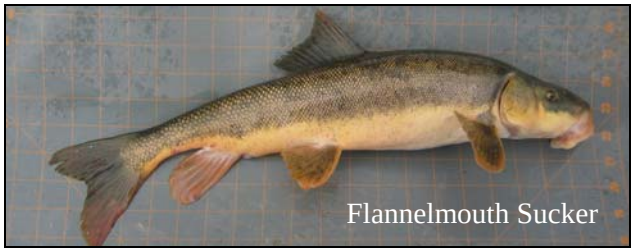
Aaron Kern, Green River Project Biologist

The Green River Native Fish Crew, funded by the State Wildlife Grant program and Bureau of Reclamation, has been busy conducting fish surveys throughout the Green River watershed the past 4 years. The purpose of these surveys is to document the distribution of native and introduced non-game fish. Tributary streams and rivers, as well as portions of the Green River itself, were sampled with a variety of electrofishing gear and seines. Sampling reaches

were typically about 200 yards long, although longer reaches were sampled on larger streams.

A total of 320 reaches were sampled throughout the Green River drainage. When comparing the data collected from 2002-2006 to similar data from years past, it is apparent that three of our native non-game fishes are experiencing significant population declines: bluehead sucker, flannelmouth sucker, and roundtail chub. Bluehead sucker were documented in only 16 of 320 sites sampled (5%), flannelmouth sucker were found in 80 of 320 sites (25 %), and roundtail chub in 27 of 320 sites (8%). The biggest threat to native bluehead and flannelmouth suckers is the presence of non-native white suckers. Not only does the white sucker compete with our native suckers for food and habitat, they also readily hybridize with native bluehead and flannelmouth suckers. These hybrid suckers are now much more widespread and numerous than genetically pure bluehead and flannelmouth suckers. However, pure bluehead suckers can still be found in the Big Sandy drainage, the Green River below Fontenelle Reservoir, the Henrys Fork and Blacks Fork river drainages, and the Little Snake River drainage. Flannelmouth suckers are more widespread than bluehead suckers, and can be found in low numbers throughout the Green River drainage below Fontenelle Dam, including the Little Snake River drainage. Flannelmouth suckers are also present above Fontenelle Dam, but numbers are even lower than other areas of the drainage. Roundtail chub were only found in the Blacks Fork River and Little Snake River drainages, but are also present in several of the Pinedale Finger Lakes in the New Fork River drainage. Wyoming Game and Fish Department personnel will take action to ensure the continued survival of these unique Wyoming natives. Likely steps include removal of white sucker from appropriate stream reaches to eliminate the aforementioned hybridization threat, as well as increasing deep-water habitat in certain stream reaches, which will benefit all three species currently in decline.


Bluehead Sucker


Flannelmouth Sucker


Roundtail Chub

Wyoming's Native Freshwater Mussels

Gordon Edwards, Aquatic Assessment Crew, Fisheries Biologist

Wyoming is home to headwater drainages of the mighty Columbia, Missouri, and Colorado rivers and, thus, a unique group of seven freshwater mussel species. Little is known about the distribution of these species and others may be waiting for discovery in Wyoming. Unobtrusive and well camouflaged, Wyoming's freshwater mussels are largely unnoticed in our creek bottoms and lakeshores, although they have important ecological, cultural, and evolutionary values. Freshwater mussels are important "bioindicators," or species that reflect the quality of their habitats. Mussels filter the water in which they live and some species may live more than 100 years, potentially subjecting them to the long-term effects of pollution.

They also provide an important source of food for terrestrial wildlife, such as raccoons, bears, skunks, and shorebirds. Ancient and modern peoples, alike, have used freshwater mussels for food, buttons,

jewelry, tools, and pearl "seeds" in oyster culture. Freshwater mussel shells are frequently found as cultural artifacts by modern archaeologists in Wyoming and provide a unique window into geologic history and evolution. The complex life cycles of freshwater mussels rely upon particular species of fish or amphibians as hosts and allow mussels to disperse into new areas. This is likely how the western pearlshell mussel crossed the continental divide with the westslope cutthroat trout long ago. Unfortunately, freshwater mussels are among the most imperiled species in the world.

The Wyoming freshwater mussel program is truly in the discovery phase, which is rare in the 21st century. If you find freshwater mussels, *please do not move or otherwise disturb them*, but instead take a few minutes to help us understand them better by doing the following things. Take notes and record where they are (GPS coordinates are great), how many you saw, how big they were, and if they were alive or just empty shells. Take pictures if you have a camera, and contact a local Game and Fish biologist.

You can learn more about mussels on the web at:
http://courses.missouristate.edu/mcb095f/gallery
http://www.fws.gov/columbiariver/musselwg.htm
http://www.gf.state.wy.us/wildlife/CompConvStrategy/Species/MollusksCrustaceans/index.asp

Native Fish Spotlight: Mottled Sculpin

Craig Amadio, Regional Fisheries Biologist

Many native fish species inhabit the lower Green River drainage in Wyoming including the mottled sculpin. Often referred to as "bullheads" by local anglers, sculpin are only distant relatives of the true bullhead catfishes. Most sculpin species actually live in the ocean but a handful of species have managed to survive in freshwater systems of western North America. Sculpin may not be a highly sought after sport fish but they do play an important role in aquatic ecosystems. They tend to occupy high gradient habitat of rivers and streams that many other fish species cannot utilize and serve as an important food item for trout. They have flat heads and slender tapered bodies along with other specialized adaptations such as enlarged pectoral fins and flexible fin spines giving them the ability to maneuver and rest in swift water. Adults rarely exceed 4 inches and they are well camouflaged with variable color patterns of green, brown and gray.

Mottled sculpin prefer cold, clear streams with rock and gravel substrates and high water velocities but can also be found inhabiting the shorelines of lakes and ponds. They feed on small fish, insects, and occasionally prey on fish eggs. Sculpin spawn in the spring by laying eggs in a "nest", which the male will then guard until the young hatch. They are generally thought to be nocturnal, restricting the majority of their activity to night and remaining concealed during the day.

Anglers have long recognized the importance of sculpin in the diet of trout and imitations such as marabou muddlers, matukas, and double bunnies, are a staple among local fly anglers looking to coax a giant trout out of heavy cover. Anglers who frequent lakes and reservoirs have also realized the importance of sculpin in the diet of large trout, and will regularly use dead sculpin as bait.

Loose Ends

- Anglers are alerted to the proposed fishing regulation changes for 2008. Proposed changes will be available on our website starting April 30 and the public commenting period will be April 30 to June 13. We are very interested in public feedback on these proposals and written comments can be provided either online or by mail to:

  Wyoming Game and Fish Department
  Attn: Fishing Regulations
  5400 Bishop Blvd
  Cheyenne, WY 82006

- The 9th annual Wyoming Hunting and Fishing Heritage Expo will be held September 7-9, 2007 at the Casper Events Center. The Expo is a great event to take youngsters to and educate them about the value and diversity of Wyoming's wildlife resources. For more information about the Expo, visit the Game and Fish's website at http://gf.state.wy.us, or call 1-888-EXPO-WYO.

WYOMING HUNTING & FISHING HERITAGE '07 EXPO
CASPER EVENTS CENTER ♦ SEPTEMBER 7 - 9, 2007
1-888-EXPO-WYO

- Wyoming free fishing day is June 2, 2007.

- Families and young anglers can look forward to fishing the urban ponds in our local communities this spring. These ponds will be stocked with catchable trout beginning in late April and stocking will continue through the end of June.

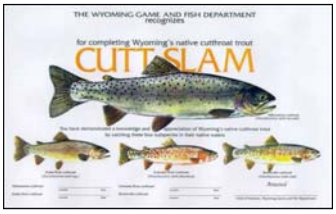
- June 16 is the annual kids fishing day in Evanston sponsored by the local Lion's Club.

- June 16 is the annual kids fishing day at the Rock Springs County Fair Grounds. This popular event us sponsored by Trout Unlimited, Seedskadee National Wildlife Refuge, Wal-Mart, and Wyoming Game and Fish Department.

- Anglers should look for the 2007 Walk-in Area Fishing Atlas. This guide features fishing areas on private land enrolled in the Game and Fish's Private Lands/Public Wildlife Access Program.

- The 2007 Green River Region fishing forecast will be in the May-June issue of Wyoming Wildlife News.

- Try the Cutt-Slam! This Game and Fish program is designed to encourage anglers to learn more about Wyoming's native cutthroat trout sub-species and develop an understanding and appreciation of the Department's cutthroat trout management program. Please visit our web site for more information.



Visit us on the internet!
HTTP://GF.STATE.WY.US/

Wyoming Game and Fish Department
Green River Region Fisheries Crew

Robert Keith – Fisheries Supervisor
Bill Wengert – Fisheries Biologist
Craig Amadio – Fisheries Biologist
Kevin Spence – Aquatic Habitat Biologist

Newsletter Comments or Questions:

Wyoming Game and Fish Department
Fisheries News Comments
351 Astle Avenue
Green River, Wyoming 82935
Phone: (307) 875-3223