



2007 Sheridan Region Angler Newsletter

“From the Bighorns to the Blackhills”

Sheridan Fish Management Crew

Volume IV, Issue IV
2007

Wyoming Game and Fish Department
“Conserving Wildlife— Serving People”

Greetings From Your Fish Management Team

Welcome to the Northeast Wyoming angler newsletter! We hope you find it informative and useful and we'd love to hear from you if you have any comments or suggestions for us.

The Sheridan fisheries region is one of the most diverse regions in the wonderful state of Wyoming. The Sheridan region covers over 18,000 square miles in Sheridan, Johnson, Campbell, Crook, Weston, Niobrara, Natrona and Washakie counties. Major drainages include the Little Bighorn, Tongue, Powder, Little Powder, Little Missouri, Belle Fourche and Cheyenne.

The diversity of fish and fishing opportunities in the region are tremendous. Some 3,000 miles of streams and 19,000 acres of lakes support fisheries from the Yellowstone cutthroat trout to the ever popular walleye.

All told there are 7 native game fish species and 19 native non-game species in our region. In addition to the natives, there are 27 introduced fish species, including rainbow, brown, brook, splake, lake and golden trout, small and largemouth bass, sunfish, northern pike, tiger muskie, and walleye.

We try to highlight some of the more popular fishing spots in these newsletters, some of the projects we're working on, and some of

Wyoming's lesser known but important native fishes.

It's all part of our mission and we want to tell you about it. So again, welcome, and by all means please let us know what you think about our newsletter.

To reach us by phone, Call 307-672-7418 and ask for one of the fisheries biologists. To send us a letter or email, please see the back of this newsletter. And by all means, Happy Fishing!!



Travis Cundy, Bill Bradshaw, Paul Mavrakis, Bud Stewart, Andrew Nikirk

Sheridan welcomes a new position, CBNG coordinator

Bud Stewart has been in the Coal Bed Natural Gas Coordinator Position since June 1, 2006. The goal and purpose of this position is to ensure long-term perpetuation of native fish and wildlife habitat and populations within the energy development area in Northeast Wyoming. This will be accomplished by coordinating with federal, state, county, local government agencies, the Coal Bed Natural Gas (CBNG) industry, landowners, researchers, advocacy groups and interested publics to communicate a consistent message regarding WGFDM management policy, mitigation and reclamation strategies, and impact assessment.

The CBNG Coordinator serves as a member on several CBNG related groups, committees and organizations to inform them of the importance of protecting the important wildlife resources in the Powder River Basin.

Inside this issue:

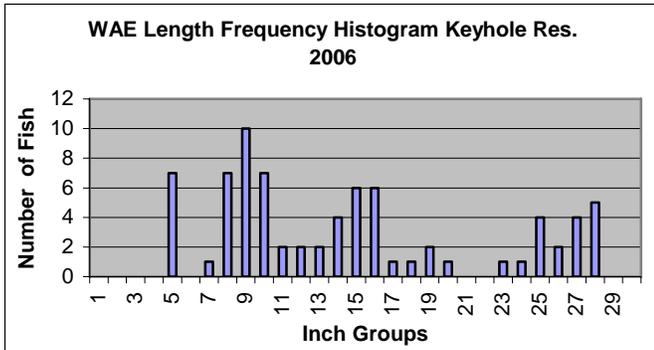
Greetings	1
Keyhole Reservoir Update	2
Know your native species, the sauger	3
Story Hatchery Update	3-4
Regulation Changes in 2008 and 2009!	4
North Tongue Update	5
South Tongue and other waters in Sheridan Region	6-7

Special points of Interest:

- Forest Fires and Fish?
- Regulation Changes!!
- Powder River Sampling
- Fish Passage

Keyhole Reservoir Update

Fish populations continue to do well despite the ongoing drought and low water levels at Keyhole Reservoir near Moorcroft, Wyoming. Annual fish sampling is conducted in late August to monitor fish population abundance, size structure, and overall condition or health of the fish. Fish sampling in 2006 differed little from the past 2-3 years. Sixty-nine walleye were sampled and ranged in length from 5 to 28.5 inches and averaged 15.5 inches and 2.2 pounds.



Keyhole has a lot of walleye in the 5 to 16 inch range and in the 25 to 28 inch range. The larger size classes of walleye are a result of the 1992 and 1993 stocking. As these larger walleye disappear from the population (through harvest and natural mortality) smaller walleye will grow and take their place as the “big ones” that anglers will pursue.



State record northern pike: 27lbs 4oz, 47 inches long. Caught by Bob Hockett October 2004

Five northern pike ranging from 27 to 31 inches were sampled in 2006. Northern pike are very difficult to catch in our sampling gear. These wary fish are ambush predators that lie and wait for food to come to them. The low numbers of northern pike sampled are not an indication that the pike fishery is doing poorly; they’re simply hard to catch. Anglers report that the northern pike are doing quite well and remain highly sought after.

While the 7-9 inch crappies are still very abundant, only 10% of the crappie sampled were 10 inches or larger. Until a significant portion of the 7-9 inch crappie succumb to natural and fishing mortality, it is doubtful that the size structure desired by anglers will improve.

In 2006, 177,830 northern pike and 120,900 walleye fingerlings (small fish about 1-2 inches in length) were stocked in Keyhole. Due to natural reproduction in Keyhole being sub-par, annual stocking helps to maintain these fish populations. In addition to walleye and northern pike stocking, Keyhole is also annually stocked with approximately 500-1,000 gizzard shad from Nebraska. Gizzard shad reproduce quickly and often more than once per year. These offspring provide forage for the game fish within Keyhole. Without the addition of gizzard shad into Keyhole, fish growth would be slower.

In the spring and early summer of 2007, the Wyoming Game and Fish Dept. will be conducting a creel survey at Keyhole. Creel surveys provide useful information to biologists such as catch rates, harvest rates, and fishing pressure. So if you see a creel clerk this fishing season please take a few moments to answer their questions. Your responses will help us to manage Keyhole better.

Fish populations continue to do well despite the ongoing drought

Several walleye were found in the 25-28 inch class



Walleye caught through the ice at Keyhole Reservoir.

Walleye and Crappie pictures provided by Eric Engbretson of Engbretson Underwater Photography.

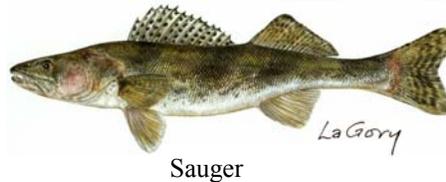
Know Your Native Species: The Sauger

Sauger (*Sander canadense*) is a native game fish to some of Wyoming's waters, including the Sheridan Region in the lower Tongue River and in lower Clear Creek. Sauger are a species of special concern in Wyoming. Sauger have diminished in Wyoming since the turn of the 20th century due to loss of habitat such as the construction of dams and irrigation diversions. Sauger no longer exist in the North Platte drainage and currently inhabit the Wind-Bighorn River, Tongue River, and Powder River drainages.

Sauger are very close relatives to the walleye, an introduced species to Wyoming. Sauger, at times can be difficult to distinguish from walleye, thus making it difficult for anglers to follow the regulations. Sauger will generally have dark mottling along their sides, dark round spots on their dorsal fin, and the absence of a white tip on the bottom of their tail fin. Walleye on the other hand have a white tip on the bottom of their tail fin, no dark spots on their dorsal fin, and usually don't have a mottling pattern on their sides.

Please remember to follow the regulations for sauger, which are a creel limit of six fish/day and a possession limit of six fish. Also, please try to correctly identify your fish! Without your help, conserving this Wyoming native will be very difficult.

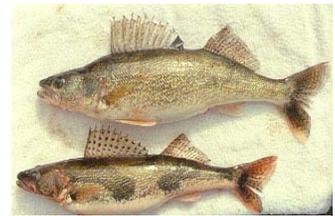
A special thanks to Michelle LaGory for her amazing artwork!



Sauger



Walleye



Walleye on the top. Sauger on the bottom. Note the difference in the fish skin, spots on the dorsal fin, and the white tip on the bottom of the tail fin.

The sauger no longer exist in the North Platte River drainage.

Projects at Story to Begin in 2007!

The 2006 Wyoming Legislature appropriated 2.6 million dollars for building a new brood facility and addressing whirling disease concerns at Story Fish Hatchery.

Reconstruction of the domestic water collection system at Story Hatchery is scheduled to begin in the spring of 2007. Water from one spring at Story will be tied into plumbing for the hatchery building and residences. Laboratory analysis of this spring water resulted in recommendations to utilize this water source for domestic use and might free up the use of well water from the artesian well at Story for future fish rearing purposes.

Construction of a broodstock holding and spawning facility should begin sometime in the summer of 2007. This new facility will replace some of the dirt fish rearing ponds at the hatchery and provide hatchery workers with a roomier and more sheltered place for spawning operations. A new egg incubation room and additional fish rearing units will be incorporated into the structure.

Three important brood stocks are kept at Story hatchery. Lake trout and brook trout broods are spawned in the fall to produce roughly 1.2 million lake trout and splake (cross between male brook trout and female lake trout) eggs, and 500,000 brook trout



Dave Ackerman, Story Hatchery Superintendent, with a male Eagle Lake rainbow trout.

Story Hatchery Continued

eggs. Springtime spawning activities at Story center around taking 2.5 million Eagle Lake rainbow trout eggs. Eggs are incubated at Story Hatchery for initial development and then shipped to other Wyoming hatcheries or to state and federal hatcheries across the nation to trade for species not raised in Wyoming's hatchery system such as walleye, catfish, bass, perch, and northern pike.



Crowded conditions currently for Eagle Lake rainbow spawning operations.



Story spawning structure may look similar to the recently completed structure at the Tensleep hatchery



Spawning Lake trout at the Story Fish Hatchery



Male Brook trout from the Story Fish Hatchery

The Story Fish Hatchery spawns Eagle Lake rainbows, Brook trout and Lake trout; totaling about 4.2 million eggs!

Regulation changes for 2008-2009!!

Typically, Game and Fish proposes only a few fishing regulation changes every two years. This is not a typical year. In early 2007, we began holding public meetings, gathering input through the Internet and mail, and talking to many angler groups about some substantial proposed changes to the fishing regulations. If accepted by the Game and Fish Commission, the regulations would become effective in January 2008.

Many of the big changes are statewide changes including separating out the brook trout limit into its own category, changes to the seining and trapping regulations, creating a separate limit in streams and rivers for trout, special limits for species of concern including sauger, ling and shovelnose sturgeon and many other changes. This overhaul of the statewide regulations is overdue and the changes will help us better protect the resource while making the regulations shorter and more consistent statewide.

Proposed changes of local interest in northeast Wyoming include removing the restrictive regulation on Healy Reservoir, extending the catch and release section on the North Tongue, eliminating special regulations on Leiter Ditch and Black Hills Power and Light (Osage) Reservoir and modifying the regulation on the Middle Fork Powder River.

Following some scoping meetings in February and March, we will start the normal rulemaking process at the end of April. A formal public comment period will start on April 30 and run through June 13. After the comment period closes we will prepare our final recommendations and present them to the Wyoming Game and Fish Commission at their July 19-20 meeting.

All the proposed changes to the statewide and northeast Wyoming regulations can be found on the Game and Fish website at:

<http://gf.state.wy.us/fish/regulations/index.asp>

Please plan on attending the regulation meeting in Sheridan on May 16th at the Game and Fish office from 7 to 9pm. Call us at 672-7418 if you would like to discuss any of the proposed changes and let us know what you think.

North Tongue River and Bull Creek Update

The North Tongue River and Bull Creek in the Big Horn Mountains, west of Sheridan provide excellent fishing opportunities, especially for the fly-fishing enthusiast. Fish population estimates on the North Tongue from our 2006 sampling indicate that there is an estimated 2,400 trout per mile from Burgess Road upstream to the Highway 14A crossing. Estimates upstream of Highway 14A are approximately 1,500 trout per mile. Fish population estimates on Bull Creek are approximately 700 fish per mile. These estimates for the North Tongue and Bull Creek are quite impressive considering their high elevation, coldwater temperatures, and lack of spawning habitat.

Due to the lack of spawning habitat and reproductive success, the Wyoming Game & Fish Dept. annually stocks 2,000 cutthroats in the North Tongue and 300 cutthroats into Bull Creek. In addition to annual stocking, the Wyoming Game & Fish Dept. has implemented a catch and release, flies and lures only regulation on the North Tongue from the mouth of Bull Creek upstream, including Bull Creek and all tributaries to the North Tongue. All fish except *brook trout* must be returned to the water immediately.



In the coming years, biologists will once again evaluate the success of two strains of cutthroat that are stocked in the North Tongue and Bull Creek. Half of the fish currently being stocked are Yellowstone cutthroat while the other half are Snake River cutthroat. The evaluation process involves analyzing stocking survival, growth rates, and condition or health of the fish. Sampling during the fall of the next few years will tell us how the Yellowstone and Snake River cutthroat are going to do. If their growth and survival do not meet our expectations and the anglers expectations then a different variety of fish may be stocked, perhaps rainbow trout.

Possible Regulation changes on the North Tongue

If you've fished the North Tongue the last few years you may have run into a creel clerk asking how the fishing is and your thoughts on the current regulations. In 2005, the Game and Fish Commission directed the Sheridan Fisheries Crew to evaluate the possibility of extending the catch and release area on the North Tongue. It's important to remember that regulations are tools to help manage a fishery, both biologically and socially. So, after a couple years of sampling, we have determined that there would be little biological impact to the fishery and many anglers would definitely be in favor of extending the catch and release area. We are proposing that the catch and release, flies and lures only area on the North Tongue be extended downstream to Burgess Rd (U.S. Forest Rd. 15). If approved by the Game and Fish Commission, this new regulation will take effect in the 2008-2009 regulations.



Yellowstone cutthroat trout from the North Tongue River.

The catch and release section on the North Tongue may be extended downstream to Burgess Road in the 2008-2009 regulation cycle.



Snake River cutthroat trout from the North Tongue River.

South Tongue River Update

Plenty of brookies and browns in the South Tongue!!

For many anglers that fish the waters of the Big Horn Mountains, most end up overlooking the productive waters of the South Tongue and concentrate their efforts on the popular North Tongue River. In the fall of 2006 the Wyoming Game & Fish Dept. sampled three stations on the South Tongue and found tons of fish. At the Dead Swede Campground, we found approximately 4,700 trout per mile with 2,600 trout per mile greater than 6 inches in length. Just downstream of the Dead Swede Campground two other stations we sampled had estimates of 4,000 trout per mile and 6,900 trout per mile.

Unlike the North Tongue River, the South Tongue River has excellent spawning habitat but little “cover habitat” and low food production, thus fish within the river are numerous but on the small side. Anglers are encouraged to help the fish population by harvesting a few fish from the South Tongue. By harvesting fish, more cover and food are available to the remaining fish allowing them to grow to a bigger size.

As previously mentioned, good fish habitat within the South Tongue is lacking. In the fall of 2003, instream habitat structures were placed in the Dead Swede Campground area. These habitat structures have increased the number and depth of pools providing “cover habitat” for fish. The structures have also helped control bank erosion in the area. Since the structures have been put into place the size of fish at the Dead Swede Campground have increased. In the future, pending available funding, more habitat improvement structures will be put in the South Tongue downstream of the Dead Swede Campground.

So, if you’re in the Big Horns and don’t want to fight the crowds on the North Tongue or want to take a few fish home to fry, swing by and fish for the brookies and brown trout on the South Tongue.



Wyoming Game and Fish Department and U.S. Forest Service employees electrofishing the South Tongue River at the Dead Swede Campground, September 2006.



A “cross vane” structure is used to concentrate the flow of water down the middle instead of along the bank. This helps to alleviate bank erosion but also helps to create pool habitat for fish.



A bank stabilization structure is used to prevent bank erosion while also helping to create pool habitat.

Pending funding, more habitat improvements will be placed downstream of the Dead Swede Campground in coming years.

Summaries from other waters within the Sheridan Region

Clear Creek through the town of Buffalo

Lots of habitat work has been done on Clear Creek in Buffalo in recent years. Prior to 2005, Clear Creek had very little fish habitat through that section of river. With the precise placement of boulders, Clear Creek now has several deep pools that the brown and rainbow trout love. Population estimates from the 2006 field season indicate that there are approximately 3,000 trout/mile in through the City Park stretch of river. Pending funding, more habitat improvements will hopefully be installed in the future.



Bank stabilization structure on Clear Creek in Buffalo, Wyoming.

Summaries Continued:

Little Bighorn River

The Little Bighorn River at Dayton Meadows offers anglers an excellent high mountain stream fishery. Located in the Bighorn Mountains, north of Highway 14A off of Forest Service Road 14, the Little Bighorn River has Yellowstone cutthroat, brook trout, and a few rainbow trout. Population estimates from the 2006 sampling were approximately 4,600 trout per mile and 2,250 trout per mile greater than 6 inches.



Little Bighorn River at Dayton Meadows.

Duck Pond

In the summer of 2006, Duck Pond was found to be full of plump brookies and rainbows. Duck Pond is a shallow, yet very productive pond in the Bighorn Mountains. The shallow water usually means good production of aquatic vegetation and aquatic invertebrates, resulting in fat fish. Several brook trout were caught, ranging in length from 6 to almost 12 inches. Duck Pond is located off of Forest Road 26 (Red Grade Road), then southeast on Forest Road 284.

Park Reservoir

Although there are lots of white suckers and water levels fluctuate during irrigation season, Park Reservoir still offers anglers an excellent high mountain reservoir fishery. Several brown trout, Yellowstone cutthroat, and a couple of rainbow trout were sampled this past summer. Starting in 2007, splake (brook trout-lake trout hybrid) will be stocked into Park Reservoir to help control the white sucker population. Park Reservoir is located off of Forest Road 26 (Red Grade Road), then south on Forest Road 293.



Cook Lake

Cook Lake

Cook Lake offers a good trout fishery in the Black Hills North of Sundance. Although there are several undesirable species in Cook Lake, rainbow trout up to 12 inches and brown trout up to 17 inches were sampled this past fall. In order to get rid of the undesirable species such as white suckers and black bullheads, the Wyoming Game & Fish Dept. will most likely have to treat the lake with rotenone. Treating the lake allows us to start from scratch, which will result in a better fishery. Cook Lake is located off of Forest Road 842 north of Sundance, Wyoming.



West Weston Reservoir.

West Weston

West Weston is a newly formed lake in Campbell County west of the town of Weston off of Highway 59. West Weston will provide a trout fishery where very few trout fisheries exist. Preliminary sampling suggests that this lake is a good "trout grower", and that the fish should do well assuming water levels can be maintained.

MW Reservoir

MW Reservoir is located south southwest of Newcastle off of Highway 85. MW offers a very good trout fishery to anglers with rainbow trout ranging from 7 to 14 inches. In 2007, MW will be stocked with 7,500 rainbow trout and 2,500 Snake River cutthroat trout.

Wilderness Lakes

Thirteen lakes were sampled in the Clear Creek drainage in 2006. Powell #3, Powell #4, Chipmunk Lake, Rainy, and Frozen #2 were confirmed fishless. Firehole #2 had golden and lake trout. Lake Angeline had Snake River cutthroat and rainbow trout while Romeo and Martin had nice splake populations. Trigger had a mixture of brook, rainbow, and Snake River cutthroat trout. Two lakes were sampled in the Big Goose drainage as well. Thayer Lake was found to be full of nice brook trout ranging to 15 inches in length. Hope Lake had nice Yellowstone cutthroat trout with the biggest being 16.5 inches.



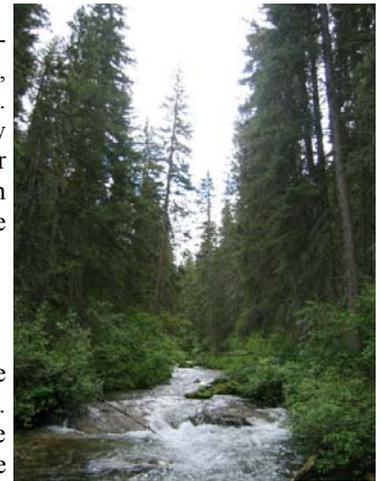
Hope Lake in the Cloud Peak Wilderness.

Forest, Fire, and Fish; The Cycle of a stream in the Bighorns



This tree-covered drainage presents a scene of incredible beauty and offers a glimpse of nature untouched by man. Because it's a pristine forest, it's easy to assume that the fish habitat is the best possible; but is it? In this case, the forest is made up of dense, lodgepole pine that has matured over the last 100 years or so. Just like the forest around it, the stream environment has also matured, and has actually become decadent and past its prime.

In this stage of development, very little woody material finds its way to the stream, and as a result, the uncomplicated fish habitat is not really all that fish friendly (see photo to the right). While there are some pools where larger fish hang out, the stream is dominated by shallow riffles and fast water, and few resting places for fish. There isn't much overhead cover for fish to hide under or decomposing vegetation that is important for producing the insects fish feed on. Unless something happens on a large scale, very little woody material will enter the stream from the surrounding forest.



Occasionally, large-scale catastrophic events like windstorms or fires will affect entire watersheds. When this happens we often think of terms like "ravage", "destroy", or "decimate". But quite the opposite happens to the stream environment. Over time, and it might take a decade or two; the burned trees begin to rot, fall over, and find their way into the stream. At this point the stream becomes like an unruly teenager, young, complicated, and radically different than a few years ago. For fish, this is a very good thing!

At this time in the cycle of forest, fire, and fish, logs and branches of all sizes can literally choke parts of the stream. Imagine a jackstraw of timber that dams the stream, makes pools, provides cover, slows the water, and creates a huge amount of decomposing material that feeds bacteria and insects. This complicated, messy looking stream habitat can really challenge anglers, but you can be sure it is better for the fish. So while some of us may not be around to see the long-term benefits of the next big fire in the Bighorns, the next generation will be, and for them, the fishing will be better than ever.



2006 Fish Stocking in the Sheridan Region

The fish culture section of the Wyoming Game and Fish Department is always busy stocking fish across this great state and in the Sheridan Region. And 2006 was no exception with over 596,100 fish stocked into Sheridan Region waters including walleye, northern pike, tiger muskie, splake, brown, golden, rainbow, Yellowstone cutthroat, and Snake River cutthroat trout. Waters stocked in 2006 included 18 high mountain lakes, 41 reservoirs, lakes and ponds, and 9 streams. If you get the chance, make sure to thank the guys who work so hard to raise and stock all of these fish. Without them, many of our waters wouldn't have fish!

Over 596,000 fish were stocked into Sheridan Region waters in 2006 from hatcheries all across the state!



A tandem axle distribution unit is often used when large numbers of fish are stocked such as Lake DeSmet.



These distribution units can carry approximately 30,000 subcatchables or 9,000 catchables per tank. Each unit has two tanks.



Stocking of Tiger Muskie in LAK Reservoir by Newcastle, Wyoming. 1,000 tiger muskie were stocked at LAK in 2006.

Fish Passage at Low Head Diversion Dams

A cooperative research project was initiated with the United States Bureau of Reclamation (USBR) and Natural Resources Conservation Service (NRCS) to assess passage (fish movement around and through structures) by various fish species at some commonly constructed low head diversion dam designs. The goal was to develop guidance for diversion dam designs that accommodate both game and nongame fish movements past the dams. A stepped boulder structure at the Frank Hopkins diversion on Clear Creek (see picture), which was constructed recently to reduce the annual maintenance necessary of a former push-up dam, was selected for evaluation during the project.



Fish movement assessments using mark and recapture techniques were initiated in spring during the spawning migrations of various species to determine if fish were currently passing the stepped rock structure. All fish caught were marked with an elastomer dye and fish bigger than 8-10 inches were also marked with a PIT tag (Passive Integrated Transponder) which gives a number when scanned, similar to a bar code. Marking the fish above and below the structure with different colors allows us to determine if the fish have moved past the structure or if the structure is inhibiting fish movement. Twelve species were captured above and below the structure. These assessments will be concluded in 2007.

In fall, USBR and NRCS personnel initiated a series of flow and topographic assessments at the structure. Additional surveys will be completed in 2007 at different flow conditions to calibrate hydraulic models of the structure. In turn, various design modifications will be tested in the laboratory relative to their effectiveness at allowing passage by various fish species over a range of flow conditions. In the end,

guidelines will be developed and made available to landowners regarding options to rehabilitate small diversions that will meet their water delivery needs while accommodating the natural movement requirements of fish to spawn or seek thermal refuges during low flow conditions.



A white sucker being marked with a PIT tag.



A white sucker being marked with elastomer dye.

WGFD Continues Sampling efforts on the Powder River



WGFD personnel seining the Powder River.

During recent years the Wyoming Game and Fish Department (WGFD) has increased attention on fishes of the Powder River in northeast Wyoming. These efforts partly aimed to better understand relationships between widespread industrial development and aquatic resources in the area. The nonprofit organization American Rivers named the Powder River the 6th most endangered river in North America in 2002 based on development concerns coupled with high conservation value of the watershed. The WGFD is also acting on its statutory responsibility to manage all wildlife, which includes many more non-game species than the few game species that traditionally captured management interests.

The Powder River is one of the few remaining unregulated Great Plains streams of North America. Nineteen native fishes are well adapted to the seemingly harsh conditions of the Powder River. Minnows (eight species), suckers (five species), catfish (three species), shovelnose sturgeon, sauger, and goldeye represent five families of native fishes in the river. Several minnows have large eyes and external taste buds on their fins, which help them forage on zooplankton and aquatic invertebrates in muddy water. These fishes survive wide swings in water temperature, which may exceed 95° F in late summer. Many of these fishes spawn several times per year, literally waiting for the right conditions. Their eggs drift in the current to avoid burial in the shifting sands and their offspring grow quickly in shallow, warm backwaters. Shovelnose sturgeon, sauger, and goldeye migrate seasonally into Wyoming. They travel hundreds of miles upstream from the lower Powder and the Yellowstone River in the spring, presumably to spawn, then return downstream with receding stream flow. Spawning of goldeye and sturgeon has not yet been verified in Wyoming.

Fisheries biologists surveyed the fish community and aquatic habitat at eight sites on the Powder River and at two sites on Crazy Woman Creek from 2004 through 2006. Biologists found that the murky waters of the Powder are teeming with native fishes. Fish were sampled with seines in various aquatic habitats (such as pools, riffles, runs, and backwaters) during spring, summer, and fall. Over 185,000 fish were examined, almost all of which were native. Trends in species distributions were identified. Minnows such as sand shiners and flathead chubs were abundant at all sites. Mountain suckers were only found at the upstream sites, while channel catfish were most commonly found at the downstream sites. Only three sturgeon chubs were found during the entire project. Exotic species such as green sunfish, common carp, largemouth bass, smallmouth bass, and rock bass were rarely encountered. These species are poorly suited to the incredibly variable streamflows, high range of water temperatures, and lack of aquatic vegetation in the Powder River. Conditions of the habitats where fish were sampled were also recorded, such as overall depths, stream velocity, overhead cover, and substrate composition. These data will help biologists understand the habitat requirements of fishes in the river.



WGFD personnel identifying the fish samples collected.

Biologists also searched for sauger in lower Clear Creek and shovelnose sturgeon in the Powder River during the early summer of 2006. Trammel nets were drifted along the bottom of the river to capture fish in fine-meshed pockets of the nets. Sauger were sampled with electrofishing equipment in lower Clear Creek. Only 17 sauger were examined, tagged, and released in 2006. Flows were quite low last year, reducing the ability of sturgeon and sauger to move upstream into Wyoming. Only 15 sturgeon were captured, tagged, and released but several fish were located ten miles further upstream than previously documented. Biologists also gathered valuable information on channel catfish throughout the drainage during this project. Genetic samples collected from these species of fish will help determine how fish sampled in Wyoming are related to populations in Montana. Please report the date, tag number, and capture location of tagged fish caught in the Powder River by calling 1-800-331-9834.



River Carpsucker, from the Powder.

Fisheries biologists need good information about game and non-game fishes alike to answer questions asked by the public, other agencies, and industry about this complex aquatic environment and preserve the high conservation value of this important aquatic resource. Data analysis is ongoing and will provide valuable insights into the ecology of the Powder River for years to come. Follow-up work will address certain aspects of this project in greater detail. A graduate research project will be initiated in the spring of 2007 to refine fish sampling methods and increase knowledge of habitat use by fishes in the river.



Goldeye, a highly migratory species in the Powder River.

The Wyoming Game and Fish Department expresses sincere gratitude to all the cooperative landowners that have provided logistical assistance and granted access to the river over the years.



Sturgeon Chub, a very rare species in the Powder River.

**Sheridan Fish Management
Crew**



**Wyoming Game and
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"Conserving Wildlife -
Serving People"

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Special thanks to the folks at Story Fish Hatchery (Dave Ackerman, Brad Welch, and Jennifer Meineke) for their contributions. A big thank you to Michelle LaGory and Eric Engbretson of Engbretson Underwater Photography for their photos and art work.

We welcome your comments or suggestions about this newsletter. Please feel free to contact us with the information to the left, or email us at:

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Dates to Remember

- September 7-9: Wyoming Hunting and Fishing Heritage Expo, Casper Events Center. 1-888-EXPO-WYO
- June 2, 2007: Wyoming's Free Fishing Day, check the Game and Fish website or your fishing regulations for details.



Upcoming work in 2007

Thanks for taking the time to view our newsletter! Please feel free to stop by our office, give us a phone call, or catch us out in the field. Although we'll be very busy this summer with field work we'll be happy to try and answer any questions you might have about fishing and fishing opportunities within the Sheridan Region. Here is a list of work that we have planned for the 2007 field season. Stay tuned for updates on these waters in our next newsletter.

- Creel surveys on Keyhole and Muddy Guard #1 Reservoirs.
- Evaluation of habitat structures on fish populations in Clear Creek through Buffalo.
- Fish passage work on Clear Creek at the Frank Hopkins diversion (see page 10).
- Sauger and shovelnose sturgeon sampling on Clear Creek, Tongue River, and Powder River.
- Sample Little Falls Creek, Gold Creek, Little Bighorn River, South Tongue River, North Tongue River, Middle Fork Powder River, and Sand Creek.
- Sample Tie Hack Reservoir, LAK Reservoir, Healy Reservoir, Keyhole Reservoir, Muddy Guard Reservoir #1, Donna Reservoir, Weston Bass Pond, West Weston Reservoir, Buffalo Wetlands Pond, Calvin Lake, Duncan Lake, and Lake DeSmet.
- We will also sample 17 High Mountain Wilderness lakes including Mabel Lake and Magdalene Lake.



Paul Mavrakis



Travis Cundy



Bud Stewart



Andrew Nikirk



Bill Bradshaw