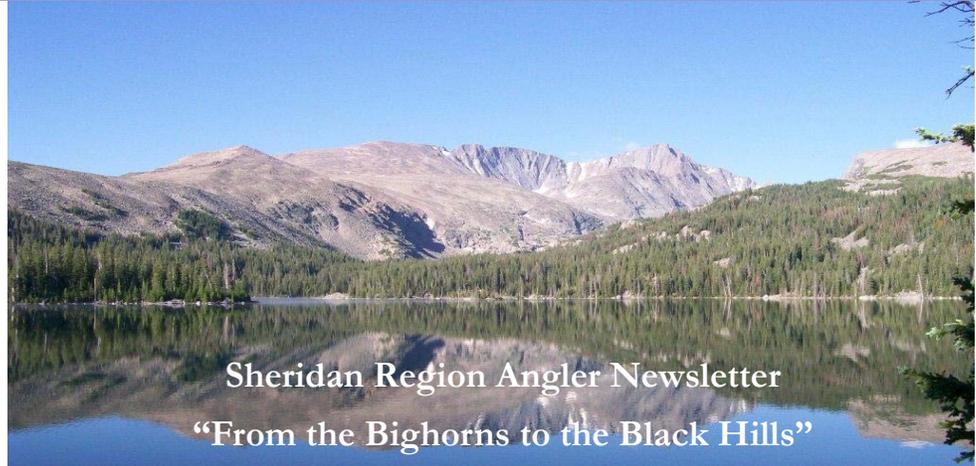


2011



Wyoming Game and Fish Department-Sheridan Region



Sheridan Region Angler Newsletter "From the Bighorns to the Black Hills"

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AIS-Aquatic Invasive Species

The summer of 2010 was a really busy summer for us once again, but busy in a different way. In 2010 the Wyoming Legislature passed a new aquatic invasive species bill that allowed for the establishment of check stations to inspect watercraft for aquatic invasive species and if necessary to decontaminate the watercraft. With this being the first year of the AIS program, fish management personnel statewide were heavily involved with boat inspections at local lakes and reservoirs. As a result, several scheduled sampling events were cancelled in 2010.

In the Sheridan Region the primary focus of boat inspections was at Keyhole Reservoir and Lake DeSmet with "spot-checks" at Tie Hack, Sibley, and Muddy Guard reservoirs. From May 14, 2010 through November 5, 2010, 3,367 watercraft were inspected. Of these, eight inspections were considered "high risk", meaning that these watercraft had standing water within their vessel or had recently come from a water that contained or may have contained AIS. Of the 3,367 watercraft inspected in the Sheridan Region, three of these watercraft posed a high enough risk for a decontamination (all were at Keyhole Reservoir).

Statewide, there were 41,429 watercraft inspections on 36 Wyoming waters. Of these, 63 were "high-risk" inspections and 24 were decontaminations. Four of the watercraft that were decontaminated were found to actually have dead mussels attached to the vessel. All other decontaminations were for standing water, suspected AIS, or as a precaution.

Boats were not the only thing inspected in 2010. In partnership with the U.S. Bureau of Reclamation water samples were collected from 44 Wyoming lakes and reservoirs looking for the larval zebra and quagga mussels. All water samples came back negative indicating that Wyoming has yet to be infected with the mussels.

For the 2011 boating season, boaters can expect a similar situation as 2010. Inspectors will be stationed and/or roving between Wyoming's standing waters inspecting boats and educating boaters on the prevention of infecting Wyoming waters with AIS. It is our hope that the second season of inspecting boats will run more smoothly, allowing the fisheries biologists to catch-up on data collection and sampling. Please refer to <http://gf.state.wy.us/fish/AIS/index.asp> for more information on zebra and quagga mussels and what you, the boater can do to prevent their spread.



AIS boat inspection at Keyhole Reservoir

Special points of interest:

- Aquatic Invasive Species
- Cloud Peak Wilderness lake sampling
- Lower Clear Creek: Fish passage
- Yellowstone cutthroat trout reintroduction into the Little Tongue River



Nice walleye from Keyhole

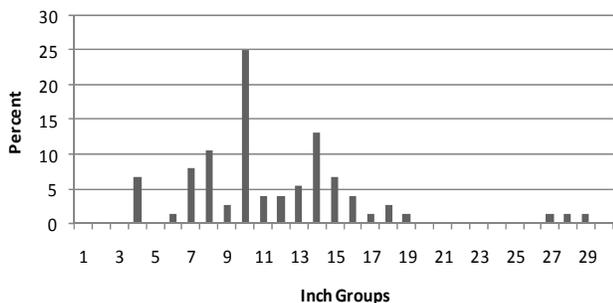
Keyhole Reservoir

Water levels improved again in 2010 for Keyhole Reservoir. With decent snow-melt and some good spring rains, water levels rose to 60% of capacity, up from 35% in 2007. We were at Keyhole four days/week this last summer, however, most of that work was conducting boat inspections and educating boaters about AIS. Bad weather and our AIS commitments allowed for only one sampling event on Keyhole in 2010.

This year saw a decent increase in our Catch Per Unit Effort (CPUE; number of fish captured/hours net was in the water) for walleye in our standard sinking gill nets. This increase was good to see as the past three years we've had a difficult time catching walleye, especially walleye over 18 inches. For a fourth consecutive year, young walleye dominated our catch, indicating to us that there are some good year classes coming into the fishery.

Other game fish within Keyhole continue to do relatively well too. Black and white crappie continue to thrive with most being 7 to 11 inches while most smallmouth bass sampled ranged from 8 to 12 inches but a few in the 17 to 18 inch range. Only a few northern pike have been sampled the last few years with 2010 being the first time in a long time that small northern "hammer-handles" were captured. Northern pike are very difficult for us to capture due to their nature of being a "lie and wait" predator. If they don't move, we don't catch them. But there is always a chance of a lunker waiting to be caught!

Walleye Length Frequency
Keyhole Res 2010



Tons of yellow perch and a happy angler from Healy Reservoir.

Healy Reservoir

Stunted perch still dominate the fishery at Healy Reservoir. The good news is that according to our sampling data, average perch length increased almost an inch from 2009 to 2010. Why has this happened? There are likely four contributing factors. One; starting in 2008, splake (brook trout - lake trout hybrid) were introduced to provide a perch predator. The stocked fish from 2008 are approaching the size needed to be an efficient predator. Two; the largemouth bass population has seen a fairly substantial increase and are likely preying on the perch. Three; for two years, walleye have been transplanted from Lake DeSmet to Healy. To date we have moved 48 walleye and although a relatively small number of fish, walleye are likely preying heavily on the abundant perch population. And perhaps the biggest reason; Healy has been discovered! On any given weekend (especially during ice-fishing season) there are numerous anglers taking advantage of the plethora of perch, with most anglers taking fish home. With these "predators" in place, we are hoping that the average size of perch will continue to increase.



Tie Hack Reservoir

For the past three years, sampling at Tie Hack Reservoir has been very difficult for us. The number of fish sampled by our equipment didn't coincide with the number of fish that we stocked (i.e., very few fish sampled) perhaps an indication that the fishery may be struggling. However, we rarely received any negative feedback from the angling public. Previous years of sampling always happened at the end of May, perhaps too early for this high elevation reservoir. So in order for us to manage Tie Hack better, five sampling events occurred in 2010, three nettings and two hydroacoustics (sonar) samplings.

We found that early July is the best time to sample Tie Hack and all future sampling events will happen in July (more fish were captured in July than any other month). Based on the sonar sampling, a lot of fish were found to be outside the range of our nets (too deep or too far away from shore). We feel confident however, that the larger sample sizes in July will help us make informed management decisions about Tie Hack, such as stocking rates and sizes.

As far as the fish, Tie Hack is an excellent reservoir for brown trout; lots of them and large! We found browns ranging in size between 12 and 21 inches and up to 5 pounds (anglers have caught bigger browns, up to 10 pounds, see picture). When it comes to rainbow and cutthroat trout we find very few large fish. Most fish sampled are stocked fish from the current year. We assume that most of these fish get caught and harvested by anglers and they don't carry over into the next year. While we don't know this for sure, we will be conducting an in-depth creel survey in 2012 to help us determine the amount of fishing pressure, amount of angling harvest, and angler attitudes. Based on the results from the creel survey, we will be able to determine if stocking rates are appropriate.



A 10 plus pound brown trout from Tie Hack Reservoir



Another nice brown from Tie Hack Reservoir

Lake DeSmet

Lake DeSmet is one of the most popular fisheries in Northeast Wyoming. Several opportunities are available for boaters, shore anglers, and ice fisherman. Several game fish are present within DeSmet including rainbow, brown, cutthroat, perch, rock bass, and walleye.

In 2010 we were quite busy at DeSmet. Many days were spent inspecting boats for AIS and thanks to cautious boaters, no "high risk" boats were found. In April and May we transferred another 29 walleye to Healy Reservoir to prey on the abundant perch population.

Our standard sampling is conducted in June and September. Why twice a year? In order for us to gather adequate data sampling twice a year is necessary, because believe it or not, we actually catch different fish between the two samples. In the spring sampling we tend to capture mostly trout species, especially cutthroat. While in the fall we tend to capture more walleye, perch, and rainbow trout. We're not exactly sure why this happens, but it's probably a function of food availability and habitat use at the different times of year.

With the sampling events combined, rainbow trout ranged from 11 to 22.5 inches and up to 3.5 pounds. Brown trout ranged from 17 to 29 inches and up to 12 pounds while cutthroat ranged from 8 to 16 inches and up to 1.5 pounds. Walleye ranged from 11 to 25 inches and up to 6 pounds while perch ranged from 4 to 10 inches.

We will be conducting a creel survey at DeSmet from May thru September 2011. This data will allow us to evaluate the stocking program, estimate the amount of fishing pressure and harvest, and will allow us to gauge angler attitude about the fishery.



A 21 inch rainbow, an above average walleye, and an awesome brown trout from Lake DeSmet



Rainbow from Muddy #1

Muddy Guard Reservoirs #1 and #2

Muddy Guard #1:

This fishery just continues to flourish since the rotenone treatment in 2004. Prior to 2004, white suckers dominated the fishery, tying up productivity, and as a result, the trout within the lake suffered. In the six years since the chemical treatment, we have seen the suckers essentially disappear, while the trout have grown to trophy sizes. In the 2010 sample we found that brown trout ranged from 7 to 25 inches and up to 6 pounds, rainbow ranged from 13 to 20 inches and up to 7.8 pounds, and Snake River cutthroat ranged from 13 to 23 inches and up to 5.5 pounds!!



Huge rainbow from Muddy #1

Fishing can be difficult at Muddy #1 as there is a lot of food for these fish to get to these huge sizes. Patience is key for anglers at this reservoir, but it may be worth your while! Anglers are reminded that Muddy Guard #1 is a trophy fishery with a creel limit of one (1) trout. All trout under twenty (20) inches shall be released immediately. Fishing is permitted by the use of flies and lures only.

Muddy Guard #2:

If your looking for another fishery with trophy size fish, you might want look over the hill to Muddy Guard #2. Muddy #2 has always been a put and take fishery with a mix of 5,000 rainbow and cutthroat trout stocked annually. Not only did we capture several nice rainbow and cutthroat (up to 16 inches and 1.2 pounds) we also captured several large brown trout (the brown trout population is wild with fish coming in from Muddy Creek). Muddy #2 is loaded with longnose suckers, providing a great food source for these large browns. We found browns from 7 to 28 inches and up to 10 pounds! So if you're looking for a place and a chance to catch large fish, don't overlook Muddy Guard #2.



Large brown from Muddy #1



Nice brown from Muddy #2



Large smallmouth from LAK

LAK Reservoir

LAK Reservoir, east of Newcastle continues to provide excellent fishing opportunities. Prior to 1995, green sunfish and white suckers dominated this fishery. So in 1996, tiger musky and walleye were introduced to prey on the abundant populations of green sunfish and white suckers. Following these introductions, white suckers and green sunfish have declined greatly.

Our sampling effort in 2010 found a few large brown trout ranging in size from 8 to 26 inches and up to 6 pounds. Smallmouth bass ranged from 5 to 18 inches and up to 3 pounds while the walleye ranged from 11 to 21 inches and up to 3 pounds.



Nice walleye from LAK

LAK Reservoir is the only water in Northeast Wyoming that has tiger musky. The last year that tiger musky were stocked was 2006. Our source of tiger musky was a hatchery in Pennsylvania. Well, long story short, this facility came up positive for a disease called Viral Hemorrhagic Septicemia (VHS). VHS is a disease that can affect a wide variety of fish species and has caused large scale fish kills. Since Wyoming doesn't have this disease, the last thing we wanted to do was bring this disease in with a batch of fish. Wyoming is currently pursuing tiger musky from other states with clean sources (a work in progress). Hopefully, tiger musky will once again be stocked into LAK Reservoir.

Kendrick Diversion: Bypass Channel on Lower Clear Creek Opens up 36 Stream Miles for Fish

Kendrick Dam is on lower Clear Creek about 7 miles upstream of the confluence with the Powder River. The dam was built about 100 years ago to provide irrigation water and is still used by the Pee Gee Ranch. The dam is tall enough that all upstream fish movement was blocked, and spawning runs of sauger, channel catfish, shovelnose sturgeon, and other fish were obstructed.

With the cooperation of the Pee Gee Ranch, that has changed. A by-pass channel was constructed around the dam and the headgates were opened for the first time on April 15, 2010. For the first time in 100 years, a wide variety of fish species can move into about 36 miles of Clear Creek above Kendrick Dam. In fact, they can move almost to Clearmont before hitting another barrier.

Fish trapping at the top of the bypass channel in the spring of 2010 showed that almost all of the 20 species known to occur in lower Clear Creek, used the bypass channel to move past the dam. Channel catfish, goldeye, and river carpsucker were also sampled in Clear Creek almost as far upstream as Clearmont. None of these three species have been seen above Kendrick dam for many decades.



Aerial photos of the by-pass channel



Close-up view of the by-pass channel



We hoped to see sauger and shovelnose sturgeon using the bypass channel, but we didn't capture either one of them during our netting in 2010. Both of these species are fairly uncommon and we may have missed them.

In order to find out, we will sample much more intensively in 2011, and with a little luck, we'll be able to add both species to the long list of fish benefitting from this exciting project.

We would like to give a big thanks to the Pee Gee Ranch and all the funding partners that made this project possible (WY Heritage Foundation, US Fish and Wildlife Service, Partners for Fish and Wildlife, WY Governor's Sensitive Species Account, and the Wyoming Wildlife Natural Resource Trust).



Three of Wyoming's native game fish. The sauger (insert) and the shovelnose sturgeon (bottom right) are usually seasonal migrants. Water level increases during spring runoff queue these species (and many others) that it's time for migration and spawning. The channel catfish (bottom left) can be migrants as well, but several individuals reside year long.





Peggy Lake

Cloud Peak Wilderness Sampling

July and August is one of our favorite times of year to be a fisheries biologist. We get a chance to escape the heat in Sheridan and head to the high alpine lakes of the Cloud Peak Wilderness. In 2009, inclement weather prevented us from sampling several lakes. So in 2010 we had double the workload with thirteen lakes (three weeks of work) to sample.

Peggy Lake and Highland Park Lake: Both of these lakes were found to have lots of brook trout. Average size was 8 to 9 inches with some fish as large as 12 inches.



Sawtooth Lake #1

Sawtooth #1 and #2: One of the most beautiful places in the Bighorns. Both of these lakes are loaded with nice sized rainbow trout with fish up to 15 inches.

Loomis: One of the more difficult lakes to get into, but absolutely worth it. Yellowstone cutthroat trout were found to be small, 6 to 9 inches while the Snake River cutthroat were 18 to 22 inches.

Bard: Another lake that is difficult to get to but well worth your time. Similar to Loomis, the Yellowstone cutthroat were 6 to 9 inches and the Snake River cutthroat were 16 to 18 inches.

Mead and Upper Mead lakes: Some excellent fishing opportunities at these two lakes with the likelihood of catching brook trout up to 17 inches. Mead Lake was found to have brook trout from 9 to 15 inches, rainbow from 12 to 16 inches, and Yellowstone cutthroat from 9 to 16 inches. Upper Mead had rainbow from 7 to 17 inches and brook trout from 15 to 17 inches!!



Loomis Lake

South Piney Creek Lake #1 and #2: Might take a few years for these lakes to take off. Yellowstone cutthroat trout were found to be on the small side with fish between 6 and 13 inches, but we did capture a couple large Snake River cutthroat in lake #2 (18 inches)!!

Myrtle and Elephanthead: These two lakes have been stocked with golden trout in previous years. We weren't able to capture any fish from these lakes, but that doesn't mean there weren't any there. Both of these lakes were stocked with golden trout again in 2010.

2010 was a helicopter stocking year for 22 Cloud Peak Wilderness Lakes. The lakes within the Wilderness are stocked on a 2-year or 4-year rotation and some are not stocked at all. Lakes that are stocked more often generally have no natural recruitment and are often lakes that have higher use and harvest. Lakes that are stocked every four years are lakes that generally have a little natural reproduction occurring and these lakes generally receive less angling pressure and harvest. Lakes that have fish and do not get stocked have self-sustaining populations that maintain the fishery.



Bard Lake

You may be wondering why lakes like Loomis and Bard (and several others) have Yellowstone and Snake River cutthroat. The previous strain of Snake River cutthroat within our Fish Culture section was the "Auburn" strain. This strain had been cultured for close to 100 years and their genetic integrity had become compromised. So in 2005, the "Auburn" strain was replaced with the "BarBC" strain of Snake River cutthroat. These cutthroat are excellent fish, however, due to their timing of spawn and hatching, these fish are too small to be stocked with a helicopter and have any chance for survival. Our only option was to replace our Snake River cutthroat stocking with Yellowstone cutthroat. We are very optimistic that the Yellowstone's will be able to grow and perform as well the old Auburn strain Snake River cutthroat. We will be monitoring this stocking change over the next several years.



South Piney Lake #2



Helicopter stocking in the Bighorns

Middle Fork Powder River

A well known, yet often overlooked fishery in the Sheridan Region is the Middle Fork Powder River west of Kaycee. This fishery has been subject to “Mother Nature’s” fury with several floods and fires throughout history. In 2010, two electrofishing stations were sampled to monitor this fishery post flood (2001 and 2007) and post fire (2006).

Gordon Creek: This is the uppermost station on the Middle Fork, near the end of Hazelton Road. Estimates of both rainbow and brook trout were found to be lower when compared to our estimates of 2007. The flash-floods of 2001 and 2007 have likely caused this decline in the population. Not to worry however, there are still over 2,300 fish/mile greater than 6 inches and 462 pounds of fish/mile greater than 6 inches within the station.

Outlaw Cave: This is one of the coolest sections of river in all of Northeast Wyoming. Steep trails and canyon walls and big healthy fish. The fire of 2006 has had an affect on the fishery through this stretch of river, most notably, the smaller, young-of-year fish. The increase in fine sediment and ash from the fire has most likely caused a couple of missing year classes, as very few small fish were captured. A mixture of brown and rainbow trout in this stretch was estimated at 2,100 fish/mile greater than 6 inches and 1,150 pounds of fish/mile greater than 6 inches



Large brown trout from Outlaw Cave



Middle Fork Powder at Outlaw Cave



Middle Fork Powder at Gordon Creek

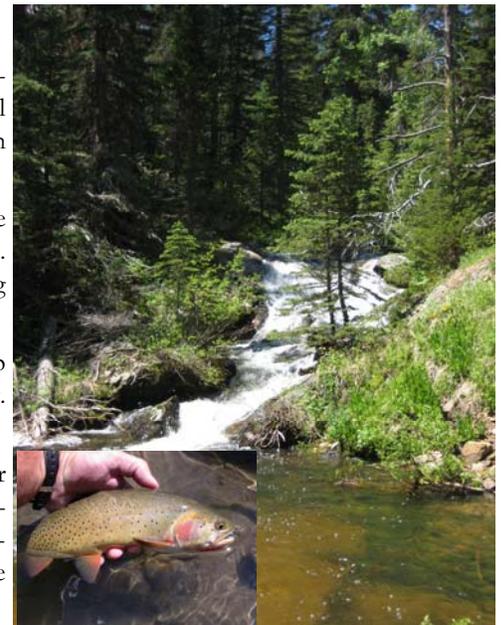
Putting Yellowstone Cutthroat back into the Little Tongue River

After treating streams in the upper Little Tongue River drainage to remove brook and rainbow trout, we’ll finally be ready to start stocking Yellowstone cutthroat trout this fall. All that remains is a little spot treatment to ensure the brook trout are completely gone, which we’ll do late this summer.

Yellowstone cutthroat trout will be distributed over the 15 miles of stream that were treated in 2009 and 2010. About 10,000 fish will be stocked in the fall of 2011 and 2012. We are optimistic that these initial introductions will be enough to establish self-sustaining cutthroat populations.

Most of the stocked fish will be smaller “sub-catchable” size fish, but some larger fish up to 8 inches or so, will also be stocked to provide something for anglers to catch right away. The larger fish will be stocked in the most accessible areas along Black Mountain Road.

Yellowstone cutthroat trout are native to Bighorn Mountains and the Little Tongue River but almost all to them have been extirpated over the years. Today brook, brown, and rainbow trout are present in our area. Game and Fish has been working to restore Yellowstone cutthroat trout to the Little Tongue River drainage as part of a larger effort to ensure that they persist throughout the Sheridan area.





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Dates to Remember

September 8 - 10th: Wyoming Hunting and Fishing Heritage Expo. Casper Events Center. 1-888-EXPO-WYO.

June 4th, 2011

Wyoming's Free Fishing Day. Check the Wyoming Game and Fish website or your fishing regulations for further details.



Upcoming work for 2011

Thanks for taking time to view our newsletter! Please feel free to stop by our office, give us a call, or catch us out in the field. Although we'll be very busy this summer with field work, we'll be more than happy to answer any questions you might have about fishing and fishing opportunities within the Sheridan Region. Below is a list of projects upcoming for the 2011 field season. Stay tuned for updates on these waters in our next newsletter. Happy fishing!!

- Fish passage evaluation on Clear Creek at Kendrick Diversion.
- Sampling on the South Tongue River, Clear Creek through Buffalo, Sand Creek, Sourdough Creek, and the North Fork Clear Creek.
- Sampling on Keyhole Reservoir, Lake DeSmet, Healy Reservoir, LAK Reservoir, Tie Hack Reservoir, Muddy Guard Reservoir #1 and #2, Geier Reservoir, Sawmill Reservoir and Sawmill Lakes, Weston Lake, and Duck Pond.
- Native game and native non-game fish sampling on the Powder River.
- Several Cloud Peak Wilderness lakes will be sampled including the Cross Creek lakes and Lost lakes.
- Creel survey on Lake DeSmet.



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