



Sheridan Region Angler Newsletter

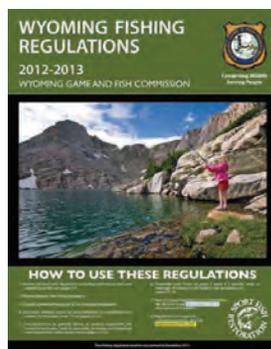
“From the Bighorns to the Black Hills”



New Regulations for 2012-2013

Inside this issue:

<i>Keyhole Update</i>	2
<i>Cloud Peak Wilderness Sampling</i>	4
<i>Lake DeSmet Update</i>	6
<i>Sand Creek Update</i>	6
<i>Kendrick Bypass Channel</i>	8
<i>Tiger Trout: A new species in Sheridan</i>	10
<i>Movement, Migration, and Connectivity</i>	11



New regulations have gone into effect for 2012 –2013. One of the biggest Statewide changes include a different creel limit for trout between lakes and streams. New creel limits for lakes are six (6) trout with no length limit.

The new creel limit for trout in streams is three (3) trout, and only one (1) trout shall exceed sixteen (16) inches. A separate category for lake trout was created as well with the new creel limit being six (6) lake trout with no more than one (1) exceeding twenty-four (24) inches. The creel limit on mountain whitefish has been reduced from twenty-five (25) to six (6). Brook trout are still a separate category as well with a creel limit of sixteen (16) brook trout. However, we got rid of the length limit, so anglers can keep 16 brook trout of any length.

Because many of our streams in the Bighorn Mountains are loaded with more than enough fish, we have excluded all Bighorn Mountain streams (with the exception of the North Tongue, Bull Creek, and Middle Fork Powder) from the new Statewide stream creel limit. So anglers, can still harvest six (6) trout from Bighorn Mountain streams (remember brook trout are separate).

One of the biggest changes in the regulations for the Sheridan area is the use of live minnows in Healy Reservoir and Lake DeSmet. Anglers are reminded that all minnows used in DeSmet and Healy shall be commercially produced live baitfish from a licensed live baitfish dealer. Also remember that DeSmet falls under the Special Winter Ice Fishing Provision which allows anglers to use up to six (6) rods or tip-ups, while Healy Reservoir still only allows the use of two (2) rods or tip-ups.

Remember to pick up a regulation booklet at any license selling agent or local regional Game and Fish office before fishing. And as always, happy fishing!!

Special points of interest:

- Little Tongue River: Restocked with native cut-throat.
- Story Fish Hatchery: Reopened to the public.
- Ice fishing: Some of the basics.
- North Tongue: Volunteers stabilize eroding banks.
- Fried perch recipe.

AIS-Continued monitoring

Our effort to prevent the spread of Aquatic Invasive Species (AIS) continued in 2011. From May through September AIS inspectors checked a total of 4,055 watercraft between Keyhole Reservoir and Lake DeSmet. At Keyhole Reservoir, 2,773 boats were inspected with 91% of those boaters being Wyoming residents. At Lake DeSmet, 1,282 boats were inspected with 92% of those boaters being Wyoming residents. None of the boats inspected required decontamination. Boaters were generally compliant, coming to the boat ramps with a Cleaned, Drained, and Dry boat. In 2011, there were 42,804 boat inspections statewide with a total of 14 decontaminations (down from 22 decontaminations in 2010). Statewide, numerous lakes, rivers, and reservoirs were sampled looking for the larval stage of zebra and quagga mussels. To date, all waters have remained clean and free of zebra and quagga mussels. By ensuring boats are Cleaned, Drained, and Dry, we are trying to keep Wyoming free of these invasive mussels.



Perch, walleye, and crappie from Keyhole this winter

Keyhole Reservoir

Water levels improved once again in 2011 at Keyhole Reservoir. With an abundant amount of snow and some good spring rains, water levels rose to 92% of capacity, up from 60% in 2010. Water levels have not been this high since 1999-2000 and as a result, this fishery saw an explosion of productivity.

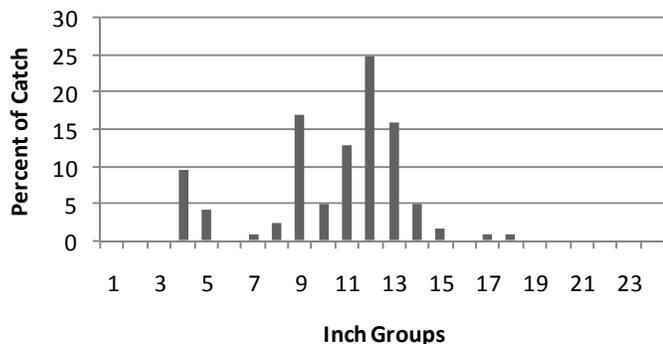
As one might think, there is a strong correlation between water levels (i.e., habitat) and our walleye catch rates (see graph at bottom of page). If the water levels are low, there is less habitat available, yearly production is generally less, and overall, the fishery suffers. On the other hand, if water levels are up, habitat increases, productivity of aquatic invertebrates increase, thus game fish and forage fish generally increase as well. This spike in productivity usually means strong year classes of game fish.

For a second consecutive year we saw a large increase in our Catch Per Unit Effort (CPUE; number of fish captured/hours net was in the water) for walleye in our gill nets. In fact, it was the highest it has been since 2002. Although there is still a decent population of large walleye in the population, most of the walleye that we sampled in 2011 were on the smaller side, with most being 15 inches or smaller. These fish are a result of good spawning conditions created by the increased water levels the last two years.

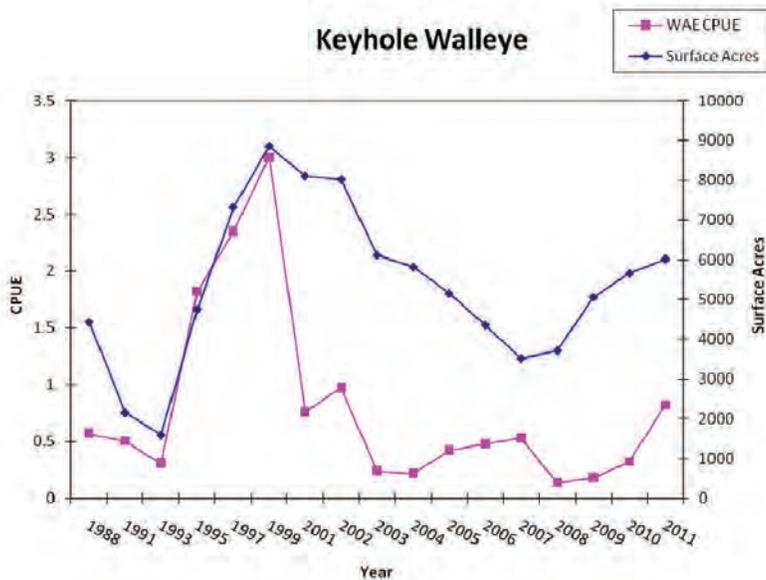
Other game fish like crappie, yellow perch, and smallmouth bass have seen large increases in both numbers and size the last few years as well. Hundreds of yellow perch were captured with the largest coming in at 11.5 inches. The largest smallmouth captured was 13 inches, but anglers reported smallmouth up to 20 inches! Most crappie were in the 9 to 11 inch range with many young of the year crappie captured as well. Only a few northern pike were sampled in 2011, but like the other game fish in Keyhole, a good year class of young fish is present.

The fish are there, the productivity is there, and fishing at Keyhole should be excellent in 2012.

**Walleye Length Frequency
Keyhole Res, 2011**



Keyhole Walleye



Nice walleye from Keyhole Reservoir

Graph showing the correlation between our walleye catches (pink line) and surface acres of Keyhole Reservoir (blue line).

Little Tongue River project completed

Following two years of chemical treatments, the Bighorn Mountains' native trout, the Yellowstone cutthroat, was reestablished to the Little Tongue River. Yellowstone cutthroat trout historically inhabited hundreds of stream miles within the Bighorn Mountains but by the turn of the 20th century, many of these streams were stocked with nonnative trout such as rainbow, brook, and brown trout. These introductions led to the elimination of most Yellowstone cutthroat populations within the Bighorns.

Over the last several years, the Cody and Sheridan regional fish crews have restored some of these populations by removing nonnative trout and transplanting or stocking Yellowstone cutthroat to several creeks (Buckskin Ed, Dry Medicine Lodge creeks on the Cody side, Little Tongue, Red Gulch, and Elkhorn creeks on the Sheridan side). These projects are part of a larger statewide effort to ensure that Wyoming's native cutthroat will persist long into the future.



On August 29, 2011 10,000 Yellowstone cutthroat were stocked into the Little Tongue River and several tributaries. Stocking will continue for two more years and by then, our hope is that this restored population will be able to naturally reproduce on their own and stocking will no longer be needed.



Stocking Yellowstone cutthroat on the Little Tongue River.

West Fork South Tongue River

In the late 1800s and early 1900s, loggers used the South Tongue River drainage for major "tie-hacking" operations in order to build the early railroads. Tie-hacking involved damming up the rivers to form reservoirs, loading these reservoirs with the newly formed ties, then blowing up these dams to float the ties downstream to local sawmills, eventually to be used as lumber or railroad ties. Ingenious methods for the times, but as you might guess, this was a very destructive process on the stream environment.

Since 2005, the U.S. Forest Service and the Wyoming Game and Fish Department have partnered on several projects to rehabilitate some of these badly damaged areas. Two projects have been completed on the South Tongue River at the Dead Swede Campground and just downstream at the old Boy Scout camp.

In 2011, a large section of the West Fork South Tongue River was identified as a concern. A restoration project is being proposed that will help to get the river into a better functioning condition. We expect this project will help to not only restore to a properly functioning river but also to enhance the fishery. Currently, this section of river was estimated to have 3,200 fish/mile with most of these browns and brookies averaging around 7 inches in length. Stayed tuned to future newsletters to see how this project is progressing.

West Fork South Tongue River. Arrow shows the remnant dam used for tie-hacking.



Arrows here show the eroding and degraded stream banks.





Hope Lake Yellowstone Cutthroat



Huge Thayer Lake lake trout



Rinehart #2 rainbow trout



Devil's Lake



Geier Reservoir near Newcastle

Cloud Peak Wilderness Sampling

July and August are 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 2011 we spent a couple weeks sampling 11 lakes.

Crystal Lake: Nice little fishery above Lake Geneva. Rainbow trout were found to be between 6 and 12 inches.

Hope Lake: Off the beaten path with very few visitors, but what a fishery! We found some very nice Yellowstone cutthroat here with fish ranging in size from 8 to 21 inches.

Upper and Lower Rinehart lakes: A decent fishery is only a short hike away. In both lakes, we found rainbow trout between 6 and 17 inches.

Thayer Lake: A good brook and lake trout fishery with the possibility of catching a lunker lake trout. Brook trout were between 6 and 11 inches with lake trout between 7 and 32 inches!

Lake Geneva: Good fishery here with the opportunity to catch three different species. Brook trout were found to be between 5 and 12 inches, lake trout between 13 and 32 inches, and rainbow trout were between 12 and 15 inches.

Big and Little Stull Lakes: Both of these lakes offer a good high mountain brook trout fishery with brookies approaching 16 inches in Big Stull Lake. Big Stull was also found to have Yellowstone cutthroat between 10 and 14 inches.

Devil's Lake: Another fishery with abundant brook trout ranging from 7 to 10 inches in size.

Every year we get several calls here at the office asking when, where, and what gear to use at these wilderness lakes. For the most part, depending on the severity of winter of course, most of the Cloud Peak Wilderness lakes aren't accessible until mid to late July. As far as which lakes to go to, we tell most anglers that it depends on the "Wilderness Experience" that you're after. There are several possibilities of short trips (weekend or even a day trip) that offer up some good angling and sight seeing opportunities. If you have more time and good "back-country" skills, a longer trip into some of the more remote lakes might be up your alley. Generally speaking, the further away the lake is from a trail, the bigger the fish will be. And when it comes to the gear to use, we recommend to most anglers that a combination of flies and lures is worth the extra pack weight. You only get so many days in the beautiful Cloud Peak Wilderness, might as well go prepared. As always, we are more than happy to answer any questions on any of the lakes and streams in or outside the borders of the Cloud Peak Wilderness.

Geier Reservoir-Summerkill

An unfortunate incident occurred this past summer at Geier Reservoir, northwest of Newcastle. This 36 acre reservoir, recently signed up into WGFD's Walk-In-Access program, suffered a summerkill in 2011. It turns out this reservoir is just not suited for trout.

Due to the high water temperatures, we are going to change our management scheme from a trout fishery to a warm-water fishery. In 2012 we will be investigating the possibility of introducing large-mouth bass, crappie, and potentially yellow perch. Stay tuned to future newsletters for information on this reservoir and as always, respect the landowner and his land by following the signs and any rules and regulations in the 2012 Walk-In-Fishing Atlas.

Bighorn Mountain Reservoirs

Park Reservoir: Most folks probably know of Park Reservoir but may not be aware of the angling opportunities at the reservoir. Brook, brown, rainbow, Yellowstone cutthroat, splake, and the occasional lake trout inhabit this reservoir and you might also be able to hook into the occasional arctic grayling at the inlet of East Fork Big Goose Creek. There are not too many places anywhere that you have the opportunity to catch seven species of trout!! The grayling, rainbow, brook, and Yellowstone cutthroat are of the typical size (8 to 12 inches) but the splake, brown, and lake trout have the potential to get very large!

Tie Hack Reservoir: Tie Hack, west of Buffalo, continues to provide an excellent wild brown trout fishery! Most of these browns range in size from 8 to 15 inches but browns over 18 inches are fairly common. Rainbow, brook, and Yellowstone cutthroat trout are a little smaller with most being between 9 and 13 inches.

Weston Reservoir: If you want a reservoir with a unique species, look no further than Weston Reservoir. This reservoir is full of arctic grayling who are willing to bite a fly. These grayling averaged 10 inches but a few close to 15 inches were captured as well.

Calvin Lake: The severe winter of 2010-11 unfortunately caused a winterkill at Calvin Lake. Yellowstone cutthroat were stocked in 2011 and by summer of 2012 fish should once again be of decent size.

Duck Pond: This little pond suffered from the severe winter as well, but fortunately it was not a complete winterkill. This pond contains both rainbow and brook trout, and while rainbows were not captured in 2011, very nice brook trout were found with fish ranging in size from 9 to 13 inches. Rainbow trout were stocked again in 2011 following our sampling.

Sawmill Reservoir: If you would like to catch a lot of brook trout, look no further than Sawmill Reservoir. Splake have been introduced here to hopefully prey upon these brook trout. We didn't capture any splake in 2011 and most of the brookies are smaller ranging between 7 and 10 inches in size. We certainly encourage anglers to harvest their limit of brookies.

Sawmill Lake #1 and #2. What can you say about these two lakes other than "Wow!!"? Both of these highly productive lakes contain a mixture of Snake River and Yellowstone cutthroat trout ranging in size from 10 to 15 inches. Splake were also found in these two lakes with some approaching 17 inches and 2 pounds!



A huge brown from Park Reservoir



Grayling from Weston Reservoir



A Sawmill Lake #2 splake



A nice Duck Pond brook trout



Tie Hack Reservoir brown trout

Sand Creek



Typical brown trout found in Sand Creek

Sand Creek, a spring creek in the extreme northeastern corner of Wyoming, near Beulah, continues to support some amazing trout numbers. Sand Creek has always been a really productive creek with lots of spawning habitat for the wild brown and rainbow trout. As a result, population estimates have been as high as 7,000 to 10,000 fish/mile, with most of these brown trout being small, stunted, and a bit on the skinny side. For the past two years however, above average flows (as a result of high snow pack and good spring rains) have flushed large deposits of sediment and numerous smaller fish downstream.

These “flushing flows” scour out the stream-bed, increasing quality spawning habitat, and perhaps the most important thing, increases productivity for aquatic invertebrates (which then eventually leads to larger fish). This is exactly what we found in 2011 when we did our routine population and biomass estimates. We found an overall decrease in trout/mile (from 7,300/mile in 2007 to 5,200/mile in 2011), but we saw an increase in biomass/mile (from 1,150 lbs/mile in 2007 to 1,570 lbs/mile in 2011). We also saw an increase of one inch in the mean length of brown and rainbow trout! Fewer fish per mile, but larger fish per mile.



Lake DeSmet



A quality brown (inset) and walleye from Desmet!

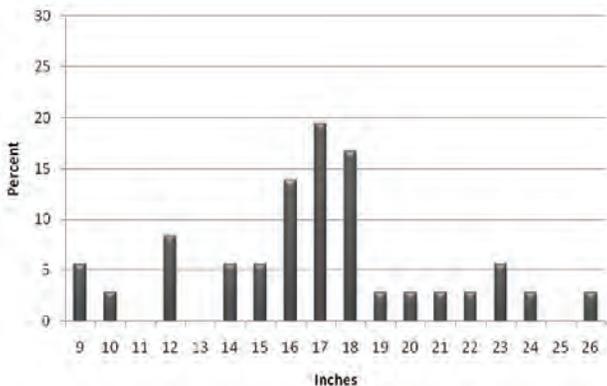
Many days were spent on northeast Wyoming’s most popular water. Long hours were spent inspecting boats and talking with boaters about Aquatic Invasive Species (AIS). Seven “high-risk” boats were found, but no decontaminations were warranted. Water samples were taken looking for the larval stage of zebra and quagga mussels and to date, none have been found in DeSmet or anywhere across the state. However, another invasive species was found at DeSmet; curly leafed pondweed. Proof, that boaters can unintentionally move species between waters and a reminder to always Drain, Clean, and Dry your vessel.

If you fished DeSmet this past summer, you were probably contacted by one of our clerks conducting a creel survey. These creel surveys are important tools for managers as they provide data that help us to manage a fishery better. Some of the statistics generated are catch rates, harvest and release rates, and overall use by anglers. Once we have analyzed these data, management of the water may or may not change. We are still working on the data analyses from 1,421 angler interviews who harvested 1,120 fish.



Lake DeSmet was sampled with gill nets in the spring and fall of 2011 and for the most part, everything was pretty consistent with past samples.

We found rainbows from 11 to 20 inches and up to 3 pounds, while cutthroat were 8 to 17 inches and up to 1.8 pounds. The walleye population is still fairly strong with several year classes present. This year’s walleye ranged in size from 9 to 26 inches and up to 9 pounds. One thing that we did notice, was a slight decrease in rainbow trout relative weight, an index used to measure the health of a fish (fish “plumpness”). We will continue to monitor this and adjust our stocking rates for rainbow if warranted.



Length frequency distribution of walleye captured at DeSmet this past fall. 17 inch walleye made up the majority of the sample with almost 20% of the total walleye catch.

Story Fish Hatchery - 2012 Update

After several years of closure for renovations and upgrades, the Story Fish Hatchery has reopened to public visitation! A dedication ceremony and public open house held in July of 2011 helped celebrate the grand reopening of the facility. Although some areas are now closed to the public because of fish health and public safety concerns, visitors will find new enhanced informational signage at key points around the site. A welcome statement and facility map are now located in the parking area and information about the raceways, water sources, vacuum degassers, lake trout brood stock, egg incubation and spawning and wildlife viewing opportunities will guide you as you explore. In addition to the outside signs, the newly renovated visitor center welcomes visitors and gives in-depth information on the fish, the hatchery and the Wyoming Game and Fish Department.



Story Hatchery is open 8am-5pm daily



Feeding the lake trout makes for great family time!

You may notice a few changes if you haven't been here for a while. Due to high summer visitation, vehicles must follow the signs and park only in the large designated parking area to your right as you enter the gate. Handicap parking is, as before, available along the front (raceway) side of the log sided hatchery building. As in years past, to keep the fish healthy and waste to a minimum, the feeding of things such as bread, other human food and all other items to the fish is prohibited. The fish food machines are now located in the Lake Trout Brood Stock Pond area, please feed only these fish as the food is too large for other fish on the station to eat. The machines take quarters and there are no change machines on-site, so please plan ahead. If last summer was any indication, feeding the fish will be the highlight of your visit!

In 2011, the Story Fish Hatchery spawned, or collected, almost five million eggs from the five brood stocks, or adult fish breeding groups, that it houses. Story is home to Wyoming's captive Eagle Lake rainbow, golden, brown, brook and lake trout brood stocks. We also supply both hybrid splake (female lake trout x male brook trout) and tiger trout (female brown trout x male brook trout) eggs. This was the first year for Story to spawn the brown trout brood and it happened none too soon. Prolonged drought and watershed changes above Soda Lake near Pinedale have made it increasingly difficult to collect enough wild brown trout eggs to meet state stocking needs. Luckily, the spawning of 674 of our captive females produced approximately 657,000 eggs which will help contribute to meeting both brown and tiger trout fish stocking requests in the 2012 season. Once this brood stock is fully on line, we hope to provide up to one million eggs annually for distribution by other hatcheries across the state.

Perhaps the most noteworthy accomplishment at Story Hatchery in recent years has been the continued success of the nation's first known successful captive golden trout brood stock. Due to habitat loss and interbreeding with rainbow trout in their native state of California, the golden trout has been listed as a Threatened Species by the US Fish and Wildlife Service. Because of supply issues related to wild egg collection, many of Wyoming's golden trout lakes have either not been stocked or have had limited stocking since 1994. In 2011 we spawned 383 females and collected just over 160,000 eggs. We easily met the fish management request of 60,000 eggs to be sent and hatched for 2012 helicopter stocking. In addition to having extras that were sent to the state of Idaho, this is the first time in 17 years that a genetically pure Wyoming based golden trout brood stock has been able to meet all of the state's requested needs!



A large male wild brown trout taken from Lake DeSmet, ours are much smaller!



In 2011, Story Hatchery staff spawned golden trout for the third consecutive year.

Kendrick Bypass is a success!!



Aerial photo of the bypass channel

Kendrick Dam is on lower Clear Creek about 7 miles upstream from the confluence with the Powder River. For 100 years, this diversion dam has blocked fish migrations and spawning runs for species like channel catfish, shovelnose sturgeon, sauger, and a host of other species. With the cooperation of the Pee Gee Ranch, that has changed. Starting in 2009, an 800 foot by-pass channel was constructed around the diversion dam, allowing a wide variety of fish species to access an additional 36 river miles before hitting the next barrier (almost to Clearmont).

Once the gates of the by-pass channel were opened up in April of 2010, we were really excited to see what fish were using the channel and what fish were utilizing these additional stream miles above the dam. Over the last two years we have documented 21 of 23 potential species using the channel. The only two species that we have yet to document are sauger and shovelnose sturgeon.



Close-up view of the bypass channel

The last two years we've had exceptionally high water making some of our sampling quite difficult. Both of these species are fairly uncommon and we may have missed them. We did however document sauger below the bypass channel, so we know they are using Clear Creek and we can probably assume that they would use the bypass channel as well. We also documented several fish species upwards of 20 miles upstream of the diversion that haven't been there in perhaps 100 years!

In 2012 we are going to continue with some extensive sampling in the channel, electrofishing above and below the diversion, and hopefully, tag a few fish to see where they go. Once again we would like to thank the folks at the Pee Gee Ranch for all of their cooperation with this unique conservation project.



A nice sauger from lower Clear Creek



Electrofishing above the bypass channel

Ice fishing: Some of the basics

As I sit here in my office, looking out through the window on a cold and dreary day in February, all I can think about is the taste of a freshly fried yellow perch or a smoked rainbow trout fillet. Spring and summer are still several months away so what's a fishing addict like me to do? That's right, it's hard-water time!! Ice fishing may not be your first love, but it can be some of the most rewarding, yet at times, some of the most challenging type of fishing you can do. If you don't mind putting up with some of Wyoming's brutal winter weather, ice fishing opportunities are endless in the Cowboy State.

Not much of an ice fisherman? Having a hard time getting started? Think it's too expensive of a sport? As with anything in this world, ice fishing can be as cheap or as expensive as you want to make it. First, we should talk about the absolute essentials needed to get started. Basic items should include: a hand auger or spud bar, an ice-scoop, a rod and reel or two, an assortment of jigs and lures, some bait, and a 5 gallon bucket, which doubles as your chair and your means for carrying all your fishing gear. For \$150-\$200 you can get started pretty easily. Not too bad right? And for just a few dollars more you could purchase materials to construct your own ice-house (not an essential but a

nice luxury to have on one of Wyoming's cold days). When purchasing gear, I recommend the "end of season" sales at your local sporting good stores, E-Bay or other internet sites, and garage sales in the summer time to help you keep the costs down.



In the last ten years or so modern technology has led to some major advances with ice fishing equipment. From the new propane power augers to underwater cameras and sonar flashers, to insulated ice shelters and gortex coveralls, ice fishing has become more and more of a comfortable sport. As you may guess, these fancier items cost a pretty penny. Brand new 10" power augers will set you back upwards of \$500 and the new sonar flashers can cost as much as \$650!! Most people of course aren't able to afford the whole gamut of ice fishing gear all at once but it can be done if you spread your purchases over a couple years. For example, one year I purchased an ice shelter, the next year I purchased a flasher, and the next year I upgraded my heater and bought a couple new rods and reels. This year I purchased a set of insulated gortex bibs and parka to stay dry and warm (worth absolutely every penny by the way). By spreading out your equipment purchases, over time you can have a pretty good setup. While most gear can be used for most fish species, if you're a fishing addict like me, you'll

eventually end up purchasing equipment tailored to a specific fish species. For example, I have heavier jigging rods for walleye and catfish, medium rods for trout, super light rods for those light biting perch at Healy, and a half dozen tip-up rigs when I'm fishing with minnows.

Several resources are out there that can help you with the purchasing of your gear or with ice fishing tips in general. A plethora of websites exist that are tailored to ice fishing and ice fishing tips. Your local WGFD regional office is another good source of information as well. Give it a look-see, and when you find yourself between hunting seasons and open water, give ice fishing a try.



Fried Perch Recipe

There are a million different ways to fry a fish. Below is what I do and it works very well for perch, crappie, and walleye. I don't use measurements, I just keep adding things until it looks about right. In a separate bowl, add flour and season with pepper, season-all salt, and cayenne pepper. In another bowl, beat 4 or 5 eggs with a little milk and season again with pepper and salt. In the third bowl, add flour, Italian seasoned bread crumbs, Corn Chex cereal (crushed), garlic salt, season-all salt, black and cayenne pepper (I go heavier with the cereal and bread crumbs than the flour here). Heat your skillet or fish fryer to 350°F. Set up an assembly line and first dredge your fish fillet in the flour mixture and coat well, then dip into the wet mixture, let the excess egg mixture drip off, then dredge your fillet into the final dry mixture, coating the fillet completely. This double dredge helps to add extra seasoning and creates a great crust. Fry for 3 to 4 minutes (depends on the size of the fish however) and enjoy!





Small tiger trout stocked into Cook Lake and Willow Park Reservoir.

Tigers on the Loose

A new species was introduced into the Sheridan Region in 2011. Tiger trout, a hybrid cross between a female brown trout and a male brook trout were stocked into Cook Lake (Black Hills National Forest) and Willow Park Reservoir (Bighorn National Forest). Tiger trout are a sterile hybrid, meaning they can't reproduce, thus they tend to put their energy into growth, rather than reproduction. This affinity for growth leads to a highly piscivorous (fish eating) and aggressive fish.

Tiger trout were stocked into Willow Park Reservoir to prey on an overpopulated and stunted brook trout population and they were stocked into Cook Lake to feed on white suckers and green sunfish. Our hope is that these tiger trout will be an effective biological control and eventually improve these fisheries. And if the tigers do what we hope, anglers should see some large fish before too long.

Tiger trout are used as biological controls in other states such as Utah and have worked out quite well. In Wyoming, tiger trout are a fairly new idea with High Savory Reservoir having the only population of tiger trout prior to 2011. Stay tuned to future newsletters for the status of tiger trout in these two water bodies.



Large tiger trout from High Savory Reservoir near Rawlins.

North Tongue River: Streambank Stabilization



For the past two summers, in conjunction with the Bighorn National Forest and the Little Bighorn Chapter of Trout Unlimited, biorevetment (the use of willows or other natural materials) work was completed on a 600 foot section of badly eroding streambank. The intent of this work is to stabilize eroding streambanks and to reduce sediment inputs into the river.



Over the last two years, volunteers planted approximately 900 willow sprigs (cuttings from live willows that will eventually regenerate into larger willows), 200 sedge (native riparian grasses) root stock plantings, and 10 willow bundles (large mass of willow cuttings bundled together and replanted). The section of the North Tongue that was "rehabbed" is next to a high traffic area for anglers, cattle, and wildlife. If the plantings prove to be successful, erosion and sediment inputs will be reduced and the riparian area will be healthier.

Willows are a very important component to the North Tongue River. They provide food and cover for a variety of wildlife and the materials needed for beavers to make their dams, which in turn makes over-wintering habitat for trout. Willows are also home to numerous species of terrestrial invertebrates which comprise a large component of the diet for trout in the North Tongue.

Thanks to all the volunteers that have helped over the last two summers!!!!!!



This series of pictures show how we went from an eroding streambank (top left), to knocking back the bank and setting in rock and dirt (inset picture) for the willows and sedges to be planted in (bottom left).

Movement, Migration, and Connectivity

In April 2011, a channel catfish, originally captured and marked (picture to the right) by Wyoming Game and Fish personnel in June 2007 on lower Clear Creek, was caught by an angler on the Yellowstone River near Billings, Montana. That is approximately 415 miles of travel for that catfish! There is no way to tell exactly how far that individual catfish swam in those four years, but it showcases the point of how important unimpeded pathways for fish movement/migration really are.

The Powder River is known as one of the last undammed prairie rivers in the U.S., flowing approximately 430 miles from the Bighorn Mountains to the confluence with the Yellowstone River in eastern Montana. In the spring and early summer, high flows from snowmelt and spring rains, trigger migrant fish to make their journey to find spawning grounds. Among several others, species such as channel catfish, shovelnose sturgeon, goldeye, and sauger are considered potamodromous; migratory fishes whose migrations occur wholly within freshwater. Adult fish live in the Yellowstone River, run upstream to the Powder, Clear Creek, and Crazy Woman Creek to spawn, and then presumably return to the Yellowstone River. The newly hatched fry then live for a time in Wyoming prior to drifting downstream to the Yellowstone River.

Why do fish go through such trouble? It's their innate behavior and life history. The Yellowstone River has the suitable habitat for adult fish, while the Powder, Clear Creek, and Crazy Woman Creek offer great habitat for spawning and reproduction.



The distance that this channel catfish traveled shows how important it is to have connected river systems where fish can move and complete their life cycle. Ocean-run salmon (anadromous fish that are born in freshwater, migrate to the ocean to adulthood, then return to freshwater to spawn) are the most famous example of fish traveling long distances but many fish in Wyoming also need to be able to travel long distances for spawning, overwinter habitat, and to escape adverse conditions like a prolonged drought.

While the Powder River is an undammed, unaltered system, many other rivers across the state and the Sheridan Region are not. Rivers such as Clear Creek, Tongue River, and Big and Little Goose creeks have numerous push-up dams and other irrigation diversions that block fish movement. The Wyoming Game and Fish Department has placed a large emphasis on fish passage the last several years and several projects have been completed in the Sheridan Region recently (see Kendrick fish passage project on page 8). While not all dams and irrigation diversions can be made fish passage friendly, many can be altered and reconstructed in ways that allow for fish passage, while also allowing the landowner to receive their water consistently and reliably. Most fish within these streams don't necessarily migrate long distances but connectivity and passage are still important. Fish may move upstream to find good spawning gravels, and/or they may move downstream to find a deep pool for the winter.

Many of these projects are expensive and funding for these projects has been provided by block grants and cost-share assistance with Sheridan County and Lake DeSmet conservation districts. Game and Fish will continue to look for opportunities to work with willing landowners and irrigation districts to make irrigation diversions fish friendly.

Modifications to the Tongue River Diversion near Ranchester, WY were completed in 2011, which allows for fish passage through a wide range of flows.



Channel catfish with a FLOY tag near its dorsal fin. Tagging helps us to monitor fish movements.



Like the channel catfish this sauger (above) and goldeye (inset picture) are seasonal migrants of the Powder River, Clear Creek, and Crazy Woman Creek.





We welcome your comments or suggestions on this newsletter. Please feel free to contact us or send an email at:

Paul.Mavrakis@wyo.gov (Regional Fisheries Supervisor)

Bill.Bradshaw@wyo.gov (Fisheries Biologist)

Andrew.Nikirk@wyo.gov (Fisheries Biologist)

Travis.Cundy@wyo.gov (Aquatic Habitat Biologist)

Wyoming Game and Fish Department
 "Conserving Wildlife-Serving People"

Wyoming Game and Fish Department
 Sheridan Regional Office
 700 Valley View Dr. Sheridan, WY 82801
 307-672-7418

<http://gf.state.wy.us/>

Follow WGFD on Facebook and YouTube



Important Dates to Remember

September 13-15th, 2012: Wyoming Hunting and Fishing Heritage EXPO. Casper Events Center. 1-888-EXPO-WYO.

June 2, 2012 and June 1, 2013: Wyoming's Free Fishing Day. Check the Wyoming Game and Fish website or your fishing regulations for additional details.



Paul Mavrakis



Bill Bradshaw



Travis Cundy

Upcoming work for 2012

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 are always happy to answer questions about fishing and fishing opportunities within the Sheridan Region. Below is a list of projects upcoming for the 2012 field season. Stay tuned for updates on these waters in our next newsletter. Happy fishing!!

- Continue to evaluate fish passage and fish movement of sauger and shovelnose sturgeon on Lower Clear Creek.
- Sampling on the South Tongue River, North Tongue River, Bull Creek, Owen Creek, Middle Fork Powder, West Fork South Tongue River, Little Falls and Gold creeks.
- Sampling on Keyhole, LAK, Muddy Guard #1 and #2, Healy, Black Hills Power and Light, Willow Park Reservoir, Cook Lake, Tie Hack, and Lake DeSmet.
- Sampling of several lakes in the Cloud Peak Wilderness including Lost Wilderness and Golden lakes.
- Creel survey on Tie Hack Reservoir in July and August.
- Monitoring the recent Yellowstone cutthroat stocking in the Little Tongue River drainage.



Andrew Nikirk