



2019

Wyoming Game and Fish Department

# Sheridan Region Angler Newsletter

“From the Bighorns to the Black Hills”

## Special points of interest:

- A Summer of Records!
- Bighorn Mountain reservoirs
- Making a tiger trout at the Story Hatchery
- Creel surveys in 2019 on Lake DeSmet and Healy Reservoir.
- Take a Kid Fishing.
- Upcoming Projects in 2019

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## 2018 - A Summer of Records! Andrew Nikirk

It was a lazy Friday May morning here at the office, just working on my computer when my phone rang. On the other end was this nice kid, Caleb Salzman, claiming that he likely broke the largemouth bass state record of 7 lbs 14oz. I congratulated him and explained the process of certifying his fish as a record; all the while thinking that if his fish was a new record it was probably just over 8 lbs. When I asked him how much he thought the fish weighed, I laughed to myself when he said nearly 12 lbs. Surely he had misidentified his catch, or his tackle-box scale had malfunctioned; there was no possible way that Wyoming could grow a largemouth bass that big! I instructed Caleb to swing by our office for verification of species (part of the record certifying process) and to my amazement, Caleb's catch had smashed the previous record and officially weighed in at 11.51 lbs. We have certainly seen nice bass at Kleenburn Ponds, just north of Sheridan, but

nothing close to Caleb's catch. This new record will likely stand for many years to come.



*Caleb Salzman with his 11.51 lb largemouth bass caught from Kleenburn Ponds on May 11, 2018.*

Two short months later in July, on back-to-back days, James Potter smashed the freshwater drum record at Keyhole Reservoir with his fish weighing in at 22.58 lbs, while Matthew Deichsel broke the world record spearfishing for walleye from Lake DeSmet with a fish weighing in at 17.29 lbs. Matthew's fish is not recognized as a WGFD state record as record fish must be caught by hook and line, but his fish is recognized by the International Underwater Spearfishing Association.

Three gentlemen, three fish, three new records in the same summer. Proof that Wyoming fisheries are pretty amazing, proof that you never know what you might catch, and proof that you can't catch them if you don't go!

If you think you may have caught a new state record there are a few steps. 1) fish must be harvested by hook and line, 2) species must be verified by a fisheries biologist, and 3) fish must be weighed on a Department of Agriculture certified scale. A list of state record fish can be found on our website at <https://wgfd.wyo.gov/Fishing-and-Boating/State-Record-Fish>.

*Matthew Deichsel with his 17.29 lb walleye from Lake DeSmet on July 14, 2018, an International Underwater Spearfishing Association World Record.*



*James Potter with his 22.58 lb freshwater drum caught from Keyhole Reservoir on July 15, 2018..*



## Aging fish Christina Schmidt and Andrew Nikirk

For several days during December, we spend hours peering into a microscope, carefully viewing and counting rings on otoliths, the inner ear bones of fish. Much as a tree puts down rings during each year of its growth, otoliths also feature growth rings that indicate a fish's age. As a fish grows quickly during the summer while food is abundant, multiple thin white bands are laid down in the bone. When metabolism slows in the winter, daily growth is reduced so lines are closer together, showing up as one larger, dark band. Therefore in most cases, each dark band counted on the bone represents one winter of a fish's life.

The otoliths were collected from walleye during sampling that took place this summer at Keyhole Reservoir, Lake DeSmet and LAK Reservoir near Newcastle.

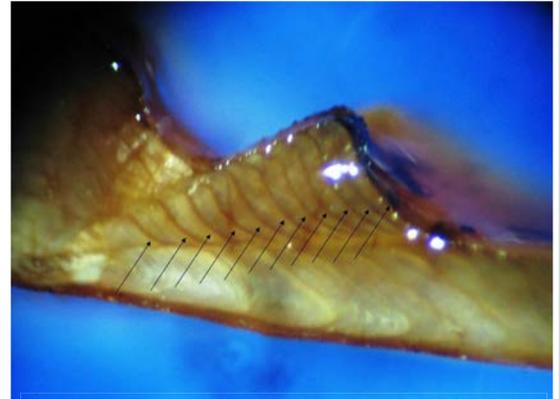
By studying the otoliths, biologists can get a better picture of the health of the population. Otolith aging is just a snapshot of how the fish are growing which is a good indication of the productivity of that water. It is another tool to look at to evaluate and analyze a population to see how things are going or maybe how to improve it.

The otoliths are broken in half with a knife or by hand in a method known as 'crack and burn'. After cracking, one bone half is lightly singed over a flame to add some color to it for the lines to stand out better. After singeing the bone, a small drop of mineral oil is added to make it shine and fill in the rough cracks. It is then secured upright in a clay base to view under a light and microscope.

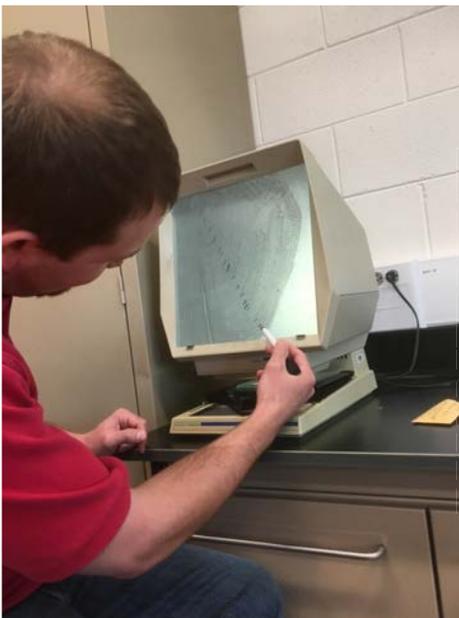
Starting in the middle and counting the dark lines radiating outward, we can establish a close age estimate for the fish. We measure fish length while conducting surveys, but length only provides a general indication of age. As fish get older, growth, especially in length, slows down.

For instance, a 12-inch walleye from Keyhole will be in the two to three-year-old range, but a 19-inch walleye could be four all the way to 14 years old. That is where the otolith aging comes in. A fast growth rate is a factor of productivity in a particular water body and it could vary from year to year based on food availability, competition and other factors. For example, the past couple years we have seen quite a few 12-inch walleye at two years old and some three-year-old fish at 15 inches from Keyhole. That is fast growth for walleye, so that shows us that Keyhole has had good productivity of forage fish like gizzard shad, emerald shiners, spottail shiners and yellow perch for the walleye to feed on.

The age of a fish can also be determined by using scales, spines, or cleithra (facial bone generally used to age pike and muskie). As seen from the page 1 story, those record fish would likely have to be old to get to such large sizes. As it turns out, we were able to obtain and age an otolith from the freshwater drum and a scale from the largemouth bass. The drum was aged at 29 years old and the largemouth bass was aged at 18 years old. We were not able to age the walleye from DeSmet, but ages from similar size walleye in DeSmet, would estimate it to be 16 to 20 years old.

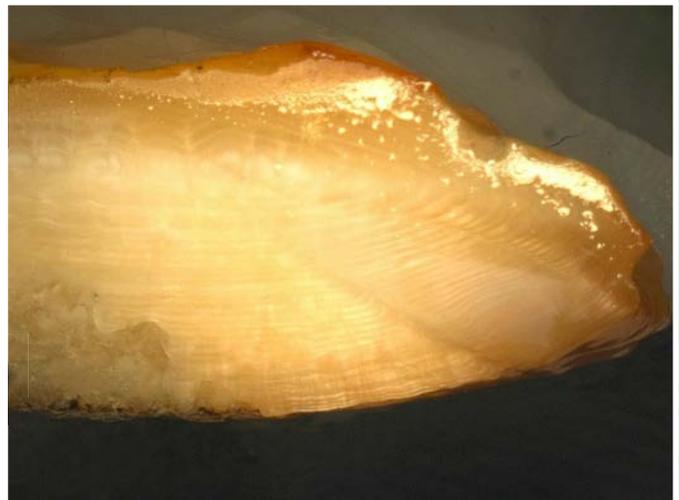


An otolith from a Lake DeSmet walleye. This fish was 11 years old.



Biologist 'reading' a scale from the new state record largemouth bass (left) on a microfish reader. It was determined to be 18 years old!

An otolith showing growth rings from the new state record freshwater drum (right). It's age was determined to be 29 years old!



## Healy Reservoir Update Andrew Nikirk

Ownership has changed hands again at Healy Reservoir. For the last 20+ years, ownership of Healy Reservoir has changed hands a few times, all the while, allowing access for the public to fish. The caveat however, was that public access could end with a 30-day notice. Luckily that scenario never came to pass and in 2018 something even better happened.

Following Governor Mead’s ‘Ten in Ten’ initiative (the development and completion of 10 water storage facilities in 10 years), the Wyoming Water Development Commission was able to purchase Healy Reservoir for \$2.5 million dollars on June 26, 2018. This acquisition will hopefully guarantee access and should result in better facilities and management of the reservoir.

In fact, in November 2018, we were able to take advantage of low water levels (for dam and outlet works inspections) and installed a better boat ramp (see pictures below).

On to the fish. The overall size structure of yellow perch continues to be small, with very few perch exceeding 6 inches in 2018. Our current thinking is that anglers, along with the large predators, are taking out most of the larger perch. Most anglers high-grade their perch catch, releasing everything under 7 inches and keeping the larger perch. It doesn’t take too long before a majority of the bigger perch are culled out, leaving only smaller, undesirable sizes. The large predators (tiger muskie and largemouth bass) have no problems eating a 7 to 9 inch perch, the size desirable to anglers. Understanding the predator-prey relationship in Healy has been difficult thus far and we are still learning. How many muskie do we stock? Do we enact length limits on perch? Do we reduce creel limits? These are just some of the questions we

will try to answer in coming years. To help us answer these questions we are planning creel surveys for 2019.

That said, there are lots of nice tiger muskie and largemouth bass in Healy right now. Several anglers have reported tiger muskie over 40 inches and largemouth bass 5+ pounds. Despite the perch fishery still struggling to grow larger fish, Healy is still a great place to take a kid fishing and currently a great place for a chance at a trophy!

Remember that the minimum length for tiger muskie is now **36** inches before it can be harvested and the limit is one fish. Happy fishing!



*While perch sizes are running smaller, predators like the tiger muskie and largemouth bass are currently thriving in Healy Reservoir.*



*The newly constructed boat ramp at Healy Reservoir. The new ramp is at the north end of the middle parking area. This ramp is a little steeper and should allow for easier launching; even when water levels are lower. Reminder that there is a 15hp motor restriction on Healy. Boats with large motors can still be used, just not the motor itself.*





Figure 1. Utilizing a waterjet stinger to plant willow cuttings.



Figure 2. A new ramped vein structure and head gate improving efficiency of the diversion.



Figure 3. Temporary fish barrier to isolate cutthroat during chemical treatments.

## Habitat Projects in the Sheridan Region

Travis Cundy

### Riparian Rehabilitation

Game and Fish personnel worked with a landowner to plant about 400 streambank willow cuttings along a tributary to Bitter Creek in the Powder River watershed. The cuttings were collected at available sources and planted using a water jet stinger (Figure 1). The plantings are to provide a willow source for expansion over future years within the riparian area.

### Tongue River Number #1 Diversion Fish Passage

Rehabilitation was completed at the Tongue River Number #1 Diversion to improve the function of the diversion structure and enhance fish passage. Rehabilitation included replacing a push-up dam with a ramped vane diversion structure and improvements to the ditch head gate (Figure 2). Cost share was provided from the Department's habitat trust fund and fish passage grants program, TNC, Wyoming Wildlife and Natural Resource Trust Board and the irrigator.

### West Pass Creek Yellowstone Cutthroat Trout

#### Restoration

Expanding a native Yellowstone cutthroat trout (YSC) population in the West Pass Creek watershed is an ongoing project in northwest Sheridan County. Game and Fish personnel constructed a temporary fish barrier on the North Fork of West Pass Creek (Figure 3) to prevent other trout species from moving upstream and mixing with YSC. This log crib barrier secured 1.7 miles of stream habitat in the North Fork of West Pass Creek for YSC. In the future, following the removal of non-native brook trout above the barrier, South Fork YSC will be moved to the North Fork. Plans are also underway to construct a permanent fish barrier on the main stem of West Pass Creek that will secure a total of six miles of suitable stream habitat for YSC.

### Tongue River Corridor Rehabilitation Phase-2

The phase-2 rehabilitation involving stream bank stabilization on the IXL Ranch above Dayton was completed during October. The work included securing channel grade, restoring dimensions, and stabilizing eroding banks along about 750 ft of river through the placement of two j-hook vanes and the development of a bankfull bench along the lower third of an eroding meander bend (Figure 4).

Figure 4. J-hook vanes (arrows) help minimize erosion by directing the main current to the center of the channel.



## Take a kid fishing Paul Mavrakis

Every year we get several calls asking for suggestions on where to take kids fishing. We generally suggest waters that offer some fast action that will keep the kids’ attention since they usually do not care how big the fish are, just so long as they get to reel in a few. In the Sheridan Region, there are numerous places that offer this opportunity.

We are fortunate to have several community fisheries that are not only close, but generally provide some fast action. These include: **Mavrakis Pond** and **Fairgrounds Pond** in Sheridan; **Ranchester City Pond** in Ranchester; **Sundance Fairgrounds Pond** in Sundance; **Panther Pond** in Wright, **Gillette Fishing Lake** in Gillette, and **Black Elk Pond** in Newcastle. All of these ponds are stocked with catchable-sized trout (8 to 10 inch fish) in both the spring and the fall. Many of these ponds also have other species as well, like sunfish, bass, bullheads, and channel catfish that provide additional opportunities.

**Kleenburn Ponds** located north of Sheridan is another good potential spot. Not only could you catch the next state record (page 1), these ponds are stocked annually with trout as well. Walking paths and picnic tables add to the experience.

**Healy Reservoir** located northeast of Buffalo is probably the regions’ best ‘kids’ fishery. Numerous yellow perch, willing to bite just about anything plus the chance to hook into a tiger muskie or a largemouth bass provide excellent opportunities for a young angler. Ice fishing Healy Reservoir is usually the best way to get your children out, but a small boat on a warm summer day is nice too.

**Keyhole Reservoir** north of Moorcroft can be good fishing for kids too, especially from a boat. In late May/early June, crappie and smallmouth bass are in shallower water and are easy to catch. A slip-bobber with a minnow is easy gear for kids to use.

Numerous Bighorn Mountain waters offer kid friendly fishing as well. If your child is a little older and can handle a bit of a hike, **Sawmill Reservoir**, **Sawmill lakes #1 and #2**, and **Calvin Lake** offer good brook and cutthroat fishing. If your child is getting into fly fishing, most every Bighorn Mountain stream has high populations of hungry trout including the **North and South Tongue rivers**, **Copper Creek**, **Owen Creek**, **East and West forks of Big Goose Creek** to name just a few.

It really doesn’t matter where you end up going, if it’s ice-fishing Healy, dunking a minnow at Keyhole, or camping near the South Tongue River. The key is to get your kid(s) out there for the experience. If you have additional questions on good places to take a kid fishing, just give us a call or swing by our office (contact information on back page). Happy Fishing!



## AIS Program Update Paul Mavrakis

In 2018, 5,248 watercraft inspections were conducted in the Sheridan region and 509 were considered high risk. High risk inspections include watercraft that were last launched on a zebra or quagga mussel-infested water or a watercraft that was transporting standing water from a state that has known mussel-infested waters. Of those high risk inspections, 52 required a decontamination to treat standing water and 2 vessels were transporting zebra or quagga mussels from Lake Michigan and an unknown water in Maryland. Thankfully, the mussels on the 2 vessels were dead from being out of the water for several months, and they were removed at our inspection check-stations. The Wyoming Game & Fish Department is very thankful for all boaters who comply with our watercraft inspection requirements and we look forward to another season of working together with the public to prevent the spread of aquatic invasive species in our valuable Wyoming waters.

### Invasive Clam found in Keyhole Reservoir

In the summer of 2017, Asian clams were discovered in Keyhole Reservoir. Previously, Asian clams were only known to be in the North Platte River and Laramie River in Wyoming. The invasive species can cause biofouling of water systems, compete with native species and can contribute to algal blooms causing oxygen depletion in the water. It is unknown how Asian clams arrived at Keyhole Reservoir, but a likely vector could be the transport of water containing viable Asian clam larvae. Water can be easily moved in the live-wells and motors of boats; so the Wyoming Game & Fish Department would like to remind boaters to **“Clean, Drain & Dry” boats and all gear and to also follow the regulation remove all boat plugs after exiting the water and to travel with all boat plugs out.**



*A close-up view of the Asian clam*

## Creel Surveys at Lake DeSmet and Healy Reservoirs: Help manage your fisheries Gordon Edwards

You have a golden opportunity to help the Game and Fish manage fisheries at Lake DeSmet and Healy Reservoir in 2019 by doing what you love – fishing! We will begin a 4-month creel survey in May at these waters. On survey days, anglers will be counted at specified times of day at Lake DeSmet. Anglers contacted at both waters will be asked to complete a brief survey to provide information on the amount of time spent fishing, targeted species, fish caught and released, and fish harvested. Some anglers will also receive a survey card to complete when they are done fishing. **If you are given a creel card, please deposit it in a creel card return box when departing (see picture) or mail it back to the Wyoming Game and Fish Department, postage paid.** An intensive creel survey effort like this one allows fisheries biologists to estimate the number of angler trips and angler-hours spent, pinpoint catch rates, and help determine rates of fish population harvest. This information is valuable for evaluating the economic impact of fisheries, assessing the effectiveness of costly stocking programs, and assists managers with making appropriate management changes to best meet public desires. Where possible, fisheries biologists repeat intensive creel surveys every five to ten years. This way, funds are used for the highest priorities, and the most expensive information is only updated as fisheries change. The most recent intensive creel surveys show how much fishing activity can fluctuate at Lake DeSmet, with the estimated number of angler trips dropping from 43,389 in 1991 to 28,864 in 2000. This occurred even though the average catch rate for rainbow trout had not changed (about 1 fish per two hours). The economic value of the average fishing trip in Wyoming was \$75 in 2015, according to the U.S. Fish and Wildlife Service. Both of these fisheries have undoubtedly gone through recent changes, and updated information is needed. Do your part to make these creel surveys successful by providing accurate information when interviewed and please return creel cards promptly. The information you provide will be used to modify regulations and stocking programs. This is your chance to be involved! Thank you!



A typical creel card return box.

## Middle Fork Powder River; Quite an Amazing Place! Gordon Edwards



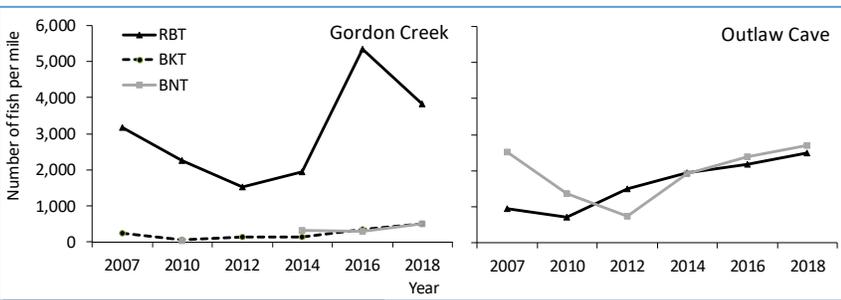
Just like pancakes that taste better when you're camping, really good fishing is more satisfying when you work hard to get to a special spot. The Middle Fork of the Powder River feels this way. The trip to the water stands alone as memorable, but when you take your rod it becomes unforgettable. Fishing promises to be excellent in 2019 at both the upper and lower reaches of this remote destination.

The upper reach of the Middle Fork of the Powder River is accessible at the primitive BLM campground that bears the stream's name along the



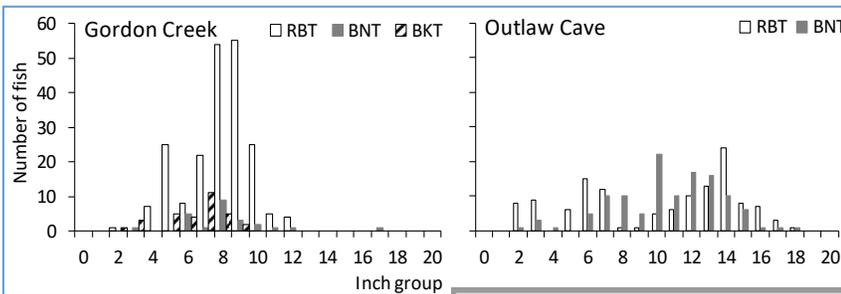
An average Rainbow Trout near Outlaw Cave.

Hazelton Road, about 45 miles south of Highway 16, or about the same distance northwest of Kaycee via the Mayoworth-Slip Road. Near the campground, you can also drive 1.5 miles east of the Hazelton road and take advantage of the Ellis Public Access to find yourself a bit further downstream near the confluence with Gordon Creek. The overall number of trout bigger than 6 inches was near an all-time high when we surveyed the



Population trends for trout ≥ 6 inches at two reaches of the Middle Fork of the Powder River.

stream in 2018 (4,822 fish per mile!). Rainbow trout were 79% of the population in 2018. Brown Trout and brook trout numbers were slightly up. The average rainbow or brown was about 8.5 inches. Rainbows from 10 to 12 inches were common and the largest brown trout was over 17 inches. If you're looking for a quiet place to get away from the crowds, this is it!



Sizes of trout sampled from the Middle Fork of the Powder River in 2018.

The lower reach of the Middle Fork of the Powder River is accessible from the canyon rim along a BLM and state-maintained access road about 25 miles southwest of Kaycee via highway 191/190 and the Bar C Road. Primitive camping sites are available at the BLM's Outlaw Cave campground. Overall trout numbers continued to climb in 2018. In fact, the population estimate for all trout bigger than 6 inches was astounding (5,194 fish/mile!) and on par with much larger and more well-known



A nice Outlaw Cave Brown Trout.

spots such as the Miracle Mile reach of the North Platte River or the Bighorn River at the Wedding of the Waters! The trout population in the Outlaw Cave reach is an even mix of rainbow trout and brown trout, with the average fish measuring close to 11 inches. Trout in the 14 to 16 inch range were common, with a few exceeding 18 inches! Many small fish of various sizes sampled in 2018 indicated good natural reproduction and rearing to ensure quality fishing into the future. So, if you're up for it, a road trip awaits you with scenic canyon vistas and a tasty reward at the bottom of the canyon.

## Behind the Scenes at the Story Hatchery: Making Tiger Trout Steve Diekema, Story Hatchery Superintendent

Tiger trout are a unique, relative newcomer to the Cowboy state. Recently we have been asked, how are these fish produced and where can I go to catch one of these feisty and colorful fish?

The Story Hatchery began producing tiger trout eggs in the fall of 2011. For those unfamiliar with these hybrid fish, a tiger trout egg is produced by crossing a female brown trout with a male brook trout. The cross is completed with a female brown trout as attempts using a female brook trout by a male brown trout did not work very well and produced significantly lower quality eggs. One thing many people don't know about tiger trout is that they are sterile and are unable to reproduce. How do we know these fish are unable to reproduce? Well, the Story Hatchery creates what is called a triploid egg.

A triploid fish has three sets of chromosomes, unlike a fertile fish that have two set of chromosomes (a diploid fish). A triploid fish is not a genetically modified organism nor have the genes of the fish been manipulated or modified in any way. Triploid fish simply have an extra copy of DNA that makes reproduction impossible.

Triploid tiger trout are created by forcing the egg to retain a chromosome that is normally ejected during egg development. To prevent the egg from rejecting the chromosome, Story Hatchery personnel use a pressure treatment method to retain the chromosome that would normally be kicked out of the egg during an early stage of egg development. Using pressure, at precisely the right time in the egg development, the chromosome is retained; resulting in a sterile fish with three chromosomes.

The Story Hatchery uses a small pressure chamber to induce triploidy in the eggs. After the eggs from the female and milt from the male are mixed to fertilize the eggs, the group of eggs is left to develop for 40 minutes. At exactly 40 minutes post fertilization, the group of eggs are placed into the chamber and are subjected to 9,500 psi of pressure for five minutes. Previous studies have found that it is during this five minute period at 40 minutes post fertilization the third chromosome is kicked out of the egg. By applying pressure during that exact time, the hatchery is able to produce triploid eggs.

The triploid process actually produces more viable tiger trout eggs than if we left them as diploid eggs. Hatchery personnel are unable to explain why inducing triploidy in tiger trout eggs creates more viable and successful eggs, but studies have proven that it does.

In 2013, the Story Hatchery conducted its own experiment to compare survivability of diploid versus triploid tiger trout eggs. Hatchery personnel found that 72% of the triploid eggs survived from the time the eggs were taken until the fish started to feed whereas only 54% of the diploid eggs survived until the fish started feeding. The quality of eggs produced by the Story Hatchery have become so highly regarded that they are shipped to the states of Nebraska, South Dakota, Colorado, Idaho, and Oregon as part of the WGFD's hatchery trading program that brings walleye, catfish, and other species back into Wyoming.

Now you have somewhat of an understanding of the tiger trout making process. Why are we stocking these fish in the first place and where can you go to catch this unique species in the Sheridan area? Since tiger trout are sterile, they tend to put all of their energy into growth and since they won't reproduce, we stock them in places to act as a biological control. These are situations where we have stunted, overabundant populations of other species; sometimes undesirable species like suckers, but also brook trout and grayling. In the Sheridan Region we have stocked tiger trout in Willow Park, Cloud Peak, Weston, and Muddy Guard reservoirs #1 and #2, and Long and Ringbone lakes in the Cloud Peak

Wilderness. The stocking of tiger trout is still a relatively new tool for us and we are still evaluating their effectiveness as a biological control in these waters. Nonetheless, tiger trout are very aggressive, they fight hard, and they have created a little excitement with our angling public.



*A male brook trout fertilizing brown trout eggs to make tiger trout.*



*Hatchery personnel removing the newly created triploid tiger trout eggs from the pressure chamber (above). A nice sized tiger from Willow Park Reservoir (left).*

## North Tongue River Update Andrew Nikirk

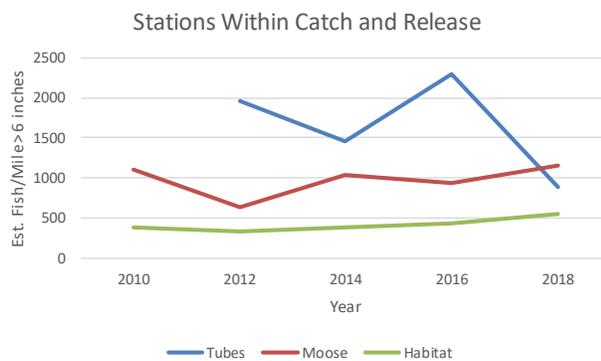
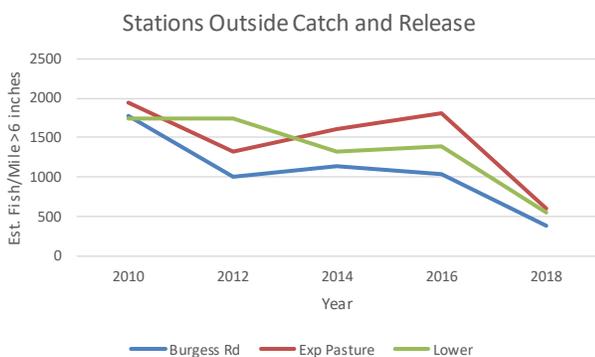
Certainly our most popular water in the northern Bighorns is the North Tongue River. Despite cold water temperatures and a short growing season, the North Tongue produces many trout of decent size. Our management objective for the fishery is to maintain 30% of the trout population to be 12 inches or larger. Since 2010, the North Tongue has been at or above this objective. Also, since 2012, between 65% and 75% of the fish captured were 10 inches or larger, and that was no exception in 2018. However, the overall population (number of fish/mile) and biomass (pounds of fish/mile) throughout the river have dipped from a high in 2008, with a steady, downward decline (see the figures below). It is unclear as to the reason for the decline, but there are several likely factors to consider.

Some of the factors are environmental, such as long, cold winters, high spring flows, lack of overwinter habitat, and perhaps disease. These are factors that wild populations of fish deal with on an annual basis, leading to the ups and downs of any population.

Other components to consider would include the human element such as how long the fish was ‘played’, hook extraction, and handling to name a few. Add a few of these factors together and you end up with hooking mortality, even in a Catch and Release stream. The literature suggests that hooking mortality for a catch and release trout stream generally ranges between 3% and 5%. If you look at the estimated number of fish caught this summer from our creel survey (write-up below), you would end up with between 1,074 and 1,790 dead fish (3% and 5% of the estimated 35,801 fish caught in 2018 by anglers). Even the best-intentioned fishermen are going to occasionally kill a fish or two. Something to consider when you’ve had those 20 and 30 fish days.

If you look at the figures below, two of our stations increased in the number of trout  $\geq 6$  inches; the Moose and Habitat stations. These stations are upstream of the highway crossing, far from vehicle pull-offs. During our creel survey this summer, we saw much less fishing pressure in these areas compared with sections of river close to parking areas. On the contrary, the Tubes station (right at highway crossing) decreased the most of all the stations, despite being within the Catch and Release section, but next to two major parking areas.

Even with trout numbers lower than the recent past, the North Tongue River is still one of the best fisheries in the Bighorns. Stay tuned to future newsletters for updates on the North Tongue River.



## North Tongue River Creel Survey

Creel surveys are our method for determining how many anglers are fishing a particular water, how many fish they are catching and harvesting, and their overall attitude towards their fishing experiences. It’s also a good way for anglers to communicate with the WGFD on what they might like to see changed in the fishery. In 2018, we conducted an extensive creel survey. Preliminary results show that an estimated 7,106 anglers (19% increase) fished 23,690 hours (40% increase) catching 35,801 fish (5% decrease) and harvesting 1,075 fish (43% decrease); compared with the last creel survey in 1999. Anglers were asked if they would like anything to change in regards to the current fishing regulations. Of the anglers interviewed, 616 were in favor of extending the catch and release section, 67 favored leaving the regulation as it is, while 95 anglers had no opinion on the issue.



A gorgeous Snake River cutthroat from the Tubes station.



Beautiful Cloud Peak Reservoir

## Bighorn Mountain Reservoirs Andrew Nikirk

**Cloud Peak Reservoir:** Tons of angling opportunities at Cloud Peak Reservoir, especially if you like to catch and harvest brook trout. Brook trout averaged 10.2 inches and ranged between 6 and 12 inches while splake (hybrid between brook and lake trout stocked to hopefully eat small brook trout) averaged 11.7 inches and ranged between 9 and 14 inches and tiger trout (brook and brown trout hybrid) averaged 10 inches and ranged between 7.5 and 12 inches. It's a bit of an ATV ride into Cloud Peak Reservoir, but it's certainly worth the trip as the scenery is breathtaking and the sizes of fish are bigger than in the recent past .



A pretty tiger trout from Willow Park

**Willow Park Reservoir:** Brookies abound in Willow Park Reservoir. Starting back in 2011, we have been stocking tiger trout to prey upon stunted brook trout. Brook trout numbers have declined a bit and they averaged 9 inches and ranged from 6 to 12 inches. The tiger trout are slowly getting to larger sizes with the average tiger at 9 inches ranging in size from 6 to 13 inches. The handful of Yellowstone cutthroat that were sampled averaged 12 inches and ranged from 5 to 16 inches.

**Sibley Reservoir:** Five species of trout are present here including brook, brown, rainbow, Snake River and Yellowstone cutthroats. Most fish captured this year were brook trout but angler reports show that cutthroat are more willing to bite a hook. Most fish are between 10 and 12 inches but there is always a chance for a lunker brown trout!



A nice brookie from Sibley Reservoir

## Cook Lake Renovation Andrew Nikirk

A long awaited project will hopefully come to fruition in 2019. Cook Lake, a 31 acre reservoir in the Black Hills National Forest, north of Sundance, WY will be drained and chemically renovated this summer. This project, initialized by the Black Hills National Forest, has secured funding to make dam repairs and WGFD will take advantage while the water levels are low to improve the fishery.

The tentative plans are to start pumping the lake down starting in July, to as low as possible, hopefully to a creek channel. This will allow the contractor to make their fixes to the dam and valve in a timely manner.

Currently, Cook Lake is a marginal fishery at best. It is overwhelmed with undesirable species such as green sunfish, white suckers, and black bullheads. These undesirables compete with the thousands of stocked rainbow and cutthroat trout that we stock annually, resulting in poor performance and survival of trout. With the lake drained to a creek channel, we will be able to chemically treat any remaining pools and the creek with rotenone, a chemical that kills fish (not harmful to humans or livestock).

Once the repair and treatment have been completed the lake will refill and we will resume stocking in early 2020. Fish stocking will not happen in 2019 as a result of this project. For questions concerning this project, feel free to give us a call here at the Sheridan Regional Office and ask to speak to a fisheries biologist.



Cook Lake will not be stocked in 2019. Trout stocking will resume in 2020 following the dam repair and chemical treatment.

## Cloud Peak Wilderness Andrew Nikirk

July and August are our favorite months of the summer. That’s when we head for the high country, miss out on some of the heat, and survey alpine lakes in the Cloud Peak Wilderness. This year was no exception as we sampled 7 lakes, 6 of which have fish. Below is a table of what we found in 2018.

Some excellent angling opportunities are available in these lakes and many others within the wilderness.

Lake	Species	Mean Length (Max Length)	Lake	Species	Mean Length (Max Length)
<b>Long</b>	Brook trout	7.8 (9.0)	<b>Romeo</b>	Splake	15.3 (17.8)
	Splake	14.4 (15.2)	<b>Martin</b>	Nothing captured	
	Yellowstone cut	8.8 (10.0)	<b>Lame Deer</b>	Rainbow trout	7.0 (7.0)
	Tiger trout	8.7(8.7)		Brown trout	13.9 (16.6)
<b>Ringbone</b>	Yellowstone cut	10.6 (11.3)	<b>Willow #1</b>	Splake	12.8 (13.7)
				Grayling	12.4 (13.8)
				Yellowstone cut	Observed/angled



A nice brown from Lame Deer Lake.

Stay tuned for updates in future newsletters. For questions about wilderness regulations please contact the Bighorn National Forest at 307-674-2600. For questions about specific lakes, stocking, regulations or management, please contact us here in the Sheridan Regional Office at 307-672-7418.



A very nice grayling caught from Willow Lake #1 and an amazing view of Bighorn Peak from Lame Deer Lake.



## Muddy Guard Reservoir #1 Update Gordon Edwards

Muddy Guard Reservoir #1 (MG#1) continues to flourish since the rotenone treatment in 2005 to rid the reservoir of white suckers. We sampled many nice fish this year like we have over the past several years. This year we put in a little more effort to figure out the human element in regards to angler use and catch rates. You may have seen a creel box with a questionnaire card asking what you caught and how many you caught. MG#1 is usually a pretty tough place to fish due to the productivity (lots of food available), and this year’s creel results were better than anticipated. A total of 152 anglers reported fishing for 556 hours and catching 374 trout (only 3 were harvested). The overall catch rate for anglers in 2018 was 0.67 fish/hour. Our catch rate objective for anglers at MG#1 is for 20% of the anglers to catch 0.50 fish/hour. Anglers fared much better than our objective with 45% of anglers catching at least 0.50 fish/hour.



A beautiful tiger trout from MG#1

Another interesting caveat is that 81% of the angler catch was rainbow trout, despite equal stocking of both rainbows and Snake River cutthroat. Thanks to the anglers who filled out their creel cards in 2018 and happy fishing MG#1.



A nice Snake River cutthroat and brown trout from MG#1





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## Important Dates to Remember in 2019

- May 9—11, 2019. **Wyoming Outdoor Expo:** The Wyoming Game and Fish Commission has reinstated the Outdoor Expo in Casper. Tons of activities for all ages. For more information go to <https://wgfd.wyo.gov/education>
- June 1, 2019— **Wyoming’s Free Fishing Day** June 1, 2019 is Free Fishing Day to coincide with the beginning of the National Fishing and Boating week. Residents and nonresidents may fish Wyoming waters (excluding Wind River Indian Reservation and Yellowstone National Park) without a fishing license or conservation stamp this first Saturday in June.



Paul Mavrakis: Fisheries Management



Gordon Edwards: Fisheries Management



Reed Moore: AIS Specialist

## Upcoming Work for 2019

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. We are always happy to answer questions about fishing and fishing opportunities in the Sheridan Region. Below is a list of projects upcoming for the 2019 field season. Stay tuned for updates on these waters in our next newsletter. Happy Fishing!

- Sampling on DeSmet, Keyhole, LAK, Muddy Guard #1, Healy, Park, Twin Lakes, and Weston reservoirs.
- Sampling on South Tongue River and Bull, Sucker, Sand, Copper creeks.
- Yellowstone cutthroat restoration work on the North and South Fork of West Pass creeks.
- Several Cloud Peak Wilderness lakes including Seven Brothers, Peggy, Elephanthead, Spear, and Myrtle lakes.
- Creel surveys on Lake DeSmet and Healy Reservoir to gauge angler use and attitudes.
- Native stream surveys on the Powder River and in the Little Missouri River drainage.
- Cook Lake Renovation Project.



Travis Cundy:  
Aquatic Habitat Program



Andrew Nikirk: Fisheries Management