



2020

Wyoming Game and Fish Department

# Sheridan Angler Newsletter

“From the Bighorns to the Black Hills”

## Special points of interest:

- Master Angler Program
- Salmon in Lake DeSmet?
- AIS Rapid Response Plans
- Muddy Guard reservoirs #1 and #2
- Bullfrog surveys in the Sheridan area
- Upcoming Projects in 2020

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## Become a Master Angler! Andrew Nikirk

The Wyoming Game and Fish Department is pleased to provide a program that recognizes the catch of trophy-sized fish from our phenomenal Wyoming waters. There are three levels of achievement: Master Angler, Trophy Angler and Ultimate Angler.

**Master Angler:** Catch one fish of qualifying length and you will be awarded a Master Angler decal sticker of that fish species.

**Trophy Angler:** Catch 5 different species of qualifying length and you will be awarded the Trophy Angler challenge coin.

**Ultimate Angler:** Catch 10 different species of qualifying length and you will earn the Ultimate Angler award comprised of a prize package and statewide recognition.

### RULES

Open to all Wyoming anglers, resident and nonresident.

- Fish must be caught with legal methods and during open seasons in Wyoming.
- Anglers are limited to one Master Angler entry per species per calendar year. Submissions for Trophy Angler and Ultimate Angler have no time limitations.
- Each entry must be accompanied by one side-view photograph, preferably with either the angler or another object (e.g. ruler) that can be used to validate length.
- Qualifying fish must meet or exceed the minimum length established for that species. Length is defined as the Total Length of the fish (nearest 1/2 inch); from the snout to the tip of the pinched tail.



This new program has been met with some amazing enthusiasm and participation from anglers. From June 1, 2019 (when the program first started) to December 31, 2019, 483 anglers were Master Anglers with 10 Trophy Anglers and one Ultimate Angler. The North Platte River led the way with the most entries, followed by Glendo, Hawk Springs, and Pathfinder reservoirs. Rainbow Trout led the way as the most common species entered by anglers followed by Cutthroat Trout, Crappie, and Walleye. So get out there, and see if you are a Master, Trophy, or Ultimate Angler in 2020! For further information visit our website at <https://wgfd.wyo.gov/Fishing-and-Boating/Master-Angler>



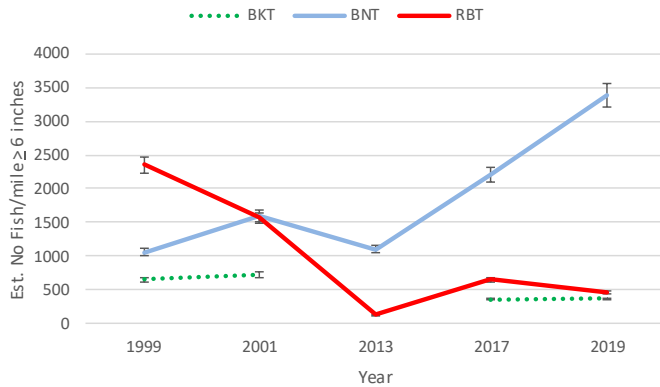
Angler, Gannon Bade with his Walleye submission from Keyhole Reservoir.



## The South Tongue River Andrew Nikirk

Most fly-fishing enthusiasts fishing the Bighorns usually target the North Tongue or the Middle Fork Powder rivers; our most popular rivers. A river that can be just as good, with much less angling pressure but is often overlooked is the South Tongue River.

Tributaries of the East Fork South Tongue River begin on Woodchuck Pass and Sawmill Divide (Mohawk and Graves creeks) while the West Fork South Tongue begins on Bruce Mountain. Both flow north until they combine to form the South Tongue River just upstream of Dead Swede Campground. The South Tongue continues north approximately 15 river miles until it joins the North Tongue, forming the Tongue River above Box Canyon.



*Population estimates of fish > 6 inches at the Schutts Flats section, South Tongue River.*

The South Tongue is primarily occupied by Brown and Brook trout but Rainbow Trout appear in greater numbers as you move downstream (north) towards the confluence with the North Tongue. The geology of the South Tongue watershed is granitic, which breaks down into excellent trout spawning gravels. Spawning habitat is so good that our population and biomass estimates generally hover around 4,000 fish/mile > 6 inches and 700 to 900 pounds of fish/mile! Pretty impressive for a mountain stream!

The downfall of the granitic geology is that it is less productive from a food (aquatic invertebrates) standpoint which is the limiting factor in the South Tongue. Conversely, the geology of the North Tongue is limestone, which is very productive from a 'food' perspective but lacks good spawning gravels. In the North Tongue, spawning habitat is the limiting factor thus fish must be supplementary stocked. For this reason, the

average size of fish on the North Tongue are generally bigger than those on the South Tongue. But don't let that sway your decision. The South Tongue can still grow some trophy Brown Trout!



*A tie flume used to transport rail ties from the Bighorns to Ranchester, WY.*

With the development and expansion of the railroad in the late 1800s, the South Tongue River watershed became a primary source for railroad ties. The easiest way to transport ties from the top of a mountain to the railway route was to build splash dams and tie flumes. These splash dams held back water to supply the flume while several miles of "flume-track" delivered ties to the mainstem Tongue River, then eventually Dayton and Ranchester.

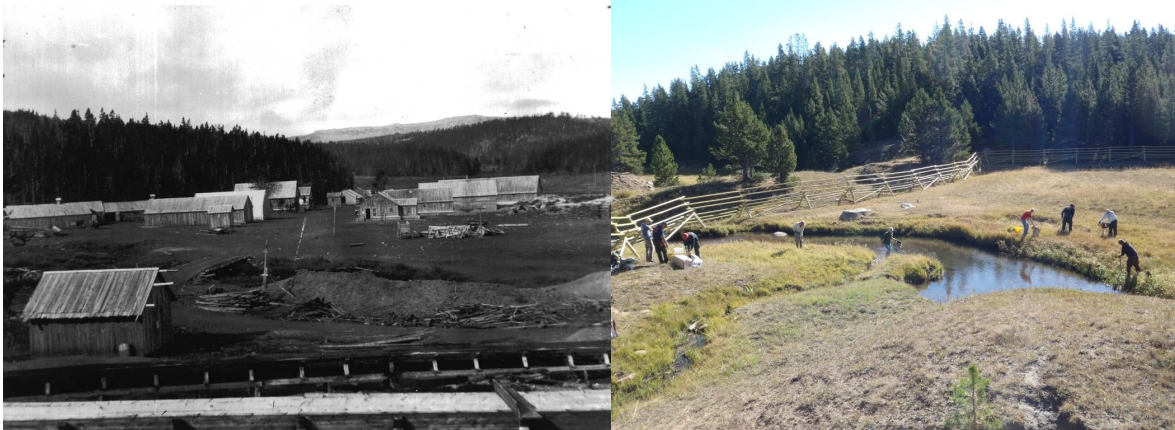
Ingenious as it was, the result of these dams and flumes badly damaged portions of the South Tongue watershed with eroding banks, stream straightening, and the loss of willows, beavers, and woody debris (stabilizes stream banks). In the early 2000s, stream restoration first occurred at the Dead Swede Campground. More recently, in conjunction with the Bighorn National Forest, we conducted PFC (properly functioning condition) assessments throughout the watershed to determine other opportunities and locations for stream and riparian restoration.



*A very nice Brown Trout from the Boy Scout section, South Tongue River.*

## South Tongue River Continued Andrew Nikirk

Along with several partners, two approaches at restoration have been used within the watershed. The active approach is when we get into the creek with heavy equipment to place boulders, trees, sod, and reshape the stream. This was done at Dead Swede Campground, Boy Scout (just downstream of Dead Swede), and Schutts Flats (upstream of Prune Creek Campground). This method is certainly quicker, but much more expensive. The other approach is passive, in that we let the stream heal naturally with a little help. We've assisted with two passive projects with the construction of exclosures (keeps cattle and wildlife away from the stream) on Sucker Creek and the West Fork South Tongue River. Over time, willows will regenerate, woody debris will accumulate, and stream banks will stabilize. This method generally takes much longer to accomplish a positive change, but is less expensive.



*The 1910 tie camp at Woodrock (left) and the exclosure (passive approach) at Woodrock today.*

The South Tongue and its tributaries are truly remarkable. There are several locations that are easy to access and there are miles of river with more rugged access points. You can plan a trip that suits any of your needs, from remote dispersed camping to several established campgrounds; from access next to Highway 14 to an isolated 6 mile stretch between Prune Creek and Tie Flume campgrounds. For the South Tongue River and its tributaries you can harvest 6 trout (Browns and Rainbows combined) and 16 Brook Trout. Although the trout are not typically as large as the North Tongue, being able to keep 22 trout will provide a few good meals. Happy Fishing!!



*The active approach used at the Boy Scout site. The before (top left) shows eroding banks with a shallow stream depth. The after (bottom left) shows the use of woody debris, sod, and large boulders to stabilize the bank and deepen the river channel. At Dead Swede Campground (above), large boulders were placed to concentrate flow and stabilize stream banks.*

## Habitat Projects in the Sheridan Region Travis Cundy



Figure 1. Fish barrier completed in 2019 on West Pass Creek to isolate Yellowstone Cutthroat Trout from other trout species.



Figure 2. The 12 foot concrete ramp located just upstream of Interstate 25 on Clear Creek in Buffalo, WY. The removal of the ramp will allow fish movement throughout Clear Creek.



Figure 3. A recently installed beaver dam analog on Sourdough Creek west of Buffalo, WY.



Figure 4. A before (left) and after (right) of the Tongue River near Dayton, WY.

### **West Pass Creek Yellowstone Cutthroat Trout Restoration**

A fish barrier was completed on West Pass Creek (Figure 1) to prevent other trout species from moving upstream and mixing with native Yellowstone Cutthroat Trout. The barrier secured six miles of stream corridor along the North and South forks, and main stem of West Pass Creek for restoration purposes.

### **Clear Creek Rehabilitation and Fish Passage at Interstate 25 Crossing:**

A 12-ft tall concrete grade control structure that is a barrier to upstream fish movement, occurs upstream of the I-25 box culvert crossing on Clear Creek (Figure 2). Our leading design option to improve the stream and remove the barrier entails re-grading the channel and floodplain corridor between County Road 252 and I-25, and constructing a series of riffles and pools to stabilize the channel and facilitate fish passage through the stream reach. The rehabilitation will allow Brown and Rainbow trout, and native suckers isolated downstream to access upstream habitats and thermal refuges along several miles of Clear Creek. The work will also improve stream habitat available to the public along two acres of Clear Creek owned by the Wyoming Department of Transportation.

### **Riparian Rehabilitation using Beaver Dam Analog Structures**

Regional habitat personnel collaborated with Bighorn National Forest and State Forestry Division personnel to complete 10 beaver dam analog grade control structures at two locations on Grommund Creek and Sourdough Creek (Figure 3), and one location on Parmlee Canyon Creek in Weston County. The willow or woody debris lattice (weave) structures provide temporary grade control that raise the streamside water table, promote riparian vegetation development, and entice dam building by beaver to promote further water table and riparian vegetation development. Sourdough Creek is a candidate release site for beaver transplants in the future.

### **Tongue River Corridor Rehabilitation**

Stream and riparian floodplain rehabilitation was completed along a reach of the Tongue River (Figure 4) upstream of the Highway 14 Bridge in Dayton, WY. Rehabilitation included installing constructed riffles, J-hook vanes and toe wood revetment. The purpose was to reduce the overall width of the channel, reestablish riffle to pool sequences that were eliminated during past channelization efforts, stabilize eroding streambanks, and increase instream and riparian cover available to hold trout. Reestablishing riffle to pool sequencing will increase pools available to dissipate the energy of high flows and provide cover for fish. Reducing eroding streambanks with J-hook vanes and floodplain benches with toe wood revetments will increase riparian floodplain plant communities with dense root systems, protect property values and improve cover for fish.

### Salmon in Lake DeSmet?! Gordon Edwards

Yes – you heard right - a new species was added to Lake DeSmet. About 40,000 fingerling Kokanee (3 -4 inches) were stocked in April 2019. Kokanee are landlocked Sockeye Salmon that live mostly “off shore” in lakes and filter feed in the water column on small crustaceans called zooplankton. These zooplankton are at the base of the food chain and eat phytoplankton or algae, that live in the open water. Biologists surveyed zooplankton densities over the summer and the numbers indicated that the Kokanee should grow well. In fact, two Kokanee that were 7 inches long, fat, and sassy showed up during our fall gill net survey! They were not expected to be large enough for capture with the nets until spring 2020. That was a great sign that good things are to come.



*A completed zooplankton tow to assess the food availability for Kokanee in Lake DeSmet.*

The Rainbow Trout fishery at Lake DeSmet continues to struggle. Gill net catch rates remained low in 2019, aligned with a steady downward trend since 2016. The Eagle Lake strain of Rainbow Trout was very popular at DeSmet for decades, particularly with shore anglers because they were known for “running the shoreline” in the spring. Game and Fish has been marking Eagle Lake rainbows before they are stocked and have seen very, very few of them during our gill net surveys. In addition, only a single Eagle Lake Rainbow was observed when 425 anglers were interviewed during a creel survey in 2019. Most of the Rainbow Trout caught at DeSmet now are “fall strain,” which were bred to spawn in a hatchery during the fall. Fall rainbows are performing better but not good enough yet to bring the fishery back to the glory days.



*A nice sized DeSmet Rainbow Trout.*



*The first Kokanee Salmon captured with our sampling gear in September, 2019.*

Big Walleye, Lake Trout, and Brown Trout are still common at Lake DeSmet. Although these fish challenge the Rainbow Trout fishery, they provide excellent opportunities for a trophy fish!



*A big DeSmet Walleye (left) and Brown Trout (right). These large predators offer trophy opportunities at Lake DeSmet!*

## AIS Program Update Reed Moore

In 2019, 5,768 watercraft inspections were conducted in the Sheridan region and 508 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, 32 required a decontamination to treat standing water and one vessel was transporting adult zebra or quagga mussels from the Saint Lawrence River in Canada. Thankfully, the mussels on the vessel were dead from being out of the water for several months and they were removed at our inspection check station. 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

Zebra and Quagga mussels are not the only AIS we are concerned about. In the summer of 2017, Asian clams were discovered in Keyhole Reservoir. Previously, Asian clams were only known to be in the North Platte and Laramie rivers 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 livewells 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*

## AIS-Planning for a Possible Invasion Andrew Nikirk

For the last ten years our AIS program has been running very smoothly, inspecting boats at ramps and Ports of Entry across Wyoming and we greatly appreciate the boater’s cooperation through the years! While our inspectors and boaters have done an excellent job in keeping zebra and quagga mussels out of the state to this point; what would happen if one of our waters became positive with these mussels? In 2019 we were tasked with completing a Rapid Response Plan (RRP) for our most “at-risk” waters. These waters have been identified as being the most likely to become positive because of their location, amount of use, and types of use (nonresidents and/or complex vessels) and the first 8 of 23 waters included Jackson Lake, Glendo, Keyhole, Flaming Gorge, Grayrocks, Boysen, Fremont, and Big Horn (Yellowtail) reservoirs.

Drafts of these 8 plans are complete but are not finalized. We will be gathering input from the public and our partners like BLM, BOR, State Parks etc., Finally, our plans will be reviewed and approved by our Game and Fish Commission before they are implemented. The main theme with all individual plans is to reduce the risk of spreading the mussels to other Wyoming waters should one of them become positive, all the while, minimizing the impact to the boater.

What are some of the changes that a boater could see should one of our waters become positive for zebra or quagga mussels? First, there would likely be a temporary closure to the waterbody itself. This will allow teams to mobilize equipment and personnel to the newly infected water. Second, we would shift from entrance inspections (as you’ve encountered coming into a reservoir) to exit inspections. In order to reduce the spread to other waters, we would require that all boats leaving an infected waterbody to be inspected. Finally, in order to ensure that we can inspect every boat leaving, some waters may have “hours of operation”. For instance, for Keyhole Reservoir, it is currently proposed to have exit inspections locations open from 1/2 hour before sunrise to 1/2 hour after sunset. In addition, there may be seasonal, nightly, or vessel closures at the infected waterbody.

While putting these plans together, it quickly became a harsh realization of how difficult and expensive such a task would be-to inspect every boat leaving an infected waterbody most of the year. If Keyhole becomes positive, we would likely need to hire as many as 16 inspectors and purchase numerous amounts of equipment; from signs to decontamination units. For Keyhole Reservoir, it is currently estimated to cost nearly \$300,000 annually, but could range from \$450,000 to \$750,000 a year just to continue allowing boating.

If one of our waters became infested with zebra or quagga mussels, these expenses would run in perpetuity. There is no “cure”. Once zebra and quagga mussels show up, they will always be there. Boaters-please continue doing an excellent job in keeping your vessels Cleaned, Drained, and Dry, and with any luck, we’ll never have to worry about implementing a Rapid Response Plan.

## Sibley Lake Paul Mavrakis

With easy access, developed campgrounds and a really nice fishing pier, Sibley Lake is likely one of the busiest fisheries in the Bighorns. It’s common to see anglers lined up on the shore and several boats enjoying this beautiful lake, especially on a nice weekend day. Sibley has wild brookies, browns, rainbows and stocked Yellowstone Cutthroat Trout. Game and Fish stocks Sibley with 5,000 catchable-sized (8-10 inches) Yellowstone Cutthroat Trout each year. In recent years, we have received several reports of not so great fishing at Sibley.



*A nice Brook Trout from Sibley Lake.*

In 2019, we installed angler boxes and asked anglers to fill out cards letting us know how their fishing was that day. We received nearly 100 completed cards back from June through September. Those anglers reported catching 466 trout and fishing for 255 hours. Of course not everyone that fished filled out a card but the sample does show that anglers are catching fish, with the most common catch being stocked Yellowstone Cutthroat Trout.

In conjunction with the angler cards, we electrofished Prune Creek below Sibley. Prune Creek flows through Sibley and we suspected a large number of our stocked Yellowstone Cutthroat were leaving the lake. We found that many of the stocked Yellowstone Cutthroat were quickly going out Prune Creek so they were unavailable to anglers in Sibley.

Starting in 2020, we are switching from catchable Yellowstone Cutthroat trout to catchable Rainbow Trout. We will again have the angler card boxes out so we can directly compare angler catch between the two species. So if you fish Sibley in 2020, please take the time to fill out an angler card each time you fish to help us better manage Sibley.

## Sand Creek Update Andrew Nikirk

One of the most unique fisheries in the Sheridan Region and one of the prettiest places in Wyoming is Sand Creek, near Beulah. Historically, Sand Creek has bolstered one of the highest biomasses (pounds of fish/mile of stream) of any stream in Wyoming with estimates of nearly 1,500 pounds/mile. Sand Creek is a very productive stream. There are good spawning gravels throughout the creek, tons of watercress and other aquatic vegetation (harbors food and cover), and a plethora of aquatic invertebrates. Our sampling in 2019 found something quite different from the “norm”. Our population and biomass estimates this year were at a 20 year low for Sand Creek (see graph).

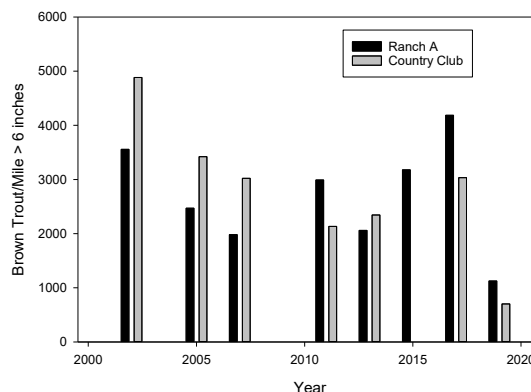


*Despite fewer fish observed in 2019, Sand Creek still provides opportunity for some nice fish!*

Why such a drastic change this year? 2019 was one of the wettest on record for this region of Wyoming. A high, late spring snowpack followed by heavy rains, caused some extreme flows. Base flows at Ranch-A are typically 20-25cfs. In 2019 they were nearly 100cfs for an extended time, while nearly 500cfs near I-90. These high flows likely flushed fish downstream and ripped up and removed the vegetation. The good news; Sand Creek has always bounced back following high flow events. With fewer fish in the system, there is more food available, thus quicker growth. We generally see an increase in the number of bigger fish a year or two following such an event.



*High flows observed on Sand Creek in the spring of 2019 (left). Estimates of Brown Trout at the Ranch A and Country Club sites over the last 20 years (right).*



## Bullfrogs in Sheridan Christina Schmidt

While walking his dogs at Kleenburn Ponds north of Sheridan in 2018, Sheridan resident Bob Krumm heard the call of an animal he knew did not belong there. He has lived in Wyoming since 1966, but grew up in Michigan and immediately recognized the distinct sound of a bullfrog as it began its nightly serenade. "There is no mistaking a bullfrog. I don't know of any other sound that is like it. Like a loon or a sandhill crane, once you hear it, you can't miss it. It is very distinctive."

Krumm reported what he heard to the Sheridan Regional Office and the next day we visited the ponds and actually found the frog. We were unable to catch him on the first attempt, but a few nights later we were able to find and capture the bullfrog. Bullfrogs are native to the eastern United States. When they are intentionally or accidentally introduced into new areas, they can have devastating impacts on native amphibians. It is unclear if bullfrogs were ever native to Wyoming because they have been introduced to so many parts of the U.S. If they are native to any part of Wyoming, it is just a small area on the Nebraska border along the North Platte River corridor. But they are not native and should not be anywhere else in Wyoming.



An adult bullfrog (photo courtesy of Gary Nafis).

Aside from the confirmed bullfrog in Sheridan, other reports suggest they are at Keyhole Reservoir, ponds in the Cheyenne area and Kelly Warm Springs by Jackson. Widely separated reports suggest that the frogs might be accidental or intentionally released pets or classroom projects. They sometimes show up in urban ponds because those are common spots for folks to release their pets. Releasing pets can have huge, negative consequences on local ecosystems however.

Preventing bullfrogs from taking up permanent residence in Wyoming is critical. Their large size, aggressive nature and voracious appetites position them well to out-compete our native amphibians. When they arrive in a new area, they can nosh their way through the inhabitants. Insects, small rodents, fish, birds, reptiles and even other amphibians are all potential menu items. In their native range, bullfrogs have natural predators that keep their numbers in check. In Wyoming, we lack that predator base in our wetlands to really handle bullfrogs (bigger snakes and other bird species not found in Wyoming).

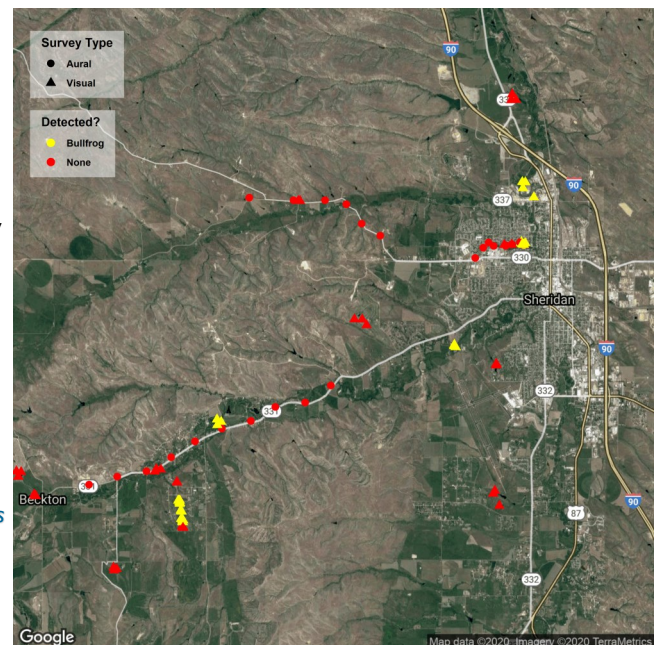
An example of the devastating effect nonnative bullfrogs can have in an area can be seen just south of our border. When you go to some of the ponds along the Front Range in Colorado, they are packed with bullfrogs and non native amphibians. Leopard frogs in the Front Range are really declining and part of it is the severity of the bullfrog invasion. That is common in areas where bullfrogs are introduced and did not previously occur; they either eat or out-compete all the other amphibians. Once they get a good foothold, they are very hard to control. They also threaten native amphibians in another substantial way. In recent years, the disease chytridiomycosis, caused by the fungus *Batrachochytrium dendrobatidis*, has decimated amphibian populations around the globe. Amphibians have semi-permeable skin allowing for the transfer of gasses and water. The fungus destroys the skin's ability to be permeable which can cause massive osmotic imbalance resulting in drowning or heart attack. Initial research suggests bullfrogs are less susceptible to the disease, allowing them to spread it while avoiding the disease's lethal impacts.

In 2019 an extensive survey effort (26 surveys) in the Sheridan area found bullfrogs at several sites along Big Goose Creek, including Mavrakis Pond. At one location, 1,500 bullfrog tadpoles were captured! Game and Fish continues to ask the public to help identify potential new areas of bullfrog expansion by reporting suspected calls or sightings. Bullfrogs breed later in the season than our native amphibians and are likely to be heard in July and August.

A short video featuring photos and recordings of bullfrog calls can be found at [www.youtube.com/wy.gameandfish](http://www.youtube.com/wy.gameandfish)

If you hear or see a bullfrog anywhere in Wyoming, please contact your local WGFD office and include a detailed description of the location.

*Map of surveyed sites in and near Sheridan in 2019. Red dots and triangles indicate no observances, while yellow triangles indicate visual sightings or captures.*





## Cook Lake Renovation Update Andrew Nikirk

A long awaited project came to fruition in 2019. Cook Lake, a 31 acre reservoir in the Black Hills National Forest, north of Sundance, was mostly drained, chemically treated to remove undesirable fish, and dam repairs were made. This project was initialized by the Black Hills National Forest. They were able to secure funding and found a Bureau of Reclamation construction crew to make the necessary dam and spillway repairs. We took advantage while the water levels were low to improve the fishery.

The contractors arrived in early July, staging equipment and materials. After the July 4th holiday, the recreation area was closed to the public for the duration of the project. In order to complete the project, the old bridge and spillway culverts needed to be removed, followed by draining the lake to the lowest level possible. Several thunderstorms and snow storms in the fall delayed progress a bit, but by November 21, 2019, 95% of the work was completed. A little grading and rip-rap placement will be necessary in 2020.

Prior to this project, Cook Lake was a marginal fishery at best. It was overwhelmed with undesirable species such as Green Sunfish, White Suckers, and Black Bullheads. These fish were plentiful and competed with the Rainbow and Snake River Cutthroat Trout that we stock annually, resulting in poor performance and survival. With the lake drained to a creek channel and a dead-pool (amount of water unable to drain) we were able to apply rotenone, a chemical that kills fish (not harmful to humans, livestock, or wildlife). With very little water remaining, our treatment needed very little chemical and within just a few hours, fish had perished. The chemical was neutralized by dilution as the reservoir filled throughout the fall and winter.

Now that the project is mostly complete, we will restock the lake in the spring of 2020. Our plan is to stock 8,000 Rainbow Trout and 1,500 Tiger Trout. It is our hope that the stocked trout will grow well in the absence of the undesirables, so that when suckers, sunfish, and bullheads return, there will be predators big enough to prey upon them (suckers, sunfish, and bullheads inhabit the creek above the lake, making a complete eradication impossible).



*Cook Lake at full pool prior to draining.*



*Cook Lake following the dewatering to just a creek channel (above).*

*Dead White Suckers encased in ice following our chemical treatment (bottom right).*

*The completed dam and spillway (top right). Grading, rip-rap, and some revegetation work will be needed in 2020.*



## Muddy Guard Reservoirs #1 and #2 Gordon Edwards



*MG #1 Rainbow Trout*

A real gem lies southwest of Buffalo, tucked into the foothills of the Bighorn Mountains. Muddy Guard #1 sits in a fairly sheltered location in the Muddy Creek valley about 16 miles southwest of Buffalo, WY, just off of the Crazy Woman Canyon road. Striking scenery combined with phenomenal trout fishing guarantee that you'll have a good day here. It would be a great stopover on a summer backroad tour up the mountain. This is also a great place to take your car-topper boat, float-tube, kayak, or canoe. It is a productive 27 acre reservoir managed for trophy trout. As such, you can fish only with artificial flies and lures and may take home one 20 inch wall-hanger. Ample aquatic insects, Fathead Minnows, and crayfish support rapid growth here for all life stages of trout. This fishery is small and no secret, so recycling its fish is key to keeping the fishing good.

Game and Fish carefully maintains the stellar fishery at Muddy Guard #1 by stocking about 900 trout per year, in several flavors. Snake River Cutthroat and Rainbow Trout are the bread-and-butter here. The cutties were most abundant in 2019, averaging 16.6 inches and 2.09 lbs! They are beautiful fish too. Rainbow Trout numbers have been steady. The average length of rainbows in 2019 was 18.1 inches! You'll have a better chance of catching a nice Tiger Trout at Muddy Guard #1 soon.



*MG #1 Tiger Trout*

Game and Fish began stocking more Tiger Trout in 2019 to boost their numbers. The number of Tiger Trout during surveys and reported by anglers

has been low but the fish were large and healthy, with fish exceeding 20 inches supported by lots of forage.

Low numbers of wild Brown Trout add to the diversity of fish at Muddy Guard #1 and we routinely sample a brown over 24 inches. Keep a look-out for Brook Trout too. Extra brookies were available in our hatchery system in 2019, so we stocked a few at Muddy Guard #1 to try them out. We expect them to grow well and become a fantastic addition to the fishery.



*MG #1 Snake River Cutthroat*

Look no further than Muddy Guard #2 if you're looking for a trophy Brown Trout. This fishery is also southwest of Buffalo, and not far from the Crazy Woman Canyon road. It's a 50 acre reservoir on the North Fork of Crazy Woman Creek. Access over the south dam allows float tubes, small canoes, or whatever anglers are willing to carry up and over the dam. Ample shoreline is also accessible for fishing.

Brown Trout are wild at Muddy Guard #2 and the density of large browns was impressive when it was surveyed in 2018. Results included 11 browns ranging from 17.4 to 28.8 inches, with the largest fish weighing 8.68 lbs. The average length of Brown Trout was 22.4 inches. These low-density brown trout get big by living a long time here and feasting on the abundant Longnose Suckers. Unfortunately, there aren't enough of them to keep the suckers in balance.



*A large MG#2 Brown Trout*

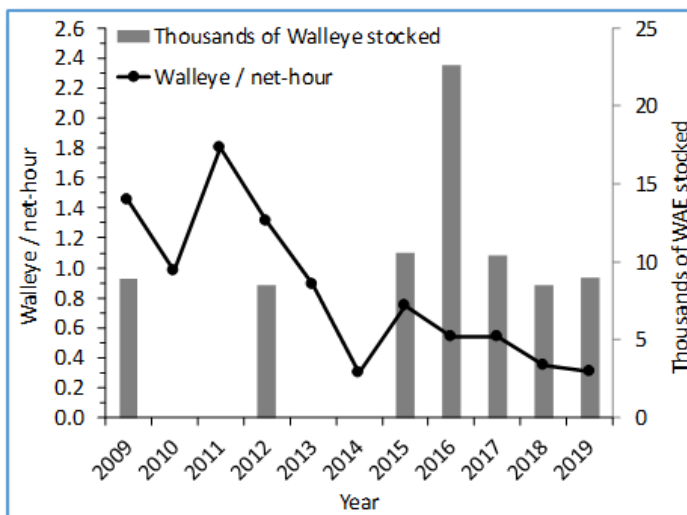
Game and Fish is working to improve this stocked Rainbow Trout fishery. Abundant Longnose Suckers have challenged the rainbow fishery for years through competition for aquatic insect and crustacean forage. The sucker population has declined but the body condition and growth of rainbows had not yet improved in 2018. Rainbow Trout at Muddy Guard #2 ranged from 8.8 to 12.6 inches when sampled in the spring, which is not much larger than they were stocked during the previous fall. A reduction in the number of rainbows stocked annually intends to boost growth until the sucker population is under control.

Game and Fish began stocking Tiger Trout annually here in 2016 to reduce the sucker population. Tiger Trout are a sterile hybrid between Brown Trout and Brook Trout. We can control their numbers through stocking. Only 8 Tiger Trout were sampled in 2018 and they were small (6.9 to 11.1 inches). Small Tiger Trout also feed on aquatic insects until they reach a size where they shift to eating mostly other fish – like young suckers. It's likely that they are growing slowly as well and looks like it will take some time for them to get on top of the sucker population. When this happens, we hope to have larger rainbows, nice trophy tigers, and still some big old browns! A survey is scheduled for 2021.

## LAK Reservoir Update Gordon Edwards

Newcastle residents are lucky to have the diverse warm water fishery found at LAK Reservoir only 5 miles southeast of town, just north of Highway 16. Here you can catch Walleye, Tiger Musky, Smallmouth Bass, Yellow Perch, Green Sunfish, White Crappie, and Brown Trout. A formal access agreement was established with True Ranches in 2016 to ensure fishing and boating access for 25 years (permission slips no longer required). This crystal-clear 120 acre lake is fed by enormous springs in the upper valley of Stockade Beaver Creek. Fish habitats vary at LAK from steep, rocky shoreline adjacent to deep water at the dam and cliffs on the west side, to shallow coves with dense weed beds with emergent bulrush on the east side and near the inlet.

Walleye abundance has not rebounded in response to consistent stocking that resumed in 2015. Game and Fish stocks about 10,000 Walleye fingerlings (1.5 to 3 inches long) at LAK every year. We aren't sure why the Walleye population has not rebuilt. Green Sunfish were still booming in 2015 – 2016 and they probably put a dent in the fingerlings we stocked. In addition, this may have combined with predation from a growing Yellow Perch population. Perch likely had some relief from Walleye predation for a few years. We can say, with certainty, that the Walleye that you'll catch at LAK are nice fish. In 2019, we sampled Walleye from 14.1 to 25.6 inches. They averaged 20.0 inches and had excellent body condition.



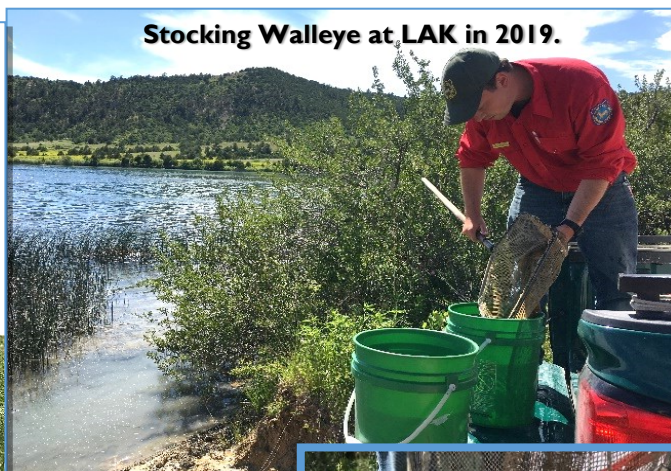
Walleye catch rate through the years at LAK. A downward trend despite consistent stocking.

**Former G&F Commissioner Keith Culver with a nice Tiger Musky at LAK.**



The stocking of non-trout species in Wyoming, such as Walleye and Tiger Musky at LAK Reservoir can only be possible with the help from other states such as North Dakota. Our 10 in-state hatcheries produce excess fish and fish eggs that we, in turn, trade with other states for species that we do not raise, such as Walleye, Crappie, Largemouth Bass, Channel Catfish, Bluegill, Northern Pike (Keyhole Reservoir only), and Tiger Musky. Walleye are the most numerous fish stocked with over 1 million fingerlings stocked in Wyoming waters on an annual basis.

**Stocking Walleye at LAK in 2019.**



**Ready to Stock!**

**Walleye Fingerlings Up Close**

## Bighorn Mountain Reservoirs Andrew Nikirk



*A nice Brown Trout from Cross Creek Reservoir.*

**Cross Creek Reservoir:** A good fishery is just a short ATV ride and walk away. Cross Creek Reservoir, upstream of Big Horn Reservoir, offers up some good Brook Trout ranging in size from 8 to 11 inches. Rainbow Trout and Brown Trout are present as well but not in as large of numbers, but some decent sizes. Rainbows were found to be around 12 inches and the few Browns were between 14 and 20 inches (picture left). Put Cross Creek Reservoir on your to-do list for 2020!



*A Weston Reservoir Tiger Trout*

**Weston Reservoir:** A short, but super bumpy ATV ride can get you into Weston Reservoir. We have been stocking Tiger Trout (Brown X Brook hybrid) to prey upon smaller Grayling. Grayling are still on the smaller side ranging in size from 6 to 10 inches but the Tiger Trout are approaching the 12 to 14 inch size range. Tiger Trout are very aggressive and willing to bite almost any fly or lure. Anglers should use caution as the trail into Weston Reservoir is very rough and is only recommended for experienced riders. However, the good fishing at Weston is worth the bumpy ride and the likely chiropractor bill!

**Park Reservoir:** This fishery has been struggling over the last 15 years due to an overpopulation of White Suckers. These suckers out-compete trout for food and space, resulting in a lower quality, less healthy trout. To combat the sucker population, we have been stocking Splake (Brook X Lake hybrid) and Lake Trout. Our hope is they will eventually get big enough (takes longer at this high elevation and colder water temperatures) to prey upon the suckers. This year we found Splake to range in size from 11 to 14 inches and Lake Trout 10 to 14 inches. Brown and Brook trout are wild in this fishery (meaning they are naturally reproducing) and are the most populous. Brown Trout can get very large in this reservoir, up to 15 pounds, but generally range



*A trophy Twin Lakes Reservoir Lake Trout!*

from 7 to 15 inches. We found the Brook Trout to be above average size for most Bighorn Mountain waters as they ranged from 8 to 11 inches. Our stocked Rainbows are doing better than past years and are growing to larger sizes with most ranging between 11 and 15 inches.

**Twin Lakes Reservoir:** Just a quick, short walk can put you on some good fishing at Twin Lakes Reservoir. The wild Brook Trout are plentiful and they are of decent sizes ranging from 6 to 13 inches. Not too bad for a Brook Trout right? Twin, however, is most known for its Lake Trout. While most are < 20 inches, there is always a chance at a trophy sized fish (picture left). Over the years of sampling Twin, we have captured several Lake Trout between 8 and 22 pounds!! Early spring right after ice-out and late fall are good times to target these giants.



*A Tiger Musky from Big Horn Reservoir.*

**Big Horn Reservoir:** Unique opportunity awaits at Big Horn Reservoir. While technically a private in-holding within the Bighorn National Forest, this reservoir is now signed up in our Walk-In-Access program and is accessible to anglers. Similar to Park Reservoir, this fishery is also affected by the overabundance of White Suckers, which compete with the wild Brown, Brook, and Rainbow. We took an opportunity to try an experiment and in 2017 we introduced Tiger Musky, a sterile hybrid between Northern Pike and Muskellunge. We've used Tiger Musky in other waters like Healy and LAK reservoirs to prey upon Yellow Perch and Green Sunfish, but this is our first time trying them at a higher elevation water in the Sheridan Region. Our hope is that they will prey upon the suckers and improve the trout fishery. In 2019 we sampled our first musky, a 17 inch fish that was almost 2 pounds!! A reminder to anglers, the regulation for Tiger Musky is one (1) fish, fish smaller than 36 inches must be released immediately.

## Cloud Peak Wilderness Gordon Edwards

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 9 lakes and found a few trophies. Below is a table of what we found in 2019.

Lake	Species	# Captured	Length Range (inches)
<b>Seven Bros #1</b>	Lake Trout	19	14.2 - 18.0
	Rainbow	19	6.0 - 15.7
<b>Seven Bros #2</b>	Lake Trout	1	20.7
	Rainbow	25	6.1 - 21.9
<b>Seven Bros #3</b>	Lake Trout	19	10.6 - 16.8
	Rainbow	23	6.2 - 15.5
<b>Seven Bros #4</b>	Lake Trout	34	9.6 - 33.3
	Rainbow	4	5.9 - 14.6
<b>Seven Bros #5</b>	Lake Trout	17	10.4 - 26.2
	Rainbow	10	5.6 - 15.2
<b>Seven Bros #6</b>	Yellowstone cut	45	7.1 - 11.8
<b>Seven Bros #7</b>	Lake Trout	23	9.9 - 13.0
	Rainbow	8	9.8 - 12.7
<b>Lake Angeline</b>	Snake River cut	1	17.0
	Yellowstone cut	27	10.7 - 16.0
<b>Frozen #1</b>	Golden Trout	10	7.6 - 15.2



*Lower Frozen or Frozen #1 (above) and the gorgeous Golden Trout that inhabit the lake (below)*



Some excellent angling opportunities are available in these lakes and many others within the wilderness. 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 trophy Lake Trout from Seven Bothers Lake #4 (left) and a beautiful Lake Angeline Yellowstone Cutthroat Trout (right).*



Wyoming Game and Fish Dept.  
Sheridan Regional Office  
700 Valley View Dr.  
Sheridan, WY 82801

307-672-7418

<http://wgfd.wyo.gov>

Follow WGFD on Face  
Book and YouTube

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

## Important Dates to Remember in 2020

- May 7—9, 2020. **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 6, 2020— **Wyoming’s Free Fishing Day** June 6, 2020 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.



## Upcoming Work for 2020

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 fish and fishing opportunities in the Sheridan Region. Below is a list of projects upcoming for the 2020 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, Sawmill, Cloud Peak, Willow Park, Kearny, and Tie Hack reservoirs.
- Sampling on North Tongue, Middle Fork Powder, and Little Bighorn rivers.
- Yellowstone cutthroat restoration work on the North and South Fork of West Pass creeks.
- Several Cloud Peak Wilderness lakes including Highland, Peggy, Myrtle, Bard, and Loomis lakes.
- Sampling at Kleenburn Ponds, Calvin Lake, and Sawmill Lakes #1 and #2.
- Native stream surveys on the Powder River and in the Little Missouri River drainage.
- AIS check stations at Sheridan Visitor Center, Beulah Visitor Center, Keyhole and DeSmet.



Paul Mavrakis: Fisheries Management



Gordon Edwards: Fisheries Management



Reed Moore: AIS Specialist



Travis Cundy:  
Aquatic Habitat Program



Andrew Nikirk: Fisheries Management

Help prevent the spread of harmful Aquatic Invasive Species  
by becoming a Wyoming certified inspector!

# 2020 Watercraft Inspection Training for the Public



**CLEANDRAIN DRY**  
WYOMING

## CASPER

May 2nd; 9:00am - 4:00pm  
Casper WGF Regional Office  
3030 Energy Lane, Casper WY 82604

## CODY

May 2nd; 9:00am - 4:00pm  
Cody WGF Regional Office,  
2820 State Highway 120, Cody WY  
82414



## EVANSTON

April 11th; 9:00am - 4:00pm  
Uinta County Public Library,  
701 Main St, Evanston WY 82930

## GERING, NE

April 11th; 9:00am - 4:00pm  
Platte Valley Bank  
1850 10th St., Gering, NE 69341

## GREEN RIVER

April 18th; 9:00am - 4:00pm  
Green River WGF Regional Office 351  
Astle Ave., Green River WY 82935

## JACKSON

June 13th; 9:00am - 4:00pm  
Jackson WGF Regional Office  
420 North Cache, Jackson WY 83001

## KEMMERER

May 1st; 11:00am - 5:00pm  
Lincoln County Library  
519 Emerald St., Kemmerer WY  
83101

## LARAMIE

April 25th; 9:00am - 4:00pm  
WGF Regional Office,  
1212 S. Adams St., Laramie WY 82070

## NEWCASTLE

March 24th; 9:00am - 4:00pm  
Newcastle BLM Field Office,  
1101 Washtington Blvd., Newcastle  
WY 82070

## SHERIDAN

May 1st; 9:00am - 4:00pm  
Sheridan WGF Regional Office  
700 Valley View Dr., Sheridan, WY  
82801

Aquatic Invasive Species (AIS) can be aquatic animals such as zebra and quagga mussels or rusty crayfish, or aquatic vegetation such as hydrilla. These AIS can have far-reaching impacts on our water resources. Many of these species permanently change stream and lake ecology, negatively affecting native species and our prized sport fisheries. Zebra and quagga mussels can attach to water infrastructure and equipment causing damage. These species are often called "aquatic hitchhikers" because they can hitch a ride on boats, equipment, or in any water that is not drained.

The Wyoming Game and Fish Department is offering several watercraft inspection trainings in 2020. These trainings will provide the skills necessary to inspect your own watercraft and certify you to inspect other watercraft as well. The trainings include information on basic biology, impacts, transport vectors and distribution of AIS. It includes classroom instruction, a question and answer session, and a hands-on watercraft inspection exercise.

The trainings are free and open to anyone interested in preventing the spread of AIS through watercraft inspection. These trainings are being offered as a one-day course (9:00a - 4:00p). Registration deadline is one week prior to the class start date. Limited to 20 people per course.

To register: contact Joshua Leonard, AIS Coordinator at (307) 721-1374 or [joshua.leonard@wyo.gov](mailto:joshua.leonard@wyo.gov). Please provide your name, mailing address, phone number, and email address. Or register online at: <https://forms.gle/yFPNck3XCiShP3z6A>  
Visit: [wgfd.wyo.gov/AIS](http://wgfd.wyo.gov/AIS) for more information about AIS.



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