



2016

Wyoming Game and Fish Department

Sheridan Region

Angler Newsletter



Fishing Piers Make Access Easier *Paul Mavrakis*

There are two new fishing piers in Northeast Wyoming that will make it easier for everyone to go fishing. The piers are at Sundance Fairgrounds Pond in Sundance and Black Elk Pond in Newcastle. Other fishing piers in NE WY are at Ranchester Pond, Kleenburn Pond, Panther Pond and Gillette Fishing Lake.

Black Elk Pond is a brand new pond in Newcastle that was completed in late 2015 with funding from the Wyoming Refinery, Newcastle Country Club, Wyoming Wildlife Natural Resource Trust Fund, Weston County Natural Resource District, Wyoming Wildlife-

The Foundation and many others. Pilings for the pier were used power poles donated by Powder River Energy. All the materials were paid for by the Wyoming Sportsman's Group out of Gillette. Black Elk Pond will have largemouth bass, crappie, yellow perch and bluegills once transplants are completed this spring. Fishing should improve over time as these fish become established.



Fishing pier at Black Elk Pond, Newcastle, WY



New fishing pier at Sundance Fairgrounds Pond

The fishing pier in Sundance was a result of cooperation between Powder River Energy and the Sundance Rod and Gun Club in Sundance. The Sundance Rod and Gun Club provided the materials and the bulk of the labor to construct the fishing pier. Once the ground thaws this spring, the fishing pier will be tied into shore and be ready to use. Game and Fish stocks 1,800 catchable sized (9 inches) trout every year at Sundance Fairgrounds Pond for anglers to enjoy.

Special points of interest:

- FISHING PIERS MAKING ACCESS EASIER
- GOLDEN TROUT
- BIG FISH FROM 2015
- HIGH TECH FISH SAMPLING COMES TO THE BIGHORN MOUNTAINS

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“From the Bighorns to the Black Hills”

Keyhole’s other fish *Andrew Nikirk*

When most anglers think of the fish in Keyhole, they usually think of walleye and northern pike. What most folks don’t realize is that there are ten game-fish species at Keyhole, and most are overlooked. In addition to the popular walleye and pike, there are two species of crappie (black and white), yellow perch, green sunfish, bluegill, smallmouth bass, freshwater drum, and channel catfish.

Historically, green sunfish and bluegill have never flourished at Keyhole. However, with the water levels remaining full or near full in recent years, we’re seeing some decent sized sunfish and bluegill in our sampling gear.

While yellow perch and freshwater drum can be targeted by anglers, especially during ice-fishing season, most anglers catch these fish incidentally while pursuing walleye. Both species have increased in recent years and have grown to some impressive sizes. Keyhole holds the Wyoming record for freshwater drum (17lbs 4oz) and we’ve seen perch as big as 13 inches!

Pound for pound, nothing fights harder than a smallmouth bass. The high productivity of Keyhole has produced an excellent forage base and the smallmouth have taken advantage. We’ve seen smallmouth nearing the 5 pound mark in recent years. Smallmouth can be found throughout the reservoir, typically lurking near rock outcroppings.

Keyhole’s only native game fish is the channel catfish. Channel cats generally inhabit the shallow, more turbid water of the “West End” more so than other parts of the reservoir. Catfish are generally targeted by shore anglers with cut bait. In recent years, we’ve seen channel catfish up to 15 pounds.

Probably the most plentiful and easiest to catch fish are the black and white crappie. White crappie have 5-6 dorsal spines and often vertical bar pattern on their sides, while black crappie have 7-8 dorsal spines and a checkerboard pattern on their sides. Crappie are found throughout the reservoir but depending on time of year, they may be shallow or deep and suspended. During late spring, crappie will find vegetation and shallower water to spawn. Once spawning has concluded, crappie will retreat and suspend over deeper water. Most crappie are around 10 inches with a few around 12 to 14 inches.



Freshwater Drum



Channel Catfish



Bluegill



Smallmouth Bass



White Crappie

So if the walleye or pike bite are on the slower side, give Keyhole’s other fish a try. These other fish bite throughout the day and are also excellent table fare.



Yellow Perch and Freshwater Drum

Habitat Projects in the Sheridan Region *Travis Cundy*

Piney Creek Pratt and Ferris #1 Diversion Fish Passage

A habitat trust fund grant was secured to help the Apache Foundation complete a fish ladder and drum screen at the Pratt and Ferris #1 dam and diversion on Piney Creek. Additional cost share was provided by the Wyoming Wildlife and Natural Resource Trust and U.S. Fish and Wildlife Service fish passage program. The fish ladder will reconnect about 30 contiguous miles of Piney and Clear creeks. The screen will limit fish entrainment (loss of fish) in the diversion ditch as well. Construction began in November 2015 and was completed in March 2016 (Figure 1).



Figure 1. The new fish ladder completed at the Pratt and Ferris #1 diversion on Piney Creek.

Tongue River Interstate Diversion Fish Passage

Funding was secured through the habitat trust fund to develop design alternatives for fish passage, diversion screening, and floater portage at the Interstate dam and diversion on the Tongue River. Western Water Consultants and Wild Fish Engineering were contracted to develop concept design alternatives. Upon completion, preferred alternatives will be identified with stakeholders. Additional funding to support the design phase was provided by the Nature Conservancy and the Bureau of Land Management. Developing passage at the dam will allow fish to move between 23 river miles downstream of the dam, between the dam and Tongue River Reservoir, and 26 miles of the Tongue River and 10 miles of Goose Creek upstream of the dam. Screening will limit fish entrainment in the 15 to 18 cfs diversion ditch. Project planning will continue in 2016.

Managing Beaver to Improve Riparian Corridors

Eleven beaver were live-trapped during spring in Sheridan County to alleviate nuisance situations. All were released in upper Middle Redwater Creek on the Black Hills National Forest (Figure 2), where colony establishment and dam-building is desired to raise streamside water tables and reduce the channel degradation occurring in segments of the watershed.



Figure 2. Recently released beaver in Middle Redwater Creek.

“From the Bighorns to the Black Hills”

Golden Trout *Andrew Nikirk*



Golden trout from Elephanthead.



Map showing the location of Elephanthead and Myrtle lakes.

The name golden trout conjures up images of pristine, remote, wilderness, spectacular, sore knees and an aching back. After all, to get to where golden trout live, a long arduous journey is often required.

Golden trout are native to the Kern River watershed in California's Sierra Nevada mountain range, more specifically the Kern Plateau. From Alaska to Mexico, the sea-run coastal rainbow inhabited most mountain streams, including the Kern watershed. Approximately 20,000 to 30,000 years ago, tectonic movement, volcanoes, glaciations, and erosion created the Kern Plateau, but they also created barriers such as waterfalls and hanging valleys (an abrupt change in elevation at a valley's outlet). Isolated, the sea-run rainbow wasn't able to be a migrating fish and these isolated rainbow trout in the Kern watershed evolved into the subspecies we know today as the golden trout.

While golden trout are not native to the Cowboy State, they have had a pretty unique history within our borders and other Rocky Mountain states. Golden trout eggs from California were first brought to Cook Lake (Sublette County) in 1920 by U.S. Forest Service personnel. The stocking of eggs continued through 1925 with additional stockings in 1929 and 1932. Once the Cook Lake fishery was established, it served as the brood stock for Wyoming, providing eggs for Wyoming and other Rocky Mountain states from 1936 through 1954. In 1955, Cook Lake was abandoned in favor of Surprise Lake (Sublette County). Surprise Lake was originally stocked in 1949 and was our brood source from 1955 through 1993.

Unlike captive brood stocks, collecting eggs from wild sources like Surprise Lake is often a very difficult task. Personnel and equipment have to be packed in (hiking, horses, or helicopters) several miles. Personnel then have to capture the fish and hold them in pens until they are ready to spawn. All the while camping and living in the wilderness, battling "mother-nature" for several days or weeks.

In 1988, a very large fire (same year as the Yellowstone fire) burned hot and long in the upper Surprise Lake drainage. In the years to follow, golden trout egg collection suffered and was eventually abandoned. The aftermath of the fire contributed heavy sediment and debris loads to the lake and the inlet stream. Natural reproduction decreased significantly and genetic integrity in the remaining population became compromised (i.e., fewer individuals equals less genetic variability).

Other attempts to create a wild brood stock failed at three other waters, in the mid to late 90s due to genetics and logistics. During this time, golden trout were still stocked and the eggs came from Grave Creek Lakes (Fremont County)



Golden trout from Myrtle Lake.

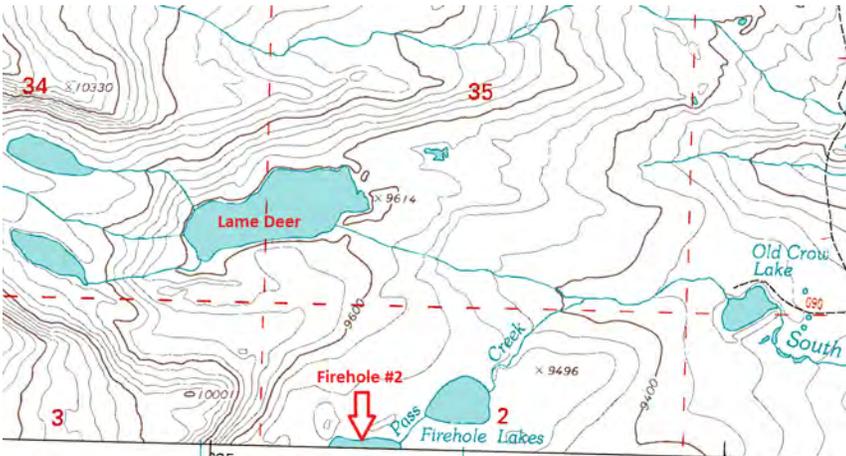
Golden Trout continued...

however, genetic analysis found these fish to be less than 100% pure.

Rather than continue with trying to collect eggs from the wild, a rare opportunity presented itself, albeit, in an unanticipated way. In 2005, a batch of fish at the Story Hatchery tested positive for whirling disease. Whirling disease cannot be transmitted from fish to egg and because of this, Story Hatchery was revamped from a production facility (a facility that grows fish up to size and stocks them out) to a brood stock facility (a facility that spawns the broods and provides eggs to other facilities to raise and stock). Story's water supply very closely mimics the spawning temperatures and timing of spawning golden trout in the wild. In 2007, golden trout eggs from Sylvan Lake, Montana were shipped to Story and in 2009, the Story Hatchery successfully spawned captive golden trout. By 2010, now three years old, Story was "rocking and rollin" with this new captive stock. Currently, Story meets all of Wyoming's requests for golden trout and ships excess eggs to Colorado, Utah, Idaho, Montana, Washington, and California.



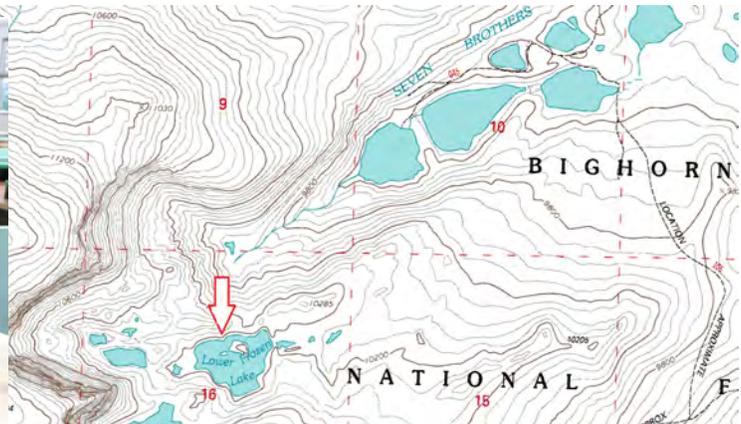
The Wyoming Game and Fish Department manages 133 high, alpine lakes for golden trout. Most of our golden trout waters are in the Wind River mountains (Lander and Pine-dale regions), with others in the Absaroka, Snowy, and Bighorn mountains (Laramie, Cody, and Sheridan regions). In the Cloud Peak Wilderness, on the Cody side (west side) of the Bighorns, there are eleven waters with golden trout and on the Sheridan side (east side) there are four waters with goldens; Elephanthead, Myrtle, Firehole #2, and Frozen #1. Access to these lakes are often difficult but ultimately rewarding; not only for the beauty of the fish themselves, but the locations in which they're found. Good luck and stay safe in the Cloud Peak Wilderness.



Map showing the location of Firehole Lake #2.



Story Hatchery personnel spawning golden trout.



Map showing the location of Frozen Lake #1.

"From the Bighorns to the Black Hills"

Big Fish Board 2015!!

Willow Park Reservoir, tiger trout



Copper Creek, brook trout

Sibley Reservoir, brown trout



Keyhole, walleye



Muddy Guard Reservoir #1, Snake River cutthroat



Keyhole, channel catfish



Tie Hack Reservoir, brown trout



Twin Lakes Reservoir, lake trout



Sand Creek, brown trout



Clear Creek, brook trout



High Tech Fish Sampling Comes To the Bighorns Bill Bradshaw

Yellowstone Cutthroat (YSC) is the only trout native to the waters flowing off the Bighorn Mountains. We've estimated they once occupied some 250 miles of the Tongue, Goose Creek, and Little Bighorn drainages, and the historical record is clear; there were some nice fish back then and a lot of them! Sergeant George Howard was a scout with General Crook's 1876 campaign and wrote of catching YSC up to 3 pounds while camped near Sheridan, and Captain John Bourke of the same campaign noted that probably more than 15,000 trout helped feed the troops during the three weeks they were in the area. But things have changed.

Beginning in the late 1890s, introduced Brook, Brown, and Rainbow Trout, and habitat changes spelled doom for most YSC in the Sheridan area. Today there only a handful of small, isolated, wild populations representing what was once here. These fish are beautiful, but owing to small isolated gene pools, nearby or intermingling nonnative trout, and possible catastrophic wildfire or floods, we fear they may not persist over the long term.

To help keep them on the landscape in their natural habitats, we've undertaken several projects over recent years to remove nonnative trout. This eliminates predation and competition and gives the YSC a better shot at survival. After we think we've removed the nonnative trout, we electrofish to make sure we've gotten them all. But it's easy to miss a few fish where there is a lot of brush, root wads, or deep undercut banks, especially small ones. And this is where the high tech comes in.

Last summer we used environmental DNA (eDNA) sampling to help make sure we really did remove all the nonnative trout where we are trying to conserve a native YSC population. I'm with you; my initial reaction was "what the heck is eDNA"? Well, it turns out it is an incredibly sensitive way to determine if small numbers of a species are present, say perhaps a few individuals missed by electrofishing, for example. Remember, at least in theory, it only takes two. So it's important to know if there are nonnatives that might begin reproducing down the road.

Basically, about a gallon of water is pumped through a micro filter small enough to collect any DNA in the water upstream of the sample location. The DNA could be from any species upstream of the sample, including invertebrates, mammals..., or fish. The DNA is analyzed for unique DNA "signatures" and when detected, the signature tells us the species in question is present upstream of the sample location. Sampling eDNA from multiple locations then lets us identify the area where the few individuals were missed by electrofishing.



Bill Bradshaw collecting water samples for eDNA testing.



A nice Yellowstone cutthroat trout from Pumpkin Creek in the Bighorn Mountains.

Where we could easily miss a dozen small fish when electrofishing over a half-mile, eDNA sampling is very likely to detect the presence of those same 12 fish. Then we can focus additional removal effort on that small stream section.

Last summer it was used on Elkhorn Creek to ensure that Brook and Brown Trout were completely removed by rotenone treatments and that only YSC remained. The results? It appears the YSC now have a home of their own.



“From the Bighorns to the Black Hills”

Tiger Muskie in Wyoming

Tiger muskie are a sterile hybrid between a male northern pike (*Esox lucius*) and a female muskellunge (*Esox masquinongy*). Wyoming depends on other states in order to stock cool and warmwater fish like walleye, catfish, and tiger muskie. Tiger muskie were first brought to Wyoming in 1985 and stocked in Grayrocks Reservoir. Tiger muskie were stocked periodically throughout Wyoming among several reservoirs through 2006. From 2007 through 2011, a nationwide moratorium prohibiting fish stocking of fish from sources east of the Mississippi River, was enacted to prevent the spread of VHS (viral hemorrhagic septicemia), so Wyoming’s source of tiger muskie disappeared.



A 6 to 7 inch muskie stocked in October, 2012 at Healy.

In 2012, clean brood stock sources were secured in Colorado and Nebraska, and in October 2012, tiger muskie were stocked once again. Currently, several western states stock tiger muskie including Washington, Colorado, New Mexico, Utah, Idaho, Montana, and Wyoming to name a few. In Wyoming, twelve waters have been recently stocked with these sharp-toothed critters and in the Sheridan Region there are six; LAK Reservoir, Healy Reservoir, Gillette Fishing Lake, Buffalo Wetlands Pond, Kleenburn Ponds, and Ranchester City Pond.



View of a tiger muskie with an underwater camera.

Tiger muskies are stocked in the Sheridan Region for a few different reasons. One, we’re hoping they’ll act as a “biological control” over undesirable or stunted fish species (e.g., small perch and numerous suckers in Healy Reservoir). Two, if they do as we hope, they’ll provide a “trophy component” to the fishery (e.g., 38 inch tiger muskie have already been reported in Healy Reservoir), and three, because they are a sterile hybrid, we don’t have to worry about them over populating, we can control their numbers by how many we stock.

For Healy Reservoir, tiger muskie stocking started in 2012 in hopes they would prey upon abundant populations of yellow perch and white suckers. Our goal is that they will thin the perch population enough that we’ll see an improvement in size and condition of the remaining fish. From sampling conducted this last spring it appears that tiger muskie are having an impact. For the first time ever, we caught zero white suckers in our nets. Have all the suckers disappeared, likely not, but it’s a pretty good indicator that muskie are impacting the sucker population. For yellow perch, our CPUE (number of fish we caught per hour) was under 5 fish/hour, the second lowest since 2005. While we haven’t seen an increase in perch length or condition quite yet, muskie appear to be influencing this population as well.

Interest in angling for tiger muskie has grown as much or more than the muskies themselves. Prior to muskie introduction in Healy, we would see very few open water anglers. Now that muskie are approaching 40 inches and 15 pounds, Healy is quickly becoming a destination fishery. Anglers are reminded that the limit on tiger muskie is three (3) fish and all have to be 30 inches or greater to

harvest. Stay tuned for updates on tiger muskie in Healy Reservoir and our other regional waters in future newsletters.



Jared, Jackson, and Haleigh Smith with an 8 pound tiger muskie from Healy Reservoir.



Jared and Jackson Smith with an impressive 38 inch, 11 pound muskie.

Sheridan Region Newsletter

AIS Program Update *Mike Locatelli*

As the 2016 watercraft season approaches, we would like to give you an update on the Aquatic Invasive Species (AIS) program. Check stations will remain at borders, inspecting incoming watercraft traffic on I-90 at the Sheridan Port of Entry and at the Northeast Wyoming Welcome Center near Beulah April 30th - September 30th. An inspector will be stationed at Keyhole Reservoir and we will occasionally conduct inspections at Lake DeSmet on the weekends. We are looking forward to another successful season in the Sheridan Region and welcome your thoughts at outreach events such as Ag and Natural Resources Expo in Gillette, Third Thursday street fairs and others. However, with the continued threat of AIS moving closer to our borders we want you to be aware of a few changes in 2016.

Changes to expect in 2016:

- With zebra mussels now in Lewis and Clark Reservoir (SD/NE) and Angostura Reservoir suspect for mussel veligers, we want to remind boaters visiting out-of-state waters to make sure their boat is **Drain, Clean and Dry** after leaving the water and that they are required to have their boat inspected before launching in Wyoming waters.
- We will no longer be conducting inspections at the Sundance POE/Rest Area, the check station will now be located at the Northeast Wyoming Welcome Center near Beulah. The Welcome Center is located 16 miles east of Sundance on Interstate 90 (exit 199).
- The Sheridan Port Of Entry check station will be open Thursday – Sunday (7:00am-7:00pm) each week. Boaters needing an inspection from Monday through Wednesday may come to the Sheridan Regional Office from 8:00am to 5:00pm.

During 2015, over 47,000 watercraft inspections were conducted statewide, of which 4,055 were high risk; requiring a more thorough inspection. This led to 1,298 boats being decontaminated with hot water to kill and remove all potential AIS. The Sheridan region conducted 4,404 watercraft inspections and performed 52 decontaminations. Wyoming has seen inspection rates increase throughout the state over the past 3 years and we would like to remind boaters to purchase their 2016 AIS Decal prior to launching. Decals can be purchased at any regional WY Game & Fish Department office and more information can be found at wgfd.wyo.gov/AIS.

Another major aspect of the AIS Program is sampling waters for the presence of AIS. Plankton tow sampling for larval mussels (veligers) at Keyhole Reservoir and Lake DeSmet were conducted by the Game and Fish in July and October of 2015. All samples from these waters were negative indicating no presence of mussels.



AIS technician decontaminating a boat at the Sundance Port of Entry.



Mussels removed from a vessel at the Sundance Port of Entry. Despite being small, they can cause irreparable damage.

We would like to remind boaters in the Sheridan region that zebra and quagga mussels are not the only AIS of concern to our waters. Lake DeSmet and Keyhole Reservoir has been confirmed to have curly pondweed, an invasive plant that has been spreading to downstream waters. Always remember to **Drain, Clean, and Dry** watercrafts and all equipment after every boating trip to avoid spreading this invasive plant around the region. If you see any suspicious plants or animal on your equipment or notice something while you are enjoying Wyoming's outdoors that you think may be invasive, please let us know. You can report a sighting at 1-877-WGFD-AIS or ReportAIS@wyo.gov.

Boaters don't be shy, come say hello to our friendly inspectors at any of our locations, tell them about your day on the water and get a quick inspection! Thank you for your help in protecting Wyoming waters. From all of us in the AIS program, have a fun and safe 2016 boating season!



WYOMING GAME AND FISH DEPARTMENT—“CONSERVING WILDLIFE-SERVING PEOPLE”

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

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Important Date to Remember

June 4, 2016

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



Paul Mavrakis: Fisheries Management



Upcoming Work for 2016

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 in the Sheridan Region. Below is a list of projects upcoming for the 2016 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, Tie Hack, and Willow Park, and Weston reservoirs.
- Sampling on North Tongue, South Tongue, Middle Fork Powder rivers, Copper, Bull, Lake, Lick and Wagonbox creeks.



Bill Bradshaw: Fisheries Management



Mike Locatelli: AIS Program



Travis Cundy:
Aquatics Habitat Program



Andrew Nikirk: Fisheries Management