Several new fishing regulations have gone into effect for 2015. These changes came about because of action by the Wyoming Game and Fish Commission last fall following a series of public meetings.

Of interest to anglers and live baitfish dealers is the change allowing importation of baitfish into Wyoming from approved commercial hatcheries. This new regulation allows those holding a commercial hatchery license or a live bait dealer license to import fathead minnows from Game and Fish approved commercial sources outside the State of Wyoming. This regulation was changed specifically to improve the live baitfish supply for those anglers that prefer to use live baitfish.

Other changes of note include allowing the use of corn for bait and the use of artificial lighting devices while fishing. This regulation continues to prohibit the use of artificial light when spear-gunning for game fish.

The new fishing regulation booklet listing all of the changes is available on the Game and Fish website wgfd.wyo.gov. Printed versions of the booklet can be found at Game and Fish regional offices or any other license selling agent.

Improved Access at Kleenburn Ponds  Paul Mavrakis

A new fishing pier that was designed for all anglers, regardless of mobility issues, is now available at Kleenburn Ponds. The pier was designed with low railings to allow people in wheelchairs to comfortably fish. The project was completed in partnership with RENEW, Sheridan County, Generation X Construction and Wyoming Game and Fish. Kleenburn is a Sheridan County Park with walking paths, bathroom and crude boat ramp. In addition to abundant largemouth bass, anglers can fish for crappie, channel catfish, rainbow trout and tiger muskie.
If you’ve fished Keyhole Reservoir in recent years you have probably hooked onto a northern pike; whether you meant to or not. Full or nearly full water levels the last several years has lead to a phenomenon that we call “the new reservoir effect”. As the water level rose from 2007 thru 2012 it inundated what once was terrestrial habitat (from years of lower water and drought). This caused an increase in overall productivity for all Keyhole fishes. And for the pike it meant an explosion!! The increase in nutrients and subsequent increase in food and habitat availability has created the highest population of northern pike ever in Keyhole.

Historically, northern pike were stocked on an annual basis and these fish came from Garrison National Fish Hatchery in Pick City, North Dakota. The purpose of pike is to provide anglers with a “trophy” opportunity (30 inch minimum size limit to harvest), something unique that can only be caught at Keyhole, and finally, a sizeable fish that will hopefully prey upon the massive population of common carp. Our sampling, for years, only captured a handful of northern pike. We knew pike were in the reservoir, but they weren’t present in very high numbers. Natural reproduction was limited and stocking success was fairly low for many years. However, in 2012 the water topped Keyhole spillway for the third time in it’s history. With much more habitat available, coupled with stocking 150,000 fingerlings, we soon realized that the northern finally had the opportunity to flourish.

Northern pike have done so well in recent years that we have cancelled stocking for the foreseeable future. Natural reproduction has been documented the last two years and with water levels remaining steady, natural reproduction will likely continue to be successful.

In the summers of 2012 and 2013, anglers reported catching many small pike. Our sampling gear confirmed this with only 10% of the sampled pike ≥ 30 inches. In 2014, anglers reported seeing more “keeper” sized northern and out of the 70 northern we put our hands on, 23% were ≥ 30 inches. A large percentage (57%) were between 25 and 29 inches and will be in the “keeper” range in the summer of 2015. A few anglers report (confirmed with photos) larger northern in the 15 to 18 pound range as well. If water levels and forage remain consistent, the northern population should remain robust.
When you’re out fishing your favorite water, have you ever wondered how or why it’s managed the way it is? Probably not, right? You’re just out there to enjoy the day and hopefully catch a fish or two. All of Wyoming’s fisheries however, fall into one of five (sometimes more) categories or concepts that we base our management around.

**Basic Yield (Put, Grow, and Take):** Management here is primarily directed towards providing fishing opportunity of a general nature. Waters under this concept are supported by stocking but a majority of the catch is comprised of fish which grow to catchable size in the wild. Examples would include walleye stocking in Keyhole, fingerling trout in Muddy Guard #1, or helicopter stocking of lakes in the Cloud Peak Wilderness.

**Put and Take:** Management here is primarily directed towards creating immediate fishing opportunities where little opportunity would normally exist. These waters are stocked with catchable sized trout (9-10 inch fish) that are large enough to immediately harvest. Examples would include community fisheries such as Sundance Fairgrounds Pond, Mavrakis Pond, or Kleenburn Ponds (stocked in late fall to provide a better ice-fishing opportunity).

**Unique Species/Opportunity:** Management here is primarily directed towards providing a sport fishery that is supported by one particular species. With this concept, these unique species aren’t ubiquitous, they are found in only a few waters. Examples would include golden trout in a handful of wilderness lakes, tiger muskie in Healy Reservoir, tiger trout in Willow Park Reservoir, or grayling in Weston Reservoir.

**Trophy Concept:** While most every water has the potential to grow a “trophy” sized fish, waters under this concept are directed towards providing anglers with the opportunity to catch a larger than average fish. Average fish in these waters are larger than the average fish in Basic Yield waters. Also, waters under this concept usually have regulations implemented to allow fish to grow to larger sizes. The only example from the Sheridan Region would be Muddy Guard Reservoir #1 with a regulation of flies and lures only and a creel limit of one fish that must be ≥ 20 inches.

**Wild Concept:** Management here is primarily directed towards providing anglers with the opportunity to catch a fish from a fishery that is totally supported by natural reproduction. Examples would include almost every stream in Wyoming with the exception of rivers below large dams and those where temperature or other physical factors limit trout production.

So as you’ve read through our different management concepts, you’ve also realized that many waters encompass more than one category. For instance, while we stock walleye annually in Keyhole Reservoir (Put, Grow, Take), the rest of the fish (crappie, smallmouth bass, yellow perch, channel catfish) are wild (after their initial introduction).

Brood culls (adult fish used for spawning in hatcheries) are stocked when they have surpassed their productive life in the hatcheries. These culls are usually stocked in community fisheries such as Gillette Fishing Lake, providing a unique species and a unique opportunity.

Just a few things for you to think about the next time you’re on your favorite water.

Wild brook trout from a Bighorn Mountain stream.
Aquatic Habitat Projects in the Sheridan Area  Travis Cundy

Several aquatic habitat projects are completed or ongoing in the Sheridan Region. These projects range from addressing fish passage and fish entrainment (loss of fish in irrigation ditches), to riparian and stream bank repair, to improving stream function. Project scope and costs range from simple and fairly inexpensive to larger scale and more expensive projects. WGFD often cost shares on projects. We are really fortunate to work with several great organizations, private landowners, and federal and state partners to fund most of these projects.

Fish Passage and Diversion Screening

Assistance was provided through the Department’s habitat trust fund to help the Apache Foundation rehabilitate the Dunlap dam and diversion on Piney Creek. The dam was replaced in 2013 with a bedform structure and rock ramp to provide upstream fish passage. In 2014, 200 willow live-stakes and 100 bare-root riparian shrubs were planted alongside the structure to stabilize streambanks and increase riparian plant canopy coverage (Figure 1). Plantings survival was over 90 percent in August. Grating with 0.5 inch gaps between the vertical bars was placed in front of the diversion headgate to trap debris and screen larger fish from entering the diversion ditch (Figure 2).

Managing Beaver to Improve Riparian Corridors

Beavers were trapped along Big Goose Creek in Sheridan County to address landowners concerns. They were released during fall in upper Middle Redwater Creek on the Black Hills National Forest (Figure 3), where additional colony establishment and dam-building is desired to raise streamside water tables and inhibit the channel down-cutting occurring in segments of the watershed. Periodic monitoring has occurred to determine if beaver colonies established and persisted as a result of past transplants. Three dam complexes occurred in the Blacktail Creek watershed that were being maintained by beaver (Figure 4).
Middle Fork Powder  Andrew Nikirk

Due to its remoteness, rough two-track access and steep trails, the Middle Fork Powder River west of Kaycee, Wyoming is often overlooked by most anglers. Fish in this river are subject to “Nature’s Fury” more often than other rivers within our region, with fires and flash floods. Despite this, the fish populations at Gordon Creek and Outlaw Cave are some of the healthiest/robust fish on the mountain.

Higher than average flows prevented us from generating population estimates at the Gordon Creek site in late August. The Gordon Creek site is the uppermost site on the Middle Fork and fish generally aren’t as big as in lower reaches but we did find rainbow trout ranging from 6 to 12 inches and brook trout ranging from 7 to 11 inches. Rainbow trout have rebounded nicely since the 2007 flash flood while the brook trout have yet to reach pre-flood numbers.

The fish at the Outlaw Cave section were some of the most impressive we have ever seen. The fire from 2006 and the flood in 2007 reduced the number of fish for several years through this section. Increased ash and silt coupled with very high flows resulted in the loss of a couple year classes. The populations have rebounded however, as both brown and rainbow trout numbers have doubled since 2010.

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<th>Number Collected</th>
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<td>Outlaw Cave</td>
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<tr>
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<table>
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</table>

If you are up for a hike, you’ll be rewarded with some of the best trout fishing in Northeast Wyoming! For directions on how to get to the Middle Fork Powder River, see our interactive Fishing Guide on the WGFD website at: http://wgfd.wyo.gov/web2011/fishing-1000428.aspx
Great Plains Toads
During the summers of 2013 and 2014, the Wyoming Game and Fish Department conducted surveys for reptiles and amphibians throughout the Sheridan region to learn more about their distributions, abundances, and habitats. One of the exciting finds in 2014 was the observation of Great Plains Toads! Previous to these surveys, we only had a handful of observations of this species across the state. However, in 2014, we recorded Great Plains Toads at over 30 different locations throughout the Sheridan region, likely representing over 30 different populations. Two of these locations were hand-caught adult toads, but the majority of these observations were locations where we heard calling male toads during their breeding season. In early summer, adult male toads and frogs gather at breeding sites (aquatic areas) and call at night to attract females. The call of a Great Plains Toad has been likened to the sound of a high-pitched jack hammer. It is a loud, long, metallic trill lasting from 5 to 50 seconds. Great Plains Toads generally breed after heavy rains or high irrigation runoff and target breeding areas with temporary water. This pattern of breeding after heavy rainfall and specializing in temporary water sources is very similar to the habits of the Plains Spadefoot, another species of toad in eastern Wyoming. If you hear any of these loud toad calls this spring or summer after a heavy rain, please let our state herpetologist (Charlotte Snoberger, contact info on page 10) know!

Chytrid Fungus
During amphibian surveys in 2013 and 2014, WGFD tested for chytrid fungus on almost all amphibian captures. Chytrid is an aquatic fungus that causes an infectious disease in amphibians. Over the past several decades, chytrid fungus has caused declines or extinctions in hundreds of species of amphibians, especially frog species. Chytrid fungus infects amphibian skin, impairing basic functions such as respiration and thermoregulation. At high infection levels, this can kill a frog, and individuals with low-level infections can act as pathogen reservoirs. Since chytrid fungus thrives best at cooler temperatures, species that live or breed in permanent water at higher elevations appear to be the most susceptible. The WGFD, as well as other agencies, routinely tests for chytrid fungus in amphibians across the state. This test consists of swabbing the belly and legs of an amphibian with a cotton swab, storing the sample in ethanol, and sending it to a lab for analysis. Fortunately, WGFD did not have any amphibians test positive for chytrid fungus during surveys in the Sheridan region in 2013 or 2014. Unfortunately, chytrid fungus has been found throughout Wyoming, including the Powder River and Belle Fourche drainages. It was also recently documented in the Bighorn Mountains. Much is unknown about chytrid fungus, but we do know that the pathogen is spread through human actions, including directly introducing amphibians to new environments (e.g., using larval salamanders as bait) and transporting spores on wet objects such as waders. You can help stop the spread of chytrid fungus by drying or disinfecting equipment between water bodies or drainages. If you see what appears to be a sick amphibian, that may possibly have chytrid fungus, please let our state herpetologist (Charlotte Snoberger) know!
AIS Program Update  Gregor Downey

As the 2015 boating season draws near, we would like to give you an update on what has been happening in the Aquatic Invasive Species (AIS) program. Check stations remained at the borders in 2014, inspecting incoming boat traffic on I-90 at the Sheridan Port of Entry and the Sundance Rest Area. A roving waters technician inspected boats lakeside at both Keyhole Reservoir and Lake DeSmet on the weekends. The Sheridan region saw increased program satisfaction from the boating public as we gained more feedback through outreach events such as Third Thursday street fairs in Sheridan and boater appreciation raffle surveys. We are looking forward to another successful season; however, due to the threat of AIS moving closer to our borders, a few changes will be made in 2015.

Changes to expect in 2015

- With Lewis and Clark Reservoir and Angostura Reservoir in South Dakota now positive for mussel veligers, we are increasing vigilance in Northeast Wyoming. Boaters can expect to see an AIS technician at Keyhole Reservoir 7 days a week during the 2015 season.
- Due to construction and renovations at the Sundance POE/Rest Area, the check station will be moved to the Wyoming Visitor & Information Center. The Visitor Center is located 16 miles east of Sundance on I-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 Monday through Wednesday may come to the Sheridan Regional Office (8am to 5pm; Mon-Fri).

During 2014, over 43,000 boats were inspected statewide, of which 2,087 were high risk; requiring a more thorough inspection. This led to 880 boats being decontaminated with hot water to kill and remove all potential AIS. The Sheridan Region conducted 3,477 watercraft inspections and performed 35 decontaminations. A total of 10 mussel encrusted boats were intercepted at the borders and decontaminated; three of these were intercepted at the Sundance check station.

Another major aspect of the AIS Program is sampling and monitoring waters for the presence of AIS. Plankton tow sampling for larval mussels (veligers) at Keyhole Reservoir, Lake DeSmet, Tie Hack Reservoir, and Sibley Lake were conducted by Game and Fish in July and October of 2014. All samples from these waters were negative, indicating no presence of mussels.

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 has been confirmed to have curly pondweed, an invasive plant that has been spreading to downstream waters. Also remember to Drain, Clean, & Dry all boats and equipment after every boating trip to avoid spreading this invasive plant around the region. If you see any suspicious plants or animals 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@wy.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 2015 boating season!
Lake DeSmet is a very popular fishery located in the Sheridan Region. Lake DeSmet is stocked annually by the Wyoming Game and Fish Department’s fish hatcheries, receiving both rainbow trout and Yellowstone cutthroat trout. In 2015, it is scheduled to receive a total of 100,000 rainbow trout and 50,000 Yellowstone cutthroat trout, 7-9 inches in length. But, where do the fish come from, and how do they get there?

First, we have to start two years ago, when the planning process began for 2015. After evaluation of years of data collected by fisheries biologists, the biologists request fish to be stocked in Lake DeSmet, based on this information. That request, along with fish requests for other waters throughout the state are sent to the fish culture section in a database. All the hatcheries select fish from those requests based on whether they can provide the number, size, species, and stocking dates that are required. Once a water, (in this case Lake DeSmet), is picked up by a hatchery, that hatchery then has to start the process of acquiring the fish. Fish take time to grow, and the process of scheduling the fish takes time, and that’s why the process is started two years in advance of the actual stocking.

Fish can be acquired by a hatchery in two ways--either by eggs or by a transfer from another hatchery. Some hatcheries acquire eggs and others such as Wigwam (near Tensleep) request a transfer of small fish to complete the stocking request.

The rainbow trout for DeSmet came from eggs from the fall rainbow brood stock at Boulder Rearing Station near Pinedale. Eggs were manually removed from female fish and fertilized with males. These eggs were then shipped in coolers of water to incubators to develop. Once the eggs develop to the “eyed” stage (eyes of the fish embryo can be seen inside the egg) they were shipped to Speas hatchery (near Casper). The eggs were hatched, and the fish will be kept and cared for until they reach 8-9” in the fall. Some of the eggs were also hatched to provide a fish transfer to Wigwam to provide the rest of the rainbow trout for Lake DeSmet in 2015.

The Yellowstone cutthroat for DeSmet come from the brood stock located at Tensleep Fish Hatchery. Eggs are collected in the same manner as the rainbow trout eggs and placed in the incubator at Tensleep. The eggs are hatched and the fish are cared for until they reach a size of 6-7” in the fall.

Care of the fish for Lake DeSmet, wherever they are raised, includes a great deal of work. The fish are sampled periodically to determine their size in order to calculate how much to feed the fish and to determine how much space they need to grow. As the fish grow, they require more space, so they are moved into more tanks as they grow. During the rearing process, water quality is monitored, tanks are cleaned daily, fish are fed daily, and all data is recorded. Accurate records are vital in a fish hatchery--they help with future planning by providing information on past survival and growth.

After several months at each hatchery, the fish will finally reach the desired size to stock in DeSmet. Once they are ready, the fish will be loaded onto a large truck for transport to the lake. Water is pumped onto the truck, filling two large tanks capable of holding 1,200 gallons of water each. The tanks have aerators and compressed oxygen to keep the water suitable for fish transport. At Speas, fish are loaded onto the truck with a fish pump. The fish pump sucks the fish out of the rearing unit and into the truck tank. At Wigwam and Tensleep, the fish are netted out of the rearing units by hand, and loaded into the truck for transport.
Stocking Spotlight Cont.  Jeff Stafford, Wigwam

The fish distribution trucks have scales on them that weigh the fish once they are on the truck, so we know how many fish have been loaded. During transportation, the fish are checked periodically and oxygen levels in the tanks are monitored. Once the driver arrives at Desmet, the fish are checked one last time to make sure they are okay. Water temperature and pH are also checked in the lake prior to stocking to make sure conditions are favorable for stocking. If everything is okay, the fish are released into the lake and monitored for a few minutes before the driver returns home.

As you can see, a lot of planning and cooperation between fisheries biologists and the fish hatcheries is required to provide fish for a lake like Desmet. This is only a condensed overview of the process of what it takes to get fish from egg to stocking. The hard work by all involved is worth it, and the reward is a great fishery and happy anglers! Go wet a line at Lake DeSmet and take advantage of the resource provided by the Wyoming Game and Fish Department!

Wyoming’s “Long Distance Runners”  Bill Bradshaw

It’s a fair guess that when people think of runners, they probably don’t think of fish first. And “long distance runners” is more likely to conjure up images of marathon runners, than some kind of fish. But of course fish do “run” as anybody familiar with salmon knows. They have an amazing ability to travel long distances back to the stream where they were hatched, and these journeys are the famous salmon “runs” that often involve travelling hundreds of miles.

Here in NE Wyoming we have our own version of the river runners. Each spring, when flows rise, a fish migration rivaling that of the salmon, begins in the Powder River. Every year, hundreds if not thousands of shovelnose sturgeon ascend the Powder into Wyoming. Some of these fish start their journey from as far downstream as the confluence of the Powder and Yellowstone rivers and some probably come from even further downstream in the Yellowstone itself. For those fish to even get to Wyoming, they must travel some 230 river miles. But as impressive as that is, that’s not the end of it.

Landowners, biologists, and some anglers have known for years that sturgeon don’t stop when they get to the state line, and will continue upstream to Clear Creek, Crazy Woman Creek, and sometimes as far as I-90. The sturgeon that makes it to I-90 has now travelled more than 300 miles if it started in the lower Powder. But even that isn’t enough for some of them.

Sampling in 2014 upstream of I-90 confirmed that some sturgeon will go almost to Sussex. That’s another 80 miles above I-90. If these fish started at the mouth of the Powder, they would have migrated close to 400 miles to get to their spawning grounds. Now that’s quite a run!
Upcoming Work for 2015

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 2015 field season. Stay tuned for updates on these waters in our next newsletter.  Happy Fishing!

- Sampling on Keyhole, DeSmet, Healy, Tie Hack, Upper Twin Lakes, Park, MW, LAK, Geier, Muddy Guard #1 and #2, and Kearny reservoirs.
- Sampling on Sand Creek, Owen Creek, Lake Creek, Little Tongue, Bull Creek, North Fork Crazy Woman, Little Bighorn, Lower Clear Creek, Clear Creek in Buffalo.