



Wyoming Game and Fish Department

Laramie Region Angler Newsletter

2019

Inside this issue:

Laramie River at the Jelm 2

What's a HCB? 3

Fish Regulation Changes 4

Aquatic Invasive Species News 5

Tips to catch Largemouth 6

Crow Creek Revival 7

Trout passage project 8

Big fish caught in the Laramie Region 9

Fish Management in the Laramie Region

Welcome to the 2019 Laramie Region Angler Newsletter! We had another great year managing the diverse aquatic resources that Southeast Wyoming supports. This letter highlights some events from 2019. The Laramie Region provides many angling opportunities, from trout in alpine waters to crappie in prairie waters—make sure to get out this year to fish a new water or catch a new species. As always, please feel free to contact us with any comments or questions about the aquatic resources in southeast Wyoming. Your input is important to us as we manage these resources for you, the people of Wyoming. You'll find all of our contact info on the last page of this newsletter. Thanks for a great 2019 and happy fishing in 2020!



Laramie Region Aquatics Team

Laramie River at the Jelm Wildlife Habitat Management Area

Access to the Laramie River at the Jelm Wildlife Habitat Management Area (WHMA) is just south of Woods Landing, WY. The Jelm WHMA comprises 640 acres of Game and Fish Commission owned lands, and 140 acres of public fishing easements across private property. There are two parking areas, one of which is developed with an outhouse. The Jelm WHMA was purchased primarily as winter range for mule deer. The additional fishing easements provide public access to two miles of the Laramie River on private lands for wade and float anglers. The WHMA provides hunting access and fishing access year round and the camping limit is five days.

The Badger Creek Fire burned about 21,000 acres from June 10 through July 15, 2018. This fire was located within drainages that are tributaries to the Laramie River, upstream of Woods Landing. The land burned was primarily composed of lodgepole pine forest, much of which was dead from the mountain pine beetle epidemic. The fire burned in a mosaic pattern, with areas of moderate and high soil burn severities. In these areas, it is likely that increased rates of soil erosion and sediment delivery to stream channels will occur in the first 3-5 years following the fire, particularly on steep slopes. Such an event occurred in mid-July 2018, as a precipitation event washed ash and debris into the Laramie River near the Jelm WHMA. The WGFD received several reports of dead fish following the event.

To evaluate the impacts of the Badger Creek Fire on the trout population, a population estimate was conducted in July 2019. The location was a 2.4-mile segment on the Laramie River within the Jelm WHMA and two electrofishing rafts were used to capture fish (see picture below). The last estimate occurred in 2014, and the population of Brown Trout ≥ 6 inches was 1,474 per mile, with a biomass of 762 pounds per mile. The estimate for Brown Trout in 2019 was 963 per mile, with a biomass of 600 pounds per mile. While the number of Brown Trout did decrease since 2014, this decrease is within the normal variability of a wild trout population; the impact of ash and debris flow from 2018 was not significant. The proportion of Brown Trout ≥ 12 inches was 48% and had not changed from 2014. The biomass still remains high within the Jelm WHMA, and is considered a Blue Ribbon fishery. Make sure to put this spot on your calendar to fish in 2020!



Hazardous Cyanobacterial Blooms (HCB)

Awareness of hazardous cyanobacterial blooms (HCB) has become more widespread across Wyoming in recent years, including waters within the Laramie Region. Hazardous cyanobacterial blooms occurred at Wheatland Reservoirs 1 and 3 in 2018, and Leazenby Lake, Saratoga Lake, Toltec Reservoir, and Wheatland Reservoirs 1 and 3 in 2019.

Hazardous cyanobacterial blooms are dense concentrations of cyanobacteria or blue-green algae that pose a health risk to humans, pets, livestock, and wildlife. Under normal conditions, cyanobacteria are present at low levels and play an important role in aquatic ecosystems. When blooms occur, cyanobacteria become visibly abundant and can look like grass clippings, blue-green scum, or spilled paint on the water surface. Harmful cyanobacterial blooms may also be suspended in the water column, and may make the water appear green or blue-green. Cyanobacteria can produce toxins and other irritants that can cause health effects such as rashes, fatigue, disorientation, and gastrointestinal illnesses. In extreme cases, toxins may lead to pet, livestock, or wildlife death. Anglers and other recreationists are urged to avoid bodily contact with water in areas where HCB advisories exist.

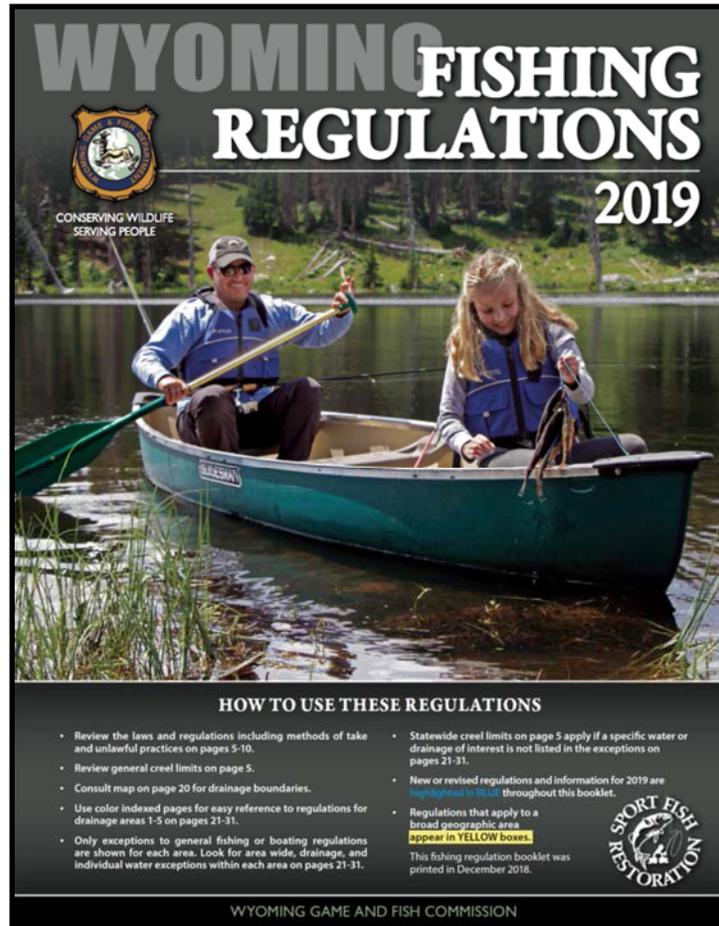
Other safety tips include:

- Do not ingest water from the bloom. Boiling, filtration, and/or other treatments will not remove toxins.
- Rinse fish with clean water and eat only the fillet portion.
- Avoid water spray from the bloom.
- Do not allow pets or livestock to drink water near the bloom, eat bloom material, or lick fur after contact.
- If people, pets, or livestock come into contact with a bloom, rinse off with clean water as soon as possible and contact a doctor or veterinarian.



If you suspect a HCB, it should be reported to the Department of Environmental Quality (DEQ) at 307-777-7501 or by clicking “submit a complaint” on the Report a Spill webpage: WyoSpills.org so DEQ can investigate. If the bloom consists of harmful cyanobacteria, DEQ will collect samples to determine if cyanotoxins and/or the amount of cyanobacteria are at unsafe levels. If unsafe levels are present, DEQ will notify the Wyoming Department of Health so an Advisory can be issued. The Advisory will be posted around the waterbody and include recommendations on how to keep people and animals safe. The DEQ will work with the Department of Health and the water management agency to monitor conditions until the bloom dissipates. Once a bloom has completely dissipated, the Wyoming Department of Health will lift the Advisory.

2019 Fish Regulation Changes



- Hawk Springs Reservoir has been added to the special winter ice fishing provision.
- Paddleboards, regardless of length, are exempt from the AIS decal provision, but the boater is required to have a lifejacket.
- No person shall possess live baitfish while fishing on any water where the use of live baitfish is prohibited.
- The Area 5 (Laramie and Casper Regions) limit for trout, **excluding brook trout**, is 6 for lakes and 3 for streams (no more than one shall exceed 16 inches). The total stream and lake combination shall be 6.
- The Area 5 limit for brook trout is 6 for lakes and 16 for streams. The total stream and lake combination shall be 16.
- The only exception to the brook trout limit is on the Pole Mountain District of the Medicine Bow-Routt National Forest (Crow, Dale, Horse, and Lodgepole Creeks). Within the National Forest, the brook trout limit is 6.

Area 5 Live Baitfish

The boundary for Location A has been moved downstream to Glendo Dam.

New waters within Location A where a holder of a valid seining license can seine, net, trap, or spear baitfish include Bump Sullivan Reservoir, Festo Lake, Hawk Springs Reservoir, Packers Lake, Rock Lake, Springer Reservoir, Wheatland Reservoir #1, and canals and ditches that are in the Interstate and Fort Laramie canal systems in Goshen County downstream from the Whalen Diversion on the North Platte River.

The designated wild caught live baitfish possession area for Location A is the North Platte River drainage below Glendo Dam, excluding all locations in the South Platte River drainage (including Cheyenne) and all locations in Albany County.

Laramie Region Aquatic Invasive Species News

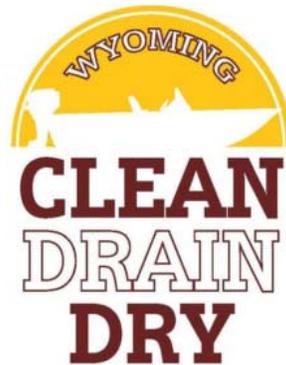
Brook Stickleback Research Project

Brook Stickleback (*Culaea inconstans*) are considered an AIS throughout Wyoming and are present in the Laramie region. They have small mouths with swollen lips, a lower jaw projecting beyond the upper jaw, and spines (2-7, usually 5) located in front of their dorsal fin. A few popular water bodies anglers may encounter Brook Stickleback in the region include Diamond Lake, Johnson Creek Pond, Saratoga Lake, Lower



Laramie River, Medicine Bow River, and the North Platte River. Brook Stickleback have been spread from one water body to another by bait bucket dumping, so live baitfish regulations have been implemented to prevent this from occurring. Research suggests that Brook Stickleback can negatively affect other fish species through competition for habitat, competition for benthic macroinvertebrate resources, and egg predation via predation. Information regarding their effects on native nongame fish species in Wyoming is lacking; therefore, the Wyoming Game and Fish Department recently funded a University of Wyoming graduate student to evaluate the potential threat posed by Brook Stickleback. The study will begin 2020 and the objectives of this study are to 1) Evaluate Brook Stickleback establishment and expansion in Wyoming; 2) Assess Brook Stickleback habitat use and diet; 3) Determine which native nongame fishes may be at risk from Brook Stickleback expansion.

Wyoming state law requires that any Brook Stickleback taken from legal seining, trapping, or netting must be killed immediately and shall not be possessed or transported. Please report any new sightings to your local AIS Specialist.



New Regulation and Inspection Reminder - The Laramie Aquatic Invasive Species (AIS) program reminds boaters of new regulations that came into effect in 2018. Wyoming state law, along with multiple neighboring states, requires that **all water holding compartments (bilge, ballast tanks, livewells, etc.) be drained and vegetation removed** upon leaving a water, and **all bilge and ballast plugs be removed** while in transport in Wyoming. The AIS program also reminds everyone that any conveyance being transported into the state of Wyoming is required to be inspected before launching on any water in the state between March 1st and November 30th. Boaters can be inspected at regional offices or [other inspection locations](#) when launching in Wyoming. This requirement is extended year-round if the conveyance was last used in any water infested with zebra and or quagga mussels. Please remember to stay vigilant and to clean, drain, and dry your watercraft after every use.

Big Fish and Big Rewards

The new WGFD Master Angler Program offers anglers an opportunity to be recognized for catching large fish from Wyoming waters. More information about this program can be found at <https://wgfd.wyo.gov/Fishing-and-Boating/Master-Angler>. Fishing has been great in Southeast Wyoming for the past few years and opportunities to catch many different species of large fish exist. Sloans Lake and Lake Absarraca, which are both located in the City of Cheyenne provide opportunities to catch Master Angler Largemouth Bass. The minimum length to qualify as a Master Angler Largemouth Bass is 16 inches. Even though this may seem like an exceptionally large fish, results from sampling in 2018 indicate that these two lakes are worth fishing.



Tips for catching Largemouth Bass

- ⇒ Fish shallow in the spring while fish are near shore spawning
- ⇒ Focus on complex habitat like fallen logs, steep banks, and aquatic vegetation
- ⇒ Use baits that mimic crayfish and minnows like sunfish and shiners

In June of 2018, nighttime electrofishing was completed on both lakes to monitor the Largemouth Bass populations. The take home message from this work is that both lakes have very healthy populations of Largemouth Bass! Multiple size classes of Largemouth Bass were present in each lake indicating that fish are successfully spawning and recruiting to the fishery. In addition, relative weights of Largemouth Bass were very high in both lakes. Relative weight is an index for fish condition and is simply a measurement of plumpness. The high relative weights observed in 2018 suggests that Largemouth Bass in these lakes are very plump and are obtaining enough energy to grow quickly. And large they are! Largemouth Bass up to 18 inches were collected from both lakes making these waters a great place to chase a Master Angler Largemouth Bass!



Crow Creek Revival

Efforts are underway in Cheyenne to polish hidden aquatic gems in the Capital City. Crow Creek Revival (CCR), a group of citizens, local non-profits, and federal, state, and local government, has been leading the charge to revitalize Crow Creek and Dry Creek within Cheyenne since early 2017. CCR has primarily been focused on planning restoration activities on Crow Creek from the Happy Jack Road crossing (Highway 210) downstream to Westland Road, a half-mile reach. Restoration designs are nearly complete, and the group has been extremely busy raising implementation funds and working through the permitting process.

Big changes to Crow Creek are coming in 2020. Currently, the stream flows through a narrow, constricted floodway and lacks sinuosity, or curves. CCR intends to widen the floodplain so that the stream can access this important habitat during high flows. Along with the widened floodway, CCR will increase sinuosity and create deeper pools. Woody debris will be used to enhance in-stream and floodplain habitats. Native vegetation, including shrubs, trees, and native grass, will be planted along the stream and floodplain corridor. Wetlands will be developed neighboring the stream to help filter stormwater and other inputs.

Crow Creek through Cheyenne is listed for several water quality impairments including sediment, E. coli, and selenium. The 2020 restoration and future efforts will help improve these water quality concerns by enhancing the sediment transport function of the stream and creating wetland areas for filtering.

Crow Creek is home to numerous native, non-game fish species including Common Shiner and Central Stoneroller. Deep pools, overhanging vegetation, and cleaner riffles will provide enhanced habitat for these and other aquatic organisms.

In future years, the City of Cheyenne, intends to extend the Greenway Trail System so that the public may more easily access the new gem of the Capital City, a restored Crow Creek. CCR partners include City of Cheyenne, Cheyenne Board of Public Utilities, Laramie County Conservation District, Wyoming Game and Fish Department, Wyoming Department of Environmental Quality, Curt Gowdy Chapter of Trout Unlimited, FE Warren Air Force Base, Microsoft, The Nature Conservancy, US Geological Survey, US Fish and Wildlife Service, Pathfinder Ranches, Holly Frontier, Trihydro, Laura Jane Musser Fund, and local citizens.



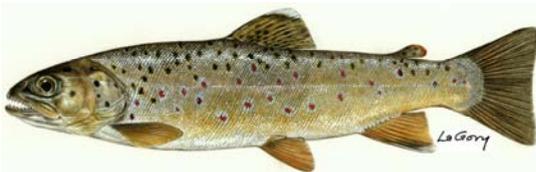
Design layout from Happy Jack Road downstream to Westland Road in Cheyenne. The green represents the expanded floodplain while the white curved lined represents the new channel alignment.

Improving Trout Passage on North Platte Tributaries

Big Creek is one of the larger tributaries to the upper North Platte River. The adequate flows and good habitat provide great potential for Rainbow and Brown Trout from the North Platte River to use this stream for spawning. Unfortunately an irrigation diversion, located about 11.5 miles upstream, was limiting trout from accessing a large portion of Big Creek. In the fall of 2017, a rock ramp was constructed on the downstream end of the irrigation diversion to improve fish passage. Fish ladders are types of passage structures that often make headlines and people are familiar with. Similarly to fish ladders, rock ramps are intended to allow passage around an obstruction. Unlike fish ladders that include a series of low steps similar in height and distance, rock ramps mimic a more natural series of falls and pools and are created by large boulders placed strategically. Each rock ramp structure is unique because boulder placement, shape, and size effect the overall function. Since it was unknown how well trout could actually use the ramp to move upstream, fisheries biologists conducted a study on Brown Trout movement in the fall of 2018.

Biologists used Passive Integrated Transponder (PIT) technology to study how successfully Brown Trout could pass the irrigation diversion. PIT tags, which have unique identifiers and are similar to chips placed in pets, were inserted in 147 Brown Trout downstream of the diversion. PIT readers were placed below and above the diversion structure to record the time a fish passed by each location. This allowed for tracking fish movement upstream and determining success at passing the barrier.

The results indicated that the new rock ramp improved fish passage for many sizes of Brown Trout. Tagged fish ranged in size between 7.6 and 21.7 inches and all sizes of fish used the rock ramp to pass the barrier. Flows were extremely low in the North Platte Drainage in 2018; even so, about 50% of the fish moving upstream successfully passed the diversion structure. These results are very exciting and indicate that connectivity was restored to the Big Creek system. With the addition of accessible spawning areas, trout within Big Creek and the North Platte River will continue to have sources of young fish to maintain the populations at high levels.





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

Laramie Regional Office
1212 South Adams St.
Laramie, WY 82070

Phone: 307-745-4046

2019 Master Angler Awards from the Laramie Region

Alsop Lake—cutthroat, rainbow trout

Diamond Lake—brook, cutthroat, rainbow trout

Grayrocks Reservoir—black crappie, channel catfish, freshwater drum, smallmouth bass, walleye

Hawk Springs Reservoir—black crappie, walleye, yellow perch

Lake Absarraca—sunfish

Lake Hattie—brown, rainbow trout

Lake Owen—brook trout

Packers Lake—largemouth bass, walleye

Sloans Lake—largemouth bass

Twin Buttes Lake—brown, cutthroat, rainbow trout

Wheatland #1—smallmouth bass, walleye, yellow perch

Wheatland #3—rainbow trout, walleye

We welcome all questions and comments on this newsletter or about the fisheries resources within the Laramie Region. Please feel free to contact us or send an email to:

Bobby.Compton@wyo.gov (Regional Fisheries Supervisor)

Steve.Gale@wyo.gov (Fisheries Biologist)

Chance.Kirkeeng@wyo.gov (Fisheries Biologist)

Christina.Barrineau@wyo.gov (Aquatic Habitat Biologist)

Joshua.Leonard@wyo.gov (AIS Specialist)

