

Conserving Wildlife  
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# Wyoming Game and Fish Department



## Lander Region Angler Newsletter

2019

### Fish Management in the Lander Region

Welcome to the 2019 Lander Region Angler Newsletter! We had another great year and inside this issue you'll find updates from our work in 2018. As always, please feel free to contact us with any comments or questions about the aquatic resources in the region. Your input is important to us as we manage these resources for you, the people of Wyoming. You'll find our contact information on the last page of this newsletter.

### Wind River Helicopter Stocking

Some backcountry campers may have woken early on the mornings of August 8 and 9 to the loud thumping of rotors overhead. Helicopter stocking of wilderness lakes in the Lander Region occurred on those days with 28 wilderness alpine lakes being stocked, and an additional 12 lakes were stocked on the Wind River Reservation.

Most wilderness lakes support wild, naturally reproducing fish populations and do not require periodic stocking. However, the lakes stocked in early August do not support natural reproduction and must be stocked to maintain these fisheries. Wilderness lakes are stocked every two to four years on a rotational basis around the state. Stocking of wilderness waters was historically done by horseback but helicopters have been used for decades and are a much more efficient means of planting fish in remote, roadless areas. Fish are loaded into a tank with eight separate cylinders that suspends beneath the helicopter. The pilot then takes off and travels to various waters, hovers over the selected lake, and dumps individual cylinders using controls in the cockpit. Multiple lakes can be stocked in one flight.

This year a total of 73,635 fish were released in the Region. Most were Golden Trout but Cutthroat, Rainbow, Brook, and Tiger trout were also stocked.



*Loading fish into stocking cylinders bound for wilderness lakes.*

## Louis Lake Trophy Lake Trout

A new trophy fishing opportunity currently exists near Lander. On July 3, 2018 the Wyoming Game and Fish Department (WGFD) captured high numbers of large lake trout in Louis Lake, which lies along the Loop Road in the Shoshone National Forest near Lander. Ninety-two percent of the captured Lake Trout were > 4 lbs, and 24% were > 10 lbs. The recent increase in Lake Trout size was likely caused by Kokanee Salmon stocking, which began in 2014. Kokanee are stocked to provide additional sport fishing opportunity, but are also a preferred food item for lake trout. The high numbers of Kokanee stocked in Louis Lake (between 10,000 and 30,000 annually from 2014 – 2017) created a new food source, and likely increased Lake Trout growth rates over the past 4 years. A downside to the increase in large Lake Trout may be a decrease in Splake (a hybrid between a male Brook Trout and a female Lake Trout), which have been stocked since the late 1970s and are popular with Lander area anglers. The Splake catch rate in gill nets decreased by 80% from 2015 to 2018. The effects of Lake Trout predation on stocked Kokanee are still unknown and will be evaluated further in September 2019.

Most of the trophy-sized Lake Trout were captured in the northeast portion of Louis Lake, near the beach and outlet stream. Others were captured near the inlet stream in the southwest area of the lake. Boat anglers have the most success catching Lake Trout, as the species prefers deeper water. Shore anglers may have better success fishing the north shore of Louis Lake (because the shoreline drops off quickly to deeper depths), or at night when Lake Trout move to shallower water to feed.

Fisheries biologist are interested in learning more about the age and growth of the large Lake Trout in Louis Lake. If an angler chooses to harvest a large Lake Trout from Louis Lake (> 24 inches), please bring the fish to the Lander Regional Office so that aging structures (i.e. otolith bones from the head) can be obtained. The heads of large harvested Lake Trout can also be frozen and brought in at a later date. Anglers are reminded that the daily creel and possession limit is six (6) Lake Trout, but only one (1) shall exceed twenty-four (24) inches.



*Top: Biologist Paul Gerrity with a 20+ pound Lake Trout.*



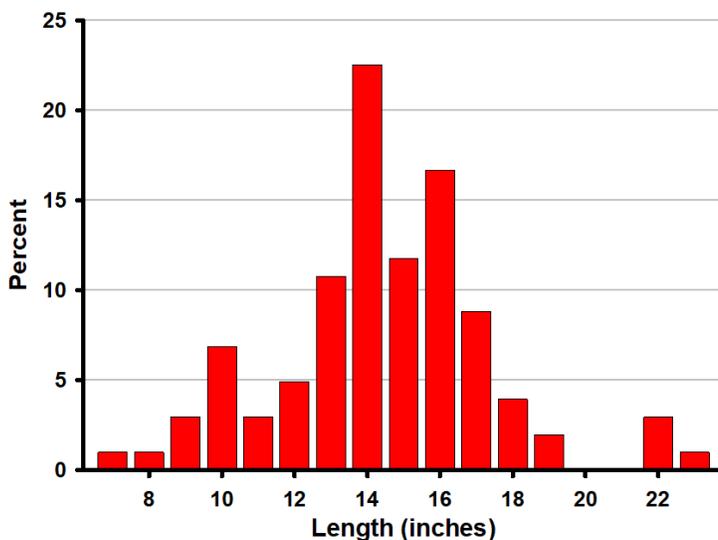
*Left: Fisheries Technicians Aaron Black and Colter Brown holding a couple 10+ pound Lake Trout.*

## Boysen Reservoir Walleye, Sauger, and Yellow Perch

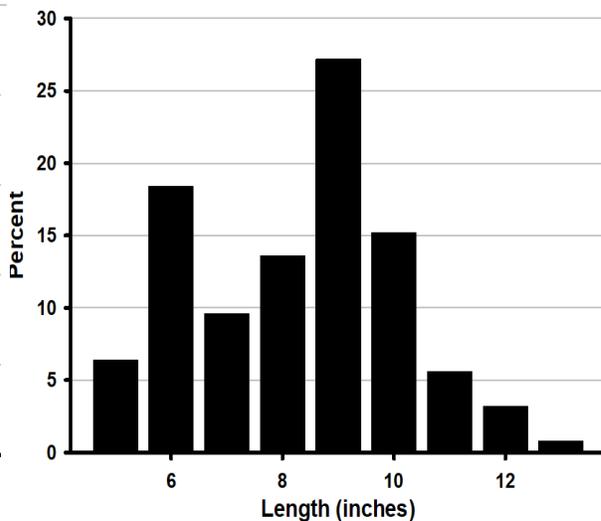
Sampling by WGFD fisheries biologists in 2018 showed that Boysen Reservoir continues to have healthy populations of Walleye, Sauger, and Yellow Perch. Similar to last year’s sampling, high numbers of Walleyes from the 2014 (age 4; 15 to 16 inches) and 2015 (age 3; 14 to 16 inches) year classes made up a large proportion of the population. Good numbers of age-2 Walleyes (12 to 14 inches) from the 2016 year-class were also captured.

2018 fall sampling yielded the highest Sauger catch rates since 2002, which was very encouraging. Sauger numbers crashed in the early 2000s, likely because of the extended drought and lack of successful natural reproduction. Most Saugers were young age-1 (8 to 10 inches) and age-2 (11 to 14 inches), so the future is bright for the population.

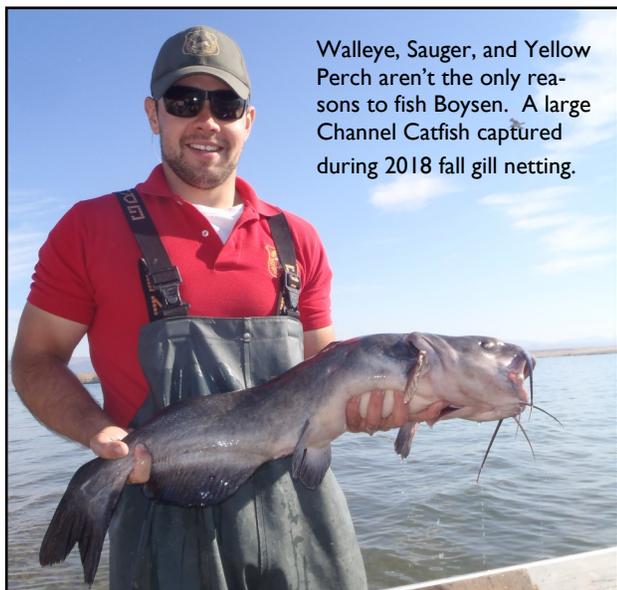
Good Yellow Perch numbers were captured for the third consecutive year, with length data showing a balanced population with multiple age classes. Fifty percent of the Yellow Perch were keeper-sized at 9 to 13 inches. The other 50% were younger, smaller fish at 5 to 8 inches, which bodes well for future fishing.



*Length frequency of Walleye captured in Boysen Reservoir, 2018.*



*Length frequency of Yellow Perch captured in Boysen Reservoir, 2018.*



Walleye, Sauger, and Yellow Perch aren't the only reasons to fish Boysen. A large Channel Catfish captured during 2018 fall gill netting.



Former Aquatic Habitat Biologist Betsy Morgan with a nice Boysen Reservoir Walleye.

## Burbot in Boysen Reservoir

Burbot (a.k.a. Ling) are a popular native sport fish in the Wind River drainage. In some places like Torrey and Trail lakes near Dubois, their populations have declined making them a species of conservation concern. However, numbers remain relatively stable in Boysen and the population continues to meet our management objective. Burbot are most active during the winter making them a favorite of ice fishing anglers. Their increased activity in winter allows them to avoid predation and compete better for food resources.

The WGFD samples Burbot using trammel nets set overnight at 12 standardized locations in April. The 2018 Burbot catch rate was 0.47 fish/net hour. A total of 114 Burbot were captured. The average length was 18.3 inches with the largest fish over 28 inches. Burbot weight averaged 1.71 pounds and the largest fish tipped the scale at 5.63 pounds.



*Burbot like these Boysen fish can grow big. However, the state record is much larger at 44 inches and 19.25 pounds.*

## New to the Region — Tiger Trout and Kokanee

Tiger Trout and Kokanee Salmon, two fish species relatively new to the Lander Region, are being caught in good numbers by anglers in recent years. Tiger Trout, a sterile hybrid between a Brook Trout and a Brown Trout, are being caught in Cow and Upper Silas lakes in the Shoshone National Forest. In addition to being a fish highly desired by anglers, Tiger Trout are a good management tool for biologists to control other fish populations. Tiger Trout are aggressive predators with a large gape size, which enables them to eat bigger fish than Brown Trout and Brook Trout of the same size. The fact



*A 15 inch Cow Lake Tiger Trout.*

that they are sterile ensures that they will not spread to other waters uncontrollably. Tiger Trout were stocked in Upper Silas Lake in 2014, 2016, and 2018 to improve a stunted Brook Trout population. The goal of stocking Tiger Trout in Upper Silas Lake is to reduce the number and thereby increase the size of Brook Trout as well as create a Tiger Trout fishery. Tiger Trout were stocked in Cow Lake in 2015 and 2017 to take advantage of an abundant Lake Chub population and create a new sport fishery for Lander-area anglers. Anglers should be aware that the stocked Tiger Trout are still young and have not yet grown to their full size. Tiger Trout over 12 inches in Upper Silas Lake and over 10 inches in Cow Lake are uncommon. As these fish age, it will be exciting to see how large they get (the state record is just over 11 pounds from High Savery Reservoir) and what kind of angling opportunities they create!

Kokanee Salmon were first stocked in Louis Lake in 2014 to in an attempt to create an additional brood source for Kokanee eggs in Wyoming. Historically, most Kokanee eggs were obtained from New Fork Lake and Flaming Gorge Reservoir; however, egg shortages in recent years caused the Game and Fish to attempt the creation of additional brood sources throughout the state. Like all salmon, Kokanee change colors from silver to red when they spawn and will die after spawning.

Although the brood source experiment hasn't worked out, Kokanee have been a big hit by Louis Lake anglers over the past year. Anglers have had success catching Kokanee through the ice in the winter and from boats during the summer. Most are between 9 — 14 inches long and have created another good fishery for anglers in the Lander area.

Louis Lake is approximately 26 miles from Lander on Shoshone National Forest Road 300 (the Loop Road). Cow Lake is less than a ¼-mile hike east of the Loop Road between Fiddlers Lake and the Little Popo Agie River. An approximate waypoint for Cow Lake is Z 12, E 0674851, N 4720427 (datum NAD 1983). Upper Silas Lake is an approximately 4-mile hike from the Christina Lake trailhead (located at Fiddlers Lake) by taking the Christina Lake Trail to the Silas Lake Trail.



*Louis Lake Kokanee Salmon in spawning colors.*

## Deep Creek and Tayo Drainage Wilderness Lake Surveys

From August 11 - 18, the WGFD conducted fisheries surveys within the Middle Fork Popo Agie River basin in the Wind River Mountains. Twelve lakes were within the Tayo, Deep, and Ice creek drainages in the Wind River Peak area, and one along the mainstem Middle Fork Popo Agie River. All lakes can be accessed using the Stough Creek, Sheep Bridge, or Sweetwater trailheads in the Shoshone National Forest. The purpose of these surveys was to evaluate sport fisheries, particularly those that are helicopter-stocked. Results are summarized in the table on page 7.

Survey results showed that the Tayo and Deep creek drainage lakes near Wind River Peak currently offer some of the best Golden Trout fishing opportunities within the Wind River Mountains. The WGFD helicopter-stocks Upper Tayo, Lower Tayo, and Upper Deep Creek lakes with pure Golden Trout every two to four years. Naturally reproducing Golden Trout/Cutthroat Trout hybrids occur in Coon, Middle Deep Creek, and Lower Deep Creek lakes. Good numbers were captured in all six lakes, with bigger fish found in Coon, Lower Tayo, Middle Deep Creek, and Lower Deep Creek lakes.

Lakes surveyed in the lower Deep Creek drainage included Heart and Pinto lakes. Both lakes contained high numbers of Brook Trout, with low numbers of Golden Trout/Cutthroat Trout hybrids also occurring in Heart Lake. The Golden Trout/Cutthroat Trout hybrids in Heart Lake likely drifted downstream from the Deep Creek lakes, which are approximately one mile upstream. Fortunately, a waterfall on Deep Creek between Heart and Lower Deep Creek lakes prevents Brook Trout from swimming upstream and colonizing the Deep Creek lakes.

Squirrel Lake flows into the mainstem Middle Fork Popo Agie River between Tayo and Bills parks, and is helicopter-stocked with Grayling every four years. Grayling up to 13.5 inches were captured during the last sampling event in 2012. Unfortunately, no fish were captured during 2018 sampling. It is unknown why no fish were captured. Squirrel Lake was last stocked in 2014, and it's possible that the Grayling fry did not survive the stocking event. Another possibility is that fish currently exist but were not captured in the gill net. Grayling fry (1.1 inches long) were stocked again in 2018, and will hopefully create a quality sport fishery within a couple of years.

Other lakes surveyed were in the Ice Creek drainage and included Cliff, Boot, Jug, and Chief lakes. With the exception of Cliff Lake (which is fishless), all lakes contained wild Brook Trout populations.



Upper Deep Creek Lake

## Deep Creek and Tayo Drainage Wilderness Lake Surveys

<u>Lake</u>	<u>Species</u>	<u>Length Range (inches)</u>
Coon	Golden/Cutthroat hybrids	14.0 – 17.0
Upper Tayo	Golden Trout	7.0 – 11.2
Lower Tayo	Golden Trout	4.7 – 16.1
Upper Deep Creek	Golden Trout	3.6 – 12.0
Middle Deep Creek	Golden/Cutthroat hybrids	6.1 – 17.0
Lower Deep Creek	Golden/Cutthroat hybrids	8.5 – 17.0
Cliff	fishless	
Boot	Brook Trout	6.0 – 14.0
Jug	Brook Trout	6.0 – 11.0
Chief	Brook Trout	6.0 – 11.0
Heart	Brook Trout	6.0 – 10.0
	Golden/Cutthroat hybrids	13.0 – 15.0
Pinto	Brook Trout	6.0 – 13.0
Squirrel	No fish captured*	

\* Squirrel Lake is helicopter-stocked with Grayling every four years, including 2018. Fish stocked in 2018 were too small to be captured during 2018 sampling.



## Kids Fishing Day and Education Efforts

Kids fishing day was once again a big success in the region! Hundreds of kids and parents showed up at Luckey Pond in Lander, Big Bend ponds in Riverton, and Pete's Pond in Dubois to enjoy some fun and fishing! North Platte Walleyes Unlimited supplied free fishing poles that the kids got to keep at the end of the day. A number of groups provided tackle and bait: Wind River Outdoor Company, Kiwanis, Trout Unlimited, and WGFD. Kiwanis also served up free hamburger and hotdog lunch at each location. Thanks to everyone who helped, the smiles said it all!



Biologists at the Lander kids fishing day were alerted to an injured owl found by one of the kids fishing at Luckey Pond. It turned out the owl wasn't injured but was wrapped up in fishing line left along the shoreline. Once the owl was untangled and free of the line it flew into a nearby willow to recover from the traumatic ordeal. It was a happy ending to a dangerous situation and taught many of the children the importance of properly disposing discarded fishing line. Fishing line just left on the ground kills thousands of birds and mammals each year. They get tangled up and can't move. As they struggle to free themselves the line gets tighter and usually leads to a slow painful death. Please remember to never leave fishing line on the ground, always throw it in a trash container.



## Ocean Lake Annual Fall Survey

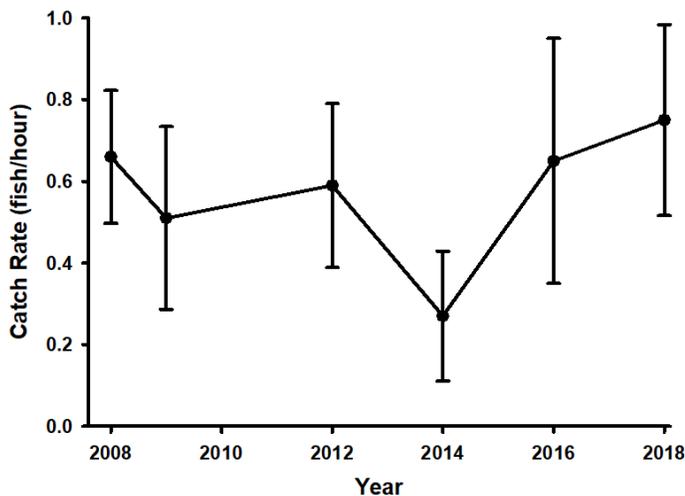
The WGFD manages Ocean Lake for Walleye fishing by annually stocking approximately 320,000 fingerlings (2 to 3 inches). Fall 2018 netting operations showed good survival of Walleyes stocked in recent years, as fisheries biologists obtained the highest catch rate since 2008. Length and age data showed high numbers of age-1 (9 to 12 inches), age-2, age-3 (14 to 17 inches), and age-7 (19 to 21 inches) fish. Walleyes were in good condition, indicating they have plenty of food to eat.

Despite high abundance in 2018, Ocean Lake ice anglers were having a difficult time catching Walleyes this winter. The slow fishing is being attributed to high numbers of forage fish and Walleyes with full stomachs. While this is good for the fishery it can decrease the chances of Walleyes biting a baited line. Additionally, fish in good body condition may not spend as much time actively feeding.

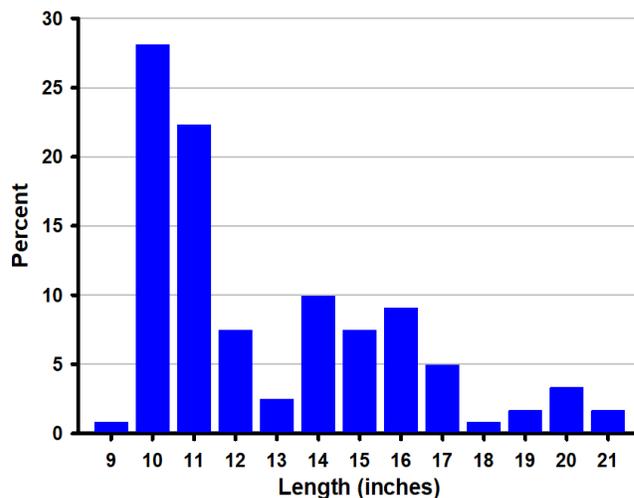
Another notable result from 2018 netting was the absence of Northern Pike. Two Northern Pike have been captured by Ocean Lake anglers (one in June 2014 and another in November 2015), causing concern that an undesirable top predator could affect the fishery and possibly spread within the Wind/Bighorn basin. The absence of Northern Pike in netting operations and angler reports since 2015 is fortuitous and indicates density is currently low or Northern Pike are no longer present. However, continued monitoring will be necessary to determine if a Northern Pike population establishes in Ocean Lake. Anglers are reminded that any Northern Pike captured must be immediately killed and not released alive. Additionally, fisheries biologists would appreciate anglers reporting any Northern Pike captured in Ocean Lake to the WGFD Lander Regional Office.



Ocean Lake Walleye



Average catch rates for Walleyes in fall trammel nets (2008 - 2018), Ocean Lake. Error bars represent 90% confidence intervals.



Length frequency of Walleyes (n = 121) captured in trammel nets at Ocean Lake, 2018.

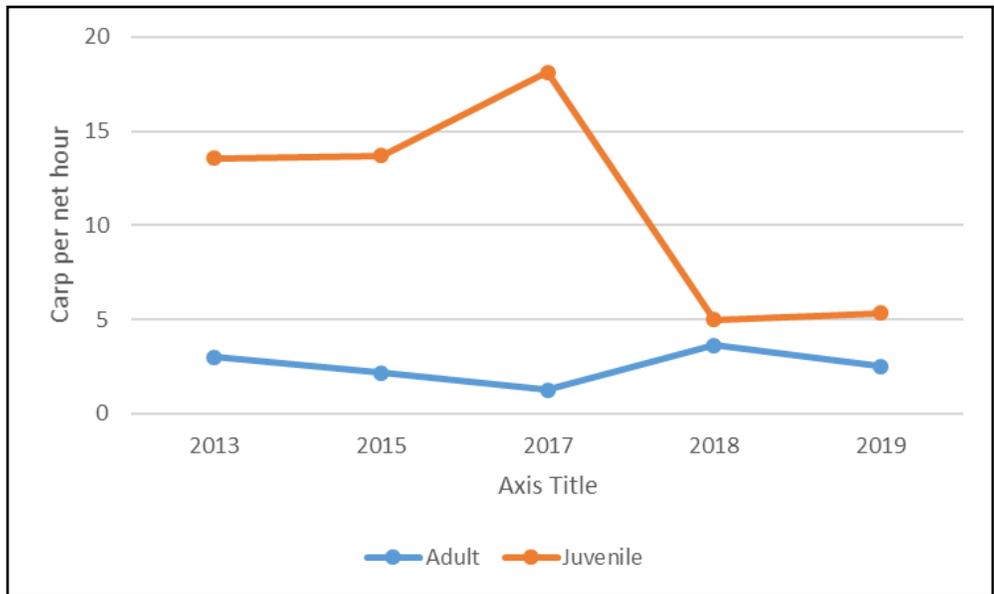
## Tiger Muskie Opportunities

Tiger Muskie are sterile hybrid cross between Northern Pike and Muskellunge. The WGFD raises Tiger Muskie at the Dan Speas Fish Hatchery. The statewide regulation limits harvest to one, all Tiger Muskie less than Thirty-six (36) inches in length shall be released to the water immediately.

Adult Tiger Muskie feed primarily on fish. They grow to over 40 inches in length and are stocked to control other fish species. Because Tiger Muskie don't reproduce, their abundance is controlled through stocking rates and frequency. The statewide regulation allows Tiger Muskie time to grow and forage on fish before being vulnerable to harvested by anglers. They are lurking predators, meaning they sit and wait for prey. Fishing for them requires anglers to search for them rather than hoping for one to swim by. The qualifying length for Wyoming's Master Angler is 38 inches.

There are three waters in the Wind River Basin that were stocked with Tiger Muskie from 2015 to 2018. Close to 1,260 were stocked in Middle Depression Reservoir, 1,015 in Lake Cameahwait, and 350 in Badwater Pond. Tiger Muskie now range from 20.3 to 28.6 inches in Badwater Pond and 13.2 to 25.9 inches in Middle Depression Reservoir. No Tiger Muskie have been sampled in Lake Cameahwait.

The abundance of juvenile carp has decreased in Badwater Pond following the introduction of Tiger Muskie in 2015. Tiger Muskies reach 10 inches in length by October when they are stocked. It took two years in Badwater Pond for Tiger Muskie to grow large enough to eat juvenile Carp that are around 4 to 5 inches in length.



Mean catch rates for adult Carp in gill nets and juvenile Carp in trap nets (2013-2019), Badwater Pond.



## Be Prepared — Know the Regulations

Once it warms up for the summer, many people look forward to getting out on the water with their boats and other watercraft. Wardens are also busy this time of year heading to the waters for watercraft and fishing enforcement. Some of the most common violations include fishing without a license, failure to get an Aquatic Invasive Species (AIS) inspection prior to launch, failure to require children to wear life jackets, and fishing with more than two poles. Here are some highlights that may help you avoid mistakes, but always check the full regulations before you recreate.

### Where can I find fishing regulations?

1. You can find them online at <https://wgfd.wyo.gov/Fishing-and-Boating/Fishing-Regulations>
2. Wyoming Game and Fish regional offices
3. License selling agents

### What do I need in my boat?

1. A personal flotation device (life jacket) available for each individual on board. Life jackets must be properly-sized, U.S. Coast Guard approved, and readily accessible; children 12 years old and under are required to wear theirs while underway. Anyone being towed by a boat is required to wear a life jacket as well.
2. An approved throwable flotation device is required on boats 16 feet and longer.
3. A proper fire extinguisher is required on any boat with an inboard engine, compartments that store fuel tanks or other combustible materials, bottoms that are not sealed to the hull, closed living spaces, or permanently installed fuel tanks. Check for details and full regulations online.
4. Lights are also required when boating from sunset to sunrise. The types of lights required differ based on the size of the boat. Check for details and full regulations online.

### Do I need an AIS inspection?

1. Any watercraft transported into Wyoming from March 1 through November 30 must undergo a mandatory inspection by an authorized inspector prior to launching in any water of the state. Additionally, if you pass an open AIS watercraft check station on your route of travel, you must stop for an inspection, even if your boat has already been inspected and documented.
2. If your boat has been in a mussel suspect/positive water (such as Lake Mead, NV; Lake Powell, UT; Great Lakes, etc.) in the last 30 days, you must have your boat inspected before launching in Wyoming during all times of year.
3. And, just as a reminder, all watercraft must have a valid Wyoming AIS decal before boating on any waters of the state. Decals are available online, at regional offices and at automated license vendors.

**Don't Move a Mussel**

**BEFORE YOU LAUNCH  
IN ANY WATER,**  
*protect your water resource and  
boat motor from invasive zebra  
and quagga mussels by doing a*  
**SELF-CHECK**

**Follow these simple steps to protect your waters:**

**✓ DRAIN** All water must be drained from your boat. This includes the ballast, bilge, livewell and motor. Leave wet compartments open.

**✓ CLEAN** Remove all plants, mud and debris from equipment and boat.

**✓ DRY** Dry your boat or equipment 5 days in the summer, 18 days spring/fall or 3 days of freezing.

**Help protect Wyoming's  
waters by making sure you  
Don't Move a Mussel!**



Please contact the Wyoming Game and Fish Department if you see attached mussels on your equipment or in Wyoming waters. We can provide more information and assistance in removal. Call 1-877-WGFD-AIS - (877-943-3247)



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**Aquatic Habitat**

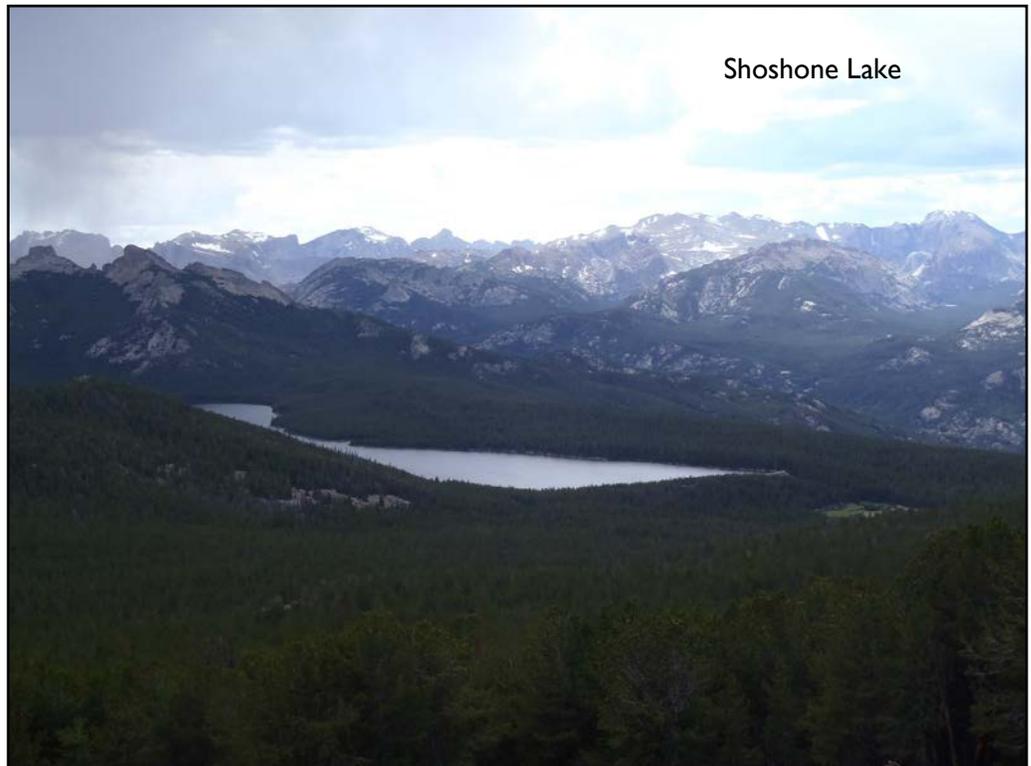
Joanna Harter - Aquatic Habitat  
Biologist

Nick Scribner - Fish Passage  
Coordinator

**2019 Lander Region Angler Newsletter**

**Important Dates to Remember in 2019**

- June 1 — **Kids Fishing Day (Lander and Riverton) and Wyoming's Free Fishing Day**  
*The Wyoming Game and Fish Commission has declared June 1, 2019 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. Free Fishing Day will also coincide with Kids Fishing Day in Lander (Luckey Pond) and Riverton (Big Bend ponds).*
- May 17 and 18 — **Wyoming Outdoor Weekend (Lander)** *This event is free to the public with some great kids activities, educational booths, local outdoor vendors, and raffle prizes. Complimentary food and beverages will be served both evenings with live music Friday night and a showing of the International Fly Fishing Film Festival on Saturday night.*
- June 8 — **Pete's Pond Dubois Kids Fishing Day** *Pete's Pond is a new community fishing pond in Dubois located near the rodeo grounds. Construction of the pond was completed in the fall of 2017 and it is stocked with catchable size Rainbow Trout, Yellowstone Cutthroat Trout, and Grayling in this spring. The Dubois Anglers and Wildlife Group will be hosting a kids fishing event to promote the new fishery.*
- June 15—**Shoshone Lake and Shoshone Creek opens to fishing** *Closed to fishing from September 1 to June 14.*
- January 1, April 1, June 1—**Wind River Indian Reservation waters open to fishing** *Reservation waters that are open to the general public (with a valid tribal fishing license) have various opening and closing dates. Make sure to consult tribal fishing regulations.*



Shoshone Lake