

Lander Region Angler News

2015 Edition



Wyoming Game & Fish Department
Conserving Wildlife—Serving People

Roaring Fork Drainage Survey

Every year the WGFD samples different groups of lakes in the Wind River Mountains with gill nets to evaluate fish populations. Because there are so many lakes to survey, most lakes are only sampled once every decade. Lakes within the Roaring Fork Creek drainage were sampled in 2014. Roaring Fork Creek is located within the Popo Agie Wilderness of the Shoshone National Forest, and is a tributary to the Middle Fork Popo Agie River. Lakes within the Roaring Fork Creek drainage can be accessed through the Roaring Fork Trailhead at Worthen Meadows Reservoir.



Leg Lake

Lander Region Fisheries Staff:

Fisheries Management

Kevin Johnson - Regional Fisheries Supervisor
Joe Deromedi - Fisheries Biologist
Paul Gerrity - Fisheries Biologist

Aquatic Invasive Species

Greg Mayton - Regional AIS Specialist

Aquatic Habitat

Nick Scribner - Fish Passage Coordinator

Dubois Hatchery

Bret Barngrover - Hatchery Superintendent
Bill Yaracz - Assistant Superintendent
Matt Starr - Fish Culturist

Inside this issue:

Roaring Fork Drainage Survey	1
Fish Entrainment Investigations at Gaylor and Warnock Canal	2
Sauger versus Walleye – Important to Know the Difference	3
Fish Lake Management Emphasis Shifted to Native Yellowstone Cuthroat Trout	4
Lake Cameahwait	5
Fish Passage Projects Continue.....	6
The Battle Continues Lander Region Aquatic Invasive Species (AIS) Update	8
Ocean Lake	9

Leg Lake, which used to be one of the most popular golden trout fisheries in the Lander area, was the lake that fisheries biologists were most interested in sampling in 2014. The fishery at Leg Lake must be maintained through stocking because of limited stream habitat for natural reproduction. The golden trout fishery flourished through periodic stocking from 1975 – 1992; however, stocking ceased after 1992 because a large wildfire decimated Wyoming's golden trout brood source. The golden trout fishery in Leg Lake (and many other Wyoming lakes) soon disappeared in the absence of stocked fish. The WGFD eventually re-established a golden trout brood source, and stocking occurred again in Leg Lake in 2010 and 2012. Sampling in 2014 showed that the Leg Lake golden trout fishery is again flourishing. A gill net set in the lake had high catch rates of golden trout. Additionally, fish were sampled across a broad size range (9 to 16 inches), indicating that stocked fish are surviving and growing.

Gap Lake was another recently stocked lake that biologists were interested in sampling. Gap Lake is perched at 10,310 feet above a rim that overlooks the Leg Lake outlet stream. Grayling were first stocked in this lake in 1975, with natural reproduction sustaining the population afterwards. Grayling exceeding 18 inches could be captured by anglers through the mid-2000s, but the fishery collapsed sometime after 2008. Decreased stream spawning habitat caused by many years of drought was the likely cause of the fishery's collapse. In an attempt to re-establish the Gap Lake fishery, 11,000 grayling fry were stocked in 2012. A gill net set

(Continued on page 2)

(Continued from page 1)

in the lake in 2014 captured very high numbers of grayling ranging in length from 6 to 9 inches. Although the grayling were small, it is important to remember that they were only 2 years old and will grow larger. Fisheries biologists will continue to monitor Gap Lake to determine if natural reproduction can sustain the fishery or if future stocking is needed.

Spruce Lake and Fir Lake, which are both sustained through natural reproduction, were also sampled in 2014. Brook trout ranging from 7 to 12 inches was the most common species in both lakes; however, splake (up to 12 inches) and golden trout (up to 10 inches) were also captured in Spruce Lake and grayling (up to 14 inches) were also captured in Fir Lake. Splake, a hybrid between brook trout and lake trout, were stocked in Spruce Lake from 1983 – 1994. The WGFD stopped stocking splake in Spruce Lake after 1994 because wild brook trout were dominating the fishery. The golden trout in Spruce Lake were likely the result of fish stocked in Leg Lake drifting downstream. Wild grayling have been observed in Fir Lake since 1997, and probably originated from fish drifting downstream from Gap Lake. The persistence of wild splake within Spruce Lake and grayling within Fir Lake is interesting, and will provide a few lucky anglers with a surprise at the end of their line.



Fir Lake grayling.

Fish Entrainment Investigations at Gaylor and Warnock Canal

In cooperation with local landowners and the Popo Agie Anglers (Lander Trout Unlimited Chapter), the Lander Fisheries Crew evaluated fish loss in the Gaylor and Warnock Irrigation Diversion throughout the 2014 irrigation season. The Gaylor and Warnock Irrigation Diversion is one of seven diversions on the Middle Fork Popo Agie River between Sinks Canyon State Park and Lander. Lander Fisheries personnel thought that the Gaylor and Warnock Irrigation Diversion may be one of most likely to entrain fish because it is the furthest upstream of all Middle Fork Popo Agie River diversions, making it the first diversion that fish within the state park encounter as they move downstream.

Water passing through the canal was sampled with a modified fyke net (see picture below) throughout most of May - September 2014 for a total of 3,229 hours. Sampling occurred over a range of flow levels, from a low of 1.8 cfs on April 29 to a high of 35.5 cfs on June 25. Popo Agie Angler volunteers maintained and checked the net for fish once a day to once a week.



Results from 2014 sampling indicated that fish loss in the Gaylor and Warnock Irrigation Canal was negligible. Therefore, no fish screens or other modifications to prevent fish entrainment are recommended. Only seven fish were captured throughout the entire April 26 – September 29 sampling period. Captured fish included two rainbow trout on May 23, one brown trout and one unknown species on August 2, two rainbow trout on September 7, and one rainbow trout on September 12.

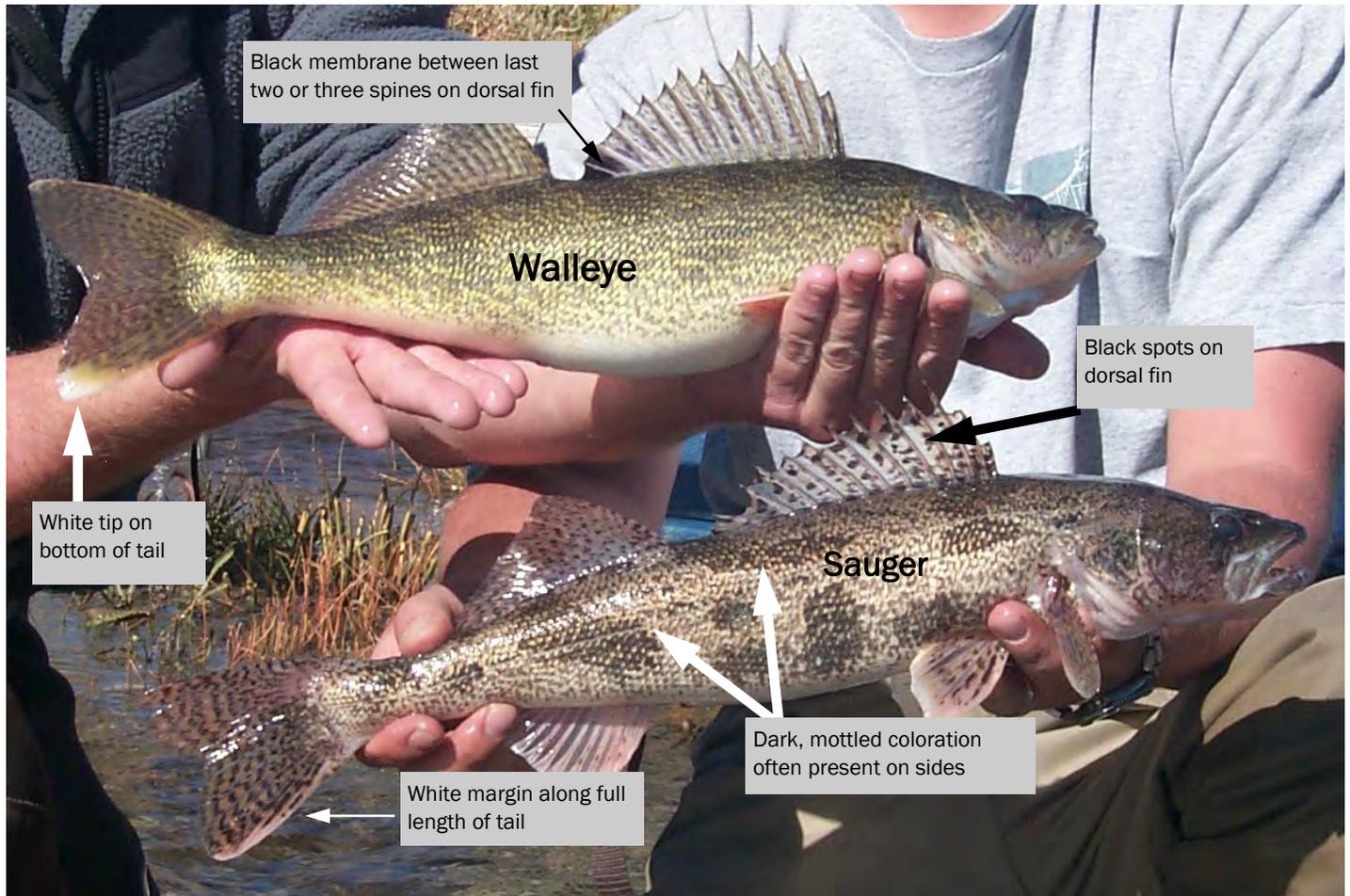
Thank you to all of the Popo Agie Anglers volunteers who worked on the project!

Sauger versus Walleye – Important to Know the Difference

Knowing the difference between a sauger and its close relative the walleye will be especially important for anglers this year because of the high number of age-4, 16- to 18-inch saugers currently in Boysen Reservoir. The creel limit on saugers in the Wind River drainage is two, whereas six walleyes can be harvested daily or kept in possession. Sauger and walleye limits in the Wind River drainage are not combined, so an angler can possess up to eight fish as long as no more than two are saugers and no more than six are walleyes. All walleyes and saugers caught in the Wind River drainage also must remain whole (gills and entrails may be removed) until the angler is off the water and done fishing for the day. Once off the water and done fishing for the day, walleyes and saugers may be filleted for transportation and storage. A piece of skin large enough to allow species identification (at least one (1) inch square) shall remain on all fish fillets while in transit or in the field.

The best way to know the difference between a sauger and a walleye is to look at the dorsal fin. Saugers have distinct spots along their entire dorsal fin, whereas walleyes have no spots but do have a black patch on the membrane between the last two or three spines. Saugers also have dark, mottled coloration along the entire length of their bodies and walleyes do not. Signs will be posted at Boysen Reservoir boat ramps to assist anglers in sauger/walleye identification. Anglers with a sauger possession limit that are having difficulty determining if a fish is a sauger or a walleye are urged to follow the motto “If you don’t know, let it go.”

IS IT A SAUGER OR A WALLEYE?



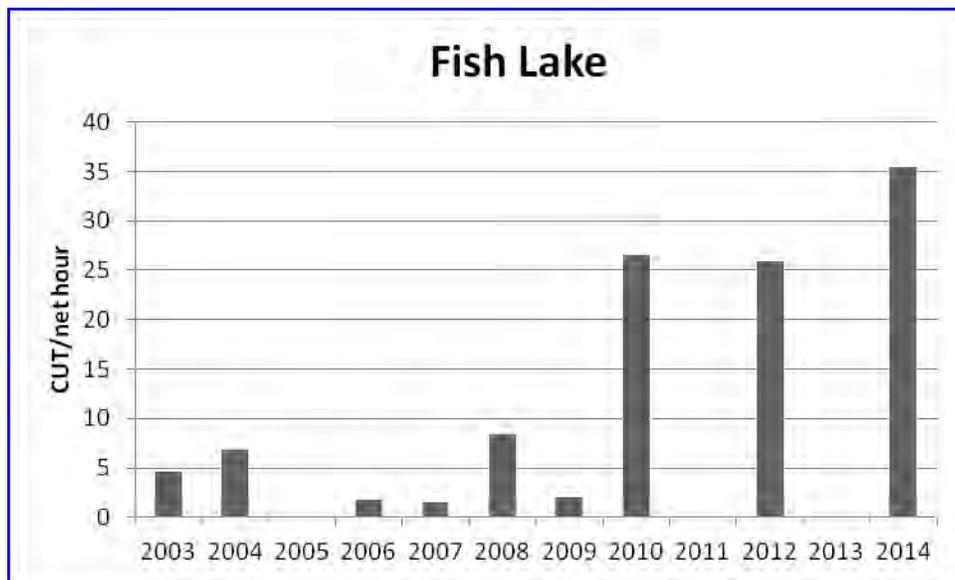
Fish Lake Management Emphasis Shifted to Native Yellowstone Cutthroat Trout

Fish Lake is a 28-acre lake located just south of the headwaters of the Wind River at 9,200 feet in elevation. It is managed as a Yellowstone cutthroat trout (YSC) fishery through annual stocking. A few years ago, stocking shifted from Snake River cutthroat trout (SRC) to YSC. Current regulations allow the harvest of three trout, but only one may exceed 16 inches.

The Wyoming Game and Fish Department sampled Fish Lake with gill nets in July 2015. The purpose was to evaluate stocking and obtain trend data. Catch rate in gill nets has been increasing at Fish Lake indicating better survival and higher abundance of stocked fish (see figure below). The shift to stocking a slightly larger sized cutthroat trout has increased survival. Mean length was around 14 inches for both cutthroat trout strains. Fish Lake supports a high abundance of cutthroat trout and provides anglers with a good opportunity to catch quality sized fish.

Number, mean length with ranges, and mean weight with ranges of fish captured with gill nets in Fish Lake on July 23, 2014.

Species	Number	Average Length (inches)	Range	Average Weight (pounds)	Range
SRC	6	14.5	12.9 - 15.5	1.08	0.80 - 1.39
YSC	68	13.9	11.7 - 17.7	0.92	0.55 - 2.00



The number of cutthroat trout per net at Fish Lake in July from 2003 through 2014. Fish lake was not sampled in 2005, 2011 or 2013.

Lake Cameahwait

Lake Cameahwait, known as Bass Lake, is located 8 miles north east of Shoshoni. The fishery supports largemouth bass, bluegill and yellow perch as well as non game fish. The largemouth bass fishery is managed by a slot limit to protect mature fish between 10 and 15 inches. The regulation allows harvest of one largemouth bass over 15 inches and one under 10 inches.

The Wyoming Game and Fish Department is planning to jaw tag largemouth bass in 2015, which will allow the Department to estimate the number of fish in the lake during sampling. To get the most accurate estimate, it is important for anglers to return jaw tags from harvested fish. There are containers for jaw tags located at access areas around the lake. Jaw tags should be left on live fish that are released. There is no money reward for the tags, just an opportunity to participate in a study aimed at improving the fishery.

A management activity that is just beginning at Lake Cameahwait is the use of triploid grass carp to recycle nutrients. Triploid fish are sterile allowing managers to control their abundance. Nutrients in the water affect the abundance and growth of fish. Grass carp fertilize the water with the nutrients they consume from plants. The Department would like to know the number of largemouth bass prior to stocking grass carp so that it can be determined after a few years if nutrient recycling by grass carp increased the number of largemouth bass in Lake Cameahwait. The participation by the public is important for helping the Department evaluate the success of stocking sterile grass carp.



Largemouth bass from Lake Cameahwait.

Fish Passage Projects Continue...

This past winter, Governor Mead revealed the Wyoming Water Strategy, which outlines four themes and several initiatives to address water issues for the benefit of people and wildlife for future generations. Fish passage was one of the top 10 initiatives that look to improve and protect fisheries around the state. Fish passage is simply the ability of fish to move unimpeded both upstream and downstream. Passage was not likely considered during the construction of dams, diversions, and road crossings that proliferated in the early to mid 20th century. However, much of that infrastructure has now aged to the point that improvements are needed to function properly and serve their intended purpose. And, with that come numerous opportunities to improve fish passage and reduce fish loss. Furthermore, we have gained tremendous knowledge over the past several decades on characteristics of healthy streams, fish movements, and swimming ability that assist in these efforts.

We have collaborated with many organizations and water users over the past 5 years in the Lander region to improve passage, stream habitat, and reduce fish loss. Below are a sampling of these great projects. We are excited about the new water strategy and potential partners and projects that come about to focus on this important aspect to improve fisheries throughout Wyoming for future generations.

Horse Creek Fish Passage: Like many diversions across Wyoming, a seasonal push-up dam was constructed during the irrigation season to deliver water to the headgate, which was severely dilapidated. These push-up dams impede passage and can direct fish into the irrigation ditch. Project partners raised funds to build a new headgate and install 2 rock cross vanes in the channel that allow year round fish passage, yet still deliver ample water to the headgate. A similar passage project was completed upstream essentially removing all passage barriers between Dubois and USFS land.



Before



After

West Fork Long Creek: If you've spent time in the Long Creek drainage northwest of Dubois the past couple years you may have been stopped for construction. This project removed 2 culverts that were fish barriers. An 18 ft diameter culvert was installed on the lowest crossing while a hardened crossing was installed on the secondary road at the upper crossing. This opened up 4.3 miles of stream that previously blocked upstream fish movement.



Before

After

Thunderhead Fish Screen: Thunderhead diversion on Bear Creek was just completed this spring with installation of solar power to run a screen. This will return fish that become stuck in the irrigation ditch back to the river in this important Yellowstone cutthroat trout stream. In addition, rock structures were placed below the headgate to reduce annual maintenance work in the stream. This is the second fish screen placed on Bear Creek.



Fish screen passes irrigation water, but returns fish to the stream.



Rock structures to improve passage and reduce annual maintenance.

The Battle Continues Lander Region Aquatic Invasive Species (AIS) Update

In 2014, larval quagga mussels (veligers) were found at two new waters close to the Wyoming border, highlighting the importance of inspections of all boats entering Wyoming. Angostura Reservoir is in western South Dakota, a mere 46 miles from the Wyoming border and Deer Creek Reservoir in northeast Utah, just 82 miles from Wyoming. Many boaters use these two waters before boating in Wyoming, making it critical that these and all boats entering the state are inspected.

In response to these new found invaders, inspections at nearby Wyoming waters such as Keyhole Reservoir and Flaming Gorge Reservoir will increase in 2015.

During all times of the year, if your boat has been on a water positive for zebra or quagga mussels within the last 30 days you are required to have your boat inspected prior to launching in Wyoming. Also, if you are transporting a boat into Wyoming from out of state from March 1 through November 30, you are required to have your boat inspected prior to launching in Wyoming. This includes out of state boaters entering Wyoming and any Wyoming boaters who have left the state and are returning. Please remember that according to Wyoming law, if you encounter an open check station on your route of travel, you must stop and will be required to undergo an inspection, or show proof of a previous inspection.

Boaters can find information on inspection locations including Game and Fish offices and private locations at: wgfd.wyo.gov Those wishing to become an AIS inspector may complete a free six-hour training course. Private certified inspectors may conduct inspections on their own boat and equipment, as well as provide these services to others. Training course information can be found at: https://wgfd.wyo.gov/web2011/Departments/Fishing/pdfs/AIS_WIDPUBLIC_150006618.pdf



Boysen Reservoir

In 2014, over 43,000 watercraft inspections were conducted throughout the state. Of those, 2,087 were high risk inspections of watercraft last used on a water with zebra/quagga mussels or had high risk water on board that could have been transporting AIS. A total of 880 watercraft required decontamination to remove water or suspect AIS. During the season, ten watercraft were found to have invasive mussels attached and were thoroughly decontaminated.

In 2015, check stations at key entrances into the state will be open as frequently as possible from April 25 through September 20. We encourage all boaters to plan ahead to have their watercraft inspected at one of these locations. In the Lander Region, watercraft check stations will be operated at Boysen Reservoir and some other waters on a rotating basis.

So is Wyoming currently AIS free? No. While no zebra or quagga mussels have been found in Wyoming waters, there are populations of other invasive species in Wyoming such as Asian clam, New Zealand mudsnail, rusty crayfish, and curly pondweed. In 2014, a new population of curly pondweed was found in the Lower Shoshone River near Cody. New Zealand mudsnails were also found in the first new water in Wyoming in over a decade, Lake Cameahwait near Shoshoni. It is more critical now than ever that as an angler or boater you do your part in stopping the spread of these species by always remembering to Drain, Clean, and Dry your boat and all fishing equipment. If you ever see any suspicious plant or animal while out recreating, it could be an invasive species. Please report any and all sightings to ReportAIS@wyo.gov.

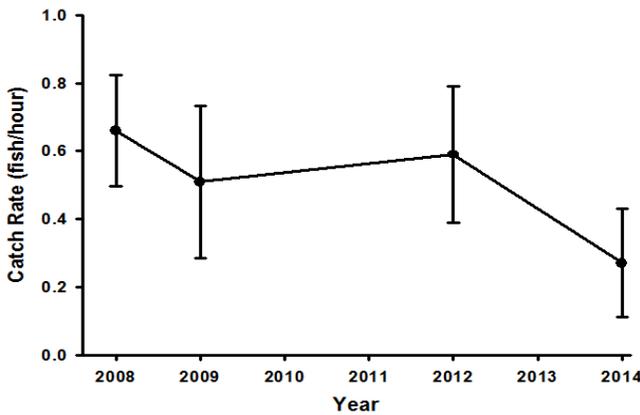
Just a reminder, a three-year AIS decal for Wyoming registered watercraft is now available. Decals can be purchased at any Game and Fish office, online, and at most license selling vendors across the state.

While no invasive mussels have been detected at waters in the Cody region or elsewhere in Wyoming, new findings of mussels in waters close to Wyoming should be a call to action for outdoor enthusiasts to stay vigilant in protecting the waters that we so proudly enjoy and call home.

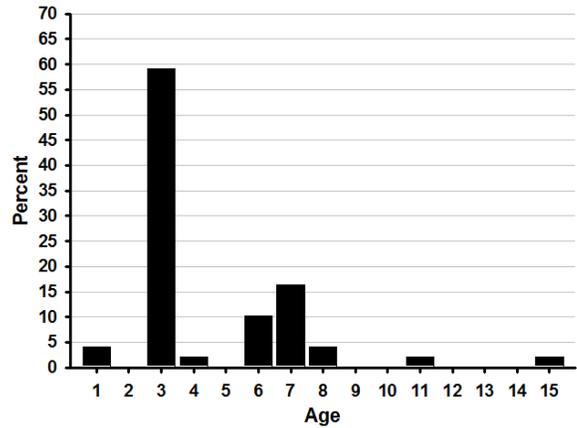
If you require an inspection, please contact the Lander Regional WGFD Office at 307-332-2688 or Regional AIS Specialist, Greg Mayton, at 307-254-3554.

Ocean Lake

Ocean Lake is a popular walleye fishery located near the towns of Pavillion and Kinneer. The fishery is maintained through the annual stocking of 320,000 fingerling walleyes that are obtained from Garrison National Fish Hatchery in North Dakota. Unfortunately, walleye numbers in 2014 were lower than normal (See graph below on left). Weak year-classes in 2012 and 2013 were the causes of the low walleye catch rate. The weak 2013 year-class can be explained by the cancellation of 2013 stocking, which was necessary to prevent the introduction of rainbow smelt that were found in walleye rearing ponds at Garrison National Fish Hatchery. Cannibalization by the strong 2011 year-class likely contributed to the weak 2012 year-class. Although walleye numbers are currently below average, the strong 2011 year-class should still result in decent fishing in 2015. Fifty nine percent of the walleyes captured during fall sampling were age-3 fish (See graph below on right), which should be 16 to 18 inches long in 2015.



Mean catch rates for walleyes in fall trammel nets, Ocean Lake, 2008 - 2014. Error bars represent



Age frequency of walleyes captured in Ocean Lake trammel nets from October 27 -

Wyoming Game & Fish Department

Conserving Wildlife—Serving People

Lander Region Fish Division
260 Buena Vista Drive
Lander, WY 82520

Phone: 307-332-2688
Fax: 307-332-6669



WE'RE ON THE WEB

<http://gf.state.wy.us/>

JOIN US ON FACEBOOK AND YOUTUBE!



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)

WYOMING GAME & FISH DEPARTMENT
"Conserving Wildlife—Serving People"

STOP AQUATIC HITCHHIKERS!