

2013 Edition



Wyoming Game and Fish Department

CASPER REGION ANGLER NEWSLETTER

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Special points of interest:

- New AIS Regulations
- Drought conditions persist north and west of Casper
- Trout populations are booming in Casper area tailwaters
- Reptiles and Amphibians of Southeast Wyoming
- Walleye and trout in North Platte River Reservoirs
- Glendo angler surveys

Watercraft Inspections at Borders

By now you've heard of Aquatic Invasive Species (AIS) and are well aware of the damaging effects invasive species such as zebra and quagga mussels could have on Wyoming's water resources. Just a few of the negative impacts invasive species can have include impeding water delivery, clogging pipes and pumps used to supply your drinking water, clogging water intakes on your boat which can destroy the motor, and removing the food source for many of the fish you like to catch.

The 2012 Wyoming State Legislature passed a new statute. The statute requires a boat transported into Wyoming from March 1 through November 30 to be inspected for AIS before launched in Wyoming.

Additionally, any watercraft that has been in a water infested with zebra or quagga mussels within the last 30 days, is required to undergo a **mandatory inspection** before launching in Wyoming *during ALL months of the year*. While we realize that this may take some adjustment for boaters and is an added requirement when bringing your boat into Wyoming, it is a necessary step to keep our waters free of harmful invasive species.



The goal is to make it as easy as possible for nonresident boaters and resident boaters transporting their boat back into the state to get this mandatory inspection. The Wyoming Game and Fish Department (WGFD) will staff check stations at key entrances into the state as frequently as possible during the boating season (April 15 through September) and we encourage all boaters to plan ahead to have their watercraft inspected at one of these locations. In the Casper Region, watercraft check stations will

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be operated at the Lusk US Hwy 18/20 Port of Entry, the Torrington US Hwy 26 Port of Entry, and at regional waters on a rotating basis. Hours and location information for each of these stations can be found on the WGFD webpage at wgfd.wyo.gov/AIS. If you require an inspection during other times, please contact your regional WGFD office or 1-877-WGFD-AIS (943-3247) to schedule an inspection.

If you never boat outside of Wyoming this season or are not a boater at all, we encourage you to keep doing your part in preventing the spread of AIS in Wyoming by always remembering to Drain, Clean and Dry. **DRAIN** all water from your fishing gear and equipment including waders and boots. **CLEAN** all plants, mud, and debris from gear and equipment. Never move a plant or animal from one location to another. **DRY** your gear thoroughly. By doing this each and every time you fish or boat, you won't be the one that moves an invasive species to your favorite water.

There are no known populations of zebra or quagga mussels in Wyoming to date, but they have rapidly invaded waters across the country and are present in over 34 states including Colorado, Nebraska and Utah. They could be present in Wyoming waters before our monitoring can detect them, so even if you only boat or fish in Wyoming, it is important that you always Drain, Clean, and Dry. There are currently populations of other invasive species in Wyoming (Asian clam, New Zealand mudsnail, and curly pondweed) and we do not want these species moved to another water. You can report an aquatic invasive species sighting at ReportAIS@wyo.gov.



Curly pondweed

33-Mile Ponds



Antelope Reservoir in Natrona County

Thirty miles north and west of Casper is an area commonly referred to as 33 Mile Country. There are a number of small stock watering ponds in this area on Bureau of Land Management lands that are managed by the Game and Fish for sport fishing. When conditions are right, these ponds provide good fisheries.

The winter of 2011-2012 was tough on the ponds in 33-mile country. We documented winterkill in Antelope, Big Muddy, and Shepherd reservoirs. All three were re-stocked with trout in spring 2012. The loss of bass in Antelope and Shepherd is more problematic. Due to the scarcity of bass from our out of state sources, in 2012 no bass were re-stocked. We are currently evaluating some instate sources for transplant into these two ponds, and will attempt to transplant largemouth bass if a suitable source is found.

The North Platte River- Casper to Glenrock

The North Platte River between Casper and Dave Johnston power-plant dam is annually stocked with 20,000 finger length Firehole River strain rainbow trout. Three years ago we initiated a study to determine the contribution of stocked fish into the trout population. A similar study was conducted on the river between Gray Reef and Mills Bridge in 2002. That study showed stocking the upper river was not necessary as natural reproduction accounted for the majority of trout. While the current study is not complete, preliminary results suggest that stocking is important for the overall trout population downstream of Edness Kimball Wilkins State Park. In our electrofishing surveys, 48% of the trout present are of hatchery origin. Further, the stocked fish averaged



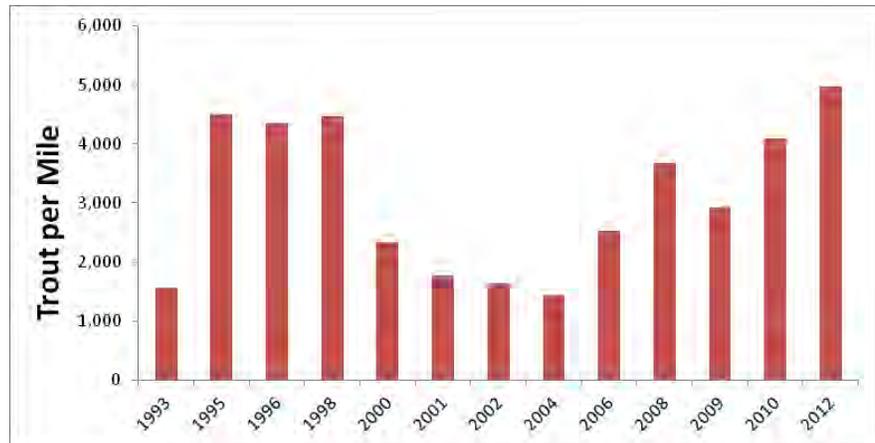
about 1 inch larger than wild fish at any given age. The wild trout in this reach likely swim down from spawning areas in the upper North Platte River. While half of the fish between Casper and Glenrock are wild, it is important to understand that the upper river has had exceptional natural reproduction the past two years. It is quite likely that in years with average to below average reproduction upstream, the majority of fish in the lower river would be stocked fish. We plan on conducting population estimates in 2013 which will wrap up the study.



A nice brown from the Glenrock reach

The North Platte River —Miracle Mile

Sustained high flows in the Miracle Mile reach of the North Platte River in 2010 and 2011 provided more habitat for juvenile trout, and the result is a boom in the population. The trout population estimate in 2012 was the highest we have ever measured. We estimated just under 5,000 trout per mile, 74 % of which were rainbows and 26% were browns. One year old (6-12 inch) rainbow trout were especially abundant, which is a sign that the rainbow fishing will be good in the coming years. Average lengths were 12 inches for rainbows and 11 inches for browns.



Trout population estimates for the Miracle Mile

Some fish move between the Pathfinder Reservoir and Miracle Mile to spawn. We conducted monthly electrofishing at the Miracle Mile from September, 2011 to August, 2012 to examine seasonal changes

in species composition and spawning condition. Brown trout numbers peaked in November when they were 47% of the fish captured. Most brown trout were ready to spawn in December. Walleye were quite abundant in April when they comprised 20 % of the catch. Almost all of the walleye in April were ripe males. Because Pathfinder Reservoir is stocked with a fall spawning strain of rainbow trout, we thought we might see ripe rainbows in the fall and winter. We found a few ripe male rainbows in the fall, but these fish did not have the stubby dorsal fins characteristic of Pathfinder fall rainbows. Ripe females were found only from February to April, with the peak in March. Thus, we did not find evidence of a fall spawning run of rainbows from Pathfinder Reservoir.



Some like it cold: A ripe male brown trout in December

North Platte River– Gray Reef

Two years of high water on the North Platte resulted in excellent rainbow trout production. Our October population estimate was the highest ever measured in the fall and the second highest ever. The population estimate for rainbow trout in the upper 3 miles of river was 8,670 per mile or 7,050 pounds per mile. While brown trout and Snake River cutthroat are present, no population estimate could be conducted for these species as we

did not re-capture any individuals. The number of these species appears to be unchanged based on the number we captured and represents less than 1% of the total trout population. The majority of the rainbows (60%) are 1 year old fish (8.0-12.9 inches) meaning that spawning conditions in 2011 were excellent. As



these fish mature over time we expect the number of large fish in the river to be nothing short of astonishing.

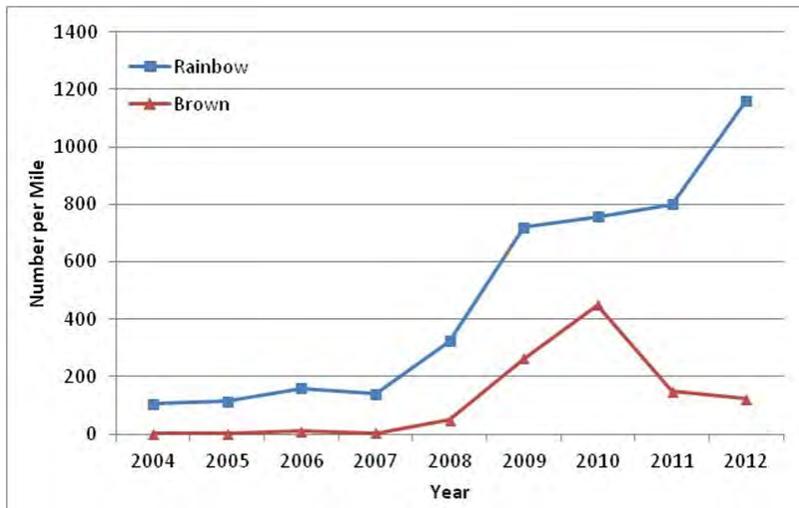
There were still a fair number of walleye present in the upper 1 mile of river. These fish moved into the river during the last two years

when Alcova Reservoir was spilling. We captured walleye as large as 30 inches and 10 pounds while electrofishing. If you decide to try your luck on these fish remember the river in this reach is governed by a special regulation where only the use of artificial flies or lures is permitted.



The North Platte—Cardwell

Our fish population sampling in September showed the rainbow trout population in this reach has increased for the 5th year in a row. The estimated number of rainbows in this reach was 1,160 per mile which equates to 2,240 pounds of rainbow trout per mile. The number of brown trout was down from the peak in 2010 and currently stands at 124 brown trout per mile. The average size for a rainbow trout in this reach was 15.4 inches and 1.65 pounds. Brown trout averaged 14.1 inches and 1.17 pounds.



Special Feature:

Reptile and Amphibian Surveys in the Casper Region

Though not often seen or noticed, at least six species of amphibians and 20 species of reptiles are native to the Casper region. Over the past two summers (2011-2012), a WGFD herpetologist and associated technicians from the Fish Division’s state-wide research crew have been surveying for reptiles and amphibians across the Casper region to learn more about their distributions, abundances, and habitats. This work is funded through a U.S. Fish and Wildlife Service program. Little is known about most reptiles and amphibians in Wyoming and many reptile and amphibian species are declining world-wide, so much information is needed to monitor and conserve these important species. Though often underappreciated, reptiles and amphibians are an integral part of ecosystems. They eat and help to control insects and small mammals and are an important source of food for many larger animals, in-



Plains Spadefoot

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cluding fish. More commonly seen reptiles and amphibians in the Casper region include Bullsnares, Tiger Salamanders, and Greater Short-horned Lizards. But there are also secretive or rare species that many people may not know even exist in Wyoming. These less commonly seen species include Plains Spadefoot Toads, Plains Hog-nosed Snakes, and Great Plains Earless Lizards.

Plains Spadefoot

The Plains Spadefoot is a type of toad that lives across eastern Wyoming. Though they may be plentiful in certain areas, they spend most of their lives underground and are rarely seen. However, after heavy rainfall, Plains Spadefoots may come out in large aggregations to breed for a few nights. They congregate in water puddles, marshes, stock ponds, playas, and along rivers. Male Plains Spadefoots call for hours, trying to attract females. Their call has been described as similar to a snore or a duck quack and may be heard up to a mile away. If you are lucky enough to see a spadefoot, note the vertical pupils, similar to a cat's eyes. Spadefoots get their name from a black, hardened part of their hind foot known as a 'spade'; they use these spades to burrow underground, where they stay buried until the weather is just right. Though Plains Spadefoots are a type of toad, they are different from most toads in that their skin is more smooth and moist. Spadefoots lack warts that are typical of most toads, but they have small raised bumps that may have orange spots.

Plains Hog-nosed Snake



Plains Hog-nosed Snakes also range across eastern Wyoming and live in sandy areas where they may burrow underground. Their coloration is similar to Prairie Rattlesnakes and Bullsnares so they may be easily confused, but Plains Hog-nosed Snakes differ in that they have a very upturned, pointy nose – similar to a hog's. They use this snout to dig underground; this snake also has a black, shiny belly, different from the lighter bellies of Bullsnares and Prairie Rattlesnakes. If seen in the wild, a

Plains Hog-nosed Snake may have a wide variety of behaviors. It may play dead, rolling over on its back, opening its mouth, and sticking out its tongue. It may even vomit or excrete waste all over itself, trying to make itself very unattractive to any potential predator. If the snake feels especially threatened, it may even flatten out the skin around its head and hiss, so that it looks like a cobra. But don't be fooled by these frightening behaviors; Plains Hog-nosed Snakes rarely bite and are actually a very gentle snake.

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Great Plains Earless Lizard

Seven species of lizards live in the Casper region. One unique and colorful lizard in eastern Wyoming is the Great Plains Earless Lizard. This lizard has no external ear openings and a very slightly upturned nose, both adaptations for burying in the sand. Black dots run along the sides of their pale bellies; females are orange and yellow tinted. Great Plains Earless Lizards live in open areas with plenty of sand for running and quickly finding cover. They are swift and can easily outrun many predators.



Fairy and Tadpole Shrimp

Many invertebrates, including freshwater shrimp, live in the same seasonal wetlands (puddles, stock tanks, playas) as Plains Spadefoots and other amphibians. Freshwater shrimp eggs may remain dry for several months or up to a year, then hatch after heavy rainfall. These shrimp are important prey for a variety of organisms, including amphibians and birds, and may not survive in wetlands with fish. Though freshwater shrimp may be eaten by adult amphibians, they may feed on amphibian eggs and larvae.

More information is needed about the distributions of freshwater crustaceans in the state, so these are collected when seen during amphibian surveys. Freshwater shrimp in Wyoming include several species of fairy shrimp and tadpole shrimp. In the Casper region, two species of fairy shrimp have been found and collected during amphibian surveys.

Fairy shrimp look similar to saltwater shrimp, but are much smaller; they have been described as looking like 'sea monkeys'. They are usually under an inch

long and light beige in coloration, though some may appear to be bright green or orange. Tadpole shrimp have been found in other areas of Wyoming and may live in the Casper region as well. They look similar to tadpoles when swimming in the water, but when in hand, tadpole shrimp look like mini horseshoe crabs. So when you're out this summer, keep your eyes open for any of these unique critters!



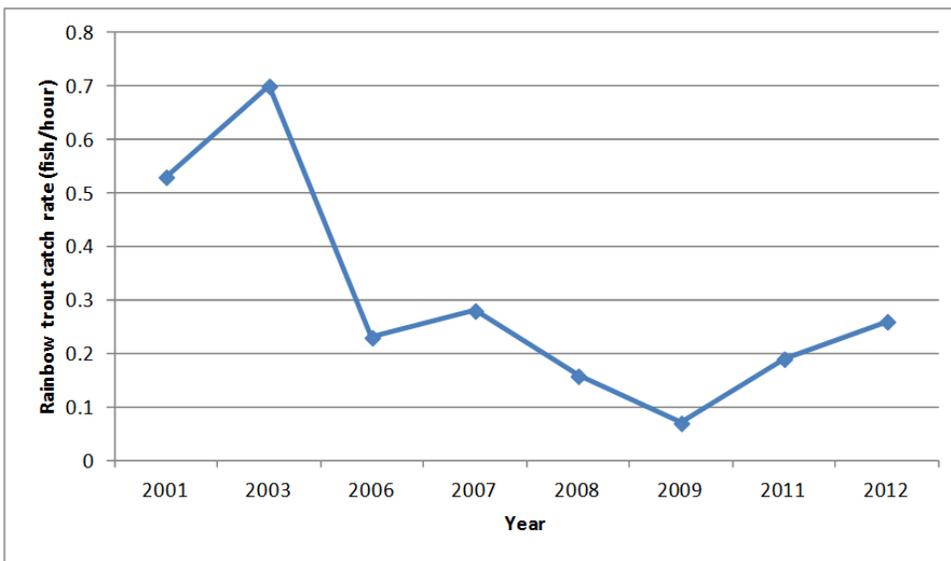
Tadpole Shrimp

Alcova Reservoir

Trout fishing in Alcova Reservoir was slightly improved in 2012 but was still short of our management objective for angler catch rates. Trout stocking has been steadily ramped up from 95,000 9-inch rainbows four years ago to 130,000 9-inch rainbows in 2011 and 2012 in response to an increasing walleye population. Our fall gillnetting revealed walleye reproduction was again high in 2011. In four years those fish will be large enough to eat stocked trout meaning trout catch rates will again decline without further stocking increases. At this juncture it appears that increasing stocking in an attempt to overcome walleye predation is not a practical or economically feasible solution for Alcova Reservoir. Since creel surveys show 95% of anglers are fishing for trout, we will be proposing increasing the creel limit for walleyes on Alcova Reservoir from six to 12. With it being biologically desirable to thin out the walleye population, an increased creel limit for walleye on Alcova



would allow walleye anglers to harvest more walleye which would, in turn allow more rainbow trout to survive overwinter and be available to trout anglers. Population modeling we conducted this winter shows a 10% increase in walleye harvest at Alcova could result in a 45% decrease in the number of large walleyes in the population after several years. The reduction in large walleye would allow us to scale trout stocking back to 95,000 trout annually, save considerable money for the Department, and provide the high quality trout fishing that Alcova has been known for in the past.



Average rainbow trout catch rate (number of fish per hour of fishing) during May and June from Alcova Reservoir angler creel surveys.

Glendo Reservoir

The walleye fishing at Glendo Reservoir was excellent in 2012. A very strong year class of 3 year old fish provided plenty of walleyes between 15 and 18 inches. The two year old year class also appears to be strong, and most of these fish will have grown to legal length (≥ 15 inches) by 2013. Average size of walleye in our netting survey was 15.9 inches and 1.5 pounds.



Angler Surveys

We interviewed 372 anglers during May, June, and July 2012. Anglers averaged 0.67 walleye per hour during this time period, a pretty great catch rate for a walleye fishery. Average length of harvested walleye in these surveys was 16.4 inches.



We would like to thank all the anglers who participated in these surveys. The information we gain by interviewing anglers is very important in managing the Glendo Reservoir fishery. Look for us again at boat ramps in 2013.

Yellow perch numbers appear to be down for the third year in a row. Young perch are particularly hard to find, indicating that walleye are doing a fair job of preying on the population.

Channel catfish were not stocked from 2001 – 2004 due to concerns about having adequate forage for abundant walleye and the expanding catfish population. Walleye populations often cycle between boom and bust due to available forage fish. Biologists wanted to reduce the likelihood of a bust in the walleye population by reducing the number of channel catfish entering the population.

Not stocking channel catfish for four years also allowed an evaluation to determine whether they were reproducing naturally. Part of this study involved using pectoral spines to age the catfish. This spine can be removed without lasting harm to the fish, then cut into thin sections and placed under a microscope. The annual growth rings in the bony spine can then be counted, much like counting rings in a tree stump. We saw a few 4-7 year old catfish in our summer netting indicating fish stocking is starting to rebuild the fishery.

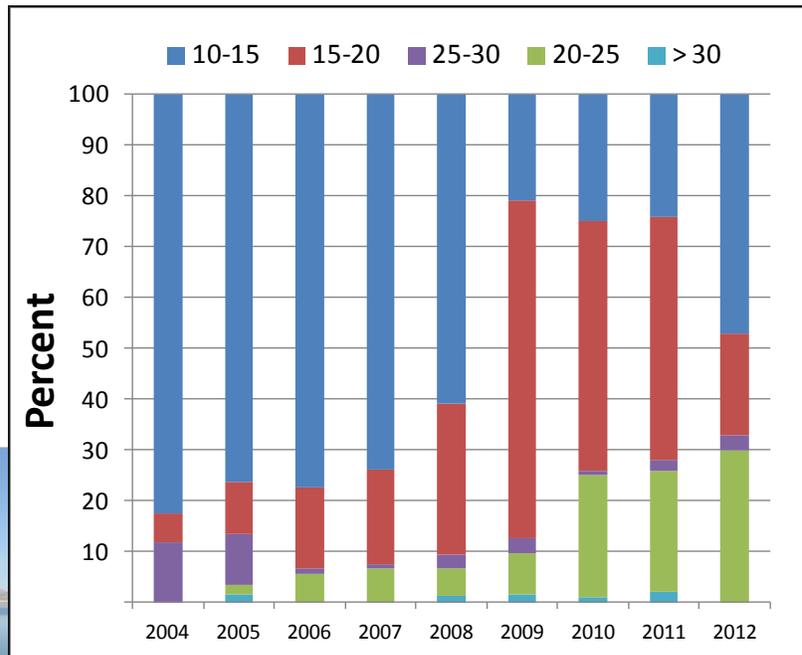
Pathfinder Reservoir

The population of large rainbow trout in Pathfinder Reservoir has increased over the last four years. For example, 34 % of the rainbows we caught in 2009 were over 16 inches, compared with 68% in 2012. The proportion of fish over 20 inches has also been increasing. Nearly 50,000 Snake River cutthroat trout were stocked in Pathfinder Reservoir in 2011 and these fish were 11-12 inches at the time of our spring netting. These cutthroat should grow in excess of 16 inches in 2013.



Snake River cutthroat from Pathfinder

The Pathfinder Reservoir wall-eye population is on the rise. Fish from a very strong 2011 year class have grown to about 10 inches and these fish will provide ample opportunity to catch “eater” size walleye in the coming years. Large walleye are also abundant right now, with 32% of the fish in our netting survey over 20 inches.



Percent of walleye in different length (inches) categories from fall netting surveys.

Seminole Reservoir

The walleye population in Seminole appears to be continuing to adjust to the regulation change from 20 walleye per day to 6 walleye per day back in 2002. Because walleye in this lake grow so slow and live to be 25 years old or more, the full effect of reduced harvest has not yet been realized. What is obvious however is that the overall size structure of the Seminole walleye population is continuing to increase. There is evidence of considerable harvest on 14-16 inch fish as we have seen several strong yearclasses cropped back upon reaching this size range. However, we are seeing more of these fish survive past 16 inches than was evident under the 20 fish limit. The overall number of walleye present increased with two years of very good recruitment in 2005 and 2006 and has declined since with poor recruitment from 2007 – 2009. Our netting surveys in fall of 2012 showed evidence of a strong 2010 yearclass, meaning we are likely at the bottom of the population cycle and numbers should begin to rebound. The forecast for walleye fishing in Seminole during 2013 is that anglers should expect to catch a lot of 11-13 inch walleye. Walleye in the 13-16 inch range will be relatively scarce and the number of 16 inch and larger walleye will be better than in recent memory. Of course Seminole remains one of the best places in the state to catch a 30 inch walleye.



Our spring 2012 trout netting painted a far less rosy picture than our fall walleye netting did. We had been able to increase trout stocking and were set up to have some of the best trout populations in the last 6 years. Based on the number and size of trout stocked, we expected to see gillnet catch rates of around 2 fish per hour. We found gillnet catch rates to be only 0.6 fish per hour. In essence, our netting indicated the rainbow trout population declined 60% unexpectedly. The smoking gun would seem to be the increased size structure of the walleye population. Similar to Alcova, the number of large

walleyes has built to the point where they are beginning to severely impact our ability to provide a quality trout fishery. To be sure, we initiated a study in fall of 2012 which will investigate the severity of predation on trout by walleye.

Wyoming Game and Fish Department

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WE'RE ON THE WEB!
[HTTP://WGFD.WYO.GOV/](http://wgfd.wyo.gov/)
YOU CAN ALSO FIND US ON:



"Conserving Wildlife — Serving People"

Wyoming Free Fishing Day—June 1st

Don't forget—June 1st is free fishing day in Wyoming. On free fishing day, no license or conservation stamp is needed to fish. It is the perfect time to take that special someone to your favorite fishing spot.

June 1st is also Kid's Fishing Day at Yesness Pond. This event is made possible by the Wyoming Game and Fish Department, The City of Casper, North Platte Wall-eyes Unlimited, Wyoming Fly-casters, and Sportman's Warehouse.

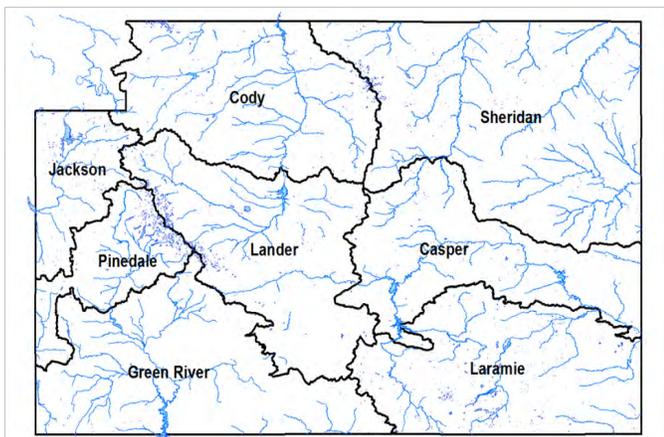


Acknowledgements

Contributors to this newsletter include the Casper Fisheries Management Crew, Aquatic Invasive Species Coordinator Beth Bear, and Herpetologist Charlotte Snoberger.

Casper Region Fisheries Management

The Wyoming Game and Fish Department splits up the fisheries of the state into eight regions. Waters within the Casper Region include the North Platte River drainage from Seminoe to the Nebraska state line, the South Fork Powder River, Salt Creek, and Niobrara watersheds. Our region includes over 2,350 miles of stream, 40,000+ acres of lakes and ponds and supports over 205,000 angling days a year. In 2012 over 750,000 fish (142,000 pounds) were stocked in the Casper Region.



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