



Pinedale Region Angler Newsletter

Welcome to the 2008 Angler Newsletter

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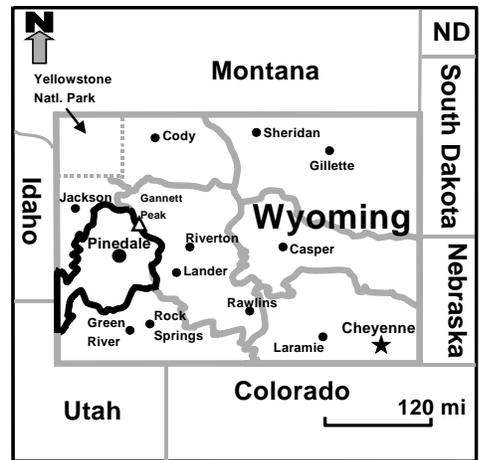
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Once again we are happy to unveil our free newsletter, designed to inform and educate those interested on topics of interest, and Fish Division activities within the Pinedale Region. The Pinedale region encompasses the Upper Green River Drainage (upstream of Fontenelle Reservoir) and parts of the Bear River drainage near Cokeville (see map).

It is our intent to produce up-to-date newsletters each year to keep you informed on findings, progress, and recommendations from the previous year. This newsletter is intended for everyone interested in the aquatic resources in the Pinedale area. The resources we manage belong to all of us.

We hope you find this newsletter useful and informative. Please direct any feedback that

you may have or suggestions for improvements to the contact listed on the back page.



*WGFD Regional Map:
Pinedale Region outlined in black.*

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Fishing Regulation Changes Take Effect in 2008

Anglers in the Pinedale region will notice several changes to the fishing regulations that went into effect at the beginning of 2008. The current version of the fishing regulations, which are in effect through 2009, includes numerous changes throughout the state in an attempt by the Game and Fish Department to simplify some of the regulations and make many of them consistent within the various regions.



Changes to the 2008 Fishing Regulations include a new trout limit in Soda Lake

One of the most significant changes to the regulations in the Pinedale region was the creation of a drainage wide regulation for all flowing waters. Beginning this year, all flowing waters in the Green River drainage upstream of Fontenelle Reservoir will be subject to a limit of three trout per day or in possession (excluding brook trout), only one trout can exceed 16 inches, and only one trout can be a cutthroat trout. An addi-

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Fishing regulations (cont.)

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tional brook trout limit was created statewide, allowing anglers to harvest 16 brook trout, of which only six can be greater than 8 inches. The reason for this regulation change was to eliminate many of the special regulations in place on many of the smaller tributaries in the region, and create a single regulation for all flowing waters. This regulation will allow limited harvest of the Colorado River cutthroat trout native to the area, while still maintaining some protection for this important sensitive species. Many artificial flies and lures only restrictions remained in place for some of the region's flowing waters, however, overall the number of special regulations decreased.

Another significant change was the creation of a similar drainage-wide regulation for flowing waters in the Bear River drainage including the Smiths Fork and Salt Creek (Thomas Fork) drainages. The new regulation allows anglers to harvest six trout (excluding brook trout), no more than three can be cutthroat trout, and only one cutthroat can exceed 16 inches. The purpose of this regulation is to allow anglers to continue to harvest trout, while limiting the harvest of Bonneville cutthroat trout native to the area, particularly larger, mature spawners.

Anglers will also notice a change in the regulation for Soda Lake north of Pinedale. Beginning in 2008, the limit was reduced to one trout (including brook trout) per day or in possession. This change was made to address continued declines in trout numbers in Soda Lake due to persistent drought conditions in the region and low trout survival during the winter.

A new regulation was also created for all waters in Area 4, including the Green River and Bear River drainages, allowing anglers to harvest unlimited numbers of walleye and burbot. This regulation was created in response to illegally introduced walleye and burbot populations that are rapidly expanding and can significantly impact important area fisheries. Although illegally introduced walleye and burbot will likely never be eliminated from the region, it is hoped that angler harvest will help curb their expansion and limit the impacts they might have on some of the region's important recreational fisheries.

Other important changes include a reduction in the statewide whitefish limit from 50 to 25 per day, and a reduction in the cutthroat trout limit in North Piney Lake to one per day.

For a complete list of all the regulation changes that went into effect in 2008, see the current version of the 2008-2009 Wyoming Fishing Regulations available at Game and Fish Regional Offices, License Selling Agents, or online at <http://gf.state.wy.us/fish>.

- Darren Rhea

Are Bonneville Cutthroat Trout Endangered?

Bonneville cutthroat trout were historically found throughout the Bonneville Basin, including the Bear River drainage in southwest Wyoming. Many populations of this subspecies of cutthroat trout were severely impacted by a variety of factors, including habitat destruction, and hybridization and competition with introduced trout species. Eventually, their numbers de-

“Conservation efforts have helped populations of Bonneville cutthroat trout throughout their range”

clined so much that some people believed the subspecies to be extinct. When a few surviving populations were discovered, the Wyoming Game and Fish Department, along with numerous other agencies, began working to restore this subspecies to their historic habitats. The fish responded to these efforts, and they can now be found in many waters within their historic range.

The Biodiversity Legal Foundation felt that the numbers of Bonneville cutthroat trout were still too low, in spite of the ongoing efforts to conserve this subspecies. Therefore, they petitioned to have the subspecies listed under the Endangered Species Act in 1998. The U.S. Fish and Wildlife Service concluded that Bonneville cutthroat trout did not warrant listing as



A Bonneville cutthroat trout from the Bear River Drainage

a threatened species in 2001, because its status had improved since the 1970s, and because ongoing and future conservation actions would be sufficient protection. This finding was challenged in court, but the lawsuit was dismissed in District Court in March 2007. That decision was appealed, but the appeal was dropped, because the U.S. Fish and Wildlife Service decided to

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Know Your Natives: Roundtail Chub

Gila robusta

The roundtail chub is a member of the minnow family that is native only to the Colorado River drainage. In Wyoming, it is restricted to the Green River and Little Snake River drainages. Historically, the roundtail chub could be found throughout the Colorado River and its tributaries from the Wind River Range to the Pacific Ocean. Today however, its distribution has been reduced to less than 50 percent of its historic range, with small, isolated populations spread throughout portions of Wyoming and the desert southwest. Locally, the roundtail chub has been extirpated from most streams



Roundtail chub are easily distinguished from other fish by their streamlined body and narrow caudal peduncles.

and rivers and exists in small populations restricted to a few of the "Finger Lakes", including Halfmoon and Burnt lakes. Habitat loss and fragmentation, regulated flows from dams, and competition with introduced fish have all contributed to the decline in roundtail chub numbers throughout their range. In Wyoming, the roundtail chub has been given a Native Sensitive Species ranking of 1 (NSS1), meaning it is among the rarest and most threatened native species in the state.

Despite being found in some lakes, the roundtail chub is adapted primarily to living in large rivers. Its streamlined body form and narrow caudal peduncle (front portion of the tail) have made it a strong swimmer, capable of tolerating the

"Their aggressive behavior and fighting performance have earned them the title of game fish in some states"

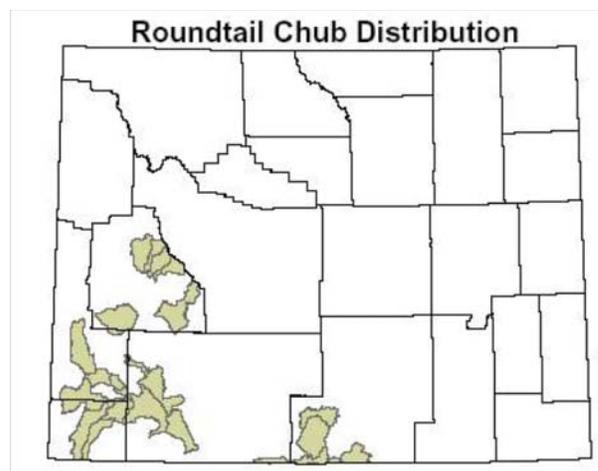
extreme flows found in many western and desert streams. Adults of the species typically grow to 10 inches, though individuals up to 20 inches long have been found. Roundtail chub usually appear brown, olive, or gray on the back with a sharply contrasting white or yellowish belly. Orange or red coloring along the belly and fins is common, and typically becomes brighter during spawning, especially among males. Spawning occurs in the late spring and eggs are broadcast along

reefs and shallow bars with gravels and larger cobbles. Roundtail chub do not build redds like most trout species, instead, their eggs are spread across the bottom where they stick with a light adhesive¹.

The diet of roundtail chub has been described as mostly insects and zooplankton, although larger individuals are known to prey on other small fish. Roundtail chub are known to be quite aggressive and will frequently attack lures, jigs, or flies. In fact, their aggressive behavior and fighting performance have earned them the title of game fish in some states. Anglers in the Pinedale Region frequently

report incidental catches of roundtail chub, stimulating curiosity over this native inhabitant of some area fisheries. There is currently no limit on the number of roundtail chub that can be taken by angling or bait seining, however, removing large numbers of this species from the water is discouraged given their rare status. If you are among the few anglers fortunate enough to encounter this native species that at one time swam freely over thousands of miles of the Colorado River system, please release it unharmed and notify the Wyoming Game and Fish Department.

- Darren Rhea

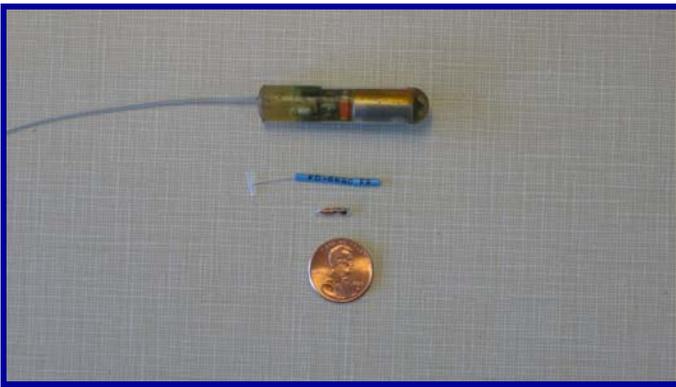


Roundtail chub distribution in Wyoming

¹ Baxter, G.T., and M.D. Stone. 1995. Fishes of Wyoming. Wyoming Game and Fish Department, Cheyenne, Wyoming.

Primitive and Advanced Marking Techniques Used to Identify Individual Fish

In many species, one animal looks just like most or all of the others. For example, can you be sure that the mule deer doe you saw last year is the same one you saw this winter? Unless that doe had a scar on its side, a crooked leg, or some other distinguishing mark, you probably have no idea whether or



From the top: a radio tag, a Floy tag, a PIT tag, and a penny to give an idea of the size of the tags. Notice the wire antenna on the left end of the radio tag.

not it is the same animal. If you want to know how far an animal moves or how fast it grows during the course of a year, you need to be sure you are always looking at the same animal. It doesn't take much imagination to come up with other reasons why it might be necessary to recognize a specific animal. Therefore, it is often useful to be able to mark an individual in order to be able to readily differentiate it from others that might be in the same area.

Most people are familiar with a variety of ways that have been used to identify individual animals. For example, nearly everyone has seen a dog or cat wearing a collar with an identification tag that will help a lost pet to be reunited with its owner. Ear tags have been applied to livestock and big game animals for years, and leg bands are used to allow biologists to recognize specific birds. Unfortunately, fish don't have necks, ears, or legs to hold a marker, but fisheries biologists have still figured out a variety of ways to keep track of individuals.

Removing one or more fins was probably the first method used to mark fish. This method is simple and inexpensive, so it is still frequently used. It is most often used in situations where one group of fish needs to be differentiated from another. For example, it can be used in studies designed to compare stocked fish to wild fish. Regrettably, removing a fin can affect swimming ability and cause other problems, so other

marks were developed.

Different types of chemical and dyes have been used to mark fish with some success. However, these methods, like fin removal, are of limited value if individual fish need to be identified. In addition, these marks often don't last for long periods of time. Brands on fish, like those used for livestock, allow biologist to identify more individuals, but they don't tend to last very long. Therefore, this method isn't used often.

“Unique marks and tags are the only way of distinguishing one individual fish from another”

A wide variety of external tags have been developed for use on fish. Historically, biologists clamped an engraved metal band around the jawbone of fish. This tag allowed for unique marks, but they often affected feeding efficiency, and harmed the jawbone as the fish grew. Therefore, this tag is no longer used, but other types of external tags are commonly employed. Several types of tags that attach to the back of a fish have been developed. These can be made of plastic or metal, and they can take the form of disks, tubes, straps, or plates. One of the most commonly used types of external tags is known as a Floy tag or spaghetti tag, because it looks like a piece of colored pasta coming out of the back of a fish. External tags can be customized to include identifying numbers, as well as other information. However, almost all of



A “spaghetti” tag (Floy tag) sticking out of the back of a roundtail chub

Marking Techniques (cont.)

(Continued from page 4)

these tags have some effect on the muscle where the tag is inserted, and they may affect swimming ability.

“Report the details of any marked fish you encounter to the Wyoming Game and Fish Department”

Internal tags can be difficult to insert in a fish, but they overcome many of the problems associated with external tags. One of the simplest internal tags is the Visible Implant tag. This tiny tag is only about 3 millimeters long and 1 millimeter wide, and is injected into clear tissue on a fish, where it can be seen without any special equipment. Coded wire tags are another type of internal marker. These tiny chunks of wire are injected

into the nose cartilage, and can be detected with a metal detector. The wire can be marked with notches to allow identification of groups of fish (e.g., fish from different hatcheries can receive different marks), but the fish must be dissected in order to retrieve the tag.

Passive Integrated Transponders (more commonly known as PIT tags) are advanced tags that allow biologist to identify individual fish without actually having to recapture them. These microchips are about the size of a grain of rice, and are injected into the body cavity of a fish. The technology was first used in the livestock and pet industries, but biologists have adapted this tag for use in fish. Special equipment has been developed that allow the tag to be read as the fish swims past an antenna placed in the water. Therefore, this technology is very useful in situations where fish are difficult to capture. In addition, it can be used in studies where the objective is to determine the timing or extent of move-

ments made by a population.

Radio tags and sonic tags also allow a fish to be detected without having to recapture it. Both of these types of technology are very expensive, and usually require a surgical procedure for implantation of the tags. However, unlike PIT tags, these tags do not require a marked fish to pass a specific point in order to be detected because the tags produce signals that can be detected from long distances. Therefore, both short distance and long distance movements can easily be monitored. In addition, the location of these tags can be determined with great accuracy, so studies on habitat use by fish can be conducted with these high tech tags.



A Visible Implant Tag (number D74) inserted behind the eye of a cutthroat trout.



A radio tag being inserted into the body cavity of a cutthroat trout.

The development of different types of tags has allowed us to learn about many aspects of fisheries biology that would otherwise still be a mystery. Although biologists have learned a great deal, there is still much to learn, so we still commonly mark fish with many of the methods discussed. You may have even caught a marked fish and not realized it. In the future, look for marks on the fish you catch, and let us know if you catch one. By reporting details associated with marked fish (e.g., color of tag, number on the tag, location where the fish was captured), you can help us to learn even more and manage your fisheries better.

- Pete Cavalli

Colorado River Cutthroat Trout Brood Stock: A New Beginning

After seven years in the making, this year the Wyoming Game and Fish Department's Daniel Fish Hatchery will spawn the newly developed Colorado River Cutthroat Trout (CRC) brood stock. These fish represent the Western portion of the CRC's historic distribution and are referred to as Western Enclave CRC.

The brood stock's purpose is the production of eggs to grow catchable sized fish for stocking in many Wyoming waters. The CRC is a sensitive species and this brood stock was created to fulfill both restoration and sport fish stocking requests within CRC habitat in the Green River drainage. Production from the brood stock will be used in restoration projects to reestablish extirpated and/or renovated populations in suitable CRC habitat, help supplement/maintain existing genetically pure populations and provide a genetic refuge for Western Enclave CRC. Production from this brood stock will also be used to meet sport fish goals both in public and private waters adjacent and/or connected to habitats identified as occupied by important CRC populations.



Biologists work to spawn Colorado River cutthroat trout at the Daniel Fish Hatchery.

A Little History

Many sportsmen may remember the Wyoming Game and Fish Department's first Western Enclave CRC brood stock. It was established from wild stock found in North Beaver Creek, a tributary of South Piney Creek, located in the southwest corner of Sublette County, Wyoming. This CRC brood stock was established in the spring of 1973, when eggs from North Beaver Creek were taken to the Daniel Fish Hatchery and then stocked into Big Sheep Mountain Lake, located near the headwaters of the Green River. Due to low egg quality and production, this wild brood stock did not work out as expected. In 1983, the Fish Culture Section decided to move this brood stock and establish a captive brood stock at the Daniel Hatchery.

Several attempts were made to bring in "new blood" and improve

the gene pool in this brood stock. In 1984, fishery personnel took eggs from a population of CRC in Rock Creek, a tributary of LaBarge Creek in Lincoln County. Again in 1993 and 1995 eggs were taken from CRC in Sjhoberg Creek and these fish were added to the brood stock. Although attempts to improve the genetics were made, continued low genetic variability contributed to the decision not to take any future brood recruitment from the captive strain. The strain was ultimately phased out July 30, 1999.

A Search Begins

From 1999 to 2003 no CRC were available for stocking in Wyoming. The Wyoming Game and Fish Department began a new search for a genetically pure and diverse Western Enclave populations. Genetic samples from CRC obtained from North Piney Lake, near Big Piney, Wyoming were collected in 1998 by the Pinedale Fisheries Management Crew and submitted to University of Montana for analysis. These fish were found to be pure CRC and would provide a suitable brood recruitment source.

A New Beginning

The first successful take of eggs and founding fish for a new brood stock originated from North Piney Lake. The WGFD flew the Fish Division's Spawning crew and other Fish Division personnel to the lake. A camp was set up and the first take of eggs were collected on June 7, 2003.

The eggs were sent to the Auburn Fish Hatchery Isolation Facility near Afton Wyoming for incubation. On December 4, 2003 these fish were transferred to the Daniel Fish Hatchery as fingerlings, totaling 45,541 fish.

The Spawning Crew continued collecting eggs for four more years to ensure enough age classes of fish to begin a new brood stock. These five age classes of fish have been reared and cared for at the Daniel Fish Hatchery ever since.

The Future

This year will begin the Daniel Hatchery's first attempt at collecting internal brood recruitment for this brood stock. Fish from the first eggs collected in 2003 are now 4 years old and along with the newly matured 3 year old fish will give the WGFD the beginning it's been waiting for. With the good genetic beginning, the WGFD can now rely on internal recruitment for several years instead of making the trek to North Piney Lake every year. North Piney Lake will continue to be managed as a pure source of CRC, and will be used for additional brood recruitment in the future.

- Greg Anderson

While You Were Sleeping

To the untrained eye, it might look and sound like something out of science fiction movie: the fog covered darkness of the Green River broken by a raft with four halogen headlamps attached to the front, and the unnatural hum of a 5000-watt generator whining in the background. However strange or unworldly the described scene may seem, it is not an uncommon event along portions of the Green River during the summer and fall months.



Capturing fish at night has many advantages over capturing fish during the day.

Every year, biologists with the Wyoming Game and Fish Department collect population estimates at night on reaches of area rivers to evaluate the status of trout populations in these important recreational fisheries. Population estimates are obtained through the use of electrofishing, the process of running high voltage electric current through the water column to immobilize fish for capture. Electrofishing on most large rivers involves the use of raft-fixed electrodes (large, boom mounted electrodes that extend off the front of a raft). Using raft-fixed electrodes allows biologists to use the river current to their advantage, traveling downstream with the flow of the current and targeting areas of trout habitat. When fish encounter the electric field they are drawn to the current and immediately immobilized, where they are netted and placed in a holding tank unharmed.

Electrofishing at night can often be more effective than during the day and is regularly employed in areas without river hazards or dangerous conditions. Electrofishing at night improves the probability of capturing fish in many ways. First, when it is dark, fish are less likely to “run” from the electrofishing raft. Although most fish species instinctively avoid oncoming danger by darting to cover during the day, at night they rely more on the cover of darkness for protection. In many cases, they are less likely to avoid an oncoming raft during the night and will hold their position, leading to improved fish captures. Second, fish are more likely to leave the safety of heavy cover during the night when threats from overhead danger, primarily predacious birds, are much lower. This tends to distribute fish throughout the reach where they become more vulnerable to

electrofishing. Cooler air and water temperatures at night also create more favorable conditions for fish, reducing capture and handling stresses than can become harmful during warm temperatures.

Population estimates are obtained on regularly sampled reaches to monitor changes in the size, structure, and composition of fish populations through time. This information is used by biologist to investigate the success of stocking, regulations, and other management activities.

During 2007, biologists conducted population estimates on four reaches of the Green River, three of which were conducted at night. April found the crew on the Green River between the Huston’s Access and Sommers’ Bridge. During September, the crew was busy working a section of the Green River immediately downstream of Green River Lake, and during October the crew was enjoying three nights of work on the Green River near Big Piney below the Fear Access.

The estimate obtained below the Huston’s Access indicated a robust population of brown trout numbering 209 fish per mile, the majority of which were 10-16 inches long. Though lower numbers of fish were found in this portion of the river compared to estimates historically obtained within other sections of the river, the data suggest a stable population with multiple age classes of fish offering plenty of opportunities for anglers.

Obtaining a population estimate in the Green River below Green River Lake proved to be more difficult than anticipated, primarily due to low electrical conductance in the water. Despite less than desirable conditions, the crew was able to obtain valuable information on the composition of wild and hatchery-raised trout, which will help guide future stocking efforts within the river.

Over 500 trout per mile were found to occupy the portion of the Green River above the Fear Access on Dry Piney Creek. Brown trout and Snake River cutthroat trout made up the majority of the trout population, with a large number of individuals greater than 16 inches long.

The use of night electrofishing techniques has proven to be very successful on some rivers in the Pinedale Region, and 2007 was no exception. Efforts will continue as we resume monitoring the status of our important sport fisheries and improve fishing opportunities for anglers. Just beware of oncoming headlights and reports of UFOs cruising the Green River during the summer!

“Biologists use the cover of darkness to obtain population estimates on important sport fisheries”

Wyoming Game and Fish Department

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"Conserving Wildlife – Serving People"

Bonneville cutthroat trout (Cont.)

(Continued from page 2)

withdraw their finding. Their decision was prompted by a legal interpretation of a specific phrase in the initial finding. Therefore, the U.S. Fish and Wildlife Service will again review the status of Bonneville cutthroat trout to determine whether the populations in any significant portion of the range of this subspecies warrant listing as threatened or endangered. Public comments will be gathered in early 2008, and a final decision should be released in 2009. However, these decisions are often delayed, so it may be a long time before we finally know the official status of this important native trout.

-Pete Cavalli

We've Moved!

The Pinedale Regional Office officially moved to our new location at 432 East Mill Street in early 2008. The new office is located approximately two blocks east of the old office location on South Sublette Street.

The public is encouraged to come see the new location and visit with the fish staff anytime during business hours.

Fish Division Mission Statement

As stewards of Wyoming's aquatic resources, we are committed to conservation and enhancement of all aquatic wildlife and their habitats for future generations through scientific resource management and informed public participation. We will use an integrated program of protection, regulation, propagation, restoration, and control to provide diverse, quality fisheries resources and angling opportunities. Our efforts will balance the productive capacity of habitats with public desires.

Important Dates



- Pinedale Kid's Fishing Day is Saturday, June 7th, 2008. Call 307-367-4353 for more information.

- Wyoming Free Fishing Day is Saturday, June 7th.

- The 11th Annual Wyoming Heritage Hunting and Fishing Expo is September 11-13, 2008 at the Casper Events Center. The Expo is a great event for youngsters and adults to learn about the value and diversity of Wyoming's wildlife resources. For more information about the Expo, visit the Game and Fish's website at <http://gf.state.wy.us> or call 1-888-EXPO-WYO.

WY Game & Fish Department E-Newsletter

The Wyoming Game & Fish Department has a monthly e-newsletter. The free e-newsletter arrives once a month in your email in-box to keep you informed of all the latest news related to hunting, fishing, recreation, and wildlife conservation efforts in Wyoming. There are two ways to subscribe to the e-newsletter: sign up online at: <http://gf.state.wy.us/newsview/frmNewsDisplay.aspx> or email: join-wgfnews@wyoming.gov