



Wyoming Game and Fish Department

Green River Region Angler Newsletter

2012

Volume 7

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Fish Management in the Green River Region

Welcome to the seventh issue of the Green River Region Angler Newsletter. This annual newsletter is dedicated to the aquatic resources in the Green River Fisheries Region. Within this issue, we'll highlight popular fisheries as well as interesting projects and conservation issues.

Our region spans from Fontenelle Reservoir in the north to Flaming Gorge in the south, from the Bear River in the west to the Little Snake River in the east, and includes all the lakes, reservoirs, rivers, and streams in between. Ours is the largest fisheries region in the state, and one of the most diverse! From trophy lake trout to native Colorado River cutthroat, bass, kokanee, tiger trout and more, Green River has a little something for everyone!

Our crew consists of a fisheries supervisor, two fisheries biologists and one aquatic habitat biologist. Together, we're responsible for managing the fish communities and their habitat throughout the Green River Region. We manage aquatic resources for *you*, the people of Wyoming, so your input is very important and we appreciate your comments. Please feel free to contact us at 307-875-3223, or using the information provided on the last page of the newsletter. Happy fishing!

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Biggest fish 2011 – Ross Jackson, UT

Burbot Bash — Flaming Gorge Reservoir

The annual Burbot Bash at Flaming Gorge Reservoir has become a popular event for ice anglers interested in competing for cash prizes while also helping to control the illegally introduced population of burbot. The Bash was started by a group of sportsmen concerned by the introduction of burbot and negative impacts this aggressive predator may have to the Flaming Gorge fishery. The event initially began as a free single day seminar to educate anglers about the potential consequences of burbot in the reservoir and promote harvest of the unwanted fish. Since 2011, the Bash has been sponsored by the Green River, Rock Springs and Flaming Gorge chambers of commerce and supported by state wildlife agencies in Wyoming and Utah. What began as a small grassroots event has now become a large regional ice fishing contest for cash and prizes to benefit the fishery and expose sportsmen to the growing burbot problem in Flaming Gorge.

Following their illegal introduction, the Wyoming Game and Fish Department (WGFD) began encouraging the harvest of burbot and asking for help from the angling public to help manage the fishery by removing as many as possible. Burbot are aggressive predators and feed on just about everything in the reservoir. Biologists have examined the stomach contents of all burbot sampled the past five years and the results are alarming to say the least. Their diet is very diverse and includes other fish, crayfish, eggs and invertebrates (bugs). Burbot predation on smallmouth bass and

kokanee salmon is of particular concern. Juvenile smallmouth bass appear to be a favorite prey item and not surprisingly the number of juvenile smallmouth bass has drastically declined since burbot became established in the reservoir. Predation on kokanee salmon is another major concern. Adult kokanee have been found in many burbot stomachs and kokanee eggs have also been seen in the fall when the salmon are spawning. Obviously the added predation on these highly valued sport fish is troubling and biologists are doing everything possible to limit the negative impacts and control the burbot population. Those efforts include allowing unlimited harvest, generating angler interest, and promoting contests to increase the number of burbot removed from the fishery each year.

The Burbot Bash has certainly helped to accomplish those goals. The past two events in January of 2011 and 2012 resulted in the harvest of more than 5,000 burbot. In addition to these successful removal efforts, another unique aspect of the Burbot Bash has been the grand prize for catching a tagged fish. More than 650 burbot were tagged the last couple years prior to the Bash and contestants lucky enough to catch a tagged fish were eligible for a grand prize drawing worth thousands of dollars. All the tags had identification numbers specific to each individual fish so biologist could collect data on burbot movement and growth. The tags were also used to estimate the number of burbot in the population based on the proportion of tagged burbot caught during the event. This is called a mark-

recapture estimate using anglers to sample the marked population. The estimate for 2012 has yet to be calculated but the 2011 estimate was approximately 300,000 fish and may be twice that large based on statistical analysis of the data. The most disturbing aspect of the population estimate is that the number only applies to the upper end of the reservoir where anglers were fishing (due to poor ice conditions) so the total number of burbot in Flaming Gorge is likely much greater.

Hopefully the Burbot Bash will continue to grow and attract even more anglers in the future to further benefit the Flaming Gorge fishery. In addition to the Bash, there are numerous other burbot ice fishing contests each year which the WGFD fully supports as well.

Angler harvest is one way to control their population and information from other areas where burbot are native suggests that populations have declined in large part because of over harvest. There is no quick fix to the problem and burbot are not going away. Yet biologists are hopeful that over time angler harvest will succeed at suppressing the Flaming Gorge burbot population and minimizing the predators impact on the other Flaming Gorge sport fish populations that anglers cherish.

One angler said it best during the closing ceremony, "It was good to help be part of the solution to this problem."

Burbot Angling Tips:

Drill several holes – experienced burbot anglers will drill more than 20 holes for themselves.

Be aware of your depth – Depths of 20-30 feet have been most productive.

Glow and scent are very important – keep your bait fresh, recharge glow jigs often.

Try different habitats – burbot can be caught in flats adjacent to rocky cliffs and the backs of bays while spawning.

Ice Fishing For Burbot

Numerous burbot ice fishing tournaments have been held on Flaming Gorge Reservoir in recent years. Beyond the large numbers of fish removed at each of these derbies it is striking how many participants struggle to catch burbot. A few teams consistently catch large numbers of burbot, another group of teams catch some, but a lot of teams catch very few. This article shares some tips for catching burbot through the ice on Flaming Gorge Reservoir in hopes of increasing catch rates on these voracious predators. Remember, every burbot removed from Flaming Gorge Reservoir represents a savings in game fish, especially kokanee and smallmouth bass!

Burbot are most active at night. In Flaming Gorge, they find dark recesses under rocks and in holes and cracks in the rocky cliffs that line the reservoir. Around sunset, burbot start emerging from hiding and looking for food. The first 2-3 hours following sunset and the couple hours before sunrise can be very productive periods for catching burbot.

Good burbot fishing can be found immediately adjacent to cliffs both on the main body of the reservoir and within the bigger bays of the reservoir. The deep vertical habitat immediately next to most cliffs tends to produce few burbot. Instead



Group of anglers with a nice mess of Flaming Gorge burbot.



Examples of productive luminescent lures.

anglers should target the habitats adjacent to cliffs with slopes less than 70 degrees and a rocky bottom. The mouths of bays tucked between cliff complexes can be also good. Other good spots to try are cliff complexes within bays that have gradually-sloped habitat nearby.

Burbot can be caught at water depths of 5 feet out to 70 feet, but 20 to 30 feet is most productive. Lures should be no more than 6 inches off the bottom. If you are fishing with multiple lines, spread them across a range of depths to start and consolidate them near the depth that is working best. If you are not catching fish, move to new holes regularly.

Night fishing for burbot requires lures that glow. Jigs with luminescent grub bodies and heavy spoons that are luminescent are most productive. The weight of lure used will be dictated by the depth you are fishing. If you are fishing shallow $\frac{1}{4}$ or $\frac{3}{8}$ ounce jigs are fine. If you are fishing 40 feet or deeper you will need a $\frac{1}{2}$ ounce jig or more. Burbot are not shy and don't care about the lure's weight so use the lure that gets you down fast. Also keep in mind burbot have hard mouths and

Burbot Angling, Continued:

they get big. Stout hooks are a must. Luminescent lures only hold the glow for 10-20 minutes. It is critical that the glow be recharged on a regular basis. Finally tip the lure with a strip of sucker meat (skin on), 1-1¼ inches long and ½ inch wide works well.

Burbot catching (not just fishing) is an active sport. Those anglers catching lots of burbot are actively fishing and constantly moving from hole to hole. The good burbot anglers start out by drilling at least 20 holes. They typically don't spend more than 10-15 minutes fishing a hole without a bite before moving to a new hole. The rod they are holding is being lightly jigged at all times. Tip-up anglers should be using at least one jigging rod that they actively fish while waiting for flags to go up. They also need to be checking tip

-ups every 20 minutes at least. Don't be shy about hand jigging your tip-up line as you check it. Many burbot bite tip-up lures while they're being checked. Burbot are either hanging on the lure below the tip-up without triggering the flag or the act of checking the tip-up will solicit a strike. Most critically, recharge your lure every time you check your tip-ups.

Finally, burbot seem to move and forage in small schools. If you catch one from a hole there are likely several more burbot directly below you. Get the fish on the ice and your lure back down to the bottom as fast as possible. More times than not, if you are quick enough, you will ice 1-2 more burbot from that hole same within 60 seconds of hooking the first fish.

The Three Species—Native non-game fish of the Green River

Flannemouth sucker, bluehead sucker and roundtail chub, collectively known as “the three species” are native, non-game species of the Colorado River drainage. The Green River drainage in Wyoming is the northern most extent of their distribution. Once abundant in rivers of Wyoming the three species have experience severe declines in recent decades. Although many factors have contributed to the decline of the three species introduced non-native fish species has had the greatest impacted. Three non-native non-game species in particular have contributed to the decline of the three species: white sucker, burbot and creek chub. White sucker pose the biggest threat to the native suckers by competing for food and readily hybridizing with the native suckers. Burbot, as they spread throughout the Green River drainage, are taking their toll on the native fish by preying on them. Creek chub compete with roundtail chub for food and habitat. Adult creek chub have also been found to eat the fry and juvenile life stages of the native fish. The WGFD has been working in three drainages to reduce the threat posed by these non-native fish. Crews from the WGFD has been electrofishing many miles of river and stream habitat in the Big Sandy and Little Sandy drainages and the Muddy Creek drainage to remove non-native fish species. In 2011 175 miles were electrofishing across the three target drainages.



Flannemouth Sucker



Roundtail Chub



Bluehead Sucker

Northern Leatherside Chub

Human activities have extensively altered native fish populations and their habitats in the Western United States. Due to these concerns, Wyoming Game and Fish Department (WGFD) biologists have increased efforts to gather information about the current population status and distribution of native fish across the state. One such species is the northern leatherside chub, a rare desert fish native to parts of Idaho, Nevada, Utah and Wyoming. The northern leatherside is classified by the WGFD as a species of greatest conservation need and is considered a sensitive species by both the Bureau of Land Management and U.S. Forest Service.

Northern leatherside chub are small fish in the minnow family that only reach about 5 inches in length. They typically inhabit small streams and ponds within their native range, including in the Bear River and Snake River drainages. Very little was known about northern leathersides so surveys were initiated in 2005 to describe the current distribution and abundance of northern leatherside in the upper Bear

River drainage of Wyoming.

In 2007, the species was petitioned to be listed under the Endangered Species Act (ESA) and the WGFD increased efforts to collect information about this relatively unknown desert fish. An intensive project was conducted in 2010 and 2011 to study the

distribution and habitat needs of northern leatherside and identify threats to their persistence. The results of the study found the species is still relatively common in many places, but populations are highly fragmented in most areas they are found and their distribution has declined relative to historical records.

Northern leatherside appear to prefer foothill stream habitat and are generally found in deep pools with some form of cover like woody debris. They appear to be quite tough as well despite their

small size. Northern leatherside can tolerate a wide range of environmental conditions and often persist in remnant pools of drying streams during the summer months until conditions improve. They can be vulnerable to predation by larger trout and are often associated with other

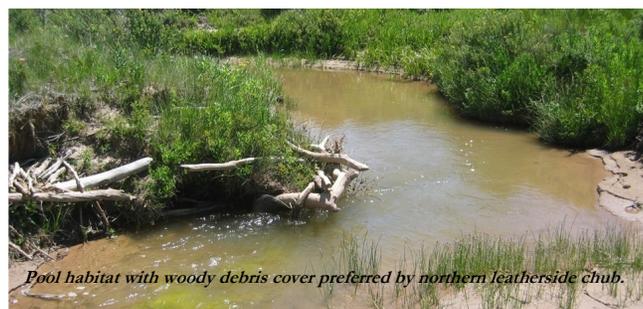
native non-game fishes like mountain sucker, reddsider shiner, and speckled dace.

The research conducted over the

past few years has resulted in more knowledge about northern leatherside chub and will help direct future management in Wyoming. This work has also confirmed that populations in Wyoming represent the core range of northern leatherside. This means that Wyoming will have the unique opportunity to be a leader in range-wide conservation efforts for the species. In addition, the United States Fish and Wild Service announced in 2011 that listing of the species under the ESA was not warranted due in large part to the recent conservation efforts conducted in Wyoming.



An adult northern leatherside chub captured in the upper Bear River drainage. Notice the fish has an almost leathery appearance (hence their name).



Pool habitat with woody debris cover preferred by northern leatherside chub.

Future of the Three Species Project

Over the past several years, we have published updates in this newsletter about work being done on three native fish species (see previous page). However, the goal of the native fish project is to restore warm water fisheries back to completely native fish assemblages in the Big Sandy River, Little Sandy Creek and Muddy Creek drainages.

To complete the restoration, the Fisheries Management Crew in Green River will be shifting gears from the electrofishing surveys to

building fish passage barriers and performing chemical restoration in the Big Sandy River, Little Sandy Creek and Muddy Creek drainages. Although this is a monumental task, restoration will be conducted incrementally. For example, in 2012, chemical restoration is scheduled for 2 tributaries. Fish passage barriers will be installed at the mouth of each stream and chemical restoration will occur upstream of the barrier. Once chemical treatments are confirmed

successful, native fish will be transplanted into the streams.

When tributary restoration is completed, the Fisheries Management Crew will begin work on restoring the main stem rivers. The restoration process is similar to that described above for tributary streams. You might be asking why chemical restoration is necessary. Why not keep electrofishing and removing non-native fish? Chemical restora-

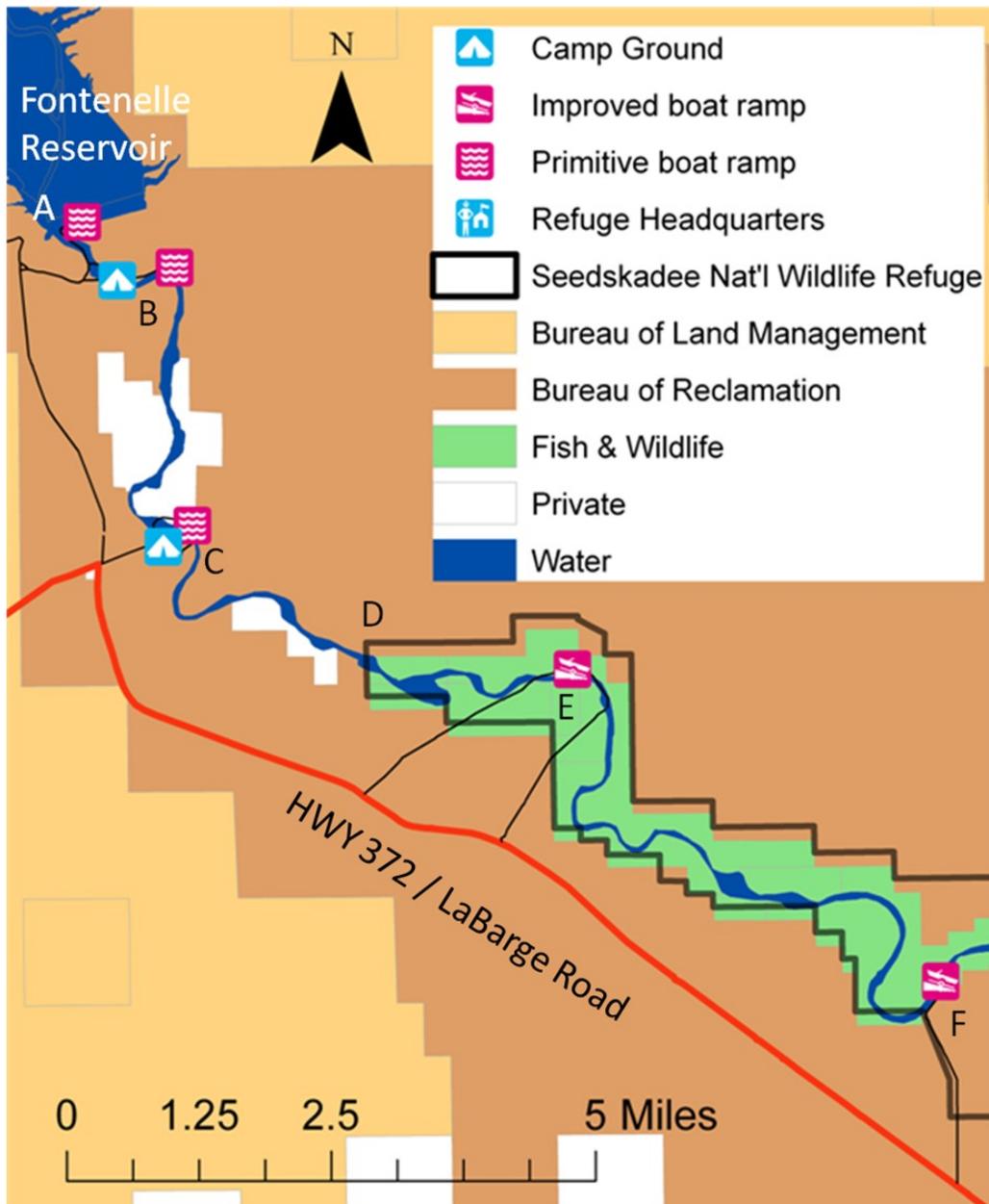
tion is the only way to remove all the non-native fish. Although electrofishing is efficient, every fish will never be captured.

As the planning process continues for the next phase of the native fish project, a series of meetings will be held to receive public comment. Look for press releases over the next several years on meeting information if you wish to learn more about this project.

Green River Float Map

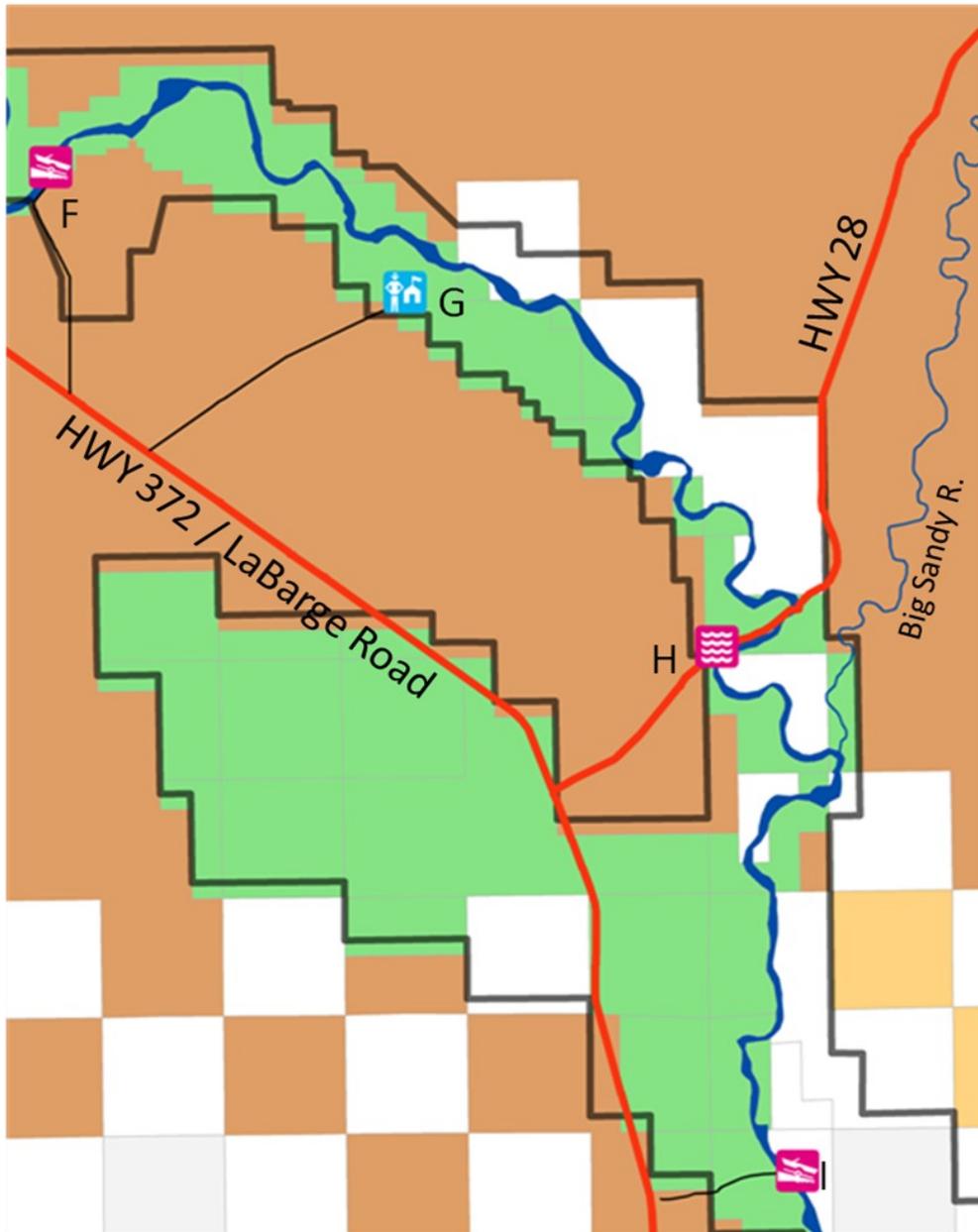
We often field calls from anglers asking about boat, shore and wade fishing access points and camp grounds along the Green River below Fontenelle Dam. The next two page insert is a float map with improved and unimproved boat ramps, approved camping locations and legal status of lands from the Fontenelle dam down to the “six mile” boat ramp (I) downstream of the confluence of the Big Sandy with the Green River. River and road mile distances between landmarks are given in a table on page 5 for ease of navigation.

Please note that the Green River from the CCC bridge (near Slate Creek Camp Ground; C), downstream to the Big Sandy confluence is a special regulations area. This area has a creel limit of one trout per day or in possession. All trout under 20 inches need to be released. Also, fishing is permitted by artificial flies and lures only throughout this section. Use of bait is allowed upstream and downstream of this area and state-wide creel limits apply. Please check fishing regulations prior to going out for special and seasonal regulations.



Green River Float Map

| Landmark | Description | River miles below Fontenelle Dam | HWY miles from I80 to Landmark turnoff |
|----------|---------------------------|----------------------------------|--|
| A | Fontenelle dam takeout | 0 | 43.5 |
| B | Weeping Rock CG takeout | 1 | 43.5 |
| C | Slate Creek CG takeout | 5 | 40.6 |
| D | Seedskadee North boundary | 7 | |
| E | McCullen Bluff takeout | 10 | 35.5 |
| F | Hay Farm takeout | 17 | 30.1 |
| G | Refuge Headquarters | 22 | 27.4 |
| H | Farson 28 takeout | 26 | 27.0 |
| I | 6 Mile takeout | 35 | 21.4 |



High Times on High Savery

High Savery Reservoir is the largest, most popular standing water fishery in south central Wyoming, located approximately 35 miles South of Rawlins. Construction on the reservoir began in 2002. The impoundment was closed in 2004 and filled to its 22,433 ac-ft capacity by 2005. Managed as a fishery for kokanee salmon, Colorado River cutthroat trout and tiger trout, the reservoir is stocked with these species annually. Anglers will also encounter the occasional brook trout washed into the reservoir from upstream tributaries. Downstream of the dam, both rainbow trout and Colorado River cutthroat trout are stocked into the tail water (see Wyoming Game and Fish Department Walk-in Access Map for information on McCary Ranch/High Savery Reservoir tail water walk-in units).

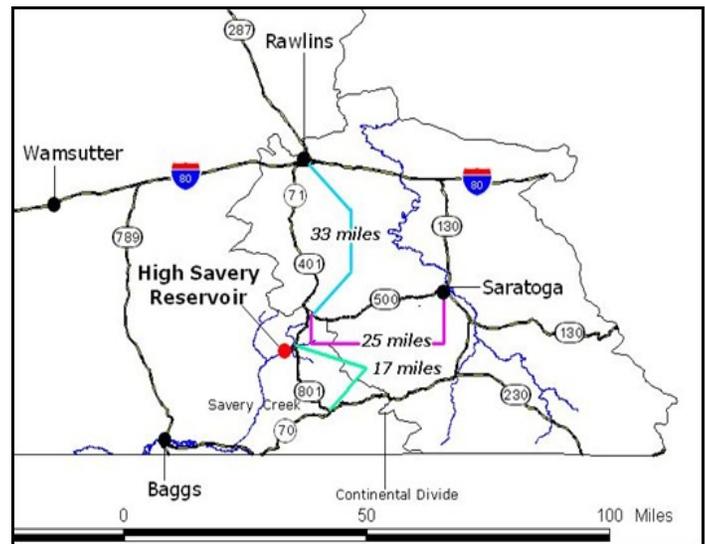
The best fishing on High Savery is in early spring after ice-off when temperatures are low. The road in is typically accessible by mid to late May. Later in the spring and summer, high water temperatures and declining oxygen levels make for poor fishing. Early spring is a good time to target trout from shore, and kokanee from boats. Kokanee tend to school at specific depths (a fish finder and downriggers are extremely useful for targeting these species). Spring netting shows the highest concentrations of kokanee occurring at depths from 20-40 feet. The next most popular depth range is from 0-20 feet. Kokanee sampled in 2011 ranged from 7-16 inches.

Tiger trout are surface-oriented and are often caught structure, such as submerged vegetation or rocks. Sampling in 2011 produced tiger trout ranging

from 17 to just under 26 inches (current state record is 22.5 inches).

Facilities at the reservoir include one improved boat ramp, parking area and restroom on the northern side of the reservoir. There is currently no overnight

camping permitted around the reservoir. However, an abundance of primitive camp sites may be found on adjacent BLM and USFS land.



Fontenelle Boat Ramp Upgrade

The Wyoming Game and Fish Department used Boating Access monies to upgrade the boat ramp on Fontenelle Reservoir near the Dam. Construction occurred in November and December of 2011. Thermal blankets and a lot of elbow grease were used to complete construction during a window of good weather. The project included extending the concrete portion of the existing boat ramp up the hill to just shy of the outhouses. This project has thankfully eliminated the long-standing problem of vehicles skidding out on the steep, gravel of the old ramp. But don't take our word for it. Get the boat out and go see for yourself!



Above: Workers smooth the freshly poured concrete at the Fontenelle Dam boat ramp.



Right: Workers lay rebar and prepare the Fontenelle Dam boat ramp for a much needed upgrade

Adopt-A-Trout Program Initiated on the Bear River

The Upper Bear River Chapter of Trout Unlimited (TU) and the Wyoming Game and Fish Department (WGFD) launched an exciting new project in 2011 to study a couple sensitive native fish species in the Bear River. The project was developed with two goals in mind. The first was to implement a radio telemetry study to assess seasonal movements and habitat use of native Bonneville cut-throat trout and bluehead sucker, as well as the influences of human impact on both species. Secondly, TU wanted to partner with Uinta County School District No. 1 in Evanston and incorporate an Adopt-A-Trout program in conjunction with the telemetry study. The Adopt-A-Trout program seeks to engage local science students in fisheries

related research projects. Evanston's program will be one of the first to be implemented in Wyoming. It's an exciting opportunity not only to TU and WGFD, but also to Evanston Middle School teacher Derek Haider's 7th grade "Challenge" science class involved with the study. The Adopt-A-Trout project officially got under way in the fall at the Bear River State Park where Haider's class spent the morning watching biologists from TU and WGFD electrofish a section of the river to collect fish and surgically implant radio telemetry tags for tracking. The students also participated in several break-out sessions that taught them about other fish species and aquatic invertebrates (bugs) found in the Bear River, radio

tracking equipment used for this project, and riparian habitat.

To date, a total of 19 Bonneville cutthroat trout and 6 bluehead suckers have been tagged for the project. All fish tags provide individual radio signals so that each fish can be tracked to gather key information on fish movement. Officials are also asking for help from anglers if they happen to catch any of the tagged fish in 2012. Fish with tags should be obvious to anglers since they have

wire antennas sticking out from the side of their abdomen (see photo below with red arrow pointing to antenna). Any angler that catches a tagged fish is asked release it immediately. However if the fish must be harvested, please contact TU and return the tag so it can be reused to tag another fish.

For more information on the UBRTU Adopt-A-Trout program, or to return a fish tag, please call Mike Jensen or Mark Tesoro at (307) 789-6560.



A Bonneville cutthroat trout tagged for the UBRTU Adopt-A-Trout project. The red arrow points to the wire antenna of the radio tag.



Illustration by Joseph Tomelleri

Trout Salvaged From Viva Naughton Spillway

On August 24, 2011 workers with the Wyoming Game and Fish Department and Naughton Power Plant personnel salvaged trout from the energy dissipation basin at the base of the spillway on the west side of Viva Naughton dam. The basin is known to locals as the "tub" and sits at the base of the spillway on Viva Naughton Dam to dissipate energy when water is overflowing the spillway during spring runoff before it is released to the river downstream.



A typical rainbow trout found in the "tub" during the salvage operation.

Trout follow the water out of the spilling reservoir ending up in the tub. They also move up into the tub from the river during high water. After the reservoir stops spilling, the connectivity with the river is lost thereby trapping the trout in the tub. In a normal year, the trout hang out in the tub, which is about 10 feet deep, and wait for the reservoir to spill the following year. In 2011, Naughton Power Plant personnel needed to drain the tub to complete repairs to the spill way.

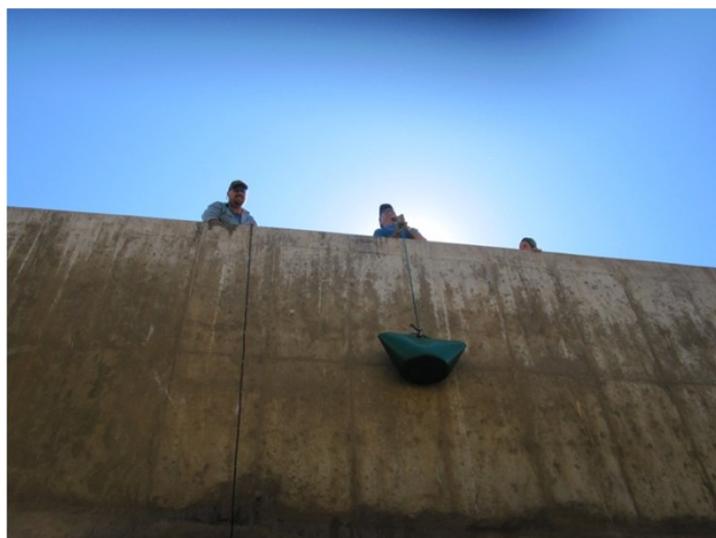
The Naughton Power plant uses Viva Naughton Reservoir as a water source for operations at the power plant. Naughton plant managers needed to complete maintenance on the concrete within the basin and the spillway. To complete the maintenance they needed to drain the water out of the basin. The trout in the basin had no way to escape and would have died when the

basin was drained if the salvage operation had not been performed. Plant personnel contacted the Green River fisheries crew and a plan was hatched to salvage the trout from the tub.

Naughton Power Plant personnel drained all but a couple feet of water out of the basin prior to the salvage operation. Game and Fish personnel and Naughton Power Plant personnel netted the trout from the basin with seines. The fish were hoisted up an 18 foot wall in buckets with water pulled by ropes. The trout were then put in a stocking tank with oxygen and circulating water, awaiting the trip to Viva Naughton Reservoir for release.

The operation salvaged 175 trout from the tub. The trout were released into Viva Naughton Reservoir. The salvaged trout ranged in length from 10

inches to over twenty inches with most of the trout well over ten inches. Many of the larger fish were over 16 inches and 19 of the trout were estimated between four and six pounds. The Green River fisheries crew applauds the employees of the Naughton Power Plant for initiating the fish salvage and contacting the Game and Fish for assistance. The Plant personnel's assistance was also invaluable during the salvage. They did most of the heavy lifting "literally" as it was the plant personnel that hosted the trout out of the basin up the 18 foot high wall in buckets of water. This salvage operation was a good cooperative venture that allowed the Department and Plant personnel to save a significant number of fish and put them back in the Viva Naughton Reservoir where anglers will have access to them.



Naughton Power Plant personnel hoisting trout up the Viva Naughton spillway wall to the waiting stocking tank. All salvaged trout were then put back into the reservoir for anglers to enjoy!

Wyoming Game and Fish Department

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Newsletter Contributors

This years' newsletter contributions came from the Green River Fish Management Crew. Thanks to all who pitched in.

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 capability of habitats with public desires."



2012 Dates to Remember

Free Fishing Day June 2 – The Wyoming Game and Fish Commission has declared June 2, 2012 and June 1, 2013 Free Fishing Days 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, which are not regulated by the State of Wyoming) without a fishing license or conservation stamp.

Kemmerer Kids Fishing Day June 9 – Located at the Kemmerer Community pond by the overpass. Sponsored by the Kemmerer Recreation Center.

Evanston Kids Fishing Day June 9 – Located at the UP Ice Ponds, Registration starts at 7.45, Fishing from 8 am to 1 pm. Sponsored by Upper Bear River TU Chapter.

Rock Springs Kids Fishing Day June 16 – Located at the Rock Springs Pond - south side of the road into the Rock Springs Golf Course. Event 9 am to 3 pm. Sponsored by Flaming Gorge/Green River TU Chapter, Seedskaadee Wildlife Refuge and the WGFD.

Wyoming Hunting and Fishing Heritage EXPO: September 13-15 – This year's Expo will be Thursday through Saturday, September 13-15 from 9-4 at the Casper Event Center. See <http://wgfd.wyo.gov/web2011/education-1000262.aspx>

