Upper Snake Region Annual Fisheries Report Activities and Accomplishments

Volume 6 2011

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Welcome…

And Thanks for your interest in the 2011 edition of the Upper Snake Regional Fisheries Newsletter. Over the past several years, we've been producing this document to better inform anglers of the fisheries resources, issues and activities of the Idaho Department of Fish and Game. We've had another productive year, including completing numerous population surveys, a creel survey on the Teton River, and implementing new fishing regulations. This newsletter, along with those from past years, will be posted on the IDFG website on the "Fishing" page, under "Fishing Reports/Info" (Upper Snake). If you find it interesting, please tell your friends and fishing partners and pass it along. We can most effectively serve anglers when they stay informed and involved, so if you have questions or want to share your thoughts, please contact us.

New Fishing Regulations Take Effect

If you've picked up the 2011-2012 edition of the Idaho Fishing Regulations, you will quickly find they've changed compared to past years. We've moved to a format we think anglers will find more useful and less confusing than our old package. Along with the new format, there are several season changes that took effect on January 1, 2011. Among the noteworthy changes are that streams in the Upper Snake Region have largely gone to open all year as opposed to a season that previously ran from Memorial Weekend through November 30. Many of these newly opened streams are catch and release from December 1 to Memorial Weekend, and will provide anglers with opportunity to fish some quality waters that were unavailable last year. Additional opportunity is also provided on Henrys Lake, as well as portions of the Henrys Fork including Box Canyon. Although many regulations have changed, some streams remain closed. Please refer to your new regulations booklet before heading out this spring to ensure you stay within the law.

Tributary Weirs on the South Fork Get a Leg Up

Much like salmon and steelhead migrate from the ocean into freshwater rivers to spawn, native Yellowstone cutthroat trout in the South Fork migrate into one of four tributaries each spring to spawn and continue their life cycle. The problem on the South Fork tributaries is, so do non-native rainbow trout. Rainbow trout hybridize with cutthroat trout, reducing the abundance of native cutthroat. Additionally, rainbow trout often outcompete young cutthroat, further reducing their abundance. Over time, rainbow trout left unchecked take over and push cutthroat trout out of the system.

Excluding rainbow trout from the four main spawning tributaries of the South Fork has been a priority for the Idaho Department of Fish and Game since 2001, and these efforts have met with varied success. Standard methods used to trap salmon are ineffective in our tributaries, where we are attempting to collect relatively small fish in high runoff conditions. We essentially needed to reinvent how our tributary traps functioned to meet our needs – a situation that had not successfully been completed when we started our weir program.

Over the course of the last decade, we tried numerous methods, some of which were successful under some conditions, and others that failed. We are glad to say we recently completed modifications to the last of our tributary weirs. Three of the traps now incorporate electrical barriers that are similar to an invisible electric fence across the stream. The fourth uses a waterfall to block upstream migrations. All of these barriers have a fish trap on one side where fish can enter as they try to negotiate around the barrier. After fish enter the trap, cutthroat are counted and passed upstream while rainbow trout and hybrids are removed and stocked into a nearby kids fishing pond. With these newly modified and apparently successful fish traps in place, native Yellowstone cutthroat trout have a better chance of maintaining strongholds in spawning tributaries and thus persist in their native environment in the South Fork for many years to come.

Free Fishing Day June 11, 2011

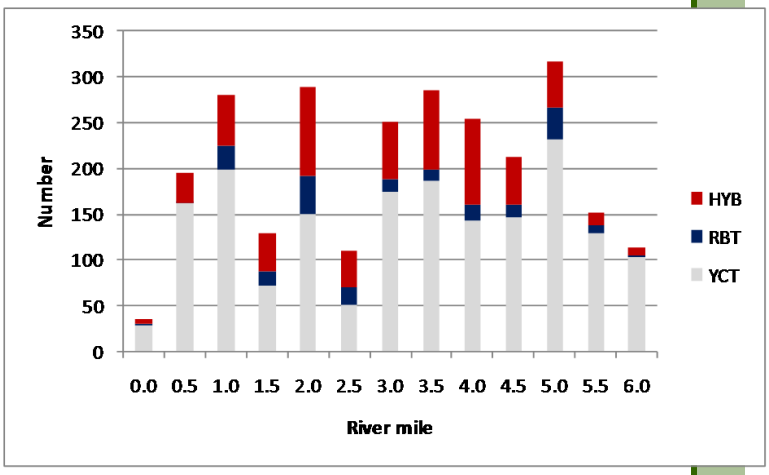
June 11, 2011 is the annual Free Fishing Day, where anglers are not required to have a fishing license to go fish. This is a great opportunity for anyone who's been interested in the sport to go give it a try! Not convinced it's for you? There are several places across the Upper Snake Region and statewide that will be offering clinics to help new anglers have an enjoyable experience. These clinics are typically located in areas where fishermen have a reasonable chance of catching fish. Additionally, fishing rods and tackle are available to borrow as needed, and there are plenty of instructors to teach how to rig, cast and land fish. IDFG will be sponsoring events at the Rexburg City Ponds in Rexburg, Freeman Park in Idaho Falls, Ashton Hatchery (limited entry – call for reservations 525-7290) and Island Park Mill Pond. If you are looking for a new experience, or are already a seasoned angler, come to one of the many great fishing spots in the Upper Snake and have some fun!

Palisades Creek: Keeping it Pure

The water flowing down the Big Hole Mountains in Palisades Creek eventually hits the South Fork, and is as pure as water gets in the west. Unfortunately, the same cannot be said for the fish swimming in this beautiful creek, which is one of four main spawning tributaries used by native Yellowstone cutthroat trout from the South Fork. Unlike when settlers first came to this area, cutthroat in Palisades Creek now spawn in the presence of nonnative rainbow trout, which is bad. History has shown that rainbows and cutthroat cannot persist together, as the two species hybridize, and rainbows and hybrids eventually become the dominant fish. To counteract this, IDFG has operated a fish trap on Palisades Creek since 2001 to block rainbow trout migrating upstream from the river, thus reducing risks of hybridization. However, installation of this barrier came too late, and a resident rainbow population exists upstream of the trap.

Beginning in 2010, our fisheries staff combined forces with our partner agencies and volunteers to try an experiment. We want to reduce nonnative fish abundance in Palisades Creek by manually removing rainbow and hybrid trout caught upstream of the fish trap. We removed 849 rainbow trout and hybrids in 2010, most of which were found between two and five miles above the fish trap. As crews neared Lower Palisades Lake, rainbows and hybrids were less abundant, similar to abundances closer to the fish trap. In the middle section, however, rainbow trout and hybrids often comprised 50% of trout abundance. Our sampling gear is not 100% effective, so our efforts will have to be repeated annually for several years. Participation by volunteers is welcomed. If you find this activity appealing, please contact us.

Through this research, we will learn if we can restore the genetic purity of Yellowstone cutthroat trout to the pristine waters of Palisades Creek. If we are successful, this strategy will be applied in other streams.



The number of Yellowstone cutthroat (YCT), rainbow (RBT), and hybrid trout (HYB) captured during sampling on Palisades Creek from the fish trap to Lower Palisades Lake in October 2010.

Personnel Changes

We've lost one of the pillars of our fisheries program in 2010. Damon Keen, the Fisheries Biologist at Henrys Lake for the past 10 years has accepted a transfer to the Lewiston Office of IDFG, and will be employed as their new Aquatic Habitat Biologist. Damon is credited with many accomplishments over his career at Henrys, but is most noted for his work educating fellow anglers and the public about the fantastic resources found at the lake.

Damon's replacement is Jessica Buelow, who will start work at the beginning of April. Jessica will bring a breadth of experience and enthusiastic approach with her when she starts.

The Teton River Offers Good Catch Rates Without Crowds

In 2010, the Idaho Department of Fish and Game interviewed fishermen on the Teton River to estimate angler use and harvest. Interviewees were also invited to take a fish identification quiz. Angler catch rates were just shy of one fish per hour, and caught an estimated 53,761 fish. Catch was comprised of Yellowstone cutthroat trout (40%), rainbow trout (22%), brook trout (27%), and mountain whitefish (11%). Total harvest was low, at 1,183 trout - 98% of captured trout were released. Although closed to harvest, a small portion of the fish observed in anglers creel was cutthroat trout. Based on observations, 6% of harvested fish were cutthroat trout, 50% were rainbow trout, and 44% were brook trout. Anglers spent nearly 57,000 hours fishing the Teton River in 2010. This is light fishing pressure compared to the neighboring South Fork which had over 233,000 angler hours in 2005. Over 80% of anglers were fly fishing, while 11% were bait fishing and 7% were fishing with lures. Anglers were most often fishing from a boat (71% of the anglers) instead of wading or fishing from the bank (29% of anglers), and most Teton River anglers were Idaho residents (60%). Fish identification quizzes on the river's bank indicated most anglers could identify trout species present in the Teton River. Rainbow trout were most accurately identified with 98% of the anglers correctly identifying them followed by Yellowstone cutthroat trout (94%), brown trout (81%), and brook trout (80%).

Abundant Fish in the South Fork

Each year, the Idaho Department of Fish and Game monitors fish abundance in the Lorenzo and Conant reaches of the South Fork. We conduct electrofishing surveys, which allow us to make comparisons to prior years. Based on these results, we are able to evaluate conservation efforts and the effects of management practices and fishing regulations.

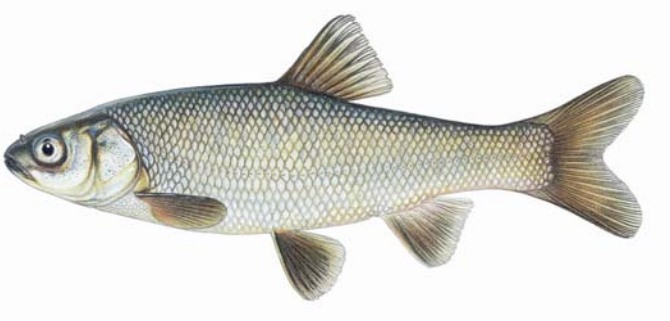
At our Lorenzo site, we found trout densities lower than in 2009, but within the range of what we consider normal for this area. We estimated there were 1,426 trout per mile, made up of 74% brown trout and 26% Yellowstone cutthroat trout. We also found a handful of rainbow trout, but not enough to calculate a population estimate. Survey results suggest trout populations in this reach are stable. Population estimates from the Conant monitoring reach revealed an abundance of fish, with over 4,600 trout per mile, close to the all-time high density estimate of 4,857 trout per mile found in 1999. Species composition was 42% cutthroat trout, 41% rainbow trout and 17% brown trout. Abundances of both cutthroat and brown trout have increased over last year, while rainbow trout abundance has decreased. In 2009, rainbows outnumbered cutthroat in this reach for the first time since population monitoring began. Results from 2010 surveys show that ongoing management actions are having an effect on fish populations and reducing rainbow abundance, which is encouraging.

IDFG currently manages the South Fork to benefit native cutthroat trout in three ways: maintaining tributary fish traps to exclude rainbow trout from spawning areas, encouraging anglers to harvest rainbow trout, and working with partner agencies to manage flows to benefit cutthroat and hinder rainbows. The results from our surveys suggest these efforts are working. Anglers play a critical role in this management program by harvesting nonnative rainbow trout (see Angler Incentive article else-

Henrys Lake Utah Chub Update

IDFG first documented Utah chub in Henrys Lake in the early 1990's although anglers have reported catching an occasional chub since at least the early 1960's. Utah chub are considered a native species in the Upper Snake Region, although their historical relationship to Henrys Lake is unclear. Beginning in 2002, IDFG began an intensive monitoring program for chub to evaluate population trends, year class strength, relative abundances, predation and competition with trout.

The chub monitoring program requires hundreds of hours of netting, hundreds of hours of laboratory work, and many more hours of data analysis. However, the data we gather from this program allows us to evaluate specific interactions between chub and trout. To date, the increasing abundance of chub has not proven detrimental to our trout populations. We are hopeful this trend continues.



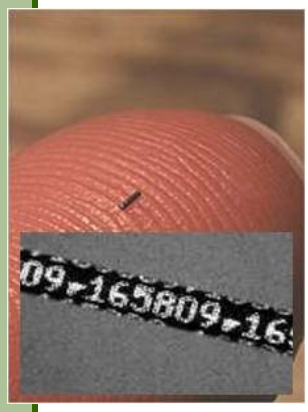
One potential method for chub control is predation by trout. An analysis of the stomach contents of 29 brook trout, 234 cutthroat trout, and 154 hybrid trout in 2004 showed very limited predation by any of these species, with 2 juvenile fish - the remains of which we were unable to identify to species - in 417 trout stomachs (<1% of stomachs had fish in them).

As chub are more abundant now compared to 2004 we repeated the stomach content analysis in 2010 to see if feeding behavior of trout had changed. We examined 872 trout stomachs (194 brook trout, 549 cutthroat trout and 129 hybrid trout) and found fish or fish parts in 4% of all stomachs. We found evidence of predation in 3% of all cutthroat stomachs, 3% of brook trout stomachs, and 7% of hybrid trout stomachs. While these numbers seem relatively small, we are optimistic that more in-depth research may reveal that Utah chub are a larger portion of trout diets than we previously observed, possibly as a result of the increased abundance of chub.

We will continue monitoring stomach contents during 2011, and will collect stomach samples on a monthly basis to determine how trout diet changes and when, if ever, fish species comprise a major portion of their diet.

Anglers – Make Money AND help Yellowstone Cutthroat Trout in the South Fork!

To get anglers to harvest more rainbow trout in the South Fork, IDFG partnered with Trout Unlimited to start a new program that will continue through 2011. 575 rainbow and hybrid trout were tagged in the snout with ultra small, coded wire tags that are worth anywhere from **$50 to $1,000**! Tags are so small, they cannot be detected without specialized gear. As such, the head must be turned in to IDFG for analysis, which can be done three different ways:



- Turn in rainbow heads to the Fish and Game regional office in Idaho Falls anytime during business hours to be scanned at a later time
- Bring in rainbow heads on the first Friday of each month to have them scanned while you wait
- Turn in rainbow heads at freezers placed at the Conant and Byington boat ramps (May through September only).

Anglers who do not wish to keep their fish may still participate in the program by donating the entire fish as outlined above. After scanning heads for tags, IDFG will deliver carcasses to the Eastern Idaho Community Action Partnership who will then distribute donated fish to local families in need. Anglers are requested to clean their fish on the river (not at the boat ramp) and to keep them clean and cool.

Anglers are encouraged to harvest all the rainbow trout they catch from the South Fork to help native Yellowstone cutthroat trout. The South Fork remains one of the few remaining Yellowstone cutthroat trout strongholds in their native range, but is threatened by non-native rainbow trout that compete for food and cover, and hybridize with native cutthroat. Offspring from these hybrid crosses are fertile and can continue to reduce the genetic purity of cutthroat. Anglers can directly help cutthroat trout in the South Fork by harvesting all the rainbow trout they catch.

Only rainbow trout and hybrids have been tagged for the incentive program, and only in the South Fork. Rainbow trout and hybrids are easily identified by their white-tipped fins, as shown in the picture below. Cutthroat trout do NOT have white-tipped fins. Please use good judgment when releasing cutthroat trout. If a fish is hooked deeply, clip the line as close to the fish's mouth as possible and release as opposed to trying to remove the hook. Also, handle fish gently, remove from the water only when necessary, and keep handling time to a minimum. With your help we can ensure that unintentional injuries are minimized.

Know Your Fish!

Rainbow trout—no limit—please harvest

Yellowstone cutthroat trout—no harvest

Brown trout—limit of two fish > 16"

Ririe Reservoir Walleye Update

IDFG implanted 41 illegally introduced walleye with radio transmitters in Ririe Reservoir in 2009 and 2010 to learn about their movements over the course of the seasons. Our intent is to educate anglers about where walleye can be caught in the hopes harvest can keep the population to a low level. Some general movement patterns emerged

Shortly after ice off (around April), walleye moved into the Willow Creek arm of the reservoir and the lower end of Willow Creek, presumably to spawn. Tagged walleye remained in Willow Creek until mid-May, and then returned to the reservoir. After spawning, tagged fish spread throughout the reservoir, but generally used the upper (south) half of the reservoir. As summer turned to fall, tagged walleye moved towards the dam, congregating near where the power lines cross the reservoir. This general movement pattern was consistent between both years we tracked walleye. We were unable to track during the winter, so are unsure what additional movements they might make, but we have yet to hear any reports of ice anglers catching walleye.

There is no bag limit on walleye in Ririe Reservoir and their potential impacts to the existing fishery are a concern. Therefore, anglers are encouraged to harvest all walleye they catch. For anglers targeting walleye, we suggest trying the Willow Creek arm of the reservoir as soon as ice out occurs. Concentrate on the submerged Willow Creek channel, as it appears migrating walleye are using the channel as opposed to the shoreline. Walleye appear to be spawning in riffles just upstream from the mouth, before these areas are inundated as the reservoir fills. Recent changes to the fishing regulations have opened Willow Creek year-round to fishing (see current regulations for complete details). Although there is no limit on walleye during this new season, trout fishing is strictly catch and release until Memorial Day Weekend.

Through late spring and summer, walleye may be tougher to find. Focus on the southern half of the reservoir. Tagged walleye generally occupied depths between 20 and 40 feet during summer and anglers should look for submerged rock points and shelves within this

Our intent is to educate anglers about where walleye can be caught in the hopes harvest can keep the population to a low level.

Henrys Lake Annual Gill Net Monitoring

2010 proved to be another good year on Henrys Lake, with anglers catching hard-fighting cutthroat, big beautiful hybrids, and gorgeous brook trout. From the bustling opening day crowds to the last die-hards shuffling off the ice, anglers had great success in 2010.

Each May, IDFG uses gill nets set prior to the opening of fishing season to monitor fish populations and collect biological data that helps us manage Henrys Lake. Weather conditions and ice-off dates sometimes limit the amount of data we can collect, but in 2010, we were able to set 50 nets, which resulted in great information on the trout population. Trout catch rates were 15.8 trout per net, which is nearly 40% higher than our long term average of 11.4 trout per net. Cutthroat trout were responsible for much of this increase, with catch rates going from 4.0 fish per net in 2009 to 10.1 per net in 2010. Hybrid trout and brook trout remained similar to 2009, with hybrids again below the long term average (2.4/net in 2010 vs. 3.9/net long-term average) and brook trout above the average (3.3/net in 2010 vs. 1.8/net long term average).

As for fish sizes, brook trout averaged about 14.5" and ranged over 20", while cutthroat averaged 13" and were caught up to 23". As most anglers know, the hybrids are the biggest fish roaming the lake, with the average size caught in our nets being over 17" and largest fish topping 25". We also saw a welcome decrease in catch rates of Utah chub.

We will be setting our 2011 gill nets in May, prior to the season opener, and will have more current information at that time. Based on our 2010 results, however, we anticipate another excellent fishing season on Henrys Lake in 2011.

We're on the Web!

http://fishandgame.idaho.gov/

Or check out our Facebook page
http://www.facebook.com/
IdahoFishGame

Or follow us on Twitter:
http://twitter.com/idfg

Henrys Fork Trout Population Monitoring

During 2010, IDFG surveyed the trout populations in four different reaches of the Henrys Fork, including the Box Canyon, from Riverside Campground to Hatchery Ford, downstream from Stone Bridge to Ashton, and from the railroad bridge downstream of St. Anthony to the Parker-Salem Bridge.

We estimated over 3,600 trout per mile in the Box Canyon, which is well above the long term average of 2,900 trout per mile. The average size of fish encountered in our surveys was about 14 inches, but we observed rainbow trout up to 21 inches.

In the Riverside to Hatchery Ford reach, we found over 5,600 rainbow trout per mile – the highest observed in any of our previous surveys throughout the river. Although the numbers are high in this reach, the average size is only about 8 inches, and most of the trout were less than 14 inches. This is similar to what researchers found in the late 1980's when this reach was last sampled. It appears that this area likely provides rearing habitat for juvenile rainbow trout and may be an important source for recruitment of trout to upstream reaches.

Downstream, from Stone Bridge to Ashton (Highway 20 bridge), we estimated about 2,500 trout per mile, which is similar to previous surveys. Although densities were similar, the proportion of brown trout within the population appears to be increasing. In the early 2000's, brown trout comprised ~8% of the total trout population, while currently, brown trout make up 15% of the trout population. Average size for rainbows was 13 inches while browns were slightly larger at 15 inches with maximum sizes of 20 and 22 inches, respectively.

We are continuing to learn about the fishery below St. Anthony, and 2010 surveys provided more interesting information. Past estimates have ranged from 400 to 1,900 trout per mile depending on the time of year sampling occurred, with fall samples averaging over 1,400 trout per mile and spring samples around 450 trout per mile. With brown trout comprising about 85% of the trout population here, you might assume that increased trout numbers in the fall would be related to brown trout migrating into this reach for spawning activity. However, the size of trout encountered during these surveys did not vary, which leads us to believe that the increase in trout density is not spawning related, but due to changing habitat conditions. This is further corroborated by a proportional increase in rainbow trout in the fall.

During 2011, we will be surveying the Box Canyon and Macks Inn reaches of the Henrys Fork. The Box Canyon is surveyed on an annual basis to gauge population fluctuations in the upper river and to evaluate winter stream flows and impacts to trout production. The Mack's Inn reach was last surveyed in 2007, shortly after a new cutthroat trout stocking program was initiated. We will assess the benefits of this program with our 2011 surveys.

Aquatic Invasive Species Threaten Area Waters

Zebra mussel

Eurasian milfoil

Introduction of invasive or nuisance aquatic species are a large concern in Idaho. Many anglers became aware of the issue in 2009 when the Idaho Department of Agriculture implemented a mandatory boat sticker to help fund the fight against invasive species. Since that time and as a result of funding generated from the stickers, many boat wash stations are now found at ports of entry coming in to Idaho. These inspection stations are designed to detect contaminated boats as they enter the state. In other areas of Idaho including Henrys Lake, boat wash stations are in place that could help curb the introduction of some aquatic nuisance species. Even in the presence of these counter measures, the threat of introducing invasive species is real. The only way anglers can stop the spread of these invaders is through personal responsibility. Please take responsibility for your actions, and when moving between different water bodies remember to **Clean, Drain and Dry your gear.** Some chemicals exist that may help decontaminate gear, but the only 100% effective method is to thoroughly dry all of your gear including boats, waders and any other gear that may have been exposed to contaminated water.

Quagga mussels