Thanks for reading the 2012 version of Pinedale Region Angler Newsletter. This years newsletter will feature stories and news regarding Soda Lake, 2012 regulation changes, mountain sucker, Upper Pole Creek drainage, 2011 activities and Daniel Fish Hatchery, along with other interesting aspects of fisheries management in the Pinedale Region. This newsletter is intended for everyone interested in the aquatic resources in the Pinedale area. The resources we manage belong to all of us.

The Pinedale Region encompasses the Upper Green River Drainage (upstream of Fontenelle Reservoir) and parts of the Bear River drainage near Cokeville (see map).

Tough Fishing Expected to Continue in Soda Lake in 2012

If you have been following the trends over the last few years, or you are a diehard angler of Soda Lake, it probably comes as no surprise to hear that trout numbers have been trending downward over the past few years. Trout numbers in the lake peaked in the late 1990s and have been slowly inching downward since. These unfortunate trends have continued into 2011, and the fishing outlook for 2012 looks to remain below average. In fact, brown trout numbers in 2011 were the lowest recorded since monitoring began in 1975, and brook trout numbers are near their all-time low as well.

Soda Lake is a unique lake for western Wyoming due to a number of factors. First, Soda Lake is in an entirely closed basin, meaning there is no permanent inlet or outlet. During wet periods, water levels can rise substantially, which has significant benefits to the fishery. Buoyed by the high water levels of the mid 1990’s, trout responded favorably to the increased availability of very productive habitat in Soda Lake, peaking at about 47,000 fish in 1997. Due to natural precipitation cycles and variability between years, water levels in Soda Lake do not remain consistent. Declining regional precipitation during the last decade resulted in decreasing water levels in Soda Lake. Less water means less habitat and lower numbers of fish. Population declines in Soda Lake

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have tracked very closely with these declining water levels. There is no doubt that the decline in trout populations in Soda Lake has been a direct result of drier weather patterns.

Low water levels impact trout populations in a number of ways. In addition to reducing the volume of habitat available for fish, when the lake contains a smaller volume of water it is more vulnerable to dangerously high water temperatures and low dissolved oxygen. Because trout are coldwater species, high water temperature causes stress that can lead to reduced growth, increased susceptibility to diseases, and even direct mortality. In winter, lower water levels are linked to less oxygen availability, which can further stress fish and cause fish kills. These negative impacts have been observed numerous times in Soda Lake since the late 1990’s. Often, dissolved oxygen concentrations in Soda Lake have dipped to five parts per million or below in the winter. Concentrations below this level cause negative stress responses and can be lethal to trout.

Although trends in Soda Lake are alarming and do not bode well for anglers, they follow directly from natural events. Options to improve fishing in Soda Lake are limited by the hand dealt by Mother Nature. Although anglers frequently call for additional stocking to counteract this pattern, increased stocking will likely exacerbate the problem. Adding fish to an already stressed ecosystem like Soda Lake would increase competition between individuals and accelerate negative trends. Fishery managers with the Wyoming Game and Fish Department have fine-tuned their trout stockings over the years to maximize survival of stocked fish in Soda Lake. Other anglers advocate switching to a catch-and-release only regulation, or closing the lake to fishing entirely. Since habitat conditions are the driving factor behind the negative trends rather than harvest, it was decided not to adopt these restrictive regulations. The only proven remedy to bring trout numbers back to their former glory will be a return of high water levels.

Although the outlook for fishing in Soda Lake in 2012 is bleak, some fish are still available to anglers and the fish that remain are often of trophy quality. Although numbers of fish have fallen precipitously in recent years, the average size of brook and brown trout has steadily increased. Indeed, some real bruisers still haunt the depths of Soda Lake awaiting the tantalizing lure or fly of a dedicated and patient angler.

-Luke Schultz

New Fishing Regulations Take Effect in 2012

Changes to the Wyoming Game and Fish Department fishing regulations are made every two years and are implemented on the 1st of January in even numbered years. A number of changes were made to the 2012-2013 fishing regulations that are important to area anglers.

New for 2012, the statewide limit for trout, including brown, cutthroat, grayling, golden, rainbow, salmon, splake, tiger and other trout hybrids, was split for lakes and streams. In lakes, the limit on trout is six per day or possession with no limit on their size. Whereas in stream, the limit is three per day or possession and only one can exceed 16 inches, and in the Green River drainage only one cutthroat trout can exceed 12 inches. The primary reason for splitting the limit out between lakes and streams was due to the large differences in their productivity and their ability to sustain differing levels of angler harvest. Lakes are among the more productive aquatic environments in the state and typically support a much larger population of trout than streams. They also receive the majority of the fish that are stocked in Wyoming, which are intended for anglers to catch and keep. In the past, limiting anglers to one trout over 20 inches often resulted in many unfilled limits as anglers were forced to release fish they would otherwise keep.

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Know Your Natives: Mountain Sucker
Catostomus platyrhynchus

One of the most widely distributed and common fish species in the Intermountain West is the mountain sucker. Mountain sucker range from eastern California east to South Dakota and from southern Utah north into Alberta and British Columbia. In Wyoming, mountain sucker are one of our most widely distributed species, occurring in nearly all of the major drainages except the southeast corner of the state. Despite its prevalence, an understanding of the ecology of mountain sucker has been generally overlooked. Although mountain sucker appear to be stable and secure in Wyoming, the species has been declining in other neighboring states.

Mountain sucker can be found in streams draining from mountainous areas, but tend to be much less common in larger rivers and the headwater reaches of mountain systems. Mountain sucker may also be found in the Finger Lakes around Pinedale, but are less common in standing water in other parts of its range. Streams that have the highest numbers of mountain sucker contain cool, clear water with cobble and rock substrate with abundant attached algae – their primary food source. Unlike other sucker species, mountain sucker feed almost exclusively on attached algae, consuming insects only inadvertently. Other sucker species, for example native flannelmouth sucker and introduced white sucker, will selectively feed on invertebrates and other stream bugs.

Mountain sucker have all of the features of typical sucker species including a large, fleshy-lipped mouth located on the bottom of the head, and a body shape built for living in benthic (bottom-dwelling) habitats. However, mountain sucker can be distinguished from most other suckers in Wyoming by a cartilaginous scraping ridge located on the inside of its mouth. This is used to scrape algae from rocks and wood in streams and lakes where mountain sucker feed. Bluehead sucker, another native sucker species, also have this scraping ridge but generally attain much larger sizes than mountain sucker. A large mountain sucker would measure 10 inches, but most are less than six inches. Their body is very cylindrical or cigar-shaped relative to other fishes, which make mountain sucker resemble a swimming hotdog with fins.

Mountain sucker are arguably one of the most colorful of the sucker species (see photo). The top half of mountain sucker are a dusky brown or olive that fades to a lightly colored belly. During its spawning season, which may run from spring into the middle of summer, mountain sucker develop a bright red to orange lateral stripe. Mountain sucker will spawn over gravel substrates in riffle areas, broadcasting adhesive eggs onto these open substrates to develop without parental care.

Mountain sucker play an important role in the ecosystems it inhabits by providing a critical link between primary productivity (algae and plant growth) and predatory fish production in stream systems. As a result, they tend to be excellent forage for trout species – up to a point. In fact, in some locations interactions with introduced trout has been tied to declines and complete losses of mountain sucker. Within streams with mostly native fishes, mountain sucker tend to co-occur in relative harmony with trout and other predatory fish. Managers will continue to expand their knowledge of mountain sucker and other native fishes as we work to ensure they are present for future generations.

-Mountain sucker are one of the most widely distributed native fish in Wyoming

Mountain suckers are among the most colorful of all the sucker species in Wyoming

-Mountain sucker prefer habitat with cool water and large, rocky substrate

-Luke Schultz
Every year, members of the Pinedale Fisheries staff spend countless hours in the field studying area fishery resources. Many popular sport fisheries are the focus of intense sampling efforts as they provide hours of enjoyment and continue to draw the attention of local, regional, and even international angling enthusiasts. Here are just a few examples of the areas more popular sport fisheries we sampled in 2011.

**Green River**

2011 was a banner water year for the Upper Green River basin, and the Green River itself enjoyed some of the highest flows recorded in recent history. Runoff-type flows extended well into July, creating some much needed flooding and scouring of the channel, which had not experienced much change in the past ten years. Flood events are critical for the long-term maintenance of important fish habitats both within the channel and along the margins or banks. Though short-term impacts from these events can be seen immediately thereafter, long-term benefits can be enjoyed for many years.

One interesting phenomenon from the high flows observed during 2011, was a downstream shift in trout numbers in the Green River. Based on sampling in three sections of the river; one above the US Forest Service boundary, one at Forty-Rod Creek and one below Big Piney, trout numbers declined in the upper portions of the river and subsequently increased in the lower portions of the river. This phenomenon was most apparent in small trout, primarily those less than 10 inches long. In short, the high flows apparently carried a large number of the smallest fish in the river downstream temporarily. Though this may have had some limited effects on angling during 2011, it isn’t expected to have any long-term effect on the overall river fishery. In fact, many of these fish have likely already re-distributed themselves, and thanks to the healthy flooding and scouring that occurred in 2011 should prosper in the coming years.

Additional work in 2011 on the Green River included some preliminary aircraft flights to determine angler use and success. Anglers may have noticed low-flying aircraft closely following the course of the river on a number of occasions in 2011. Fixed wing aircraft are used to count anglers on the river and estimate the total amount of angler use during a given period of time. Additional efforts will be conducted in 2012, with long-term plans to establish an intensified survey of angler use in 2013.

**Meadow Lake**

Meadow Lake is a popular mountain lake located in the foothills of the Wind River Mountains that contains a sport-fish population.
made up exclusively of grayling. In addition to being a popular gamefish attraction to anglers, the grayling in Meadow Lake are also the Department’s wild brood source, serving as the egg source for all grayling stocking in the state. For much of the past decade, Meadow Lake was negatively impacted by the prolonged drought conditions and subsequent low water. Following several years of population declines and little or no reproduction, grayling in Meadow Lake have made a strong comeback. By the summer of 2011, the grayling population was estimated at 20,000 adults, up from only 740 adults in 2008. Anglers wishing to catch a grayling should take advantage of the current conditions in Meadow Lake as excellent fishing is expected to continue for several years to come.

Finger lakes

A great deal of work was accomplished on several of the “Finger Lakes” in 2011 as managers continue to evaluate these regionally important sport fisheries. Two of the lakes, Boulder and New Fork lakes were the subject of intensified hydroacoustic monitoring in 2011. Hydroacoustics is an advanced form of “fish sonar” that utilizes reflected sound to actually count the number of fish in a lake. This particular technique is especially effective in large lakes with fish species that occur in the vast open water or pelagic zone. In the Pinedale Region, hydroacoustics is particularly effective for monitoring kokanee salmon, an open water fish than can prove difficult to evaluate using alternative methods such as netting. Kokanee are important because they generate a great deal of interest from anglers and also because they make up a large portion of the diet of lake trout, another important sport fish. The kokanee population that inhabits New Fork Lake also serves as the Department’s wild brood source, and is the primary source of all kokanee salmon stocks in the state. The kokanee population in New Fork Lake remained relatively unchanged in 2011 and should continue to provide good angling as well as meet the Department’s egg needs. Boulder Lake’s kokanee population saw a slight increase in 2011 following several years of decline. Continued improvement should make for better fishing and improve lake trout condition.

Lower Green River Lake, Halfmoon Lake, and Burnt Lake were also the sites of intensified netting assessments in 2011 to evaluate the status of game fish populations and to monitor their trends through time. Netting assessments are typically done on each of the large lakes in the region every 2-3 years. These are usually conducted from May – June and involve multiple weeks of netting to target sport fish and other non-game fish.

Following a change in the lake trout regulation in Green River Lake, it appears that overall size distribution and body condition is slowly improving. Prior to 2010, Green River Lake was managed by a special lake trout regulation that only allowed anglers to harvest two lake trout per day. Over several years of monitoring, it appeared that the lake trout were becoming smaller and more abundant. It is hoped that increasing harvest of lake trout in Green River Lake will help reduce the number of smaller lake trout and improve body condition and growth throughout the population. Additional years of monitoring should provide additional insight into these changes.

Halfmoon Lake and Burnt Lake contain some of the most diverse sport fisheries in the area. Anglers visiting Halfmoon Lake may encounter as many as four different species of game fish including lake trout, rainbow trout, brown trout, and brook trout. Netting continues to indicate that large numbers of these species persist in Halfmoon Lake with lake trout and rainbow trout making up the majority of the population. Lake trout density in Halfmoon Lake is among the highest in the region and a special regulation is in place to maintain larger numbers of smaller sized lake trout for increased opportunity.

Middle Piney Lake

Middle Piney Lake is a high elevation lake situated within the Wyoming Range mountains. It is one of the only lakes of its kind in the area and provides important recreational fishing opportunities to anglers on the west side of the Green River Basin. For a couple of years in a row, the road into the lake has been washed out by snowmelt effecting access into the lake and impacting the Department’s ability to maintain the fishery. In 2011, the road was repaired and should lead to improved access in the future. A complete assessment of the fishery was subsequently completed during 2011 to evaluate the current conditions in the lake. Based on the netting data, the lake trout have fared well over the years with a high density of large, healthy fish inhabiting the lake. Other species like kokanee and rainbow trout were less abundant, likely due to a couple of years with limited or no stocking due to access into the lake. 2011 also marks the first year that cutthroat trout were stocked into the lake. With improved access and additional years of stocking we should see improvement in the kokanee and cutthroat populations in the coming years.

-Darren Rhea
Angling Opportunities Plentiful in the Upper Pole Creek Drainage

Pole Creek is a major tributary of the New Fork River, and drains the west side of the Wind River Mountain range just southeast of Pinedale. The Pole Creek drainage is a diverse trout fishery, offering anglers the opportunity to catch cutthroat trout, rainbow trout, brook trout, brown trout, golden trout and lake trout. Besides the miles of stream fishing available, the drainage also contains more than 60 fish-bearing lakes. The Pole Creek basin begins at the base of the continental divide just below Harrower Peak at Wall Lake, a 104 acre lake located at an elevation of 10,449 feet. The watershed drains multiple lakes in the Pole Creek, Spider Creek, Fall Creek, Baldy Creek drainages, with each basin providing a variety of angling opportunities. For the last several years, biologists have been setting small, lightweight gill nets to evaluate these lakes to determine species composition and the overall health of the fish populations.

This information not only provides updated information to the anglers, but also provides fishery managers the data needed to determine if additional stocking may be required to sustain the sport fish populations. Surveys completed concluded that the prolonged drought may be impacting the recreational fisheries in the Bridger Wilderness. Spawning channels were dry, fish were stranded in pools, lake levels were low and water temperatures were relatively high. In the case of Nelson Lake, a golden trout lake located near the continental divide, the drought conditions during 2000’s eliminated most natural reproduction. Other golden trout lakes in the drainage were also found to be limited by poor natural reproduction. Because of these findings, golden trout were re-stocked in several lakes.

Other lakes within the drainage have benefited from historical fisheries management activities, and are prospering. In the early 1970’s, lake trout were stocked in 2 unnamed lakes in the upper basin to reduce the abundance of over-populated brook trout. Lake trout can now be found throughout the drainage in lakes connected directly to Pole Creek. In many of these lakes, such as 1,000 Island Lake and Junction Lake, overall fish abundance has decreased since the 1970’s but fish size has dramatically increased. Because of the success of these previous actions, and the prior establishment of lake trout within the drainage, lake trout were stocked in Cook Lakes in an effort to reduce brook trout abundance and increase average size. Cook Lakes currently contains a dense population of small brook trout in poor condition due to competition for food. It is hoped that the introduction of fish-eating lake trout will eventually reduce brook trout abundance and improve their average size. Because the lake trout were stocked as small fry, any changes in the Cook Lakes fishery will take many years to take effect.

There were several lakes within the Pole Creek basin where it is suspected that “bucket biologists” have negatively impacted the management goal of providing healthy and diverse fisheries. The trophy brook trout management objective was compromised by the introduction of brown trout and cutthroat trout in several lakes. These include Belford and Trophy Lakes near the Meadow Lake trailhead, which were long known for their exceptional trophy-sized brook trout. Other examples where management objectives were compromised was the introduction of brook trout to waters managed for golden trout, completely eliminating the golden trout population. Once these illegal stocking activities have taken place, even intensive stocking efforts will not allow the target species to thrive in these lakes.

Overall, based on the netting information, we found golden, rainbow, lake, brook, brown, and cutthroat trout all continue to thrive within the Pole Creek watershed. This area provides one of the most diverse angling opportunities within the Bridger Wilderness, and should be considered a prime area to visit for anglers interested in fantastic wild trout fishing in a spectacular setting.

-Hilda Sexauer
The Daniel Hatchery is responsible for the egg care, incubation, fish rearing, and stocking of over 500,000-750,000 fish a year in addition to the facilities general maintenance and operation.

The Daniel Fish Hatchery, located 15 miles north of Pinedale maintains the Department’s Bear River (Bonneville) and Colorado River cutthroat trout brood stocks. Daniel begins its spawning season from mid April to the first part of June. The hatchery anticipates a take of over a million green eggs for the Bear River and 500,000 green eggs for the Colorado River cutthroat.

Offspring from these brood stocks are used for restoration efforts as well as for stocking in fishing waters throughout the state. Bear River Cutthroat are stocked in waters that include the Bear River proper, UP Ice ponds, Smiths Fork River near Cokeville, and the Laramie plains lake of East Allen. Colorado River cutthroat are stocked into several drainage’s on the East Slope of the Wyoming Range which includes the LaBarge and Cottonwood drainages.

The relatively cold water at Daniel Hatchery – ranging from 42 degrees to 47 degrees – provides an ideal environment for growing fish slowly. The slower growth results in smaller fish that are most suitable for backcountry stocking via helicopter, horse packing, backpacking and ATV stocking. Daniel Hatchery provides golden trout, splake, brook trout, lake trout, and cutthroat for stocking statewide in backcountry areas.

The Daniel Hatchery provides fish to several management regions around the state. Regional Fish Management Crews request a certain number, size and species to be stocked based on available habitat, fishing pressure, and management objectives. Most waters are stocked with small fish that grow and provide fishing over several years.

In addition to station hatchery duties, personnel lend assistance to others in the Department. Personnel assist the Statewide Spawning Crew collect fish eggs from many of the Departments wild spawning locations. We help other hatcheries, like the Boulder Rearing Station with Fall Rainbow spawning. We aid the Statewide Fish Distribution crew with helicopter stocking and lend assistance to the Pinedale Fisheries crew for population estimates.

The hatchery is open to the public and welcomes scheduled group and walk in tours of the facility. Visiting hours are from 8am to 5pm daily. The hatchery is located 15 miles northwest of Pinedale on U.S. Highway 191, and 2.4 miles west on Sublette County Road 23-150 (Pape Road).

-Greg Anderson

Daniel Hatchery Fish Stocking Summary for 2011

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<th>Species Name</th>
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<th>Pounds Stocked</th>
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<tr>
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<td>Colorado River Cutthroat</td>
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<td>Lake Trout</td>
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<td>Splake</td>
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<td>Golden Trout</td>
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<td><strong>Total</strong></td>
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Summary of Fish Transferred to Other Facilities for 2011

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<td>Brown Trout</td>
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<td>Colorado River Cutthroat</td>
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<td>Fall Rainbow</td>
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<td><strong>Total</strong></td>
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Daniel Hatchery Spawning Summary for 2011

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<th>Number Green eggs</th>
<th>Number Eyed eggs</th>
<th>Percent Eyed*</th>
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<td>Bear River Cutthroat</td>
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<td>Colorado River Cutthroat</td>
<td>553,171</td>
<td>279,895</td>
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Another change for 2012 was the creation of a separate limit for lake trout. The new statewide regulation allows anglers a limit of six lake trout per day or possession with only one exceeding 24 inches. The change from one over 20 inches to one over 24 inches will give anglers in the Pinedale Region some additional opportunity to harvest lake trout while still restricting the harvest of larger fish which become much more rare after 24 inches.

A couple of additional changes within the region include the creation of special regulations for brook trout in Wagon Creek and Rock Crib lakes. Because these are popular trophy brook trout fisheries specifically managed to produce large brook trout, a creel limit of six brook trout per day or possession will restrict harvest over the statewide limit of 16 brook trout. Another change was the creation of a closed area 500 feet above and below the fish migration barrier on LaBarge Creek. This regulation was created primarily to avoid improper use of the barrier, including snagging or netting of fish below the falls, and as a public safety precaution.

In addition to the changes affecting Pinedale region fisheries, a number of other changes have been made statewide and among the five drainage areas in the state. The new 2012-2013 regulation booklets will help guide you through the various fishing regulations throughout the state, and any questions can be directed through your nearest Wyoming Game and Fish Department Regional Office.

- Darren Rhea