

BIG HORN BASIN ANGLER NEWSLETTER



MARCH 2002

QUOTABLE QUOTES: JOHN WESLEY POWELL'S COLORADO RIVER EXPEDITION



"We have an unknown distance yet to run; an unknown river yet to explore. What falls there are we know not; what rocks beset the channel we know not. To leave the exploration unfinished, to say that there is a part of the canyon which I cannot explore is more than I am willing to acknowledge and I determine to go on." The quote comes from John Wesley Powell, one of the great adventurers in western history, while he was exploring the Colorado River. Bad weather, dwindling food supplies, and lost equipment had resulted in a near mutiny by Powell's crew. Yet even in the face of these overwhelming obstacles Powell was determined to finish the exploration. Well, history tells us Powell did succeed in finishing the exploration and left us with a valuable lesson. We must never stop exploring and we must never be willing to acknowledge defeat when the discovery is so near. This is especially true in our personal lives where, even though we may not realize it, we are on a continual journey of discovery. We

should apply Powell's experience to the one passion that we all share, fishing.

Although there are few places like the Colorado left for mankind to discover, there are new adventures and exciting places for each of us to experience. This might be fishing for a new species, visiting a new stream or lake, trying a new angling technique, or even finding a new "fishing buddy." Just last year I caught my first ling (ice fishing at Yellowtail), discovered some new fishing spots, and found a new fishing buddy. Next year I plan to spend time in the Big Horns, fly fishing mountain lakes and streams that I have yet to visit. The point is that there are so many new and exciting places to fish and we should be determined to experience them.

Aside from the angling, Powell's experience can also apply to the professional side of fisheries. My sincere hope is that you the angler will help keep us motivated and focused on the task at hand. That task is protecting what we have, while also working to create new and better fisheries. There are new discoveries to be made that will help to improve our fisheries, as well as new fisheries waiting to be created. The challenge is great and the obstacles are many, but we must not acknowledge defeat. As you read through the newsletter, think about what we could do differently. Maybe you will come up with some new ideas that we, anglers and biologists, can work on together. Drop us a line at Fisheries Newsletter, 2820 State Hwy. 120, Cody, WY 82414. Or email me at mike.welker@wgf.state.wy.us.

WILDLIFE LEGACY TRUST: THE BIGGEST NEWS STORY OF THE YEAR?

An important piece of wildlife conservation legislation, **The Wildlife Legacy Trust Bill**, is currently being debated in the Wyoming Legislature. If passed, the legislation would create the Wyoming Wildlife Legacy Trust account. Funding for the trust would come from a one-time appropriation of \$10 million in federal mineral bonus payments. The trust would also consolidate the two current trust accounts within the Game and Fish and allow people to contribute whole dollar amounts to the trust. Up to 5% of this trust account could be expended annually.

The Game and Fish Commission would make expenditures from this trust on:

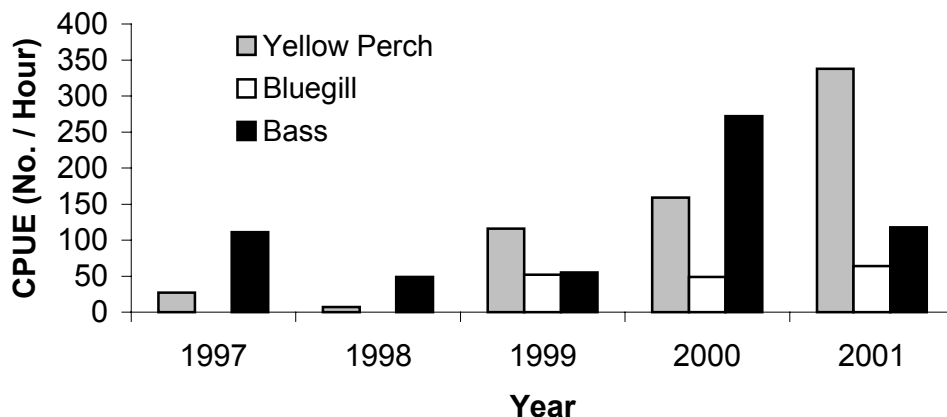
- Improving wildlife habitat
- Gathering information and other work related to species which are potential candidates for listing under the federal Endangered Species Act
- Addressing human-wildlife conflicts associated with increased development
- Promoting the enjoyment of wildlife including non-consumptive use
- Promoting the maintenance and growth of the trust
- Making payments for property damage caused by trophy game

The trust would provide up to \$1.2 million annually in new revenues. The trust will allow the Department to begin addressing some of the increased demands for additional wildlife programs.

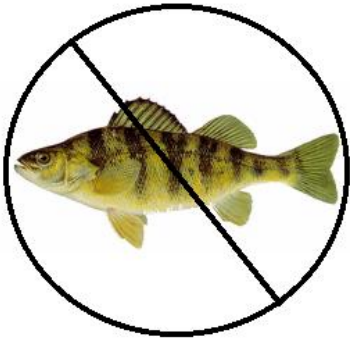
The Department is asking the people of Wyoming to support the Wildlife Legacy Trust. They can do so by contacting their local Representatives and Senators and letting them know they care about Wyoming's wildlife, wildlife habitat, and the future of wildlife in Wyoming.

A NEW MANAGEMENT STRATEGY FOR HARRINGTON RESERVOIR

In 1994 Harrington Reservoir was filled and we decided on a management strategy that would provide a quality bass fishery (> 15 inch bass) and also a panfish (bluegill) fishery. Largemouth bass were stocked in 1995 and 1996 and bluegill were stocked in 1997. Despite our best intentions, the fishery has taken a downward turn thanks to the unplanned and unfortunate introduction of yellow perch. Survival of bass was good and catch rates were high through 1997. However, bass numbers began to fall in 1998 (see graph below) and we stocked more bass in 1999. The plant of bass resulted in an increase in bass numbers in 2000, but numbers again declined in 2001. Bluegill numbers have remained consistent over the years, but abundance is low. Conversely, yellow perch numbers have increased steadily since 1999.



What happened? After the introduction of perch, there were some really big perch to be caught (10-12 inches), but those big fish quickly disappeared. The big fish have been replaced by tens of thousands of 4-5 inch perch. Why no big perch? The answer is because there is not a predator in the reservoir that can control perch. As perch numbers increase, the amount of food decreases and what results is a stunted perch fishery. Let this be a lesson to anyone thinking about illegally transplanting perch. The large numbers of perch and small size are a problem, but the bigger problem involves the bass and bluegill. Small bass and bluegill must now compete with yellow perch, which far outnumber them. Also, the bigger perch are preying upon the young bass and bluegill. So what is left is a marginal bass-bluegill fishery and a stunted perch fishery.



200-300 adult walleye to stock.

The obvious solution to improving the fishery is to get rid of the perch. But how best to go about it? There are two possible solutions: 1) drain the reservoir down and apply rotenone to kill everything or 2) introduce a predator that is more effective at eating perch. Because we are biologists (biology meaning the study of life), we are hesitant to kill everything. Also, chemical treatment is costly and there is no guarantee of a complete kill. Thus, our solution to the problem will be to introduce walleye. Starting this year we will stock fingerling walleye each year through 2004. In addition, we plan to electrofish the Big Horn River this spring to get about

Don't give up on the bass fishing just yet. There are still some big ones left out there. Last year I caught six that were 15 inches or bigger (about 2 pounds), all on rubber worms or buzzbaits. Some of the bluegill are also getting up to harvestable size, about 8 inches, but don't plan on catching any. Those hungry, pesky perch will always be the first to get your bait.

A TAGGING STUDY ON WILD CATS (MEOW)



No we're not talking about purring feral felines here, but I do know of an interesting study where they collared some house cats and followed their movements. But that's a story for another day. This is all about the big whiskered cats that inhabit the Big Horn River and Yellowtail Reservoir. This year we embarked on a tagging study to find out how many channel catfish we have and how they move between the river and the reservoir. We tagged 230 catfish with numbered yellow tags that are about the diameter of a piece of spaghetti (the thick stuff, not that angel hair pasta). If you catch any cats check the front part of the dorsal fin (top fin) for a tag and report it to us (1-800-654-1178). Ask for the "catfish biologist."

To catch the cats we used trotlines, hoopnets, electrofishing, and yes some angling (boy is my job tough). The average length of catfish, 18.5 inches, was somewhat disappointing compared to previous years. Catch rates on the trotlines were also disappointing, given that the catch rate was about half of normal. I remember the glory days of catfishing back in 1997 when big cats seemed to be everywhere (see photo of a 16 ¼ pounder caught in Yellowtail). Not sure what is happening to the population, but that is what the study is all about. Let's hope

that the decline is reversible and not a symptom of a larger problem. Remember that we don't stock catfish, so we depend upon natural reproduction to maintain the population. Consider releasing some of the catfish, especially the larger ones. I released the big one in the photo and every year I imagine him still swimming around in the murky depths of Yellowtail. I bet he is well over 20 pounds by now!

GRASS CREEK TROUT INTRODUCTION SUCCESSFUL

Grass Creek, located about half way between Meeteetse and Thermopolis (west of the highway), is now home to a thriving trout population. In 1992 trout were few and far between, so Trout Unlimited, the Bureau of Land Management, concerned anglers, and Game and Fish pooled resources to reintroduce trout. Trout were stocked in the upper meadows in 1997 and 1999. All trout were either sub-catchable (5-7 inches) or advanced fingerlings (4-5 inches). Sampling this past year found good survival of the planted brown trout. Also, it appears that trout are now reproducing. Consequently, we have decided to manage the stream as a wild fishery and no more trout will be stocked. The population is now estimated to be about 1,232 trout per mile. The table below shows length and weight statistics for the population.



	SIZE	NO	AVERAGE LENGTH	AVERAGE WEIGHT	Number Per Mile
Brown	>=1 inch	69	5.8	0.12	1,232
Brown	>=6 inch	18	10.1	0.36	317
Rainbow	>=1 inch	1	12.7	0.68	18
Rainbow	>=6 inch	1	12.7	0.68	18

DROUGHT IMPACTS THE BIG HORN RIVER TAILWATER FISHERY AT THERMOPOLIS



As most Thermopolis area anglers know, we embarked on a new management strategy in 1997: 1) stocking larger fish, 2) scattering fish by boat, and 3) stocking after runoff. The obvious goal was to increase survival and put more fish in your creel basket. Until recently, it appeared that the new strategy was working well. Then, Mother Nature decided to take the water away. It doesn't take a fish biologist to tell you that fish need water to survive. As we speak, the discharge from Boysen Reservoir is hovering around 400 cubic feet per second (cfs). This is well below our target of somewhere between 700 and 1100 cfs. Don't go blaming the Bureau of Reclamation, because their hands are tied. We have a good working relationship with the river/reservoir managers and they are well aware of our fish recommendations. I say the problem is that we have

been cursed by drought, likely because some of us are leading less than exemplary lives (I offer myself as an example). Our new management strategy is to encourage all anglers to attend the church of their choice and pray for a heaping helping of snow in the next couple of months. A moment of silence in your recliner will also suffice. The point is we need some water to refill Boysen Reservoir and get our target flows back in the Big Horn River. Fish need water!

This past year we stocked a new strain of trout that comes from the Firehole River in Yellowstone National Park. This new strain of trout was developed in an attempt to increase survival in tailwaters, like the Big Horn. We stocked 15,600 fingerling Firehole rainbow and 8,000 Snake River cutthroat trout. In September, we attempted to electrofish from Wedding of the Waters down to Longwell Public Fishing Area. Needless to say it was a bumpy ride. We spent more time cleaning vegetation out of the motor and dislodging ourselves from rocks than we did

catching fish. Given the treacherous conditions, it was not surprising that our catch was somewhat measly (see table below).

Species	Number Captured	Average Length (inches)	Length Range (inches)	Average Weight (pounds)	Weight Range (pounds)
Wedding of the Waters to 8th Street Bridge					
Burbot	4	20.9	13.7-29.2	2.03	0.46-4.02
Brown	86	13.6	3.5-25.0	1.30	0.02-5.04
Firehole	4	4.6	4.2- 5.1	0.03	0.02-0.06
Rainbow					
Other	12	7.7	4.7-20.0	0.42	0.06-2.79
Rainbow					
Snake R. cutthroat	7	10.8	7.6-16.9	0.64	0.18-1.79
Wakely to Longwell					
Brown	32	15.4	9.5-21.0	1.57	0.28-3.18
Firehole	3	5.5	5.1- 6.3	0.05	0.04-0.08
Rainbow					
Other	7	16.9	14.2-20.4	1.89	1.48-2.88
Rainbow					

Even though conditions were less than favorable for boating and electrofishing, it still appeared that our catch was low. We made only one pass through the river, primarily because the technicians were threatening mutiny. Nothing worse than a couple of crazy technicians brandishing dipnets. Anyway, we captured only seven of the 15,600 Firehole rainbow that were stocked one month earlier. I probably don't need to say it, but will anyway. Survival of stocked rainbow and Snake River cutthroat was extremely poor. The Firehole rainbow trout that we did capture were also small, 4-6 inches. Past studies have shown that trout need to reach 10.5 inches before winter or overwinter survival will be poor. Needless to say, all the information appears to point to poor survival and some tough fishing ahead. What we would like to do next year is stock some catchable size trout to supplement the fishery. In addition, we will be working with our fish hatchery personnel to try and grow some larger fish to stock. Keep us informed about how the fishery is doing.

ANNUAL EAST NEWTON SPAWNING OPERATION NETS 397,000 EGGS



The spawning operation at East Newton Lake was again a good success. The statewide spawning crew was able to obtain 397,000 eggs, which was down somewhat from 2000. As many of you know, East Newton Lake is one of the sources for rainbow trout eggs, which are used to produce fingerling trout for stocking throughout the state.

Fish were measured and weighed during the egg take operation. Average size and weight of rainbow trout increased, while average size of splake remained unchanged (see table next page). Both brown and brook trout showed a slight decline in average length and weight. East Newton Lake has a one fish over 20-inch limit and only artificial flies and lures are allowed. Although harvest of one fish is allowed, the majority of anglers choose to practice catch-and-release.

Number	Average	Length	Average	Weight
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Species	Sampled	Length	Range	Weight	Range
2000					
Brook	5	18.0	17.2-18.6	1.86	1.38-1.92
Brown	21	19.3	15.0-25.5	2.27	0.96-4.68
Rainbow	130	19.7	14.8-23.8	2.63	1.32-4.08
Splake	26	20.2	17.1-21.5	2.23	1.38-282
2001					
Brook	4	17.2	16.2-18.3	1.67	1.42-1.88
Brown	24	17.4	10.1-23.9	1.93	0.48-4.04
Rainbow	135	19.8	14.9-24.7	2.80	1.20-4.80
Splake	29	20.2	17.3-21.7	2.59	1.88-3.28

UPDATE ON WALK-IN FISHING AREAS

This new and developing program continues to provide lots of good fishing in areas that were either previously closed to public angling or were restricted to permission only fishing. Thanks to participating landowners and a respectful public, this program continues to be successful and is growing. Valuable input from anglers, wardens, landowners, along with our fisheries data justified many walk-in area renewals for 2002, as well as some cancellations, and some new enrollments. We try and spend angler dollars wisely and if an area truly supports a reasonable fishery and if we would send an angler there to fish or would fish there ourselves, then it meets the criteria for enrollment in the program. Since its inception in 1998, the Walk-in Fishing Program has provided some 17 miles of public fishing opportunity on a number of waters in the Big Horn Basin. You can fish for warm and cool water species like walleye, sauger, ling (burbot), and channel catfish in the Big Horn, lower Shoshone and Nowood Rivers or try your skills on some fine trout fishing in the Greybull River and Paintrock and Medicine Lodge creeks. Remember to follow the fishing regulations and help us protect and perpetuate your fisheries resources. And importantly, be respectful of the landowner and his property -- we are guests on the Walk-in Fishing Areas and it is up to all of us to preserve those opportunities for those who follow.



REEL FUNNY?

Things you won't hear a fisherman say...

- "Duct tape won't fix that."
- "My truck won't go through that."
- "Hank, those jeans make your butt look big, and your belt doesn't match your boots."
- "Sorry Ned, I can't go fishing with you, I'll miss Oprah!"
- "No my fish wasn't that big."
- "Come on man, we can watch In-Fisherman anytime! Figure skating is on!"
- You don't need that new rod. Why don't you buy your wife flowers instead?"

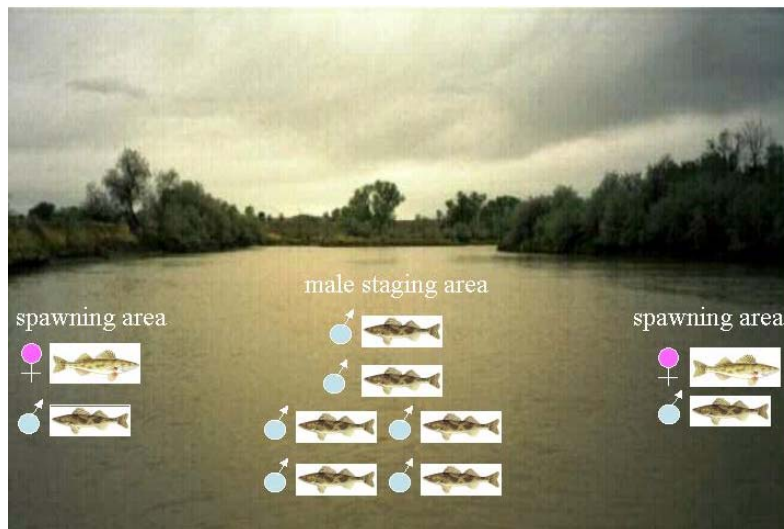
Jim had an awful day fishing on the lake, sitting in the blazing sun all day without catching a single one. On his way home, he stopped at the supermarket and ordered four catfish. He told the fish salesman, "Pick four large ones out and throw them at me, will you?" "Why do you want me to throw them at you?" "Because I want to tell my wife that I caught them." "Okay, but I suggest that you take the orange roughy." "But why?" "Because your wife came in earlier today and said that if you came by, I should tell you to take orange roughy. She prefers that for supper tonight."

A man was stopped by a fish biologist in Northern Algonquin Park recently with two buckets of fish leaving a lake well known for its fishing. The biologist asked the man, "Do you have a license to catch those fish?" The man replied to the biologist, "No, sir. These are my pet fish." "Pet fish?!" the biologist replied. "Yes, sir. Every night I take these here fish down to the lake and let them swim around for a while. I whistle and they jump back into their buckets, and I take em home." "That's a bunch of hooley! Fish can't do that!" The man looked at the biologist for a moment, and then said, "Here, I'll show you. It really works." "O.K. I've GOT to see this!" Being a biologist he was of course naturally curious. The man poured the fish in to the river and stood and waited. After several minutes, the biologist turned to the man and said, "Well?" "Well, what?" the man responded. "When are you going to call them back?" the biologist prompted. "Call who back?" the man asked. "The FISH." "What fish?" the man asked.

SAUGER SPAWNING IN THE BIG HORN RIVER

This past summer, we completed our sauger spawning investigation in the Big Horn River. What we wanted to do was locate sauger spawning sites and then determine what type of habitat they needed. We located sites by electrofishing the river from Manderson down to Yellowtail Reservoir and then went back to the sites and used boat electrofishing to determine the locations of sauger within the site. Actual spawning locations were verified by locating clumps of male and female sauger, where the female was either very ripe or partially spent. These locations were flagged as actual spawning locations within the site. Once the spawning area was roughly delineated, we measured the following variables: velocity, depth, and substrate type.

Spawning sites were characterized by large numbers of sauger, the presence of ripe males and gravid females, and the distinct segregation of male and female sauger within the site (see figure below).



At all spawning sites males were captured in large pods near deeper, mid-channel areas over finer substrates and females were caught near-shore over coarse substrates. Spawning occurred in small groups consisting of one female and two or more males. Spawning occurred at a mean depth of 2.5 feet (0.6-4.0), mean water velocity of 0.40 feet · s⁻¹ (0.06-2.0) and over primarily pebble and cobble substrate. Spawning in 2000 and 2001 peaked between May 7 and 14, with water temperatures between 51 and 56°F.

Availability of spawning habitat does not appear to be a limiting factor for Big Horn River sauger populations. However, sudden changes in flow, discharge, and water temperature may force sauger to suspend spawning activities or could

isolate them from premium spawning habitat. Consistent discharge from Boysen Reservoir during sauger spawning would reduce flow fluctuations and optimize spawning conditions. Although we have good information on sauger spawning requirements, we still need to study habitat needs of the little fish (larval and juvenile sauger).

Additional research is also needed to determine the feasibility of designing fish passage structures to allow access above diversions. This year we will be looking at diversions on the Nowood and Big Horn Rivers to determine if there is any way that we can get fish above these diversions.

FISHING NEWS FROM AROUND THE BIG HORN BASIN



Enos Creek, tributary to Gooseberry Creek (SW of Meeteetse), may have been impacted by the Renner Complex Fire. The fire burned very hot, which may have killed the Yellowstone cutthroat trout that were stocked in 2000. The management crew will investigate in 2002.



Seventeen Big Horn Mountain Lakes were sampled as part of a trout stocking study. The goal of the study was to provide defensible stocking guidelines for mountain lakes that maximize benefits to sport fisheries. The study found that accessibility, as it relates to angler use and harvest, is the primary factor influencing the dynamics of stocked trout fisheries. Consequently, new stocking guidelines were developed to improve size structure and abundance of trout in high mountain lakes.



Fubar Reservoir was recently renovated to enhance fish habitat, but water levels have fallen drastically over the past year. The outlet pipe structure fell over resulting in the loss of about five vertical feet of depth. In addition, the drought has further contributed to the low water level. Plans are to repair the structure this coming summer. According to anglers, the bass and crappie fishery had improved greatly prior to the outlet structure problem.



Yellowtail Reservoir has been dry in the Wyoming end since July. With snow pack levels down, the water level will likely be very low again this year. Walleye fishing was good in the Montana portion of the reservoir last year (even I could get a limit), but that may change this year. Look for declining numbers of walleye thanks to a very poor forage (food) base. Emerald shiners, a primary diet item for walleye, have been declining the past couple of years. The decline is likely related to the drought, which reduces available spawning habitat. Let's all hope for some heavy spring snows this year.



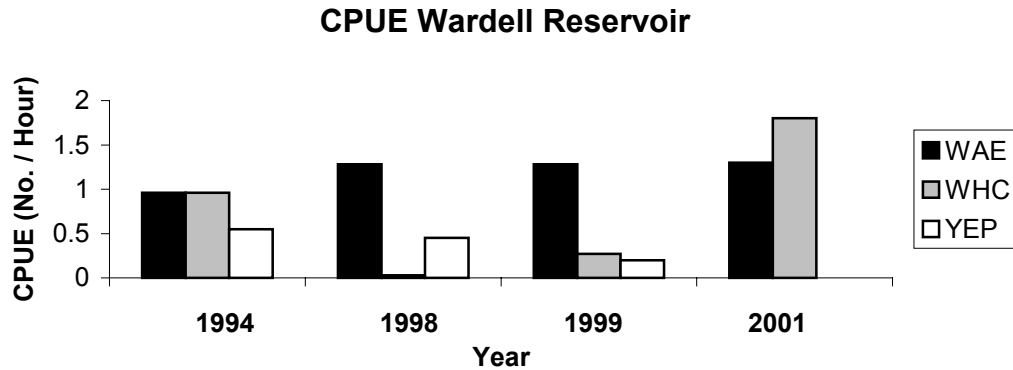
Scharen Reservoir (near Greybull) and Horseshoe Reservoir (Pond 5-Yellowtail) may have been impacted by a fish kill. Reports from anglers indicate some dead fish and very poor fishing through the ice. We will investigate this coming year. Both reservoirs are stocked with trout, bass, and hybrid sunfish.



Blue Ridge Reservoir (near Basin) may be the site of the next Fish Wyoming project. The reservoir once supported a very good trout fishery, but the low water level led to a complete fish kill. The crew will investigate the fishery potential of the reservoir and make plans to improve habitat availability. These plans will involve either increasing water depth by raising the dam and fixing the outlet structure, or installing a windmill structure to help oxygenate the water during the winter.

WARDELL RESERVOIR WALLEYE FISHERY STABILIZING

In June, we used experimental gillnets to sample Wardell Reservoir and evaluate success of walleye and white crappie plants. Wardell has a past history of low recruitment for walleye and panfish (crappie and perch) due to environmental factors such as water fluctuations and limited spawning habitat. Because of limited natural reproduction, we started stocking again in 1997. Past plants for walleye were 1997 (3,500), 1998 (2,750), 1999 (2,646), 2000 (4,100), and 2001 (3,100). White crappie were planted in 1997 (5,500) and 1999 (15,800), but have not been available in other years. The figure below shows the results of our sampling for 1994, 1998, 1999, and 2001.



WAE=walleye, WHC=white crappie, and YEP=yellow perch. CPUE=catch per unit effort and is the number caught in nets per hour.

Since reestablishing annual plants in 1997, walleye catch has increased and stabilized at around 1.3 per gillnet hour. Walleye averaged 14.1 inches with a range of 6.7-26.5 inches. White crappie plants in 1997 and 1999 have also led to a corresponding increase in the catch rate. White crappie averaged 9.0 inches with a range of 7.4 to 11.6 inches. These data indicate that the stocking strategy has successfully improved abundance and size structure of the walleye and crappie fisheries.

In contrast to walleye and crappie, yellow perch catch has declined each year since 1994. In 2001, no perch were captured during sampling. The decrease and eventual disappearance of perch is related to poor spawning habitat. Female perch need some structure, usually aquatic vegetation or submersed terrestrial vegetation, upon which they can deposit their eggs. In Wardell Reservoir, submersed vegetation is scarce due to siltation (silt covers existing woody structures) and high turbidity (poor water transparency prevents penetration of sunlight and establishment of rooted aquatic vegetation).

Habitat enhancement could improve reproduction for both walleye and panfish (crappie and perch). However, habitat improvement projects are difficult in irrigation reservoirs. For example, walleye spawning could be greatly enhanced by adding gravel/cobble substrate, but sediment from the irrigation water would quickly cover the spawning substrate. Likewise, the silt laden irrigation water would also preclude any attempt to establish rooted aquatic vegetation. Without a radical change in reservoir operation or a habitat improvement project, annual stocking will be necessary to maintain the fishery.

One final note: A big thanks to Earl Kelsey and his band of merry men. Earl is one of our fisheries volunteers and has been working on a project to move perch from Harrington Reservoir to Wardell. Earl and helpers have caught (ice-fishing) and transplanted 5,000 perch this winter. What a superhuman effort!

BEARTOOTH MOUNTAIN LAKES STOCKING EVALUATION

The management crew was busy this past year sampling some of the Beartooth Mountain Lakes. The purpose of the sampling was to assess the condition of the lakes and determine how well the stocked trout were surviving. The table below shows the sampling results for six of the lakes. A complete list of Beartooth Mountain Lakes, including stocking and sampling histories, is available at the Cody Office. Maybe the most exciting event of the sampling was the capture of a very large lake trout from Beartooth Lake (see picture below). The big laker was released after a quick photo and is waiting for some lucky angler.

Water Name	Species	Number	Catch Rate	Average Length	Length Range
T-Lake	brook trout	70	2.27	8.5	6.3-17.3
	splake	42	1.36	9.9	7.7-12.5
Lily Lake	grayling	88	1.91	10.8	5.5-14.1
	rainbow trout	1	0.02	15.3	15.3-15.3
Horseshoe Lake	brook	72	2.58	7.8	4.1-10.3
	splake	11	0.39	10.4	8.2-13.2
Finger Lake	brook trout	58	2.11	7.8	4.6-10.0
	splake	16	0.58	9.5	7.2-12.6
Claw Lake	brook trout	70	2.27	7.7	4.2-12.2
	splake	13	0.42	10.3	7.1-13.5
Beartooth Lake	brook trout	44	0.86	9.3	6.5-11.8
	grayling	2	0.04	13.8	10.7-16.8
	lake trout	18	0.35	14.7	8.6-34.0
	rainbow trout	15	0.30	11.8	7.5-15.4
	Yellowstone cutthroat trout	8	0.16	11.7	10.2-15.1



WALLEYE NUMBERS HIGH IN DEAVER RESERVOIR





If you enjoy walleye fishing, Deaver Reservoir is a place you might want to visit. The walleye population in Deaver has been slowly building over the last few years and may be peaking. Night electrofishing this past summer found that the catch rate for walleye had nearly doubled from the previous year. The walleye average 11.7 inches with a length range of 6.0-18.8 inches. Anything over 20 inches is rare. Fishing peaks in the spring and can get pretty tough through the summer. It may pick back up again in the fall, but I haven't found that to be the case. Deaver can also produce the occasional big rainbow (up to 6 pounds). If you are looking for some good fishing, Deaver may be your best bet.


ODDS AND ENDS




The 6th annual Basin Kid's Fishing Day was again a huge success. Organizers plan to hold the event again in May 2002. Contact the Basin Eagles Lodge for additional information.

 After a two-year hiatus, shovelnose sturgeon will once again be stocked in the Big Horn River. Disease problems have prevented any recent stocking.

 A Yellowstone cutthroat project on the Greybull and Wood rivers will get underway this year. This is a cooperative project with the U.S. Forest Service. The goal is to determine if habitat conditions above barriers are suitable for Yellowstone cutthroat trout. If the habitat looks good, cutthroat will be reintroduced.

 Kid's Fishing Days will be held in Cody (Beck Lake Recreation Area) and Powell (Homesteader Park Pond) in June. Contact the city recreation districts for more information.

 Over 100 waters in the Cody area are scheduled for stocking this year. Trout species to be stocked include Yellowstone cutthroat, brown, rainbow, brook and splake. Cool- and warmwater species include channel catfish, crappie, hybrid sunfish, bass, walleye, and shovelnose sturgeon.

NATIVE MINNOWS IN THE BIG HORN RIVER



To most anglers a minnow is a minnow. But, the truth is there are actually many different native minnows (all included in the Family Cyprinidae) in the Big Horn River. These unique fish include sturgeon chub (picture on left), flathead chub, longnose dace, plains minnow, and western silvery minnow. The western silvery minnow has not been collected since impoundment of Yellowtail Reservoir and has likely disappeared completely from the drainage. We also thought that the sturgeon chub was no longer in the river, but discovered some chubs during our sampling this year. Some other interesting native nongame species in the river include the white sucker, longnose sucker, river carpsucker, and shorthead redhorse. All of these species are included in the Family Catostomatidae (suckers).

In the past these species have received less attention than sportfish, but things are beginning to change. Throughout Wyoming biologists are working to determine distribution, abundance, and habitat needs of native nongame species. Here in the Big Horn Basin, we are working on a study to determine the habitat needs and amount of available habitat for native nongame fish in the Big Horn River. Once we better understand the habitat needs, we can protect what habitat is available and better manage for these species.

NEWS NOTES FROM BUFFALO BILL RESERVOIR

- Purse seine sampling this year found that the trout population was comprised mainly of rainbow trout (76%), followed by Yellowstone cutthroat trout (20%), and lake trout (4%). Lake trout numbers are likely much higher than reflected by the sampling, because purse seining is not an effective means of sampling this species. Average length of rainbow trout declined from 13.9 inches in Fall 2000 to 13.3 inches in 2001. Yellowstone cutthroat continue to average about one inch longer than rainbow trout.
- The percentage of small fish in the sample (< 10 inches) was similar between 2001 and 2001, indicating good trout recruitment.
- Sonar surveys estimated total fish density at 6.4 fish/acre, which is down from 11.7 fish/acre in 2000. This represents a 45% decrease and the third year of decline.

- At a reservoir elevation of 5,358 ft, fish abundance was estimated at 34,200. The rainbow trout population was estimated at 24,300 (down 56.1% from year 2000), the Yellowstone cutthroat population at 6,800 (53.4% down), the lake trout population at 2,400 (41.5% down) and the brown population at 700 (74.1% down).

These apparent declines are thought to have more to do with reservoir conditions at the time of sampling than real decreases in trout abundance. The reservoir was at a significantly lower level (drought) than in past years and the standardized purse seine sampling locations were not repeatable. In addition, the hydroacoustic sampling was compromised by very windy conditions and gillnets could not be set. In consultation with the local warden and the Reservoir Research Crew, we feel that the fishery is really not in jeopardy. However, in our ongoing resolve to protect and perpetuate these very important reservoir and upstream river fisheries, an intense evaluation will be conducted in 2002 to determine it's true status.

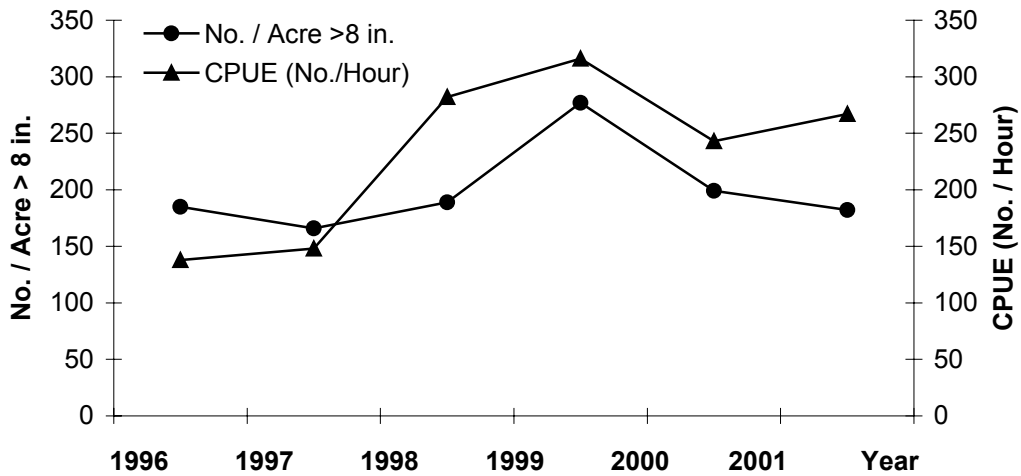
SHOSHONE RIVER FISHERY MAY SUFFER FROM LOW WINTER FLOWS

Raft electrofishing upstream of Belfry Bridge was used to sample the fishery in anticipation of scheduled low winter flows. Normal winter flows (near the Trail Creek Gauge) are about 410 cubic feet per second (cfs). However, because of the drought flows this winter have been about 150 cfs. The main concern is loss of low velocity habitat that could result in increased overwinter mortality. We are currently working on an instream flow water right to protect the fishery. Some salient nuggets from the sampling were:

- The total trout population (3,101 fish/mile) increased from 1999 sampling (2,625 fish/mile).
- The brown trout population increased slightly in 2001 (881 fish/mile) from 1999 sampling (819 fish/mile). The brown trout population has increased steadily over the last three years.
- Rainbow trout numbers increased substantially from 1999 to 2001. In 1999 we found 965 rainbow/mile while in 2001 there were 1,806 rainbow/mile. There appears to be some natural reproduction occurring as more young of the year were taken than in past sampling.
- Snake River cutthroat numbers decreased from 1999 to 2001. In 1999 cutthroat numbers were 824 fish/mile and have declined to 379 fish/mile. This is the lowest level since 1995. The average length of cutthroat was one inch longer in 2001 (13.7 inches) than found in 1999 (12.7 inches). Fish were stocked at a slightly smaller size than normal in 2001 and survival may have been affected. Another explanation for the low number of cutthroat may simply be that they are difficult to sample when there is a lot of vegetation. Cutthroat tend to occupy habitat near and around aquatic vegetation making capture difficult.

RENNER RESERVOIR SAMPLING FINDS A HEALTHY BASS POPULATION

The Renner Reservoir bass fishery appears to be holding steady. Although the number of larger bass (> 8 inches) declined slightly last year, the total number of bass appears to be high (see graph below). The fishery appears to be far more stable compared to the early and mid 90's. Introducing hybrid sunfish may have been the necessary ingredient. Prior to stocking sunfish, forage for adult bass was limited to invertebrates and young bass. It appears that hybrid sunfish are now playing a dual role: 1) as food for bass and 2) another species for anglers to catch.



Going into the new management strategy we thought we would get good growth on the sunfish, because Renner is a very productive body of water. However, we didn't dream that it would be as good as it is. Several anglers have caught sunfish in the one pound range and one Lovell area angler caught a whopping 1.5 pounder (see picture below). The real problem is that we can't depend upon getting hybrid sunfish every year. Hybrid sunfish are 90% male and 10% female, which means that we get little if any reproduction. So to maintain a fishable population, we must stock sufficient numbers every year. To date, we have never been able to stock as many as want. Last year we were only able to get 7,000, even though our request was for 21,000. So until we can get a reliable source and stock every year the numbers will remain low, but there will be some big ones to catch.



LAUGHTER REALLY IS THE BEST MEDICINE



"...Just for the record, this is a six-mile wide channel and this is the only buoy..."



"Sorry about that. I'm still getting used to this new rod."



"...And that's me talking about the fish I almost caught in Florida."



"Nice cast. Now can I have my hair piece back?"



"Jenkins and I had a little argument concerning the length of a fish I caught over the weekend. But we worked it out."



"Why don't you drink and gamble like other husbands?"

THAT'S ALL FOR NOW. SEE YOU OUT ON THE WATER!





Wyoming Game and Fish Department

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