

2006 Edition



“Conserving Wildlife—Serving People”

Change in the Casper Region

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We talked a little about change in the 2005 newsletter. Don't worry if you missed the 2005 newsletter – it is out now at the same time as our 2006 edition. We were working on the 2005 edition last fall/winter when Scott Gangl accepted a position with North Dakota Game and Fish. Change is the only thing that is consistent! We welcome a new biologist to the Casper Management Crew, Mr. Matt Hahn. Matt is originally from Riverton, Wyoming. He graduated with a B.S. in Wildlife and Fisheries Biology and Management from the University of Wyoming in 2000 and obtained a M.S. in Fish Ecology from the University of North Dakota in 2002. He began working for the Wyoming Game and Fish Department as a seasonal fisheries technician in Green River in 1998 and 1999. In 2002 he worked as a contract biologist in the Green River region on the newly constructed High Savory Reservoir. In 2003 he moved to Laramie as a regional fisheries biologist before transferring to Casper in May 2006.



Alcova walleye, 6 pounds

In an attempt to be consistent with change, we also changed the look and content of Casper's Angler Newsletter. Since the 2005 edition is now available and gives you an overview of the region, we are emphasizing walleye in the 2006 edition. Wyoming anglers spend 78 percent of their time fishing for trout, 19 percent of their time fishing for walleye and sauger, and 3 percent of their time fishing for other types of fish – so why emphasize walleye? We believe our trout fisheries in the region are in good condition, at least where we have water. The interest in fishing for walleye has certainly increased in Wyoming, particularly in the Casper Region. We would like to offer some information on the success and some of the problems with managing walleye in the Casper Region.

We will be conducting several population estimates on the North Platte River during the 2006 field season. Next year, look for more information on trout in the newsletter.

Special points of interest:

- Wyoming's Free Fishing day is Saturday, June 3, 2006 and Saturday, June 2, 2007!
- What do walleye eat?
- How are walleye doing in the Casper Region?
- Did you catch a walleye from Glendo with a tag?
- Don't forget to pick up the 2006 fishing regulations!



Matt Hahn, Casper fisheries biologist

Seminole Reservoir

Walleyes were first documented in the North Platte River in Wyoming in 1961 when an angler brought a fish he had caught in Seminole into the Casper District Office to be identified. The source of walleye in Seminole is unknown. Biologists have speculated about illegal introduction or drift downstream from a source in the upper drainage. Little was known about walleye/trout interaction in the 1960s and early 1970s. Biologists monitored the fishery hoping a two-story fishery would develop – walleye inhabiting the warmer water and trout in the cooler habitats.

- 1973 - Walleye were abundant but their forage was declining.
- 1978 - Walleye were very abundant but with very little forage the population was stunted.
- 1980 - Gizzard shad from Nebraska and emerald shiners from the Great Lake States were introduced to provide forage.
- 1982 - A bonus creel limit (20 walleye) was offered to generate some interest for anglers to fish for the abundant walleye in Seminole.

By 2000 the walleye population had changed. A comparison of the percentage of the walleye in the 15 to 24 inch size range showed a dramatic decline between 1996 (Figure 1a) and 2000 (Figure 1b).

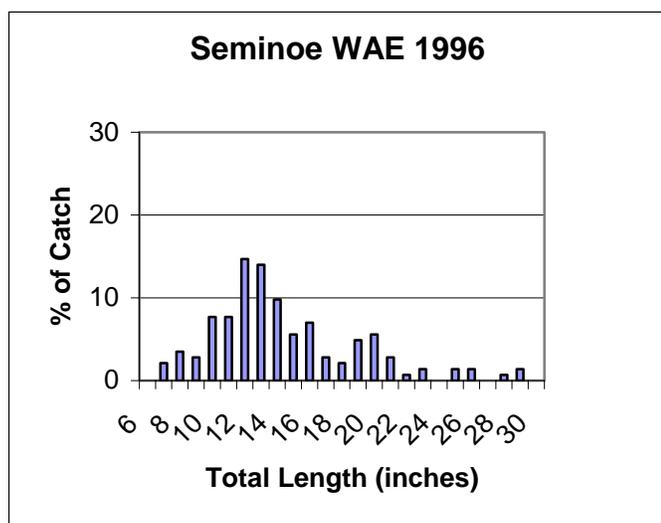


Figure 1a. Percent of walleye in the population by length from 1996 netting.

So in 2002, the bonus creel limit that was started to attract angler interest was reduced to the standard of 6 walleye. Did it work? The total number of walleye we are catching in our netting has increased significantly. We have also seen an increase

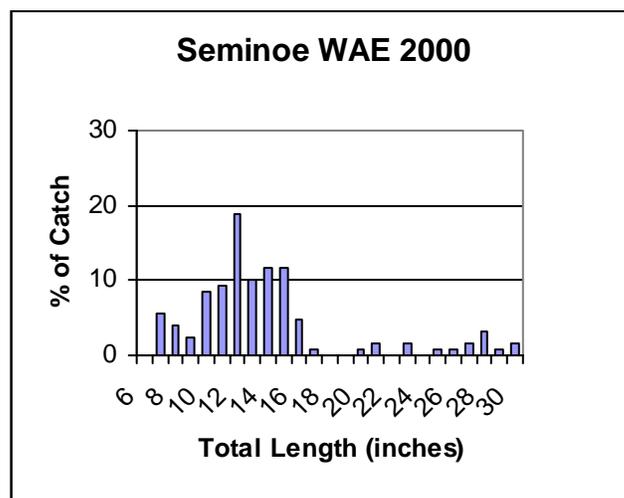


Figure 1b. Percent of walleye in the population by length from 2000 netting.

in the percentage of walleye in the 15 to 24 inch size range and there are good numbers of smaller fish that should be growing into that size range (Figure 1c).

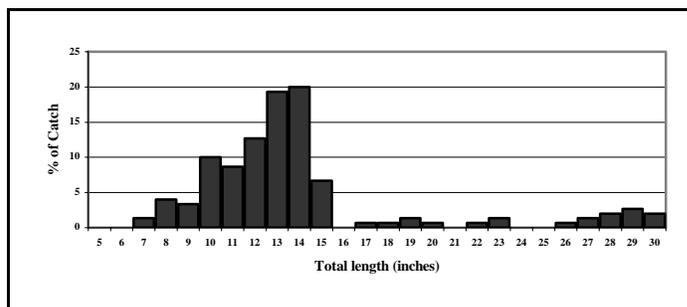


Figure 1c. Percent of walleye in the population by length from 2005 netting.

The improvement is not as good as we had hoped. However, with the drought, all the fish species have been in decline. Seeing any improvement with the reservoir conditions suggests good things may happen with improved water levels.

Our netting information in 2005 did show some encouraging trends for walleye. The number of walleye per net hour (CPUE) doubled from 0.33 fish/hour in 2004 to 0.72 fish/hour in 2005. The average length of walleye was 14.4 inches. The condition of the walleyes (Wr value) was some of the best observed in recent years, with all length classes averaging in the 90s or higher. In 2004 the Wr values ranged from 84 to 86. These data suggest a good year class of walleye is entering the population and forage may be improving. While still low, the reservoir level did improve in 2005 and forage fish appear to have benefited from improved water levels.

Pathfinder Reservoir

Walleye were documented in Pathfinder Reservoir in 1974 after water was spilled from Seminole Reservoir in 1973. Walleye appear to be attracted to reservoir spill events and migrate downstream with the large amount of flowing water going down the reservoir spillways. Walleye seemed to be confined to North Platte inflow area until 1977 when natural reproduction was first documented in Pathfinder. Walleye rapidly expanded throughout the reservoir and by 1983 anglers were catching walleye ranging from 3 to 6 pounds.

As the walleye numbers increased the numbers of forage fish decreased. Fish species native to the Western States found in the reservoirs are unable to support large walleye populations. Using the lessons learned in Seminole, new fish species were introduced to provide forage for the expanding walleye population. Gizzard shad, emerald shiners and spottail shiners were introduced in Pathfinder to prevent the walleye population from stunting. Even with the new forage species, walleye growth is slow in the upper North Platte River reservoirs as shown in a comparison done in 2001 (Figure 2a). Five years are needed for a walleye to reach 15 inches in Pathfinder. Length of the growing season (water temperature) and reservoir productivity are also factors controlling walleye growth.

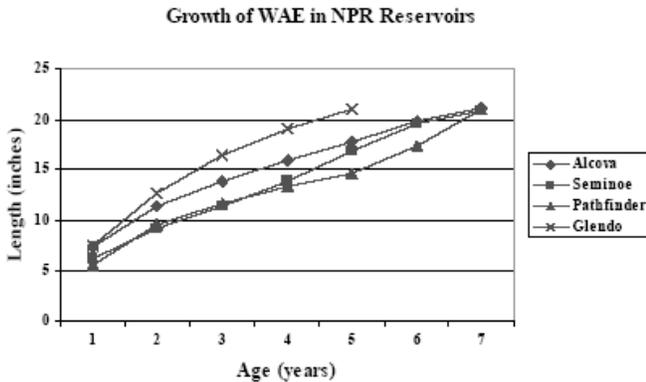


Figure 2a. Average length at age of walleye in North Platte River reservoirs.

Unfortunately the drought has caused problems for all fish species in Pathfinder. Declining water levels has reduced the numbers of forage fish available for walleye to eat and walleye growth is slower. Growth data collected in 2005 shows a decline in the growth for walleye between 15 to 20 inches (Figure 2b). The information suggests very little growth between ages 5 to 8.

Give 'em something to eat, stock more forage fish you say! We have been evaluating the situation but without improved habitat condition, stocking more fish is not the answer. However, this certainly does not mean that we won't consider stocking gizzard shad in the future. When we exit the drought and reservoirs gain water and maintain more substantial zooplankton populations, gizzard shad stocking will be considered. And, with better habitat conditions all species of fish will benefit.

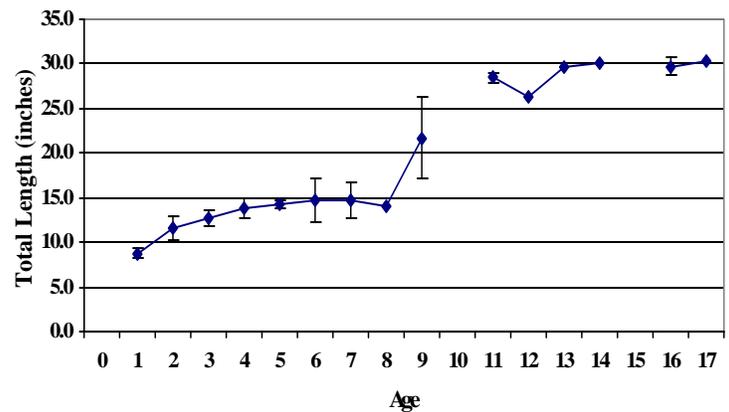


Figure 2b. Average length at age of walleye in Pathfinder Reservoirs from 2005 netting.

Our netting information in 2005 did show some encouraging trends for walleye. The number of walleye per net hour (CPUE) increased from 0.22 fish/hour in 2004 to 0.35 fish/hour in 2005. Average length was 15.3 inches. The condition of the walleyes (Wr value) remained unchanged with an average of 84 ranging from 80 to 89. While very low, the reservoir level has been stable for a couple of years and the decline seen in the walleyes in previous years has perhaps stabilized with stabilizing water levels.



Walleye Facts...

Walleye are not native to Wyoming and 30 years ago very few people knew about or fished for walleye here. As the number of walleye increased and more people had a chance to eat the delicious white meat, the interest in fishing for walleye has greatly increased.

Sometimes called a "walleyed" pike but they are not pike. Walleye are closely related to yellow perch and sauger. They can be identified by a mouth full of needle like teeth, a white area on the bottom of the forked tail and a black spot at the back of the first dorsal fin. The walleye ordinarily prefers lakes to rivers. We do see a migration from the reservoirs into the North Platte River in the spring during spawning. Many walleye will spend the summer in the river and drift downstream back to the reservoir as the water cools in the fall.

While growth is slow, we have seen walleye over 16 pounds in the reservoirs. There is no size limit and the general creel and possession limit of six fish applies to all our waters with walleye. Remember, if you fillet your walleye before you get home, leave a piece of skin (at least a one inch square) on the fillets. And please, do not transport live fish from the water where you caught them. This includes transporting live fish in the live well of a boat.

Alcova Reservoir

Alcova Reservoir is best known for water sports and trout fishing, but there is a population of walleye in the reservoir. Until 1984, a fishable population of walleye did not exist in Alcova. However, after Pathfinder Reservoir spilled in 1984 and 1986, Alcova had the largest average size walleye in the North Platte River system during the late 1980s. Unlike the other reservoirs, we have not seen a strong walleye year class in Alcova. We believe the walleye fishery is maintained by downstream drift from Pathfinder Reservoir or, if natural reproduction, at a low level.

Additional forage fish species have also been introduced into Alcova. Emerald and spottail shiners are present in the reservoir. Gizzard shad were also stocked but very infrequently. As we struggled to manage trout and walleye in the same reservoir, there was hope that providing more forage would buffer stocked trout from walleye predation. The goal for forage introduction in Alcova was to reduce walleye predation on stocked trout, not to provide a better walleye fishery. In Alcova, as in other reservoirs, we found small stocked trout seemed to be the preferred walleye forage. The trout fishery responded to stocking bigger trout not more walleye forage.

Our netting information in 2005 did show some extremely encouraging trends for walleye. The number of walleye per net hour (CPUE) was 0.57 fish/hour in 2005, which was substantially higher than the 0.12 to 0.27 range seen in 1995 to 1999. The average walleye length was 18.2 inches. Alcova's average walleye is again the largest in the North Platte System. Walleye condition (Wr value) was also very good, with an average of 92 and a range of 89 to 97. The condition of walleye in Alcova was actually better than we observed in Glendo! Overall, we have not seen this type of a walleye fishery in Alcova since the late 1980's.

We are at somewhat of a loss to explain the apparent increase in the number of walleye

in Alcova. Perhaps after 20 years we are seeing an increase in natural recruitment in the reservoir. Another possibility is the in-stream flow that began being released in 2002 from Pathfinder Dam. This flow provides fish an opportunity to migrate downstream from the dam without passing through the turbines in the power plant. A fish has a much better chance of surviving the trip from Pathfinder to Alcova with Pathfinder at a low level and not passing through the turbines.

The good news about Alcova's walleye must be tempered a bit by discussing the decline in the trout fishery. We found we could provide a good trout fishery by stocking 9-inch trout but our hatcheries have not been able to produce as many 9-inch trout as needed for the upper North Platte River Reservoirs. Because the walleye density was lower in Alcova than other reservoirs, we have stocked smaller rainbows in Alcova. Since 1999, the size of stocked rainbows has gradually decreased from 9.0 inches to 6.9 inches in 2004. As the size of stocked trout decreased, the trout population was monitored annually with hydroacoustic surveys. These surveys showed a decline in rainbow trout density as the stocked trout size dropped below 8 inches (Figure 3a). To improve the trout density, we will return to stocking at least 8-inch rainbows and shift some of the 9-inch rainbow from other reservoirs into Alcova in 2006 and beyond.

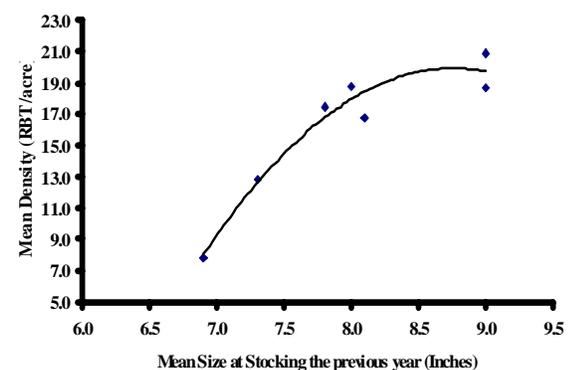


Figure 3a. Relationship of the number of trout per surface acre compared to the size of trout stocked the previous year.

Fishing Contests

As the interest in fishing for walleye in Wyoming increases, so has the interest in competitive fishing – contests. The greatest increase in the number of fishing contests has been at Glendo Reservoir. With the increase in contests we have also received an increase in complaints about contests. We have heard two major concerns from recreational anglers about the number of fishing contests at Glendo. Anglers are concerned about the impact of fishing contests to the numbers of walleye and their fishing experience.

Walleye numbers are indeed down at Glendo, but not because of contests. Walleye populations are cyclic - thus they boom and bust. Walleye numbers were extremely high in Glendo in the late 1990s and have been declining. Creel surveys suggest that contests were not the reason for the decline. Our creel data estimated 87,000 walleye were harvested from Glendo in 2000. Yet if all contest anglers had kept their limit, it would only have been 6 percent of the total harvest.

Because the large number of fishing contests appeared to be reducing the enjoyment of recreational anglers, we began to evaluate social concerns. More people fishing create more potential conflict adding to the growing concerns about crowding. We realized we did not have data to address the social concern, so we conducted angler surveys at Glendo in 2004. Data were collected over the course of a weekend when a contest was taking place at the reservoir and randomly through the fishing season. Game and Fish personnel asked anglers a series of questions about their views on fishing contests. Everyone was asked the same questions, which included: "Are there too few, too many or about the right number of contests on Glendo," and "During the past year, have you avoided fishing Glendo because a contest was being held?" Anglers were also asked if they would support or oppose a contest-free weekend a month.

Results from the survey showed that anglers are subjected to a lot of pressure from contest fishing. In fact, both contest and non-contest anglers fishing at Glendo report that contests reduce their enjoyment while fishing.

The surveys suggested 50 percent of anglers who do not fish in contests avoid fishing at Glendo when there is a contest. They cited crowding, busy boat docks and too much competition for the areas where fish are known to frequent. Eighty-eight percent of recreational anglers said they would support a contest-free weekend. And surprisingly, 83 percent of contest fishermen also support contest-free periods at Glendo. We asked anglers what they thought, and they replied that

they wanted fewer contests.

The mission statement for the Wyoming Game and Fish Department is simple: "Conserving Wildlife, Serving People." Yet carrying out that mission is not always so easy. With so many different groups of people who have a stake in Wyoming's wildlife, sometimes management decisions are made based more on social pressure than on biological concerns. The new regulation on fishing contests is an example.

The new regulation gave Wyoming anglers two weeks free from fishing contests at Glendo Reservoir this summer. Fishing contests were prohibited at Glendo during the two weeks between June 17th and 30th this year, and from June 16th to the 30th in 2007. The change is an attempt by the department to strike a balance between the desire to have contests and the possible concerns about having too many.

Fishing contests are enjoyed by an increasing number of anglers and will continue to be part of the recreation opportunity at Glendo Reservoir. We hope this regulation will address the social concerns about fishing contests while still allowing sufficient opportunity for contest anglers to pursue their sport.



Busy boat ramp at Glendo Reservoir

Walleye Forage

If you have had the opportunity to feed a teenager, you understand the ecological concept of energy loss between trophic levels. Or stated another way, a teenager eats a lot of groceries to gain a pound. A deer consumes about four pounds of forage a day. A two year old deer may have eaten 3,000 pounds of forage in its life. A mountain lion may eat one two year old deer a week. My calculator suggests 156,000 pounds of deer forage is needed to sustain one mountain lion for one year. Fortunately, walleye are more efficient than mountain lions and teenagers. A walleye consumes about 10 pounds of forage fish to make one pound of walleye. However, providing forage for walleyes in Wyoming is still a struggle. We estimated 23,000 walleye were harvested from Seminoe Reservoir in 1996. The harvested walleyes averaged 15 inches and 1.6 pounds. So, 36,800



Gizzard Shad

Gizzard shad takes its name from the gizzard-like nature of its stomach. Gizzard shad are primarily filter feeders, feeding on a variety of animal plankton, bottom insects and vegetation and is one of few native North American fish capable of existing almost solely of vegetable material. Adult length averages about 10 inches but larger fish are common.

Considering the 3 limiting factors, introduction of new forage species was the only option available to provide walleye fisheries in Wyoming. Fishery biologists began an extensive study to evaluate introductions of new species to

bolster forage. Their goal was to find species to provide walleye forage and do no harm to existing aquatic species. Biologists from the mid west were contacted for help. Life histories, habitat, forage requirements and habits of numerous fish species were evaluated. Three species were eventually selected for introduction into Wyoming: emerald shiner, spottail shiner and gizzard shad.

As the walleye distribution in Wyoming expanded, biologists quickly saw that reservoir productivity, length of growing season and fish species native to Wyoming could not sustain large walleye popula-

tion. The 1980s was the decade of walleye expansion and forage fish introduction in Wyoming. Introductions of emerald and spottail shiners resulted in self-sustaining populations where they were introduced in Seminoe, Pathfinder, Alcova, Glendo and Bryan Stock Trail reservoirs. Both introduced species of shiners inhabit open water in large lakes and reservoirs and are small enough to be forage in all life stages. If you see a shiner that is four inches, you have seen a big one.



Emerald Shiner

Emerald shiners inhabit large lakes and reservoirs and large rivers. They spawn in early summer in the open water. Adult size usually 2 to 3 inches.

Unlike shiners, gizzard shad can grow too large for walleye to eat. Gizzard shad grow up to 18 inches and their deep body shape protects them from being eaten after they are about a year old. In warmer climates gizzard shad cause real problems by overpopulating reservoirs. However in Wyoming, our harsh winters control if not eliminate the introduced gizzard shad.

Gizzard shad were first introduced in Glendo Reservoir in 1984 with documented reproduction that season. A self-sustaining population did not develop with the first introduction. By the late 1980s a substantial decline had occurred in the walleye condition factor and the stocks of yellow perch and walleye in Glendo. Gizzard shad were stocked from 1988 to 1990, 1992, 1996, 1997, 2001 and 2002. Sampling suggests some gizzard

Walleye Forage continued...

over-winter every year, with stocking and winter severity controlling the population. Adult gizzard shad have been stocked in Seminoe, Pathfinder and Alcova reservoirs with reproduction documented after each stocking event. But at higher elevations, self-sustaining populations have not developed in these reservoirs. We evaluate stocking gizzard each spring based on the severity of the winter, reservoir storage and the status of other fish species.

The goal of the forage species introductions was to provide good walleye fisheries where walleye is the primary species being managed. A comparison of the harvest at Glendo Reservoir with other walleye fisheries suggests the forage introduction has help provide good walleye fisheries in Wyoming (Table 1). Walleye anglers will recognize some well known walleye fisheries listed and Glendo's numbers are impressive, particularly harvest per surface acre. The walleye population has declined since 2000 when the information was collected, but there are indications we are again building the walleye population in Glendo.

Wyoming has some good walleye fisheries; however, we must end with a word of caution. Opportunities to support more walleye fisheries with new species introductions do not exist. Suggesting walleye expansion into new waters

successfully managed for other species is irresponsible. To maintain the existing North Platte River reservoirs as trout fisheries requires a 400-percent increase in hatchery production. Recall the Seminoe example of 368,000 pounds of forage fish to produce 36,800 pounds of walleye. Trout are in the same trophic level as forage fish. The same energy needed to produce 36,800 pounds of walleye in Seminoe could have produced 368,000 pounds of trout. Very few Wyoming reservoirs have the productive capacity and duration of growing season to sustain millions of pounds of forage to support thousands of pounds of walleye.



Spottail Shiner

An open-water dweller like emerald shiner but shows more orientation toward the shoreline. Spawns over shoals or may migrate into the mouths and lower reaches of tributary streams to spawn. Adult size usually 3 to 4 inches.

Water	State	Walleye Harvest/hr	Surface Acres	Harvest/Surface Acre	Season
Glendo Reservoir	WY	0.35	12,365	7.06	4/00-9/00
Mille Lacs Lake	MN	0.09	132,500	1.85	5/98-10/98
Oahe Reservoir	SD	0.33	370,000	0.76	4/99-10/99
Lake Sakakawea	ND	0.25	385,600	0.76	5/97-9/97
McConaughy Reservoir	NE	n/a	30,000	0.7	5/99-10/99
Harlan Reservoir	NE	0.003	13,000	0.04	4/00-9/00

Table 1. Comparison of walleye harvest statistics to other regional walleye fisheries.

Drought

33 Mile Ponds

Drought conditions continue and we recommend anglers omit 33 Mile Ponds north west of Casper from your list of fishing spots. The seventh year of drought continues taking a toll on these ponds. They are really low or dry and we do not expect the fishing opportunities this year that anglers have enjoyed in the past.

The ponds, which have been stocked regularly in the past, did not receive any new fish for the 2005 angling season and will not be stocked again in 2006. The water is just too low or, in some cases, non-existent. Low water levels can lead to both summer and winter die-offs of fish due to lack of oxygen.

We will continue to evaluate any change in the condition of the reservoirs and we plan to stock the reservoirs as conditions improve. Hopefully an increase in moisture will provide improved conditions very soon.



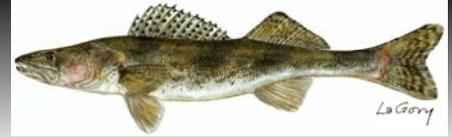
Non-existent water in Burke Reservoir

Goldeneye Reservoir

Unfortunately, we need to add Goldeneye Reservoir to the list of losses due to the drought. Several species of fish have been stocked in the reservoir in the past 20 years. Our last attempt was walleye with gizzard shad as the forage species. Early results looked very good with gizzard shad providing abundant forage and walleye showing good growth. However with declining water levels and poor water quality, the only fish species we captured in our last sampling was carp. Unless you are interested in fishing for carp, we recommend not fishing Goldeneye Reservoir.



Boat dock affected by drought at Goldeneye Reservoir



Something is missing...

The sauger is native to Wyoming and can still be found in Wind/Bighorn, Tongue and Powder river drainages. It was common in the North Platte at the turn of the twentieth century but is not present today. Drastic changes to the river's habitat - seven dams - caused the species to disappear in the drainage.

A sauger looks a lot like a walleye. They can be distinguished from a walleye by the round black spots on the dorsal fins and no white area on the bottom of the forked tail. They also have the same delicious white meat. The sauger prefers large rivers but also occurs in reservoirs. While walleye spawn both in river and reservoir habitats, the sauger only spawns in rivers and often migrates long distances to spawn. Generally a sauger does not grow as large as a walleye. The state record sauger is 7.4 pounds and the state record walleye is 17.4 pounds.

We are currently collecting information to evaluate the reintroduction of sauger into the North Platte River drainage. We are collecting information on the genetic purity of our walleye, water temperature and other river habitat measurements. We will be careful about the reintroduction. Walleye and sauger will hybridize. We will evaluate the chance of sauger establishing without harming the existing walleye populations.

Wyoming's Native Freshwater Mussels

Gordon Edwards
Statewide Assessment
Crew, fisheries biologist

Wyoming is home to headwater drainages of the mighty Columbia, Missouri, and Colorado rivers and, thus, a unique group of seven freshwater mussel species. Little is known about the distribution of these species and others may be waiting for discovery in Wyoming. Unobtrusive and well camouflaged, Wyoming's freshwater mussels are largely unnoticed in our creek bottoms and lakeshores, although they have important ecological, cultural, and evolutionary values. Freshwater mussels are important "bioindicators," or species that reflect the quality of their habitats. Mussels filter the water in which they live and some species may live more than 100 years, potentially subjecting them to the long-term effects of pollution. They provide an important source of food for terrestrial wildlife, such as raccoons, bears, skunks, and shorebirds. Ancient and modern peoples, alike, have used freshwater mussels for food, buttons, jewelry, tools, and pearl "seeds" in oyster culture. Freshwater mussel shells are frequently found as cultural artifacts by modern archaeologists in Wyoming and provide a unique window into geologic history and evolution. The complex life cycles of freshwater mussels rely upon particular species of fish or amphibians as hosts and allow mussels to disperse into new areas. This is likely how the western pearlshell mussel crossed the continental divide with the westslope cutthroat trout long ago. Unfortunately, freshwater mussels are among the most imperiled species in the world.



The Wyoming freshwater mussel program is truly in the discovery phase, which is rare in the 21st century. If you find freshwater mussels, PLEASE DO NOT DISTURB THEM!

Instead:

- 1) Take good notes of the find. Record location coordinates (UTMs from your GPS are great!). How many were visible? Were they alive or empty shells? How big were they?
- 2) Take pictures, preferably with a digital camera.
- 3) Notify your local fisheries biologists with the Wyoming Game and Fish Department.

-OR-

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Web sites on Freshwater Mussels:

Wyoming's Comprehensive Wildlife Conservation Strategy:

<http://gf.state.wy.us/wildlife/CompConvStrategy/Species/MollusksCrustaceans/index.asp>

Uniogallery:

<http://courses.missouristate.edu/mcb095f/gallery/>

Pacific Northwest Native Freshwater Mussel Workgroup:

<http://www.fws.gov/columbiariver/musselwg.htm>

Glendo Reservoir

Prior to 1972 Glendo Reservoir was managed for rainbow trout and no walleye were present. A very good rainbow trout fishery was possible when yellow perch numbers were suppressed. The Department had chemically rehabilitated Glendo to reduce yellow perch numbers in 1957 and 1966 and following these treatments, the reservoir provided an excellent trout fishery until yellow perch and other non-game fish numbers rebounded. The last chemical rehabilitation of Glendo Reservoir was conducted in 1972.

The cost to control yellow perch with rotenone was increasing and biologists were looking for other options to control them. Walleye were doing very well in Seminoe Reservoir and biologists assumed walleye would eventually drift downstream to all the reservoirs in the North Platte System. So following the treatment in 1972, fry and adult walleye were stocked into Glendo Reservoir to control yellow perch and provide additional fishing opportunity. The initial stocking did very well and in 1977 biologists saw the first large naturally recruited walleye year class entering the population.

During the early 1980s walleye management in the North Platte Reservoirs was primarily an attempt to entice anglers to fish for the increasing number of walleye. This was particularly important at Glendo after the rainbow trout fishery had collapsed even with stocking catchable sized rainbows. Most anglers in Wyoming were not interested, did not know how to catch walleye or did not recognize the available walleye opportunities. A bonus creel limit was offered at Seminoe Reservoir and biologists were offering information on how to catch walleye to stimulate some interest in the walleye fisheries. For anglers that were fishing for walleye in Glendo, the expanding population provided some remarkable fishing.

Walleye numbers peaked in the early 1980s and by the late 1980s the walleye had suppressed the yellow perch, their primary forage. Walleye condition and numbers had dropped and an aggressive forage introduction program began. Following the lessons learned in upstream reservoirs, spottail shiners, emerald shiners and gizzard shad were introduced. All three species introductions were successful and the success of the forage introductions fueled the boomer year classes of the mid 1990s.

The Glendo walleye fishery has been a textbook example of predator/pray relationships. Abundant forage in the early 1990s fueled the boomer year classes in the mid

1990s and the walleye numbers peak higher than in the previous decade. These mid-1990s year classes dominated the fishery and suppressed the recruitment of additional year classes by reducing the amount of forage and eating their young. Without recruitment the population has declined since 1997 (Figure 4a). As the mid-1990s year classes have left the population (harvest and natural mortality), forage fish have rebounded. The improved forage allowed another boomer year class (2003) to enter the population, which reached catchable size in 2006. Our netting in 2005 suggested this year class made up almost 80% of the walleye in Glendo (Figures 4b and 4c).

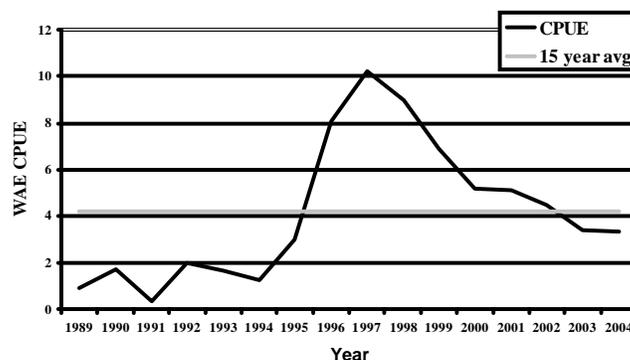


Figure 4a. Walleye catch per unit effort (CPUE – number of walleye caught per net hour) in short duration daylight gill nets.

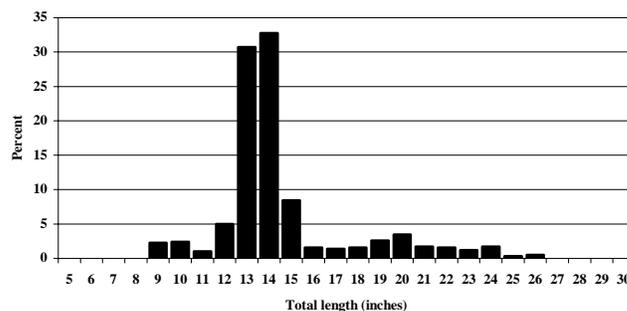


Figure 4b. Percent of walleye in the population by length.

Glendo Reservoir continued...

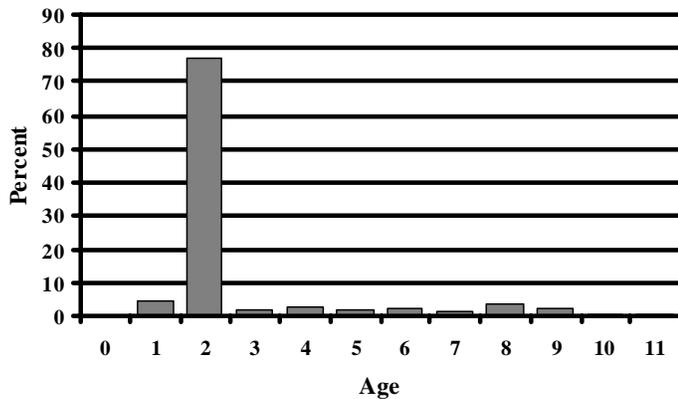


Figure 4c. Percent of the walleye in the population by age.

The number of walleye per net hour (CPUE) doubled in our overnight gill nets from 2004 to 2005. The average length of walleye declined to 15.0 inches due to the recruitment of the large number of 13 and 14-inch fish into the population. The condition of the walleyes (Wr value) was very good averaging near 90 for all sizes. The next couple of years look very promising for the Glendo walleye fishery. If we can recruit another year class in behind the one entering the population as we did in the mid 1990s, Glendo should continue to be a premier walleye fishery in Wyoming, if not the Rocky Mountain Region.

Glendo Walleye Study

We are conducting a walleye fishing mortality study on Glendo Reservoir in 2006. This study will help fisheries biologists better manage Wyoming walleye fisheries. By determining how many walleyes anglers harvest, we will decide whether regulation changes are needed to maintain or improve the quality of walleye fishing.

Cooperation by anglers is critical to the success of this study. To encourage angler cooperation, the Wyoming Game and Fish is offering a reward to anyone catching a tagged walleye in Glendo during 2006. A tagged walleye will have a blaze orange tag attached just behind the dorsal fin. Each tag will have a phone number on one side and a tag number on the opposite side. If you catch a tagged walleye, you will be eligible for a reward of \$5, \$10, \$20, \$50, or \$100. To redeem your reward, cut the tag from the fish, place the tag in a return envelope, fill out the information on the envelope, and place the envelope into one of the tag return boxes posted at boat access areas or throughout state parks. Tag return envelopes can be obtained

from green wooden boxes posted near boat access areas. Walleye tags may also be returned by calling (307) 777-4600 (the phone number printed on the walleye tag) for mailing instructions. Please include the following information with your returned walleye tag: 1) Date walleye was caught; 2) Length of walleye; 3) Whether the walleye was harvested or released alive; and 4) Your name, address, and phone number. It is also important to know that some walleyes will have two tags. If you catch a walleye with two tags, please return both to the Game and Fish. Once the returned walleye tag(s) are received by Game



tagging walleye

and Fish personnel, the tag number will be matched to a pre-determined reward and a check for the reward amount will be mailed to the angler within 4 to 6 weeks. We will also return the tag with a letter

with information about the tagged walleye.

We have appreciated the interest shown by anglers in the study. By July 1, 2006, a total of 346 tags were returned to us. Thanks for your help! If you're interested the in



tagged Glendo walleye

where the bigger prizes are going, seven Wyoming anglers have received \$100 as well as three anglers from Colorado. We have also awarded ten \$50 prizes with seven in Wyoming, two going to Nebraska anglers, and one from Colorado.

Wyoming Game and Fish Department

Wyoming Game and Fish Department

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WE'RE ON THE WEB!
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**Many Thanks to Newsletter Contributors:
Gordon Edwards, Paul Gerrity, Matt Hahn and
Janet Milek.**

Reward!

The discovery of walleye in Harry Yesness Pond has been very frustrating. We netted the pond again in the spring of 2006 and plan to seine in late summer. We did not find any more walleye this spring and if we do not find any seining, we will assume all have been removed. Biologists have invested a lot of time with the illegal introduction that could have been better spent on other projects.

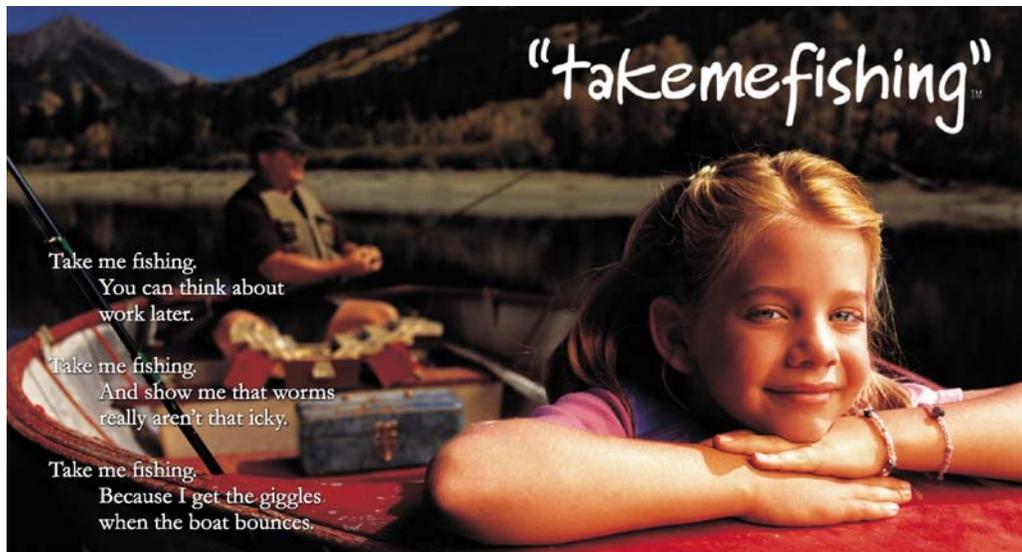
This pond is managed as a trout fishery for children and walleye don't belong here. Because Yesness Pond was drained in 1999, we are certain the three walleye were the result of an illegal introduction. Yesness Pond is a small body of water and could not support many walleye. But it can support a lot of smaller rainbow trout, and kids generally like to catch a lot of fish versus the possibility of catching one bigger fish.



Walleye netted in Yesness

The Wyoming Wildlife Protectors Associations and Wyoming Game and Fish Department are offering a \$2,500 reward for information leading to the arrest of persons illegally stocking live fish with Wyoming. Call your local game warden or 1-800-442-4331 you may remain anonymous.

The Casper Region Fisheries Management Crew is composed of three full-time biologists: Al Conder, regional fisheries supervisor; Matt Hahn and Paul Gerrity, regional fisheries biologists. Geoff Klein is the region's aquatic habitat biologist.



Take me fishing.
You can think about
work later.

Take me fishing.
And show me that worms
really aren't that icky.

Take me fishing.
Because I get the giggles
when the boat bounces.

Take me fishing.
Because my wedding will
be sooner than you think.

Wyoming's FREE fishing day!

Saturday, June 3, 2006 | Saturday, June 2, 2007



"Conserving Wildlife - Serving People"