

2009 Edition



# CASPER REGION ANGLER NEWSLETTER



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## **Special points of interest:**

- Are you illegally transporting fish?
- How are trout doing in the Casper Region?
- What's new at Speas Rearing Station?
- Changes to fishing regulations in 2010-2011?
- Concerns about introduction of invasive species.

## ***Aquatic Invasive Species***

The WGFD is asking for your help to protect Wyoming waters from a host of organisms, collectively known as Aquatic Invasive Species. These organisms represent a very real threat to the state because of the ecological, recreational and economic impacts they can have on water, fish, equipment and water transport systems.

Often called "nuisance" species or "exotic" species, they can attach to equipment, boats and clothing used in the water, and can be transferred on these items from one body of water to another. Any plant and animal can be considered an invasive species if moved to an ecosystem where it doesn't belong.

Since their 1988 discovery in the United States, zebra and quagga mussels have become the best-known aquatic invasive species. We have been following the spread of the invasive mussels for more than 10 years. Until 2 years ago this was a problem of the Great Lakes and Mississippi River, suddenly they are at our borders. The recent and rapid spread of these mussels has changed the setting with respect to aquatic invasive species risks in Wyoming. We are faced with very real threats from these species, which are now present in three of our neighboring states – Colorado, Nebraska and Utah. The Game and Fish is focusing its attention on zebra mussels and quagga mussels because they pose an immediate threat to Wyoming.

We encourage you to spend a little time and learn about these threats and what you can do to ensure you are part of the solution not the problem. There are several informative web sites. You can start with ours that has information on the problem and links to other web sites: <http://gf.state.wy.us/fish/AIS/index.asp>.

## ***2010-2011 Fishing Regulations***

We are proposing a 15-inch minimum length limit for walleye at Glendo Reservoir. Paul provides the rationale for the proposed change in his report in this newsletter. A second change is on the North Platte River from the Lusby Public Fishing Area to the Bessemer Bend Bridge. The current regulation is a creel limit of three trout per day or in possession and only one shall exceed 20 inches. We are proposing a creel limit of three trout per day or in possession and only one shall exceed **16** inches. This change will provide a little more protection for larger fish and provide greater consistency in our river regulations (same regulation as the Miracle Mile).

Comments will be accepted through July 9, 2009. Additional information is available at <http://gf.state.wy.us/>.

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# *The North Platte River - Gray Reef and the Narrows*

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## ***Gray Reef***

We conducted our bi-annual population estimates on the Gray Reef reach during the week of September 29, 2008. We estimated 2,233 trout per mile representing 4,329 pounds of trout per mile. The vast majority (96%) are rainbows. Brown trout make up approximately 3% of the population with cutthroat trout comprising less than 1%. The average size of trout in the Gray Reef reach is quite impressive with rainbows averaging 16.8 inches and 1.87 pounds. Brown trout averaged 18.0 inches and an astonishing 3.35 pounds. Cutthroat trout are also capable of reaching impressive sizes in this reach with one fish that measured 24.9 inches and 6.61 pounds. The largest fish captured was a brown that was 27.8 inches and 9.36 pounds.

## ***The Narrows***

We also completed bi-annual population estimates at the Bessemer reach (through the narrows) during the week of October 6, 2008. We estimate there are 1,024 trout per mile or 1,099 pounds of trout per mile in this reach. These numbers are significantly lower than the 10 year average of approximately 3,500 fish per mile. The large decrease in numbers through this reach is largely attributable to poor recruitment in 2007, where the number of 1-year-old rainbows in 2008 represented a mere 18% of normal. Unlike the gray reef reach, the population through this stretch is comprised largely of young (1-2 year old fish) versus older (3 years plus) fish at Gray Reef. It is likely that the effects of the poor 2007 year class will be seen in the Gray Reef population in 2010 and 2011. Unfortunately, we have every reason to believe the 2008 year-class was also very poor. We plan to conduct population estimates at Gray Reef and Bessemer again in 2009 to further assess the 2007 year-class and determine the strength of the 2008 year class. We are hopeful that river conditions through the critical spawning and hatching times (April – June) are conducive to good reproduction. If we suspect river conditions limited reproductive success again this year, we may need to consider stocking the upper river to buffer the effects of limited numbers of young fish.



*Fisheries biologist, Matt Hahn, with nine pound brown at Gray Reef*



*Snake River cutthroat trout*

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# The North Platte - Cardwell

There is good news to report about the population in the Cardwell reach. We observed a near doubling in population from 2007 to 2008. Our population estimate conducted in early September showed 373 trout per mile and 642 pounds of trout per mile. Interestingly, the increase in population cannot be attributed to increased reproduction or survival of stocked fish; rather, the numbers were up across all size classes. While we cannot say for sure, it seems that the Cardwell reach is receiving an influx of fish from Pathfinder Reservoir. Given the low reservoir level, it may be possible for fish to become entrained in the outlet and survive the pressure gradient to be deposited in the river.



Casper fisheries technician with rainbow from Cardwell

hauling spawning gravel to Cardwell and plan to construct 5 spawning beds similar to what was built at the Miracle Mile. This will result in a net increase in available spawning habitat by more than 350%. Additionally, we will be coupling noxious vegetation control with fish habitat enhancement. We will be cutting Russian olives from the easement and placing them in the river below spawning

Our 5 year stocking and strain evaluation has been completed. We can definitively say that stocked fish, regardless of strain, are contributing very little to this fishery (Figure 1). Over the last 5 years, stocked fish have always comprised less than 10% of the trout population. Firehole rainbows have had a numerical advantage over Eagle Lake rainbows in every sample, but there is no detectable difference in growth or condition. We will discontinue stocking this reach and focus our efforts on enhancing spawning habitat for trout. We will be

areas to provide nursery habitat for newly hatched trout. The trees will be placed in slow, shallow habitats preferred by young trout to offer protection from predators.

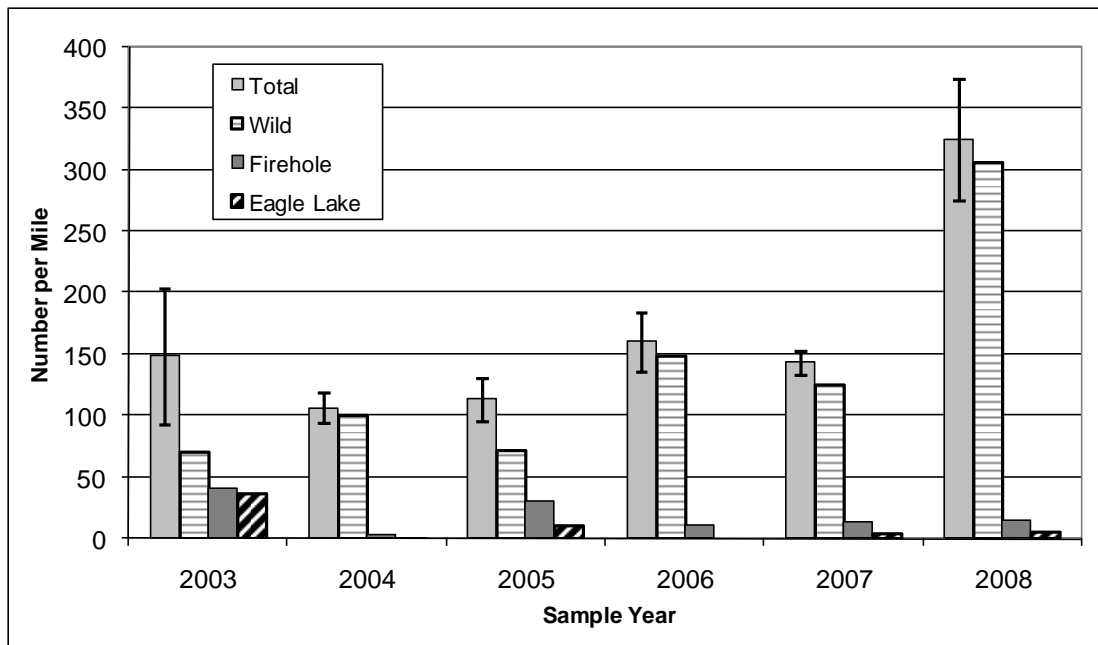


Figure 1. Total number of rainbow trout per mile (combined wild and stocked) and the number of wild (unmarked), stocked Firehole strain and stocked Eagle Lake strain rainbow trout per mile from the Cardwell reach. Error bars represent 95% confidence interval.

# The North Platte— The Miracle Mile



*Electrofishing during the 2008 Miracle Mile*



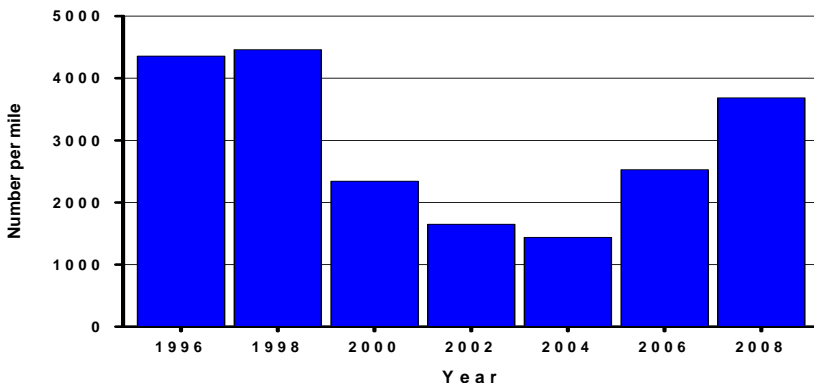
*10.5 lb Miracle Mile brown trout*

A population estimate was conducted at the Miracle Mile during July 2008 using raft electrofishing. Estimates for 2008 were 3,683 trout per mile and 1,563 pounds of trout per mile. Approximately 58% were rainbow trout, 42% brown trout, and < 1% cutthroat trout. The number of trout in the 2008 population estimate was the highest observed since 1998, and the number of trout in the Miracle Mile has increased in every population estimate since 2004 (Figure 1). Despite the high numbers, most of the trout in the Miracle Mile were small, with rainbow trout average length at 10.5 inches and brown trout average length at 11.4 inches. The low water level in Pathfinder Reservoir is likely having a negative effect on the size of both rainbow and brown trout in the Miracle Mile. Growth and body condition of Pathfinder trout, many of which swim upstream into the Miracle Mile, has decreased with the reservoir water levels.

The small average size of rainbow trout may also be the result of increased stocking that has been implemented for a rainbow trout strain evaluation. From 2005 – 2008, approximately 40,000 Eagle Lake strain rainbow trout (ELR) and 40,000 Fire-hole River strain rainbow trout (FHR) were stocked each year. The goal of the evaluation is to determine which strain survives better, grows bigger, and is caught more often by anglers in the



*One of the few cutthroat trout captured during the 2008 Miracle Mile population estimate*



*Figure 1. Number of trout per mile in the Miracle Mile from 1996 – 2008.*

Miracle Mile. All ELR received a right pelvic fin clip and all FHR received a left pelvic fin clip before stocking. Preliminary results based on 2006 and 2008 population estimates suggest that FHR are performing better than ELR; however, final results of the study will not be known until 2010. A creel survey, July population estimate, and seasonal electrofishing at the Miracle Mile in 2009 are planned to be before deciding which strain to continue stocking.

# Pathfinder Reservoir

The winter of 2007 – 2008 brought some much needed water to the North Platte River system. As a result, end-of-year Pathfinder Reservoir storage increased to 38% in 2008, which was the highest end-of-year storage since 2001. The overall storage in Pathfinder was still low, but an increase in water levels after years of drought was an encouraging sign.

## Trout

Body condition of Pathfinder rainbow trout significantly increased from 2007 to 2008 and was likely affected by the increasing water level. No significant increase was observed in rainbow trout numbers; however, the population will likely need additional time to recover if water levels continue to increase. Trout numbers may have been slow to increase because of stocking practices in the fall of 2007. Normally, the WGFD stocks trout that are 9 inches in length in Pathfinder because fish of this size are too big for many walleye to eat. However, trout that were 7 inches or less were stocked in 2007. Our hatchery system has been undergoing some much needed renovations and updates that has resulted in some limitations. Thus, many of the trout stocked in 2007 were probably eaten by walleye, and did not survive to be caught by fishermen in 2008.

An example of the effects of stocking smaller fish on the Pathfinder trout population can be seen in Figures 1 and 2. Figure 1 shows the trout population in 2007, when a large number of 8 to 9-inch fish were stocked in the fall of 2006. Notice the large number of 11 to 13-inch fish, which were the survivors from the 2006 stocking. Figure 2 shows the trout population in 2008, when trout that were 7 inches or less were stocked in the fall of 2007. Notice the lack of survivors (11- to 13-inch trout) from fish that were stocked in 2007.

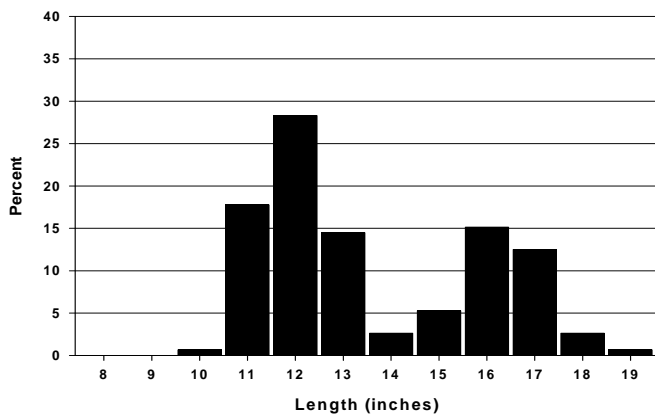


Figure 1. Length frequency of rainbow trout in Pathfinder Reservoir in 2007.

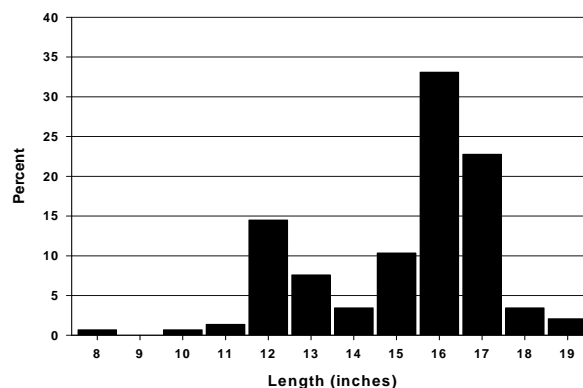


Figure 2. Length frequency of rainbow trout in Pathfinder Reservoir in 2008.

The WGFD stocked a large number of 8 to 9-inch rainbow trout in the fall of 2008, so trout numbers are expected to improve in 2009. Rainbow trout in Pathfinder should also have higher growth rates than in past years because of higher reservoir water levels. Hopefully, stocking larger trout combined with higher water levels will lead to good trout fishing in Pathfinder in 2009.

## Walleye

After three straight years of increasing numbers, the Pathfinder Reservoir walleye population appeared to stabilize from 2007 to 2008. The size structure of the walleye population in 2008 showed that most fish were 10 – 17 inches; however, some large fish were present in the 30-inch range (Figure 3). Higher reservoir water levels from 2008 to 2009 should benefit walleye condition and growth.

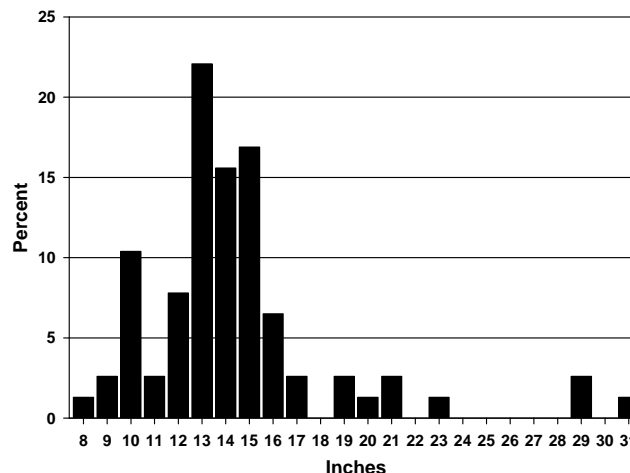


Figure 3. Length frequency of walleye in Pathfinder Reservoir in 2008.

# Seminole Reservoir

Similar to Alcova Reservoir, the trout fishery in Seminole has been influenced by variable stocking over the last 6 years. When enough fish have been available to meet requests, the population has responded favorably. When 9-inch rainbow trout were not available, smaller trout were stocked and the population responded negatively. With the hatchery renovations nearly complete, stocking in the reservoir will stabilize at the preferred number and size of fish and will provide quality angling opportunities for rainbow trout. A small brown trout fishery exists in the reservoir, perpetuated through natural reproduction in the river upstream. While rainbows tend to reach a maximum size of around 20 inches in the reservoir, we have captured brown trout in excess of 8 pounds, which serve to provide a trophy component to the overall trout population.

As is typical with a wild population, the walleye population in Seminole experiences a “boom and bust” recruitment regime. For example, the reservoir has an average 2006 year class, strong 2005 and 2003 year classes, a

weak 2004 year class, and a nearly non-existent 2002 year-class. Since the walleye in Seminole grow very slowly, the number of fish over 15 inches in the fishery is dictated by the combination of year-classes from 5-7 years prior. Since 2003 and 2005 had excellent reproduction, we are seeing a lot of walleye in the 10-11 inch and 13-15 inch range. But, because reproduction in 2002 was so poor, there are very few walleye in the 16-18 inch range. While the majority of fish caught on Seminole will be in the 11-15 inch range, Seminole Reservoir continues to be one of the best places to hook a truly big walleye as we routinely capture walleye over 13 pounds during our annual sampling.



Twelve pound Seminole walleye

## VERY IMPORTANT

### STREAM ACCESS AND TRESPASS

Wyoming’s trespass law states that a member of the public has the privilege to enter private land only with the explicit permission of the landowner.

It is legal to float through private land but it is the responsibility of the floater to know if the land is public or private. If you are floating through private land you must stay in your boat at all times unless permission has been obtained from the landowner.

State law only allows you to leave your craft for short portages around non-navigable obstacles. The streambed is the property of the landowner. Wading or anchoring without permission is trespassing.

Access to public lands for public use is only permitted if these lands are accessible from an existing public road or border other public lands where you can access the state lands without crossing private lands. If you are unsure, check with the land management agency responsible for the land in question (BLM, USFS, State of Wyoming, etc.).

Public land maps, available from the Bureau of Land Management, are excellent guides for avoiding a \$210 trespassing ticket.

In all cases, respect the land, the landowner, and those who come after you by removing litter and minimizing evidence of your presence and the evidence of others who have not been so considerate.

Treating your access as a privilege goes a long way in gaining more access for fishing and hunting in Wyoming.

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## *Alcova Reservoir*

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The rainbow trout population in Alcova Reservoir is beginning to rebound after 5 years of stocking smaller than preferred fish. Over the last 8 years, the WGFD fish hatchery system has been undergoing some much needed renovations and updates. During this time, the production of fish through our hatcheries was slightly impacted. Our management “prescription” for Alcova Reservoir has been to stock 95,000 9-inch rainbow trout annually. Due to the decreased hatchery space available, it was necessary for us to stock smaller rainbows than normal (5-7 inches). During this same time period, the walleye population in Alcova has increased dramatically, resulting in lower than desired survival of stocked rainbow trout. We are on track to stock between 85,000 and 95,000 9-inch rainbows in 2009. Beginning in 2010, we plan on increasing the number of rainbows stocked to around 120,000, which should allow enough trout to escape walleye predation to provide anglers with acceptable catch rates.

As stated earlier, the walleye population in Alcova has significantly increased over the last 5 years. Our catch rates in gillnets have steadily increased to the point where catch rates in Alcova are similar to other better known walleye fisheries such as Seminoe, Pathfinder, Boysen and Keyhole reservoirs. Several large year-classes have resulted in a large number of 13-16 inch walleye in the reservoir. Excellent growth rates coupled with very little walleye harvest has resulted in a healthy population of large walleye. In 2008, 15% of the population was made up of fish over 5 pounds, with 6% of the population being fish over 10 pounds. In fact, we capture more fish over 10 pounds every year in Alcova than any other walleye reservoir in the North Platte system.



*Ten plus pound Alcova walleye*

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## ***Dan Speas Rearing Station Construction Update***

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As you may have noticed from the highway, there are some very large buildings appearing at the Speas Rearing Station. Construction is moving ahead rapidly and the facility is scheduled to be open again to the public late fall of this year. The crew at Speas has been doing an amazing job of providing fish for the state while construction is underway. Kind of like overhauling your pickup while driving down the road.

When completed the facility will be able to produce more trout and at a size that will be suitable for our stocking programs in the North Platte Reservoirs and other large reservoirs throughout Wyoming. The new circular “raceways” and other technology such as separators and settling basins will be better for the fish, produce more fish and control the waste. More fish and clean water – a win/win for everyone.



*Fiberglass Rearing Units, there are now 12-foot, 16-foot and 20-foot circulars at Speas for a total of 36 new rearing units.*



*New 36 foot concrete circulars at Speas, there are now 8 total at Speas*

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## ***New Fishing Regulation Proposed for Walleye at Glendo Reservoir***

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In 2006, a tagging study was initiated to estimate fishing mortality on the Glendo Reservoir walleye population. During the study, 1,000 walleye were tagged with reward tags ranging in value from \$5 to \$100. The goal of the study was to determine annual fishing mortality through the number of reward tags returned by anglers. Over the one-year period from 2006 to 2007, it was estimated that anglers harvested 35% of the fish in the Glendo walleye population.



*Tagged Glendo walleye*

Many Glendo anglers have expressed a desire to catch and harvest larger walleye, even if it means releasing smaller fish. Data from the fishing mortality study as well as age and growth information collected during annual gill netting surveys were analyzed. The analysis suggests the implementation of a minimum length limit would likely increase the size structure of the walleye population and the size of fish harvested by anglers. Implementation of a minimum length limit may also benefit the walleye population by limiting the harvest of juvenile fish that have not had an opportunity to spawn in their lifetime. A downside to a length regulation is that anglers would no longer be permitted to fillet fish at Glendo Reservoir.

Glendo Reservoir anglers were asked their opinions of a minimum length limit for walleye during 2008 check stations and creel surveys. All anglers were told that they would no longer be permitted to fillet fish at the reservoir if a minimum length limit was implemented. Anglers were asked if they would prefer: 1) no change to the current regulations; 2) a 15-inch minimum length limit; or 3) an 18-inch minimum length limit. Of the 622 anglers asked the opinion question, 12.4% did not want a change in the walleye regulations, 64.6% preferred a 15-inch minimum length limit, and 23.0% preferred an 18-inch minimum length limit. In all, 87.6% of anglers supported a minimum length limit for walleye. Based on data from the Glendo walleye population and results of the opinion survey, a 15-inch minimum length limit for walleye at Glendo Reservoir will be proposed to for the 2010-2011 regulation cycle.



*Anglers being interviewed at Glendo Reservoir in 2008*

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# Glendo Reservoir

## Walleye

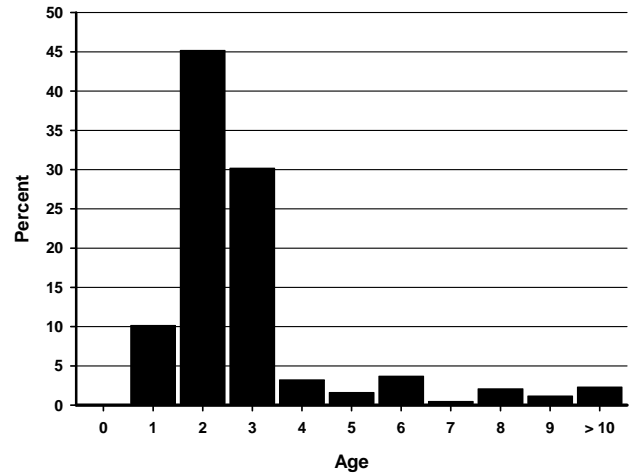
Glendo Reservoir produced outstanding walleye fishing again in 2008. Results from a June creel survey showed that anglers caught 1.15 walleye per hour of fishing time, which was the highest catch rate observed since the June creel survey began in 2000. However, the average length of harvested walleye was only 15.2 inches, which was the smallest average length observed since 2000 (Table 1). The small average length of harvested walleye was no surprise,

Year	Walleye catch rate	Average walleye length
2008	1.15	15.2
2007	0.82	15.3
2004	0.37	16.2
2003	0.39	16.9
2002	0.83	15.5
2001	0.63	16.3
2000	0.74	16.7

*Table 1. Walleye catch rate (fish/hour) and mean length of harvested walleye by year for June creel surveys conducted at Glendo Reservoir.*

because over 45% of the Glendo walleye population was made up of age-2 walleye (Figure 1), which are approximately 14 inches long in June.

Walleye fishing should continue to be good at Glendo in 2009. Anglers should expect to catch larger fish, but catch rates will likely not be as high as 2008. A weak walleye year-class was produced in 2007, with age-1 fish making up only 10% of the population in 2008 (Figure 1). In 2009 anglers should expect to catch less fish in the 13 – 14 inch range (age-2), and more in the 16 – 19 inch range (ages -3 and -4) than they did in 2008.



*Figure 1. Age frequency of walleye in Glendo Reservoir, 2008*



*A 10.5 lb Glendo Reservoir walleye.*



*A WGFD creel clerk measures walleye at a Glendo Reservoir check station in 2008.*

## *Glendo Reservoir continued...*

### **Channel Catfish**

Average channel catfish size at Glendo Reservoir in 2008 was large at 23 inches and 5 pounds. However, numbers continue to remain low. The 2008 gill netting survey showed the lowest numbers of catfish in Glendo since standardized gill netting began 2002 (Figure 2). The low numbers are the result of not stocking catfish in Glendo Reservoir or the North Platte River upstream from Glendo from 2001 – 2004. Channel catfish were not stocked during this time period because we had concerns about available forage for walleye and we would be able to also evaluate if natural recruitment could sustain the fishery. Early results indicate that natural recruitment is producing very few catfish and that stocking is needed to sustain the fishery. Stocking resumed in 2005; however, shortages of catfish in the Arkansas and Oklahoma hatcheries where catfish are obtained prevented stocking the normal amount of catfish in 2006 and 2007. Normally, the requests a total of 20,000 – 30,000 catfish for Glendo Reservoir and the North Platte River upstream from Glendo; however, less than 10,000 were stocked in 2006 and 2007. Although some

small catfish from recent stockings have begun to appear in our surveys, the lack of stocking over the years has taken its toll. To recover the population, we hope to increase stocking to 40,000 catfish per year.

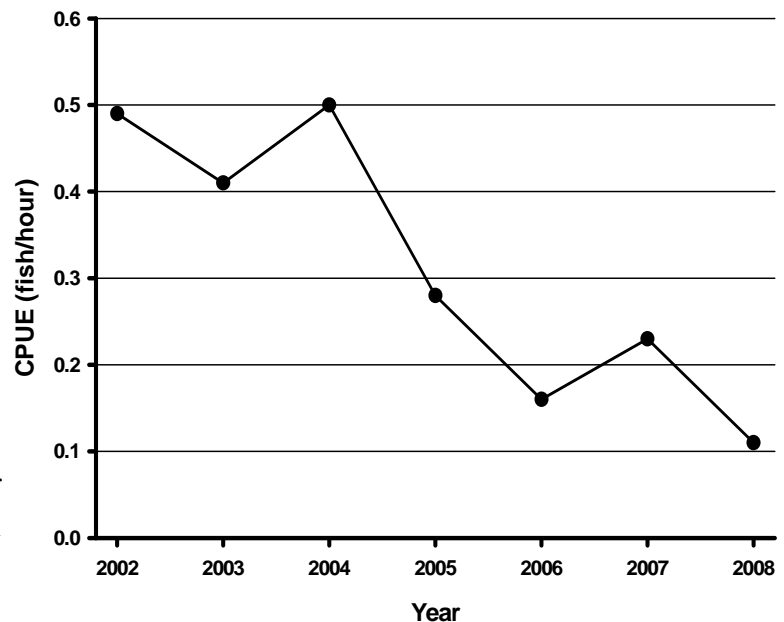


Figure 2. Catch per unit effort (CPUE) of channel catfish in Glendo reservoir from 2002 to 2008.



Channel catfish. Fish art by Michelle LaGory

# Don't Move a Mussel



**A**quatic invasive species like **quagga mussels** and **zebra mussels** are small organisms that could have huge impacts for Wyoming's waters, boaters and anglers. They can ruin fisheries, clog cooling systems in motorboats, foul hulls and ruin equipment. These organisms have **not** been found in Wyoming **yet**, but are present in several bordering states.

**Help protect Wyoming's waters by making sure you Don't Move a Mussel!**

## Follow These Simple Steps:



**✓ DRAIN** Eliminate all water before leaving the area, including wells, ballast and engine cooling water.



**✓ CLEAN** Remove all plants, animals and mud from equipment and boats. Thoroughly wash everything, including all crevices and other hidden areas.



**✓ DRY** Allow time for your boat and gear to completely dry before launching or recreating in other waters.



**WYOMING GAME & FISH DEPARTMENT**

"Conserving Wildlife - Serving People"



For more information, visit [www.100thmeridian.org](http://www.100thmeridian.org). Please contact the Wyoming Game and Fish Department if you observe quagga or zebra mussels on your equipment or in Wyoming waters. We can provide more information and assistance in removal. Call (800)842-1934 in-state or (307)777-4600.

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## *Illegal Live Fish Transportation*

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The Wyoming Game and Fish Department is making a serious effort to stop the illegal transportation of live fish. Illegal transportation of live fish has resulted in illegal introductions in many Wyoming waters. Examples of illegal fish introductions include brook stickleback in the North Platte and Bighorn river systems, burbot in the Green River system, and walleye in Yesness Pond in Casper, Lake DeSmet, Sulphur Creek Reservoir, and Buffalo Bill Reservoir.

The Wyoming Game and Fish Department conducted four check stations in the Casper Region in 2008 and early 2009 with the goal of stopping anglers from illegally transporting live fish. Three check stations were conducted at Glendo Reservoir, and one was conducted between Casper and Shoshoni. The check stations at Glendo Reservoir were designed to stop anglers from illegally transporting game fish (primarily walleye), whereas the check station between Casper and Shoshoni was designed to prevent the illegal transportation of bait minnows. Although current fishing regulations explicitly state “any fish placed on a stringer, in a container, in a live well, or not released immediately to the water.....shall be killed prior to being transported from the water of origin,” WGFD personnel often observe Glendo anglers leaving the boat ramp area with live fish in livewells. Fishing regulations also clearly state that “live baitfish shall not be transported out of the designated use area as listed by the Department.”

A total of 14 citations and three warnings were issued for illegal live fish transportation to Glendo Reservoir anglers that had live fish in live wells after leaving the boat ramp area. Of the 15 vehicles with fishermen contacted at the Casper/Shoshoni check station, eight (more than half) were issued citations for illegally transporting live bait fish. Most of the anglers cited for illegal transportation likely did not intend to illegally stock the fish they were transporting. Nevertheless, all anglers must be aware of WGFD regulations. The high number of citations issued for illegal live fish transportation at the check stations indicates that many anglers need to take live fish transportation regulations more seriously. The Wyoming Game and Fish Department is hoping that conducting check stations and citing anglers illegally transporting live fish will prevent future illegal introductions and make anglers more aware of regulations.



*Check station at Glendo Reservoir*

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## Wyoming Game and Fish Department



*Wyoming Game and Fish Department  
Casper Region Fisheries Management  
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Casper, Wyoming 82604  
Phone: 307-473-3400  
Fax: 307-473-3433*

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**WE'RE ON THE WEB!**  
**[HTTP://GF.STATE.WY.US/](http://GF.STATE.WY.US/)**

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**"Conserving Wildlife — Serving People"**

In 2008, the Casper Region Fisheries Management Crew was composed of three full-time biologists: Al Conder, regional fisheries supervisor; Matt Hahn and Paul Gerrity, regional fisheries biologists. The region's aquatic habitat biologist was vacant.

### **Many Thanks to Newsletter Contributors:**

**Al Conder, Paul Gerrity, Matt Hahn, Janet Milek,  
and Gordon Townsend.**

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## ***The North Platte—Creel Survey***

In March, we initiated a 7 ½ month creel survey on the North Platte River from Robertson Road bridge to Gray Reef Dam. We will be counting anglers and gathering data such as how long they fished, number of fish caught and released or harvested etc. until the end of October. The information collected will allow us to estimate the total number of anglers fishing the river, how many fish are harvested, how the angling pressure is spread out, by location and season etc. The last time a survey of this magnitude has been completed on the river was 1995 and 1996. Obviously, use of the river has increased significantly since that time.

## ***How are the Redds?***

We are also in the early phases of a study investigating the factors that govern reproductive success in the river. We are in the second year of collecting information as to the effect of flushing flows on spawning habitats. We are collecting core samples from known spawning areas prior to and after the flush, which allows us to quantify the beneficial impacts of the flushing flows as they relate to trout spawning areas. The second phase of the sediment study will be to core actual trout redds to determine the exact parameters that trout in the North Platte need to successfully reproduce. Through preliminary sampling last year, it became apparent that many areas of the North Platte River seemingly appear to be major spawning areas due to the high concentration of redds. However, when we sampled redds in these areas, we found that over 90% of the redds were "false redds", meaning they contained no eggs. This same phenomenon was also observed in brown trout redds at the Miracle Mile. In contrast, there were other areas where 100% of the redds sampled contained eggs. Through additional sampling, we will be able to identify the range of hydrologic and substrate conditions that allow trout in the North Platte to successfully spawn and can then delineate what would be considered the crucial spawning areas.

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