Montana Fish, Wildlife & Parks

ANNUAL EDITION
2008

FISHING NEWSLETTER

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Welcome to our annual Fishing Newsletter.

The articles in this issue highlight the wide diversity of tremendous fisheries we manage in the state; from hatchery supported walleye and trout fisheries in a variety of reservoirs to our internationally recognized wild trout fisheries. The biggest news for the fisheries of the state this year is the removal of several barriers to fish movement that will greatly enhance our river fisheries. Of course everyone has heard about the removal of Milltown dam. As I write this the old powerhouse is coming down and in the next month the Clark Fork and Blackfoot rivers will be flowing free once again. Thousands of fish representing several species that have been blocked from completing their annual spawning migrations for over a hundred years will be able to return to historic spawning and rearing grounds. But I will wager that most of you are not aware of the fish passage projects on the Tongue and Yellowstone rivers that will re-open hundreds of miles of habitat for river dwelling warm water species such as sauger, channel catfish, shovelnose sturgeon, paddlefish and the endangered pallid sturgeon. These projects are just as exciting and important as the Milltown dam removal.

I hope you will have many opportunities this year to get out with your family and friends to enjoy this diversity of great fishing. Remember to take a kid fishing this year.

Sincerely

Chris Hunter
Fisheries Administrator

Introduction

Efforts to maintain and enhance Montana's renowned fishery resources were as much as challenge in 2007 as in any previous year. Almost 390,000 anglers purchased fishing licenses during the year, and with this purchase comes a wide range of expectations and opportunities. Many like to fish the lakes and reservoirs; some of these have naturally reproducing fisheries, but others do not and require stocking from our 10 fish hatcheries. These facilities produce a wide variety of sport fish for the angler, including salmon, trout, grayling, walleye, bass, and northern pike. The hatchery system also provides a critical role in helping to restore sensitive and endangered species like pallid sturgeon and cutthroat trout. The sport fisheries in our streams and rivers are largely self-sustaining, meaning they receive no hatchery supplementation. This is why Montana Fish, Wildlife & Parks (FWP) invests heavily in habitat and water quality protection efforts. One water quality feature we have little immediate control over is rising water temperatures brought on by drought and our warming planet. Since 2005, the FWP staff and Commission have instituted a river closure policy where we can close streams to fishing if water temperatures exceed 73°F for three consecutive days to avoid undue stress to fish. Slight differences occur in drainages with drought management plans or where bull trout occur. We invite all cold-water anglers to visit the FWP website to learn more about this policy and keep appraised of closures as they occur, typically starting in mid-summer. Go to: http://fwp.mt.gov/fishing for this and plenty more useful information on fishing in Montana, including our Fishing Guide of over 400 popular lakes and streams.

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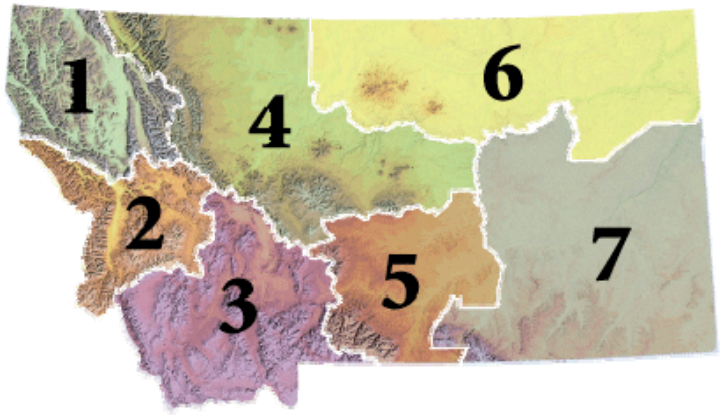

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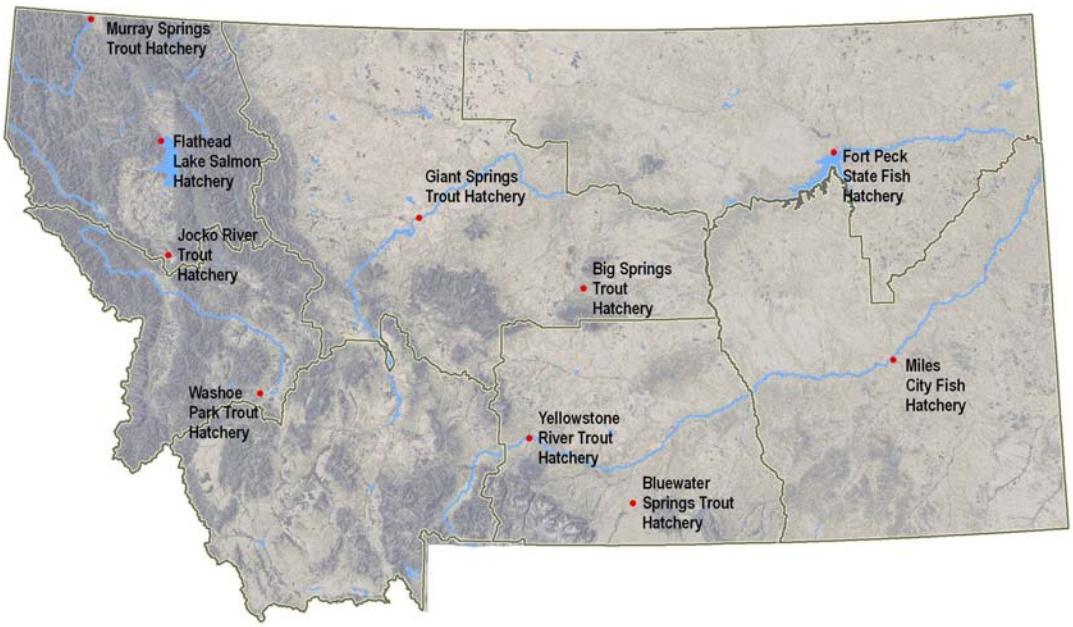
Hatcheries



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Bluewater Hatchery
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Fort Peck Hatchery
PO Box 167
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Jocko River Hatchery
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Miles City Hatchery
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Murray Springs Hatchery
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Yellowstone River Trout Hatchery
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Anaconda, MT 59711
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Region 1 - Northwest Montana

Regional Overview
(Jim Vashro)

July 2007 was the hottest July on record for northwest Montana. Heat coupled with below average moisture had streams hurting by midsummer. Reservoir outflows kept some rivers like the Kootenai and Flathead in good shape, but the Thompson River went to a "hoot-owl" (2 pm to midnight) closure on July 9 and stayed restricted through August 31. The Thompson River still has good numbers of trout but many recent year classes are weak with low flows impacting juvenile recruitment. In the lower reaches brown trout have increased from 30-50% of the population to 50-80% of the fish. This is probably because browns are more tolerant of warm water and harder for anglers to catch.

Low winter water levels contributed to substantial winterkills in Frank and Banana lakes. Rogers Lake is a broad, shallow (average depth 12'-15') lake and the hot summer drove surface temperatures to 80° F and bottom temperatures were still at 74° F. Thousands of grayling died although fall fishing reports indicate there are still lots of fish to be caught.

The South Fork Flathead River is the only stream in Montana where anglers can legally fish for bull trout. This remote fishery has been popular with anglers reporting catching and releasing nearly 400 bull trout in 2006. However, summer 2007 water temperatures pushed 68°F, raising concerns that bull trout schooled at the mouths of cooler tributaries would be vulnerable to overfishing and suffer undue post-release mortality due to thermal stress. Therefore, the river was closed several weeks earlier than the scheduled August 15 closure. The recreational bull trout fisheries in Hungry Horse Reservoir and Lake Koocanusa remain popular. The fisheries are run under a special permit from the U.S. Fish and Wildlife Service (USFWS) and utilize a catch card system. More than 2,200 anglers secured a catch card for one or more waters in 2006-2007 although many of those anglers didn't ultimately fish. Over the last 3 years fishing pressure has declined in Hungry Horse Reservoir and increased in the South Fork Flathead River. A mail survey estimated anglers caught 623 bull trout in Hungry Horse but released all but 56 (91% release rate). It was estimated anglers caught and released 380 bulls in the South Fork Flathead. Lake Koocanusa sustained the bulk of bull trout fishing with an estimated 3,400 days of fishing. Anglers caught 1,170 bull trout but released 85%, keeping only 180 bulls, which was lower than previous years.

Drought conditions are tough on a coldwater fish like bull trout but they are hanging in there. Spawning runs out of Hungry Horse and Lake Koocanusa don't seem to be showing any impacts from the recreational fisheries. The run out of Koocanusa into the Wigwam River consists of an impressive 5,000 to 6, 000 adult bulls. The run out of Swan Lake this year was one of the best ever although illegally introduced lake trout are a growing cloud on the horizon. An interagency working group organized a large-scale netting effort to try to estimate lake trout abundance and implant sonic tags for a graduate student study from Montana State University. The netting caught 2,174 lake trout and marked 1,391 fish of two or more age classes in the 14"- 16" range but it wasn't possible to get a population estimate. Some tags were implanted in 18 lakers from 8 to 22 pounds, probably some of the first fish introduced.

Management also continued on the Flathead Lake fishery to balance lake trout with native bull and westslope cutthroat

trout (WCT). The primary strategy has been to use recreational sport fishing to harvest lake trout. A particularly useful strategy has been fishing contests where anglers are rewarded for bringing in large numbers of small lake trout. The daily limit was raised to 50 lake trout and a small number of highly skilled anglers have regularly hit that limit during peak periods. The total harvest for 3 fishing events in 2007 was nearly 24,000 lake trout in addition to 30,000 to 40,000 lake trout harvested outside of fishing events and biologists will monitor to see what effect that has on the fishery. The 2007 bull trout spawning run produced 203 redds in index sections or about 450 redds drainage wide which is about 50% of the historic highs and more than double low counts in the mid-1990's. Work is continuing on habitat restoration in streams such as Coal Creek in the North Fork Flathead where redd counts have lagged far behind other streams. Potential problems also loom in the North Fork across the border in British Columbia where there are proposals for several coal mines, coal bed methane development, and a gold mine. A coalition of conservation groups and biologists is pushing for adequate baseline data and environmental reviews.

47", 31.6 pound northern caught by 14 year old Ryan Street from Somers Bay, Flathead Lake

Angler with Flathead Lake whitefish

A bright spot for fish and fishing has been selective withdrawal from Hungry Horse Dam. Deep water releases from the reservoir for power production would drop summer water temperatures in the South Fork and Mainstem Flathead Rivers as much as 15 degrees. This stopped insect hatches in their tracks and deeply impacted trout growth and abundance. An innovative program put selective withdrawal on the dam to withdraw water at different levels to better mimic normal temperatures. The system became operational in 1995 and trout response has been phenomenal. Snorkel counts of westslope cutthroat downstream from Hungry Horse Dam increased from 48 in 1995 to 615 in 2003 and 1149 in 2007. Mountain whitefish in the same section decreased from more than 1100 to 400 or less and some bull trout are now being observed. This positive effect persists in the main Flathead with anglers reporting fishing like the "good old days".

Human populations are also increasing rapidly in northwest Montana. Access options are decreasing as land ownership changes and increasing numbers of anglers are crowding into the remaining areas. FWP acquired an access at Paradise that will provide a float-out spot for both the Clark Fork and lower Flathead rivers to spread pressure into some under utilized fisheries. When a developer proposed abandonment of a county road that provided access to Church Slough in the Flathead Valley, a local sportsman's club, Flathead Wildlife, intervened and eventually were successful in ensuring continued public access to this popular warmwater fishery. A new access at Echo Lake with an improved ramp and parking drew rave reviews from anglers; especially after the Parks Division rebuilt and installed a dock to make launching easier.

Region 1's newest fishing access site on the Clark Fork River at Paradise

Anglers have always been willing to step forward to help fisheries and northwest Montana is exception. Members of the Junior Bass Club and Flathead Land Trust (FLT) helped pick up litter on McWennegar Slough where FLT provides fishing access. Members of Flathead Wildlife helped build a handicapped accessible pier on Shady Lane Pond. Within 5 minutes of completion, there were 10 kids on the pier and one caught a nice cutthroat. The Flathead Valley Chapter of Trout Unlimited helped weigh in Flathead lake trout during contests and provided prizes and a judge for the local State-Fish Art Contest. Members of the Western Montana and Echo Lake bass clubs and Montana BASS Federation helped build and install nearly 50 artificial bass habitat structures in Echo lake, and a whole array of anglers and clubs helped with Kids Fishing Days across the region.

Flathead Wildlife volunteers build a handicapped accessible fishing pier at Shady Lane Pond

Young anglers with first fish at Flathead Fishing Fair

Illegal fish introductions continue to plague the state and northwest Montana. Both Kilbrennan and Loon lakes northwest of Libby were chemically treated to remove illegal bullheads and yellow perch. Lion

Lake near Hungry Horse was treated in 1992 to remove yellow perch and pumpkinseeds and has produced as much as 3,000 days of fishing per year since then. But netting in 2007 revealed the yellow perch and pumpkinseeds were back along with northern pike, black crappie and white suckers. Cutthroat have already disappeared and rainbows are declining. Black crappie and smallmouth bass appeared in half a dozen new lakes. Another unwelcome discovery was the appearance of Eurasian Milfoil in Noxon Rapids and Cabinet Gorge reservoirs on the lower Clark Fork. This aggressive plant can clog waterways and choke out habitat. It is easily spread by fragments on boats and trailers. Anglers are encouraged to always inspect, clean, and dry all equipment and boats between trips.

South Fork Flathead Westslope Cutthroat Trout Conservation Project (Matt Boyer)

Westslope Cutthroat trout, Montana's state fish, have been reduced to less than 10 percent of their historic range. Hybridization and competition with introduced trout are the primary threats to the persistence of westslope cutthroat; consequently, conservation of this native species often involves management actions that reduce or eliminate non-native trout populations. In 2007, after extensive environmental review and public involvement, FWP began implementation of the South Fork Flathead River Westslope Cutthroat Trout Conservation Project with rotenone treatments of Black and Blackfoot lakes. The goal of this multi-year project is to replace non-native trout populations in 21 high mountain lakes with native westslope cutthroat. The South Fork Flathead drainage comprises 10 percent of the remaining westslope cutthroat distribution and more than half of the large connected populations. Over time, non-native fish dispersing downstream from the mountain lakes would compromise the genetic integrity of westslope cutthroat populations in the South Fork Flathead drainage.

The remote location of these lakes combined with restrictions on motorized use makes these projects logistically challenging. Helicopter sling loads were used to transport equipment, including a 14-foot aluminum boat and motor, to Black and Blackfoot lakes. In addition, a single engine air tanker (S.E.A.T.) plane was used to drop 1,260 gallons of rotenone in Black Lake. Video footage of the S.E.A.T. aircraft and photos of this year's lake treatment projects are located at the project website: http://fwp.mt.gov/r1/wctproject/default.html

S.E.A.T. aircraft drop of rotenone at Black Lake

Management actions for the remaining lakes will be determined based on results from genetic samples collected during summer 2007. Repeated stocking of genetically pure westslope cutthroat (i.e., "genetic swamping") had occurred in many of the lakes containing non-native trout. Genetic samples collected from these lakes will be used to determine the relative success of genetic swamping. It is

possible that rotenone treatment may not be needed in lakes that have responded to past stocking of pure WCT.

This project provides a unique opportunity to conserve westslope cutthroat in a significant portion of their remaining range, as well as investigate interesting biological questions pertaining to fisheries conservation management. Future areas of research related to this project include local adaptation, effects of juvenile rearing environment on survival, and effects of stocking density and frequency on population dynamics.

Hybrid trout in Blackfoot Lake

Hatcheries and Aquatic Education (Bob Snyder)

A hatchery truck dropping a load of fish in a lake is one of the most visible symbols of fish management. Fish are stocked where there isn't enough reproduction to meet demand, to introduce new species, and to reintroduce native fish into historic habitat. Fish hatcheries also play an important role in aquatic education. The 10 hatcheries owned or operated by FWP plant approximately 50 million fish each year into more than 800 lakes and reservoirs and nearly 2 dozen streams across Montana. Hatcheries host tours by hundreds of school groups each year as well as members of the public that stop by. Hatchery personnel explain modern fish culture, fish biology, nutrition, genetics, disease control, and the roles of stocking in fish management. The Washoe Park (Anaconda) and Giant Springs (Great Falls) hatcheries also have living streams that give visitors a fish-eye view of the underwater world.

Mark Kornick, Flathead Lake Salmon Hatchery manager, helps a young "fish-squeezer" spawn salmon

Hatcheries also provide catchable fish for Family Fishing Ponds utilized by "Hooked on Fishing, Not on Drugs" (HOF) school groups where students get to test their newly learned skills. At a number of ponds HOF classes meet hatchery trucks for a talk on the role of fish stocking and then the students are given buckets or bags of fish to plant in the pond. Afterward, the students often pick up litter or put up birdhouses. In this way they learn about giving back to the resource. And of course, they can come back with Mom and Dad to fish for "their" fish. The hatcheries also provide fish for dissection in the HOF classrooms to learn about fish physiology and for classroom aquaria.

The Marion School HOF class gets a truly unique opportunity thanks to Flathead Lake Salmon Hatchery. The students visit the kokanee spawn-taking site at nearby Little Bitterroot Lake. After some instruction, the students actually get to spawn salmon. Later in the winter the students will visit the hatchery to learn about fish culture and

visit "their" eggs. In the spring the hatchery brings the salmon fingerlings back and the students complete the cycle by carrying fish down to and planting them in the lake.

A Hooked on Fishing student plants fish in Buffalohead Family Fishing Pond

Lower Clark Fork Quick Highlights/Notables

Angler Mike Jensen was fishing the Clark Fork River, near the mouth of the Thompson River when he landed a state record 1.45 pound peamouth chub. One week later at the same location Mike broke his own record, landing an even larger 16-1/8 inch, 1.52 pound peamouth. Peamouths are a native minnow.

Due to an unseasonably hot summer the Thompson River was closed early on to fishing during the hottest parts of the day. Low flows and warm temperatures kept the river closed in the afternoons and evenings to reduce stress on the popular cutthroat, rainbow, and brown trout fishery. Surveys indicate that fish are faring well despite the continued drought the last 5 years. Brown trout are increasing in the percent of the population, probably because they are more resistant to drought and angling harvest. Browns can compete with and prey on other species so biologists will be looking at ways to bring them back into balance with the other species.

Work continued with FWP and PPL Montana working together to radio tag rainbow trout, cutthroat trout, and bull trout below the Thompson Falls Dam. Biologists used telemetry to track fish as they neared the base of the dam to identify the specific locations that attracted fish. This data will help ongoing efforts on the best location to build a fish ladder and provide passage over Thompson Falls Dam for bull trout and other species. Providing connectivity will benefit trout species by allowing them to make their natural spawning migrations up the Clark Fork River and then into tributary streams where they can spawn.

Caught and released WCT in the Thompson River

Noxon Rapids Reservoir

Noxon Rapids Reservoir holds one of Montana's premier black bass fisheries. FWP monitors bass tournaments held several times a year on Noxon. In 2007 tournaments were held in April, May, July, and October. The tournament data gives us a good idea of angler success and adult fish size structure. Over the past three years average bass size has increased approximately 1 inch per year. In 2007, the most common size of

largemouth bass brought to weigh-in at the end of tournaments was between 13-15 inches. Smallmouth bass weighed in are generally larger (and this is consistent over the years), with the most common size between 14.5-16.5 inches. Tournament anglers also caught some very nice largemouth bass with the biggest nearing 6 pounds and they captured a number of smallmouth around the five-pound mark. The bottom line, there are a lot of nice bass in Noxon.

Other game fish do well in Noxon Reservoir too. The reservoir is well known for abundant and healthy northern pike. In our annual gillnet surveys, the average northern pike was 24 inches long and 4.5 pounds. That doesn't sound impressive, but it equates to a very fat fish. The relative weight, a measure of a fishes overall condition, on the average northern pike in fall 2007 was 134. Fisheries biologists consider 85 – 95 to be excellent; with values over 100 indicating exceptionally fat and happy fish. In fact, all of the major game species were in great condition in our fall nets. Relative weights were 158 for largemouth bass, 103 for smallmouth, walleye came in at 129 and even the yellow perch, a fish notorious for overpopulation and stunting, had a relative weight of 97. The yellow perch fishery continues to improve in Noxon Reservoir, with average size and weight increasing every year. This year the average length was over eight inches, with many over ten inches. Yellow perch can provide fast fishing action and excellent table fare.

Biologists have been keeping an eye on walleye in Noxon Reservoir, which were illegally introduced and first documented in 1994. Annual surveys indicate that the population has been slowly increasing the last ten years, and ongoing studies in cooperation with Avista Corporation are looking at movement patterns of walleye in Noxon Rapids. Walleye have the potential to severely damage and have long-term impacts on fisheries in Noxon Rapids and Cabinet Gorge reservoirs, affecting the entire fish community. This year numerous anglers reported catching walleye in Noxon Reservoir. Although few anglers are targeting walleye because of their low population numbers the best time to catch walleye is during their spawning migration in April and May. During this spring time period adult fish are concentrated within the first few miles downstream of Thompson Falls Dam, which translates into increasing the chance of an angler running across one. FWP reminds anglers there is no limit on walleye in Noxon Rapids and Cabinet Gorge reservoirs.

Region 2 - West Central Montana

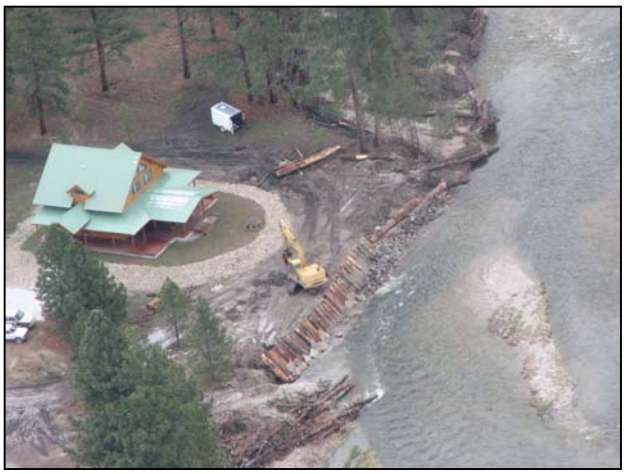
Bitterroot River
(Chris Clancy)

Trout populations in the Bitterroot River have been fairly stable over the past few years. However, rainbow trout populations have declined in the East Fork Bitterroot and upper Bitterroot River near Darby, most likely due to whirling disease. Westslope cutthroat populations have leveled out after increasing in number for over a decade since catch-and–release regulations took effect.

A large project to siphon two ditches under Skalkaho Creek is beginning and should be finished by April 2008. The goal of the project is to separate ditch and creek water so westslope cutthroat will not be lost into the ditches as they descend Skalkaho Creek toward the Bitterroot River.

A Ravalli County process to control the building of homes next to streams has

been ongoing since mid-summer. As development continues, homes next to streams often result in riprap, vegetative clearing, and water quality issues. The goal is to pass an ordinance that maintains a buffer between homes and streams.



Streambank stabilization project along the Bitterroot River in 2007

Upper Clark Fork
(Jason Lindstrom)

Decades of historic mining activity, as well as added land use impacts, have all played a role in limiting angling opportunities in the Upper Clark Fork River Basin. However, there is reason for optimism. The conservation tide is turning in the Upper Clark Fork, and the opportunities to do good things for fish are great. This work will take a lot of effort on behalf of many people, including local, state, and federal governments, concerned citizens, watershed groups, conservation organizations, and possibly most importantly, the cooperative efforts of numerous private landowners. Everybody who enjoys fish and wildlife will benefit from these cooperative restoration and conservation efforts.

While restoration and conservation work in the Upper Clark Fork Basin is really just getting started, there are projects already underway. One example is the ongoing cleanup of mine wastes along Silver Bow Creek near Butte. This is a large project that will ultimately have huge beneficial effects on the fisheries of the watershed. Every year, FWP monitors fish response to Silver Bow Creek restoration, and so far we have seen positive effects of the cleanup. This year, crews found trout in sections of the stream where they had previously not been documented. This is a good step in the right direction.

FWP is hopeful that current and future restoration efforts in the Upper Clark Fork Basin will help to re-establish recreational and native fishing opportunities throughout the area. While improving water quality and habitat condition in streams heavily impacted by historic mining such as Silver Bow Creek and the Clark Fork River will be a primary focus, there will also be efforts to restore and protect the tributaries that run into these streams. Tributary streams are incredibly important for fish spawning and rearing, and are the primary source of fish and water for larger downstream waters (i.e. the Clark Fork River). It is imperative that significant tributaries in the Upper Clark Fork are functional and healthy. Restoring or protecting important

Electrofishing a tributary in the Upper Clark Fork Basin.

tributaries, will go a long way towards helping to restore the fishery of the Upper Clark Fork River once metals contamination is addressed.

Because relatively little fishery information exists on tributaries in the Upper Clark Fork, FWP spent much of this past summer surveying numerous basin streams from Jens to Warm Springs. The purpose of this sampling was to better understand fish distribution and general fish abundance, as well as overall riparian habitat condition in many of the basin tributaries. The results of these surveys will help guide future restoration and fisheries management in the Upper Clark Fork Basin.

Flint/Rock Creek Drainages (Brad Liermann)

Fisheries management efforts in the Flint and Rock Creek drainages focused on investigating the fish populations in the tributaries. Fish species that were present in each drainage and the condition of fish habitat were assessed. Boulder Creek and Lower Willow Creek were the two main tributaries where this work was focused in the Flint Creek drainage and the Ross Fork Rock Creek drainage was the focus in the Rock Creek drainage. Fish sampling consisted of electrofishing sites to collect information on the abundance of fish present and the species composition for each location. Additional information collected included genetic samples for bull and WCT as well as lengths and weights for all fish sampled. Fish sampling was completed at several locations in each drainage in order to accurately characterize changes in species composition and abundance throughout each drainage. Habitat surveys were completed at each survey site using a method developed by the Natural Resource Conservation Service to assess whether habitat degradation was impacting these fish populations. This entire data collection effort is critical to fisheries management in this portion of Region 2. Currently, very little fisheries data is available for most of the tributaries in this area and the past data that is available is generally dated.

In addition to the tributary work completed, mainstem sampling was also completed in both of these drainages. Four electrofishing sections were completed in Flint Creek to assess the fish populations. Similar to many of the tributaries in this portion of Region 2, very little work had been completed in the past to assess the mainstem Flint Creek fishery. Surveys demonstrated surprisingly high densities of brown trout in several sections of Flint Creek. These surveys also helped to identify factors that may be negatively impacting the fishery of Flint Creek and will also provide baseline information that can be used to monitor the quality of the fishery into the future.

Fish sampling was also completed in mainstem Rock Creek during spring 2007. This consisted of electrofishing one section of upper Rock Creek in a reach that currently experiences high angler use but had not been sampled in the past. Traditionally, two electrofishing sections were completed in middle and lower portions of the Rock Creek drainage to monitor this blue ribbon trout fishery. While the data

collected at these lower sites has proven very valuable, it was suspected that an additional section higher in the drainage would expand our ability to effectively monitor this fishery and potentially provide better abundance information for native bull and WCT. This population estimate was successfully completed in 2007 and provided some interesting results. Brown trout densities in this reach were found to be quite high (as was expected), but WCT densities were also found to be relatively high. It is expected that this section will be monitored in future years to better characterize the fishery in this reach and to also better monitor the entire Rock Creek fishery. Several electrofishing population estimates will be completed for the Rock Creek drainage in 2008.

Due to favorable late season snow conditions, Georgetown Lake and many of the other fisheries in Granite County had adequate water to provide quality fish habitat in 2007. In the past, reduced water levels in Georgetown Lake have caused significant fish kills. Due to Georgetown Lake being a relatively shallow, yet very productive lake, low dissolved oxygen levels are relatively common in the lake during winter. In years when the lake levels are drawn down significantly and ice and snow cover the lake for an extended period, low dissolved oxygen levels can occur throughout the profile of the lake (at all depths). Due to trout and kokanee requiring well oxygenated water, these conditions can cause significant fish kills. Fortunately, there was adequate water in the drainage in 2007 to provide high lake levels and reduce the risk of fish kills over the 2007/2008 winter period. Thus, high quality fishing for trout and kokanee is expected for Georgetown Lake again in 2008.

Clearwater River Drainage
(Ladd Knotek)

Assessment of bull trout populations and the impacts of main stem dams

The Clearwater River Drainage is the largest tributary within the Blackfoot Watershed. This is a unique system with many high quality trout streams interspersed with a series of lakes along the main stem. The Clearwater system still supports a network of unique native fish populations (including lake-dwelling migratory bull trout), despite introduction of many non-native fish species that eat, compete, and hybridize with them. The primary challenges for FWP fisheries managers are 1) balancing the needs of disappearing native fish with anglers' desire for introduced sport fish (e.g., northern pike) and 2) protecting aquatic habitat quality in the face of imminent development pressure.

A series of studies over recent years have focused on identifying key habitats for native trout (bull trout and WCT) populations and factors that are limiting their abundance. By using radio telemetry to track adult bull trout and stream sampling (electrofishing) to identify stream nursery areas, biologists determined that migratory bull trout use three primary

coldwater streams for spawning and rearing. Not surprisingly, these same key tributaries also support westslope cutthroat, high water quality, and other values typically suggested by "indicator" species such as bull trout. These drainages have been prioritized in watershed protection and enhancement efforts.

As native trout mature, they move out of the tributary streams and move among the interconnected Clearwater chain of lakes in the main stem river system. Once in the lakes, trout use plentiful food and the cooler waters at depth to mature and reach large size. Bull trout telemetry work associated with a graduate research project at the University of Montana has demonstrated the importance of connectivity within the main stem river and lake system and the problems posed by dams. In several locations, bull trout and other native fish cannot move upstream past dams to reach spawning grounds. The problem is complicated by the fact that some of the same structures (e.g., Emily-A and Rainy Dams) may also prevent the upstream spread of unwanted introduced fish. With the help of new information being gathered on a number of species, these problems will be addressed on a site-by-site basis to balance the needs of native fish, sport fisheries, and stream habitat protection.

Blackfoot River Restoration: The First 20 Years
(Ron Pierce)

The year 2007 marked the first twenty years of the Blackfoot River Restoration Initiative. During this time, the story of the Blackfoot has evolved from one of simple riparian restoration projects to a "ridgetop-to-ridgetop" philosophy of applied conservation. During the first two decades of this endeavor, fisheries assessments helped identify restoration priorities for >100 water bodies and a strategy that has now helped direct restoration to 50 tributaries, most of which harbor native species including WCT and bull trout. Thanks to groups like Trout Unlimited and many other river supporters, habitat restoration continues at a brisk pace. This restoration work has greatly improved fish populations in many waters of the lower basin (including lower Blackfoot River) despite a prolonged drought and the expansion of whirling disease.

With the help of private landowners, conservation groups and resource agencies, approximately 200 square miles of perpetual conservation easements on private lands are at or near completion in the Blackfoot Basin. Many of these are located along critical waters including large segments of the Blackfoot River and North fork Blackfoot River. Conservation easements are now secure on scattered blocks of former Plum Creek Timber Company lands from the junction of the Clearwater River east to the Continental Divide near Lincoln. One conservation easement, funded by native fish habitat conservation funds, will protect a 7,000-acre area along the southern rim of the Lincoln Valley. This and similar easements will emphasize not only the protection from development, but also the restoration of native fish habitat where needed.

Other major fisheries improvements include the removal of Milltown Reservoir at the mouth and the clean up of the Mike Horse Mine area in the headwaters of Blackfoot River. The Milltown project will reestablish migrations of native fish at least as far as the North Fork Blackfoot River. The clean up of the Mike Horse will remove contaminated mining waste that led to the collapse of the cutthroat trout population in the headwaters of the upper Blackfoot River. Although there has been very little restoration activity in Clearwater River valley to date, recent fisheries research projects are now identifying critical habitats and conservation priorities in an area of imminent development pressure.

As we enter our third decade of restoration work, we remind ourselves that it is the anglers, sportsmen and conservation groups who support the fisheries resource that make the Blackfoot work possible. Those of you who fish the waters of the Blackfoot River helped make the first twenty-years a success. Please stay engaged, this work does not happen without your support, and there remains no shortage of restoration projects.

Region 3 - Southwest Montana

Arctic Grayling Recovery Program (ARGP) (Jim Magee and Peter Lamothe)

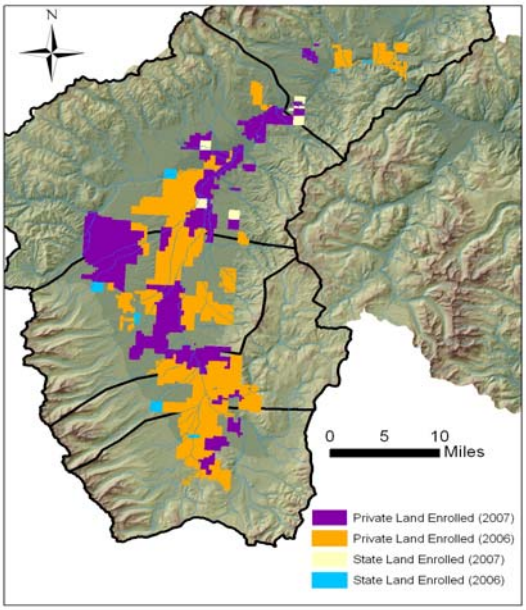
In 2007, conservation efforts for Montana grayling included the continuation of one of the largest conservation programs at a watershed scale on private lands in the country. The Big Hole Candidate Conservation Agreement with Assurances Program (CCAA) goal is to secure and enhance the population of fluvial (river-dwelling) Arctic grayling within the upper reaches of the Big Hole River drainage. Montana fluvial Arctic grayling were historically distributed in the upper Missouri River drainage but have been reduced to one population in the Big Hole River, approximately 4% of their native range. In April 2007 the USFWS ruled that Montana fluvial Arctic grayling did not meet the criteria to be classified as an ESA species and were thus taken off the candidate species list. Conservation groups have challenged this finding and the final outcome for Endangered Species Act (ESA) status at this time is unknown. Arctic grayling still remain a species of special concern in Montana. Regardless of ESA status, conservation efforts for Arctic grayling have and will continue to expand with numerous habitat enhancement projects initiated in the Big Hole and additional landowners and private property enrolled in the CCAA program in 2007.

The CCAA is an agreement between FWP, USFWS, and any non-federal landowner that voluntarily agrees to manage their lands or waters to remove threats to grayling. The landowners receive assurances against additional regulatory requirements and incidental take authority should grayling be subsequently listed under the ESA. Enrollment as of January 1, 2008 includes 32 private landowners and approximately 158,169 acres of state and private land. This is the largest CCAA in the United Sates in terms of the number of landowners and privately property enrolled.

Under the CCAA, FWP holds an ESA Section 10(a)(1)(A) Enhancement of Survival Permit issued by the USFWS which authorizes the incidental take of grayling should it be listed under the ESA. Landowners can be included in this Permit through Certificates of Inclusion. The conservation goals of the program are achieved by working with each landowner to develop a conservation plan for their land that identifies specific actions that can protect and provide benefit to

grayling. These site-specific plans will be developed with each landowner by an interdisciplinary technical team made up of individuals representing FWP, USFWS, Natural Resource and Conservation Service (NRCS), and Montana Department of Natural Resource and Conservation (DNRC). Conservation measures under the agreement will: 1) Improve streamflow, 2) Improve and protect the function of streams and riparian habitats, 3) Identify and reduce or eliminate entrainment threats for grayling, and 4) Remove barriers to grayling migration. This collaborative effort has developed partnerships with private landowners, The Big Hole Watershed Committee, the Big Hole River Foundation, The Nature Conservancy, Trout Unlimited and federal and state agencies.

Big Hole River CCAA Enrollment



Big Hole CCAA enrollment as of January 1, 2008.

Habitat restoration projects associated with the CCAA that address-limiting factors for grayling expanded dramatically in 2007. Habitat restoration included projects that stabilized streambanks and improved riparian vegetation and channel function on 18 miles of stream or river. These projects were protected by riparian fencing installed on approximately 36 miles of stream or river. Additional projects include developing 27 stock water systems to protect riparian areas and provide alternative stock water sources, installing 12 fish ladders and developing numerous fish friendly diversions to restore habitat connectivity and fish passage, the replacement of non-functioning irrigation control structures and measuring devices and the removal of confined animal feeding operations from floodplain. Similar projects are planned for 2008. In addition to these projects, installation of fish screens to prevent grayling from moving into irrigation diversions will begin in 2008.

Habitat restoration in the Wisdom Reach of the Big Hole River.

In addition to the efforts in the Big Hole, restoration work continues to establish a grayling population in the Upper Ruby River. Each spring gametes are collected from fluvial grayling brood populations, developed to eye-up in the Yellowstone River Trout Hatchery and transported to upper Ruby River. Eyed eggs are placed in Remote Site Incubators (RSIs), which develop fry under natural selective mechanisms of the Ruby River. These

efforts have been encouraging and have produced multiple age classes since 2004. Efforts will continue in 2008 with the goal of producing a stable age structure that will naturally reproduce and establish a self-sustaining population.

In 2007 habitat enhancement projects in the Ruby River system included channel reconstruction on Lazyman Creek that will improve spawning and rearing habitats, construction of high quality pools and bank stabilization on the mainstem Ruby that will decrease sediment and create summer and winter pool habitats. These projects are a collaborative effort between FWP, private landowners, the Ruby Watershed Council, and the US Forest Service.

For an update on grayling recovery efforts please visit the AGRP website http://www.graylingrecovery.org/

Remote Site Incubators (RSIs) are used in the upper Ruby River to develop grayling eggs to under natural selective mechanisms.

Westslope Cutthroat Trout Restoration (Lee Nelson)

Through a combination of habitat loss and introductions of nonnative fish, WCT, Montana's State fish, has declined significantly thoughout its native range. In southwest Montana, FWP Region 3, genetically unaltered WCT only occupy about 110 streams, and less than 5% of their historic range. In cooperation with the U.S. Forest Service, the Bureau of Land Management, Montana Trout Unlimited, and others, FWP Region 3 has launched numerous efforts to conserve WCT. Conservation efforts have included habitat improvement projects, introduction of WCT to historically fishless streams or streams where nonnative fish have been removed, removal of nonnative trout that compete or hybridize with native WCT populations, and construction barriers that prevent invasion of nonnative fish into streams occupied by WCT.

In-stream incubator used to introduce westslope cutthroat trout eggs

In 2007, a major focus of WCT conservation efforts in FWP Region 3 was the collection and introduction of over 10,000 wild WCT eggs to the upper sections of Cherry Creek near Ennis (Madison River drainage). This introduction project, and four similarly completed efforts in the Elkhorn Mountains near Helena, are intended to expand the overall range of WCT and to help preserve rare and potentially unique genetic characteristics of remaining wild WCT populations. In most cases, these introductions have occurred by directly introducing eggs collected from wild populations into the new streams using on-stream incubators. When completed after

several more years of introductions, the Cherry Creek project will result in a WCT population that occupies about 60 miles of stream, or nearly twenty times the current distribution of genetically unaltered WCT in the Madison River drainage. Several additional WCT introduction efforts are currently being evaluated in Region 3, and at least one, in Elkhorn Creek in the Gallatin River drainage, will be initiated in 2008.

Westslope cutthroat trout.

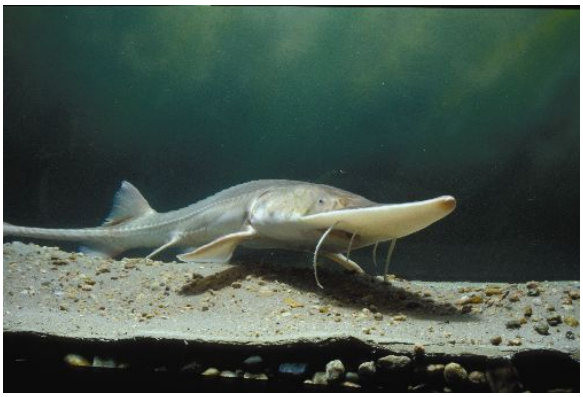
The removal of introduced, nonnative trout also continues to be a focus of WCT conservation efforts in select headwater stream areas. In 2007, the fish toxicant rotenone was used to remove nonnative brook trout and rainbow trout from about 20 miles of stream in the Cherry Creek drainage. Successful removal of nonnative trout from the headwaters of the drainage has already allowed introduction of WCT, and the project will be completed (about 60 miles of stream) with 2-4 additional years of toxicant application. Nonnative brook trout are also being removed using electrofishing from several small streams where they threaten native WCT populations. These projects are typically < 2 miles in length. Ongoing electrofishing removal efforts include Muskrat, McClellan, and SF of Warms Spring creeks in the Elkhorn Mountains near Helena, and McVey Creek in the Big Hole drainage near Wisdom. These projects, a high priority because these populations would be lost due to competition with brook trout, result in an almost immediate positive response from WCT. In some cases, WCT abundance has increased ten times after complete removal of nonnative brook trout. Similar efforts are being initiated in small tributaries the Red Rock and Ruby river drainages in 2008.

Region 4 - North Central Montana

Pallid Sturgeon Recovery in the Middle Missouri River
(Bill Gardner)

A small population of pallid sturgeon (an endangered species) exists in the 240-mile reach of Missouri River from Morony Dam to the Musselshell River near Fort Peck Reservoir. A stocking program was initiated in 1998 to preserve the gene pool and begin to repopulate the species in this recovery area. The goal is to build the population to about 1000 adult pallid sturgeon by 2025.

This year the pallid sturgeon recovery program was fairly successful and we stocked totals of 38,608 fingerlings and 4,479 yearling pallid sturgeon in this reach. Since 1998 we have stocked seven year-classes, totaling to 90,197 hatchery pallid sturgeon. Survival success of the stocked pallids has been variable with the 1997 year-class having a high survival rate of 26% after eight years in the wild. However, the survival assessment for the 2001 year-class indicates that this year-class was a total loss. The survival success of the other five year-classes is unknown at this time, but further monitoring will provide information in upcoming years. The growth rate of these juvenile pallid sturgeon has improved somewhat over last year, with the 10-year-old fish now averaging 27.5 inches fork-length and weighing 2.6 pounds.



Middle Missouri River Fisheries Survey
Sauger have been receiving considerable attention by fisheries crews because of the sharp declines first reported during the late 1980's. The 2007 electrofishing surveys indicated that sauger are at very good numbers from Coal Banks Landing and on downriver. Numbers in the Fort Benton area showed significant improvement and were 127% of the longstanding average here. Sauger numbers in the uppermost area near Morony remain exceptionally low. Since 2002 we have noted that sauger numbers remain good in the lower reach and are gradually improving in the mid to upper portions of the middle Missouri River.

Sauger spawning success appeared to be excellent both in 2006 and 2007 with several age-0 fingerlings sampled in downstream areas. A portion of the juvenile sauger population tends to migrate from the lower river-reach and move upriver, gradually taking residence several miles upstream. Consequently, strong downstream populations should enhance this natural cycle.

Middle Missouri River Creel Survey
An angling creel survey completed for the Missouri River between Morony Dam and Roads end (near the Fort Peck delta area) was completed this year. A total of 523 anglers were interviewed and they reported catching 1,619 fish comprised of 18 species. Goldeye were the most common species caught, composing 36% of the total catch followed by sauger at 15% of the catch. The most common game fish caught in the upper river (Carter Ferry area) was smallmouth bass averaging 0.29 bass/hr. Downstream in the middle reach, channel catfish were the most common game fish caught at the rate of 0.12 catfish/hr. Below Judith Landing, in the lower section, sauger and channel catfish were nearly equal with anglers catching these two gamefish at the rate of 0.16 fish/hr. Finally, for the section below Robinson Bridge, channel catfish were the most common gamefish caught by anglers at a rate of 0.08 catfish/hr. Preliminary information indicates that overall angling catch rates for all fish were similar between that reported for the 2003 and 2007 surveys (0.60 vs. 0.65 fish/hr), however, the overall 2007 angler sauger catch rate (0.10 sauger/hr) was double that reported for 2003 survey (0.05 sauger/hr).

Canyon Ferry Reservoir
(Steve Dalbey)
Reward tags in walleyes! That's right, in 2007 anglers had the opportunity to catch a limited number of walleye and if lady luck was around, get a little gas and beverage money for the next trip. When the tag was returned to FWP with date and location of catch, length of walleye and if the fish was harvested or released, a $75 check was in the mail.

Reward tag studies have been around a long time and have been used extensively to determine waterfowl harvest through the use of reward duck and goose bands. The primary objective of reward tagging walleye in Canyon Ferry was to accurately determine angler harvest rates of walleye. The amount of $75 was determined to be

the dollar value that nearly 100% of anglers would follow up and return the tag for the reward.

To the dismay of some, the 20 walleye limit has remained in effect since the Fisheries Management Plan was written in 2000. The plan forecasted that walleye would consume the limited prey (yellow perch and suckers) and stunt out. The first prediction has proven accurate as prey abundance is near record lows while an explosion of stunted walleyes has yet to pan out. In fact, walleye are the only species in the reservoir that has successfully met management plan targets. The question that biologists want to answer is, "through harvest, are anglers responsible for maintaining the walleye population and preventing the unwanted stunting?"

That's where the reward tags come in; FWP has been tagging fish for a long time realizing that some unknown percentage of these tags are returned on any given year. Assuming that nearly 100% of anglers will report the reward tag, biologists will now be able to determine what impact angler harvest is having on the walleye population in Canyon Ferry Reservoir.

Biologists along with some awesome volunteer assistance tagged 164 walleye in spring traps. Through the course of the summer, 100 reward tags were caught and returned to FWP by anglers (one reward tag was caught by FWP in other population surveys). Analysis of the reward tagging data is ongoing, but it looks like the walleye harvest rate for 2007 was right around 50%. The walleye tagging study (including the reward tags) will continue through 2008, so keep your eyes out for the bright orange reward tags next year.

In an effort to enhance yellow perch spawning and rearing habitat, FWP continued using recycled Christmas trees to construct underwater reefs. This successful cooperative project was started in 1997 and has involved FWP, Walleyes Unlimited, Townsend Chamber of Commerce, the City of Helena, and area anglers and sportsmen. Over the past 10 years over 20,000 Christmas trees have been placed in the reservoir to provide additional perch spawning habitat.

A new twist in 2007 involved the use of DNRC helicopters to deploy the bundled trees. Biologists and volunteers traditionally construct and place the tree structures on the ice. During the spring thaw the trees drop through the ice and are readily available for the perch spawn. Last winter, due to other time conflicts, all the trees did not get placed prior to ice-out. On a whim, FWP managers contacted DNRC to inquire about the use of a helicopter to place the trees in the reservoir (using boats/barges is not a cost effective way to deploy the trees). DNRC liked the idea and used the opportunity to train ground crews for the upcoming fire season. Using one chopper roughly 1,000 trees were placed in the reservoir in 4 hours - a task that would have taken a week or more by boat!

Volunteering is an excellent opportunity to learn more about fish management and trends on Montana's most popular reservoir. Volunteers are always welcome for the Christmas tree project, walleye tagging, or for any other fish population surveys that take place throughout the year. If you are interested in volunteering for any ongoing projects, contact the Canyon Ferry Fish Biologists at 495-3260.

Hauser Reservoir

The 2006 prediction for Hauser was that rainbow fishing would dramatically improve in 2007; how did we do? Hauser rainbow fishing jumped to a four-year high nearly doubling the 2006 catch rate. In large part, this was due to the number of hatchery rainbow trout that were stocked in 2006 and 2007. Near the end of September, Hauser receives nearly 150,000 rainbows from the Great Falls hatchery. Biologist have been marking these fish for several years and have determined that survival of these little hatchery rainbows is better when they are stocked at a larger size (preferred size is 8"). As long as the hatcheries can keep up with the increased demand for large rainbows, the Hauser fishery is in good shape.

We reported in 2006 that walleye abundance in Hauser hit a record high. Walleye abundance hit another record high in 2007. It appears that walleye from Canyon Ferry are easily flushed through the dam into Hauser. Although this is exciting news for walleye anglers, it presents serious management problems for biologists trying to manage Hauser as a multi-species fishery. Hauser does not have the forage to support current walleye densities as yellow perch and suckers are at or near record lows. The result of this is that many of the small walleye die over the winter months and the walleye that do survive grow extremely slow.

A pleasant surprise in 2007 was the spring fishing on Lake Helena. This shallow 2,100-acre lake warms early after ice-off and fish of all varieties are attracted to the early productivity of the lake. Reports of successful fishing for rainbow, walleye, brown trout, and a few magnum perch were fielded from May through June.

A Pennsylvania Power and Light Montana (PPLM) funded study to determine fish loss over and through Hauser Dam continued in 2007. This study is using hydroacoustics (expensive sonar) and netting to determine how many and what kind of fish are being flushed over the spill gates and entrained through the power generating turbines on Hauser Reservoir.

A new state record mountain whitefish was caught in Hauser Reservoir by Helena angler Walt Goodman. The new state record edged the old record by two hundredths of a pound. The whitefish was 23 inches long, and weighed 5.11 pounds. Goodman claims he caught the fish while trolling a rainbow-sided Rapala. Mervin Fenimore of Libby caught the old record in 1987 when a fish weighing 5.09 pounds was taken from the Kootenai River, below Libby Dam.

Holter Reservoir

Holter Reservoir remained a popular destination for anglers in 2007 starting with the spring rainbow fishery in April. Rainbows once again congregated along the shorelines of Holter, primarily around the boat ramps where angler success was high. Holter rainbow catch rates hit a 19 year high in 2007 remaining high throughout the summer. Boat anglers and shore anglers alike reported excellent catch rates throughout the lake.

Rainbow congregating along the shorelines and boat ramps provide an efficient opportunity for biologists to collect eggs for the hatchery system. Biologists took 283,000 Eagle Lake rainbow eggs from Holter in 2007. These eggs were hatched and reared at the Lewistown hatchery and many come back to Holter as well as other waters in Region 4 (Great Falls Area). In 2007, the Lewistown hatchery was back in full production and Holter received 126,000 Eagle Lake and 113,000 fall release Arlee rainbows.

The tailrace fishery below Hauser dam has proven to be one of the sweetest sleeper fisheries flying under the radar of many. Helena anglers discovered this fishery in the late 90's and guides and outfitters were soon to follow. The early spring months are popular as spawning rainbow congregate in the reach from the dam to Beaver Creek. However, the fall months are often overlooked as the brown trout and walleye (yes walleye) congregate below the dam. The brown trout are up there preparing to spawn but the walleyes are moving in to take advantage of the abundant small trout and whitefish. If you decide to fish this area, just remember to read your regulations. This section falls under the Missouri River fishing regulations with a few exceptions. The walleye limit in Holter applies for this reach of river.

Walleye fishing in Holter was the best it has ever been in terms of angler catch rates; 2007 marked the highest angler catch rates in the 22 years since FWP started this monitoring. Relative abundance, as measured in fall gillnets, was the second highest on record. Holter contains good walleye age class diversity with very high densities of small walleye. Additionally, abundance of walleyes larger than 26 inches was high in the fall of 2007.

Westslope Cutthroat Trout
(David Moser)

2007 was a busy year for WCT restoration in North Central Montana. In region 4, FWP works cooperatively with the United States Forest Service to protect remaining populations of WCT and restore WCT to historically occupied habitats.

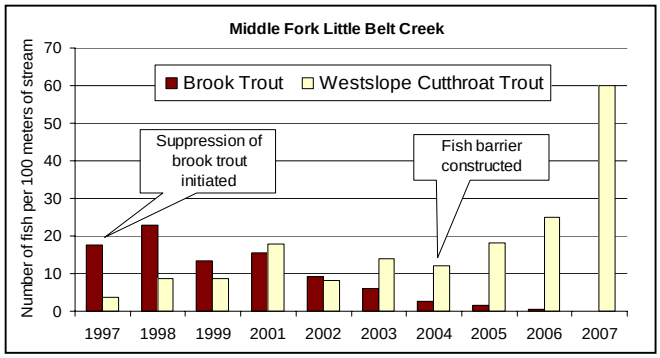
Since its inception, the cooperative work program has protected WCT populations in 40 miles of habitat in 14 streams by suppression/elimination of non-native trout species and construction of 8 fish barriers.

In addition, genetically pure native WCT have been transplanted into headwater streams to establish 6 new populations in 8 miles of habitat above natural barrier waterfalls.

One of the cooperative projects has focused on the South Fork Judith River (SF). The SF lies in a relatively untouched valley that is highly accessible to local communities but affords hikers and anglers something akin to a remote wilderness experience. In 2006, a concrete barrier was constructed to protect 25 miles of stream from rapidly increasing levels of hybridization with rainbow trout and displacement by non-native brook trout. In late 2006 and 2007, after construction of the fish barrier, non-native fishes (rainbow trout, hybrids, and brook trout) were removed from approximately 16 miles of stream in the SF drainage using electrofishing equipment. In addition, hatchery reared WCT (Washoe Strain) were transplanted to the newly vacated habitat to prevent rapid recolonization of remaining brook trout and to try to "swamp" out the majority of the remaining rainbow genes. The objective is for the SF upstream of the barrier to hold WCT of greater than 95% genetic purity. This project is unique in that it allows for movement of WCT populations between tributaries in the SF while protecting them from upstream invasion of non-native fishes.

Other projects included the continued removal of brook trout using electrofishing equipment in Big Coulee and Middle Fork Little Belt Creeks (Highwood Mountains). After, three years of electrofishing, brook trout have nearly been eliminated from Big Coulee Creek and entirely eliminated from Middle Fork Little Belt Creek (see accompanying chart) above constructed fish barriers. WCT populations in both these drainages have responded to brook trout removal with increases in WCT numbers of over 300%.

The Smith River Drainage currently supports only four populations of non-hybridized WCT in a total of less than five miles of stream (less than 1% of historical habitat). One of these, Jumping Creek, a small stream on the south side of the Little Belt Mountains currently holds a very small genetically pure WCT population that is severely threatened (<200 individuals) by displacement from brook trout.



Response of native westslope cutthroat trout to removal of non-native brook trout in Middle Fork Little Belt Creek

Suppression of brook trout over the past three years was initiated to try to stave off extinction until a barrier site was located. In 2007 a barrier site was located and construction involving the use of explosives to blast out a waterfall was initiated. In 2008, remaining WCT will be moved to a safe location and brook trout above the barrier will be removed with piscicides. After complete removal of brook trout, Jumping Creek WCT will be transferred back to their native habitat. This project, when completed, will increase the miles of stream in the Smith Drainage that hold pure native WCT by 30%.

Genetically pure Jumping Creek westslope cutthroat trout

Choteau Area
(Dave Yerk)

Tiber Reservoir

Montana's angling community received a big surprise when Missoula angler Bob Hart caught the new state record walleye from Tiber Reservoir on November 18, 2007. Although Tiber produces good numbers of smaller walleye, it is not particularly known for producing trophy-sized fish. Bob's record walleye, measuring 35 inches in length and weighing 17.75 lbs., unseated Dan Spence's previous record by more than a pound. Spence's walleye was caught in Fort Peck back in 2000. What was even more surprising than Tiber producing such a large walleye was Bob's fishing technique for catching the trophy—he was shore fishing from the comforts of a lawn chair. To add more to this great fish story, the new state record was only the second walleye Bob had ever caught in his life. Fishing under the guidance of local angler and friend Gordon Smedsrud of Shelby, Bob had caught his first walleye (14 inches long) just the previous day. Congratulations to Bob on a great fish!

Besides Bob's success, most other Tiber anglers enjoyed another year of good walleye fishing during 2007. Although the ice fishing season started out slow and challenging for most (including the local biologist), anglers enjoyed excellent walleye catch rates throughout the summer months and again noticed an improvement in the size and condition of the fish they caught. A cursory look at the stomachs of harvested walleye indicated that juvenile yellow perch was the primary prey consumed. This was similar to what was observed during 2006, and these observations indicate the importance of yellow perch to Tiber's walleye. Although FWP introduced spottail shiners in 1984 and cisco in 1997 to enhance the forage base for Tiber's walleye, yellow perch continue to be their preferred prey item.

Bob Hart and his 17.75 lb. new state record walleye caught in Tiber Reservoir on November 18, 2007.

It has now been 10 years since FWP introduced cisco (or lake herring) into Tiber. The objective of this introduction was to provide additional forage to improve growth and body condition of the reservoir's walleye population. A similar introduction was made into Fort Peck Reservoir back in the early 1980s with much success; walleye growth improved dramatically and as a result this reservoir is considered to be Montana's premier fishery for large walleye. The same success has not been realized in Tiber.

So what has happened since cisco were introduced into Tiber back in 1997? It is more a story about what has not happened. Tiber's cisco population has demonstrated very little natural reproduction since their initial introduction. In fact, 2002 is the only year that significant production occurred and that year-class now accounts for about 90% of the current population. Because this year-class will be approaching the end of their life span

(about 6 years) in 2008, unless significant production occurs this year it is likely cisco numbers will drop dramatically in Tiber. Although it is unlikely cisco will ever completely disappear from the reservoir, they will no longer dominate the fish community like they have in recent years. In 2006 fall gill net surveys in Tiber, cisco accounted for over 90% of all fish sampled.

What will this potential decline in cisco mean to Tiber's fishery? Certainly, the reservoir's northern pike and lake trout populations have capitalized on the abundant cisco—both species have exhibited impressive improvements in growth and body condition. Although Tiber's cisco have grown too quickly and large for walleye to readily feed on them, Bob Hart's record catch is evidence that at least some walleye have transitioned to feeding on them. Additionally, it is likely that cisco may have reduced northern pike and lake trout predation pressure on other prey species like yellow perch and white suckers. Gill net survey data indicates these populations have increased in abundance since the establishment of cisco in Tiber. So, anglers should stay tuned, as there are a lot of unknowns on what the future holds for Tiber's fishery. One thing for sure, managing western reservoirs is never a dull endeavor.

One final interesting note: This past fall FWP biologists sampled one of Tiber's rarest fish while completing gill net surveys—a shovelnose sturgeon. Because there has never been any evidence of shovelnose reproducing in the Marias River above Tiber, and only about a dozen adult sturgeon have been sampled in Tiber since standardized netting began in 1973, this fish is likely a relict of the Marias River before it was impounded. It is amazing to realize this was 51 years ago!

Shovelnose sturgeon continue to persist in Tiber Reservoir 51 years after the Marias River was impounded.

Lake Frances

It was another challenging year for anglers on Lake Frances. A poor snowpack resulted in minimal spring inflows, and thus irrigation and municipal water demands reduced the reservoir's elevation quickly. Although fishing for walleye, northern pike, and yellow perch was very good for most of the summer, the dropping water elevation made access difficult at times. The low water conditions experienced in 2007 are becoming more the "norm" on Lake Frances; it has been over four years since the reservoir last filled.

If there is one positive aspect of the low water conditions on Lake Frances, it is the vegetation that develops along the shoreline. Expansive stands of willows and sweet clover have sprouted along the perimeter of the reservoir, and once the reservoir fills again (some day!) this vegetative cover will provide excellent spawning substrate and hiding cover for the reservoir's fishes, especially yellow perch and northern pike. We often see population spikes in these two species once Lake Frances refills following an extended drawdown.

Dewatered Eureka Reservoir, near Choteau, is indicative of the growing loss in boating and angling opportunities.

Other Choteau Area Waters

Whether you call it ongoing drought or climate change, one thing for sure is many of our fisheries are experiencing drastic changes. Lower snowpacks, earlier run-off, warmer summers, and increased water demands have all placed greater strains on our water resources, fisheries, and recreational opportunities. The trophy rainbow trout fishery in Bean Lake and popular walleye fishery in Bynum Reservoir are essentially lost due to the lack of water inflows and declining pool levels. Boating access was limited or eliminated at several popular reservoirs due to low water elevation. On Eureka Reservoir, boaters were only able to access the water from April into early June before it became too low to launch. FWP was not able to stock rainbow trout into Eureka Reservoir until October, and then only after laying out over 100 ft. of pipe. Pishkun Reservoir boaters lost access in early August, and on Nilan Reservoir boaters had to use a primitive gravel ramp to launch beginning in August. There was no boating access to Lake Frances for most of August and September, and beginning in September Tiber Reservoir's declining water elevation limited launching to just two ramps on the entire reservoir. Spring Creek, a once popular in-town fishery for local youths, again ceased to flow through Choteau throughout 2007. FWP used to stock catchable-sized rainbow trout in Spring Creek for a great local fishing opportunity, and many local residents fondly recall spending their earliest fishing days on this special small stream.

Great Falls Area
(Grant Grisak)

The Missouri River section between Holter Dam and Cascade is one of Montana's most popular fisheries. Each year nearly 100,000 angler days are spent chasing the abundant and large sized rainbow and brown trout. High temperature and low flow typified the Missouri in 2007. There were several days in July and August where the water temperature reached 70 degrees, but fortunately cooler weather in late August allowed the river to return to more normal conditions. Despite this, trout appear to be thriving.

Brown trout such as this are common in the Missouri River below Holter Dam.

In 2007, biologists estimated there were approximately 3,511 rainbow trout and 715 brown trout per mile in the Craig section, which is above the long-term average. In the Cascade section, they estimated there

were 1,586 rainbows and 573 browns per mile, which is also above the long-term average.

In 2007 biologists started a comprehensive evaluation of trout spawning in the Missouri River. Each week during the rainbow spawning period (March-May) biologists walked index sections in tributaries to count the number of spawning nests, called redds, to determine the peak of spawning. After the peak occurs, they walk the entire stream to complete the counts. In the spring of 2007 they walked over 50 miles of stream and counted over 4,500 rainbow redds. In December biologists conducted the same study for browns and counted nearly 1,700 redds in 19 miles of stream. During two helicopter flights over the Missouri River, they discovered 21 spawning areas for rainbow trout and 37 areas for browns in the river.

Like the Missouri, the Smith and Sun rivers were plagued with high temperatures and low flows in 2007. On the Smith, water temperature exceeded 73 degrees for several consecutive days in July and peaked at 79 degrees. The Sun River also exceeded 73 degrees for several consecutive days then peaked at 81 degrees. For this reason FWP instituted a number of angling restrictions on both rivers to provide relief for the trout populations. Cooler temperatures in late August prompted FWP to relax the restrictions into the fall.

The harsh conditions on the Smith were reflected in the trout population estimates in 2007. In the Eagle Creek section, rainbows were estimated at 296 per mile and browns were 250 per mile; both slightly below the long term average. Despite low estimates for catchable trout (greater than 8 inches), biologists observed an unusually high number of trout less than 8 inches, which is evidence of successful reproduction the previous year. Biologist are optimistic these fish will help boost the population in future years.

Anglers sought relief from the warm weather in 2007 by heading to the mountain streams for angling and cooler temperatures. A number of streams in the Little Belt, Highwood, Big Belt, and Rocky Mountains provide excellent angling opportunity for the novice and seasoned angler alike. Stream fishing can be combined with camping in many areas and provides opportunity to fish with bait, lures and hand tied flies.

Biologists electrofish the Smith River each year to capture trout to estimate the population.

In addition to trout fishing, central Montana offers a diversity of opportunity for warmwater species such as yellow perch, bass, pike, and walleye. Two such areas are the ponds at Pelican Point Fishing Access Site, located six miles southwest of Cascade, and Wadsworth Pond located on the west side of Great Falls. Each year anglers spend about 240 days fishing Pelican Point Ponds for the dependable 7-inch perch and quality largemouth bass up to 17 inches. Wadsworth Pond has been plagued with water quality issues throughout its history,

but still provides opportunity for angling close to a large urban area. Each year Wadsworth hosts the annual Kids Fishing Day, which attracts about 3000 people. Both of these fisheries go a long way to generate interest in the sport of angling among children and occasionally produce the 'lunker' walleye or largemouth bass sought by every angler.

Lewistown Area
(Anne Tews)

Ackley Lake

The removal of 8.2 tons of suckers in spring 2006 may have benefited trout for at least a year. Gill netting in Ackley Lake found near record lows of white suckers and excellent numbers of rainbow trout. Rainbow trout in fall gill nets averaged 0.75 pounds and 12.2 inches, which is larger than seen during the past two years and is slightly lower than the long-term average. First year growth of rainbow trout was average at 5.4 inches, but was 0.8 inches less than 2006 growth. Ackley Lake is scheduled to be drawn-down to complete repair work in fall 2008 and will not be stocked this spring.

Bair Reservoir

In general, trout in Bair Reservoir have been small and skinny for the last twenty years. A sucker removal project undertaken here in 2007 resulted in the removal of 2.7 tons of white suckers. During trapping, over 800 rainbow trout up to 3.4 pounds (average 0.5 pounds) were trapped. Brook trout up to 0.6 pounds and cutthroat up to 2.4 pounds were also captured. Despite removal of over 7000 suckers, there were 49 suckers captured per net during fall gill netting, which was an increase from 2006. Condition of rainbow trout remained low. However, the average rainbow trout at 11.9 inches and 0.56 pounds was larger than seen at Bair Reservoir for 16 of the last 17 years (mean 10.4 inches). First year growth at 5.6 inches was a record high (mean 4.8 inches).

Yellowstone cutthroat trout from Bair Reservoir

Martinsdale Reservoir

Martinsdale was drawn down for repairs to less than 10 acres in both 2006 and 2007. Winterkill is likely at that water level. The repair was completed in December 2007 and the reservoir should start filling this spring.

Petrolia Reservoir

This reservoir continues to provide good walleye and northern pike fishing. Water levels were excellent in 2007. The reservoir produces walleye in the 10- pound range but most were just under a pound during fall netting. Northern pike up to about 14 pounds are found in the reservoir and they averaged 5 pounds in fall gill nets.

Big Spring Creek

Lewistown's premier trout stream continues to provide excellent fishing and trout numbers (>10 inches) were similar to the long-term average in 2007. Whirling disease infection levels, as determined by fish cage studies, were very high on the lower creek in 2006. However, there were about 600 one-year old rainbow trout per mile in this area in 2007. Trout populations

>10 inches at Brewery Flats increased significantly after the re-meandering project was completed. Comparison of 6 years of pre and 6 years of post project data indicated trout greater than 10 inches increased by 40% per mile and numbers actually doubled at Brewery Flats due to increased stream length. However numbers of small trout declined after the project was completed.

Big Spring Creek at Brewery Flats in 2006, 5 years after this reach was constructed.

Region 5 - South Central Montana

Bighorn River

Water became a bigger issue than ever on the Bighorn River this year. Flows have always been identified as the single greatest factor controlling trout numbers in the river, but the issue came to a head this year when a local group in Wyoming decided that, despite ongoing drought conditions, the Bureau of Reclamation (BOR) should start managing Bighorn Lake for launching at the silted-in boat ramp at the southern end of the reservoir. This issue became very political and consumed lots of time preparing for and attending numerous meetings. The result was the most conservative management of the Bighorn River observed to date. River flows were reduced to the absolute minimum flow of 1,500 cfs in July of 2006 and remained at this low level until mid-June of 2007, when flows were increased to 1,750 cfs. They were maintained at 1,750 cfs until early November, when they were increased to 1,900 cfs for the winter to enhance brown trout spawning and egg incubation.

Trout populations on the Bighorn River had rebounded from the record low levels of 2003, thanks to good flow conditions in 2005. Many of the strong 2004 and 2005 year classes of brown and rainbow trout that were carried through by the good flows in 2005 were still available to anglers this past year. Angling success was good throughout the 2007 season. Catch rates were up due to the higher trout numbers, but the average size and condition of the trout was down from those observed in 2004 and 2005, when total trout numbers were at their lowest.

Population estimates conducted on the Bighorn River in 2007 indicated the low flows of 2006 and 2007 were again impacting trout numbers. Spring sampling on the upper river showed total trout numbers similar to 2006 levels, but most fish were 2- or 3-year-old trout carried over from 2005. Numbers of yearling browns were down, and very few yearling rainbows were captured. Fall sampling on the lower river near the Mallards Landing Fishing Access Site (FAS) showed significant declines in all trout from 2006 levels. Yearling fish dominated trout populations in the lower section, but young-of-year (YOY) trout were almost nonexistent. Only about 8 YOY brown and no YOY rainbow trout were handled in 5 days of electrofishing on the lower river, which was the worst YOY catch-rate ever recorded on the lower river in the fall. Up to this point in the ongoing drought, recruitment has been the problem, with good numbers

of YOY trout showing up in the fall, but few of them recruiting into the population, likely due to predation from larger trout. This year was the first time the YOY trout were missing from the fall sample, indicating a very weak 2006 year-class. If spawning success and recruitment are affected by low flows, trout numbers in the Bighorn River could drop rapidly from the already low, drought-induced numbers seen this past season.
Whirling disease has not been found in the Bighorn River so far, but the missing YOY this fall indicated it was time to retest for its presence. Test cages of live trout were recently placed in the river. Fish from these cages are now being raised in a lab until large enough to be tested for exposure to whirling disease. Results should be available some time this spring.

Boulder River

Despite ongoing drought conditions, fish population estimates in the B2 section of the Boulder River near McLeod suggest that the rainbow and brown trout populations are in good shape and around their long-term average. An electrofishing run was also performed in the Allers Section of the river located upstream of the Natural Bridge Falls.

Silver Lake, where Yellowstone cutthroat trout restoration is occurring.

Although the population estimate has not been completed, fish numbers appeared to be similar to past estimates. One notable exception was the abundance of brook trout in the section. Brook trout have been present in the sampling section since monitoring began, but their capture was incidental and quite rare. This time, brook trout represented approximately one-third of the catch, and reports from anglers confirm their abundance. This increase is of concern because this reach of river is managed for rainbow trout.

The Yellowstone cutthroat (YCT) restoration project initiated in 2006 in Four Mile Creek, a tributary to the upper Boulder River, is continuing ahead of pace. Eventually our goal is to replace the entire fishery in Four Mile Creek with cutthroats to protect Meatrack Creek, a tributary to Four Mile Creek that harbors an excellent population of YCT. Until recently, rainbow trout were not found in Meatrack Creek, but in the last 2-3 years the have began to appear in the population and hybridize with the cutthroats. To protect YCT in Meatrack Creek, we began to remove the rainbows from Silver and Prospect lakes located at the head of Four Mile Creek. Gill nets were fished in the lakes all last year including during the winter under the ice. Over 700 fish were removed from each lake. In 2007, fewer than 50 fish were captured, and most of them were very small. Netting will continue through 2008 to attempt to completely eliminate the population. The lakes will be restocked in 2007 with 2-inch YCT, which will be too small to be captured in the gill nets. The lakes will be stocked for at least 3 years, and then monitored.

Stillwater River

The Derby Fire was the largest wildfire in Montana during 2006 and one of the largest in the nation. It burned much of

the middle section of the Stillwater River from Cliff Swallow FAS to Moraine FAS, including several tributary streams. Despite the seemingly desolate surrounding landscape, there has been little change in the fishery or the habitat in the creek. Large fires are known to increase sedimentation and nutrient loading into rivers and streams. While these impacts have been more substantial in some of the tributaries (like Bad Canyon and Trout creeks), there has been little impact on the fishery in the main river. Most of the major spawning areas are located upstream of the burned area. In Bad Canyon Creek, we have noticed more substantial impacts. In the upper watershed, where the burn was much more intense, large amounts of sediment have entered the stream, and fish densities are very low. Other areas lower in the watershed not burned as severely are in good shape. Adult fish are still abundant; however, YOY numbers were substantially lower than in previous samples. This reduction could be related to the higher sediment loads in spring when cutthroat eggs are in the gravel and are susceptible to being smothered by fine sediment. Fire is a phenomenon that these systems evolved with. In the long run, fire will likely benefit the fishery by increasing pools formed by large trees falling in the creek and by bringing new spawning gravels into the system.

Goose Lake, located at the headwaters of the Stillwater River north of Cooke City, has become our source for YCT. Fertilized eggs have been collected from fish in the lake and transported to the Yellowstone River Trout Hatchery in Big Timber over the past 4 years. Because of the success of these egg takes, the brood stock in the hatchery is being switched from the McBride Lake strain that originated in Yellowstone National Park to the Goose Lake strain.

Goose Creek, which flows out of Goose Lake and enters the Stillwater River, is populated by brook trout in the lower and middle reaches. A small boulder cascade prevents brook trout from migrating upstream and colonizing Goose Lake. A project was undertaken in 2007 to protect the Goose Lake fishery from brook trout and to expand the range of the YCT in the drainage. Brook trout were chemically removed from 6 miles of Goose Creek to its confluence with the Stillwater River, along with three lakes. Waterfalls in the lower creek near its confluence prevent any upstream fish migration. The stream and lakes will likely be treated a second time during the summer of 2008, and the waters will be stocked with YCT in either late 2008 or 2009.

Clarks Fork of The Yellowstone River

We electrofished Rock Creek in the vicinity of Joliet in the spring of 2007. Habitat conditions in this reach have changed dramatically through the years. A 100-year flood event occurred in the Rock Creek drainage in the spring of 2005, when an estimated 2,500 cfs of water flowed over the spillway of Cooney Dam. This flood contributed to the further scouring of much of the streambed and scoured to bedrock in the Joliet section of the creek. Despite these habitat changes, a small but robust population of brown trout persists in the creek. This section, unlike many others in the lower reaches of Rock Creek, maintains adequate flows during most of the summer as a result of irrigation releases from Cooney Reservoir. Good flows, warmer water, and a lower density of fish have resulted in larger brown trout than in any other reach sampled. It is not uncommon to encounter brown trout over 18 inches long. There are also a few rainbows and an abundant population of mountain whitefish.

Middle Yellowstone River

A population estimate was performed in the Yellowstone River near Big Timber. Rainbow trout were once again very abundant in the section. Also, for the first time in several years, the numbers of juvenile brown trout (i.e., those less than 8 inches long) increased considerably. This increase is good news, as past samples have contained many adult fish and very few juveniles. As part of our population sampling, we have also been tagging all trout and ling over 12 inches long; to date we have tagged more than 2,235 fish. From these data we have been able to determine the growth rate of fish in this section of the river. Particularly good data for rainbow trout suggest that those 14 to 16 inches long grew approximately 2 inches each year. Although not very many fish in the 18-inch size group were recaptured in 2007, very few had grown over the past year.

YCT restoration continued in 2007 in Soda Butte Creek near Cooke City. The 2004 chemical removal of brook trout from the headwaters appears to have been successful. Because of the healthy population of cutthroat trout in the lower creek, electrofishing is being used to selectively remove the brook trout and release the YCT back to the creek. Removal has progressed as follows: 2005, 667 removed; 2006, 225; 2007, 150. Most of the fish removed in 2007 (all but 48) were caught in or near Yellowstone National Park. This result is discouraging because it means the population is expanding farther downstream. If population expansion continues, it is possible that new waters such as Pebble and Amphitheater creeks could be colonized by brook trout. We will continue to work with our partners, the Gallatin National Forest and Yellowstone National Park, to remove brook trout from Soda Butte Creek to protect the YCT population from potential displacement.

Lower and Upper Deer creeks were also severely burned during the 2006 Derby Wildfire. Both creeks harbor native populations of YCT. Because the aftermath of the fire could produce conditions that could wipe out the fishery, YCT from both creeks were transported to an unburned creek near Red Lodge. Post-fire monitoring in 2007 suggested that all incubating eggs of cutthroat and brown trout were killed by the large amounts of ash and sediment that entered the creek during spring rains. Levels were not, however, toxic enough to cause significant mortality of older fish. Higher in the drainage, cutthroat and brown trout reproduction was successful, albeit substantially less than in previous years. Throughout the creek, large deltas of sediment have washed across the valley floor and into the creek from the steep hillsides above. Fortunately, during 2007, most of the rains were gentle and came later in June when new plants had began to grow. Although conditions in the creek are improving, there still is the potential for significant debris flows if a heavy precipitation event occurs. Therefore, preventative measures will continue to ensure that the unique fishery in these creeks is not lost.

Lower Yellowstone River

Smallmouth bass continue to flourish in the Yellowstone River. This abundance may be the result of lower, more consistent flows associated with the ongoing drought. Large numbers of bass were sampled throughout the Region 5 portion of the Yellowstone during 2007. Some bass weighed nearly 3 lb, with many in the 1 to 2 lb range. Bass numbers have increased above Huntley diversion dam with some caught as far upstream as Laurel. Anglers

have reported catching bass throughout the ice-free months, with peak fishing success during the hotter months of the summer.

Catfish and sauger fishing appeared good on the Yellowstone River in 2007. Shoreline anglers in the Huntley area reported catching sauger ranging from 1 to 5 lb. Typically, the least fishing success occurred during the fall months, when flows were low and the water was clearer. Anglers reported catching catfish throughout the year, with peak success during the summer months. MontanaCats.com held the first ever Yellowstone River catfish tournament in May of 2007 between Billings and the confluence with the Bighorn River. FWP crews provided holding tanks with aeration to alleviate mortality, as it was a catch-and-release event. All of the 73 fish captured by participants were weighed, measured, tagged, and released. The aeration system prevented any mortality during the one-day event.

A native species telemetry project continued in the Region 5 portion of the Yellowstone River during 2007. Crews deployed trap nets, electrofishing equipment, and drift trammel nets between Park City and the confluence with the Bighorn River to capture burbot, channel catfish and sauger, and implant additional radio transmitters. They also collected spiny soft shell turtles and fitted them with external radios to examine movement patterns. Tracking data collected throughout 2007 yielded interesting movement information useful for management of these large-river species in the future. Plans to extend the telemetry study into the Bighorn River were implemented in the fall of 2007 on the portion of the Bighorn River from Two Leggins Diversion Dam to the confluence with the Yellowstone River. Ten channel catfish and ten burbot were implanted with radio transmitters in an effort to identify distribution, spawning locations, and habitat use of these species. Plans are to continue these studies for at least two more years. Anglers are asked to report any tagged fish they catch in the Yellowstone and Bighorn rivers, as these data are important to the success of this study. Also, anglers are asked to consider releasing any fish they catch that has a thin wire radio antenna extending from within the body cavity. It can take a lot of effort to get one of these radios out, and we hope to get as much data as possible from each marked fish. The transmitters have up to a four-year battery life.

Additional trapping for identifying spiny soft shell turtle distribution was commenced in August of 2007 from the mouth of the Clarks Fork of the Yellowstone River to the Huntley diversion dam. This work was a portion of the Spiny Soft shell Turtle Survey being conducted throughout central and eastern Montana. Spiny soft shell turtles were found throughout the study area in Region 5, filling in some distribution gaps along the Yellowstone River. Work related to this survey will continue in 2008 between the Huntley diversion dam and confluence with the Bighorn River.

A large-scale cleanup effort took place throughout the entire length of the Yellowstone River in 2007. In cooperation with a variety of other groups and volunteers, Region 5 fisheries crews removed many tons of tires, scrap metal, and various other items in an effort to clear the river of years of accumulated garbage. The cleanup event will occur annually, and FWP hopes to continue to help with the event.

Musselshell River

Local anglers reported good fishing for both smallmouth bass and channel catfish in the Musselshell River from Roundup downstream this summer. Even though drought conditions continued in the Musselshell Drainage, flows downstream from Roundup have been much better than in the early 2000s. Water commissioners have been hired to manage flows throughout the drainage, and their oversight seems to have generally improved flows in the lower river.

An attempt to estimate brown trout numbers in our standard section upstream of Two Dot was unsuccessful this spring. In one day of shocking, we marked 72 brown trout ranging from 3.7 to 19.1 inches in 1.25 miles of stream. Spring rains made the river too muddy to effectively electrofish again before spring runoff began, so no estimate was completed. Based on the fish captured during the marking run, the brown trout seem to be doing well in the Musselshell despite the drought. It may be a good river for anglers who want to get away from the crowds and still catch some nice trout.

Bighorn Lake

Water-level management on Bighorn Lake in 2007 was the most conservative observed since the dam was closed. Water elevations reached their lowest level at about 34 feet below full pool by late February then started to rise. In the past, even with good snowpack accumulations, the management goal on Bighorn Lake has been to raise water levels to the minimum launch elevation at Horseshoe Bend (3615 feet) by Memorial Day weekend. This year, lake levels were above 3615 feet by May 5th, and they continued to rise through the spring, reaching a peak elevation less than 2 feet from full pool (3640 feet) on June 26th. Minimal releases in the Bighorn River kept water levels in Bighorn Lake within about 10 feet of full pool throughout the summer and fall, with levels less than 8 feet from full at the end of November.

Angler success was mixed on Bighorn Lake in 2007. The smallmouth bass population seems to do well regardless of lake levels, and bass were abundant throughout the lake in 2007. Just about anyone who wanted to spend a nice day on Bighorn Lake could count on catching some smallmouths, with many in the 1 to 2 lb range. Sauger continued to do very well in Bighorn Lake this year. At least two strong year-classes of sauger were produced during low lake levels early in the current drought, and may anglers reported good catches throughout the season. Most of these sauger were 13 to 15 inches long in the spring, with many of them reaching 18 inches by fall. Walleye fishing was spotty throughout the season. Netting results indicated walleyes were doing well in the lake, and some anglers reported nice catches of walleye, but fishing wasn't consistent. Both walleyes and sauger captured in gill nets were in great condition, indicating they had plenty to eat. An abundant food supply may have been one reason they were hard to catch. Anglers also reported catching a few nice

yellow perch and crappie in Bighorn Lake this year.

One night of electrofishing near the Ok-A-Beh access in the spring captured 41 walleyes ranging from 9.0 to 31.6 inches long. The largest fish was a gravid female weighing 14.75 lb. Most of the walleye captured were in the 18 to 22 inch size range. Smallmouth bass were by far the most abundant fish captured during spring electrofishing, with 78 fish ranging from 5 to 16.6 inches long.

Standard sets of six gill nets were fished overnight in both the upper and lower ends of Bighorn Lake in the spring and fall. Catch rates were much better than a few years ago when the drought first hit the lake. Walleye catch-rates ranged from 20 walleyes from the lower lake and 9 from the upper lake in the spring, to 34 in the lower lake and 44 in the upper lake in the fall. A majority of these walleyes were 18 to 22 inches long. These data indicated that nice walleyes were fairly abundant throughout the lake, even if anglers couldn't get them to bite. Netting results again showed that sauger were doing very well in Bighorn Lake. Spring nets in the lower end of the lake caught 14 sauger or 2.3 sauger per net. This catch rate was high for the lower lake, because most sauger normally seem to stay in the upper end. Spring nets in the upper lake around Barry's Landing captured 102 sauger or 17 sauger per net. This catch was the second best ever reported, only exceeded by a catch of 103 sauger in this same net series in the fall of 2006. Sauger netted in the fall averaged just over 16 inches with many 18-inch fish present. Most looked more like a walleye than sauger because of their great condition.

Channel catfish catch-rates remained good for both ends of the lake in 2007, with at least two strong year classes of younger fish present. One group ranged from 9 to 11 inches, and a second group ranged from 16 to 20 inches long. No really big catfish were netted in 2007. Ling also seemed to be doing quite well in Bighorn Lake in 2007, with the biggest fish captured measuring 24.3 inches and weighing 3.45 lb.

The long-term stocking request for Bighorn Lake has been 4 million walleye fry and 200,000 walleye fingerlings. The fingerling request was increased to 500,000 per year in 2006. The full request was stocked into the lake in 2007.

Cooney Reservoir

For a long time, the mixed walleye/trout fishery in Cooney Reservoir, unlike many other reservoirs in the state, was functioning very well. Rainbow trout survival and growth rates were good, sucker numbers were under control, and there was a good fishery for walleyes. (At one time the state record walleye came from Cooney.) In 2002, the number of rainbow trout gillnetted in the fall declined dramatically, and this trend continued through 2005, when 200,000 rainbows were stocked and only two rainbows were captured in gillnets the following fall. This decline led to a change in management for rainbow trout; instead of 200,000 5-inch rainbows, 25,000 8-inch rainbows were stocked. This strategy appears to have worked to increase survival; fall gillnetting yielded 28 rainbow trout. As a result of this apparent success, the number of larger stocked rainbow was increased to 40,000 in 2007, with similar numbers of fish returning to the nets in the fall (37 caught). The fish stocked in 2006 averaged 16.1 inches and 1.81 lb, and the fish stocked in 2007 averaged 12.6 inches and 0.97 lb. Recent tagging information suggests that growth rates for larger walleyes are very

low and often negative, while fish smaller than 24 inches appear to still be growing well. This data is of concern because it implies that the forage for older fish (primarily suckers) is low. Sucker abundance in the reservoir is still high; however, most of these suckers are too large (i.e., greater than 12 inches) to be prey for most walleyes. We also fear that the sucker population may be becoming so old that its reproductive capacity is diminishing. Reduced walleye forage, and our desire to determine whether walleyes are naturally reproducing in the reservoir, prompted our discontinuing walleye stocking in 2006. It has become apparent over the past 2 years that walleyes are naturally reproducing in the reservoir. Despite not stocking in the fall of 2006, we captured more YOY walleyes than ever before. Because YOY walleyes were also captured in 2007, they will not be stocked in 2008. Future stocking will be evaluated.

Another new development at Cooney Reservoir has been the illegal introduction of yellow perch. We first documented perch in the reservoir in 2005, but have not caught another fish since. We received sporadic reports of anglers catching perch, but during 2007, we received a substantial number. Fall 2007 gill nets did not yield any perch; however, stomach samples collected from walleyes in 2007 nets had juvenile perch in them. It is unclear what will happen with the perch fishery. Habitat, particularly spawning habitat, will likely limit the population. Perch will provide additional forage for walleyes and predation from walleye will also likely limit their population growth. One concern about the introduction of perch is that they, like the rainbow trout, are highly planktivorous and may compete for food. The impact of the illegal introduction is yet to be determined.

Deadmans Basin Reservoir

Water levels in Deadmans Basin started the year the highest they had been since 2000 thanks to summer releases last year to draw down Martinsdale Reservoir. The lake began almost 48% full and filled to over 61% before irrigation season started. Currently, work is continuing on the supply canal above Deadmans, so the water users were not able to start refilling the reservoir as soon as irrigation ended. The reservoir was only about 22% full at the end of November 2007.

Tiger muskies were the BIG story in Deadmans Basin this year. Many anglers made the trip to try their luck at hooking one of these large predators, but few of them actually connected. It takes lots of time and dedication to hook onto one of these large trophies, and even more luck to get them to the boat. Anglers caught a few nice tigers, but the big one needed to break the state record was not reported if it was caught. Netting results confirmed that the new record is swimming in Deadmans. A 42.8-inch fish caught during spring netting weighed in at 21.2 lb, well below the record of 28.87 lb caught in 2006. However, 2 fish caught in the fall nets would have broken this record! One was 45.0 inches and the other 48.5 inches. Both tiger muskies bottomed out our largest scale at 30 lb, and both were probably around 32 lb. Both were in good condition and looked like real eating machines. About 550 4-inch tiger muskies

were planted in Deadmans in 2006 to establish another year class of fish in the lake. None of these smaller fish were captured in nets in 2007, but based on past growth rates, they were probably 17 to 20 inches by this past fall.

Anglers continued to have good success for both rainbow trout and kokanee salmon in Deadmans in 2007. Stocking tiger muskies into Deadmans to control suckers has definitely increased the average size and condition of both rainbows and kokanee. Eight standard gill nets set in Deadmans in the spring captured 168 rainbows and 12 kokanee. These rainbows averaged 12.1 inches and ranged from 10 to 17.8 inches long. The spring kokanee averaged 10.7 inches. Standardized netting in the fall captured 90 rainbows and 260 kokanee. The average size of the rainbows decreased to 11.7 inches because recently stocked rainbow trout were included in this catch. Many of the kokanee netted were mature fish and the average size of kokanee jumped to 13.3 inches. Deadmans received plants of 200,104 rainbows and 100,786 kokanee in 2007.

Only 5 brown trout were netted in Deadmans Basin this year and, although they were nice fish, there were no real trophies caught. The two largest brown trout captured weighed about 6.5 lb each.

Lake Elmo/Lake Josephine

Lake Elmo continued to be a popular urban fishery with many anglers fishing for the stocked rainbow trout. Fishing was generally good for anyone willing to put in a little time. As an added bonus, anglers also caught some channel catfish, perch, and crappie. Most of the perch and crappie were small, but Lake Elmo can occasionally produce some nice crappie. One captured in a gill net set in Lake Elmo in the spring was 13.5 inches long and weighed 1.38 lb. The normal stocking request for Lake Elmo is 9,600 rainbows split between spring and fall plants. This year, Lake Elmo received 10,400 rainbows plus an added bonus of 198 large YCT brood fish from the Yellowstone River Trout Hatchery in Big Timber. These cutthroat trout ranged from about 15 to 20 inches and provided some real excitement for a few anglers expecting to catch 9 inch rainbows.

Tiger muskies were first stocked into Lake Elmo and Lake Josephine in September 2006 in hopes they would help control some of the suckers and stunted panfish in both lakes and provide another opportunity for anglers. These tiger muskies were about 6 inches long when planted, and were stocked at about one fish per acre (65 in Lake Elmo, and 20 in Lake Josephine). None of these tiger muskies were reported caught by anglers this summer, but 6 of them were captured in gill nets set in Lake Elmo this fall. These netted tiger muskies ranged from 17.8 to 23.5 inches with an average size of 22.3 inches. They were growing very well and should be putting fear into suckers and small panfish in both lakes. Miles City Fish Hatchery over-wintered some tiger muskies from the 2006. Of the 17 12-inch fish left, 9

were stocked into Lake Elmo and 8 into Lake Josephine.
The only sampling conducted in Lake Josephine this summer was part of a Bioblitz, an event where about 90 scientists and volunteers raced against the clock to find as many animal and plant species as possible in a 24-hour period. A total of 25 different fish species were collected by netting and electrofishing in Lake Josephine and the nearby Yellowstone River. This catch included two trophy-sized largemouth bass from Lake Josephine weighing 4.86 and 5.05 lb. A total of 434 species, including fish, mammals, plants, birds and insects were inventoried in the 24-hour period.

Broadview Pond
After being dry for a number of years due to drought, Broadview Pond nearly refilled in 2006. As the pond was filling, 4,000 1.6-inch largemouth bass were stocked in July. Broadview Pond continued to fill and actually started to spill water by early this spring, so another 4,000 bass were planted this year. Even though the 2006 bass were still small, a number of anglers stopped at Broadview Pond and had fun catching them. A couple of hours of night electrofishing on the pond this past October captured 15 largemouth bass. The bass from the 2006 plant were 10 to 11 inches long, and the 2007 fish were 8.5 to 10 inches. By next summer, these fish should be large enough to provide some exciting fishing. If Broadview Pond stays full and water temperatures are cool enough, plans are to stock catchable rainbows next summer to add to the excitement.

Absaroka-Beartooth Lakes
YCT eggs were collected for the first time in a while at Goose Lake, north of Cooke City. This was also the first year that fish originally collected in 2003 were spawned in the hatchery and stocked into the high mountain lakes of the Absaroka-Beartooth Mountains. Although we anticipate the fish will do well in the lakes, they will be monitored to determine growth and survival. Golden trout eggs were also collected from Sylvan Lake for stocking into the golden trout lakes of the Beartooths and as far away as the Big Hole Drainage. Many of the collected eggs also went to Wyoming to found populations there that will be used for a brood source. Montana is one of only a handful of states to harbor unhybridized golden trout. Although native to California, the golden trout has been stocked across the west. Because it is a close relative to the rainbow and cutthroat trout, these species can hybridize. The seclusion offered in many of the high mountain lakes of the Beartooths, however, allows the fish to persist without the risk of hybridization from other trout. In the Beartooth Mountains alone, there are over 22 lakes with golden trout populations.

FWP's high-mountain-lake fisheries crew sampled approximately 28 lakes over the summer from the Clarks Fork, Boulder, Stillwater, and West Rosebud drainages. The primary objective of the lake surveys is to monitor the fisheries in both self-sustaining and stocked lakes to determine fish health and decide whether stocking rates should be modified. Interns form half of the four-person crew that surveys the lakes from July to the end of August, providing a great opportunity for college students interested in the fisheries field to gain valuable experience.

Region 6 - Northeast Montana

Fort Peck Reservoir and Upper Missouri River Paddlefish Stock
Fishing pressure and harvest of paddlefish has been trending upward over the last several years requiring FWP to implement

conservation measures. This will allow snaggers the opportunity to continue harvesting fish, without losing the self-sustaining paddlefish population in this area. Based on the results of the 2007 creel survey season in the Missouri River above Ft. Peck Reservoir, additional fish regulation changes will be implemented in the 2008 season. A quota of 500 fish was established, the paddlefish snagging season was set to run from (May 1st to June 15th), hook size restriction were set, mandatory catch and release and harvest days were eliminated, and immediate release was further defined for paddlefish. For specifics on regulation changes, please refer to the 2008 fish regulation booklet.

Fresno Reservoir

In 2007, walleye were at their highest abundance levels on record (6.25 fish/net) this indicates excellent survival and recruitment of stocked YOY walleye, especially the 2005 and 2006-year class. In 2007, 6.7% of the walleye were sub-stock (less than <10 in.), 79.4% were 10-14.9 in. and 9.5% were quality size 15-19.9 in. Walleye sampled ranged in length from 6.8 to 26.3 in. and in weight from 0.1 to 6.95 lbs.

The population of adult northern pike decreased slightly in 2007. The population is currently well balanced with a high number of 14-20.9 in. and less than 14 in. fish as well as high number of quality 21-27.99 in., preferred 28-33.99 in., and memorable greater than 34 in. size fish groups. Based on the YOY surveys in 2006 and 2007, the northern pike population will continue to be elevated in 2008 and the proportion of preferred and memorable size northern pike should continue to increase as the population ages. Sauger populations increased in 2001 and 2002 when drought and extreme drawdowns resulted in an increase in riverine habitat, however no sauger were collected in 2007.

Nelson Reservoir

In 2007, yellow perch, spottail shiner, and white sucker production appeared to be similar to previous two years.

The relative abundance of adult walleye has remained relatively stable over the last five years with a minor decrease in catch rates in 2005 (8.8 fish/gill net). In 2006, walleye numbers increased to 13.3 fish/gill net. And in 2007, walleye numbers increased to 16.1 fish/gill net. The condition of walleye continues to increase after low water levels in 2002. These high condition indices are attributable to a forage base that is adequate for the existing population levels of predators. Walleye sampled in 2007 ranged in length from 7.5 to 30.0 in. and weighed 0.12 to 9.8 pounds, with the average being 14.7 inches in length and weighing 2.2 pounds.

In 2007, the relative abundance decreased to 1.9 fish/gill net. The population currently consists of many new recruits with 42.1% being less than 14 in., 15.8% being 14-20.9 in., 31.6% being quality size 21-27.9 in., and 10.5% being preferred size 28-33.9 in.

Beaver Creek Reservoir

Abundance of forage fish appears to be on the decline in 2007, as indicated by annual beach seining. In the summer of 2007, there was a partial kill of yellow perch, however based on fall gill netting there were no negative impacts to the population, relative to previous year's sampling.

In 2007, the YOY northern pike catch was greatly reduced. The adult population still consists primarily of larger adults 19.7 to 39.3 in. and as the YOY fish continue to be recruited into the population the abundance of northern pike will probably peak causing marked declines in the abundance of stocked rainbow trout and forage fish.

In 2007, 29% of the walleye sampled were greater than 15.0 in. Overall, 12.9% were quality size 15-19 in., 6.45 % were preferred size (20-25 in.), and 9.67% of the walleye sampled were memorable greater than 25 in.

Lower Missouri River

Pallid Sturgeon

This spring, Montana fisheries crews from Fort Peck, Glendive, and Miles City, as well as USFWS crews from North Dakota gathered at the Missouri and Yellowstone river confluence to capture wild adult pallid sturgeon to spawn at hatcheries. The crews captured 13 "ripe" females that were transported to Miles City State Fish Hatchery, Garrison National Fish Hatchery, and Gavins Point National Fish Hatchery. A banner year considering there are approximately 120 of these critters remaining in this area. After spawning, the progeny are being raised at these hatcheries, as well as Fort Peck and the Bozeman Fish Technology Center. Since there has been no recruitment of these fish in at least 35 years, pallid sturgeon rely solely on this hatchery program to keep the species from becoming extirpated until habitat improvements are implemented. The stocking program has been in place since 1998. Anglers should be aware that that these smaller fish are out there and they are illegal to possess. They look very similar to shovelnose sturgeon, which are relatively abundant in the system. Most of these young pallid sturgeon have colored lines on the underside of their snout however; anglers should release any sturgeon if they are uncertain of the species.

Since there was an exceptional number of gravid females this year, we were able to implant two of these fish with transmitters to help us determine if, when and where these fish are spawning. These fish were tracked on a daily basis. One female migrated up to the Intake Diversion Dam but after a few days, came back downstream. Both of the fish spawned in the Yellowstone River in mid-June near Fairview. This was the first documentation of pallid sturgeon spawning in this area. Spawning at the hatcheries was very successful which led to an abundance of larvae that needed to be moved out to make room to rear others to a larger size. This allowed us to perform a Missouri River mainstem larval drift test. We released

pallid sturgeon larvae of three different ages near Wolf Point and followed their movement downstream to North Dakota. It was estimated that these larvae drift with the current until they are about 14 days old and may need up to 600 kilometers of river before settling out and beginning their bottom dwelling benthic life stage.

The Pallid Sturgeon Population Assessment program finished its second full field season during 2007 monitoring juvenile pallid sturgeon in the Missouri River below Fort Peck Dam. The crew's main objective is to assess the pallid sturgeon population through time, which will allow us to gauge the benefits of our current propagation program and how environmental events influence this endangered species. Similarly, the crew monitors numerous species of game and non-game fishes both native and introduced to the Missouri River. By monitoring the populations of many of the shorter lived species in the river we will be better able to detect changes to the overall fish habitat of the Missouri River on a shorter time interval than if we were only looking at the very long-lived and late maturing pallid sturgeon.

During 2007 the crew implemented a new gear, the push trawl. The push trawl is employed by pushing a net that is connected to two large booms extending out in front of the bow of the boat through shallow water. The gear has been effective at capturing two relatively rare native minnows, the sicklefin chub, and the sturgeon chub. Both species are thought to be a preferred prey item for pallid sturgeon and are important indicators of aquatic health.

In addition to the standardized monitoring, the Population Assessment crew has been tagging both sauger and shovelnose sturgeon with visible tags that will help biologists better understand their growth rates and movement patterns. If enough of these important game fishes are tagged and recaptured by either biologists or the public, we may be able to quantify the sizes of their populations in the Missouri River. If anglers capture these fish they can help biologists by reporting the species, date of capture, capture location, size, and if the fish was harvested or released to the phone number provided on the tags. The information is beneficial to biologists if anglers harvest or release the fish.

Other Activities

This was the third consecutive year that wildlife and fisheries crews combined efforts to capture spiny soft shell turtles in the Missouri River from Fort Peck Dam to North Dakota. This completed the 180-mile reach of river, however we did not capture any spiny soft shells. They are abundant above Fort Peck Reservoir and in the Yellowstone River and it is thought that habitat alterations from Fort Peck Dam have forced these turtles to move elsewhere.

The Adopt-a-fish program is still gaining popularity. This year researchers from the Yellowstone River added some new areas and new species to the list. This program allows students to adopt one or two of our radioed paddlefish, blue sucker, shovelnose sturgeon, pallid sturgeon, burbot, channel catfish, or spiny soft shell turtles, name it, and track their weekly movements over the internet. This is a cooperative effort with Montana Fish, Wildlife and Parks, U.S. Geological Survey, the Billings Gazette, and Walleyes Forever. For more information or to adopt your own fish look up www.walleyesforever.com and click on the Missouri-Yellowstone River Adopt-a-Fish icon.

Fort Peck Reservoir
(Heath Headley)

The drought has persisted into 2007; however, it wasn't as severe as previous years, with the pool raising nearly five feet in early summer. The reservoir's peak elevation was reached on July 6, at 2203.2 feet msl. Snow pack in the mountains was less than average and the plains area received little amounts of snowfall once again. However, a moderate amount of spring precipitation was able to contribute to the minimal amount of snow that accumulated over the winter months. It is uncertain on the amount of snow pack that we will receive this winter, but Fort Peck is forecasted to maintain a reservoir elevation of 2200 feet msl throughout the winter. Fortunately, there are still reservoir areas that are 160 feet deep, so cold-water habitat is still available for the salmon and lake trout program to continue. A limited amount of shoreline vegetation was flooded in 2007, followed by a stable pool during the summer months. Ultimately, this flooded vegetation provides increased spawning/rearing habitat for forage fish and game fish along with nutrients that increase overall lake productivity.

The walleye spawn continues to be plagued by low water levels pushing our spawning operation further up the reservoir; however, we were still able to collect 82.2 million eggs that would benefit various walleye waters throughout the state. As a result of the spawn, 16 million fry and 2.5 million fingerlings were stocked throughout Fort Peck Reservoir in 2007. This operation requires a strong volunteer program in order to be successful. If anyone is interested in assisting with the walleye egg-take in April, please call (406) 526-3471 to join the 100 other volunteers that participate annually. It's a great way to learn more about the walleye fishery, see large walleye, and be a part of the statewide egg-take that benefits other Montana walleye fisheries.

Annual gill netting surveys indicated a slight increase from 2.4 walleye in 2006 to 3.1 walleye per net in 2007. The increase in abundance is attributed to a smaller length group of fish beginning to recruit into the population. Along with these smaller 10 to 16 inch fish, walleye anglers still have a good shot at catching others in the 24 to 28 inch range. Walleye numbers also increased as we moved further up the reservoir during our annual sampling season. Northern pike populations continue to remain at constant levels as they have in previous years with a majority of the population comprised of larger individuals.

Seining surveys showed an increase in abundance of shoreline forage, which includes young-of-year crappie, yellow perch, spottail, and emerald shiners. This can be attributed to the spring rise in reservoir elevation followed by a stable pool during their spawning and rearing period. This is encouraging because these four species comprise a large portion of the diet for smaller predatory fish like walleye, northern pike, and smallmouth bass. Smallmouth bass young-of-year continue to be one of the most dominant game fish in seine hauls. They also benefited from a stable pool during their spawning and rearing period resulting in a much larger year class than in 2006.

Cisco young-of-year had a limited year of reproduction with catches decreasing substantially from 137 cisco per net in 2006 to 37 cisco per net in 2007. This occurred even though the lake completely froze on January 12th 2007, which decreases wave action that may cause sediment to cover eggs resulting in mortality. It is possible that

the decline in YOY cisco was due to increased competition among other cisco and a drawdown in reservoir elevation during incubation. Larger cisco are the predominant forage base for cold-water species like salmon and lake trout, but are also utilized by larger walleye and northern pike.

The chinook salmon program continues to face minimal returns. However, the salmon run has gradually increased over the last couple of years. In 2007, 80 salmon were spawned yielding approximately 250,000 green eggs. This was nearly double the amount of females spawned and amount of eggs taken in 2006. As part of a tri-state salmon group, South Dakota will be able to supply surplus eggs to supplement our stocking requirements for 2008 season. It appears that increasing the size at stocking has contributed to the survival of juvenile chinook salmon since it was initiated in 2004. This year, 51,977 chinook fingerlings were stocked into Fort Peck with 36,418 spring stocked at three inches and the remaining 15,559 were fall stocked at 7 inches.

Lake trout were not spawned in 2007 and the drought has continued to pose a problem for available lake trout spawning habitat. Due to these conditions, it appears that a majority of the population is comprised of larger and older individuals. These individuals were likely a result of the high water conditions during late 1990's and are now beginning to recruit into the spawning population. At this time lake trout rearing space is non-existent and special accommodations will need to be made if future stocking efforts are to take place. Lake trout tagging still continues, so anglers are encouraged to report tagged fish. If you catch a lake trout or any other tagged fish in Fort Peck, record location, size (length and weight if possible), date caught, tag number and color. After recording the information you may call (406) 526-3471 or send the information to us at Montana Fish, Wildlife and Parks, PO Box 167, Fort Peck, Montana 59223, or contact any regional office and they can supply us with the given information. Tag information is an important part of fisheries data as it provides insight into movements, harvest rates, and growth that allow us to better manage for a particular species.

Region 7 - Southeast Montana

Yellowstone River Paddlefish

For the second year in a row, flows in the Yellowstone River have reached or exceeded the long-term average. Adequate flows in the Yellowstone system have been a rarity during the past decade and the tell-tail signs of drought have been manifest in the fish populations in the Yellowstone. The past two years of good flows have improved fish populations in general and have had a dramatic effect on paddlefish.

The increasing hydrograph found during May 2006 resulted in an exceptional run of paddlefish from their wintering areas in North Dakota's Sakakawea reservoir to their spawning areas upstream in the Yellowstone River.

The start of the paddlefish season found large numbers of young paddlefish bumping up against the Intake Diversion located about 75 miles upstream of the Yellowstone-Missouri River confluence. The season began with a high level of harvest and accelerated until the harvest cap was met a few days after the season opener.

Regulation changes during the 2006 paddlefish season included additional catch and release days in an attempt to spread out the harvest of these sought after fish over a longer period of time. The

increased opportunity to catch and release a trophy sized fish appeared to be very popular with anglers especially when the harvest season ended early in the season.

The current population of paddlefish in the Yellowstone-Missouri River below Fort Peck reach is dominated by a year-class of fish that were spawned in 1995. A large component of the 2006 harvest consisted of these 11 year old males all in the 18-20 pound weight class. Research in North Dakota to determine spawning success and recruitment of juvenile fish to the paddlefish population indicates that there has not been a successful recruitment of young paddlefish since the highly successful 1995 spawn.

Recruitment from a fry stage to a fingerling that will survive its first winter is dependant upon abundant food and cover. Paddlefish eat zooplankton their entire lives but are extremely dependant upon good sources of these microscopic bugs in the early developmental stages from fry to fingerling. Biologists have found that the upper reservoir flats in Sakakawea Reservoir can produce the abundant zooplankton resources needed for positive recruitment of young fish if the reservoir is full or increasing in elevation. Reservoir elevations during the 10 years have done just the opposite. Declining reservoir levels have produced limited zooplankton resources resulting in very poor survival of paddlefish fry and thus very poor recruitment of new fish to the population. So what does all of this mean to the paddlefish angler? Simply stated, if the Yellowstone ecosystem is not able to produce replacement fish for those that are harvested we are then harvesting our potential brood stock that will be needed to repopulate the system with paddlefish once reservoir levels return. There is much speculation and discussion about reservoir management, global warming, continued drought and other factors that will contribute to the long-term impacts to this system. In the whirlwind of these discussions fish managers evaluate the processes that they can control, mainly impacts to the population by anglers.

Current regulations allow for the harvest of one paddlefish per licensed angler. The total allowable harvest is determined by a model that evaluates recruitment against harvest. In order to maintain a robust brood stock of adult paddlefish North Dakota and Montana have set the harvest cap at 1000 fish per state, or 2000 adult paddlefish being harvested from the Yellowstone-Lower Missouri River population. Rules to allow fish managers to close the season once that cap is met have been implemented and appear to be functioning as desired.

What does the future hold for the paddlefish population and our opportunity to continue to harvest this unique fish? Current stocks of adult paddlefish are strong so the availability of spawning aged adults is adequate to sustain the population far into the future. The ability to recruit paddlefish fry to the adult population is a direct affect of reservoir levels, which do not appear to be improving in the near future. The future of this population will be determined by the ability to manage the harvest of this unique fish. Fish managers are confident in the data collected on paddlefish population status and in the tools available to manage harvest of these fish into the future. But, anglers may see a reduction in the harvest cap in the future if recruitment of young fish does not improve.

The management of paddlefish will continue to be a dynamic and changing

process far into the future. The conservation of this unique fish combined with the continued ability for anglers to catch and harvest a paddlefish remains the goal of FWP fish managers.

Other Yellowstone River Fishing Opportunities

The lower Yellowstone River continues to provide exceptional angling for a variety of fish species. The 2006 angling season proved to be memorable on the lower Yellowstone River.

Smallmouth bass abundance continues to increase in specific habitats along the reach of river running from Hysham to Miles City. Early summer catches of these hard-fighting fish thrilled anglers. Smallmouth bass are found in areas of the river where they can find forage fish. Target riffle/pool habitats where bass lie in wait for unsuspecting minnows to drift from riffles into the pools where they become an easy lunch. Use lures that mimic the minnows that bass are foraging on for best results.

Channel catfish numbers and sizes both increased during 2006. Early season fishing for catfish resulted in many fish in the 6-10 pound range. Very abundant were younger catfish in the 2-4 pound range. Standard catfishing methods and baits worked well to catch catfish the entire length of the lower Yellowstone system. In addition to the traditional night-crawler rig, crankbaits tossed along the river's edge produced nice catfish from pocket habitats. Many of the larger catfish focused on the same forage minnows that smallmouth bass were pursuing and could be caught with the same lures.

Other game fish species such as sauger, walleye, and shovelnose sturgeon were pursued with good success during the 2006 season but were caught seasonally. Sauger and shovelnose sturgeon are abundant in the lower Yellowstone during the spring and fall periods.

Fishing the lower Yellowstone River can be exceptional if conditions are correct. Spring run-off creates muddy water, which shuts down angling success. Once the river clears in late June fishing improves dramatically until late July or August when algae growth in the Yellowstone limits the ability to fish due to fouled lines and lures. By late fall the algae decreases and the ability to cast lures returns.

Tongue River

Fishing opportunities in the Tongue River are abundant but access is very limited. Along the 184 mile reach of river that extends from the Tongue River Reservoir to the confluence with the Yellowstone River anglers can encounter a variety of fishing opportunities. Rainbow trout and smallmouth bass can be found in the tail-race waters below the reservoir. Both species will succumb to fly or lure.

The majority of the Tongue River from the dam to the confluence with the Yellowstone contains smallmouth bass and channel catfish inhabiting pool habitats. Angling for these fish on a scenic, prairie river is a unique and solitary experience. Public access to the Tongue River is very limited but the local landowners are friendly and allow fishing access when approached.

Of great importance to the Tongue River fishery is the development of a fish passage channel around the T&Y (Tongue and Yellowstone) Diversion located about 20 miles up-stream from the mouth of the Tongue River.

A cooperative effort spearheaded by Roger Muggli, of the T&Y Irrigation District

and many State and Federal agencies resulted in the opening of a fish by-pass channel around the T&Y Diversion. The completed fish by-pass will be in operation spring of 2008 allowing fish from the Yellowstone River to access upstream reaches of the Tongue.
In all, an additional 45 miles of river will be accessible to fish from the Yellowstone River for spawning.

Moving further up the Tongue River is the SH Diversion dam. This dam is scheduled for removal sometime in 2009. With the removal of these low-head dams fish will have unimpeded access to over 100 miles of river that has been inaccessible for the past century. The restoration of, and access to, spawning and nursery habitats should prove to be very beneficial to fish populations in both the Yellowstone and Tongue Rivers.

Tongue River Reservoir
Crappie fishing at the Tongue River Reservoir could be described as average this past season. The crappie population remains strong with many fish in the 8-10" age class. An abundant 6-8" age class is found in the reservoir and should produce many limits of quality sized fish in 2007.

Bullhead catfish remain very abundant in the reservoir. The reservoir drawdown of 1997-1999 associated with dam reconstruction, provided conditions that were very suitable to bullhead spawning and recruitment success. These fish are now in the 1-2 lb range and make for a great evening along the shore with a simple hook and worm rig. Bullhead catfish produce a great fillet and are exceptional eating.

Reservoir elevations and the duration of high water in the system have a large impact on the spawning and recruitment success of many species in the Tongue River Reservoir. In recent years these conditions have been very favorable for northern pike. The fishery contains at least two strong year classes of the fish, some of which are reaching lengths of 30". These fish put up a good fight and are quite a surprise to anglers focused on catching crappie.

Other fish species of interest in the reservoir include smallmouth bass, channel catfish, and walleye. Both of these species seem to be doing well in the system and are increasing in abundance. Since the reconstruction of the dam and refilling of the system in 2000, walleye numbers have been lower than desired in both angler creels and biologist's surveys. Results from the 2005 and 2006 netting surveys show moderately increasing walleye numbers in the reservoir. Continued stocking of fingerling and fry walleye combined with favorable reservoir elevations will hopefully keep this fish on the increase.

Prairie Ponds
For two years in a row prairie ponds in SE Montana have seen good water levels. Basic to producing good fish populations in these small, obscure systems is adequate and timely rainstorms. Precipitation events in spring of 2006 recharged many of these ponds allowing for rapid growth in stocked rainbow trout or resident largemouth bass

populations. Once drained by drought, these systems sometimes take a few years to re-charge ground moisture before the pond will remain full.
Ponds that retained water through the summer of 2006 were stocked with fish and have been extremely productive. Phenomenal growth can be experienced by fish stocked into these highly productive systems.

Continued precipitation events are needed to retain prairie pond fisheries. Those ponds that receive spring rains and maintain full pools should produce good fishing the next season.

The regional fisheries staff monitors approximately 35 of these prairie pond systems each year. Results of these efforts can be found in our annual pond booklet. This booklet is free to the public and can be obtained by contacting the Region 7 office. The booklet provides results of the most recent surveys and maps to locate the ponds. Many of the ponds listed in this booklet are on private lands. Please obtain landowner permission before fishing these ponds.

STATE OF MONTANA - FISH RECORDS (As of December 3, 2007)

FISH	WEIGHT	SITE	ANGLER	DATE
Arctic Grayling	3.63 lbs.	Washtub Lake	Glenn Owens	6/28/03
Bigmouth Buffalo	57.75 lbs.	Nelson Reservoir	Craig D. Grassel	6/4/94
Black Bullhead	2.33 lbs.	Lower Flathead River	Darwin Zemple, Jr.	4/4/94
Black Crappie	3.13 lbs.	Tongue River Reservoir	Al Elser	1973
Bluegill	2.64 lbs.	Peterson's Stock Dam	Brent Fladmo	6/3/83
Blue Sucker	11.46 lbs.	Yellowstone River	Doug Askin	10/7/89
Brook Trout	9.06 lbs.	Lower Two Medicine Lake	John R. Cook	1940
Brown Trout	29 lbs.	Wade Lake	E.H. "Peck" Bacon	1966
Bull Trout	25.63 lbs.		James Hyer	1916
Burbot	17.08 lbs.	Missouri RiverWolf Point	Jeff Eugene Iwen	4/18/89
Channel Catfish	29.71 lbs	Nelson Reservoir	Eli Waters/Jim Jones	5/28/06
Chinook Salmon	31.13 lbs.	Fort Peck Reservoir	Carl L. Niles	10/2/91
Cisco	1.75 lbs.	Below Ft Peck	Curt Zimmerman	5/19/01
Coho Salmon	4.88 lbs.	Fort Peck Reservoir	Irven F. Stohl	5/29/73
Common Carp	40.2 lbs.	Nelson Reservoir	Jared S. Albus	5/24/98
Cutthroat Trout	16 lbs,	Red Eagle Lake	Wm. D. Sands	1955
Emerald Shiner	0.01 lbs	Park Grove Bridge	Ike Braaten	6/9/06
Flathead Chub	0.59 lbs.	Thornton Pond	Douglas Jordan	4/29/01
Freshwater Drum	21.59 lbs	Fort Peck – Ghost Coulee	Matt Washut	5/3/03
Golden Trout	5.43 lbs.	Cave Lake	Mike Malixi	7/16/00
Goldeye	3.18 lbs.	Nelson Reservoir	Don Nevrivy	7/4/00
Green Sunfish	0.56 lbs.	Castle Rock Reservoir	Roger Fliger	6/19/91
Kokanee Salmon	7.85 lbs	Hauser Lake	John Bomar	9/23/03
Lake Trout	42.69 lbs.	Flathead Lake	Ruth Barber	6/23/04
Lake Whitefish	10.46 lbs.	Flathead Lake	Swan McDonald V	8/26/06
Largemouth Bass	8.29 lbs.	Many Lakes	Adam Nelson	6/11/99
Largescale Sucker	5.06 lbs.	Kootenai River	Loren Kujawa	5/12/96
Longnose Sucker	3.27 lbs.	Marias River Loma	Ray Quigley	5/8/88
Mottled Sculpin	0.05 lbs.	Belt Creek	Brad Sullivan	7/30/01
Mountain Sucker	1.60 oz.	Beaver Creek Reservoir	Robert Garwood	4/23/01
Mountain Whitefish	5.11 lbs.	Hauser Reservoir	Walt Goodman	10/10/07
Northern Pikeminnow	7.88 lbs.	Noxon Rapids Reservoir	Darrel Torgrimson	5/28/91
Paddlefish	142.5 lbs.	Missouri River	Larry Branstetter	5/20/73
Northern Pike	37.5 lbs.	Tongue River Reservoir	Lance Moyer	1972
Pallid Sturgeon	60 lbs.	Yellowstone River	Gene Sattler	5/13/79
Peamouth	1.52 lbs	Clark Fork River	Mike Jensen	7/29/07
Pygmy Whitefish (Tie record)	0.23 lbs.	Little Bitterroot Lake	Kevin Hadley/Troy Fraley	2/27/05
Pumpkinseed	0.96 lbs.	Upper Thompson Lake	Nathan Bache	7/30/06
Rainbow Trout	33.1 lbs.	Kootenai River	Jack G. Housel, Jr.	8/11/97
Rainbow-Cutthroat Hybrid	30.25 lbs.	Ashely Lake	Pat Kelley	5/16/82
Redside Shiner	0.10 lbs.	Lost Lake	Josh Ahles	8/21/01
River Carpsucker	6.42 lbs	Intake – Irrigation Canal	Bill Odenbach	5/22/00
Rock Bass	0.57 lbs.	Tongue River Reservoir	Don Holzheimer	6/1/89
Sauger	8.805 lbs.	Fort Peck Reservoir	Gene Moore	12/12/94
Saugeye	15.66 lbs.	Fort Peck Reservoir Squaw Creek	Myron Kibler	1/11/95
Shortnose Gar	7.02 lbs.	Fort Peck Dredge Cuts	Ron Gulbertson	12/22/03
Shorthead Redhorse	4.68 lbs.	Marias RiverNear Loma	Ray Quigley	4/14/85
Shovelnose turgeon	13.72 lbs.	Missouri River	Sidney Storm	4/19/86
Smallmouth Bass	6.66 lbs.	Fort Peck Reservoir	Mike Otten	7/30/02
Smallmouth Buffalo	38 lbs	Nelson Reservoir	Brady Miller	4/28/07
Stonecat	0.54 lbs.	Milk River	Dale Bjerga	6/16/96
Tiger Muskellunge	28.87 lbs.	Deadman's Basin	Marty Storfa	7/10/06
Tiger Trout	4.04 lbs.	Bear Lake	Joe Sobczak	2/9/97
Utah Chub	1.81 lbs.	Canyon Ferry Reservoir	Eugene Bastian	2/5/92
Walleye	17.75 lbs.	Tiber Reservoir	Robert Hart	11/18/07
White Bass	2.80 lbs.	Missouri River	Vernon Pacovsky	10/13/07
White Crappie	3.68 lbs.	Tongue River	Gene Bassett	5/10/96
White Sturgeon	96 lbs.	Kootenai River	Herb Stout	1968
White Sucker	5.33 lbs.	Nelson Reservoir	Fred Perry	2/10/83
Yellow Perch	2.39 lbs.	Lower Stillwater Lake	Josh Emmert	2/19/06
Yellow Bullhead	0.93 lbs.	Tongue River Reservoir	Carl Radonski	5/24/98

State Fish Art Contest

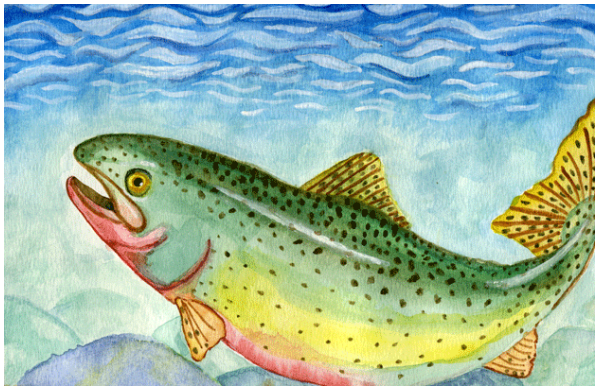
State-Fish Art is a national contest sponsored by Wildlife Forever designed to create a knowledge and appreciation of state fish. They run an annual contest and choose 3 winners from each state from grades 4-6, 7-9, and 10-12. Region 1 Fisheries runs a local contest to stimulate interest along with Snappys Sport Senter and the Flathead Chapter of Trout Unlimited.

We give local awards and then send everything to the national contest, students can enter the national contest directly. Entries are due March 31 of each year, contest details are available at http://www.statefishart.com/.

Students need to create a piece of art along with an essay on the biology or conservation of the fish. Montana's state fish is the cutthroat trout, chosen in 1977 in a poll of over 200,000 Montanans. Cutthroats are a symbol of clean, cold water and healthy aquatic habitat, part of Montana's natural heritage.

For 2007, members of one Kalispell family took all three national places for Montana, which is unusual. Troy Belleville won for grades 4-6, Kimberly for grades 7-9, and Matthew for grades 10-12. All 3 young artists traveled to the State-Fish Art Expo in Minnesota in July to accept their awards.

Troy Belleville winner grades 4-6



Kimberly Belleville winner grades 7-9

Matthew Belleville winner grades 10-12

Community Ponds – A Golden Opportunity!

Many kids dream of having a fishing hole within a bike ride of their back door. Thanks to a program initiated by FWP just four years ago, the dream has become a reality for kids in a few communities around the state.

Many Montana towns have a river or stream running through or near the city limits but stream fishing can be difficult and intimidating for young children. Furthermore, rivers or streams swelled by runoff can be dangerous. Ponds, on the other hand, provide a more controlled environment for youngsters to begin experimenting with angling and can be stocked with fish that are readily attracted to bait. A fishing pole, a bobber, a worm on the end of a hook and visions of "the big one" on the end of your line are all that is required. Most of us would agree that the pond setting more closely mimics what most of us experienced as first time anglers.

The Community Pond Program, which began in 2003, provides funding for the design, construction, repair, or enhancement of fishing ponds that are available for youth and family angling. Funds may also be used to enhance access to an existing pond – for example, improving handicapped access. These ponds also provide great locations for teaching youth, as well as adults, how to fish. Communities that have taken advantage of this new program include Whitehall, Hamilton, Missoula, Lewistown and, most recently, Great Falls.

Piedmont Pond

The Whitehall project, known as Piedmont Pond, was the brainchild of the Jefferson Valley Sportsmen Association (JVSA). Starting from scratch, the pond was excavated by a local gravel contractor who donated the property. The JVSA supplemented the community ponds grant with other state, federal, and private grants. These, combined with generous donations of volunteer time by club members, resulted in a completed project. In addition to the fishing pond, the project includes a parking lot, restroom facilities, picnic areas, and a gravel trail that encircles the pond.

According to Whitehall resident Joe Dillon the project is a huge success. Dillon says, "it is not uncommon to see 20-30 anglers, mostly kids, using the pond on a given Saturday." Dillon believes the pond area has potential for other activities including hiking and birding and hopes that additional interpretative signs will be added in time.

The Hamilton project, initiated by the City of Hamilton and the local Trout Unlimited Chapter, involved improved access and installation of a water management device for the Hieronymus Pond. The city of Missoula improved a pond located in McCormick Park known as the Silver Lagoon. Improvements included deepening the pond, installing a clay liner to improve water retention, and installation of an island bridge to facilitate access. The Lewistown and Great Falls projects have not yet begun but involve improved water retention in the popular Carter's Ponds and handicapped access to Wadsworth Pond, respectively.

Information on applying for community pond funds is available on FWP web site at http://fwp.mt.gov/habitat/pondprogram.asp. Applications are accepted once annually and are due by February 1 of each year. All applicants are encouraged to work with the local FWP Fishery Biologist. Public access is a program requirement.

Montana's Future Fisheries Improvement Program - The First 12 Years

FWP has been in the stream restoration business since 1989 with the passage of the River Restoration Act. This legislation earmarked a portion of the money generated from the sale of Montana fishing licenses toward the restoration and conservation of rivers. Between 1989 and 1995 more than 60 stream restoration projects were completed.

Beginning in 1995, the Montana legislature passed the Future Fisheries Improvement Program which increased the dollars allocated to fish habitat restoration and expanded the program to include habitat improvements in lakes or reservoirs. A portion of the funding allocated to the program is specifically earmarked for projects that enhance habitat for bull or cutthroat trout. Projects include: 1) riparian fencing and off-stream water development to better control grazing in streamside areas; 2) re-vegetation of stream banks and streamside areas to stabilize banks and cool the water; 3) installation of screening devices on irrigation diversions to prevent the prevent entrainment of fish in the ditches; 4) removal of barriers or installation of fish ladders around barriers to facilitate the upstream movement of spawning fishes; 5) construction of barriers in selected locations to prevent non-native trout from competing with or hybridizing with genetically pure native cutthroat populations; 6) reconstruction of stream channels that have been modified from their natural form as a result of land use practices or channelization; 7) water conservation measures that result in a greater quantity of water left in-stream; and 8) installation of habitat structures in lakes and reservoirs that provide cover or enhance spawning.

Since inception of the Future Fisheries Program, nearly 500 projects have been approved for funding and 350 projects have been completed (as of November 1, 2007). Almost $9.5 million in program dollars has been allocated to these approved projects, of which $6.8 million has been spent. Program dollars have been supplemented by over $23 million in matching funds.

Completed projects account for 122 miles of riparian fencing; 140 miles of restored stream and river channels; 30 fish screens on irrigation diversions; 44 irrigation diversions and 28 road crossings that have been modified to improve fish passage; 16 barriers that are protecting the genetic integrity of native cutthroat populations; 140 cubic feet per second of water conserved for in-stream flow, 47 lake or reservoir projects to enhance cover and spawning.

Applications for program funding are received twice annually and reviewed by a 15-member, citizen, review panel. Proposals are due by January 1 and July 1 of each year. During each funding cycle, review panel members evaluate proposals, meet with project applicants, and determine which projects to recommend to the FWP Commission for funding. Panel members use the following criteria to evaluate projects: 1) public benefits to wild fisheries; 2) long-term effectiveness; 3) benefits to native fish species; 4) expected benefits relative to cost; 5) in-kind benefits or cost sharing; and 6) importance of the lake or stream.

Individuals or groups interested in applying for Future Fisheries Program funding are encouraged to work with the local fishery biologist responsible for the area where the project will be located. Project applications forms and a fact sheet providing additional information on the program is available on FWP website http://fwp.mt.gov/habitat/future fisheries/default.html or by calling the Habitat Protection Bureau 406-444-5334.

BEFORE

AFTER