

# 2017-2018

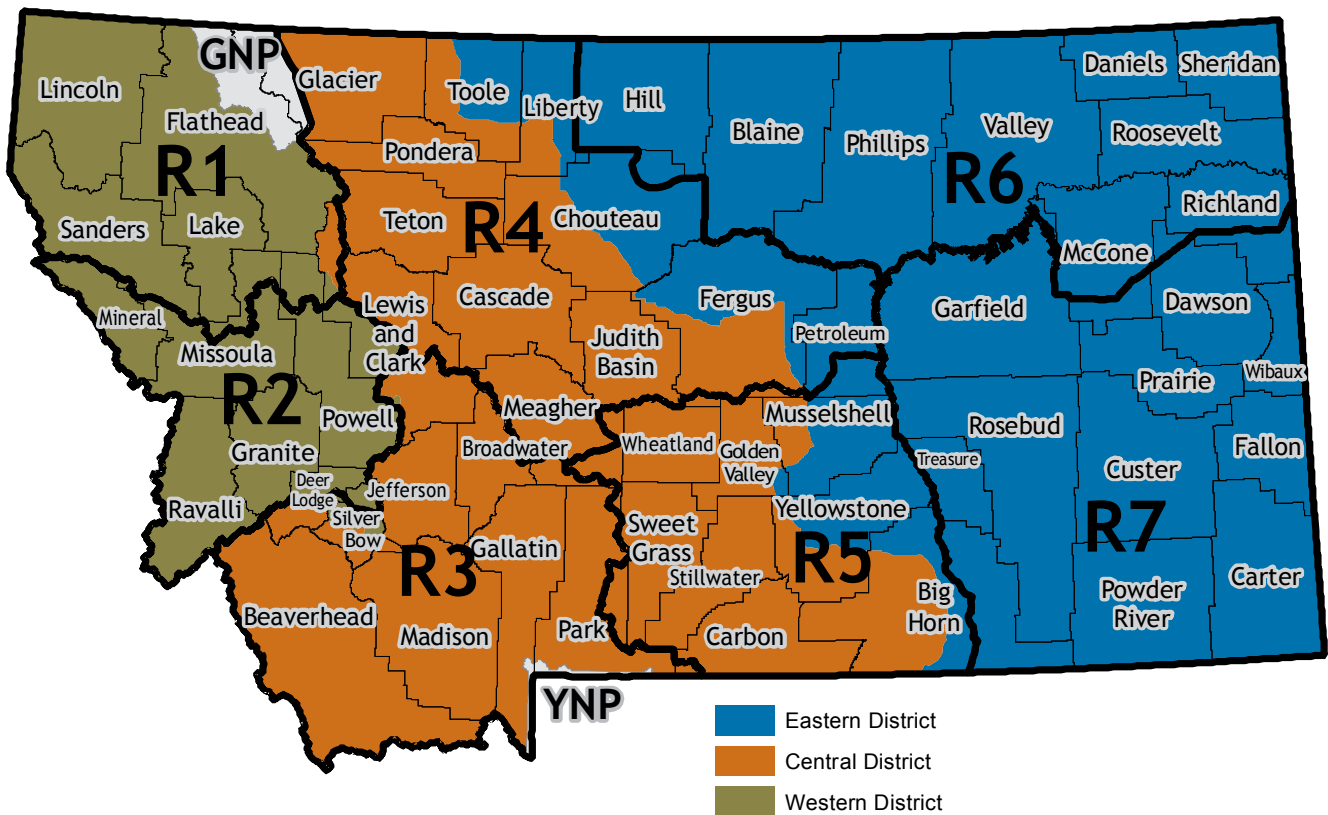
## Annual Fishing Newsletter



THE **OUTSIDE** IS IN US ALL.

<i>FWP Fishing District Boundaries &amp; Regional Offices.....</i>	<i>3</i>
<i>Region 1 Northwest Montana .....</i>	<i>4</i>
<i>Region 2 West Central Montana .....</i>	<i>12</i>
<i>Region 3 Southwest Montana.....</i>	<i>25</i>
<i>Region 4 North Central Montana .....</i>	<i>36</i>
<i>Region 5 South Central Montana .....</i>	<i>51</i>
<i>Region 6 Northeast Montana .....</i>	<i>57</i>
<i>Region 7 Southeast Montana .....</i>	<i>67</i>
<i>Montana Fish Hatchery Locations .....</i>	<i>72</i>
<i>Big Springs Trout Hatchery .....</i>	<i>73</i>
<i>Blue Springs Trout Hatchery .....</i>	<i>74</i>
<i>Flathead Lake Salmon &amp; Rose Creek Hatcheries .....</i>	<i>75</i>
<i>Fort Peck Fish Hatchery.....</i>	<i>75</i>
<i>Giant Springs Trout Hatchery.....</i>	<i>77</i>
<i>Jocko River Trout Hatchery .....</i>	<i>78</i>
<i>Murray Springs Trout Hatchery.....</i>	<i>81</i>
<i>Washoe Park Trout Hatchery .....</i>	<i>83</i>
<i>Yellowstone River Trout Hatchery .....</i>	<i>84</i>
<i>Montana Fish Records .....</i>	<i>86</i>

## FWP Administrative Regions and Fishing District Boundaries



## **FWP REGIONAL OFFICES**

### **Headquarters**

1420 E. 6th Avenue  
Helena, MT 59620  
406-444-2449

### **Region 1**

490 North Meridian Road  
Kalispell, MT 59901  
406-752-5501

### **Region 2**

3201 Spurgin Road  
Missoula, MT 59804  
406-542-5500

### **Region 3**

1400 South 19th Avenue  
Bozeman, MT 59717  
406-994-4042

### **Region 4**

4600 Giant Springs Road  
Great Falls, MT 59405  
406-454-5840

### **Region 5**

2300 Lake Elmo Drive  
Billings, MT 59105  
406-247-2940

### **Region 6**

1 Airport Road  
Glasgow, MT 59230  
406-228-3700

### **Region 7**

352 I-94 Business Loop  
Miles City, MT 59301  
406-234-0900

### **Butte Area Office**

1820 Meadowlark Lane  
Butte, MT 59701  
406-494-1953

### **Havre Area Office**

2165 Hwy 2 East  
Havre, MT 59501  
406-265-6177

### **Helena Area Office**

930 Custer Avenue West  
Helena, MT 59620  
406-495-3260

### **Lewistown Area Office**

333 Airport Road  
Lewistown, MT 59457  
406-538-4658

## **REGION 1** **NORTHWEST MONTANA**

### **Great Year for Region 1 Fisheries**

*Mark Deleray, Fisheries Manager*

2016 was a great year for Region 1 Fisheries. We are delighted to offer new fishing opportunities to recruit more anglers to get out and explore our waters. Be sure to review the new fishing regulation packet to stay up to date with important changes. Region 1 is fortunate to have so many waters and diverse opportunities. We have cold rivers with excellent trout fishing, lakes ranging from small to very large in size with diverse fisheries for numerous fish species, including both cold and warm water fish. Anglers can find the fish and type of fishing they enjoy here in Northwest Montana. FWP has made excellent improvements to our Fishing Access Sites. So, get out there and enjoy the great fishing opportunities in Region 1!



*An angler measures a large Yellow Perch.*

interest in maintaining high harvest limits. Flathead Lake, Smith Lake and Lower Stillwater were determined to be suited for a new fishing regulation. These three lakes are popular Perch fisheries that routinely produce Perch larger than 10 inches. Working with biologists from the Confederated Salish and Kootenai Tribes, the co-managers of Flathead Lake, we proposed and implemented a ten-fish limit on Perch over ten inches and unlimited harvest of smaller fish to maintain the populations size structure amidst the current angling pressure.

Perch recruitment in Smith Lake is limited due to an abundant Northern Pike population. Anglers report low catch rates for large Perch with very few smaller fish being caught. This indicates Pike predation on smaller Perch is high. Prior to Pike population

expansion, Smith Lake was a quality fishery that exhibited multiple age classes of Perch. To reduce predation on Perch and improve the size structure of the stunted Pike population, we increased the Pike limit on Smith Lake to 50 daily with 100 in possession.

### **Perch Regulations in the Flathead Drainage**

*Kenneth Breidinger, Fisheries Biologist*

Yellow Perch range widely throughout FWP's Region 1 and are a popular component of the regions warm and cool water fisheries. Perch distribution in Northwest Montana is the result of illegal introductions and we are working towards natural movements away from these introductions. While many of these introductions have resulted in poor Perch fisheries with undesirable size structure, some have become very popular fisheries. Perch have been established in Region 1 for many decades and will continue to be a component of the Flathead's Fisheries.

Every four years FWP undergoes an extensive review of fishing regulations to assure that all are relevant. This process began in 2015 for implementation in 2016. Leading up to this review many anglers expressed concern about excessive Perch harvest; others expressed

These regulations have been implemented to maintain the desirable size structure of Perch populations on Flathead Lake and Lower Stillwater Lakes and improve the fishery on Smith Lake. They have been in place for one year.

### **Bull Trout Fishing South Fork of the Flathead**

*Leo Rosenthal, Fisheries Biologist*

Hungry Horse Reservoir and the South Fork of the Flathead River provide anglers with the rare opportunity to fish for one of Montana's largest trout species, Bull Trout. Combined with the solitude of the Bob Marshall Wilderness, the chance of catching fish that can reach 15 pounds makes this opportunity a truly unique experience. Bull Trout were listed as threatened under the Endangered Species Act in 1998 and at that time most Montana waters were closed to Bull Trout angling. Hungry Horse Reservoir and the South Fork Flathead River were re-opened in 2004 under a permit from the



U.S. Fish and Wildlife Service (USFWS). A condition of this permit requires anglers to obtain a catch card from the FWP R1 headquarters. With the card, anglers can harvest two Bull Trout per year on Hungry Horse Reservoir and catch and release Bull Trout on the mainstem South Fork. Anglers may not fish for Bull Trout in tributary streams or harvest Bull Trout in the river. Additionally, angling for Bull Trout is not allowed in Big Salmon Lake. Anglers must record their catch and return the information to FWP through a subsequent angler survey. This information allows fisheries managers to closely track angler harvest on Hungry Horse Reservoir and numbers of fish caught and released in the South Fork. Since the beginning of the permitted fishery, angler use, harvest on Hungry Horse, and numbers caught and released in the South Fork have all remained consistent and well within the permitted amounts specified by the USFWS.

In addition to monitoring angler use, catch, and harvest rates for the Hungry Horse Bull Trout population, FWP also monitors adult Bull Trout abundance through annual Bull Trout redd counts. Index streams that directly drain to the reservoir (Wounded Buck, Wheeler, Sullivan, and Quintonkon) are counted annually and wilderness tributaries that drain to the South Fork Flathead River (Youngs, Gordon, White River, and Little Salmon) are surveyed periodically. While the overall redd count trend is stable for the Bull Trout population, there is some variability in the redd counts. Redd surveys in reservoir tributaries have varied in recent years likely because of stream flows (both high and low). Additionally, the previous wilderness tributary survey (2014) revealed lower than average counts in Youngs and Gordon Creeks. While these counts were lower, they represent a single point in the history of the survey and continued monitoring will result in a better picture of the population. FWP fisheries personnel plan to conduct another wilderness redd count in the fall of 2017.



*An angler with a nice South Fork Flathead River Bull Trout. Please note how the angler kept the fish in the water for the photograph. Efforts like this aid in the survival of properly released fish.*

### **The Gerrard Rainbow Trout Story and Lake Koocanusa**

***Mike Hensler, Fisheries Biologist***

Gerrard originated in Kootenay Lake and are a distinct form of Columbia Basin Redband Trout that evolved specific traits including large mouth, late maturity, long life, large size and unique spawning requirements in only two streams, Lardeau and Duncan River. These traits produced a population of large fish (greater than 20 lbs.) that is unique from a smaller sized rainbow native to the lake and genetically unaffected by the introduction of coastal Rainbow Trout that began in the 1890's and continued in at least the Montana portion of the Kootenai River into the 1960's. Historically, there had been anecdotal reports of large rainbows caught in the Montana portion of the Kootenai downstream of Kootenai Falls.

MT FWP acquired and stocked Duncan River Gerrards (known as Kamloops or "Kams" at the time) into Lake Koocanusa beginning in 1985 specifically because they were native to the Kootenai River drainage and can



*A 14-pound Rainbow Trout caught from Lake Koocanusa in March 2016.*

produce trophy sized fish. Much of the impetus for the decision also was in response to an increasing Kokanee Salmon population in Lake Koocanusa that established from several inadvertent releases of moribund (thought to be dying and dead) fish into Norbury Creek from the Kootenay Trout Hatchery at Fort Steele British Columbia in the late 1970's and early 1980's.

In addition, the Kootenay Trout Hatchery stocked hold-over Lardeau River Gerrards into two Lake Koocanusa tributaries between 1988 and 1999; they stopped stocking due to concerns of hybridization with Westslope Cutthroat Trout and competition with Bull Trout. In the early 2000's, the Duncan River Gerrards brood was established at Murray Springs Fish Hatchery in Eureka, but eventually failed due to introgression with coastal Rainbow Trout and since there were poor return to anglers at Lake Koocanusa, it was discontinued in 2007.

Typical survey techniques, such as gill netting and trapping, are not successful at assessing recruitment of Koocanusa hatchery fish. However, we do handle dozens of large Rainbow Trout during a spring fishing derby. Genetic analysis suggest that those fish are more closely related to Redband Trout (Gerrards) than coastal Rainbow Trout. In addition, MT FWP did have

some success stocking 2N Duncan/Kam Rainbow Trout (identical to Gerrards) late 1980's and early 1990's in some smaller lakes outside of the Kootenai drainage, in the AMC settling ponds (Region 2), Bean Lake (Region 4), and Little Bitterroot Lake (Region 1) that had at least some form of fish prey and/or good numbers of large aquatic insects. So, in 2008 MT FWP entered an agreement with British Columbia (BC) to acquire triploid eggs for Lake Koocanusa, which we then began stocking. Triploid fish cannot successfully spawn. In 2011 BC determined they would no longer maintain

a brood for Gerrard Rainbow Trout and in 2013 MT FWP acquired the brood which now resides at the Murray Spring Fish Hatchery.

Since MT FWP now has the Gerrard brood, we have a dependent source of eggs and in some waters will stock triploid fish and other waters normal fish. Because of its large acreage, consistently capturing large rainbow in Lake Koocanusa using standard methods is not effective. A local fishing derby that has become quite popular with large fish anglers is our best opportunity for handling larger Rainbow Trout.

Anglers had good success catching 5 to 15 lb. Rainbow Trout in Lake Koocanusa in 2015 and 2016 especially in February and March. A big part of their success was that they could launch boats due to mild winter conditions. Fishing for Gerrard Rainbow Trout in a large lake like Koocanusa is not a simple task. It is exclusively a troll fishery. The best success is from late winter to spring and late fall. Anglers use a combination of downriggers, long line and planer boards at various depths and distances from the boat tipped with various stick and jerk baits or a trolling fly. Although catch rates are relatively low for these large fish, if successful an angler may get to fight a fish of a lifetime.



### Noxon Creel Survey

*Ryan Kreiner & Jason Blakney, Fisheries Biologist*

In 2015, Montana Fish, Wildlife and Parks in cooperation with Avista Utilities conducted a creel survey during the open-water period on Noxon Reservoir. Noxon is one of the most popular fisheries in Region 1, and is the most popular fishery on the lower Clark Fork River. A previous ice fishing creel survey during the winters of 2011 and 2012 revealed that Noxon's ice fishery was a significant draw to Sanders County as about half of the anglers interviewed were from other counties. On the ice, 96% of the anglers targeted Northern Pike, Yellow Perch, or both.

Our 2015 creel survey revealed what we had long thought to be true, that bass are king on Noxon Reservoir in the spring, summer, and fall. Noxon Reservoir did not emerge as a popular fishery until the 1980's when FWP and Avista altered reservoir management, which allowed the bass fishery to establish.

Approximately 38% of the anglers we interviewed in 2015 targeted Smallmouth Bass, Largemouth Bass, or both. The next most targeted fish was Northern Pike (25%), followed by Yellow Perch (18%), and Walleye (10%). Yellow Perch were the most commonly caught game species, followed by Smallmouth Bass, Largemouth Bass, Northern Pike, and Walleye, in that order. Although Walleye anglers and Walleye catch were a relatively small percentage of the total, Walleye were harvested at a higher rate than other species. Almost all the Walleye harvested were 20 inches or less in length and the safest to eat based on consumption advisories.

The data collected during the creel survey is useful to FWP in many ways. For example, we now know that anglers harvest many more Walleye than we handle during our sampling events. Additionally, the proportions of all species caught by anglers are very similar to proportions of species encountered during our monitoring events. This gives credence to our monitoring indices and conclusions we draw from our data. For now, the fish community in Noxon appears to be functioning in a way that is favorable, and our increasing angler use reflects that. We will continue to monitor the fish community on Noxon Reservoir for changes into the future.



*A nice Largemouth Bass from Noxon Reservoir.*

### Kootenai River Creel Survey & Fishery Update

*Jim Dunnigan, Fisheries Biologist*

Fisheries biologists in the Kootenai region recently initiated work to assess the status of Burbot (sometimes called ling) in Lake Koocanusa, due in part after hearing from anglers that enjoy targeting Burbot on Lake Koocanusa that fishing isn't as good as it used to be. Many folks that enjoy fishing Lake Koocanusa realize that this is truly an international watershed. Almost one third of the reservoir at full pool extends into British Columbia, but more than 95% of the total water flowing

into the reservoir originates north of the 49<sup>th</sup> parallel. FWP biologists realized the necessity to involve our neighbors to the north to work on the problem. Biologists with FWP worked with fisheries managers in British Columbia to develop and implement Burbot assessment protocols that could easily be compared across that invisible line. The result of assessments completed in 2016 indeed indicated that Burbot abundance has decreased in Lake Koocanusa compared to as recently as a decade ago.

So what's next you might ask? The international work-

ing group that is comprised of representatives from Montana, British Columbia, First Nations, and other vested fish researchers in the Kootenai region are not willing to simply monitor the continued decline of this important native species. However, before you solve any problem, you must first understand the problem to be solved, and a first good first step toward that end is the development of a comprehensive conservation strategy for Kootenai Burbot. While there is still much work to do to develop the conservation plan and put it into action, it will likely include a hatchery component, identification of additional research to identify limiting factors and habitat restoration activities that address those limiting factors. Great advances have recently been made by the Kootenai Tribe of Idaho to develop the technology required to raise Burbot in a hatchery. This was no small task. Larval Burbot are extremely small and require live feed soon after hatch to survive. A successful Burbot hatchery must raise the live feed in addition to the Burbot. While hatchery intervention will not solve the underlying problems that ultimately caused the decline of Burbot in Kootenai, it may be a useful tool to prevent the total collapse of the fishery and buy us some much needed time to fully understand the causes of decline and work on fixing those problems.

### **Resident Bull Trout**

*Ryan Kreiner & Jason Blakney, Fisheries Biologists*

Bull Trout are a member of the trout and salmon family native to western Montana. They depend on intact spawning and rearing habitat, as well as cold water temperatures. Research suggests that temperatures in spawning streams must remain in the low fifties throughout the summer in order to support Bull Trout. Bull Trout can exhibit several life history forms. Resident fish fulfill their entire life history within the small stream in which they were hatched, while migratory

fish move down to larger rivers (fluvial) or lakes (adfluvial) to mature before returning to their natal stream to spawn as adults. Adfluvial fish grow the largest (often exceeding ten pounds in weight), while resident fish may mature at 10-12" and never exceed one pound.

There are benefits associated with all life history types. Because of their great size, adfluvial fish can be highly fertile and a large female may lay up to 5,000 eggs, while a resident fish may contain only a couple hundred



*Lake Kootenai Burbot.*

eggs. However, in many cases adfluvial fish must make extensive migrations to and from spawning grounds through altered habitats, over dams, and through a gauntlet of non-native predators, which thrive in warmer water. On the other hand, resident fish often remain in cold headwater streams, which are mostly unaltered and in many cases contain only native species. In these unproductive streams, there are fewer threats to individual survival, but the window to grow is very narrow. On the lower Clark Fork River, migratory large Bull Trout historically used the river to reach Lake Pend Oreille, Idaho. Resident populations naturally exist in the lower Clark Fork River valley where the ice dam from Glacial Lake Missoula left huge deposits of gravel in the lower reaches of many tributaries and the associated high permeability causes many streams to go dry for extensive periods each year. These streams are only fully connected with surface water during high water events. While this intermittency allows some migration to and from the headwaters, it is seasonally limited and





*Resident Bull Trout amongst Westslope Cutthroat Trout in a Clark Fork tributary stream.*

in many cases this also prevents non-native fish from invading headwater reaches. The result of this seasonal isolation can be a fish community comprised solely of Westslope Cutthroat Trout and Bull Trout that are mostly resident.

FWP works closely with other entities such as Avista Utilities and government agencies to educate the public on proper identification of Bull Trout, catch and release techniques, and enforcement of illegal harvest or recreational dam-building in Bull Trout streams. It is very important for anglers to identify Bull Trout and tell them apart from closely related Brook Trout. Look for black markings on the dorsal fin and blue halos around the red spots to identify Brook Trout. Anglers must immediately release all Bull Trout caught. With proper care, we are hopeful that these fish will persist in the environment as they have for thousands of years.

### [Investigating the Source of Illegally Introduced Walleye in Swan Lake](#)

*Sam Bourret, Fisheries Biologists*

Illegal fish introductions, sometimes referred to as ‘bucket biology’, create significant problems by degrading or even collapsing existing sport fisheries and can

also threaten rare and protected fish species through predation or competition. In Region 1 alone illegal fish introductions have occurred in more than 145 waterbodies, representing hundreds of illegal fish introductions and once populations become established their control or eradication, if even possible, requires a substantial investment of time and resources. Management actions that can be taken before the illegally introduced fish become fully established in a water body provide the greatest chance of minimizing negative impacts to the existing fishery. Therefore, early detection of introduced fish and having the ability to identify the water body source of the introduction become critical to enforcement efforts and effective management of illegal introductions.

In October 2015, during FWP Lake Trout suppression netting, two adult Walleye were discovered in Swan Lake. No Walleye have been previously detected in Swan Lake, so fisheries managers were interested in two questions: 1) were these Walleye born in Swan Lake, and 2) if they were not, which lake did they come from? The answers to these questions will tell us whether

Walleye reproduction was occurring in Swan Lake and provide law enforcement with additional information about this illegal fish introduction. The reward for information leading to the convictions of individuals responsible for the illegal introduction is \$30,000 and under Montana law introducing non-native species is punishable by up to a \$10,000 fine.



*Fish otolith prepared for chemical signature analysis. This picture was taken at 10x magnification with a compound light microscope. The core (bottom left and corner) and the growth rings that grow similar to tree rings are clearly shown.*



Using a technique called otolith microchemistry, fishery biologists are able to track a fish's movements through a watershed and from one water body to another. Most species of fish have a pair of otoliths located directly behind their brain that help the fish detect sound and gravity. As the fish grows the otolith accumulates layers of chemical signatures, (much like rings of growth on a tree) that correspond to the chemical signatures in the water. As chemical signatures make their way from bedrock geology into the otoliths of fish swimming in the lake, the values of the chemical signatures do not change, making it a unique lifetime tag that ties each fish to its specific lake.

To determine the water body source of the illegally

introduced Walleye in Swan Lake, otoliths from these fish were compared to those from several Montana lakes that contain Walleye populations. Results so far have indicated that the Walleye caught in Swan Lake were not born in Swan Lake and that Noxon Rapids Reservoir, Lake Frances, and Fort Peck Reservoir are not the natal source of the illegal introduction to Swan Lake. This winter additional otolith samples provided by FWP fish biologists from around the State will be examined to further investigate the source of the illegally introduced Walleye in Swan Lake. This investigation provides a clear example where science can be used to aid in law enforcement and the protection of Montana's fishery resources.

### **Pine Grove Pond Fishing Access Site Continues to Improve and Expand**

*Tony Powell, Fishing Access Site Program Coordinator*

Anglers at Pine Grove Pond Fishing Access Site will find improvements and little extra room to spread out in 2017. During 2016, FWP constructed two ADA accessible fishing piers at the pond and acquired an additional 5.7 acres of property. Both improvements were made possible by charitable donations. The fishing piers were funded primarily with a donation from the late Bill Kamps, a great advocate for hunting and angling. The two piers will improve access to fishing opportunity for those who are unable to negotiate the steep bank of the pond. FWP is planning a dedication and grand opening of the piers sometime in the spring of 2017. Stay tuned for details.

The natural environment surrounding the pond will see better protection thanks to the donation by Robin Street and family of 5.7 additional acres. This new property borders the pond to the north and west and will help protect the pond's natural setting from the possible encroachment of future development. FWP ecologists and fishing access maintenance staff are currently working on a plan to restore natural vegetation to this new property and to begin planting in the spring of 2017.

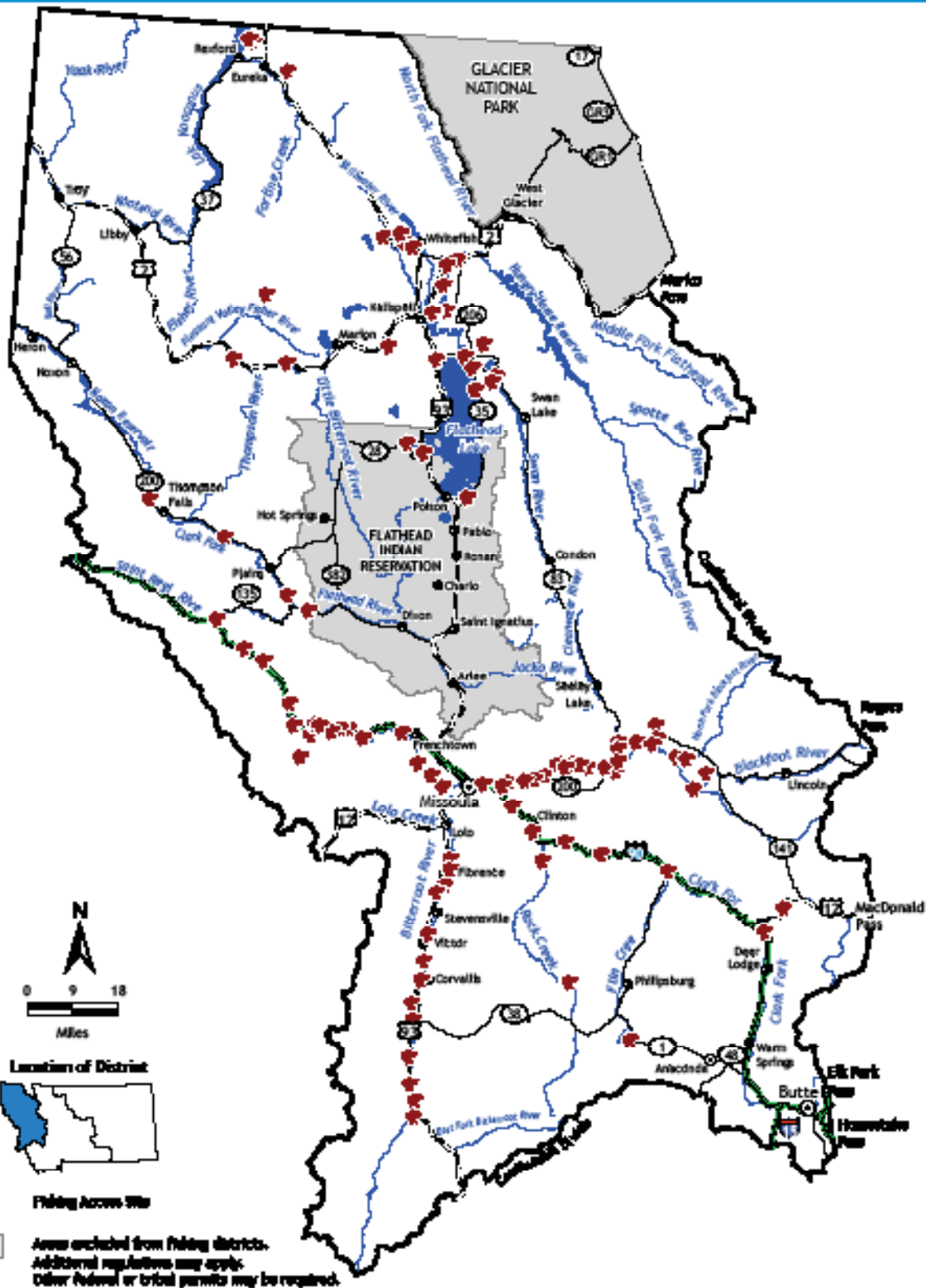
Pine Grove Pond has become an amazing resource for the community thanks to contributions from Robin Street, Bill Kamps, and many other individuals, businesses, and organizations who made it all possible.



*Left: One of the newly constructed piers at Pine Grove, ready for opening day.  
Right: With a little help from his grandpa, Oliver Powell catches his first ever fish at Pine Grove Pond.*



## Western District



**The Western Fishing District includes all waters in Western part of the Continental Divide.**

For additional information about fishing in this district, please call the following regional headquarters: Monday-Friday 8:00 a.m. - 5:00 p.m.:

**Kalipell** 486-752-6501

**Microbika** 486-542-6500

TTY (Telephone Device for the Deaf) 406-444-1200



## REGION 2 WEST CENTRAL MONTANA

### What We Do

*Pat Saffel, Fisheries Manager*

There are many ways to describe what we do. I've seen a number of them. They range from bureaucratic to simplistic to very technical. I don't know the sweet spot for explaining it, but it is important that we try. One way to explain our work is this Newsletter. Our staff puts considerable time into thinking about subjects that will resonate with readers, and preparing the articles in a manner that is concise and hopefully interesting. The Newsletter has been very popular in the past. We appreciate your interest and welcome any feedback.

I like to think about what we do as providing three services: access, opportunity and conservation. Everything we do eventually gets back to these. The articles in this Newsletter are some of the more direct examples of how we do it. You'll probably quickly pick up on that our work often provides more than one of the services at a time and that there is a grey line between defining the difference between them. Providing access also provides opportunity, right? And by conserving fish, isn't that providing opportunity? The answers are: yes and yes. In the following, I'll describe some of the ways we provide these services, but avoid the ambiguity. The important part is that access, opportunity and conservation are services of FWP that Montanans and our guests enjoy.

### **Access**

Our Fishing Access Sites are the most common way we provide access. They provide more than fishing access, though. They are a gateway to recreation and adventure. Other activities pursued include boating, white water rafting, swimming, camping, sight seeing and relaxation. Hundreds of thousands of visitors use our sites annually.

The Fisheries Division in Region 2 provides river and lake access at 72 sites. These sites are spread out



*Seventy-two sites in Region 2 provide access to rivers, streams and lakes. The sites themselves are typically pretty simple, providing parking and a boat ramp and sometimes camping. They are crucial, however, for getting to otherwise inaccessible areas and the opportunities and adventures that lie beyond them.*



*An angler showing off a nice fish is a common scene at Browns Lake. This is made possible by the Hatchery Program, and the excellent growth and survival in the lake. Biologists study how well the fish do and recommend stocking rates to optimize fish numbers and size for angling.*

over a large area. The Region encompasses the Clark Fork from its headwater at Butte to its confluence with the Flathead, and all waters draining into it. The breakdown of sites by drainage is 14 in the Bitterroot, 27 in the Blackfoot, and 31 in the Clark Fork. We are also busy pursuing more sites, particularly in the Clark Fork upstream of Rock Creek, as well as enhancing and protecting current access.

### **Opportunity**

River and lake recreational opportunities abound, and are very popular. For example, anglers enjoy over 500,000 days fishing annually in Region 2. Making sure anglers have the experience they are looking for is an important part of what we do.

Stocking fish in lakes provides some of the opportunity. About 50 lakes and ponds are stocked each year in Region 2, ranging from high mountain lakes in remote areas to busy waters such as Georgetown Lake and Beavertail Pond. The high mountain lakes we stock typically get around 200 to 1,000 2 inch fish every few years. Georgetown Lake gets around 200,000 6 inch fish annually. Our hatchery program is an important part of providing diverse fishing experiences in Montana, often providing exceptional opportunities to keep nice sized fish or to catch fish where it was not possible before.

Fishing regulations, ironi-



*A fish migration barrier before (top) and after (bottom) its removal. In this case, removing the barrier resulted in an increase in bull trout. Trout often migrate long distances to winter habitats and to find food. The barrier kept bull trout from returning to their spawning grounds to reproduce. Culverts and irrigation diversions can be barriers too, and are more common.*

cally, often provide opportunity through restricting harvest. To understand the effect of different fishing regulations on fish populations, biologists collect information about fish biology, habitat and angler use. There are often trade-offs between harvest opportunity and fish numbers and size. They provide that information to the public to make an informed decision about what regulations to implement.

Our Future Fisheries Improvement Program focuses on providing angling opportunity by protecting and enhancing important fish habitat. Biologists and their partners have done 224 of these projects in Region 2 in the 20-some years of the program. Many habitat projects have also been completed through other programs and funding, so the number of habitat projects is at least double the 200+ done through Future Fisheries. Healthy habitat is important for keeping wild, self-sustaining fisheries a mainstay of the Montana fishing experience, especially in our world-class rivers and streams.

### **Conservation**

Conservation is at the core of all of our activities, but some fall squarely in this category. Protecting and enhancing habitat for native fishes and sport fisheries is an important part of our work. Our Future Fisheries Improvement Program that I mentioned above is one way we do this. Another way is through our Natural Streambed and Land Preservation Act and Stream Protection Act laws. The primary purpose of the laws is to protect fisheries and their habitats. We review permit applications and suggest alternatives for about 200-250 projects annually that propose to modify the bed or bank of a stream or river. Projects are typically on lands owned by private individuals, cities, counties and the U.S. Forest; in other words, a large portion of lands in the area. This input is crucial to protecting important fish habitat for spawning, rearing and migration.

We also consider impacts to boaters and angler access.

We do a considerable amount of sampling of the fisheries in our streams, lakes and rivers. This is necessary for understanding the status of a fishery, ways to improve them and what the impacts of projects or events have or will have on a fishery. In essence, these are regular inventories to document, enhance and protect what belongs to you, the citizens of Montana.

All in all, we strive to provide you: Access to Montana's incredible streams, lakes and rivers; Opportunities to enjoy fishing, boating, camping and other recreational activities; and Conservation of our outstanding resources that enrich your outdoor experience and lives. We are a dedicated staff that cares deeply about the resource and providing these services. Doing this in a rapidly changing world can be a difficult. We look forward to working with you to meet these challenges.



*Biologists do a lot of sampling in streams. Small streams are critical to trout for spawning and when they are young before they migrate to lakes and rivers to grow (and be pursued by anglers). In this picture one person is carrying an electrofisher on his back (background). Electricity is used to stun the fish. Another person nets the fish while stunned (foreground). Notice the large amount of wood in the stream. To navigate the wood takes the skills of a gymnast (sort of).*



## Lake Fishing Opportunities Around in the Clearwater Basin

*Ladd Knotek & Will Schreck, Fisheries  
Biologists*

The Clearwater Valley and Seeley Lake area offer year-round lake fishing opportunities of all shapes and sizes. Anglers can catch everything from Largemouth Bass to Cutthroat Trout and choose from more than 20 different lakes over a 3,000 ft. elevation range, all within a 15 mile radius of Seeley Lake, MT. Best advice: Just pick your quarry, choose the right water body, and pencil in a trip that matches the elevation and peak fishing season for your adventure...

### **High Elevation ‘Mountain’ Lake Fishing**

In summer and fall, anglers follow forest roads and trails to fish scattered high elevation ‘mountain’ lakes on both sides of the Clearwater Valley. Because of low productivity and year-round cold water temperatures, these waters only support trout fisheries (typically Westslope Cutthroat or Rainbow Trout). Most mountain lakes form in glacial cirque basins and, in this area, occur at 5,700-6,800 ft. elevation. Examples include Spook, Dinah and Elsin Lakes on the west side of the valley (Mission Mountains) and Crescent and Trail Creek Lakes on the east side (Swan Mountain Range).

Avid adventure seekers even cross the Swan Mountain Divide via Pyramid Pass or other routes and drop into Bob Marshall Wilderness Lakes. Although there is typically a serious elevation gain, many of these waters lie within 3-4 miles of open

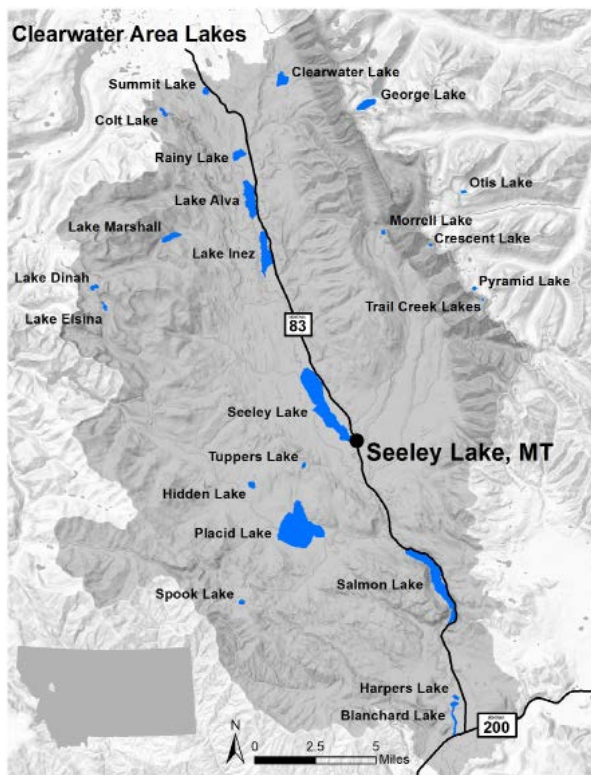


*Lakes in the Clearwater Basin area near Seeley Lake, MT*

forest roads or established trailheads and can offer fantastic trout fishing. Examples to the east of the Clearwater Valley, just over the Swan Divide, include Pyramid, Otis and George Lakes.

### **Mid Elevation Lakes**

Some of the best fishing for large Cutthroat Trout and Brook Trout in the Seeley Lake area can be found in mid-elevation (4,200-4,800 ft.) lakes scattered around the Clearwater Valley perimeter. All of these lakes are easy to access (either directly or via a short hike) from the open road network, are open to manually or electric powered watercraft, and offer outstanding scenery. They also provide higher productivity than ultra-sterile high mountain lakes, typically turning out some larger fish. Fishing is productive year-round on these waters, but most angling pressure occurs from May-October as road access is normally blocked by heavy snow during the winter ice fishing season. Examples of mid-elevation lakes in the area are Clearwater, Colt, and Hidden Lakes.



*The mountains surrounding Seeley Lake contain a number of hidden lake ‘jewels’ that provide great trout fishing within sight of town.*



**High Quality Brown Trout**  
Placid Lake, Salmon Lake, and Seeley Lake also support trophy Brown Trout worth pursuing. Brown Trout over 20 inches are now common in all three lakes, with good numbers over 25 inches. Brown Trout grow to large sizes in lower Clearwater Valley waters due to higher overall productivity and abundant Kokanee Salmon, an excellent source of protein for fast growth and high body condition. Brown Trout can be caught year-round, but anglers are particularly successful fishing lake inlets and around schools of Kokanee Salmon in deeper water. However, these same waters are also home to large native Bull Trout that use the same food sources and occupy some of the same habitats, so anglers should be mindful in identifying fish and carefully release all bull trout.

**Fishing on the Clearwater Valley ‘Chain of Lakes’**  
Anglers visiting the Seeley Lake area often associate local lake fishing with the six larger waters that form a chain from north to south along the valley floor (paralleling Hwy 83). This sequence of glacial trough lakes (80-1,300 acres) begins near the subtle divide that separates the Swan and Clearwater Valleys (near Summit Lake) and continues south towards the main Blackfoot River Valley. Good fishing on the Clearwater chain-of-lakes begins with Rainy Lake at the top and proceeds downstream to Alva, Inez, Seeley, and Salmon Lakes, which are all connected by short segments of the Clearwater River. Placid Lake lies just to the west and its outlet enters the chain between Seeley and Salmon Lakes. Elbow and Blanchard ‘Lakes’ also lie on the Clearwater River downstream of Salmon Lake, but are really just slow, wide spots or oxbows along the river.

Upper valley lakes include Rainy Lake, Lake Alva and Lake Inez. All offer good coldwater fishing oppor-



*28 inch brown trout caught and released in Salmon Lake.*

tunity, but with different types of boat access/rules, scenery, and fishing experiences. Rainy Lake provides a quality Cutthroat Trout fishery that is easily accessible via a ~ 100 yd. trail from the U.S. Forest Service campground parking lot. The lake is open to any type of carry-in watercraft, as long as it is powered manually or with an electric trolling motor. Lake Alva,

a larger lake located just downstream, also provides a good Cutthroat Trout fishery and trailered boat access. However, no wake regulations are now in place to provide a low key, quiet fishing and boating opportunity. Both Rainy Lake and Lake Alva have unaltered shorelines and low boat traffic as they are surrounded by public lands. The Lake Inez fishery is similar to the upper lakes, but restrictive boating regulations are not in place and much of the lake perimeter consists of privately owned cabins. Lakes Alva and Inez primarily offer 10-15 inch Cutthroat Trout, although smaller Kokanee Salmon are also abundant and Lake Inez maintains low numbers of quality Northern Pike.



*Rainy Lake is a popular valley destination for paddlers, photographers, and avid Cutthroat Trout anglers.*

Seeley and Salmon Lakes offer mixed coolwater fisheries consisting of trout and Kokanee, as well as introduced warmwater fish like Northern Pike and Yellow Perch. Most anglers on these lakes target illegally introduced Northern Pike, as populations are abundant and regulations allow no limits. However, a growing number of anglers have been attracted to quality Brown Trout and Kokanee Salmon fisheries on these waters (see below).

Placid Lake is the most productive water in the drainage and is managed as a diverse coolwater fishery. Although much of the lake's fish biomass is tied up in native non-game fish (Peamouth, Suckers and Northern Pikeminnow or Squawfish), it also provides quality fishing for Kokanee, Westslope Cutthroat Trout, Largemouth Bass and Brown Trout. The former two species are stocked annually by MT FWP, while the latter two are self-sustaining. Catch-and-release regulations for bass and low fishing pressure on brown trout have sustained quality fishing and some trophy-sized catches.

### **Valley Lake Kokanee Salmon Fisheries**

Abundant Kokanee Salmon populations can be found in all of the larger valley lakes, including Alva, Inez, Seeley, Salmon, and Placid. The problem in upper lakes is that these landlocked Sockeye Salmon are a little too abundant. Because Kokanee Salmon only live a few years and rely almost solely on zooplankton and insects for food, they tend to stunt when things get crowded. Closer monitoring, reduced stocking rates, and liberalized harvest opportunities have been implemented in recent years to help improve the fishery. Efforts have started to pay off in Salmon and Placid Lakes, where adults are now reaching 13 inches prior to spawning. Populations in upper lakes

have been slower to respond to management changes due to abundant natural reproduction, less harvest and lower lake productivity (upper lakes are inherently more sterile).



*Kokanee Salmon are a popular sport fish that are relatively easy to catch once they reach 11 inches.*

### **Easy Access and Family Fishing Opportunities**

A common question to FWP from parents and anglers with limited mobility: Is there a place that's close where I can take my kids or easily access good fishing from shore? One frequent answer is Harpers Lake. This small glacial pothole lies right off Highway 200 on the Blackfoot-Clearwater Wildlife Management Area (B-C Game Range), about 10 miles south of Seeley Lake. Harpers Lake is stocked generously and frequently with

larger trout from FWP hatcheries in the region. It is not unusual for anglers to catch a number of 1-2 lb. Rainbow Trout and Cutthroat Trout, and occasionally, a 10 lb. retired brood fish right from the shore near the parking lot. Anglers can also fish the entire lake perimeter or launch a small watercraft as long as it's powered manually or with an electric motor.



*Harpers Lake is an easily accessible, year-round trout fishery that is stocked frequently with catchable trout and trophy-sized, retired 'brood' fish from the FWP hatchery system.*



## **Bitterroot River Recreation Citizen Advisory Committee**

*Chirssy Oschell, Fisheries Access Site Program Manager*

There have been reports of crowding on the Upper Bitterroot River, particularly the West Fork, for many years (see map). Wondering how pervasive this issue actually was, managers instituted a data collection effort focusing on the social factors of angling on the Upper Bitterroot River. On-site surveys, self-registration surveys, and vehicle/trailer counts were done at access points along the West Fork of the river starting in 2013. Results found that there were crowding concerns at access points and on the river but also many using the river were from out-of-county or state. Were Ravalli County anglers being displaced from the Upper Bitterroot and the West Fork?

A 2016 survey was mailed to a random sample of licensed Ravalli County anglers. The results from this survey showed that 65 percent of Ravalli County anglers are spending less time on the West Fork than they would in years past. Some of the reasons people indicated for no longer fishing there were crowding and commercial use. A second survey focusing on a stretch downstream from the West Fork from Hannon Memorial Fishing Access Site (FAS) to Wally Crawford FAS was also mailed out to Ravalli County anglers. The results indicated that anglers are also being displaced from this section of river with 76% of frequent anglers reporting that they have spent less time on this section of river. The top two reasons given were that there are too many float anglers and too many outfitters/guides and their clients.

In response to the volume of public complaints, the data collected, and outcomes of meetings with partners, Region 2 has decided to convene a Citizen's Advisory Committee to advise the department moving forward. Thirty applications were submitted for the Bitterroot River



Recreation Advisory Committee (BRRAC). Sixteen of the applicants were chosen to serve on the committee. These 16 people represent the various stakeholder groups who are involved and affected by river recreation on the West Fork and upper Bitterroot. They will be charged with working together to come up with management alternatives. The preferred alternative

will be presented to the FWP Commission. Stay tuned as all meetings will be announced to the public and comments will be taken at all meetings.

## **Upper Clark Fork**

*Jason Lindstrom, Fisheries Biologist*

The Upper Clark Fork River fishery is monitored annually each spring. In 2016, we electrofished four long-term sample sections between Warm Springs and Gold Creek. Brown Trout dominate the trout fishery in this stretch of the river making up approximately 98% of the trout community. Rainbow and Westslope Cutthroat Trout are also present. In the Clark Fork upstream of Drummond, we typically see about 300 Brown Trout per mile (for fish greater than 7 inches in length). The only exception to this is a couple-mile reach immediately below the Warm Springs Ponds where fish density tends to be higher.

This part of the river is highly productive because it is downstream of the pond system.

Brown Trout numbers in most monitoring sections were

**Bitterroot River fishing access sites**





a little below long-term averages in 2016. Brown Trout densities were around 250 fish per mile in the majority of reaches sampled. Drought conditions over the last few summers have been particularly bad in the Upper Clark Fork. Low stream flows, high water temperatures, and poor water quality associated with past mining contamination likely stressed the fishery and led to an increase in mortality over the last couple of years.

Below the Warm Springs Ponds, Brown Trout numbers were a little over 400 fish per mile in 2016. This estimate was well below average; about half of the 20 year average for this reach. Over the last couple decades, we have witnessed a number of ups and downs in brown trout densities in this section of the river. The reason for the volatility is not well understood despite several recent studies looking at juvenile fish survival below the ponds. At times there is poor water quality leaving the settling pond system, but to what extent this is impacting the fishery is still relatively unknown and something we continue to investigate.

Fishery restoration efforts in the Upper Clark Fork basin have largely been associated with the implementation of the "Upper Clark Fork River Basin Aquatic Resource Restoration Plan" authored by the state of Montana's Natural Resource Damage Program (NRDP) with help from FWP. In 2016, a number of projects were aimed at improving habitat conditions and connectivity of priority tributaries. Many partners work together to initiate and com-

plete these projects. Partners include Trout Unlimited, the Watershed Restoration Coalition, and the Clark Fork Coalition. One such project was the installation of new fish screen on a ditch off of Warm Springs Creek near Anaconda. Sampling of this ditch showed that it

was entraining a large number of native Westslope Cutthroat Trout as well as number of bull trout, which are listed as a threatened species under the Endangered Species Act. By installing a screen at the head of the ditch, fish will now be redirected back to the stream instead of down the ditch where most were perishing. Fishery restoration efforts in prioritized tributaries will continue for a number of years under this program.



*A new fish screen installed on a ditch in the Warm Springs Creek drainage near Anaconda, MT. Water enters in the foreground, is "screened" and continues down to the headgate. Fish enter a "by-pass" and go back to the creek that is to the right of the screen.*

Cleanup efforts along the Clark Fork River also continued in 2016 in the Upper Clark Fork basin. The Department of Environmental Quality continued

to remove copper laden soils from the stream banks and floodplain, which will ultimately lead to an improvement in water quality and the wild trout fishery. The cleanup process was initiated several years ago, and has now completed four reaches between Warm Springs and



*A recently restored stream bank on the Clark Fork River.*

Racetrack. The overall project area stretches from Warm Springs to Garrison. Additional sections of the river and floodplain will be cleaned up annually for probably the next 10 years or so. FWP serves on a technical advisory committee that is involved with reviewing design plans associated with the cleanup. FWP has implemented temporary river closures associated with the cleanup sites to protect public safety as well as establishing vegetation. At this time, all of the completed sections are

again open for public access. However, the section of river between Galen Road and Gemback Road is only open to float through access.

## **Blackfoot River Report**

*Ron Pierce, Fisheries Biologist*

### **Drought**

Like many rivers in western Montana, the Blackfoot River was again hit by drought during the summer of 2016. The drought reduced river flows to the lowest level since 1988; it triggered temporary angling restrictions on the mainstem and certain Bull Trout streams, as well as various water conservation measures under the Blackfoot Drought Plan. Fortunately, the low flows were not accompanied by protracted high water temperatures, which often adds additional stress on coldwater fisheries during drought years.

Despite repeated droughts over the last few years (2013, 2015 and 2016), native trout in the Blackfoot River have not shown the same large declines as prior drought periods (e. g., 2000-2007). This is likely the result of relatively cooler water temperatures during recent drought years, along with 1) restoration of streams (now > 50 streams), 2) drought management actions that keep water in many tributaries, and 3) regulations that protect native trout for angler mortality. From a drought perspective, the restoration of spawning and rearing streams has proven especially important. This is because managing for healthy tributaries (quality habitat) improves their ability to better withstand drought stressors and to rebound more quickly following drought. Future drought planning in the Blackfoot basin hopes to include more long-term strategies with irrigators to improve tributaries by emphasizing restoration actions that improves resiliency.

### **Mike Horse update**

The Mike Horse tailing dam, located at the very headwaters of the Blackfoot River washed out in the spring of 1975 and in so doing washed >200,000 tons of contaminated mine waste into the upper river. This led to collapsed fisheries and contaminated floodplains. Because of this condition, the Mike Horse tailing dam has long been considered most significant threat to ecological health of the Blackfoot River. Following a settlement with the responsible mining companies, the State of Montana began the cleanup in 2014 to reverse this



*Mike Horse tailing dam left in 1975 (left) soon after the tailing dam breached (Photo by Liter Spence, MT Fish and Game 1975). The photo on the right shows a section the new Bear Trap Creek channel. Photo by Ron Pierce.*

damage. As of December 2016, cleanup has removed 630,000 cubic yards of mine waste, which includes the Mike Horse tailings dam. In addition, the cleanup has restored about 4,200 feet of newly channel (Figure 1a and 1b). When the clean-up is finished in 2018, about 1,000,000 cubic yards of mine waste will be removed from the valley floor and three miles of stream will be restored to natural form and function. This cleanup will hopefully set the stage for the recovery of Westslope Cutthroat Trout.

### **Bull Trout**

In general Bull Trout in the Blackfoot River fared better than expected given the low flows during the last few years. River populations sampling found large adults were well-represented in spring sampling and Bull Trout redd counts showed a continued positive trend during the last decade. Most of the recent increase in bull trout comes from the North Fork Blackfoot River. This tributary provides most of the recruitment not only to the Blackfoot River, but also contributes Bull Trout as far downstream as the Clark Fork River. Increased redd counts in the North Fork are likely the result of two primary factors. First, the removal of Milltown dam in 2008, which reconnected fish passage to the mouth of the Blackfoot River, and second, fish screening of all the large irrigation ditches on the lower North Fork. Both restoration actions allow Bull Trout the ability to

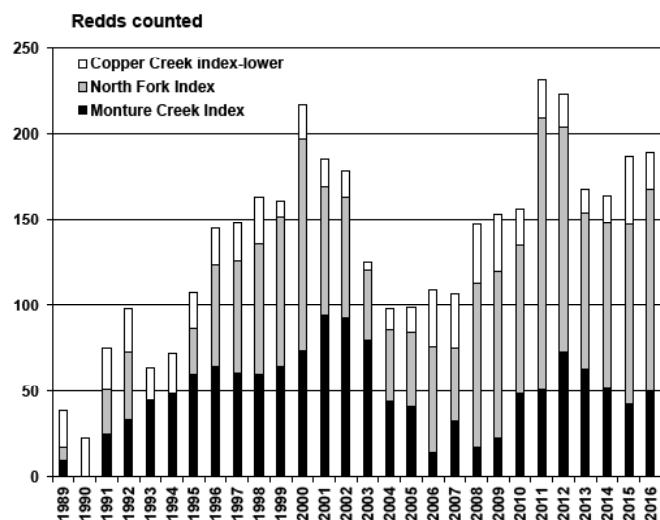


## FISHING NEWSLETTER 2017

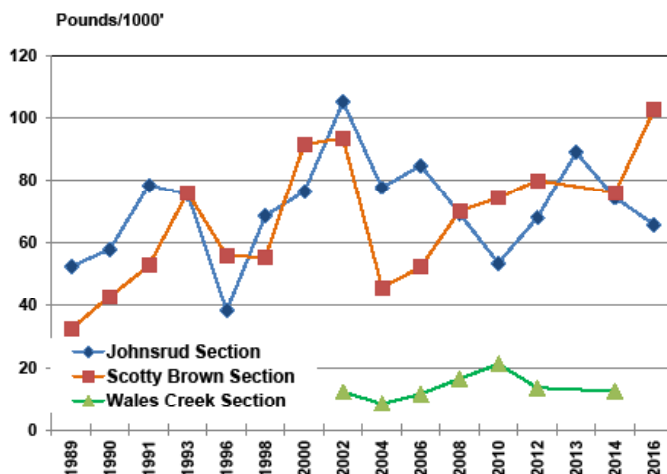
better navigate the riverscape between spawning sites in the wilderness and larger river reaches. These same fish passage and ditch screening also help to improve resiliency of fisheries during drought. Though the three primary Bull Trout streams are generally stable to increasing, the smaller bull trout spawning streams located at the lower elevations continue to decline. These declines correspond with warming trends, reductions in snowpack along with a legacy of land disturbance.

### Blackfoot River Trout Populations

In 2016, the Blackfoot fisheries crew completed biannual fish population monitoring on the mainstem Blackfoot River. Despite drought over the last few years, monitoring is showing generally stable to increasing trends in trout biomass in the two lower river monitoring section. The abundance of Westslope Cutthroat Trout has shown a 25-year increasing trend. The upper-most monitoring section (not sampled in 2016) has shown much lower numbers of trout is due to weak recruitment from streams due largely to fish passage problem, land use practices and reduced water quality.



Redd counts for the three primary spawning streams in the Blackfoot River drainage.



Total trout (all fish >6.0 inches) biomass estimates for three section the Blackfoot River (Johnsrud Section at river mile midpoint 13.9, Scotty Brown Section river mile midpoint 43.9, and Wales Creek Section at 63.0).

### Flint/Rock Creek Drainages

**Brad Liermann, Fisheries Biologist**

Electrofishing population estimates are completed on Rock Creek during most years to monitor the status of the trout populations in this popular destination fishery. Brown Trout are the primary species targeted by anglers in the drainage following the severe reduction in Rainbow Trout numbers over the past two decades due the introduction of whirling disease into the drainage in the early 1990's. Unfortunately, the population estimates indicate that Brown Trout numbers were down somewhat in 2016. The population estimate in 2016 was 590 trout per mile which is down approximately 30% from the ten



Male brook trout caught by an angler at Georgetown Lake. Outstanding fishing at Georgetown Lake is a precarious venture. The high productivity and excellent growth of fish comes with the need for delicate management of water levels, stocking rates and harvest.

year average. The Brown Trout population estimate was 530 fish per mile in the Hogback section of Rock Creek (located near river mile 30 between the upper and lower Hogbacks) which is again down about 30% from the ten year average. On a positive note, Rainbow Trout densities maintained similar abundances in the lower portion of Rock Creek (around 400 fish per mile), but still remain quite low in Upper Rock Creek (Hogback section). Reasons for the suspected Brown Trout decline aren't entirely clear, although drought conditions over the past several years are a likely suspect. Late summer flows have been lower than average over the last two summers and were also lower in 2013. Fortunately, trout have high reproductive rates and their abundance can rebound relatively quickly (within 3-4 years), if we get good stream flow conditions in the coming years.

Gill netting surveys are completed every other year at Georgetown Lake. The last sampling was September 2015. During this survey, we found that Rainbow Trout and Kokanee Salmon gill net catch rates were down slightly from previous years. Brook Trout catch rates were higher than the previous two gill netting efforts. Gill net catch rates at Georgetown Lake are variable and one year's results may not accurately reflect actual changes in the fishery. Multiple years of data are necessary to be confident that a change in the fishery has occurred. The reduced number of Rainbow Trout and Kokanee Salmon will be assessed closely in future sampling efforts. Reduced numbers of Kokanee Salmon may be welcomed, however. Fewer Kokanee Salmon can result in larger sizes. A new trophy Brook Trout regulation was put into place on Georgetown Lake due to reduced numbers of fish and fewer larger individuals; only one Brook Trout over 16 inches can be kept. The new regulation began in 2016, and future sampling efforts will assess whether the regulation is working as intended.

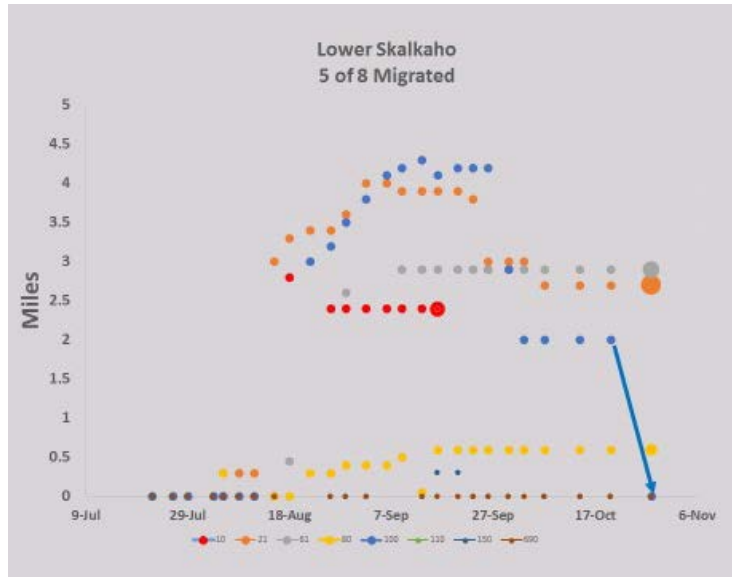


Figure 2. The date and distance bull trout migrated in one reach of Skalkaho Creek.

Snow pack was about average in the Georgetown Lake region during the winter of 2015/2016. This snow pack and good water management this year should provide good habitat for the fishery this winter with lake levels currently above average. Georgetown Lake is a shallow, productive reservoir and low dissolved oxygen levels are common during winter. In years when the reservoir levels are low, and ice and snow cover the reservoir for an extended period, low dissolved oxy-

gen levels can occur throughout much of the reservoir. Trout and Kokanee Salmon require well oxygenated water. Higher lake levels, on the other hand, provide more oxygen.

There are many demands for the Lake's water. Hydro-power, irrigation and recreation are affected by water management, as well as the fishery. We work closely with the other users to meet the multiple uses of Georgetown Lake's water, and protect its incredible fishery.

### Skalkaho Creek Resident Bull Trout Spawning Migration

*Chris Clancy, Fisheries Biologist*

When most people think about Bull Trout, they picture large fish such as those from Flathead Lake. These are impressive fish and are known to undertake long migrations to spawn in their natal streams. Resident Bull Trout are generally much smaller (up to 12 inches long) and live in a creek for their entire life. They don't get the press that their large cousins receive. However, they may be an important player in the long term persistence of bull trout as the climate warms.

We have been monitoring resident Bull Trout for many years in the streams of the Bitterroot Valley. In 2016 we decided to learn more about where and when they spawn. In order to do this, we implanted radio transmitters in 25 of these small fish and followed their move-



ments to spawning areas. We had a sense that they migrated, but how far can an 11 inch fish move in a steep stream anyway?

As it turns out they are capable of moving further than you might think. We implanted the transmitters in fish at 3 locations in the Skalkaho drainage. About  $\frac{1}{2}$  of the fish migrated some distance from site 1 (Figure 2). Each color on the chart is a different fish. Two of the fish migrated about 4 miles upstream before they dropped back downstream. That is a pretty impressive swim for a fish that weighs about  $\frac{1}{2}$  pound to undertake.

When each fish reached its upstream extent we walked the creek to look for redds, or trout nests (Figure 3). In most cases we did find redds and they were usually near trees that had fallen in the stream.

We learned that these resident Bull Trout spawn throughout the creek and did not concentrate in just a few areas. The spawning peaked in late September and many of the fish moved back downstream to where they were originally tagged. However, some of the fish remained near the spawning location. We do know from previous studies that some of these fish will move further downstream as thick ice accumulates in the creek.

Our plans include implanting radio transmitters in resident Cutthroat Trout during the Spring of 2017. They spawn in late May to early June and we would like to understand their migration patterns also.



*Typical size of an adult resident Bull Trout.*



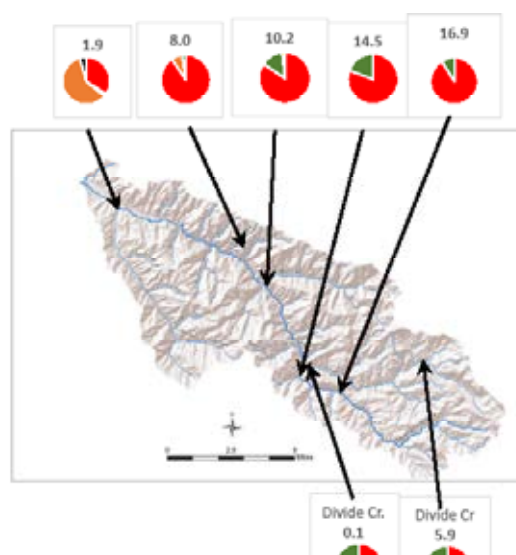
*Figure 3. A typical resident bull trout redd (the cleared area in the middle of the picture) is only about 2 square feet in area.*



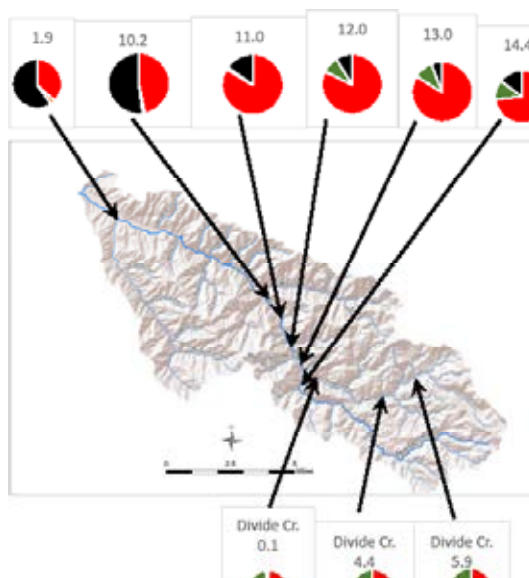
## Sleeping Child Creek Changes in Fish Composition and Water Temperature

*Chris Clancy, Fisheries Biologist*

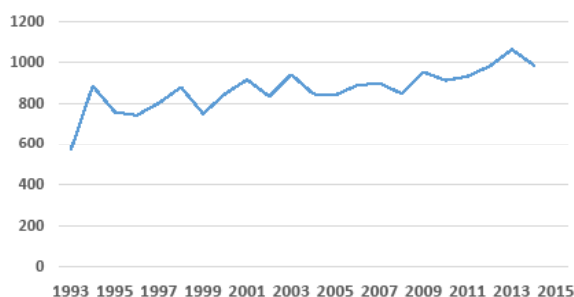
**1980's and 1990's:** The trout fishery in Sleeping Child and Divide Creeks prior to year 2000 was primarily a native fishery in the upper reaches. More than ½ of the trout were Westslope Cutthroat (red) and the other species present was Bull Trout (green). Downstream, on private lands, non-native Brook Trout (orange) were the predominant species with Westslope Cutthroat being common and Bull Trout and Brown Trout (Black) present.



**2011-2016:** Over the last 30 years, Brown Trout have become established upstream into Sleeping Child Creek. Over the same period, the number of Bull Trout has declined. Divide Creek supports a significant number of Bull trout but the status of the population of Bull Trout in Sleeping Child Creek, upstream of Divide Creek is unknown.



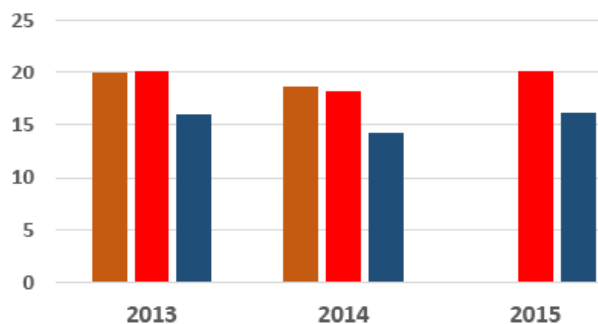
**Sleeping Child Creek 10.2  
Degree Days**



The reason for the change may be related to water temperature. The water temperature has been increasing in Sleeping Child Creek but Divide Creek is colder and still supports a strong population of Bull Trout at this time. The Sleeping Child drainage experienced a large wildfire in 2000 and the loss of trees and shrubs in a large portion of the drainage lead to higher water temperatures. Water temperatures in drainages that have not experienced major forest fires are also increasing, but at a slower rate.

The Divide Creek drainage (blue bars) did not experience fires over as much of the drainage and water temperatures have remained cooler. This difference in water temperature may be helping slow the expansion of Brown Trout into Divide Creek. We plan to collect data in Sleeping Child Creek upstream of the confluence with Divide Creek to assess whether Brown Trout have invaded that reach.

**7 Day Mean Maximum - Degrees C**





### Griz Fishing Sites Welcome a Bobcat

*Rory Zarling, Fishing Access Site Program Manager*

If you were one of the lucky fishermen in western Montana in 2016 to see a Bobcat in a Griz (greater Missoula area) fishing access site—good for you! If you were not one of the fortunate, don't feel too let down as you can be assured that there will be many more opportunities to see one in 2017 and beyond. The Bobcat some lucky fishermen saw in fishing access sites this year was not your typical furry four-legged specimen however. Instead, the sightings at fishing access sites were much more of a mechanical nature having four rubber wheels—better known as a 2016 Model S-740 Bobcat Skid-Steer. Attached to the machine was a brand new hydraulic road grader attachment. Sightings of the Bobcat for fishermen were exciting as it left fresh tracks in perfectly level graded gravel on fishing access site roads.

In 2016 Fish, Wildlife & Parks was able to purchase the highly efficient equipment for the Region 2 fishing access site program in order to improve the quality of the access roads within the regional boundaries. The purchase means that fishermen will see department managed fishing access roads and parking areas within Region 2 significantly improve on a continual basis. The capability of the combination of skid-steer and grader attachment is exactly what the region needs to maintain and improve its road system for the fishing public.

The first fishing access roads to receive attention in 2016 were on Monture Creek, Brown's Lake and Warm Springs Ponds. Plans for improving access road quality on the Bitterroot, Blackfoot and Clark Fork rivers are planned for 2017.

### Behind the Scenes Work Has Us Hopeful for Improved Fishing Access

*Rory Zarling, Fishing Access Site Program Manager*

An extra amount of hours in 2016 have gone into what hopefully results in keeping and improving fishing access at three sites. Much discussion has gone into trying to finalize plans for development of three highly desirable fishing access sites on the Bitterroot River and

Rock Creek (tributary of the Clark Fork River) that have been sought and discussed for many years.

Stevensville Bridge on the main stem of the Bitterroot River, W. W. White property on the West Fork of the Bitterroot River and Gillies Bridge on Rock Creek near Philipsburg, Montana are the three sites that are receiving extra attention of late.

To state the obvious, if the complexity of issues were simple, the deals would have been done already—many years ago. With that said, 2016 seems to have been the year when significant progress has been made on the three sites. Contributing to the effort to find common ground has included ranch owners, family trusts, attorneys, conservation easement holders, community representatives, town's people, sportsman groups, non-profit organizations, department personnel of all areas of expertise, the media, and of course, people who like to fish.

We've also been working on improved access in the Upper Clark Fork. Bearmouth and Racetrack are planned for improvements, and we are hoping to acquire a site near Gold Creek.

So, 2016 has been extra busy. In addition to the challenges of managing the Region's approximately 75 existing sites, we've been particularly active in preserving and improving future access. Anglers and other users of our access sites have reason to be excited in Region 2!



*Bobcat with a hydraulic road grader attachment.*

## REGION 3 SOUTHWEST MONTANA

### Big Hole River Drainage

*Jim Olsen, Fisheries Biologist*

Montana Fish, Wildlife and Parks working with multiple partners including the Big Hole Watershed Committee, Montana DEQ, Montana DNRC, BLM and several others embarked on a large scale placer mining restoration project in French Gulch on the Mt. Haggin Wildlife Management area near Anaconda. This area was the first gold strike in the Big Hole and mining began in 1863. Placer mining consists of removal of gold from the gravels deposited in beds and floodplains of streams. It often involves the use of dredges and other tools to excavate gravels and these gravels are then sorted and run through a sluice to separate the gold from other sediments. The gravel spoils are often piled up across the former floodplain of the stream leaving windrows of gravel as high as 15 ft. The stream in French Gulch was often diverted one side of the valley or the other so that the entire floodplain could be mined. Often mining operations excavated gravels down to the bedrock, up to 30 ft. deep, because that was most likely place to find the gold. The aftermath of placer mining in French



*Placer mined reach of French Gulch prior to restoration. Note: stream is locked between the placer pile on the right and the hill slope on the left and has no floodplain and a very limited riparian area.*

Gulch left the stream straightened and flanked by large gravel piles. The straight stream has poor habitat for fish with few pools and very limited spawning areas. Further, the once wide floodplain and riparian area that was covered with willows and alder was now covered with gravel piles that are sparsely vegetated with upland plant species such as lodgepole pine and sagebrush.

Beginning in 2013 FWP began to explore the options for restoring the stream and riparian area for fish and wildlife. A design was developed to restore the lower 3 miles of French Gulch by creating an entirely new floodplain and establishing a meandering stream channel within this floodplain. Funds were secured for the project through the DNRC's Reclamation and Development Grants, DEQ 319 program, FWP's Future Fisheries Improvement Program, Montana chapter American Fisheries Society, Patagonia, Montana Trout Foundation and George Grant Chapter Trout Unlimited to design and implement the project.



*This is the same reach of stream as shown in the photo above. Note: the new stream channel meanders across the newly created floodplain. The former stream channel where Photo 1 was taken is located between the gravel berm and the pine-covered hill side in the background of the photo.*



Work began in July of 2016 and was completed by the end of October. Over 6,000 ft. of stream channel and floodplain were restored in 5 separate reaches of stream. In Reach 1 of French Gulch the length of the former channel was 1,000 ft. and once restored the stream channel was 1,800 ft. long. In addition, Montana Department of Transportation which reconstructed Highway 569 in the summer of 2015 created a new fish passage friendly crossing over French Gulch which at the time was about 200 ft. from where the stream went under the highway in anticipation of the restoration and relocation of the stream channel. In areas of the stream where mining impacts were less and the creation of a new floodplain were not warranted, habitat improvements were made using hand crews. Logs were placed across the stream channel which created pools. A total of 57 pools were created in these reaches by a young man who did his Eagle Scout project in the stream and crews from Montana Conservation Corps. It is anticipated that this project will have significant positive impacts to the fish in French Gulch. The new more sinuous channel will slow stream velocities and allow for gravels to be deposited for spawning fish and the number and quality of pools will dramatically increase. It is anticipated that French Gulch will become an important spawning stream for fish from French Creek. The improvements to riparian and floodplain habitat should have beneficial effects on moose and other terrestrial wildlife species as the new vegetation begins to establish and thrive.

### **Greenhorn Creek**

*Matt Jeager, Fisheries Biologist*

Genetically pure Westslope Cutthroat Trout were restored to Greenhorn Creek this past summer. This accomplishment was the culmination of a ten-year project undertaken by the Forest Service, Bureau of Land Management, Turner Enterprises, and FWP. We started on this project because over the past 150 years



Westslope Cutthroat Trout (WCT) have been eliminated from most of the streams where they historically occurred east of the continental divide; distribution had declined by about 90%. What made this project urgent and significant were more recent declines in the Ruby watershed. In 2010 there were six non-hybridized WCT populations. Over the next five years we had lost all but two, one of which was in a Greenhorn Creek tributary. Slow declines over long time periods can have their significance or urgency masked. Being confronted with the reality that we were on the verge of losing one of the Ruby watershed's native fishes and that it was progressing quickly to this point was sobering.

Native fish conservation can be controversial and it's not uncommon to be questioned about why it's done. First and foremost, FWP is statutorily obligated to manage native species in a manner that they don't become listed under the Endangered Species Act, and is authorized to conduct fish restoration projects to meet that goal. This is especially relevant considering WCT now occur primarily on federally managed lands. If few WCT populations exist then each becomes more important, which can constrain land management options where they occur. This is especially true if pop-

ulations decline to the point where Endangered Species Act listing is warranted. Conversely, if WCT are widely distributed and abundant then both the likelihood of them going extinct and the need to restrict land management alternatives is reduced. WCT have been petitioned for listing under the Endangered Species Act but it was found to be not warranted, in large part because of ongoing restoration projects like the one in Greenhorn Creek. Finally, WCT are Montana's state fish and legacy. Conserving them for future generations is our obligation and the right thing to do.

In 2007 the Greenhorn Creek watershed still had two pure WCT populations, but the most common contemporary threat to their persistence was closing in. WCT distribution has declined across their range over the past 150 years, but especially east of the Continental Divide, in part because of a combination of land uses that degrade habitat. However, the introduction of non-native fishes, specifically Brook and Rainbow Trout was likely equally influential on historical declines and is presently the largest threat to the persistence of WCT; Brook Trout compete with WCT while Rainbow Trout hybridize with them. Both these species were present in Greenhorn Creek, which prompted work to remove them manually by electrofishing beginning in 2007. Although both non-native species were reduced in abundance it wasn't enough -- by 2012 one of Greenhorn Creek's WCT populations was functionally extinct.

At that point we made the decision that a more aggressive management alternative was needed to save the remaining WCT population and restore them to the rest of the stream. We took a common and successful approach to WCT conservation: installation of a barrier to isolate upstream waters from non-native fish invasion, salvage of remaining pure WCT, and treatment of the drainage with a chemical made from ground up plant roots (rotenone) which effectively eliminates fish. About 15 miles Greenhorn Creek were treated in 2013 and 2014. In 2015 we sampled the entire drainage to determine the effectiveness of our removal using two



*Fish crews move pure Westslope Cutthroat Trout back into Greenhorn Creek via horseback.*

techniques. The first was with electrofishing, a traditional fisheries sampling method. The second used an emerging technology called environmental DNA sampling. With this approach a filtered water sample was collected every 250 meters and DNA present on the filter was extracted to determine whether any fish were present. Both sampling approaches indicated that our treatment was successful and the drainage was ready to be restored.

This past summer we collected WCT from the last known remaining population of pure WCT in the Ruby watershed as well as from several robust populations in the Beaverhead drainage using criteria established to prevent harming donor populations by removing too many fish. Tissue from each translocated fish was analyzed to ensure they were genetically unaltered prior to being moved. Once determined to be pure WCT they were moved into the Greenhorn Creek back country via horseback in aerated milk cans, ironically the same way non-native fishes were transported into these drainages over 100 years ago. Completion of this project was important to Greenhorn Creek and the Ruby Watershed; it provided an opportunity to gain ground for a species locally in need. It also provided another example that this approach is an efficient and effective way for managers to restore WCT populations in southwest Montana.



## Montana Rivers vs. New Invaders

*Ron Spoon, Fisheries Biologist*

Below the famous Madison, Gallatin, Big Hole, Ruby and Jefferson Basins lies the Missouri River. Viewed from a distance, the Missouri Headwaters is the beginning of a huge waterway with national significance (the source water), but in Montana, the Missouri is the receiving water and the downstream collector of good things or bad things that occur in our headwaters - invasive species seem to make their debut in the Mighty Mo.

Anglers reading the annual newsletter are curious about how their favorite waters are holding up, including the Missouri. In recent years, the learning curve for anglers and biologists regarding invasive species has been steep, and fishing reports look more like most wanted posters. We long for the days when heated debate over 5 or 10 fish limits was the big threat.

The Missouri River near Townsend, and Canyon Ferry Reservoir appears to have received yet another new species potentially entering the mix as of November 2016. This time it is invasive mussels, as if whirling disease, Walleye, Northern Pike, Eurasian Watermilfoil and several less notable species adding their face to the crowd were not enough. Will the invasive mussels cause significant harm to the fishery? Time and

thoughtful measures will likely answer the question. Each of the previous arrivals had their effect. Biologists reset the line in the sand and moved on. Anglers modified their “search image” and adapted. And Montana rivers did their thing – scrubbing the cobbles each day, tumbling the streambed each spring with abundant flow, and scouring the winter shorelines with ice. Despite the uncertainty, the one constant is the power of a Montana river to reset the table, to heal.

The local biologist will become better versed at the details of zebra and quagga mussels, but above all else, he/she has likely learned to trust the river. A

Montana river does not readily accept new players. Our surrounding mountains provide grade for the river to run. The steep gradient translates into power, and the power forces aquatic life to adapt. Sometimes the best the invader can do is seasonally migrate in and out (Walleye), colonize and disappear (Northern Pike), or simply dabble in marginal habitat (Eurasian Watermilfoil).

The whirling disease threat arriving in the mid-1990’s remains present, and it has changed some aquatic communities, and the fish and anglers adjusted. A tempered, scientific process prevented knee-jerk mistakes as whirling disease took hold. We avoided expensive, short-term fixes (e.g., resume hatchery stocking of the Madison to replace the void) in favor of gradual adaptation and adjustment. FWP has a long track record of trusting wild fish and Montana rivers when invasive species arrive.



*Northern Pike captured during sampling in the Missouri River below Toston.*



*Eurasian Watermilfoil collected in the Missouri River at Toston Dam.*

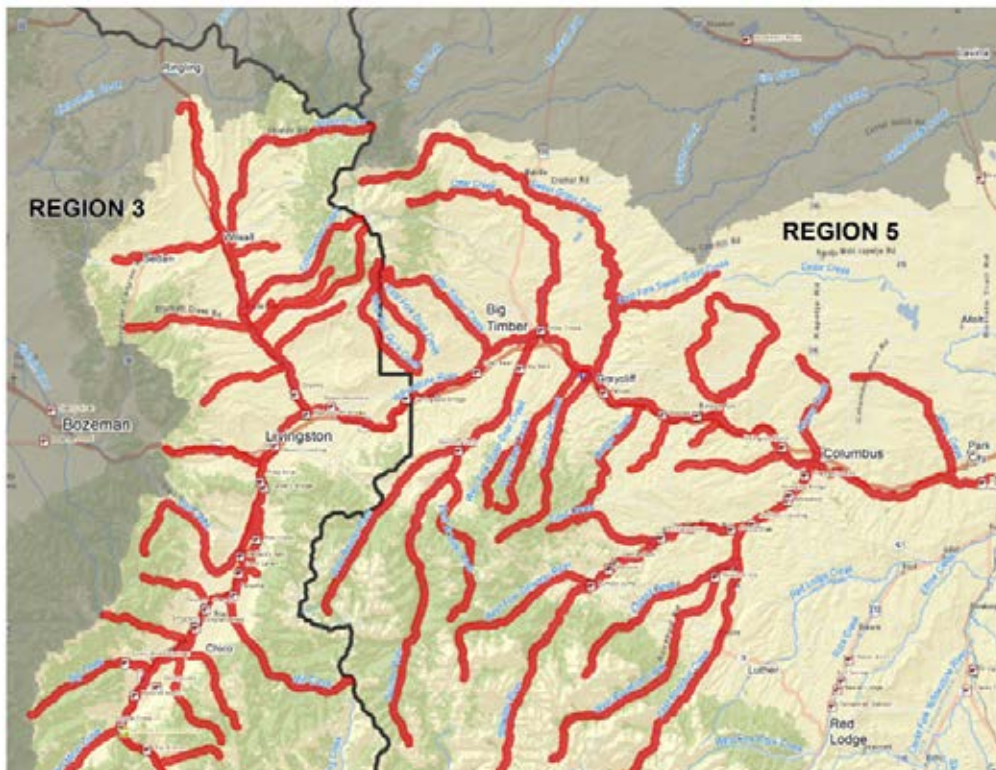
## Yellowstone River Fishkill

*Scott Opitz, Fisheries Biologist*

Beginning August 12, 2016 FWP conducted surveys on the Yellowstone River to assess reports of a significant Mountain Whitefish (MFW) kill. As part of the survey effort moribund fish (fish that are alive but in the process of dying) were collected for analysis at the US Fish and Wildlife Service Fish Health Center in Bozeman, MT in order to determine the cause of the mortality. On August 18, 2016, the Fish Health Center determined that a parasite, *Tetracapsuloides bryosalmonae* (PKX), which causes Proliferative Kidney Disease (PKD) in trout and salmonids, was the cause of mortality.

The PKX parasite requires two hosts to complete its life cycle. Bryozoans, which are aquatic invertebrates, are the definitive host and salmonids, which include trout and whitefish, are intermediate hosts. The spores produced by bryozoans are able to infect both salmonids and other bryozoans, while spores produced by salmonids can only infect bryozoans and not other salmonids.

Given the large number of dying MFW and the confirmation of the PKX parasite, the FWP Commission issued a closure of 183 miles of the Yellowstone River and all tributaries from the northern boundary of Yellowstone National Park to the HWY 212 bridge in Laurel, MT. This closure covered all water based recreation and was issued in order to remove as much stress as possible on the dying MFW and prevent the further spread of the parasite to other waters in southwest Montana that were experiencing similar flow and temperature conditions. Research indicates that if fish are exposed to the parasite and survive the exposure they will develop some level of immunity to the PKD disease. In conjunction with the closure, mandatory boat cleaning stations were implemented as soon as the closure went into effect with one station to the west of Livingston and one to the east of Columbus. This effort was to ensure that boats and other equipment that had been exposed to Yellowstone River water were



*The Yellowstone River and all its tributaries were closed to all water recreation following a large die-off of Mountain Whitefish in August 2016. All areas reopened for recreation by September 23, 2016.*

cleaned prior to being used on other waters.

The introduction of the PKX parasite into the Yellowstone River appeared to be recent based on the naive reaction of the MFW. Initial lab results indicated that the fish were dying from septic shock, the overwhelming of the immune system as a result of the high number of parasites in the fish, before the full effect of PKD could develop and kill the fish due to renal failure.

Monitoring of fish mortality on different reaches of the Yellowstone River continued through the end of September in order to determine if the level of disease was increasing, remaining constant, or decreasing through time. Fish that were observed were placed into one of three different categories. These were 1) moribund, fish that are in the process of dying, 2) recent mortality, fish that have been dead for 8-10 hours, and 3) old mortality, fish that have been dead for more than 10 hours. Increases in moribund and recently dead categories indicated continuing mortality while increases in old mortality along with decreases in moribund and recent mortality indicated decline of the disease.

On September 1, 2016, portions of the closure were opened to recreational use based on observance of



no further mortality of fish. The reach from the northern boundary of Yellowstone National Park to the Carbella fishing access point (FAS), the reach from 89 Bridge FAS to the HWY 212 Bridge in Laurel, and all tributaries within the closure reach with the exception of the Shields River were opened. In order to protect strong holds for Yellowstone Cutthroat Trout populations the reach from Yellowstone National Park to Carbella FAS was not opened for angling and the Shields River remained closed to all recreational use.

The reach from Yellowstone National Park to Carbella FAS was opened to angling on September 6, 2016 after it was apparent that recreational use with the exception of angling was not causing any further mortality of MWF in this reach.

On September 9, 2016 the reach from Carbella FAS to Point of Rock FAS was opened. The reach from Point of Rocks FAS to Emigrant East FAS, the reach from Pine Creek FAS to 89 Bridge FAS, and the Shields River were all opened on September 16, 2016. The remaining 17.2 miles from Emigrant East FAS to Pine Creek FAS was opened September 23, 2016.

While the fish predominantly affected were MWF, extremely low numbers of mortalities were noted in rainbow and brown trout, Yellowstone cutthroat trout, longnose suckers and longnose dace. Testing of fish did reveal the presence of the PKX parasite in all three trout species. To date there has been no confirmation the PKX parasite in longnose suckers or longnose dace.

There is potential to see fish kills in the Yellowstone in future years now that the parasite is present in the system. Rivers such as the South Fork Snake River in Idaho have seen fish kills after the initial detection of PKD in 2012. Trout in the Yellowstone River have tested positive for the parasite and under the right conditions



*A mandatory boat wash station following the discovery of PKD in the Yellowstone River.*

there could be fish kills in trout. In parts of Europe, significant fish kill have been noted in trout. The parasite has been confirmed in other waters in Montana through testing and the potential for a fish kill in other waters if conditions are right.

Monitoring of both Mountain Whitefish and trout populations will be conducted in spring 2017 in order to fully evaluate the impact

### **Legal Status of Upper Missouri River Arctic Grayling**

*Emily Cayer, Fisheries Biologist*

The Legal status of Upper Missouri River Arctic Grayling has been in litigation for over 30 years. Many groups and individuals would like to see Arctic Grayling placed on the Endangered Species List (ESA) and management of this species transferred to the U.S. Fish & Wildlife Service. Others would like to keep Arctic Grayling off of the ESA and under management of Montana Fish, Wildlife and Parks. This emphasizes the cultural, biological and social values associated with this unique native species; while litigation is expensive in both time and funding a silver lining has been its role as a catalyst for research, resources, and conservation partnerships and projects that benefit grayling.

The long legal history dates back to 1982, when the USFWS published their first status review and determined that grayling were designated as a Candidate

## FISHING NEWSLETTER 2017

species. In other words, they were warranted for listing under the ESA, but there was not sufficient data to support a rule that would list grayling as Threatened or Endangered.

While the legal back and forth continued for many years, the next notable event in this legal history took place on April 24, 2007 when the USFWS published a revised 12-month finding determining that fluvial Arctic Grayling in the upper Missouri River basin did not constitute a species, subspecies or Distinct Population Segment (DPS) and therefore were no longer warranted for listing under the ESA (FR 50 CFR Part 17). This determination removed Arctic Grayling from the Candidate Species List. Arctic Grayling remained a "Species of Special Concern" in Montana and a sensitive species by the US Forest Service and Bureau of Land Management. On November 15, 2007 a lawsuit was filed by the Center for Biological Diversity, the Federation of Flyfishers, the Western Watersheds Project, George Wuerthner and Pat Munday to challenge the USFWS determination. In the settlement, the Service agreed to publish a new status review finding on or before August 30, 2010. As part of the settlement, the Service agreed to consider different life history forms (fluvial and/or adfluvial) as an upper Missouri River DPS. Since the 2007 finding, additional research has provided new information on population genetics in Montana and North America. As a result, on September 8, 2010, the Service published a revised finding that

concluded that Arctic Grayling of the upper Missouri River basin did constitute a DPS, and were warranted protection as threatened or endangered under the Endangered Species Act but that listing was precluded at that time by the need to complete other listing actions of a higher priority. In 2011, the Center for Biological Diversity reached an agreement with the USFWS to move forward on listing decisions on 757 species, including the Arctic Grayling. Under the settlement, a

proposed listing decision was due in 2014. On August 19<sup>th</sup>, 2014 the USFWS announced its finding that the Upper Missouri River Distinct Population Segment (DPS) of the Arctic Grayling does not warrant protection under the Endangered Species Act (ESA) (Federal Register on August 20, 2014). The USFWS reached this conclusion after analyzing recent genetic information, determining that in fact 19 out of the 20 Arctic



*Arctic Grayling in the Big Hole River.*

Grayling populations within their historic range were stable, or increasing. The USFWS also cited the significant conservation efforts carried out by private landowners, federal and state agency partners to improve conditions for Arctic Grayling in the Upper Missouri River basin. On February 5, 2015, a lawsuit was filed in federal district court in which the plaintiffs (listed above) challenged the USFWS Notice of 12-month Petition Finding that was published August 20, 2014. On August 30, 2016 Montana Federal District Court Judge Haddon heard the case *Center for Biological Diversity v. Jewell*, the case in which Plaintiffs challenged the USFWS' 2014 finding that listing of the Upper Missouri Distinct Population Segment of Arctic grayling was not warranted. On September 2, 2016





*Pictured Right: USFWS Director Dan Ashe announcing the 2014 Not Warranted listing decision for Upper Missouri River Arctic Grayling to private landowners, agencies, and non-government partners in the Big Hole Valley, Montana, August 19<sup>th</sup>, 2014. Pictured Above: USFWS Regional Tour of the Centennial Valley Arctic Grayling conservation work – May, 2014.*

Judge Haddon granted the summary judgment motions of the USFWS and State of Montana/FWP; meaning that the USFWS not warranted decision was upheld.

On October 21, 2016 the Plaintiffs filed a notice of appeal of the Arctic gGrayling case with the 9<sup>th</sup> Circuit. And so we continue with litigation.

In the meantime, Arctic Grayling numbers are increasing or stable, reintroduction efforts are taking place within historic range, new genetic analysis is being used for management decisions, habitat improvement projects are being implemented and motivation to continue the CCAA program in the Big Hole, and now in the Centennial Valley, is high!

## **Madison and Gallatin Rivers**

*Dave Moser, Fisheries Biologist*

This summer was another warm one, much like in 2015, with the added stress of little precipitation during summer months. Water was pulsed from Ennis Dam 26 times to buffer temperatures in the Lower Madison. These pulse flows are critical for attenuating temperatures in Lower Madison during June, July and August. NorthWestern Energy uses a model to prevent peak temperatures from reaching of 80 degrees Fahrenheit, 2.5 degrees below the lethal limit for trout. Given earlier run-off and rising temperatures, we must be vigilant in protecting water for fish and wildlife. One way to address rising temperatures is to restore and protect feeder streams. The Madison Conservation District is actively pursuing and completing restoration projects in Jack Creek, Moores Creek and other tributaries. We as a fishing community must also prevent transfer of Aquatic Invasive Species. This includes transfer of fish diseases such as PKX – the culprit in the Whitefish kill

on the Yellowstone River, as well as other aquatic invasive species.

In 2016 an Environmental Assessment to cease stocking Rainbow Trout in Hebgen Reservoir was completed and distributed to the public. The EA analyzed the effects of managing Hebgen Reservoir as a wild trout fishery. Wild trout management is a cornerstone of Montana Fish, Wildlife & Parks management direction in rivers and streams since Dick Vincent's work in the 70's describing impacts of hatchery trout on wild trout stocks on the Madison River and O'Dell Creek. The proposed action is based on numerous evaluations of hatchery Rainbow Trout survival and contribution to the fishery in Hebgen Reservoir. Most recently, analyses indicated that only 13% of the fish sampled in Hebgen Reservoir were from a hatchery origin. Multiple high-quality spawning streams exist upstream from Hebgen Reservoir. Montana Fish, Wildlife & Parks will cease stocking because of the low contribution from hatchery fish, the costs associated with hatchery production and stocking, and the availability of abundant high-quality

spawning habitat for natural reproduction.

In addition to monitoring trout populations on the upper (Pine Butte section) and lower Madison (Norris section), Mountain Whitefish were sampled during spring 2016 on the Pine Butte section. Mountain Whitefish are very sensitive to electrofishing and baseline data has never been collected.



*Wild Hebgen Reservoir Trout.*

This spring a technique was used to ensure no mortality of Mountain Whitefish during mark and recapture runs. Holding tanks were saturated with oxygen and salt was used to lower stress on fish. Results showed that this reach of the Madison River upstream of Lyons bridge holds approximately 3,000 adult Mountain Whitefish per mile. Plans for next summer may include estimates on the lower Madison at Norris as well as Pine Butte. Trout populations remain steady in the upper and lower Madison River.

### Region 3 Fishing Access Sites

**Ray Heagney, Fishing Access Site Program Manager**

The Region 3 FAS program continues to inventory and address deficiencies in the program. Currently, we're cataloging all our highway and site signing to evaluate inconsistencies and replacement needs. Jay Pape, the R3 FAS Maintenance Foreman has been traveling the region to compile a photographic inventory that will assist with identifying high priority sign replacement need.

With the assistance from the staff of the FWP Design & Construction Bureau, which we greatly appreciate, we continue to move forward in updating FAS facilities at several our high use areas such as Blacks Ford on the Madison River. Two old single latrines were replaced this fall with two double latrines. This site is heavily used by not only sportsman, but recreationist as well. This upgrade is to address annual increases in use experienced at this site.





## Varney Bridge FAS boat ramp replaced and widened

Cheryl Morris & Andrew Puls, River Recreation

2016 was another record year for permits on the Madison River. The Region 3 River Recreation staff issued 214 Special Recreation Permits to Madison River commercial users and other groups. Madison River recreation use increases at an average rate of 15% each year. FWP completed work on a new concrete boat ramp and culvert at Varney Bridge FAS located on the upper Madison River. The area for the new boat ramp was widened to create a safer and more easily accessible access to the river while the larger culvert will help prevent the frequent flooding that was occurring at the site. Funding for these improvements was provided by a River Fund grant of \$23,250, a contribution from North-western energy of \$7,750 and by FWP in the amount of \$20,250.



*New boat ramp at Varney Bridge FAS.*

## **Big Hole & Beaverhead Commercial Rules**

The FWP Commission proposed an amendment to the Big Hole and Beaverhead rules at the end of the 2015 rule review that affected the allocation of some commercial use days on the rivers. In June of 2016, after receiving nearly unanimous support from the public, the rules were amended. The amendment restricts commercial users who have previously sold their Big Hole and Beaverhead businesses from applying for the pools of temporary use client days on these two rivers. The Big Hole and Beaverhead Rules have been in place for the last 16 years with very few changes being made.

### **Help Protect Native Species: If you don't know, let it go!**

#### **KEY TO IDENTIFICATION:**

**BUTHERY THROAT** can be easily mistaken for rainbow trout (see pictures below):

1. Turn the fish over and look under the jaw. Does it have a red or orange stripe?
- If yes—the fish is a buthery trout. Carefully release all buthery trout that may not be legally harvested (see page 8).

**BULL TROUT** can be easily mistaken for bull trout, lake trout or brown trout (see pictures below):

1. Look for white edges on the back of the lower fin. If yes—it may be a bull trout.
2. Check the shape of the tail. Bull trout have only a slightly forked tail compared to the lake trout's deeply forked tail.
2. In the stream (top) is a silver chub with no black spots or dark wavy lines? If yes—the fish is a bull trout. Carefully release bull trout (see page 8).

#### **MINIMUM LAW REQUIREMENTS:**

- All bull trout must be released immediately in Montana waters without fin. See Montana District regulations.
- Cutthroat trout must be released immediately in many Montana waters. Check the district standard regulations and regulations to know where you can harvest cutthroat trout.



#### **Native Fish**

##### **Westlope Cutthroat Trout**

*Species of Special Concern*



Average Size: 8"-12"



##### **Yellowstone Cutthroat Trout**

*Species of Special Concern*



Average Size: 8"-12"



##### **Bull Trout**

*A Threatened Species Listed under the Endangered Species Act*



Average Size: 18"-22"

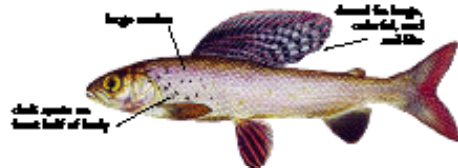


##### **Arctic Grayling**

*Species of Special Concern*



Average Size: 8"-12"



##### **Northern Pikeminnow**



Average Size: 7"-14"



##### **Mountain Whitefish**



Average Size: 8"-12"



##### **Columbia River Redband Trout**

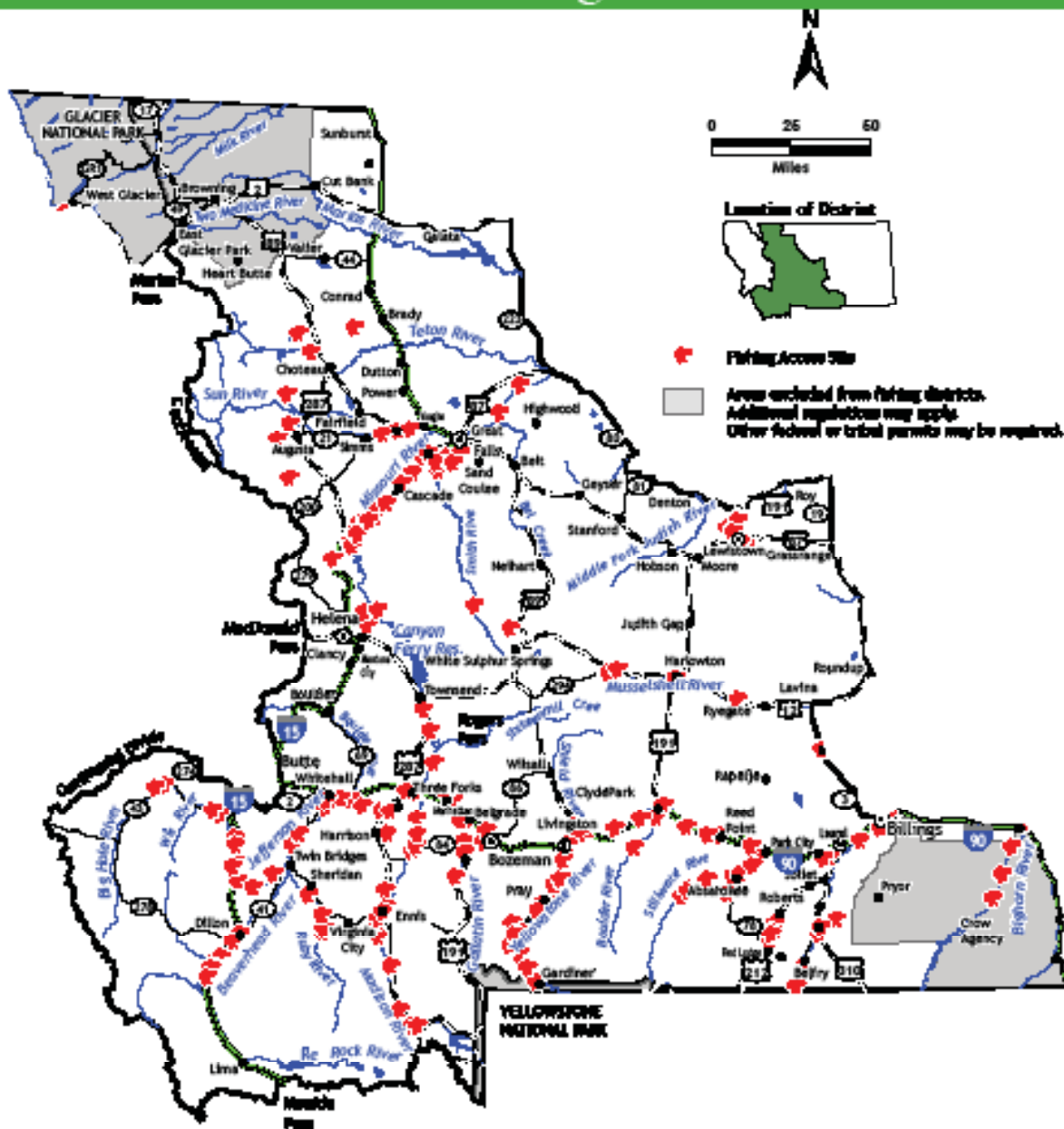
*Species of Special Concern*



Average Size: 8"-10"



## Central Fishing District



The Central Fishing District includes all waters in Montana east of the Continental Divide, (precluding the Elbow area of the Missouri River drainage) and west of the following described boundary: Interstate 15 from the Montana-Canada border south to its junction with Hwy 2 at Shelby, then east on Hwy 2 to Chester, then south on Hwy 223 to State Hwy 80 at Fort Benton, then southeasterly along State Hwy 80 to its junction with State Hwy 81, then southerly on State Hwy 81 to its junction with U.S. Hwy 191, then southeasterly along U.S. Hwy 191 to its junction with State Hwy 19, then south on State Hwy 19 to its junction with U.S. Hwy 87 at Eagan, then south on U.S. Hwy 87 to its junction with U.S. Hwy 12 at Billings, then west on U.S. Hwy 12 to its junction with State Hwy 3 at Lewistown, then south on State Hwy 3 to its junction with Interstate 90 at Billings, then westerly and southerly on Interstate 90 to the first crossing of the Little Missouri River, then southerly along the west bank of the Little Missouri River to the Montana-Wyoming border.

**Note:** Highways that are used as boundaries between the Central and Eastern Fishing Districts are interpreted to be in the Central Fishing District.

For additional information regarding the hunt areas in this fishing district, please call the following regional headquarters Monday-Friday 8:00 a.m. - 3:00 p.m.:

Hillings	404-247-3949
Horroan	404-994-4042
Haute Area Office	404-494-1953
Great Falls	404-454-5849
Holman Area Office	404-495-3258
Lewisville Area Office	404-538-4033
TTY (Telephone device for the deaf)	404-444-1246



## **REGION 4** **NORTH CENTRAL MONTANA**

### **Canyon Ferry Reservoir**

*Adam Strainer, Fisheries Technician*

Canyon Ferry Reservoir (CFR) continues to be a quality year-round Rainbow Trout fishery, an angler friendly Walleye fishery, and a trophy Yellow Perch fishery. Here's what FWP staff observed in 2015:

The Rainbow Trout population in CFR continues to offer anglers excellent opportunities for a successful day on the water. Large fish dominated the creel in 2016 with fish averaging approximately 19-inches and 2.5-pounds. The

two Rainbow Trout strains, Arlee and Eagle Lake, currently planted in CFR continue to provide anglers a quality sport fishery that annually ranks CFR as one of the top Rainbow Trout destinations in Montana. Ice fishing between Pond 4 and the Silos Recreation Area, shoreline fishing in spring

on the north end of the reservoir, and shoreline fishing in the fall in Confederate Bay all provide excellent angling opportunities. Boat anglers do well trolling crank baits or spoons in the spring and fall, while cowbells (or similar flashers) seem to work better during the summer months when the fish are deeper. The CFR **Rainbow Trout** limit is: **5 daily and 10 in possession.**

Walleye anglers continue to have excellent angling opportunities in CFR during open-water months. In 2016, fall Walleye population surveys identified the 2<sup>nd</sup> highest number of Walleye on record and the population target level remained above the reservoirs fishery management plan goal for the fifth consecutive year. A below average spawn was observed in 2016, but strong age-classes in recent years from CFR's self-sustaining Walleye population continue provide a multi-

tude of angling opportunities. Boat anglers typically target Walleye throughout the open-water months trolling worm harnesses (various colors, styles, and sizes), tipped with worms or leeches, or crankbaits. Vertical jigging on bay points throughout the reservoir is also a popular tactic for Walleye anglers. The CFR **Walleye** limit is: **12 daily, only 1 over 25 inches. Possession limit is twice the daily limit.**

A Walleye movement study continued in 2016 to help FWP understand how Walleye move, or migrate, between CFR and the Missouri River upstream to Toston Dam. FWP staff continued to monitor Walleye movement using fish implanted with internal radio telemetry tags and/or exterior dorsal tags, or Floy tags, to better understand annual Walleye movements in the area. Please contact the Helena Area Resource Office (HARO) if you catch a tagged fish in the area and/or would like to know more about the project.



*A spawned out female Walleye captured during Canyon Ferry spring surveys.*

Trophy sized Yellow Perch (10-inches or greater) continue to be the primary draw for perch anglers on CFR, especially during the winter months. FWP continues to take a conservative population management approach in recent years for perch

by limiting angler harvest to protect a portion of spawning sized fish that might be harvested with higher bag limits. Yellow Perch abundance remained below the CFR management plan goal in 2016; however, the population level increased for the 5<sup>th</sup> consecutive year. Anglers continue to catch Yellow Perch while trolling for Walleye during open-water months, but the most effecting angling continues to be during ice-covered months. Ice anglers typically use Swedish pimples or Hali jigs, tipped with maggots or worms, in 35 to 55 feet of water out from Hole-in-the-Wall, Duck Creek Bay, and Confederate Bay. The CFR **Yellow Perch** limit is: **10 daily and in possession.**

With the Yellow Perch population still needing some help, FWP, in cooperation the City of Helena, Broad-

water County Sanitation, and volunteers from two area chapters of Walleyes Unlimited, continued the placement of habitat structures made from recycled live Christmas trees into the south end of reservoir. The project, known as *Pines for Perch*, has taken place each spring since the mid-1990's and recent research has shown that Yellow Perch do use the habitat structures for spawning. *Pines for Perch* would not be possible without area volunteers, so thanks to everyone for your help!

FWP is always looking for volunteers to help assist with fish surveys and habitat work. Volunteering is a great way to get to know the FWP staff who manage the fishery, plus it's a great way to learn how fish data is collected and how that information is used to manage fish populations. If you are interested in volunteering please contact the HARO fisheries staff at 495-3260 to spend a day on the water.

### **Hauser Reservoir**

*Eric Roberts, Fisheries Biologist*

Hauser Reservoir near Helena continues to provide good fishing opportunity for the Helena area. Rainbow and Walleye fishing were pretty consistent throughout 2016, with a few perch fishing opportunities as well.

Rainbow fishing was one of the best years on record in 2016. Over 6,000 Rainbow Trout were recorded in angler creel surveys, which is about 2,000 more fish than previous years. FWP monitoring also saw an increase in rainbow abundance in 2016, after seeing a couple of down years. Stocking densities for Rainbow Trout were higher in 2014 and 2015, and about ½ as many fish were stocked in 2016. Improved fish recruitment in 2016 may be an indicator that stocking densities were too high in previous years, and lower stocking densities may lead to better fish survival and better quality fish.



*Canyon Ferry can produce some quality Yellow Perch in the winter.*

Biologists will continue to work with hatchery staff to maintain a quality rainbow fishery and determine if changes to the stocking strategy are needed to further improve the fishery.

Walleye fishing was hit or miss for most of 2016, but the quality of fish did improve. The Walleye population is still dominated by smaller sized fish, but relative weight (an index of overall fish condition) improved in fall 2016. Walleye population abundance has been above management targets for the past 4 years, leading to poor growth due to increased competition for limited forage resources. FWP surveys showed a decline in Walleye densities in 2016, which in turn may have reduced the competition for resources, leading to improved growth. If this trend continues more Walleye may grow into more desirable size

groups in the coming years.

Creel surveys didn't show much change in angler catch rates for Yellow Perch in 2016, but FWP population surveys showed perch continuing to slowly trend upward. Numbers of juvenile perch, which are key forage in the reservoir, were at the highest levels in 8 years, while a good number of adult perch were captured as well. Perch abundance in Hauser is typically quite a bit lower than in Canyon Ferry and Holter, but the perch fishing opportunity may improve over the next couple of years.

Most fishing pressure in Hauser is concentrated around Black Sandy, White Sandy, York Bridge, and up the Causeway Arm. Rainbow fishing can be good throughout the entire reservoir, but the best areas are typically where the Causeway Arm enters the main reservoir; near the Trout Creek confluence by York Bridge; or the steep cliffs just above Devil's Elbow. Walleye fishing is typically best on Lake Helena (which is connected to Hauser Lake) or the Causeway Arm in the spring, with another decent fall bite in the York Bridge – Devil's Elbow area. Shore fishing for Walleye at the Causeway in the spring can also be really productive. Hit it just at



sundown, but expect to see lots of other folks with the same idea.

### Holter Reservoir

*Eric Roberts, Fisheries Biologist*

Yellow Perch continued to be the big story at Holter in 2016. Perch abundance has declined from record high levels in 2013, but the average size has increased each year since 2013. Not surprisingly, the perch fishing has also been exceptional since 2013. Angler catch rates were a little lower in 2016, but people were catching larger sized perch. There were hot spots for perch throughout the reservoir, but fishing the edges of weed beds produced the most consistent results. Anglers fishing through the ice had to move around a little bit to find the schools of perch, but once they found a school they wouldn't have to move much the rest of the day.

Walleye fishing improved in Holter in 2016. Fishing was slow the previous three years following the big perch hatch, but now that the Walleye have to search a little harder for food the fishing has improved. FWP population surveys in the fall showed that a good number of fish were just growing into a fishable size, while also seeing a good portion of the catch 25 inches or larger (12% of the catch was fish over 25 inches). Walleye fishing usually picks up just after ice out around Gates of the Mountains. Post-spawn the Walleye distribute throughout the reservoir, with crank baits or crawler harness around weed beds or mud lines (on windy days) producing fish.

Rainbow Trout fishing was also good in Holter throughout 2016. Rainbows were relatively easy to track down under the ice when the perch weren't biting, and shoreline fishing was really good in the spring. Average rainbow size in FWP surveys was 16.5 inches, with a few fish weighing over 4 pounds, with similar sized fish also common in creel surveys. Most of the fishing action for rainbows through the ice is off Log Gulch and Departure Point, with the fish typically cruising 4-6 feet below the ice. The shoreline bite really cranks up after ice-out, with rainbows hitting a variety of flies and lures. Once the water warms up in the summer deep trolling cowbells between 30 and 50

feet deep will keep you on the rainbows.

### **Helena Valley Regulating Reservoir**

The Helena Regulating Reservoir is a popular Kokanee Salmon destination that attracts anglers from all over Montana. Historically anglers could expect limiting out on 18 inch salmon; but in recent years that certainly has not been the case. Winter of 2016 saw fair catch rates, although the fish were smaller than normal. Summer fishing was not any better. FWP surveys in summer 2016 found that stocked salmon were maturing prematurely, resulting in one less year of growth and a lower population abundance.

Salmon are highly density dependent populations, so when too few fish are stocked you can get a low number of big fish that are hard to catch. If you stock too many



*Each winter, FWP hosts dozens of Helena area elementary classes for a day of ice fishing.*

fish you can get a large number of small fish that are easier to catch. Also, if stocking densities are too high the salmon may mature sooner, and die sooner (salmon die after spawning). It appears that stocking densities in the Regulating Reservoir are too high, which is forcing the fish to mature early and die at age 2 rather than age 3. For 2017 FWP is adjusting stocking densities to find that sweet spot of nice sized fish that aren't too challenging to catch. Creel surveys throughout the winter and summer will continue, and population surveys in the summer will continue to evaluate the stocking scheme and change as needed.

## **Choteau Area Fisheries**

*Dave Yerk, Fisheries Biologist*

Similar to 2015, a mild winter in 2016 led to a very short ice fishing season in northcentral Montana. By early March anglers were fishing open water in nearly all reservoirs, which is about a month earlier than most years.

The mild winter coupled with a meager snowpack on the Rocky Mountain Front greatly reduced spring and early summer inflows into area reservoirs. Subsequently, anglers and boaters were challenged to access most reservoirs as water levels dropped throughout the summer and fall.

Currently, all area reservoirs are low going into the winter months. It will take a real Montana winter to help restore water conditions in these fisheries. Anglers can get current reservoir elevation information on all Bureau of Reclamation reservoirs in Montana at: [http://www.usbr.gov/gp/lakes\\_reservoirs/montana\\_lakes.html](http://www.usbr.gov/gp/lakes_reservoirs/montana_lakes.html)

Realtime streamflow information for Montana is available at: <https://waterdata.usgs.gov/MT/nwis/current/?type=flow>

### **Nilan Reservoir**

Anglers may experience somewhat slower fishing on Nilan Reservoir the next couple of years, as its annual plant of Rainbow Trout from Giant Springs State Fish Hatchery (GSSFH) in Great Falls was canceled in 2016 when Missouri River water backed up into the hatchery. In recent years, GSSFH has planted Nilan Reservoir with 40,000 Arlee and 40,000 Eagle Lake strain Rainbow Trout. However, following the flooding most of the fish in the hatchery were destroyed because of disease concerns, including the fish being raised for Nilan.

But all was not lost with this unfortunate incident at GSSFH. Through excellent cooperation and communication within our state hatchery system, Nilan did receive some plants of Rainbow Trout from both Big Springs and Bluewater State Fish Hatcheries to miti-



*Gerrard strain Rainbow Trout sampled in Nilan Reservoir.*

gate the loss of the GSSFH plants. GSSFH is back in production and it is expected that in 2017 the standard stocking program will resume to help maintain this popular fishery.

Gerrard strain Rainbow Trout were also stocked into Nilan in 2016. This was the second plant of this unique strain of Rainbow Trout. These fish are very long lived and can grow quite large if they attain sizes where they effectively prey on other fishes. There is a very high abundance of white suckers in Nilan for Gerrards to feed on, and it is hoped they will eventually key in on and reduce this rough fish population.

Nilan was first planted with Gerrards in 2015. Sampling completed this past fall indicated the fish from that plant are now over 14 inches in length after their first year in the reservoir. Anglers can easily identify these fish because their adipose fin has been removed to mark them (as well as the 2016 plant). Additionally, they have a unique physical appearance which is somewhat similar to a Chinook Salmon.

### **Willow Creek Reservoir**

A new Rainbow Trout regulation went into effect on Willow Creek Reservoir (Sun River drainage) this past year starting on March 1, allowing just one fish over 20 inches in length as part of the five trout daily limit. It appeared that there was good compliance with this new regulation and many anglers support the objective of the regulation in promoting the quality of this fishery. In recent years Willow Creek Reservoir has produced sizeable Rainbow Trout exceeding eight pounds, indicating the potential of this fishery.





*Tiger Muskies stocked into Willow Creek Reservoir are growing well.*

In conjunction with this new regulation, biologists are working closely with state hatchery managers to evaluate the reservoir's stocking program to maximize return and performance of stocked fish. Currently, the program calls for four different plants of Arlee and Eagle Lake strain Rainbow Trout coming from Giant Springs, Big Springs, and Bluewater State Fish Hatcheries. All of these plants are being uniquely marked to determine strain and planting hatchery. Additionally, success of early summer plants will be compared to fall plants that are made. This information will help FWP develop the most successful and cost-effective stocking program for Willow Creek Reservoir.

Many non-trout anglers are now eyeing a new fishing opportunity on Willow Creek Reservoir resulting from the Tiger Muskie introduction that occurred in 2015. A Tiger Muskie is a sterile hybrid of a female muskie crossed with a male Northern Pike. They are very effective predators, particularly of rough fish like suckers. FWP's primary objective for stocking them into Willow Creek Reservoir was to reduce White Sucker abundance (currently comprise about 90% of fish bio-

mass in the reservoir) to increase productivity of the reservoir and ultimately improve the quality of the Rainbow Trout Fishery. A potential side benefit is the development of a trophy fishery, as Tiger Muskies grow quite large. The current Montana state record is 38.75 pounds.

The Tiger Muskies stocked into Willow Creek Reservoir are surviving and growing quickly. The fish planted in 2015 were over 18 inches in length when sampled in spring 2016. FWP plans on stocking additional Tiger Muskies in 2017 if they are available. Anglers targeting Tiger Muskies in Willow Creek Reservoir should be aware that the standard Central Fishing District regulation applies: A daily and possession limit of one fish over 40 inches in length.

### **Eureka Reservoir**

This small off-stream reservoir located about seven miles northwest of Choteau in the Teton drainage provides limited fishing and boating opportunity to local residents on the Rocky Mountain Front. FWP maintains a fishing access site on the reservoir including a boat ramp, campground and day use areas. Boaters can generally launch from ice-out until early July, when irrigation withdraws lower the water far below the boat ramp.

FWP stocks Eureka Reservoir when fish are available, but it is a low priority fishery because of chronic dewatering. In 2016 Eureka did receive Rainbow Trout from Creston National Fish Hatchery, so there may be some limited angling opportunity in the future depending upon water conditions.

### **Pishkun Reservoir**

Once again it was a short boating season on Pishkun Reservoir for anglers and recreationists in 2016. The reservoir's elevation was only suitable for launching boats from mid-April through early August, which is the time period it was receiving inflows from Gibson Reservoir on the upper Sun River. In recent years, this has become more of the 'norm' for this popular reservoir. Thus, anglers and boaters should plan their trips accordingly and refer to the BOR website for the most current reservoir conditions.

Pishkun anglers can expect the Northern Pike fishing to be excellent again in 2017, with good numbers of larger fish available. There is also good opportunity to catch nice-sized Rainbow Trout, especially in the springtime

## FISHING NEWSLETTER 2017

following ice-out when they are cruising the shorelines. Pishkun also has fishable numbers of Yellow Perch for those that specifically target them out in deeper water, generally 30 feet and deeper.

Come fall, the most popular fishery on Pishkun is the opportunity to snag Kokanee Salmon. Pishkun is just one of a few fisheries in the Central Fishing District where there is a snagging season for these spawning salmon. Since most Kokanee Salmon in Pishkun are spawning at age three, one needs to look at previous stocking history to determine the availability of fish on any given year.

This was evident in fall 2016 when very few spawning Kokanee Salmon showed up along the dam face or shorelines. Back in 2013 there were just 71,000 Kokanee Salmon stocked, thus there were relatively few available to snaggers this past fall. However, large plants in 2014 (500,000) and 2015 (225,000) should result in lots of fishing and snagging opportunity for Kokanee Salmon in the upcoming years.

Anglers traveling to Pishkun from the south and the Great Falls area will hopefully have another route to access the reservoir by spring 2017. The old Board Road access to the Sunnyslope Canal Road leading to Pishkun was ordered reopened following extended court proceedings addressing its closure. Teton County has secured a contractor to replace the bridge across the canal that was removed. This work will hopefully be completed by springtime. Please contact the FWP office in Choteau (466-5621) for the most current information on this project.

### **Bynum Reservoir**

Unless there is an extraordinary snowpack in the Teton River drainage this winter, there will not be angling or boating opportunities on Bynum Reservoir in 2017. The reservoir is drawn down to near dead storage and maximum depth is currently about eight feet. FWP canceled all hatchery

plants into Bynum in 2016, and will not stock in the future until water levels have rebounded substantially.

For the past several years, Bynum has been Region 4's go to fishery for hosting school students on the ice through FWP's "Hooked on Fishing" program. The reservoir has provided an excellent Yellow Perch fishery since refilling in 2008 and 2011 after being drawn down to dead storage for several years. Last winter FWP hosted 10 schools and over 300 students and parents on the ice. Many were successful in catching their first fish.

### **Lake Frances**

Walleye anglers enjoyed another year of good fishing on Lake Frances even though the reservoir remained quite low throughout the summer and fall. In fact, the reservoir dropped so low by late summer that boaters could only launch from the low water ramp on the island out from the Valier city campground. Lake Frances is currently down 14 feet from full pool going into the winter.

FWP fall gill net monitoring showed a drop in Walleye



*Students, teachers and parents enjoy a day on the ice at Bynum Reservoir with FWP's "Hooked on Fishing" Program.*

abundance in the reservoir concurrent with increasing numbers of Northern Pike. Northerns effectively prey on smaller Walleye and it is important to keep their numbers in check to maintain the quality of the Walleye fishery. Anglers are encouraged to help with this. Adult



Yellow Perch numbers remained very low, and little production was observed in Lake Frances in 2016. This is directly attributable to the low reservoir elevation during their spring spawning period, and ultimately results in less forage available for the Walleye and Northern Pike. This can lead to a decline in body condition and increased predation pressure, which was observed in our fall sampling. Thus, continued low water conditions in a productive reservoir like Lake Frances has cascading effects throughout the fishery.

Anglers and recreationists alike should be aware that Lake Frances is a private waterbody owned by the Pondera County Canal and Reservoir Company (PCCRC). The access sites on the reservoir are on PCCRC land, thus access is not guaranteed. Public access is graciously provided by PCCRC and the campground facilities are managed by the town of Valier. Everyone should be respectful of this while enjoying Lake Frances.

### **Tiber Reservoir**

Similar to other reservoirs in northcentral Montana, last winter's sparse snowpack did not fill Tiber Reservoir in 2016. The reservoir's elevation peaked in mid-June at 5.3 ft. below full pool, and currently it is down 10.5 feet going into the winter. There is still good boating access at this elevation, but with continued drawdown over the winter launching at some ramps may be difficult in the spring.

Walleye anglers enjoyed good fishing throughout the summer months with the best success occurring during July. The average size of harvested Walleye was down somewhat from 2015, but overall anglers were pleased with the fishing. FWP fall gill net surveys showed a drop in relative abundance of Walleye in the reservoir

that is not understood at this time. It may just be a sampling anomaly as it does not correlate with the good Walleye catch rates experienced by anglers all summer. Northern Pike abundance was stable in the fall nets with several trophy-sized fish sampled.



*Emergency restrictions closed Tiber Reservoir to boats in November 2016.*

Great Falls Chapter of Walleyes Unlimited partnered with FWP and the Bureau of Reclamation in purchasing and installing a dock at the South Bootlegger access on Tiber. The dock was installed in June 2016 and has been very beneficial to users of the site. This was a great cooperative project between the different entities.

By now most Tiber users have likely heard that invasive mussel (Zebra and/or Quagga) larva were detected in the reservoir during routine sampling in 2016. Because of the potential widespread implications of these prolific invasives, an emergency order was issued in late November closing the reservoir to all boats. At this time it is unknown what restrictions or closures may need to be implemented to try to

contain the spread of these invasive mussels. Thus, prior to heading to Tiber, all boaters heading should check the FWP website or with a regional office to determine the status of the reservoir.

The detection of these mussel larva (called veligers) underscores the importance of all boaters to diligently **Clean, Drain and Dry** their boat after each and every use. Veligers are microscopic and cannot be seen with the naked eye, thus they can unknowingly be transferred between waterbodies in even the slightest amount of water. The attentiveness of all boaters is needed to prevent the transfer of these invasives to other water bodies.



## **Big Spring Creek**

*Clint Smith, Fisheries Biologist*

We've received good reports from anglers fishing Big Spring this year. Our monitoring indicates that the average size and condition of both the Rainbows and Browns is improving. The high flows of both 2011 and 2013 resulted in significant scour of the streambed and likely impacted the invertebrate populations, temporarily reducing the carrying capacity of the creek. The trout population has been trending downward and we believe this is the fishery balancing the decline in invertebrate production. We performed mark-recapture population estimates on the Machler and Carroll Trail sections of Big Spring Creek this summer. Both estimates were about 60% of the long-term average, although well within the historic range. The Carroll Trail estimate of combined trout larger than 10 inches was 785 fish per mile, compared to the long-term average of 1,338 fish per mile. This may sound like bad news, but we sampled many more 14-16 inch fish this year than in the previous 3 years, indicating that the food availability is returning to balance with the number of mouths to feed. We hypothesize that the fishery will continue to improve, in terms of average size and condition, and eventually population size, as the aquatic habitat stabilizes.

We are also nearing completion of a very exciting restoration project on Big Spring Creek immediately downstream of the Highway 191 Bridge, known locally as



*FWP Fisheries Technician, Derrick Miller, shows off a nice Brown Trout from Big Spring Creek.*

the Machler Section. This section was more than 6,000 feet long in the 1930's; however it was straightened in 1961 by the landowner to about 2,000 feet of channel in order to make room for land development. This action led to chronic degradation of the stream. An effort to fix this wrong was initiated by the current landowner (the son/nephew of the folks who straightened it in the first place) in the 1990's, and following years of effort



*A 1938 aerial image of the Machler Section of Big Spring Creek prior to straightening. There is more than 6,000 feet of channel in this photo.*



*A 1962 aerial image of the Machler Section post-straightening. The straightening reduced channel length to about 2,000 feet and destabilized the creek, resulting in chronic erosion and habitat degradation that continued for more than 50 years.*





*An aerial view of Big Spring Creek restoration project this year. The project will increase the length of the channel more than 60% over the straightened channel and recreate a connected floodplain. (Photo courtesy of Mike Getman)*

and nearly giving up many times, the creek is being restored to a natural meander pattern with a connected floodplain. This has been a huge community effort, with invaluable collaboration between FWP, DNRC, NRCS, local landowners, Fergus County, the City of Lewistown, Snowy Mountain Chapter of Trout Unlimited, and many others. The contribution of the NRCS should be emphasized, as they have provided countless hours of planning, surveying, engineering, and modeling to make this project possible, all as an in-kind service. Flow was introduced into the new channel in December and the project is planned for completion in the spring of 2017.

### **Warm Spring Creek**

In 2016, FWP initiated a radio telemetry study of the fishery in Warm Spring Creek with considerable cooperation from private landowners and funding assistance from the Snowy Mountain Chapter of Trout Unlimited. Our primary goal was to investigate a fall-run of Rainbow Trout. We were able to tag 9 Rainbow Trout. Our initial findings indicate that the Rainbow Trout in Warm Spring spawn in late November through December, then migrate down the Judith

River, into the Missouri and then continue downstream to summer in Fort Peck. They make this migration in a matter of days, a movement of anywhere from 175 to 250 miles depending on how far into Fort Peck they move. We plan to continue to study this very unique population of adfluvial Rainbow Trout.

Also, we were surprised to find sauger in Warm Spring and we placed 2 radio telemetry tags in sauger. Sauger are a native species and hadn't been documented in Warm Spring Creek since the 1970's. We found that the sauger made a spawning migration to the Missouri River, near the Fred Robinson Bridge area. Albeit a small sample size, this does indicate that the Warm Spring/Judith River Sauger are not reproductively isolated from the main-stem Missouri population and the findings highlight the importance of the tributary network of the Missouri River to maintaining diverse life histories of this sensitive native species. We plan to place additional tags in Warm Spring/Judith River Sauger to increase our sample size and further validate the findings.

### **Big Casino Creek Reservoir**

In an effort to increase angling diversity in local reservoirs, we are transitioning management of Big Casino Creek Reservoir from a trout fishery (with an illegal introduction of Yellow Perch) to a Largemouth Bass and Crappie fishery. FWP stocked 100 Crappie in hopes that they will establish a wild population. Additionally, we've stocked Largemouth Bass the past two years and



*FWP fisheries workers, Derrick Miller (left) and Rob Beattie (right), prepare a Warm Spring Rainbow Trout for surgical implantation of a radio telemetry tag.*



*Fergus High School students assisted FWP personnel build and place pallet habitat structures on Big Casino and East Fork Reservoirs.*

have begun capturing them in our sampling. While it might take a few years for the fishery to develop, our hope is that we can provide a quality fishery for folks who are interested in adding some diversity to their local angling experience. In an effort to improve reservoir habitat conditions, FWP worked with Fergus High School students to build pallet habitat structures, which we've placed in Big Casino and East Fork Reservoirs. This was a great opportunity to work with school kids to improve local fisheries while educating them on some local fisheries management issues.

### **Ackley Lake**

Tiger Muskie were stocked in Ackley as a means to reduce the sucker population and improve the trout fishery in 2015. Our sampling data in 2016 indicates that the stocking is already having impacts on the fishery. We sampled 5 tiger muskie in our nets this fall. They averaged 26 inches and a little more than four pounds, indicating that they are getting plenty to eat in Ackley. What's more impressive, is that in just 18 months, we are already seeing impacts to the sucker population, with our 2016 sampling catching the fewest suckers since 2010 and the average size of sucker was the largest on record, indicating that the tiger muskie are removing many of the smaller suckers from

the population. Catch rates of Rainbow Trout were up slightly from 2015 and the average size was above the long-term average, suggesting that the tiger muskie may be impacting the small Rainbow Trout as well. These findings are preliminary and it remains to be seen what long-term impacts the Tiger Muskie will have on the fishery of Ackley, although early indications are that they are having the desired effect of suppressing the sucker population. Also of note, we sampled some really nice brown trout in Ackley this fall, including a 27-inch, 10-pound beast. If you've got some time, a trip to Ackley could be worth it, with plenty of 16-18 inch rainbows, voracious tiger muskie, and the chance for a trophy brown trout.

### **Carter Ponds**

The Carter Ponds, located just north of Lewistown, have been popular local fisheries for decades. In recent years, following reconstruction of the dams and their outlet structures, the ponds were becoming notorious for growing some really nice Rainbow Trout. Unfortunately, an illegal introduction of bluegill and then Yellow Perch occurred in both ponds, crashing the trout fishery due to resource competition. The ponds quickly filled with stunted populations of 4-inch Bluegill and 6-inch Perch. Because



*A trophy Brown Trout sampled in Ackley Lake this fall. This fish was 27 inches long and weighed more than 10 pounds.*



of Bluegill's and Yellow Perch's ability to quickly overpopulate small water-bodies, they promptly eat themselves out of house and home. There was a lot of public concern about the future of the fisheries and so it was decided that FWP, in cooperation with the private landowner and the US Fish and Wildlife Service, would apply rotenone to remove the fisheries and start again with a blank slate. The treatment occurred in November 2015 and we restocked the ponds with trout in the spring of this year. All indications are that the treatment was a success and folks are reporting great fishing and incredible growth of the newly stocked rainbows. Ice fishing should be good this winter and there will be plenty of little football Rainbow Trout to keep folks entertained.

### **Judith & Musselshell Rivers**

Often overlooked, FWP has been investigating the fisheries of the Judith and Musselshell Rivers. Both rivers are important tributaries of the Missouri River and home to many native species. However, the rivers are very different. The Judith is largely unaltered below its confluence with Big Spring Creek, providing miles of connected, natural habitat and maintaining a natural flow regime. The Musselshell, on the other hand, has been significantly altered by water storage projects, low-head irrigation diversions, chronic dewatering, and



*A tagged Burbot from the Judith River.*

the impoundment of the Missouri River at Fort Peck resulting in a river-reservoir confluence in place of the historic river-river confluence.

Recent sampling in the Judith River has found populations of Sauger, Channel Catfish, and Burbot which appear to move between the Missouri and the Judith with some regularity to live out various stages of their life histories. We've documented, as mentioned in the Warm Spring section, the spawning movement of sauger to the Missouri River and we've also found a spring pulse of Burbot which appear to move up the Judith post-spawn. While on the Musselshell, we struggle to find sauger or Burbot, and Channel Catfish currently have a limited distribution. We've been working with FWP Region 5 staff to introduce Channel Catfish to sections of the Musselshell where they were historically present, but have been lost due to low flows and barriers to their upstream movements. The two rivers provide an interesting case study of altered vs. unaltered systems and the fisheries that result, which we are just beginning to delve into.

### **Missouri River**

*Jason Mullen, Fisheries Biologist*

The Missouri River Rainbow Trout population remained well above average in 2016. Rainbow Trout numbers in the Craig section remained high for the sixth consecutive year, with 4,816 Rainbow Trout 10 inches long and greater per mile estimated in 2016. The estimate represents an increase from 2015 and is well above the long-term average of 3,350 per mile. The size structure of the population continues to be dominated by large adult fish with 17 to 19 inch fish most common. Brown



*The Nowlin Family show off a nice Channel Catfish taken from the Musselshell drainage near Winnett. (Photo courtesy of Laura Nowlin)*

## FISHING NEWSLETTER 2017

Trout 10 inches long and greater in the Craig section were estimated at 269 per mile which is less than the long-term average of 563. While reported estimates include only fish greater than 10 inches, the 2016 estimate for brown trout less than 10 inches was the most since 2012.

In the Cascade section, Rainbow and Brown Trout population estimates for 2016 were both above average. Rainbow Trout 10 inches long and greater were estimated at 2,156 per mile compared to the long-term average of 1,616. Brown Trout 10 inches long and greater were estimated at 433 per mile compared to the long-term average of 398.

### Lake Sutherlin (Smith River Reservoir)

Lake Sutherlin has typically provided quality angling for stocked Rainbow Trout, as well as the potential to catch large Burbot (otherwise known as Ling). Approximately 16,000 Rainbow Trout are stocked annually and since 2014 approximately 2,500 Kokanee Salmon have been stocked annually to provide another opportunity for anglers. Sampling with trap nets in fall 2016, indicated a healthy population of Burbot with numerous large individuals up to 35 inches and 13.5 lbs..

### Smith River

Smith River flows in 2016 were below average, resulting in a short float season. The Department instituted time of day angling restrictions from July 25 to August 22 due to warm water temperatures approaching 80 degrees Fahrenheit. A filamentous green algae bloom occurred in late June and July that appears related to the low and early peak flow in 2016, below average peak flows over the last five years, and warm water temperatures in 2016. The algae bloom was common in rivers throughout Montana and did not appear to have any impacts on the Smith River fish population. In 2016, the number of Rainbow Trout greater than 8 inches long in the Smith River near Eagle Creek was 373 per mile and brown trout were estimated at 246 per mile. Numbers for both species are below the long-term averages of 486 Rainbow Trout and 289 brown

trout per mile; however, both species were substantially more abundant in 2016 than 2015. An additional site was sampled on the Smith River in 2015 and 2016 in the canyon near the Meagher and Cascade county boundary. The number of Rainbow Trout greater than 8 inches long in the Smith River at the "County Line" site was 375 per mile and brown trout were estimated at 522 per mile. These estimates were substantial increases over the estimates observed at the County Line site in 2015.

### Belt Creek

Regional staff continue to monitor trout populations at two sections in Belt Creek as part of mine waste clean-up activities in the Dry Fork and Carpenter Creek drainages. In the Monarch section, Rainbow Trout (167 per mile) in 2016 were less abundant than past years of



*A Burbot (ling) sampled from Lake Sutherlin in November 2016.*

monitoring, while Brown Trout (69 per mile) and Brook Trout (40 per mile) densities were similar to previous years. In the Sluice Boxes section Rainbow Trout (278 per mile), Brown Trout (145 per mile), and Mountain Whitefish (218 per mile) densities in the Sluice Boxes section were similar to previous years. Monitoring efforts will continue to be conducted throughout the Belt Creek drainage to document changes in fish and benthic invertebrate communities following current and future mine clean-up activities.



### **Sun River**

A short time frame with flows suitable for sampling allowed for monitoring of only one Sun River site in 2016. There were an estimated 215 combined rainbow and brown trout 8 inches long and greater at the site near Hwy 287, about two-thirds of which were brown trout. This estimate was less than in 2013 and 2015, but greater than all previous estimates between 1997 and 2009. Monitoring of this fishery will continue in the future as flow conditions allow, with hope that improved flow management can improve the quality of the fishery.

### **Newlan Creek Reservoir**

Newlan Creek Reservoir has typically provided quality angling for stocked Rainbow Trout, as well as the potential to catch large (30+ inches, 8+ lbs..) Burbot. In addition, Kokanee Salmon have been stocked since 2014 and gerrard Rainbow Trout have been stocked since 2015 to increase the diversity of angling opportunities. The gerrard strain of Rainbow Trout is known for its ability to reach large sizes in some situations. The hope is the gerrard Rainbow Trout will utilize the abundant suckers in the reservoir, reducing the sucker biomass, while providing the potential for a trophy Rainbow Trout fishery. This stocking of gerrard Rainbow Trout is in addition to the continued stocking of other Rainbow Trout strains.

### **Pelican Point Pond**

Northern Pike first appeared in Pelican Point Pond #1 in 2012 during routine sampling for Bass, Perch, and Crappie when two pike were caught in trap nets. In 2013, 62 pike measuring 11.9-15.6 inches long were sampled in traps. Based on the size of these pike, we suspect they originated from an illegal introduction that occurred in 2010 or 2011. In 2013 the Fish, Wildlife & Parks Commission approved a no-harvest limit regulation for Northern Pike in Pelican Point Pond #1 to encourage anglers to remove these fish to maintain the Largemouth Bass, Yellow Perch, and Crappie fishery. The regulation change began in March 2014. Biologists began active removal efforts in October 2013 removing 28 pike during trapping. Removal efforts continued in 2014, 2015, and 2016 removing 179, 42, and 5 pike,



*Happy Largemouth Bass anglers at Largent Bend Pond #2.*

respectively. Removal efforts will continue in 2017. In 2013 biologists completed the process to begin stocking Largemouth Bass in this pond to help maintain the bass fishery. Previously the bass fishery was sustained by natural reproduction, but competition for forage by Northern Pike and the predation of Bass by pike necessitated the stocking of bass to maintain angling quality. In addition, adult Black Crappie were transferred from Largent Bend Pond #3 to Pelican Point Pond #1 in 2014 to supplement the population, which has likely also been impacted by the Northern Pike illegal introduction. Wild fish transfers are conducted by the Department only in waters that have had rigorous fish health inspections, including disease testing.

### **Largent Bend Ponds**

An abundant population of adult Crappie exists in pond #3 ranging from 8 to 13 inches long. To provide an additional fishing opportunity, in 2016 approximately 600 Largemouth Bass (2.5 inches) were stocked. In 2013, a small number of Tiger Muskie were stocked in pond #3. Tiger Muskie, are a sterile hybrid of Northern Pike and muskie, and were stocked as a management tool to reduce the number of suckers in the pond. The stocking has also provided an additional opportunity for anglers to catch a large and aggressive predatory fish. Pond #2 also provides a Largemouth Bass fishery, which has become a popular fishery for young anglers and families.

### Region 4 FAS Highlights

*Jason Mullen, Fisheries Biologist*

Thanks to a hardworking FAS crew we had another successful year for the central district fishing access sites. The dedication our staff show every single day on the job is what makes our sites a popular place for people to visit.

Our FAS staff are still doing clean up at the Dunes FAS and Cottonwood FAS after the fires in 2015. They continue to do a great deal of chainsaw work at both sites. Their hard work the last three years is paying off and the locals are taking notice. We will be working with the local fire departments to burn the large piles of dead trees and debris.

After the 2015 development at Largent Bend and Medicine River, staff has been doing landscaping work to improve the site even more. We have planted many shrubs and trees and seeded with a wildlife/bird seed mixture to improve habitat. Lichen Cliffs FAS had some

bank work done to help with erosion. We followed up with putting down a seed mixture to stabilize the bank.

In April, we hired Nathan Smith as the new Missouri River maintenance worker. Nathan came to Montana from Indiana and enjoys all the opportunities that Montana offers. Prior to FWP he worked at Kenworth. We are very lucky to have Nathan on our awesome FAS crew!

Our crew continues to help our area biologists and Giant Springs Hatchery staff on several projects. This includes the Canyon Ferry project for Adam Strainer, fence work at Giant Springs Hatchery for Ryan Derr and many others.

Our crew is happy to help assist each division where we are needed. There are several projects that will be completed in 2017. We will repair a section of road at Widow Coulee FAS, have several improvements done at Wolf Creek Bridge FAS, install five new kiosks at various sites and have several improvements made at Causeway FAS in Helena.

## **MONTANA FISH RECORDS**

I caught a record-breaker! What now?

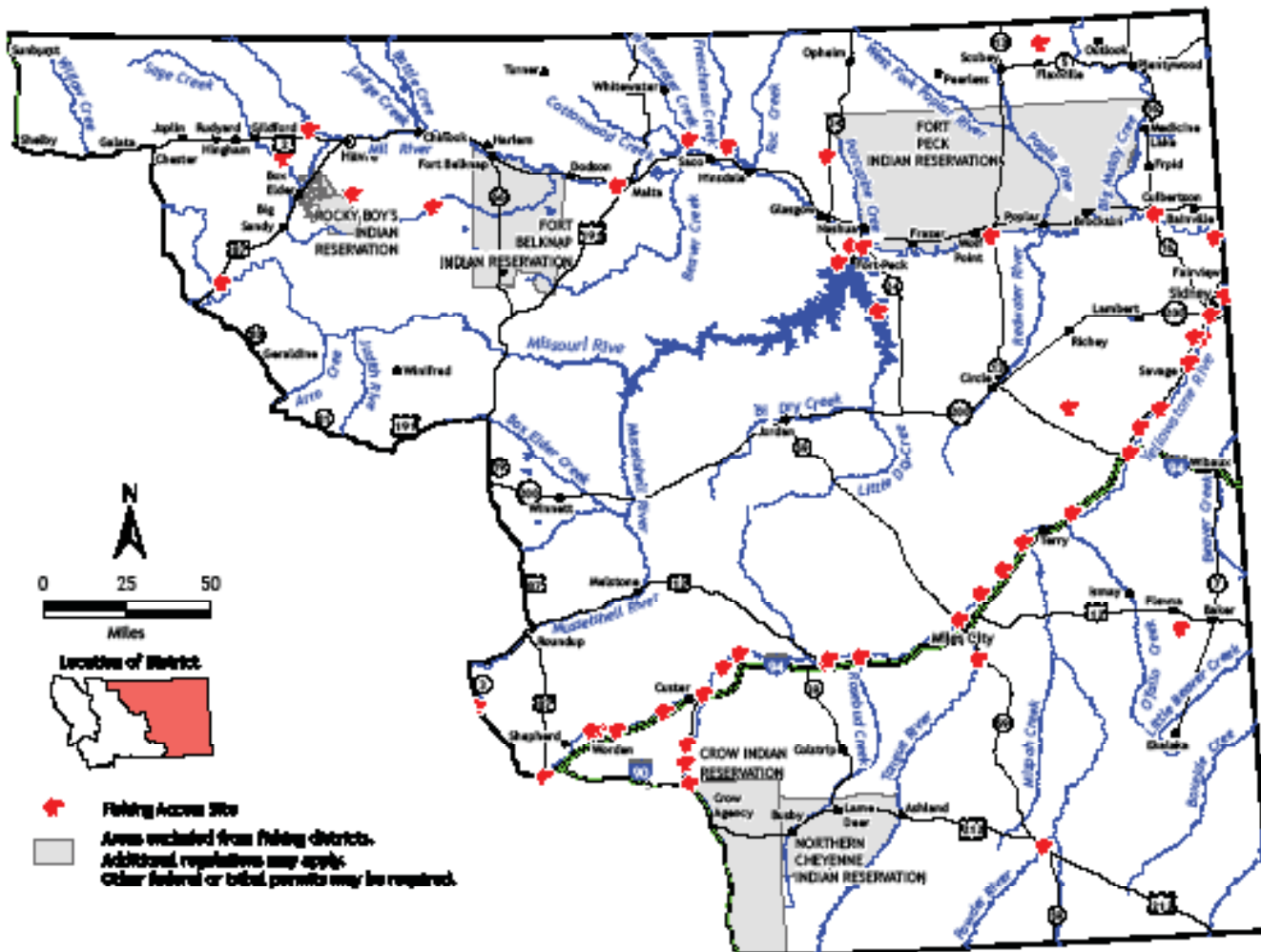
- To prevent loss of weight, do not clean or freeze the fish. Keep the fish cool.
- Take a picture of the fish.
- Weigh the fish on a certified scale (found in grocery store or hardware store, etc.), witnessed by a store employee or other observer. Obtain a weight receipt and an affidavit from the store personnel if no FWP official is present. Measure the length and girth.
- Contact the nearest FWP office to have the fish positively identified by a Fisheries Biologist or Manager.
- Fill out the Fish Record Form found on FWP's website at <http://fwp.mt.gov/fishing/anglingData/records/> and send it to:

Attn: Fishing Records  
Montana Fish, Wildlife & Parks  
PO Box 200701  
Helena, MT 59620-0701

*For a complete list of current  
Montana Fish Records see  
pages 86-87.*



## Eastern Fishing District



The Eastern Fishing District includes all waters lying east of the Central Fishing District. For the boundary description, see Central Fishing District, page 25.

**Note:** Roadways that are used as boundaries between the Central and Eastern Fishing Districts are interpreted to be in the Central Fishing District.

For additional information regarding the boundaries of this district, please call the following regional headquarters Monday-Friday 8:00 am. - 5:00 pm.:

Billings	406-247-2849
Glasgow	406-228-3708
Great Falls	406-454-5849
Haute Area Resource Office	406-285-6177
Levinsville Area Office	406-538-4658
Miles City	406-234-8908
TTY (Telephone device for the deaf)	406-444-1208

## **REGION 5** **SOUTH CENTRAL MONTANA**

### **Cooney Reservoir**

*Jason Rhoten, Fisheries Biologist*

Cooney Reservoir is a popular location for anglers and recreational boaters. The reservoir is a short drive from Billings and is full of activity during the warm summer months. During the busy summer season anglers target Walleye or Rainbow Trout and many focus their angling efforts in the morning and evenings. Historically the fishery was managed solely for Rainbow Trout but Walleye were introduced in 1984 as a management tool to control the abundant sucker population with intent of improving the trout fishery.

Walleye eventually became self-sustaining and stocking was no longer necessary thus stocking came to a stop in 2005. Annual monitoring has since shown consistent and sustaining levels of natural Walleye recruitment in Cooney Reservoir without stocking.

Each fall FWP personnel set four gill nets in Cooney Reservoir to monitor the fishery. In 2016, fall gill netting resulted in a Walleye catch rate of over 28 Walleye/net which is the third highest catch rate observed on Cooney since 1996. Additionally, the average length of Walleye sampled was 14.5 inches, which is the largest average Walleye length observed during the fall sampling since 1996. The fall sampling indicates that Walleye are abundant in Cooney Reservoir however

most fish are of smaller lengths. Of the 115 Walleyes in the fall 2016 survey, there were 16 Walleyes over 17 inches in length. Age and length data reveal growth is rapid until approximately 14 inches (roughly age four). It is suspected that forage may be a limiting factor for Walleye growth in Cooney Reservoir. Walleye tagging efforts are ongoing to further understand Walleye growth rates and harvest rates within Cooney Reser-



*A nice Walleye captured during spring tagging efforts on Cooney Reservoir.*

voir, so remember to report any tagged fish you catch.

Rainbow Trout abundance has been low for several years. However, 2016 sampling and angler reports suggest that the population, although remaining relatively low, has rebounded to numbers that are higher than those seen the last couple years. Twenty-One Rainbow Trout were captured in 2016 fall sampling and one of these Rainbow measured 19.4 inches and tipped the scales at over 2.6 lbs..

Winter ice fishing on Cooney Reservoir has a reputation for being a bit "slow." The winter Walleye bite is likely to remain challenging, however, the recent increase in Rainbow Trout may provide a little more



## FISHING NEWSLETTER 2017

winter action for anglers. Some anglers also brave the cold to target Burbot with variable success. The largest Ling sampled in the targeted 2016 winter sampling was nearly 23 inches in length. Burbot are relatively new residents of Cooney Reservoir and biologists are trying to closely monitor this population and the impact of this additional predator on the limited forage in Cooney Reservoir.

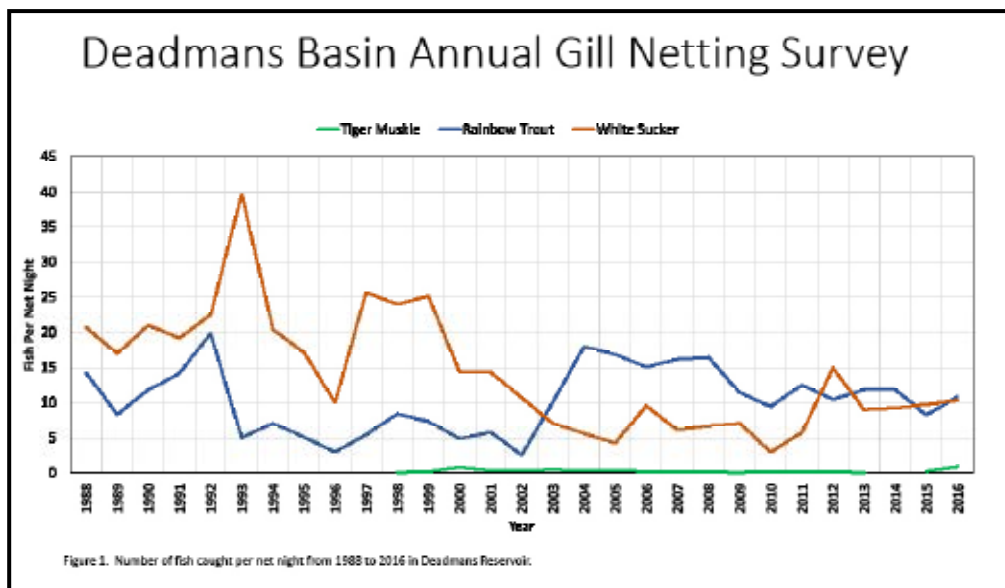
### Deadmans Reservoir

*Mike Ruggles, Fisheries Biologist*

Deadmans Basin Reservoir is an off-channel reservoir of the Musselshell River. Located between Ryegate, MT and Shawmut, MT, it covers 1,954 acres with a maximum storage of 72,220 acre/feet. The project's first dirt turned in 1934 and it was completed in 1941. Deadmans is a Montana Department of Natural Resources reservoir operated by the Deadmans Basin Water Users Association for irrigation purposes. It provides fishing opportunities for Rainbow Trout, Kokanee Salmon, Tiger Muskie, and Brown Trout. The reservoir also supports White Suckers and Common Carp along with a few other sucker and minnow species. A nicely managed Fishing Access Site allows for shore angling, boat ramp access, and camping sites.

Tiger Muskies were first stocked into Deadmans in 1998 to control an abundant White Sucker population. The expectations were an increase in Rainbow Trout size as competition with White Suckers was reduced by the Tiger Muskies, while providing a trophy Tiger Muskie fishery. Anglers can harvest a Tiger Muskie over 40 inches and must release smaller ones. The Tiger Muskies have to work as professional sucker connoisseurs before they get to 40 inches. Getting a regular supply of Tiger Muskies has been an issue at times but stocking continues and is planned to occur one in every three years. However, if there are available fingerlings to stock that plan may and has changed. It has been 18 years since the first stocking of Tiger Muskie into Deadmans, and the state records that were being challenged on a regular basis has slowed down. This

is likely a result of a reduction in the number of the original stocked fish. This reduction has been a result of natural and fishing mortality with age catching up to these early plants. Some of the original stocked fish are probably still in there, and would likely break the current state record, but likely only a few large fish remain. The last state record was caught by Leo Cantin in 2011; it was 50 inches and whopping 38.75 pounds. The good news is recent stocks appear to have taken off and are growing well with an opportunity to start catching more 40 inch Tigers in the next few years. Very few Tiger Muskies are caught during annual netting with an average over the 18 years of four per year or a catch rate of 0.3 per net. The highest catch rates were in 2000 and 2016 with catch rates of 0.8 and 0.9, respectively. From 1998 to 2000 about 7,700 fingerling Tiger Muskies were stocked which created several state records and consumed thousands of pounds of White Suckers over 18 years. From 2001 to 2014 about 2,000 large nine to eleven inch Tigers were stocked, which is much larger than the average four inch fish stocked from 1998 to 2000 and in 2015 and 2016. About 6,000 Tiger Muskies were stocked between 2015 and 2016.



The Tiger Muskie program has been successful, other than not having a reliable supply of stockable fish. This problem seems to be getting resolved as the Miles City Fish Hatchery has developed an isolation facility which allows them to get Tiger Muskie to raise for the state's needs. The hatchery staff has done a great job getting the facility running, and they are working out the last couple of issues to get better survival to stocking.



*Tiger Muskies in Deadman's Basin Reservoir are doing their job of gobbling up Suckers.*

How has the program worked for the other goal to reduce White Sucker abundance? When the catch rate of White Sucker per net night is graphed out a decline is noticeable starting in 1999 and it crosses paths with Rainbow Trout abundance by 2003 (Figure 1). The average catch rate of White Suckers from 1988 to 2002 was 20.1 per night and the average from 2003 to 2016 was 7.7 per net night. This represents a 62% drop in White Suckers on average, so the program worked well to reduce White Suckers. In 2012 the catch rate moved up to 15 per night with the average from 2013 to 2016 hovering around 10 fish per net night. This increase in White Suckers was an indicator that the Tiger Muskie population in Deadmans was declining. Although the stocking plan for Deadmans is to stock about 3,000 Tiger Muskies once every three years, the increase in White Sucker numbers lead to the decision to stock Tigers in both 2015 and 2016 when fish were available.

How has the program worked for the goal to improve the size of Rainbow Trout? The stocking plan for Deadmans is for 200,000 Rainbow Trout annually. This has been met or exceeded since 1988 except from 2001 to 2004 when reduced hatchery capacity and low water in Deadmans resulted in a reduction in Rainbow stocking.

I had been reporting the average Rainbow size increased over an inch from pre-Tiger Muskie to post-Tiger Muskie stocking. This past spring, I had an angler share with me that he and his friends used to catch Rainbows over 18 inches before Tiger Muskie were introduced into Deadmans, and now they hardly ever catch one over 14 inches. He didn't think my numbers matched his memory, and was sure the Tiger Muskie program made the Rainbow Trout fishing worse, since they only caught smaller Rainbow Trout, lots of them at times, but still smaller and often kind of skinny. I had analyzed data back to 1994 to present prior to that conversation. Comparing trout average size from 1994 to 1998 the data showed the average Rainbow was 10.6 inches and from 1998 to 2016 the average size was 12.3 inches an increase of 1.7 inches on average. That conversation

got me to focus on the data a bit more and back up a few more years prior to Tiger Muskie introduction. Using the same time periods of 1988 to 2002 and 2002 to 2016 there has been no change in average size of Rainbows in our nets. When I looked at the maximum size for each year, indeed we caught larger maximum size Rainbows in the past. The largest one netted was 21.3 inches in 1993, and in both 1988 and 1992 a 19.2-inch Rainbow was caught. A Rainbow Trout greater than 19 inches has not been netted from Deadmans since 1993. The largest Rainbow netted since introduction of Tiger Muskie in 1998 was 18.4 inches in 2003. In 2015 and 2016 the largest Rainbows measured were 15.9 inches. Are Tiger Muskies eating the big Rainbows like the angler implied? When a Tiger Muskie dies in the net, we look at the stomach contents to see what they are eating. Almost always it's a White Sucker or Carp and very rarely a trout or salmon; which when found have been smaller fish not large ones.

One thing stands out when looking at catch rates of Rainbow Trout. While stocking essentially the same number of trout annually the number of trout caught in the net changed from pre-Tiger Muskie to post-Tiger



Muskie. Using the same time periods 1988 to 2002 and 2003 to 2016 the average number of Rainbow caught per net night was 8.2 and 12.8, respectively. Almost five more Rainbow per net which is a respectable 56% increase in the number of Rainbow Trout available for anglers with a 0% change in stocking rates. At the same time the fishery had a 62% decline in White Sucker catch rates. So, Rainbows are surviving at a higher rate than before Tiger Muskies but not averaging any bigger.

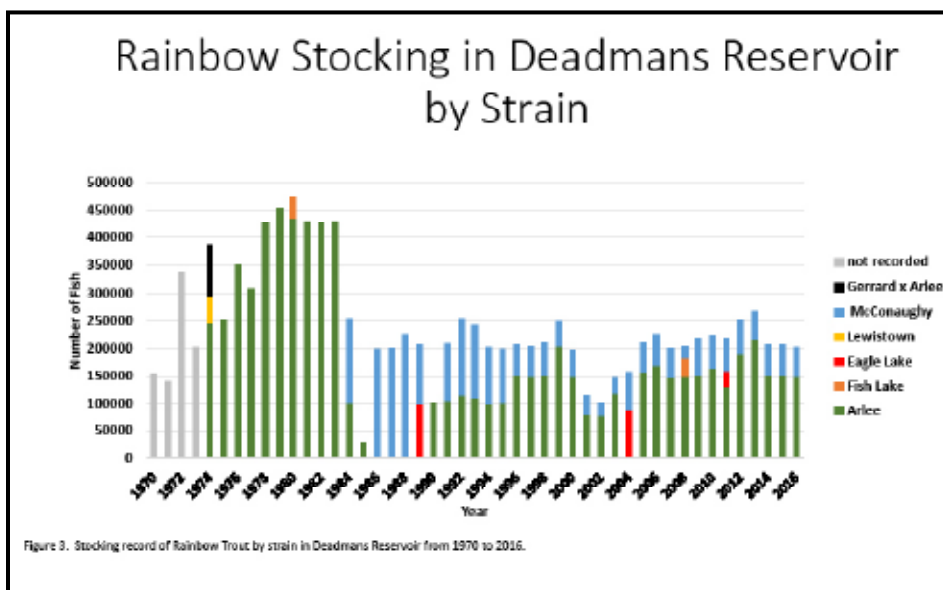
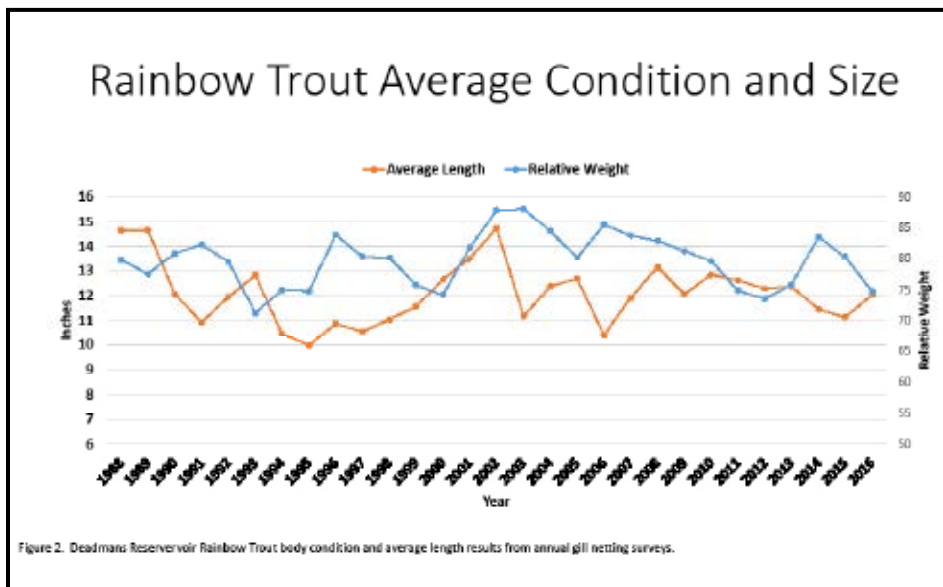
This makes me consider the stocking rates and question if the stocking rate for Rainbow Trout might be too high. Per the previously mentioned angler, they had better fishing when half as many Rainbows were surviving and they caught more larger fish. Reviewing body condition using relative weight as a measure of how fat a fish is to its length, and looking at the average length of the fish on an annual basis, it appeared that the best fish condition and largest average size was documented in 2002 (Figure 2). During that time, about 100,000 Rainbow were being stocked per year. That rate is half of what is typically planted. Historic stocking shows in the late 1970's over 400,000 Arlee Rainbow were stocked annually (Figure 3). The request was dropped to 200,000 Rainbow by 1986. At the time McConaughy Rainbow were being stocked. The stock-

ing evolved to 150,000 Arlee and 50,000 McConaughy Rainbow being stocked annually by 1996. Deadmans is the only place McConaughy Rainbow are being stocked by Montana Fish, Wildlife and Parks. In 2016 the McConaughy plants were marked with plans to evaluate their contribution to the fishery compared to

Arlee Rainbow. Results of this evaluation may lead to a reduction in the stocking request for Rainbows in the future, with potential changes in the Rainbow strains used.

The goal of this review will be to provide a quality Rainbow, Kokanee, and Tiger Muskie fishery with an occasional Brown Trout being caught. The Tiger Muskie are doing their job, and with a little adjustment to stocking rates of Rainbow the fishery might see improvements in overall body condition and potential maximum size of Rainbow Trout. Thanks to the Billings fish staff and dozens of volunteers over the years for collecting the data, and getting it into a single database making it possible to take a bigger picture look at this fishery. This is an interesting fishery to work on and I hope anglers get out and give it a try. It's always nice to visit with long-time anglers

to get their perspective of how things have changed. It is also exciting to see new anglers get started so at some point, they can become the angler that shares how things were before.



## **Soda Butte Creek**

*Jason Rhoten, Fisheries Biologist*

Over the last few years, personnel from FWP, WY Game and Fish, Yellowstone National Park and the Forest Service worked in collaboration on Soda Butte Creek striving to attain a common goal of conserving Yellowstone Cutthroat Trout. The headwaters of Soda Butte Creek originate in Montana and flow into Yellowstone National Park where it enters the Lamar River, a vital Yellowstone Cutthroat Trout stronghold. Fish that move downstream from Soda Butte Creek and enter the Lamar Drainage are met with little to no migration impediment to the upper Lamar and its many tributaries.

Nonnative Brook Trout had occupied the upper reaches of Soda Butte Creek for many years. In 1990 electrofishing Brook Trout removal efforts began in the headwaters of Soda Butte Creek to protect the native population of Yellowstone Cutthroat Trout residing in the creek. Electrofishing Brook Trout removal efforts were further amplified from 2003-2014. The intent of the increased removal effort was to achieve complete Brook Trout removal and protect the Lamar Drainage from downstream invasion. Over 20 years of removal effort yielded data suggesting that electrofishing alone was not going to be successful in eliminating Brook Trout, and that without complete Brook Trout removal, downstream invasion was inevitable.

Stakes were high with the Lamar Drainage at risk of invasion by nonnative Brook Trout, and no barriers present to stop their expansion once they entered the drainage. Based on these data, personnel from the cooperating agencies worked together to complete the required environmental review process to initiate chemical removal of the remaining Brook Trout from Soda Butte Creek. Agency personnel used rotenone to remove Brook Trout from Soda Butte Creek above Ice Box Canyon in 2015 and completed a follow up removal in 2016. Before both treatments, native Soda Butte Creek Yellowstone Cutthroat Trout were captured from and held outside of the treatment area. These rescued Yellowstone Cutthroat Trout were restocked into Soda Butte Creek following each treatment. Initial results from 2016 are very promising that the goal was attained and all nonnative Brook Trout were removed from Soda Butte Creek thereby protecting downstream waters from invasion. Water samples will be collected next summer to confirm Brook Trout absence using

eDNA. Genetically pure Yellowstone Cutthroat Trout were stocked into Soda Butte Creek following the treatment in 2016 to supplement the population of rescued Yellowstone Cutthroat. Additional stocking may occur in the future to infuse additional genetics into the Soda Butte Creek population from “nearest neighbor” populations of Yellowstone Cutthroat in the Lamar Drainage.

## **Bighorn River**

*Mike Ruggles, Fisheries Biologist*

The trout sections of the Bighorn River are evaluated annually with population estimates and size distributions. The upper river (near 3-Mile Access) is sampled in May and June while the lower trout section (near Mallards Landing) is sampled in September. The 2016 estimate for the upper section resulted in a calculated total of 2,825 Brown and Rainbow Trout of all sizes per mile. Brown and Rainbow Trout were estimated at 1,770 and 1,494 per mile, respectively. Estimates for the lower section near Mallards Landing Fishing Access Site in 2016 resulted in combined, Brown, and Rainbow Trout estimates of 1,405, 1,046, and 351 trout per mile, respectively for all sizes. The body condition of both Rainbows and Brown Trout was exceptionally good in the fall.

A concerted effort by the US Bureau of Reclamation to maintain discharges less than 5,000 cfs in the river last spring was nearly successful. Based on snowpack information this objective would have been easily accomplished. Large spring rain events in the Bighorn Basin resulted in flows exceeding 7,000 cfs during the Rainbow Trout spawn. High flows can dislodge redds in the Bighorn, and can result in high total saturated gas which can be particularly lethal to juvenile Rainbow Trout. It is challenging to predict rainfall amounts. An effort will be made to support Rainbow spawning in the spring of 2017. Fall rains helped fill the reservoir which will result in good winter flows, particularly if snowpack is near average.

*Resource Violations are Serious Crimes and You Can Stop Them!! Call 1-800-847-6668 or contact your nearest FWP office as soon as possible. The toll-free number is available 24 hours a day, seven days a week.*





## Help Protect Native Species If you don't know, let it go!

### Key to Identification

**PALLID STURGEON** are frequently mistaken for shovelnose sturgeons (see pictures below and see next two pages):

1. Look to see if the outer barbels are more than twice the length of the inner barbels. Are the barbels attached closer to the mouth than to the tip of the snout? If yes—the fish is a pallid sturgeon. Carefully release all pallid sturgeons (see page 8).
2. Sturgeons are difficult to distinguish. The shovelnose sturgeon is smaller and more common. Montana FWP recommends that all sturgeons be released if you are unsure of the species.

**WALLEYE** are frequently mistaken for sauger (see pictures below):

1. Look for multiple small, distinct black spots on the upper dorsal fin (just in on top). If yes—it is a sauger.

### MONTANA LAW REQUIRES:

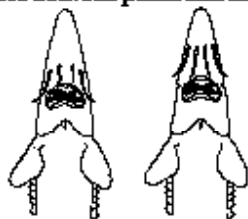
- All pallid sturgeons must be released immediately and all sturgeons longer than 40 inches must be released immediately.
- Only one sauger may be kept on the Missouri River upstream from Fort Peck Reservoir, on Fort Peck Reservoir, and on the Yellowstone River upstream from mouth of the Curtainsville Channel Dam.

### Know the difference between pallid and shovelnose sturgeon:

#### Pallid Sturgeon

Outer barbels 2 times the length of the inner barbels. (Go check the bottom barbels.)

Barbels attached close to mouth, about 1/3 the distance between mouth and tip of snout.



Shovelnose Sturgeon  
Outer barbels barely longer than inner barbels.

Barbels attached about 1/2 the distance between mouth and tip of snout.

The pallid sturgeon is a fish of special concern in Montana and it is listed as an Endangered Species by the U.S. Fish and Wildlife Service. Pallids are a bottom-dwelling fish of the Missouri and Yellowstone Rivers, producing strong currents flowing over a sandy or gravelly river bottom. Learn to distinguish the pallid from the shovelnose sturgeon, a smaller and more common species. Because the sturgeons are hard to identify, Montana FWP recommends that all sturgeons be released if you're unsure of the species.



Sauger

### Know the difference between sauger and walleye



Walleye



### Native Fish

#### Pallid Sturgeon *An endangered Species listed under the Endangered Species Act*



Average Size: 15"



#### Shovelnose Sturgeon



Average Size: 20"-22"



#### Paddlefish



Average Size: 25"-30"



#### Burbot



Average Size: 15"-24"



#### Channel Catfish



Average Size: 14"-20"



#### Sauger



Average Size: 11"-15"



## FISH TAG PROGRAM

Biologists use information from tagged fish for a wide range of information. Tagged fish can help track seasonal movements of fish, habitat use, growth, angler harvest rates, among other things. Anglers are encouraged to submit the catch information for any tagged fish that they catch. In some cases a fish may be tagged with a reward tag, which might cover the expenses for your fishing trip!

Tag information can be submitted online at are available on the FWP website at <http://fwp.mt.gov/fishing/anglingData/taggedFish.html> and can be submitted online or by mail to:

If you catch a tagged fish, please report the following information to any Fish, Wildlife & Parks office:

- \* The tag's number and color \*
- \* The date the fish was caught \*
- \* The species of the fish \*
- \* The fish's length and weight \*
- \* Location of the catch \*
- \* If the fish was kept or released \*
- \* The name and address of the angler \*

Fish Tag Program  
MT Fish, Wildlife & Parks  
PO Box 200701  
Helena, MT 59620-0701

## **REGION 6** **NORTHEAST MONTANA**

### **The Region 6 Fisheries Program**

*Steve Dalbey, Regional Fisheries Manager*

With 2016 coming to a close its time to reflect on the year and some of the highlights. In general, 2016 was a good year for anglers across the region. Fresno and Nelson Reservoirs have benefited from successive years of good water management in the Milk River system. Why is water management so important? Because when trees, rocks or other terrestrial vegetation are flooded at the right time of year, forage species such as Yellow Perch can spawn successively and produce millions of small fish that in turn leads to quality Walleye and Northern Pike fisheries.



*Redwater fish passage project completed.*

Box Elder Reservoir (near Plentywood) showed signs of life in 2016. This popular fishery has been a management challenge for several years with poor survival of stocked Walleye and Yellow Perch. FWP suspects there may be water quality issues but has not verified if this is the cause. Biologists will continue to collect water quality data through the winter but in the meantime are encouraged with recent survey results that indicate that some Yellow Perch and Walleye are surviving and growing.

The number of youth angling and education events that FWP fisheries staff participates in continues to grow. These events range from assisting Conservation Districts with aquatic education to participating in Earth Day events with the three Native American Tribes in the region. Lastly, the Hooked on Fishing Program continues to expand from classrooms in Havre to Malta with the goal of establishing the program in Glasgow and Plentywood in the future.

The Redwater River Fish Passage Enhancement project was completed in November 2016! This project removed a fish passage barrier and opened up approximately 25 miles of the Redwater to 45+ species of fish that reside in the Missouri/Redwater system; many of which are native with several species of special concern. This project could not have been possible without the cost-share partners. These included MT FWP Future Fisheries, BLM, National Fish and Wildlife Foundation, Great Plains Fish Habitat Partnership and Burlington Northern Santa Fe Railroad Mitigation.

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### **Missouri River Downstream of Fort Peck Dam to North Dakota Border**

*Tyler Haddix, Fisheries Biologist*

#### **Pallid Sturgeon Larval Drift Experiment**

During late June and early July, FWP, in collaboration with the U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, as well as other entities, conducted a large scale experiment on the lower Missouri River downstream of Fort Peck. The experiment looked at the drift dynamics of larval Pallid Sturgeon. Approximately 700,000 one-day old Pallid Sturgeon were stocked in the Missouri River just

downstream of Fort Peck Dam and monitored by larval netting as they drifted down the 200 river miles to the headwaters of Lake Sakakawea.

Currently, the leading hypothesis for why the endangered Pallid Sturgeon cannot successfully reproduce is that they do not have a long enough stretch of riverine habitat to fully develop before settling into the headwaters of Lake Sakakawea Reservoir in North Dakota. It is suspected that larvae die once they settle into this headwater area because dissolved oxygen levels are extremely low. Larval Pallid Sturgeon need up to two weeks of time, depending on water temperature,



to develop to a point where they can swim on their own and stay out of the mud and muck of reservoir headwaters. Before Garrison Dam in North Dakota was constructed, larval Pallid Sturgeon that were spawned in the Missouri River likely had ample riverine habitat to complete this early part of their life cycle.

A compounding factor for larval drift distance has been the construction and operations of Fort Peck Dam. Fort Peck Dam has severely altered water temperatures in the Missouri River resulting in colder water being released during the Pallid Sturgeon spawning season. These colder temperatures slow larval development, which makes the fish need even more miles of free flowing river to develop. In addition, Fort Peck Dam has altered the hydrology of the Missouri River. For nearly 80 years Fort Peck Dam has not released a spring freshet to stimulate Pallid Sturgeon to migrate up the Missouri to spawn. During normal operations, very few if any Pallid Sturgeon migrate upstream to Fort Peck Dam to spawn. Therefore, Pallid Sturgeon that do spawn, often spawn in the lower Yellowstone River, which also does not have enough river distance above Lake Sakakawea for larvae to complete development.

This study had many objectives, one of which was to better understand how Pallid Sturgeon larvae drift in relationship to water velocity, substrate type, channel complexity and other variable. The other main objective was to see if larvae put in the river near Fort Peck Dam would have enough river miles to fully develop. If these fish do have enough drift distance from Fort Peck Dam, the next step would be to mimic natural spring flows (although at a much lower magni-



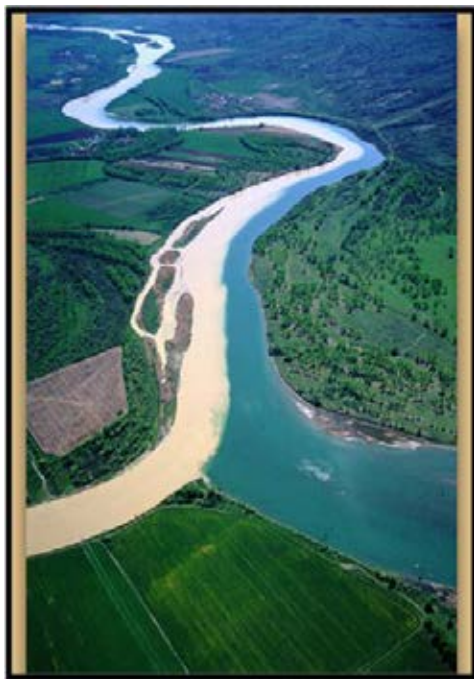
*Laurel fish nets were used for a Pallid Sturgeon drift study in the river below Fort Peck Dam.*

tude) out of the dam to get adults to migrate to this area to spawn.

This was a very large scale experiment with many partners and although the results are not in as of now, the information obtained will hopefully provide valuable information on what mitigation steps would need to be taken to help recover this magnificent fish species.

### **Lower Missouri River Fishery**

The fish assemblage on the Missouri River downstream of Fort Peck Dam was provided a boost this year with ample flow from the Milk River, the largest tributary to the Missouri below Fort Peck Dam. Due to abundant moisture in eastern Montana and the lowering of Nelson Reservoir near Malta, the Milk River provided warm turbid water inputs to the Missouri throughout the spring and summer months. This water seems to have spurred spawning success for Shovelnose Sturgeon and other native fishes. Sampling in the lower Missouri River indicated record numbers of Shovelnose Sturgeon were produced in 2016. While time will only tell how these flows affected other fishes, previous data suggests that good Milk River inputs boost production of many Missouri River Fishes. The Milk River is even more important to the Missouri River fish assemblage today than it was 100 years ago. That is because Fort Peck Dam cools the river and reduces suspended sediment that would normally occur in the Missouri River. When the Milk River flows, it helps make the Missouri River act more “natural” by warming and “dirtying up” the river, both good things for native Missouri River fishes. The Milk River also produces a lot of fish on its own when flows are present. While many of the fish produced in the Milk River reside there, many migrate down into the Missouri River and rear as juveniles and adults in the larger river. Adult Paddlefish migrate and spawn in the Milk River when flows are adequate, as do Sauger and Blue Suckers.



*The warm, murky waters of the Milk River is good for the Missouri River fishery.*



*Missouri River Shorthead redhorse sucker.*

The Milk River also produces a substantial amount of forage for game fish residing in both the Milk and Missouri Rivers. Walleye, Sauger, Channel Catfish and Northern Pike all benefit from increased production of native cyprinids, which feed these top predators.

The Missouri River near Culbertson has been a good Walleye fishery for the past several years, likely a result of excellent water conditions from 2009 to 2012 years. Although access to the river can be difficult, good numbers of Walleye are available for angling, especially in the spring and fall months. Channel Catfish are abundant in this section of river and can be caught in good numbers throughout the open water fishing season.

### **Missouri River Dredge Cuts**

*Tyler Haddix, Fisheries Biologist*

Missouri River Dredge Cut Sampling this fall indicated that Walleye were very healthy with excellent relative weights and good overall numbers. Anglers in the Missouri River and the Dredge Cuts have been doing good in the early spring and late fall/winter on Walleye. As mentioned in previous editions of the newsletter, Channel Catfish are very abundant in the Dredge Cuts and are underutilized by anglers. The Dredge Cuts and adjacent river sections are host a very diverse fishery. Species range from Lake Trout to Lake Whitefish (two nonnative species) to Shovelnose Sturgeon and Sauger (natives). Although many use boats to fish the Dredge Cuts, it is not necessary to have excellent fishing. Anglers fishing from shore just below the U.S. Army Corps of Engineers Interpretive Center can catch just

about any species using a worm and a sinker. Similarly, shore fishing opportunities exist for Channel Catfish, using a worm or cut-bait on the bottom. Local shore anglers often land trophy sized Walleye and Northern Pike in the Dredge Cuts, especially in low light conditions in the late evening to dark.

Probably the most unique “fishing” opportunity afforded in the Dredge Cuts is archery fishing for Paddlefish. Anglers can purchase a blue Dredge Cut Paddlefish tag and harvest one fish from July 1<sup>st</sup> to August 31<sup>st</sup>, using a bow and arrow. Bow anglers not only enjoy searching for Paddlefish, but also enjoy harvesting other fishes such as Common Carp, Bigmouth and Smallmouth Buffalo and River Carpsuckers, all of which are extremely abundant. Currently there are no limits on the number of blue Paddlefish tags sold, however FWP will continue to monitor this fishery to make sure that future generations can enjoy this unique opportunity.

### **Lower Milk River**

*Tyler Haddix, Fisheries Biologist*

Spring electrofishing surveys in the lower Milk River indicated good numbers of Sauger during 2016. Sauger that spend most of their life in the Missouri River migrate into the Milk River during the spring and find spawning grounds of gravel and cobble to spawn on. Good Milk River spring flows put fine sediment that often blankets the bottom of the river into suspension and exposes these spawning grounds. The same gravel bars that are used by Sauger are also used by other species like Paddlefish, Blue Suckers and Walleye.



*FWP catches some very large Blue Suckers during Milk River Sampling.*



Sauger sampled in the Milk River ranged from approximately 11 to 20 inches in length. While substantially less Walleye were sampled, they were significantly larger in average size. We also sampled several Blue Suckers, a large native sucker species that is designed to live in large turbid waters. The largest Blue Sucker sampled during 2016 measured 30.7 inches in length and weighed 9.5 lbs.!

Channel Catfish are very abundant in the lower Milk River and can easily be caught using traditional catfish baits. The size catfish you catch is often closely related to the bait you are using. While worms can catch any size Channel Catfish, the bigger fish are more often caught using larger baits, such as cut-bait or live frogs.

### Eastern Region 6 Prairie Ponds

*Tyler Haddix, Fisheries Biologist*

A mild 2015-16 winter likely benefited overwinter survival of fish in many northeast Montana ponds. However, low prairie snow pack contributed to several ponds going into the summer season at lower elevations than the previous several years. While the western areas of Region six observed large rainfall events during the fall, the eastern portions of Region six were drier, leaving ponds less than full before ice up occurred in late November.

#### **Box Elder Creek Reservoir**

Box Elder Creek Reservoir (Bolster Dam) near Plentywood showed some positive signs during 2016. Sampling indicated that hatchery Walleye are surviving with gill nets averaging two Walleye per net. This is encouraging as previous years gill nets did not sample any Walleyes. Walleye ranged in size from 7 to 15 inches, with most measuring around 14 inches in length. Walleye were also present in trap nets, averaging one per net, with a size range from 6.5 inches to 14.6 inches. Northern Pike were also more abundant in 2016 than the prior years of sampling, with five per gill net, with the largest northern measuring 25 inches. Gill nets also caught two Yellow Perch per net, which was a great sign, since very few to no Yellow Perch had been caught in the previous couple years of sampling.

While the fishery is by no means robust, the presence of Walleye, Northern Pike and Yellow Perch in 2016 was promising. FWP has been collecting water quality data over the past two years and will continue to do so as well as stock Walleye and Northern Pike annually.

#### **Whitetail Reservoir**

Whitetail Reservoir has an abundance of smaller Northern Pike. Anglers might be surprised at the numbers of Northern Pike, since at times you can actually see them jumping out of the water! Whitetail Reservoir also hosts Yellow Perch and Fathead Minnows as a forage fish. Currently the Yellow Perch population is depressed, likely due to the overabundance of Northern

Pike. Anglers are encouraged to keep some of these smaller Northern Pike to help reduce some of the predation that is occurring on smaller Yellow Perch. Small Northern Pike can make great pickled fish. No need to remove Y-bones when pickling pike, so look for a recipe in a cook book or online and keep a limit of small north-erns!

N u m e r o u s  
other smaller

prairie ponds are located within the eastern portion of Region 6. Management focus of pond varies based on habitat (depth being the most important). Shallower ponds are often managed for put-grow-take Rainbow Trout while deeper ponds that can over winter fish are managed for Largemouth Bass, Yellow Perch and Black Crappie. While most of these ponds are not sampled on an annual basis, FWP monitors these fisheries and produces a Region 6 Prairie Ponds Booklet which contains stocking, sampling and location information. These Booklets can be obtained at either the Glasgow or the Havre FWP office or on the FWP website. Depending



*Sampling in Box Elder Creek Reservoir showed good numbers of Northern Pike, Walleye and Yellow Perch.*

on demand we expect the next Prairie Pond Booklet will be produced in 2018

### **Dredge Cut Trout Pond**

Trout Pond located near the Fort Peck Dredge Cuts, is a potpourri of game fish, with Northern Pike, Largemouth Bass, Yellow Perch, Bluegill, Walleye and some Channel Catfish. This small reservoir also hosts non-game fish such as Common Carp, Bigmouth and Smallmouth Buffalo and White Suckers. While the fishery holds very few “trophy” sized fish, there are plenty of fish to enjoy a mixed bag fishing day. During the 2016 sampling, Northern Pike were quite abundant with 6.5 per gill net. The Northern Pike ranged in size from 10.6 to 30.3 inches in length. Yellow Perch were also abundant with seven per gill net, with the largest measuring 7.7 inches. Trap nets caught 9.6 Yellow Perch per net, with a number being young-of-the-year fish. Gill nets averaged 5.5 bluegill per gill net, but were most abundant in trap nets with 48.2 being caught per net. The largest Bluegill captured measured 6.8 inches. Although Largemouth Bass are not very prone to being captured in either gill or trap nets, three Largemouth Bass were captured in gill nets. However, numerous small young-of-the-year Largemouth Bass were observed in the shallows, indicating that spawning did occur.



*Trout Pond Game Fish.*

### **Havre Area Ponds**

*Cody Nagel, Havre Fisheries Biologist*

Fish, Wildlife and Parks manages approximately 100 small ponds and reservoirs located on both public and private lands throughout Hill, Blaine, and Phillips Counties. The fisheries are very diverse, with some ponds being managed as Rainbow or brook trout fisheries, and others as warm water fisheries that could contain bluegill, Yellow Perch, Largemouth Bass, Northern Pike, Walleye, Tiger Muskie, Black Crappie, or Channel Catfish. Water conditions have remained good to excellent throughout most of the region for several years now, and have contributed to some excellent fish-

ing opportunities.

*Rainbow Trout-* Trout growth in these prairie ponds is very good, and reports of trout up to four pounds are common. Reservoirs such as Bearpaw Lake, Beaver Creek, Dry Fork, Anderson, H.C. Kuhr, Choteau, Sentinel, King, Plutz, Current, Hump, Flintstone, Grasshopper, Faber, North and South Polly, and North Faber have continued to produce both quantity and quality Rainbow Trout.

*Northern Pike-* Several quality pike fisheries exist in the area. Though typically not known for trophy pike, many of these smaller impoundments often have high densities of three to five pound fish, with good catch rates reported. Reservoirs such as Baileys, Beaver Creek Reservoir, Dry Fork, PR 161, Ester, and Wildhorse all contain good pike populations.

*Walleye-* Walleye typically exhibit fast growth rates in these smaller impoundments but rarely achieve trophy status. Many of the Walleye fisheries contain a lot of fish in the two to three pound range (16-20 inches). Reservoirs such as Baileys, Beaver Creek, Dry Fork, Anita, Ester, and Cow Creek all contain good Walleye fisheries.

*Bass-* This area contains many Largemouth Bass fisheries, with one to three pound fish common. Reservoirs such as Reser, Dry Fork, North Faber, Salmo, Lark, PR 054, PR 022, Doucette, Cole Ponds, Sagebrush, Taint, and Wapiti all contain good Largemouth Bass populations. There are also good angling opportunities for Smallmouth Bass at Bearpaw Lake and Beaver Creek Reservoir.

*Yellow Perch-* Good Yellow Perch fisheries exist in Bison Bone, Anita, Reser, Cow Creek, Baileys, and Beaver Creek Reservoirs. Most of these fisheries contain good numbers of six to eight inch fish, with perch up to 13 inches present as well.



***Black Crappie-*** Opportunities exist at Baileys, Reser, North Polly, Anita, Choteau, McChesney, Ester, Hump and Flintstone Reservoirs. Black Crappie in these impoundments average 7-10 inches but fish over 12 inches is always a possibility.

***Bluegill-*** Opportunities exist at Reser, Dons, BR 047, North Faber, April, Flintstone, Taint, Lark, Sagebrush, PR 016, Wapiti, and Karsten Coulee Reservoirs. Bluegill in these impoundments typically average six to eight inches but fish over 10 inches are also common.

Anglers looking to experience the excellent fishing some of these ponds have to offer are encouraged to stop by the Havre Area Resource office and pick up the latest version of the Region 6 Pond Guide or download it from the Region 6 webpage located on the FWP website (<http://fwp.mt.gov/regions/r6/>). The fisheries on some of these ponds are greatly affected by water levels and winter severity. Anglers should be aware that landowner permission may be required to access some of these ponds and should plan accordingly.

## **Upper Missouri River Paddlefish**

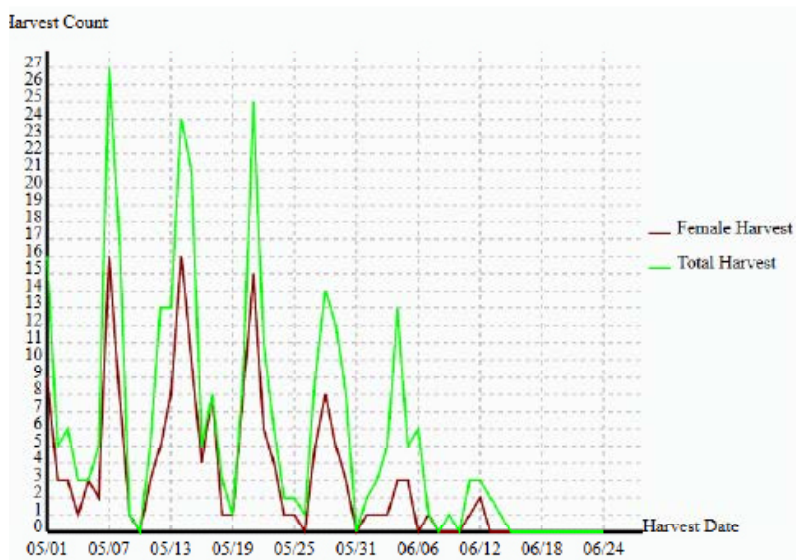
*Cody Nagel, Fisheries Biologist*

A popular recreational snag fishery occurs each year for Paddlefish above Fort Peck Reservoir to Fort Benton (White Tag). The Paddlefish season on the Upper Missouri River runs from May 1<sup>st</sup>-June 15<sup>th</sup>. Regulations established in 2016 now require anglers wanting to harvest a Paddlefish to apply and draw (via lottery; up to a party of five) for a tag that will allow for the harvest of one Paddlefish. Unsuccessful applicants and anglers who only want to snag and release are restricted to snag and release fishing on the Upper Missouri River only. Applications will be made available in early March, with the deadline to apply being March 30<sup>th</sup>.

In 2016, 320 Paddlefish were reported as harvested on the Upper Missouri River (750 harvest tags were issued in the lottery). Females comprised 53% of the harvest and harvest was spread throughout the six week season, with the majority of harvest occurring during the first three weeks. In recent years, harvest of Fort Peck Paddlefish has varied with annual river discharges, but has typically ranged between 400 and 600 fish. Historically, fishermen have caught female Paddlefish weigh-

ing over 100 lbs. and up to 56 years old. Currently, the adult population is comprised of fish between 12 and 40 years old.

In 2016, a rapid increase in flow in early May triggered a strong Paddlefish migration upstream. Flows remained between 9,000-12,000 cfs throughout May, with peak flow occurring on May 22<sup>nd</sup> (14,000 cfs). Although flows were good enough to trigger an upstream migration, the duration and magnitude of flows resulted in poor spawning conditions overall and young of year visual surveys conducted in August reflected that. However, the long-term sustainability of this population remains good, as reproductive success was above average in 2008 and 2010, with an exceptional year-class observed in 2011. Anglers can expect these fish to make their first spawning run up the Missouri River in four to eleven years. Males mature around age 10 and



*Paddlefish harvest corresponds with river discharge with most harvest in 2016 occurring during the first three weeks of the the six week season.*

females around age 15.

Anglers that catch a tagged Paddlefish are asked to record the tag number and provide this information when reporting a harvested fish. This information assists biologists in determining survival, harvest, and growth rates of Paddlefish in the Upper Missouri River. The angler will also get information back pertaining to the location, size, and date the Paddlefish was originally tagged. The Paddlefish population remains stable and anglers should expect another great spring "run" in 2017.

## Nelson Reservoir

*Cody Nagel, Fisheries Biologist*

In 2016, the Bureau of Reclamation conducted an extensive safety of dam's project at Nelson Reservoir to remedy certain deficiencies associated with the dikes. To complete the work, Nelson Reservoir was drawn down approximately 16 feet, or 37% of full pool capacity. The drawdown was initiated in late June and continued through August. In October, the area surrounding Nelson received several inches of rain and reservoir pool elevations increased approximately two feet. Reservoir pool elevations will remain approximately 15-16 feet below full pool throughout the winter.



*In 2016, Nelson Reservoir was drawn down approximately sixteen feet to repair the dikes.*

The majority of work has been completed: however, in the spring of 2017, anglers should expect crews working in the area to complete site cleanup, reclamation, reseeding, and gravel resurfacing. Re-fill of the reservoir will occur when water diversions begin. This is expected to start sometime in March/April, 2017. Recreationists should expect low water-levels to remain at the reservoir through spring, and possibly into summer. This will impact access and anglers are encouraged to call the Havre Office at 265-6177 for access updates.

Summer seining efforts revealed spawning success for Walleye, Black Crappie, and Spottail Shiner was above average in 2016. Annual fall gill net surveys suggest good abundances of all game fish found in Nelson. Walleye relative abundance was the highest documented in 25 years at 19.6 Walleye/net, and remains well above the long-term average of 14.0 Walleye/net. The Walleye population is comprised mostly of 16-22 inch fish. Northern Pike relative abundance increased from 1.6 pike/net (2015) to 2.8 pike/net, with a good mix of year-classes and Northern Pike up to 35 inches. The Black Crappie population remains strong due to the recruitment of an exceptional year-class produced in 2014. The current Black Crappie population is comprised of mostly seven inch fish, with some fish exceeding 12 inches. Yellow Perch densities in Nelson have been high since 2011, following historic year-classes produced from 2009-2011. Yellow Perch relative abundances peaked in 2011 at 37.1 perch/net, and have slowly been decreasing since. In 2016, Yellow Perch relative abundance was 12.4 perch/net. Though Yellow Perch relative abundance has been declining, it remains above long-term averages observed prior to 2011. The

current Yellow Perch population is comprised mostly of six to seven inch fish.

Long-term impacts of the drawdown to the Nelson fishery are unknown at this time, and will be heavily influenced by spring water conditions and available water for diversion throughout the 2017 water year. Spawning conditions for species such as Northern Pike, Yellow Perch, and Walleye, which spawn shortly after ice off, will be poor during the spring. Very little spawning substrate will be available for these species at current reservoir pool elevations.

## Fresno Reservoir

*Cody Nagel, Fisheries Biologist*

Water conditions in Fresno Reservoir were favorable in 2016. Reservoir pool levels stayed above average from March through June, creating good spawning conditions for all species. Summer seining efforts identified good natural reproduction for Walleye, Black Crappie, Emerald Shiners, and Spottail Shiners.

Standard fall gill net surveys revealed Walleye relative abundance increased from 15.6 Walleye/net (2015) to 17.8 Walleye/net, remaining above the long-term average of 14.9 Walleye/net. High Walleye abundance over the last nine years is primarily influenced by relatively stable reservoir levels, excellent spawning conditions, and good natural reproduction. Fresno contains multiple age classes of Walleye, with good densities of 12-17 inch fish (2-5 year old). Fishing opportunities for Wall-



eye should once again be excellent in 2017. Northern Pike relative abundance remains low (0.67 pike/net), the majority of these fish range from 20-26 inches.

Yellow Perch abundance has remained low since 2011 and there is concern pertaining to the long-term contribution of this popular sport and forage fish in Fresno Reservoir. Excellent water conditions in Fresno over the last nine years have allowed the reservoir pool elevations to remain relatively stable. Above average pool elevations during April and May have flooded terrestrial vegetation, creating optimal spawning conditions for Yellow Perch. Extremely good spawning conditions, and low perch densities, prompted FWP to plant adult pre-spawn Yellow Perch in April the last six years to help boost reproductive success and perch abundance under these favorable water conditions. Furthermore, water levels during the summer and winter months have remained 12-16 feet higher than average, keeping littoral structure such as rocks and boulders flooded, creating good rearing habitat for young-of-year Yellow Perch, Black Crappie, and Spottail Shiners. Over the last nine years FWP has documented excellent Yellow Perch and Black Crappie reproductive success; yet the ability of these two species to survive long enough to recruit to adult stages remains a challenge.

Fall gill net surveys revealed adult Yellow Perch (1.6 Yellow Perch/net) and Black Crappie (0.5 crappie/net) relative abundance remains low. Although successful spawning has been documented for forage species such as Yellow Perch and Black Crappie, low adult abun-

dances are an indication of the high predator densities. Perch and Crappie's inability to, as well as the recruit to the fishery combined with less than desirable growth rates of Walleye and Northern Pike during this period of very favorable water conditions is of concern. The health of the Fresno fishery is highly dependent on reservoir water level management by the Bureau of Reclamation. Specifically, timing and duration of water level increases can greatly impact the reproduction,

survival, and condition of forage and sport fish throughout the reservoir. Although the water in the Milk River is primarily for irrigation, FWP and local angler groups will continue to work with the BOR on water level management that benefits this very popular fishery.

### **Fort Peck Reservoir**

*Heath Headley, Fisheries Biologist*

Fort Peck Reservoir saw a slight increase in water levels during 2016. Reservoir elevations rose approximately three feet from March into June due to lower than average snow pack conditions in the mountains. As a result, a minimal amount of shoreline vegetation was flooded in 2016 and a majority of it didn't occur until early summer. Water levels decreased slightly since the summer and are forecasted to remain stable during the winter months headed into 2016. Reservoir elevations are expected to rise approximately four feet in late spring if mountain snowpack and spring precipitation conditions are "average" in 2017. All boat ramps should be usable again in 2017.

The 2016 Walleye egg-taking effort in the upper Big Dry Arm of Fort Peck Reservoir was again a huge success. Weather conditions cooperated and gradually warmed water temperatures from 44 degrees to 50 degrees during the peak of Walleye spawning activity. But the biggest contributor to the success was the volunteers! A total of 104 individuals helped collect 79 million eggs



*Above: Pre-spawn yellow perch being stocked into Fresno Reservoir. Below: Yellow perch egg skein deposited on near shore spawning habitat.*



## FISHING NEWSLETTER 2017

which exceeded the 50 million egg goal. As a result of this effort, 20.4 million Walleye fry and 2.3 million fingerlings were released back into Fort Peck Reservoir in 2016. 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 other volunteers that participate annually. It's a great way to learn more about the Walleye fishery, see large Walleye, and be part of the statewide egg-take that benefits other Montana Walleye fisheries.

Annual standardized gill netting surveys indicated Walleye and Northern Pike continued to be the most abundant species captured in 2016. Relative abundance of Walleye was 4.4 per net in 2016 which is still above the long-term average of 3.7 per net. Walleye in the 15 to 20 inch range were most abundant due to two large year classes of fish from the high water years of 2010 and 2011. Anglers can be encouraged to know that good numbers of Walleye greater than 25 inches continue to be measured during these sampling efforts. Walleye were most abundant from the dam area upstream to the Hell Creek area of the reservoir during the July-August sampling. Similar to Walleye, Northern Pike relative abundance is still above the long-term average. This is attributed to increased spawning and rearing habitat created by the high water years of 2009-2012. Most pike sampled were between 24 and 32 inches and averaged close to 4.5 pounds.

Anglers can also take advantage of two other overlooked species that have been doing well over the last several years. Smallmouth Bass populations continue

to expand throughout the reservoir as indicated by our sampling surveys. Anglers should expect smallmouth to average around 14 inches but also have a shot at others approaching 20 inches. Best locations during summer for Smallmouth Bass are the Big Dry Arm and upstream from Bone Trail.

Another overlooked angling opportunity is Channel Catfish. Channel Catfish are typically one of the most abundant game fish captured during annual gill netting surveys especially in the upper portion of the reservoir. In 2016, average size of Channel Catfish sampled was 17 inches and 1.8 pounds.



*Cisco in a walleye stomach on Fort Peck Reservoir.*

Forage fish surveys on Fort Peck Reservoir showed mixed results in 2016. Shoreline forage fish (Yellow Perch, Crappie, Spottail Shiners, and Emerald Shiners) abundance decreased in 2016. Most shoreline forage fish species are now at or below long-term averages. Unlike the high water years of 2009-2012, these

shoreline forage fish species have declined greatly due to the lack of spawning/rearing habitat as well as increased predation from a growing Walleye and Northern Pike population. In contrast, coldwater forage fish (Cisco) netting results in September indicated a large group of young Cisco (average five inches) as well as a large group of older, adult Cisco (average eight inches). While this is great news for the medium to larger Walleye, Northern Pike, Chinook Salmon, and Lake Trout, it may make things a bit more difficult for anglers.

Anglers may have to change tactics

in 2017 by fishing deeper as summer progresses when water temperatures warm. Warmer temperatures will force Cisco to head to deeper, cooler water where



*A verticle gillnet full of Cisco on Fort Peck Reservoir.*



## FISHING NEWSLETTER 2017

larger predatory fish will pursue this abundant food source.

The high abundance of Cisco has especially benefited the coldwater fishery that Fort Peck Reservoir has to offer. The increase in Cisco abundance over the last few years has led to excellent growth and survival of stocked Chinook Salmon by providing an excellent forage base and buffering predation rates from other piscivorous fishes. This resulted in high angler catch rates of salmon during the summer of 2016 along with high numbers collected in the fall during broodstock collection by FWP fisheries staff. In fact, fisheries and hatchery staff collected a record 1.4 million eggs! Most salmon caught and captured during this time were mature three-year old fish averaging close to 15 pounds. There's a chance that anglers may catch some older, larger salmon in 2017, but it will be very tough to replicate the high catch rates experienced in 2016.

Anglers can also take advantage of the Lake Trout fishery if the Chinook Salmon aren't cooperating. Compared to Chinook Salmon, Lake Trout have a tendency to be less finicky and can be caught throughout much of the fishing season. Most Lake Trout caught continue to average around seven pounds, but anglers have a shot at a fish approaching 20 pounds. Whichever species anglers decide to target, they will have a good chance at catching a quality-sized fish!

### Region 6 Fishing Access Site Program

*Dave Fuller, Fishing Access Site Program Coordinator*

The Region 6 (R6) FAS program provides access to some of the most diverse angling opportunities in the state. From prehistoric species like Shortnose Gar, Paddlefish and Sturgeon in the Missouri River to Panfish, Walleye, Bass, Pike and Catfish that are excellent table fare. Some may not be aware that R6 also provides access to world class cold water fisheries such as Rainbow and Brown Trout and Chinook Salmon. In addition to angling, FAS's are popular areas for boating, swimming, hunting, hiking, bird watching, camping



*Chinook Salmon size increased in 2016 on Ft Peck Reservoir.*

and picnicking to name a few. To address the extent of these other uses of FAS, FWP is conducting a statewide user survey to get a better idea of the different groups that use our sites. Many R6 sites were recently equipped with traffic counters that will aid in determining user trends at our sites.

Projects for the upcoming year include building a new shelter

and adding more camp sites at Bailey Reservoir and improving the parking lot at Duck Creek. We are always looking for opportunities to expand our access program especially on the access limited Milk and Missouri rivers. In addition to the FAS program, we also have access to over a hundred ponds and reservoirs in the region. Most of these sites are "primitive" and do not have latrines or improved boat ramps; however, these ponds fisheries have been a focus of the R6 Fisheries program and provide a unique fishing experience for those that don't have a boat or prefer smaller water. Some are on private land with willing landowners while others are on state or federal land. Information on these ponds can be picked up from our regional offices in Glasgow and Havre - just ask for the R6 Ponds Fishing Guide.



*Bearpaw Lake FAS.*

## **REGION 7** **SOUTHEAST MONTANA**

### **Yellowstone River Paddlefish**

*Caleb Bollman, Fisheries Biologist*

Each spring Paddlefish migrate upstream out of the headwaters of Lake Sakakawea with rising river discharge to reach river spawning grounds. At the beginning of the season anglers were finding fish both at Intake and further downstream. A fairly flat hydrograph made for a slow and steady season in 2016. Harvest was allowed for 15 days with an estimated average harvest rate of 50 Paddlefish per day. Catch and release fishing at Intake Fishing Access Site lasted until June 20 with an average of 32 Paddlefish landed per day.

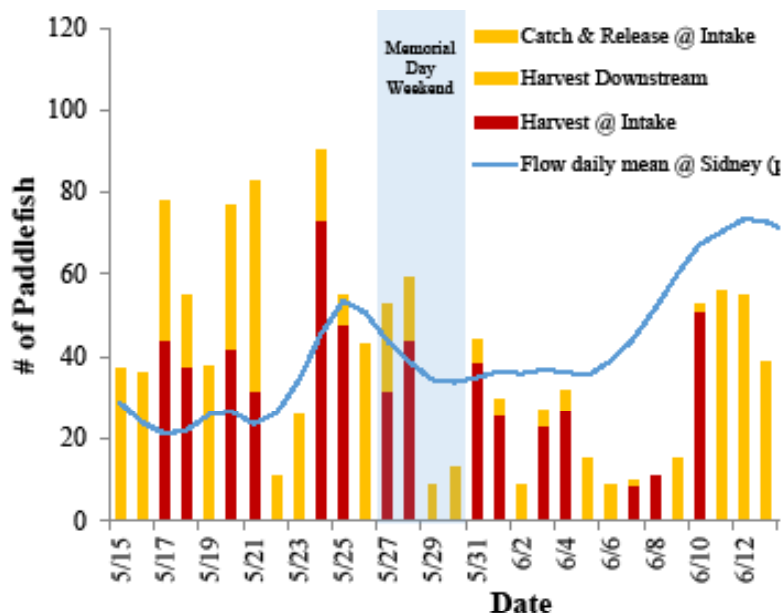
Paddlefish are a long lived species of fish that do not make their first spawning run until they are seven to fifteen years old (seven for males and fifteen for females). In order for harvest to be sustainable data must indicate that the Paddlefish population continues to recruit new fish to replace harvested fish and the population



*Paddlefish in the Yellowstone River.*

the adult population. Fall trend surveys on Lake Sakakawea found few young of the year Paddlefish in 2016. The 1995 year class of Paddlefish was an exceptionally strong year class and their abundance has been buffering the harvest of older fish for the last 10 years. On a positive note we are only a few years away from when we expect to see adult males from the 2011 year class which had early indications of being a strong year class.

Reduction of the harvest cap may be necessary if recruitment does not turn up by the end of the 2018 season.



### **Other Yellowstone River Fishing Opportunities**

*Caleb Bollman, Fisheries Biologist*

The Lower Yellowstone continues to provide exceptional angling opportunity for a variety of warm-water fish. Anglers can target game species including Channel Catfish, Sauger, Walleye, Shovelnose Sturgeon, Smallmouth Bass, and Northern Pike. The natural hydrograph of the Yellowstone River influences when individual species are catchable, but there is opportunity throughout the open water season. After ice out, in the spring (March) and before high water (June) from mountain snow melt

anglers target Walleye, Sauger, and Smallmouth Bass. Water clarity determines the duration of the spring fishing window for these sight feeding species. Sauger are more abundant downstream of the mouth of the Powder

should have representation across a wide range of year classes. While population estimates have been fairly stable, concern has been growing as year classes since 1995 have been recruiting low numbers of Paddlefish to



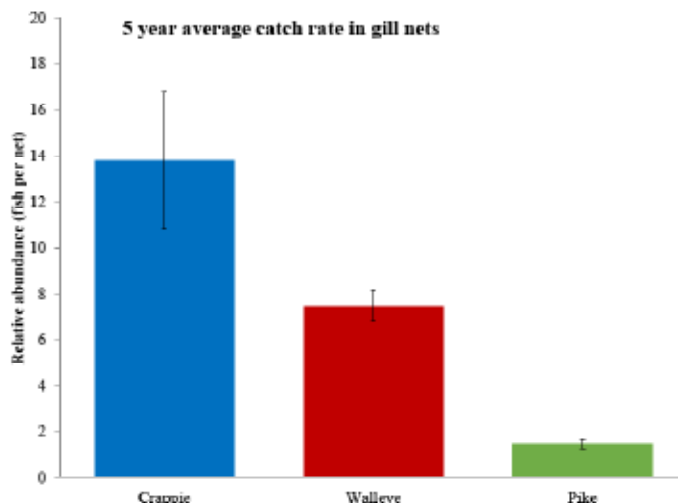
## FISHING NEWSLETTER 2017

River, but average size of individuals increases as you go upstream. The Yellowstone offers trophy potential for Walleye with 10+ pound fish sampled in the reach of river from Miles City to Hysham. Smallmouth Bass are more abundant in the less turbid reach of river upstream of Miles City. April and May are excellent months to target Shovelnose Sturgeon and if done while water temperatures are cooler anglers targeting sturgeon with worms will lose less bait to small catfish. On May 15<sup>th</sup> the Lower Yellowstone River Paddlefish season kicks off. Consider a family camping/fishing trip to one of the Yellowstone River fishing access sites or wildlife management areas to bait fish for catfish and Shovelnose Sturgeon and participate in the Paddlefish snagging season. Being less dependent on water clarity to sight feed Channel Catfish can be targeted with success almost anytime during the open water season. Channel Catfish are the most abundant sport fish encountered in the Yellowstone River where six to eight pound fish are common and 10 to 15 pound fish are observed in surveys regularly. Worms, shrimp, and minnows can be used to catch smaller catfish while larger fish are targeted best using large chunks of fresh cut bait (Goldeye and White Sucker). Goldeye will bite on live bait, soft plastics, and lures and can be entertaining using ultra light tackle or fly-fishing gear. Beginning in August anglers can again be found casting crankbaits, jigging, and trolling for Sauger, Walleye, and Smallmouth Bass. Depending on water clarity the fall fishing window can extend until ice up usually occurring sometime in November. Late fall can be an excellent time for the serious fisherman targeting Sauger and Walleye.

### Tongue River Reservoir

*Caleb Bollman, Fisheries Biologist*

Surveys in 2016 returned higher counts of adult crappie than observed in 2015 at Tongue River Reservoir. Abundances are high enough that when anglers get on schools while the bite is on catch rates should be very high. Walleye abundance continues to be well above historical average in surveys. In spite of good survey



numbers angling for Walleye in late summer and fall of 2015 was tough according to anglers, a condition that may have been influenced by a surplus of forage at the time. This forage surplus seemed to taper off and return to normal levels by late 2016 surveys and anglers were reporting better catch rates throughout the summer

and fall of 2016. Northern Pike have been naturally reproducing since the dam was rebuilt in 2002, creating suitable spawning habitat. Their abundances remain low compared to Walleye and crappie but offer anglers' additional opportunity. Bass continue to offer quality angling opportunity on the reservoir and a tailrace trout fishery in the Tongue River below the dam for Rainbow and Brown Trout provides a diversity of angling opportunity that is hard to find in just one location.

Expect fishing in 2017 to bring similar to better crappie and Walleye fishing compared to the 2016 season.

An angler fishing from the bank or in a boat is likely to catch a mixed bag as Tongue River Reservoir supports populations of Black Crappie, White Crappie, Walleye, Smallmouth Bass, Largemouth Bass, Northern Pike, Channel Catfish, Pumpkinseed Sunfish, and Yellow Perch.



*Bridger Bollman with a Smallmouth Bass from Tongue River Reservoir.*



*Mat Rugg, Glendive Fish Biologist, surgically implanting a transmitter in Pallid Sturgeon.*

### **Southeastern Montana Ponds**

**Kevin McKoy, Fisheries Technician**

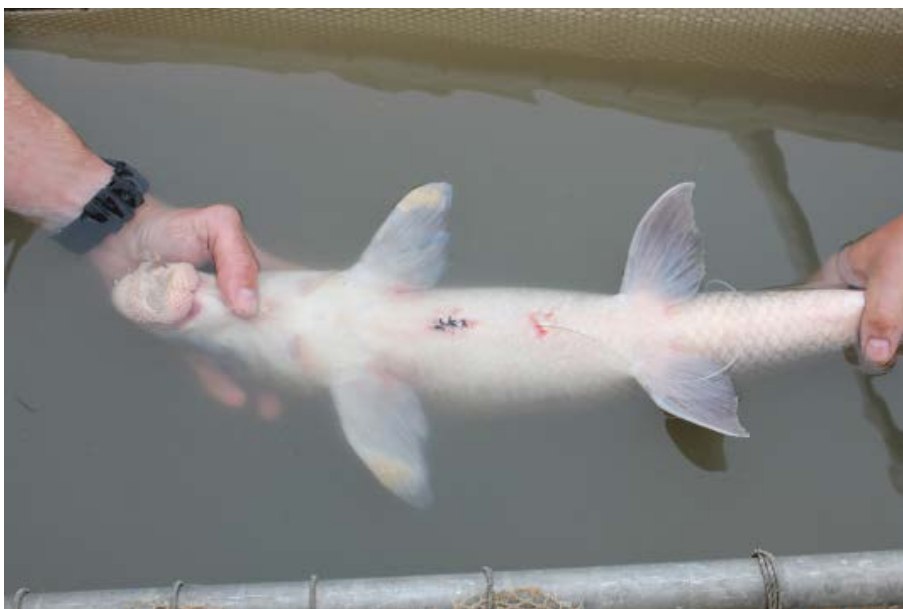
Of the 100+ ponds managed for fish in the regional pond program, most are privately owned and require landowner permission to fish. In exchange for fish stocking and management, landowners allow public access. Ponds are stocked with a variety of fish including bass, catfish, crappie, perch, and trout. About one third of the ponds are sampled each year and survey results are summarized in the Region 7 Pond Fishing Guide. Surveys in 2016 found 31 of 48 ponds sampled had fishable populations of target species. State hatcheries stocked 58 ponds in Region 7 in 2016 and regional staff conducted wild fish transfers to two ponds. The Region 7 Pond Fishing Guide is updated annually, free to the public and available at the Miles City office or by calling 406-234-0900. The 2017 guide should be available by mid-March 2017. The guide provides maps of the ponds arranged by county. Ownership and fishery information is also provided in the booklet, including private landowner names and survey results. Use the pond guide or call the Miles City office to get updated information on ponds that have recently experienced fish kills, or are reportedly

fishing well. As with all private lands, permission is granted through the landowner and must be obtained each and every time before fishing. It is the responsibility of the fisherman to look up the landowner's phone number and request permission to fish. Anglers may have reduced pond angling opportunity in 2017 based on lower water levels throughout much of Region 7 during 2016.

### **Lower Yellowstone River Native Species Telemetry**

**Mat Rugg, Fisheries Biologist**

Montana Fish, Wildlife & Parks (FWP) fisheries crews partnered with Bureau of Reclamation (BOR) in 2016 for a second year to assess the movements of several native fish species in the Lower Yellowstone River. Specifically, the agencies were interested in determining the current effects of Intake Diversion Dam (Intake) on the movements of Sauger, Shovelnose Sturgeon, Pallid Sturgeon, Blue Sucker, and Paddlefish. These species all require long, un-impeded river reaches to fulfill all of their life-history stages. Currently, passage upstream or downstream of Intake can only be achieved by fish



*Blue sucker following surgical implant of transmitter (antenna and sutures visible)*

swimming over a wooden crib and boulder field dam or through a natural side-channel that flows around the dam during times of high river discharge. However, the U.S Army Corps of Engineers (USACE) and BOR have



proposed the construction of fish-bypass project designed to improve passage for the endangered Pallid Sturgeon at Intake. The existing dam and natural-side channel, and passage of all Yellowstone River fish species, will be altered if the project is completed. Thus, it was prudent to expand the current understanding of fish movements pre construction to provide a baseline of fish passage to which post construction monitoring could be compared to.

Fish were captured in the river reach immediately downstream of Intake Diversion Dam (where passage could be impeded by the dam), as well as the reach just upstream of Glendive (where no physical passage barriers exist). Telemetry transmitters were surgically placed into the abdominal cavity of individuals, and their movements were monitored weekly using boat-mounted telemetry receivers and continuously using ground-based telemetry receivers from April through October.

Biologists were able to document the movement, or lack thereof, of the above listed species at Intake over the past 2 years. Spring Yellowstone River flows during 2015 and 2016 varied, and, expectedly, fish passage at the dam also differed between years. In 2015, the peak spring discharge at Glendive was 71,600 cubic feet per second (cfs); the spring peak in 2016 was only 32,800 cfs. The relatively lower spring discharge in 2016 created conditions in the natural side-channel around Intake that were unfavorable for fish passage. Neither Pallid Sturgeon nor Paddlefish were observed utilizing the natural side-channel to pass Intake in 2016; whereas both Pallid Sturgeon and Paddlefish passed the dam via the side-channel during the 2 years prior. Blue Suckers exhibited similar movements in 2016 as those observed in 2015; many individuals encountered and passed over Intake and made impressive upstream migrations often exceeding 100 river miles. There were several instances of both Sauger and Shovelnose Sturgeon passing Intake during 2016.



*Bailey and Josie Muscha fishing at Far West FAS Pond.*

### [Region 7 Fishing Access Site](#)

*Jamie Hould , Fishing Access Site Program Coordinator*

*Miles Muscha, FAS Maintenance Worker*

### **Far West Pond Russian Olive Removal**

During the summer months of 2015 the Region 7 FAS maintenance staff began work removing Russian Olive trees that surround the pond at Far West Fishing Access Site. The pond is approximately 2 acres and has been known to hold Channel Catfish, Smallmouth Bass, Green Sunfish, and various Yellowstone River species. The shoreline had been completely overgrown with Russian Olive trees making access to the pond very difficult. FAS staff was able to clear 300' of the east shoreline and also cleared space for a camping area on the south shoreline. A primitive gravel ramp was also constructed to provide access for small watercraft into the pond. During the summer of 2016 the staff has continued to trim and clear additional trees to provide additional camping spaces on the south shoreline. They have also seeded and maintain the areas where Russian Olives were removed in 2015. The once hidden pond is now being used for fishing, swimming, and ice skating.

### **Gartside Reservoir Improvement Project**

This project was spearheaded by the Sidney Area Chamber of Commerce Leadership Class of 2015 with over-



*Gartside Reservoir improvement project site.*



*West Rosebud FAS: Construction of new boat ramp.*

sight by Montana Fish, Wildlife & Parks. In November 2015 the team approached Fish, Wildlife, & Parks with an idea of enhancing recreational opportunity at Gartside Reservoir Fishing Access Site. Gartside FAS is located near Sidney so it is popular for fishing, kayaking, canoeing, and picnicking. The project idea was to improve an existing 2-track road that provided access to the north side of the reservoir. In addition, multiple parking and picnic areas would be improved by providing gravel, barrier posts, and picnic tables. The objective of the project was to create more space for family's to recreate and enjoy. Additionally, the project would come at little or no cost to MT Fish, Wildlife, & Parks. A concept plan and estimate was developed by MT FWP design & construction staff and provided to the Leadership team. The team had a goal of completing the project by June of 2016. With multiple fundraising efforts and generous donations, and volunteer work from local businesses and organizations, they were able meet that goal.

### **West Rosebud Boat Ramp Replacement**

In September 2016 construction began on replacing the boat ramp at West Rosebud FAS near the city of Forsyth. West Rosebud is a popular destination for day use visitors and is a primary boating access point above the Carterville diversion dam on the Yellowstone River. This project included replacement of an existing concrete boat ramp along with rip-rap upstream and downstream of the ramp. The existing ramp had been damaged by numerous ice events and the surrounding area had eroded

through the years from turbulent high water and flooding. The new ramp was constructed to be wider, longer, and deeper than the original ramp to provide better boat access during low water events. The project construction was delayed due to some wet weather in late September and was completed in mid November. This was a much needed project that will greatly benefit Forsyth area anglers.

## INSPECT. CLEAN. DRY.

**Aquatic invasive species (AIS)** may be brought into Montana from other places. They include clams, fish, mussels, plants, weeds, and aquatic insects.

**AIS can be spread** when anglers, boats and other watercraft move from one body of water to another.

Eurasian watermilfoil quickly overtakes lakes and rivers.

Zebra mussels destroy aquatic ecosystems and clog pipes.

agr.mt.gov

fwp.mt.gov

**With just  
THREE EASY STEPS**

you can help stop the spread of aquatic invasive species that choke municipal water and irrigation systems, damage our waters and ruin your fishing and fun.

- 1. INSPECT.**  
After leaving a lake or stream, inspect your boat, engine, trailer, anchor, waders, and other fishing and boating gear for mud, water, and vegetation that could carry aquatic invasive species.
- 2. CLEAN.**  
Completely remove all mud, water, and vegetation you find. Boaters should use a pressurized power sprayer, found at most do-it-yourself car washes. The hot water helps kill organisms and the pressure removes mud and vegetation. No need to use soap or chemicals.
- 3. DRY.**  
Aquatic invaders can survive only in water and wet areas. By draining and drying your boat and fishing equipment thoroughly, you will kill most invasive species. The longer you keep your boat, trailer, waders, and other equipment outside in the hot sun between trips, the better.

**STOP AQUATIC  
HITCHHIKERS!**





## **HATCHERIES**

Big Spring Trout Hatchery  
Route 1 Box 1670  
Lewistown, MT 59457  
(406) 538-5588

Giant Springs Trout Hatchery  
4801 Giant Springs Rd  
Great Falls, MT 59405  
(406) 452-5734

Sekokini Springs Hatchery  
490 North Meridian Road  
Kalispell, MT 59901  
(406) 857-3744

Bluewater Springs Trout Hatchery  
PO Box 423  
Bridger, MT 59014  
(406) 668-7443

Jocko River Trout Hatchery  
206 Hatchery Lane  
Arlee, MT 59821  
(406) 726-3344

Washoe Park Trout Hatchery  
600 W Pennsylvania St  
Anaconda, MT 59711  
(406) 563-2531

Flathead Lake Salmon & Rose Creek  
Hatchery  
100 Spring Creek Road  
Somers, MT 59932  
(406) 857-3744

Miles City Fish Hatchery  
PO Box 756  
Miles City, MT 59301  
(406) 234-4753

Yellowstone River Trout Hatchery  
PO Box 508  
Big Timber, MT 59011  
(406) 932-4434

Fort Peck Hatchery  
PO Box 167  
Fort Peck, MT 59223  
(406) 526-3689

Murray Springs Trout Hatchery  
5475 Sophie Lake Road  
Eureka, MT 59917  
(406) 889-3489



Like us on Facebook and  
see where we've been and  
what's new at the hatcheries.

## **Big Springs Trout Hatchery**

*Sam Stafslie, Fish Culture Specialist*

Big Springs Trout Hatchery had another successful year raising fish from eggs all the way up to 13 inches. Big Springs Trout Hatchery raised five different strains of rainbows trout and Brown Trout. We stocked a total of 1,318,335 fish into various urban ponds and reservoirs throughout the state which totaled 122,436 pounds.

The hatchery stocked 934,462 rainbows from 2-7 inches and 159,615 rainbows from 8-13 inches, along with 59,247 Brown Trout. The hatchery also aided the Flathead Lake Salmon Hatchery in stocking 165,011 Kokanee Salmon into reservoirs around central Montana.



*Above & Below: Big Springs Hatchery informational kiosks.*

While visiting, you may notice tall fences outside the raceways with wire strung over the top to help keep avian predators out such as herons. The doors on the buildings are also locked, not to keep people away but to help protect our fish from harmful or dangerous aquatic pathogens and parasites that occur naturally in streams and lakes, including Big Spring Creek located next to the hatchery. Although these pathogens occur

naturally, fish have built up immunities against them. In a hatchery, fish are in unnatural settings and are much more crowded and more susceptible to these pathogens. Major parasites such as whirling disease that are found in Big Spring Creek would cause us to euthanize our fish if they became infected and keep us from stocking fish for a couple years. Parasites and bacteria can survive out of water longer than people think and someone could unknowingly transfer one of these pathogens into

a raceway and cause the fish to get sick. Since the doors are closed and the staff might not be around to give a tour, we still like the public to know what we do. This summer three new kiosks were installed that describe what we do here, from gathering eggs and spawning in the wild to loading fish into our trucks and stocking. Each of these kiosks has pictures along with descriptions that illustrate each of the functions that are necessary to raising and stocking fish. One of these kiosks has brochures that include fishing regulations, fishing locations in central Montana, and the current fishing newsletter.

While visiting Big Springs, if you see a worker and would like a tour, please feel free to ask and they will be glad to show you around.





**Bluewater Springs Trout  
Hatchery**

*Dave Ellis, Fish Culture Specialist*

In 2016, Bluewater continued to provide fish for approximately 55 waters scattered throughout the southern portions of the state. The hatchery raises four different strains of Rainbow Trout including Arlee, Arlee/Erwin crosses, Eagle Lake, some California Eagle Lake, and Gerrard Rainbows. These fish are stocked into reservoirs, lakes, and ponds to maintain sport and urban fisheries. The hatchery also over-winters the Large and Smallmouth Bass broodstocks which arrive from the Miles City Fish Hatchery in September. Bass are maintained with Rainbow Trout forage throughout the winter until they are returned to Miles City Hatchery for spawning in April.

This year, some of Bluewater Hatchery production was redirected to help cover losses from the Giant Springs Hatchery contamination incident. In addition to our normal planting schedule, we also planted some of Giant Springs Hatchery waters including McGregor Lake, Hauser Reservoir, Nelson Reservoir, Browns Lake, and Lewis and Clark Fairgrounds Pond in Helena.

We raise a variety of strains of Rainbow Trout depending on what characteris-



*Aerial Picture of Bluewater Hatchery*

tics biologists are looking for. Each strain is a little different from the others. Some are longer lived than others, but may be not as aggressive. Others may grow faster, but don't live as long. Some biologists mix a variety of strains to meet a variety of management goals. In addition, we also raise a few triploid rainbows which are sterile so they cannot mix with wild populations. In the past, Bluewater Hatchery has also raised Grayling, Yellowstone Cutthroat, Kokanee Salmon, Golden Trout, and Pallid Sturgeon (experimentally).

In 2016, Bluewater Hatchery stocked 1,039,547 fish weighing 48,986 pounds and drove a total of 19,168 miles to deliver these fish to waters located in regions 1, 2, 3, 4, 5 and 7. Some of the major waters include: Georgetown Lake, Hebgen Lake, Clark Canyon, Canyon Ferry and Cooney Reservoirs. Approximately 189,441 fish weighing 826 pounds were produced to supply fish for bass forage.

In 2016, the hatchery was host to several homeschool and parks and recreation tours and many individual family visitors throughout the year. Please feel free to stop by and visit the fish hatchery. The hatchery is open to the public from 8:00-5:00 seven days a week.



*Happy fisherman at Cooney State Park. Picture by Mark Teynor, Cooney Park Ranger.*

**Flathead Lake Salmon & Rose  
Creek Hatcheries**

*Mark Kornick, Hatchery Manager*

Flathead Lake Salmon Hatchery and Rose Creek Hatchery, serve the Kokanee Salmon needs for the entire State of Montana. Two full-time employees operate the two distinct hatcheries roughly thirteen miles apart at the north end of Flathead Lake near Kalispell. In addition to the 1.7 million Kokanee Salmon stocked, these two facilities also produce up to 40,000 Eastern Brook Trout, 160,000 Arctic Grayling and over 100,000 Westslope Cutthroat. The Kokanee Salmon eggs originate from fish in Lake Mary Ronan that MT FWP staff spawns in a two week span in October. The wild source Arctic Grayling (Rogers Lake) arrive as eggs spawned by hatchery staff in early May. The Brook Trout are spawned from wild fish reared in private ponds in Northwest Montana. The Westslope Cutthroat arrives from the Washoe Park Hatchery in Anaconda. With the aid of a private hatchery on the shores of Ashley Lake near Kalispell, hatchery staff spawn, rear, and release a unique, locally-prized Rainbow/Cutthroat hybrid only back into Ashley Lake. This hybrid in the Ashley Lake environment has proven to support verifiable trophy-sized specimens in the 20+ pound class. Hatchery staff routinely handles 10-20 pounders in the two weeks of spawning in May.

Both the wild fish eggs and hatchery-sourced eggs are meticulously investigated yearly for a host of diseases to protect both the hatchery and the eventual lakes these fish are stocked into. Any particularly nasty diseases found in the parents and/or offspring may result in complete disposal of eggs or even hatched fish to avoid any moving of these bacterial or viral threats. Movement of fish or even fish parts, between waters is another possible vector for disease organisms. Requirements to drain and dry watercraft to avoid spreading of aquatic nuisance species also reduce the transfer of fish diseases. All waters and hatcheries of Montana and neighboring states (even Canada) benefit from this practice, so keep it up!



*Fish Panting Truck.*

**Fort Peck Fish Hatchery**

*Ryan Lott, Fish Culture Specialist*

The Fort Peck Multi-Species Fish Hatchery (FPFH) was built by the Army Corp of Engineers, and the facility is operated by Montana Fish, Wildlife and Parks (FWP). The hatchery went into production in January 2006. Encompassing nearly 100 acres of land, the hatchery is comprised of a 35,000 sq. ft. rearing/office building, 40 Walleye/Northern Pike rearing ponds totaling 45 surface acres, and eight 80 ft. raceways. The primary function of the FPFH is to provide fish for sport fishing and recreational opportunities to anglers in Northeastern Montana. Species raised at the FPFH include: Walleye, Northern Pike, Chinook Salmon and Rainbow Trout.

The 2016 spawning/stocking season at FPFH started in April with our annual Walleye/Northern Pike spawn and ended with a record breaking egg take for Chinook Salmon in October. Here is a brief overview of our effort throughout the season.

Walleye and Northern Pike spawning activities started pretty early in 2016. With the combination of a mild winter and a warm early spring, we were able to start setting up the spawning operation at the end of March



## FISHING NEWSLETTER 2017

and did our first Northern Pike and Walleye spawns April 1<sup>st</sup> and 2<sup>nd</sup>. We finished up with the last spawn on April 21<sup>st</sup>. We collected a total of 2.5 million Northern Pike eggs and stocked 930,000 fry and 25,000 fingerlings into various ponds and reservoirs in FWP's regions 6 and 7. We spawned approximately 543 female Walleyes for a total of 79 million eggs, with 39 million eggs at FPFH and 40 million at Miles City State Fish Hatchery. FPFH stocked 8.2 million Walleye fry into our 40 rearing ponds which included both diploid (fertile) and triploid (sterile) fry. Approximately 1.5 million fingerlings (1"-2") and 11.7 fry were stocked at various locations throughout Fort Peck Reservoir. FPFH also stocked 265,408 fingerling Walleye in various lakes and reservoirs throughout FWP's regions 4, 5, and 6 including triploid (sterile) Walleye into Bighorn Lake.

FPFH stocks various ponds and reservoirs with both fingerlings (2"-4") and catchable (7"-9") Rainbow Trout throughout FWP's region 6. The majority of our fingerlings stocked are done by helicopter. We stocked 37 ponds for a total of 84,500 Rainbow Trout in just less than 12 hours of flight time. The helicopter plants are vital tool for us at the hatchery because if we had to stock our fingerling by truck it would take us over 30 days to reach all of these ponds throughout the stocking season. FPFH also stocked 21,153 catchable (7"-9") Rainbow Trout in various locations in region 6.

Black jaw fever swept over the Fort Peck area starting at the beginning of July and ran thru October. Now don't be alarmed, this was a good sickness to have, as it relates to the great Chinook Salmon fishing that took place on Fort Peck Reservoir. The adult salmon numbers for the spawning season never slowed up either. We spawned a total of 401 female Chinook Salmon averaging about 13 lbs. The great adult numbers for the spawn gave us a record breaking total of 1.4 million eggs collected during the spawning efforts. These eggs will hatch and grow throughout the winter months and will be released as fingerlings (4"-5") at the beginning of June.

If you would like to keep track of FPFH and



*Above: Spawning activities at Fort Peck Hatchery.*





*Above: Air spawning Chinok Salmon at Fort Peck Reservoir.  
Below: Giant Springs Hatchery puts fish into the raceways after disinfection*



FWP hatcheries stocking numbers and locations, you can go to FWP's website and click on the fishing tab, then the fish stocking icon. There is also information on past stocking records.

Our visitor center is open 7:00am to 4:00pm Monday thru Friday, and 8:00am to 5:00pm Saturday, Sunday and Holidays. Tours are given by appointment only, by calling (406) 526-3689 with usually one to two days advance notice.

### **Giant Springs State Fish Hatchery**

*Matt Wipf, Fish Culture Specialist*

Closing statement from Matt Wipf 2015 Fisheries Newsletter: *"At the close of 2015, Giant Springs Trout Hatchery is almost fully supplied with fish for the 2016 stocking season, so look for us as we come to a lake near you"...* little did we know what was in store for Giant Springs State Fish Hatchery.

In May of 2016 Rainbow Dam (administered by North Western Energy), the dam that is responsible for Rainbow Reservoir, had an electrical failure that resulted in a back flood of the reservoir subsequently flooding Giant Springs Fish Hatchery's exterior raceways. In the raceways were 450,000 unsuspecting Rainbow Trout and 50,000 Brook Trout. Because Rainbow Reservoir has tested positive for Whirling Disease, a disease that is lethal to trout, we had to consider all of our exterior raceways contaminated. The raceway flooding resulted in the destruction of 500,000 fish (30,000 lbs.).

After the initial clean up Giant Springs, Staff embarked on the daunting task of total exterior raceway disinfection. This was done by first, pressure washing each of the twenty four, 80ft. x 8ft. x 3ft. raceways and head canal that feeds the raceways their water. Next, we disinfected ALL exterior raceways, gear, and aeration towers. Then after a two week waiting period the water was turned back on and we were ready for fish...again.

Because of the contamination only a handful of reservoirs were stocked. Rainbow Reservoir, Giant Springs Family Pond, Tunis, Smith River, and Daily Lake near Yellowstone National Park were the only reservoirs stocked before the incident. After disinfection of the facility we were able to raise some fish for fall stocking. All in total this fall we stocked 96,058 Rainbow Trout into 12 lakes and ponds.

Currently, we are back in the full swing of things and close to having half a million fish on station. Now that the bad





*Giant Springs Hatchery new Visitor Center.*

news is out of the way lets discuss "The Good Stuff."

We have gained a new Hatchery Manager: Ryan Derr. Ryan has been with the department for just a bit over 10 years. We are glad to have Ryan as the manager and look forward to the future of the hatchery under his guidance.

During and after the disinfecting, hatchery tours still went on as planned. This year's scheduled tour numbers were amazing! We gave over 50 groups tours, totaling 1,245 visitors, which encompassed school groups (K-12), civic groups and the general public. One of our tours was to our Governor, Steve Bullock and his staff.

The Giant Springs Fish Hatchery Visitor Center re-model is now complete. Aside from the new t.v., show tank, sign, and a few metal fish, the entire remodel was done by Giant Springs Fish Hatchery staff Ryan Derr and Matt Wipf. All of the wood trim, frames, interpretive signs, ideas, and hands on flip tiles, and many more features were all done by Ryan and Matt. Perhaps the best part of the entire remodel was how our ideas all came to fruition through team work and hard work. The new visitor center is based on hatchery management in Montana through the years and is not only chock-full of new and old pictures but great informa-

tion for all ages.

I would be remiss if I were not to mention and thank all of the Montana Fish, Wildlife & Parks staff and volunteers who helped us to get through our spring incident and to help us go forward from the aftermath. The zeal and tenacity of those willing to help Giant Springs Fish Hatchery is gratefully appreciated and we are thankful for all the support and help that we have received this past year. All of the help that was given shows the strong intra-agency bond we have and all of the volunteers who dedicated their personal time shows us how near and dear we are to our local community. From the Giant Springs State Fish Hatchery staff we say, "Thank You."

### **Jocko River Trout Hatchery**

*Stephanie Espinoza, Fish Culture Specialist*

The Jocko River Trout Hatchery has been owned and operated by Fish Wildlife and Parks since the 1940's. Since its inception, we have striven for excellence in producing beautiful trout for your fishing pleasure. As a



*Jocko River Trout Hatchery staff members.*

brood facility, one of our main objectives is to maintain the health and genetics of the Arlee Rainbow Trout brood stock both now and far into the future. We began producing this Arlee Rainbow strain in the 1950's in hopes of creating a fast growing, very catchable sports fish, which is exactly what we did. Arlee Rainbow Trout are voracious, opportunistic feeders that grow quickly and put up a good fight when on the line.

Not only do we manage the brood stock for the state but we also have our own production goals. Annually we stock around 300,000 fish in 48 bodies of water

mostly in the northwestern part of the state. The production and stocking of Arlee rainbows plays an important role in fisheries management. First, they supplement sport fishing in popular lakes and reservoirs that receive a lot of angling pressure, also we stock fish in bodies of waters where fishing would otherwise not exist, providing more accessible fishing for the public, and we stock many fish in urban ponds and designated kid's fishing ponds to provide accessible and successful fishing for kids, which we feel is very important to get kids hooked on fishing to inspire the next generation of future anglers.



*Ron Snyder displaying brood stock at the Jocko River Trout Hatchery.*

You can find our rainbows in lakes, ponds and reservoirs managed by FWP all over the great state of Montana. We produce about 5.5 million eggs per year every spawn season and most of those eggs are shipped to other state fish hatcheries located throughout the state, where they hatch them, raise them to size and then stock them in waters in their respective regions.

We have had a great spawning season for 2016, which began the second week of October and lasts until the end of December. We complete a total of seven egg takes, spawning every other week, starting with Lot A on October 7<sup>th</sup> and finishing with Lot G on December 28<sup>th</sup>. In between spawn weeks we are busy picking eggs (removing dead eggs from the live ones) and shipping those eggs to other hatcheries, while also making rearing space for our own production and future brood stock in our hatchery building.

Every year we produce a substantial number of triploid eggs. A triploid fish has three chromosomes instead of two; almost all living things are diploid. This third chromosome renders the fish sterile while everything else about the fish remains normal. A triploid fish does grow larger than a normal diploid fish because once it

reaches sexual maturity the energy usually put towards reproduction is put instead into growth. We create a triploid egg by using pressure, the other method is to use heat. We have it down to a timed science where we catch the egg (post fertilization) during a specific time of cellular division, meiosis. During this time the egg would normally excrete a chromosomal polar body, but the 9500 psi of pressure from the mechanical hydraulic chamber keeps that third chromosome in, creating a triploid egg. Triploid fish then can be stocked with confidence in more sensitive bodies of water where fisheries managers and biologists wouldn't want the fish to naturally reproduce but would still like to provide fishing opportunities for anglers. Arlee Rainbow Trout are not stocked in rivers or streams or in any body of water where they could threaten the survival of native species.

We continue to operate more or less the same way as we do every year. We spawn in the fall, ship eggs, and recruit our production and brood fish for the year. In the winter we are caring for eggs, fry and fingerlings, getting them on feed and moving them to larger spaces as they grow. We do some stocking of fish through the ice starting January, but we really get rolling in the





spring to haul our fingerling (5-7 inches), catchables (7-12 inches), and our retired brood (12 to 30 inches) to the water for the fishing public. In the summer we are completing maintenance projects, participating in summer youth employment programs and conducting educational tours. We give tours throughout the year to all grades from pre-school to college. We feel there is a lot of value in teaching students and visitors all about the hatchery and our role in fisheries management and of course we love showing off our big fish! We also stock some fish in the fall after the water has begun to cool off and then we start the process all over again with spawning. During the spawn season we also hire a University intern, which is ideal because we have a lot of work to do and they gain valuable hands-on experience to supplement their education.

An exciting project we tackled this year was to combine our strain of Arlee Rainbow Trout with the Gerrard Rainbow Trout from the Murray Springs Hatchery

out of Eureka, MT. Near the end of the spawn season, we collaborated with the hatchery personnel at Murray Springs to have them collect some milt from their earliest spawning males, we then used that milt to fertilize eggs from our female Arlee's, and the combination was a success. We raised the new Gerrard/Arlee cross through the winter and summer and grew them to over five inches. We worked closely with the biologist Ladd Knotek and ended up putting the fish in Brown's Lake over by Ovando. The fish have an adipose fin clip so Mr. Knotek will be able to study their success/impacts to the fishery. We are always excited to collaborate with others in the department and provide our facility, resources or our working hours on any special research or projects that want to be pursued.

Our major construction project this year was installing an outdoor double vault toilet. Before the new addition, we had one single bathroom which was very inconvenient when we would have large tours at the hatchery; some of the tours would have over 150 kids. We are very glad to have upgraded facilities for the public that visits our hatchery.

Another big change for us here at our hatchery is that our manager, Ron Snyder, who has dedicated 34 years to Fish Wildlife & Parks and to the Jocko River Trout Hatchery, has hung up his waders. He retired at the end of December 2016. We are so excited for him, and while we miss his guidance and company, we wish him all the best!

The hatchery is open to the public daily and we welcome tours, just be sure to call ahead for scheduling. Happy fishing!





**Murray Springs Trout  
Hatchery**

*John Lord, Fish Culturist*

The Murray Springs Trout Hatchery was constructed in 1978 to mitigate for fishery losses in the Kootenai River that were caused by the US Army Corps of Engineers (Corps) construction of Libby Dam and the subsequent creation of Lake Koocanusa. Thus, stocking fish into Lake Koocanusa is the highest priority for the Murray Springs stocking program. Operating the hatchery is a cooperative venture between the Corps and the Montana Department of Fish, Wildlife & Parks (FWP).

Murray Springs maintains the Gerrard Rainbow Trout broodstock. The Gerrard is a unique strain of Rainbow Trout that evolved in Kootenay Lake, British Columbia where it preys primarily upon Kokanee Salmon. While most rainbow strains reach sexual maturity at age three or four years, the Gerrards in Kootenay Lake do not mature until they are five to seven years old. Although Gerrards are later-maturing, they also live longer than other types of Rainbow Trout. Gerrards that prey upon



fish can grow to a large size. In fact, Kootenay Lake anglers have landed Gerrard rainbows that have exceeded 20 pounds. We have confirmation that our hatchery-reared Gerrards have reached trophy size (22 inches in length or larger) in Lake Koocanusa, and in two other FWP Region 1 lakes.

Although FWP fish culturists maintain hatchery fish and stock them out, FWP fisheries managers and biologists set management goals for all State-managed waters across Montana. Thus, hatchery fish are a fishery management tool. The Gerrard's characteristics for being long lived, predacious and their ability to reach large size make them a desirable fish for some FWP fisheries management objectives. For example, Lake Koocanusa has an abundant population of Kokanee Salmon that range from 10 – 11 inches. The Murray Springs Hatchery staff annually release yearling Gerrards, which average seven inches in length, into Lake Koocanusa. One management objective is for the Gerrards to prey upon the Kokanee Salmon and reduce salmon numbers. With reduced numbers, the surviving Kokanee Salmon should have more food (zooplankton) available to them, and their growth rates should increase. A second management objective is to sustain a recreational fishery for trophy-sized Rainbow Trout.

During 2016, we stocked 129,376 Gerrard Rainbow Trout that weighed a total of 16,332 pounds. Of those, we stocked 68,419 yearling Gerrards into Lake Koocanusa. That number is more



*Eureka Kids Pond.*



than double what was planted into Lake Koocanusa during any previous year. All of those fish had their adipose fins (the small fleshy-fin located between the dorsal fin and tail) removed. Removing adipose fins was done to distinguish hatchery fish from wild rainbows. One fishing regulation for Lake Koocanusa requires anglers to release Rainbow Trout that are smaller than 22 inches and are missing their adipose fin. Anglers who fish Lake Koocanusa need to carefully examine their catch. Small chrome-colored Rainbow Trout can be caught incidentally while fishing for kokanee, and those rainbows can easily be mistaken for kokanee.

We also spawned wild redband Rainbow Trout at the Libby Field Station. The redband trout is Montana's only native Rainbow Trout. We incubated those eggs at Murray Springs, raised the redbands to three inches, and then stocked 1,175 redband trout into Howard Lake near Libby.

We planted 26 Northwestern Montana waters in all, which included three family fishing ponds. The family fishing ponds that we stocked are located in the Lincoln County communities of Eureka, Libby and Troy. Those ponds are within town limits so that young anglers can easily access them. We typically release retired brood fish and smaller catchable-trout into family fishing ponds. We smile at the thought of a child hooking a 25-inch long seven-pound trout, and hope that those kids will be part of the next angling generation. Family fishing ponds are nice settings for adults to spend time quality outdoor time with young anglers. Take a kid fishing, be a fishing mentor, and discourage excessive harvest so that the fishing resources are not negatively impacted by over-fishing.



*Murray Springs Rainbow Trout.*

The 2016 spawning season at Murray Springs ran from January 6 to March 30. During that twelve-week period, we handled 496 females, which were aged either six or eight years old, and averaged seven to eight pounds each. Our hatchery staff collected 1.8 million eggs that had a combined weight of 760 pounds. We kept most of those eggs to raise fish for Region 1 stocking objectives, and some eggs were set aside to create a new year-class of brood fish. We shipped a total of 317,319 eggs to three other FWP hatcheries, who in turn raised Gerrard Rainbow Trout that they distributed into 13 waters throughout Montana.

Fishermen who would like to pursue Gerrard

Rainbow Trout do not necessarily need to travel to Northwestern Montana. The FWP hatchery staffs at Bluewater Hatchery, Giant Springs Hatchery and Big Springs Hatchery stocked Gerrards in Regions 2, 3, 4, and 6. Waters stocked with Gerrard Rainbow Trout can be found online by at <http://fwp.mt.gov/>.

The Gerrard rainbow broodstock program was started at Murray Springs during 2013, and it is still being developed. As was mentioned above, the Gerrards mature two to three years later than other Rainbow Trout strains which require more rearing space in comparison to rainbow broodstocks that mature by the age of four years.

Another change to the Murray Springs program was to transfer our Westslope Cutthroat Trout production to another hatchery. This was done to prevent the inadvertent mixing of cutthroat trout genetics with those that are unique to the Gerrard rainbow.

**Washoe Park Trout Hatchery**

*Angela Smith, Hatchery Manager*

The mission of the Washoe Park Trout Hatchery (WPTH) is to maintain Montana's Westslope Cutthroat Trout conservation brood stock, known as the M012. The hatchery maintains the health and genetic integrity of the M012 brood stock and supplies eyed eggs to three other hatcheries in the state. The progeny of the M012 are used for multiple management objectives, including population management, urban fisheries, native species restoration and research. A second facet of the hatchery's mission is to provide public outreach and education. This mission is accomplished by various means including the maintenance of an exceptional interpretive center, classroom education, and hatchery tours.

In 2016, the staff at WPTH stocked 215,000 Westslope Cutthroat Trout, with a combined weight of 16,000 pounds and produced 1.7 million Westslope Cutthroat Trout eggs. The hatchery staff stocked over 100 water bodies of various types including large and small lakes, alpine lakes, urban fishing ponds and several streams for restoration projects. Stocking was mainly done by truck and helicopter, but fish were also carried by mules and horses into the backcountry.

The hatchery suffered no shortages this year and met all fish stocking and egg requests. Improved nutrition over the last two years has increased our overall eggs per female and the new changes to our spawning protocols significantly improved our percent eye-up to a consistent 85%. These improvements have allowed us to reduce our brood numbers and save thousands of dollars in feed costs over the last couple years.

Replacement of siding on the hatchery building and aeration tower was postponed due to a redirection of



*Above: Male and female Brook Trout preparing to spawn in the Washoe Hatchery's livestream display. Middle: Stocking trout into Rainbow Lake by mule train with FWP warden Ezra Schwalm. Bottom: Coming in for a drop to stock trout by helicopter in a mountain lake in the Beaverhead Range.*



capital maintenance funds this year. The isolation facility for incubating wild Arctic Grayling and westslope cutthroat eggs and rearing of fry for conservation and restoration projects was also postponed due to a lack of funding. We will continue the renovation of our popular visitor's center this year, as time and funds allow, and staff are replacing dated interpretive signs and renovating the outdoor kiosk. Feedback from the public has been very positive and we hope to hold an open house soon. The Washoe Park Trout Hatchery is open 365 days a year from 8am to 5pm. For questions about the hatchery or to schedule a group tour, please call 406-563-2531.





**Yellowstone River Trout Hatchery**

*Chris Phillips, Fish Culture Specialist*

2016 was another busy year at Yellowstone River Trout Hatchery. Spawning of the Yellowstone Cutthroat broodstock began in early February and continued through the end of March. We had a total of nine weekly egg takes producing slightly over 382,000 green eggs with an average eye up of 78 %.

The spring spawning season for grayling started in May which was very busy but unfortunately not very productive. These fish can really be inconsistent and somewhat finicky in their spawning time from one year to the next and this year was definitely a finicky one! The fluvial Big Hole grayling strain was spawned at both of the wild source locations. We first spawned at Green Hollow Reservoir on May 11<sup>th</sup> and again on May 22<sup>nd</sup>. The success rate was fairly good with a total of 136 pairs spawned between both days. This yielded 131,362 green eggs with an 85% eye-up.

We also spawned at Axolotl Lake on May 18th. We were only able to find eight ripe females which resulted



*Above: Spawning grayling at Mussigbrod Lake. Below: Spawning Grayling at Green Hollow.*

in a 0% eye-up. Emma Cayer and her crew re-set nets in the lake on two separate occasions (May 22<sup>nd</sup> and May 30<sup>th</sup>); however no ripe females were captured during both sets. We also assisted Jim Olson at Mussigbrod Lake with adfluvial grayling spawning. This was the second year of egg collection from this lake and once again we had great success. We spawned 65 pairs that produced slightly over 80,600 green eggs with a 90% eye-up. All of the grayling eggs from both of the spawning operations were transported to the hatchery isolation room and incubated to the eyed-up stage (eight to ten days). The eyed eggs were then distributed into remote stream-side incubators in the wild where they hatch, emerge and disperse themselves.

In June, hatchery personnel assisted with spawn-



ing wild Yellowstone Cutthroat Trout in Pebble Creek located within Yellowstone National Park. The eggs were brought back to the hatchery and placed into isolation during incubation and subsequent early rearing until they cleared fish health. As mature three and four year old adults they will be genetically infused into the Yellowstone Cutthroat broodstock here at the hatchery.

A collaborate effort began this year between the hatchery section and the fish health lab to experiment with fish milt cryopreservation techniques and procedures. The ultimate long-term goal is to establish an internal fisheries cryopreservation program that has the ability to collect and store milt from a variety of fish species within Montana. Thus far, members of the cryopreservation team have conducted five different trials on both coldwater and warmwater fish species. The success rate or “average egg eye up” thus far has increased quite significantly with each successive trial. The last trial was completed in October at the Jocko River Trout Hatchery using Arlee Rainbow Trout. The results were very promising with 48% - 76% eye-up on eggs fertilized with cryopreserved sperm. The next two cryopreservation trials that are planned include developing a protocol for shipping milt as well as starting to cryopreserve milt for long term storage and future use.

Our high mountain lake stocking via helicopter took place in mid-July. A total of 13 lakes located within the Absaroka -Beartooth Mountains and 1 Lake (Campfire Lake) in the Crazy Mountain Range were planted with 23,140 Yellowstone Cutthroat. Other Yellowstone Cutthroat Trout fish plants conducted this year include: Hyalite Reservoir, Daily Lake, Laurel Pond, Lake Elmo, Ross Reservoir, Broadview Pond, Trout Lake and Shilo Conservation Pond. This is the third year utilizing a new 4-section helicopter fish tank which is proving to really be useful in a variety of applications. The Region 5 pilot, Neil Cadwell continues to provide us with impeccable flying skill and talent and certainly is a large contributor to our stocking success.

With just **three easy steps**, you can do your part to help stop the spread of aquatic invasive species like plants, mussels and whirling disease:

**INSPECT.**

**CLEAN.**

**DRY.**

### 1. INSPECT.

After leaving a lake or stream, inspect your boat, engine, trailer, anchor, waders, and other fishing and boating gear for mud, water, and vegetation that could carry aquatic invasive species.

### 2. CLEAN.

Completely remove all mud, water, and vegetation you find. Boaters should use a pressurized power sprayer, found at most do-it-yourself car washes. The hot water helps kill organisms and the pressure removes mud and vegetation. No need to use soap or chemicals.

### 3. DRY.

Aquatic invaders can survive only in water and wet areas. By draining and drying your boat and fishing equipment thoroughly, you will kill most invasive species. The longer you keep your boat, trailer, waders, and other gear outside in the hot sun between trips, the better.



**STOP AQUATIC  
HITCHHIKERS!**





# FISHING NEWSLETTER 2017

## MONTANA FISH RECORDS

FISH	MT NATIVE	LENGTH (Inches)	WEIGHT	GIRTH (Inches)	SITE	ANGLER	BAIT TACKLE	DATE
<b>Arctic Grayling</b>	■	20	3.63 lbs.	11.7	Washkut Lake	Glenn Owens	Wet Fly	6/28/03
<b>Bigmouth Buffalo</b>	■	40.7	57.75 lbs.	32.5	Nelson Reservoir	Craig D. Grassel	Bow & Arrow	6/4/94
<b>Black Bullhead</b>		14.37	2.60 lbs.	11.5	Sartley Slough	Birrell White	Bait	6/20/09
<b>Black Crappie</b>		16.7	3.13 lbs.		Tongue River Reservoir	Al Elser		1973
<b>Bluegill</b>		11	2.64 lbs.	17	Pelee's Stock Dam	Brent Flathro	Worm	6/3/03
<b>Blue Sucker</b>	■	32.56	11.56 lbs.	17.09	Milk River	Dean Ambrister	Spinner	5/14/14
<b>Brewer's Trout</b>			9.06 lbs.		Lower Two Medicine Lake	John R. Cook		1940
<b>Brown Trout</b>			29 lbs.		Wade Lake	E.H. "Peck" Bacon		1966
<b>Bull Trout (Dolly Variant)</b>	■	37	25.63 lbs.	25		James Hyer	Trotting Line	1916
<b>Burbot</b>	■	39	17.08 lbs.	16.25	Missouri River Wolf Point	Jeff Eugene Iwen	Minnow	4/18/89
<b>Channel Catfish</b>	■	41.75	34.8 lbs.	25	Fort Peck Reservoir	Dan Davenport	Jig	7/26/13
<b>Chinook Salmon</b>		38	31.13 lbs.	26.5	Fort Peck Reservoir Face of Dam	Carl L. Niles	Diamond King Spoon	10/2/91
<b>Chum</b>		18.2	2.08 lbs.		Missouri River	Troy Holstein	Jig & Minnow	6/2/14
<b>Creek Chub</b>	■	11.0	.52 lbs		Harbaugh Bass Pond	William Bibeau	Worm	5/12/13
<b>Coho Salmon</b>		25.5	4.08 lbs.		Fort Peck Reservoir Face of Dam	Iven F. Sicht	Dartdevil	5/29/73
<b>Common Carp</b>		38	40.2 lbs.	30.5	Nelson Reservoir	Jared S. Albus	Bow & Arrow	5/24/98
<b>Cutthroat Trout</b>	■		16 lbs.		Red Eagle Lake	Wm. D. Sank		1965
<b>Emerald Shiner</b>		3.43	0.01 lbs.		Park Grove Bridge	Ike Braaten	Rapala	6/9/06
<b>Flathead Chub</b>	■	11.2	0.59 lbs.		Thomson Pond	Douglas Jordan	Worm	4/29/01
<b>Freshwater Drum</b>	■	29.5	21.59 lbs.	26.5	Fort Peck – Ghost Coulee	Matt Washut	Smelt	5/3/03
<b>Golden Trout</b>		23.5	5.43 lbs.	13	Cave Lake	Mike Malhi	Lure	7/16/00
<b>Goldeye</b>	■		3.18 lbs.		Nelson Reservoir	Don Newtvy	Jig/Power Crawler	7/4/00
<b>Green Sturgeon</b>		9.0	0.84 lbs.	9.87	Hudson's Pond	Bette Schenckling	Worm	5/25/09
<b>Kokanee Salmon</b>		26.8	7.85 lbs		Hauser Lake	John Bomar	Jig	9/23/03
<b>Lake Chub</b>	■	5.9	.075 lbs.	3.4	Coner Lake	James Cashell	Artificial Fly	7/23/17
<b>Lake Trout</b>		42.5	42.69 lbs.	31.5	Flathead Lake	Ruth Barber	Flatfish	6/23/04
<b>Lake Whitefish</b>		27	10.46 lbs.		Flathead Lake	Sean McDonald V	Jig	8/26/06
<b>Largemouth Bass</b>		22.5	8.80 lbs.		Noxon Rapids Reservoir	Darin Williams	Rubber Tube Bait	5/2/09
<b>Largemouth Sucker</b>	■	23.1	6.16 lbs.	14.0	Woodland Pond	Kevin Friley	Worm	6/27/08
<b>Longnose Sucker</b>	■		3.27 lbs.		Marias River Loma	Ray Quigley	Worm	5/8/88
<b>Mottled Sculpin</b>	■		0.05 lbs.		Best Creek (North of Nelson MT)	Brad Sullivan	Worm	7/30/01
<b>Mountain Sucker</b>	■	6.2	1.60 oz.		Beaver Creek Reservoir	Robert Garwood	Worm	4/23/01

# FISHING NEWSLETTER 2017

FISH	MT NATIVE	LENGTH (Inches)	WEIGHT	GIRTH (Inches)	SITE	ANGLER	BAIT TACKLE	DATE
<b>Mountain Whitefish</b>	■	23	5.11 lbs.	12.5	Hammer Reservoir	Walt Goodman	Rapala	10/10/67
<b>Northern Pike Minnow</b>	■	27.125	7.88 lbs.		Noxon Rapids Reservoir	Darrel Torggrimson	Lure	5/28/91
<b>Northern Pike</b>			37.5 lbs.		Tongue River Reservoir	Lance Moyer		1972
<b>Paddlefish</b>	■	77	142.5 lbs.	41.75	Missouri River Near Kipp Park	Larry Branstetter	Snagged	5/20/73
<b>Pale Sturgeon</b>	■		60 lbs.	27.5	Yellowstone River Near Sidney	Gene Sailer		5/13/79
<b>Pearmouth</b>	■	16.125	1.52 lbs		Clark Fork River	Mike Jensen	Artificial Fly	7/29/07
<b>Pumpkinseed</b>		9.5	0.95 lbs.		Upper Thompson Lake	Nathan Bache	Lure	7/30/06
<b>Pygmy Whitefish</b>	■	9.84	0.36 lbs.	6.3	Little Bitterroot Lake	Richard Geldrich	Maggot	2/13/10
<b>Rainbow Trout</b>		36.62	33.1 lbs.	27	Kootenai River David Thompson Bridge	Jack G. Houzel, Jr.	Lure	8/1/97
<b>Rainbow-Cutthroat Hybrid Trout</b>		35.75	30.25 lbs.	27.5	Ashley Lake	Pat Kelley	Bait	5/16/82
<b>Rocky Mountain Shiner</b>	■	6.5	0.10 lbs.	3.75	Lost Lake	Josh Ahles	Worm	8/21/01
<b>River Carpeucker</b>	■	24	6.95 lbs.	16.5	Fort Peck Reservoir	Brady Miller	Bow & Arrow	8/15/08
<b>Rock Bass</b>		10.8	1.31 lbs.		Lower Crazy Head Springs Pond	Kanson Campbell	Nightcrawler	4/26/14
<b>Sauger</b>	■	28.2	8.805 lbs.	15.1	Fort Peck Reservoir	Gene Moore	Whistler/Minnow	12/12/94
<b>Sauger</b>			15.65 lbs.		Fort Peck Reservoir Square Creek	Myron Kibler	Minnow	1/1/95
<b>Shorthead Redhorse</b>	■	20.25	4.68 lbs.		Marias River Near Loma	Ray Guligley	Worm	4/14/85
<b>Shorthead Gar</b>	■	35	7.41 lbs.		Fort Peck Dredge Cuts	Brandon Hancock	Bow and Arrow	5/16/13
<b>Shovelnose Sturgeon</b>	■	39.75	14.125 lbs.		Missouri River	Chad Buck	Nightcrawler	5/21/10
<b>Smallmouth Bass</b>		21.0	7.51 lbs.	19	Fort Peck Reservoir	Mike Olanick	Dropshot Worm	9/23/17
<b>Smallmouth Buffalo</b>	■	38	38 lbs.	29.25	Nelson Reservoir	Brady Miller	Bow & Arrow	4/28/07
<b>Spottail Shiner</b>		3.0	.02 lbs.		Tiber Reservoir	Joe Hagesguter	Worm	8/14/10
<b>Stonecat</b>	■	10	0.54 lbs.		Milk River	Dale Bjerga	Worm	6/16/96
<b>Tiger Muskellunge</b>		50	36.75 lbs.		Deadmans Basin Reservoir	Leo Carlin	Bait	9/2/12
<b>Tiger Trout</b>		20.6	4.04 lbs.	12	Bear Lake	Joe Sobczak	Wooley Bugger	2/9/97
<b>Utah Chub</b>			1.81 lbs.		Canyon Ferry Reservoir	Eugene Basian	Red Fint/Maggots	2/5/92
<b>Walleye</b>		35	17.75 lbs.	22	Tiber Reservoir	Robert Hart	Minnow	11/18/07
<b>White Bass</b>		17	2.80 lbs.	12	Missouri River South of Baitville	Vernon Pacovsky	Minnow	10/13/07
<b>White Crappie</b>		18.5	3.68 lbs.		Tongue River	Gene Bassett	Worm	5/10/96
<b>White Sturgeon</b>	■	75	96 lbs.		Kootenai River	Herb Stout		1968
<b>White Sucker</b>	■	21.625	5.33 lbs.	12.75	Nelson Reservoir	Fred Perry	Spear	2/10/63
<b>Yellow Bullhead</b>	■	14.0	1.62 lbs.	8.9	Minneapolis Reservoir	Frank Tepp	Lure	2/5/15
<b>Yellow Perch</b>		14.375	2.39 lbs.	12.1875	Lower Stillwater Lake	Josh Emmert	Jig	2/19/06



# 2017-2018

## Annual Fishing Newsletter



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