

# **Tongue River Drainage**

# **Physical Description**

The Tongue River drainage includes the Tongue River, Hanging Woman Creek, Otter Creek, Pumpkin Creek, Tongue River Reservoir, and numerous stock ponds and prairie streams. Land ownership in the drainage is mostly private and agriculture is the primary land use practice with 67,000 acres of irrigated land supporting cattle ranching and farming operations. The Fort Union Coal Formation underlies the watershed. The Tongue River originates on the eastern side of the Big Horn Mountains in north-central Wyoming (Sheridan County) and flows north through Southeast Montana (Big Horn, Rosebud, and Custer counties) to the Yellowstone River. The Tongue River has a drainage area of 5,379 square miles, with approximately 70% occurring in Montana and 30% in Wyoming. The total length of river in Montana from the state line to its confluence with the Yellowstone River, near Miles City, is 209 miles.

At Decker, Montana, near the Wyoming/Montana border, Tongue River Dam (river mile 189) creates Tongue River Reservoir, a mainstem reservoir that can store 79,071 acre-feet of water. Historically, the Tongue River in Montana has been divided into five segments by four dams. There are three irrigation diversion dams: (1) Tongue and Yellowstone (T&Y) Diversion Dam at river mile 20; (2) SH Diversion Dam, which is no longer in existence (river mile 51); and (3) Mobley Diversion Dam, which is mostly gone and does not restrict fish passage (river mile 105); and one flood control dam, Tongue River Dam (river mile 189). There is a thermally unique sixth river segment created by hypolimnetic releases out of Tongue River Reservoir. This coldwater segment is approximately 10 river miles long and ends downstream of the dam near the Rosebud/Big Horn County line (river mile 179).

No natural lakes are found within the drainage. There are, however, numerous stock ponds and some are stocked with fish and managed for public access by FWP.

# **Fish Management**

The Tongue River and its tributaries are home to many warmwater and a few coldwater fish species. Native fish species include sauger, shovelnose sturgeon, channel catfish, burbot, freshwater drum, goldeye, smallmouth buffalo, bigmouth buffalo, blue sucker, river carpsucker, shorthead redhorse sucker, white sucker, longnose sucker, longnose dace, creek chub, lake chub, brassy minnow, fathead minnow, sturgeon chub, flathead chub, western silvery minnow, sand shiner, emerald shiner, and stonecat. Common carp, plains killifish, black bullhead, yellow bullhead, and green sunfish are introduced species that can be found in many parts of the drainage. Largemouth bass, smallmouth bass, walleye, white crappie, black crappie, northern pike, yellow perch, rock bass, pumpkinseed, and spottail shiner have been stocked or illegally introduced in Tongue River Reservoir. Brown trout and rainbow trout have been stocked in the tail water below Tongue River Dam.

Electrofishing is conducted on various reaches of the Tongue River to assess the current relative abundance, population structure, and body condition of fish populations in the river and monitor changes over time. Annual trend sampling on Tongue River Reservoir includes gillnetting, trap netting, and seining to assess relative abundance, condition, and length frequency of game fish in the reservoir. Stock ponds in the <a href="Regional Pond Fishing Program">Regional Pond Fishing Program</a> are sampled approximately every three years to evaluate the status of the fisheries and ensure a catchable stock of fish is present.

A variety of fish species are available from FWP hatcheries for stocking into ponds and Tongue River Reservoir, including walleye, rainbow trout, smallmouth bass, and largemouth bass. Catchable size trout are also stocked annually in the coldwater stretch of the Tongue River below the reservoir. The statewide wild fish transfer policy also allows regional staff to transfer a variety of species from source ponds with good populations to receiving ponds with fisheries that have suffered due to winterkill or drought. Species typically stocked through wild fish transfers include northern pike, yellow perch, black crappie, white crappie, channel catfish, and bluegill.

The Tongue River drainage offers many public ponds and private ponds with public access that are managed as a fishery in the Regional Pond Fishing Program. These waters are stocked primarily to provide a family fishing opportunity. The program is offered to landowners as a public relations opportunity to provide a fishery for the surrounding community. If the landowner allows free public access to the pond FWP will stock and manage the fishery. Anglers are required to obtain landowner permission each time they want to access the fishery. Rainbow trout, largemouth bass, yellow perch, northern pike, and crappie dominate the species available in these systems. Fish populations are established or supplemented when needed through stocking from a state hatchery or by wild fish transfers from another fishery within the region.

Tongue River Reservoir ranks 24<sup>th</sup> in the state and 2<sup>nd</sup> in FWP Region 7 for <u>angler pressure</u>. Due to crowding at boat ramps, at the campground, and on the reservoir, fishing tournaments at Tongue River Reservoir are not permitted from May 1 to September 15. Overall fishing pressure is relatively low on the Tongue River due in large part to lack of public access to the river. Twelve Mile Fishing Access Site (FAS), river mile 20 is one of the few publicly accessible sites on the Tongue River and is a popular destination for local and out of state anglers. Due to crowding issues at Twelve Mile FAS there is a special regulation limiting the number of lines an individual angler can fish. Stock ponds and prairie streams in the Tongue River drainage have low angling pressure.

#### **Habitat**

The Tongue River has a constrained riparian corridor with much of the floodplain developed for irrigated agriculture. The river upstream and downstream of Tongue River Reservoir has more rocky substrates than downstream reaches and is influenced by development of the area's coal resources, a major industry in the watershed. Numerous areas in the Tongue River watershed have been permitted or developed for coal bed methane or coal extraction. The extraction of coal bed methane involves pumping groundwater from the coal seams. Much of this water is high in salts and is discharged into the Tongue River upstream and near Tongue River Reservoir. Since 2018, methane extraction is largely absent due to suppressed market prices and low demand for gas resources. Increased extraction is possible in the future when markets become financially lucrative again.

Habitat in the upstream end of Tongue River Reservoir has abundant submerged woody vegetation from the dam rebuild in 1998 that raised the water level in the reservoir by six vertical feet. The upstream end of the reservoir has increased turbidity because of turbid river inflows. The middle and lower end of the reservoir have abundant rocky habitats and increased water clarity. Submerged aquatic vegetation is common in the bays throughout the reservoir.

Approximately 10 river miles downstream of Tongue River Reservoir Dam is a thermally unique reach due to cold water releases from Tongue River Reservoir. This stretch of river supports a stocked rainbow

trout and naturally reproducing brown trout population. The Tongue River in the Birney and Brandenburg area is characterized by a dense cottonwood riparian corridor and has deeper holes that are believed to overwinter fish. Downstream of Brandenburg, irrigation has an increasing influence on instream flows and riparian habitat. Downstream of T&Y Diversion Dam, chronic dewatering from irrigation in July and August is a major habitat concern.

Historically, irrigation diversion dams were barriers to upstream fish migrations and fragmented fish populations in the Tongue River for the last 100 years. In addition, the gravity fed irrigation canals were responsible for entraining fish. Beginning in 1999, large collaborative efforts between irrigators, non-government organization (NGOs), and federal and state agencies began making the diversion dams more favorable to upstream fish migrations. The T&Y Canal headgate was rebuilt in 1999 and included fish louvers to minimize fish entrainment. The SH Diversion Dam was removed in the fall of 2009 and the Muggli Bypass channel was constructed the fall of 2008 around T&Y Diversion Dam. In 2005, water withdrawals from the Mobley Diversion Dam were transferred to pumps. The dam is no longer maintained and damage from ice scour and high flow has created some fish passage opportunity. The combination of these habitat improvement efforts provides upstream passage for an additional 165 river miles of the Tongue River for many native fish species from the Yellowstone River.

Although the drainage is predominately rural, habitat changes throughout the Tongue River drainage have impacted the basin since human settlement. The use of rock or concrete rip rap to protect city infrastructure, roads, bridges, homes, and farmland/ranchland has restricted the natural function of the river and streams in this drainage. The installation of culverts, fords, and dams has similar impacts on the function of the waterways and upstream migration of fish. These developments have also impacted the ability for the river and streams to migrate laterally and interact with its historic floodplain.

Most private and public ponds in the drainage are limited by water depth. Most have a maximum depth of 10 to 11 feet which is marginal for overwintering fish during winters with sustained snow accumulations. The severity and prevalence of winterkills has been and can be reduced by installing windmill aerators. Some landowners and the Bureau of Land Management (BLM) have installed aerators at their expense to reduce winterkill occurrences. FWP has refrained from installing aerators because of the time and expenses required to service and maintain the structures.

### **Special Management Issues**

Recreational and resource management in the Tongue River drainage requires involvement with many agencies, entities, and user groups. Reservoir issues include involvement with Department of Natural Resources Conservation (DNRC), the Decker Coal Mine, Cloud Peak Energy, and adjacent landowners. The Tongue River water users group (representatives from agencies and irrigation districts), Bighorn, Rosebud, and Custer county conservation districts, Northern Cheyenne and Crow Indian Reservations as well as ranchers and farmers are all stakeholders in resource management decisions in the Tongue River drainage.

#### **Coal and Coal Bed Methane Extraction Activities**

The Tongue River Basin is rich with coal deposits and associated extraction activities, such as strip mining, methane wells, pipelines, and railroads, challenge management of the Tongue River water and aquatic resources. Construction of a Tongue River Railroad has been proposed numerous times to

facilitate increased coal extraction from current mines (Decker, Spring Creek) and proposed mines (Youngs Creek, Otter Creek). Coal extraction activities have declined in recent years and while current market forces make the future for coal mining uncertain management of wastewater from past development is ongoing. Water discharged from methane wells into the Tongue River and tributaries continues to have long-term impacts on irrigation operations, which have not been adequately quantified. Management of the Tongue River and fisheries requires involvement with all extraction issues as they evolve to ensure the aquatic resources are understood and evaluated by resource and political decision makers.

# **Instream Flows and Water Compact**

Securing more appropriate instream flow rights, particularly at the confluence of the Tongue and Yellowstone rivers, has been a management concern since instream flows were established in the late 1970s. Despite requesting 190 cfs in September to February, 525 cfs in March to April, 600 cfs May to July 15, and 225 cfs July 16 to August, only 75 cfs was granted per month through the 1978 water adjudication process. This results in occasional dewatering of the Tongue River downstream of the T&Y Diversion Dam during the month of August. The flows requested by FWP in 1977 were intended to facilitate and maintain spawning migrations and adequate rearing conditions for numerous native fish species found in the Tongue and Yellowstone rivers. The states of Montana and Wyoming concluded a lawsuit in 2018 regarding the use of water and interpretation of the Tongue River Water Compact between the states. Two conditions of the settlement are annual employment of water commissioners in Montana to adjudicate water usage and installation of water meters on every irrigation structure. Given this court dictation and potential change in water use and operation through commissioners, FWP needs to reiterate fisheries needs into the process. As a result of the settlement Wyoming contends when Montana makes a call for water their first response will be inspection of flows at the Tongue-Yellowstone confluence. If Tongue River water is reaching the Yellowstone River, they do not have to honor Montana's call for water. This change may have additional consequences and could dewater 20 river miles downstream of T&Y Dam. FWP will continue to pursue opportunities to improve flow in the Tongue River for both fisheries and irrigation needs.

# Operation of Muggli Bypass Channel and T&Y Canal Fish Screens

During the late 1990 to 2000s considerable efforts through partnerships between irrigators and multiple state and federal agencies improved fish passage at diversion dams and reduced canal entrainment through the following projects: 1) rebuilding T&Y headgate with fish screens in 1997, 2) removal of SH Diversion Dam in 2007, 3) completion of the Muggli Bypass Channel at T&Y Dam in 2008, and 4) converting flood irrigation to pumping from the Mobley Diversion Dam in 2005. These efforts have dramatically improved spawning migrations of Yellowstone River fish up the Tongue River during months of adequate flow. Six fish species (bigmouth buffalo, freshwater drum, goldeye, smallmouth buffalo, sturgeon chub, and western silvery minnow), historically restricted to 20 miles of the Tongue River downstream of T&Y Dam have successfully migrated upstream of T&Y Dam. Three of these species have migrated up to Tongue River Dam at river mile 168. Despite increased fish passage through the Muggli Bypass Channel by most species, shovelnose sturgeon have not used the channel. Although these historically significant projects have been completed to benefit the fisheries, they have not been

secured for the long-term. Specifically, operation of the Muggli Bypass and use of the T&Y Canal fish screens needs to be memorialized through a memorandum of understanding (MOU), lease, or incorporation of an operation plan into the irrigation districts bylaws. This will ensure the long-term operation and continued fishery benefits beyond the current irrigation ditch operator and FWP staff. Establishing this "document of operation" for the bypass and fish screens will establish a need and convey the importance of the structures to water commissioners and other water users. Recent documentation of pallid sturgeon using the lower Tongue River in 2020, 2021, and 2022 increases needs for discussions to alter the Muggli Bypass Chanel to provide upstream passage for both sturgeon species.

#### Post Intake 5-year Telemetry Fish Passage Monitoring

Completion of the fish bypass channel at Intake on the Yellowstone River is expected to substantially alter abundance and composition of the lower Yellowstone River and its tributaries, including the Tongue River. FWP has already begun a telemetry study of five native species (pallid sturgeon, shovelnose sturgeon, paddlefish, sauger, and blue sucker) in the lower Yellowstone and tributaries to compare post-construction fish passage to fish passage documented during a preconstruction study completed 2015 to 2018. Current telemetry efforts are expected to occur through 2025 and will be used to identify fishery management needs as populations adjust to improved passage at Intake.

### Standardized Larval Sampling

Annual sampling began in 2019 to document larval fish production of Acipenseriform larvae (pallid sturgeon, shovelnose sturgeon, and paddlefish) at two locations upstream of Intake Dam. One site includes samples from the Tongue River and Yellowstone River both upstream and downstream of the Tongue River confluence. The second site includes the Powder River and Yellowstone River upstream and downstream of the Powder River. Crews from Bureau of Reclamation (BOR) will also collect larval samples upstream of Intake Dam, downstream of Intake Dam, within the bypass channel and within the lower Yellowstone River irrigation canal. Efforts and data collected by both agencies will be summarized collectively to evaluate spawning activities for all three species. Larval samples will be genetically identified to species by one of two labs.

#### Tongue River Reservoir Crappie

Abundances of adult crappie at Tongue River Reservoir have been slowly declining over the last 20 years. Declines have been documented in annual FWP fish sampling and noticed by anglers targeting crappie. The primary fisheries management goal at the reservoir is improving and sustaining the unique crappie fishery that has historically attracted anglers from all over Montana and Wyoming. A targeted minimal goal for crappie catches in overnight gill nets, that historically equated to good angler catch at Tongue River Reservoir, is 11.6 total crappie/gill net. Tools to reach this goal may include developing a crappie stocking program through the Miles City Hatchery, temporarily reducing the walleye stocking rates when walleye abundances are at or exceed 6.0/gill net, and increased angler harvest limits when the three-year average gill net catch rate exceeds long-term abundances for predatory fish species that

are not stocked annually (smallmouth bass for example). Additional efforts are underway to understand the causes for the crappie decline and to implement actions to improve the population.

In general terms, like most crappie populations, the population at Tongue River Reservoir has had variable recruitment with missing year classes and is carried by a few year classes with strong recruitment success at any given time. The observed decline is mostly attributed to white crappie reductions, as black crappie abundances have declined but to a lesser degree. Despite reduced abundances of white crappie, positive metrics include good body condition at all size categories and representation of multiple year-classes including old fish (up to 8 and 9 years old), both indications that overharvest by anglers has not caused the declines and forage for growth is not a limiting factor.

The first significant drop in white crappie abundances occurred during the rebuild of Tongue River Reservoir Dam to replace the condemned spillway from 1996 to 1999. The new dam also increased the reservoir storage capacity by four vertical feet or from 68,040 acre-feet to the current capacity of 79,071 acre-feet. Construction required reservoir water levels at a fraction of the overall storage capacity. Following completion of the dam in 1999 white crappie abundances never returned to preconstruction numbers. Before construction (1964 to 1995), during construction (1996 to 1999), and after construction (2000 to 2021) the average number of white crappie per gillnet was 18.5, 6.0, and 7.8, respectively.

The exact reason for the white crappie declines is unknown but likely the result of a combination of environmental changes and reservoir water operation changes the last 20 years. Prior to the dam rebuild, the condemned spillway required a water management plan that significantly reduced water levels in the fall to maximize spring runoff storage capacity and minimize use of the spillway. This resulted in very few years of spill and short durations of water flowing over the spillway between 1964 to 1996. The annual fall water reductions allowed terrestrial vegetation growth on exposed shorelines which became flooded vegetation in the spring. This resulted in a very productive system for fish because it provided hiding cover and a mini-nutrient upsurge every spring just before and during larval crappie production. The lack of spillway releases likely minimized adult and larval fish losses from entrainment out of the reservoir.

After the dam rebuild both the water operation plan and environmental conditions in the reservoir changed dramatically. Reservoir water levels are more static, decreasing the annual fall vegetation growth and the corresponding spring nutrient upsurge and available hiding cover for juvenile fish. The increased storage capacity and new high water level floods the dense cottonwood, ash, and willow stands on the upper end of the reservoir. The sand/silt delta at the upper end of the reservoir, that historically was annually exposed in the spring and fall periods is now rarely exposed. The flooded trees decrease river turbidity the lack of exposed delta means wave action does not stir up sand and silt into suspension like it did previously in the upper portion of the reservoir. Literature demonstrates that white crappie populations thrive in turbid water conditions and this shift towards an a more oligotrophic reservoir may be the underlying cause of declines in white crappie recruitment and abundances.

The new operation plan and new dam eliminates the need for substantial fall reservoir drawdowns to create spring runoff storage capacity. This results in a higher target water elevation before winter ice-up and has reduced the reservoir's spring runoff storage capacity by approximately 9,936 acre-feet when comparing pre to post dam rebuild. Using reservoir storage capacity numbers at the end of May and June, pre-dam rebuild water spilled over the primary spillway 2 out of 57 years (3.5%), post rebuild spillway flows occured 18 out of 23 years (78%). Water flowed over the primary spillway every year

between 2007-2021, the average number of days of overflow was 41 consecutive days each year. Maximum duration was 63 days in 2007 with an average spill depth of 5.5 inches and maximum depth of 22.6 inches over the primary spillway crest. Literature shows that white crappie are more transient than black crappie and more likely to be entrained from reservoirs during spill events. The post dam operations plan and associated frequency and duration of spillway releases may be a contributing factor to white crappie declines the last 20 years.

Another change in the last twenty years includes saline inflows into the river and reservoir from coal bed methane extraction between approximately 2000 to 2010. Despite the collapse of the methane industry, saline inputs into the stream and reservoir continue, as sodium bicarbonate accumulated in the soils along the river, in settling ponds, and direct irrigation on pastures continues to leach into the river and reservoir during rain/snow events. East and West Decker Coal Mines also continue to discharge high salinity water into the reservoir. Direct impacts of high salinity water on the fishery are unknown but could impact larval fish development and cause a shift in the zooplankton community which is the primary forage source for crappie.

The most recent change impacting water operations at Tongue River Reservoir is the 2018 Supreme Court Settlement of a lawsuit over the 1950 Yellowstone River Compact that includes water in the Tongue River. The settlement reduces flexibility of water level operations at Tongue River Reservoir. For example, if the reservoir is not full and Montana makes a call on Wyoming's post-1950 water rights, Wyoming will claim Montana wasted water and is not obligated to honor the water call. In broad terms, it requires storing fall to pre-ice and early spring inflows which reduces spring runoff storage capacity and increases May-June spillway flows. This is misfortunate because any reduction in frequency or number of days the spillway flows could reduce crappie losses over the spillway. In years when environmental conditions are correct or as an experiment, reduced spillway flows could be accomplished by one or a combination of the following: 1) experimentally reducing the operation plan's pre-winter elevation from 3417.5 feet to 3413.1 feet (four vertical feet) which increases spring runoff storage capacity to near pre-dam rebuild conditions, 2) increasing the use of one or both outlet tunnels simultaneously in the spring prior to spillway flow events (particularly when water elevations are within 1 to 2 feet of spillway crest and snow pack forecast demonstrates significant pending inflows), and 3) maximizing outlet tunnel flows simultaneously to reduce volume and duration during spillway flow events. The first action has a secondary benefit of increasing potential for fall vegetation growth on exposed shorelines for a mini-spring nutrient upsurge and increasing fall and early spring wave action and turbidity at the delta area of the reservoir, both perceived as beneficial conditions for white crappie.

FWP will continue to monitor the situation, identify causes for the decline, and explore options to increase and stabilize the white crappie population. Actions already initiated in response to the declining population includes: 1) adding trap netting in 2014 as an annual sampling method to increase crappie sample sizes, 2) differentiate annual production of young-of-year black and white crappie, 3) not using crappie from Tongue River Reservoir for wild fish transfers to other waters, 4) reducing the daily crappie limit and possession limit from 30 daily/60 in possession to the Eastern Fishing District standard of 15 daily/30 in possession in 2022, 5) fish sampling before and during primary spillway releases to quantify presence and degree of fish losses from the reservoir, 6) communication with DNRC and dam operator to explore water management practices that reduce the frequency and duration of primary spillway outflows to reduce fish losses, 7) explore hatchery stocking (establish a crappie brood) or wild fish transfer options for white crappie to Tongue River Reservoir, 8) conduct angler creel surveys in near

future to understand angler perceptions, desires, and expectations for the crappie fishery, and 9) reduce annual walleye stocking rates for a few years to reduce predation on young-of-year and juvenile crappie.

### Sauger in Tongue River Reservoir and Tongue River Upstream

A small population of sauger exists in the reservoir and Tongue River upstream to the state line. This small population is remnant of a large population that existed into the 1970s following an adult stocking effort in the river by Wyoming in the mid-1960s. Sauger are native to Montana and are classified as a Species of Concern. Given this designation and a very small population the daily and possession limit was reduced in the reservoir and Tongue River upstream in 2012 to help preserve the population while allowing some consumptive harvest. Future studies should evaluate the size of the sauger population and dynamic movements between the river and reservoir habitats. Current river studies indicate sauger occupy the river during the open water months and anecdotal angler harvest events suggest they retreat to the upper end of the reservoir during early winter months. This information along with additional studies will inform future management actions to sustain and potentially increase the sauger population.

#### **Live Bait Fish Restrictions**

The ever increasing and approaching risks of AIS, pathogens, and illegal introductions led to changes in live bait fish regulations in 2016. The goals were to maintain live bait fish opportunity for anglers, improve bait species identification, increase awareness of AIS, and proactively reduce the potential risk of spreading AIS, pathogens, and illegal introductions. While working through public comments and observing current live bait use at Tongue River Reservoir it became obvious the new regulations created additional concerns due to the source waters and associated species being used at Tongue River Reservoir. Specific challenges for anglers using live bait fish at Tongue River Reservoir include: 1) remote location of reservoir with very limited bait rich water supplies, 2) many anglers are nonresidents from Sheridan Wyoming (20 miles away) that cannot import or transport live bait fish across the state line, and 3) the marina is frequently closed during the winter months when live bait fish are the only practical method for game species like pike and walleye. The most reliable bait source available under the new regulations is from the Yellowstone River near Billings. Three species (western silvery minnow, plains minnow, and emerald shiner) of the 10 live bait fish species allowed in the Eastern Fishing District regulations do not exist in Tongue River Reservoir or the Tongue River upstream of the reservoir. Risk of introduction of these three species to the reservoir warranted a reduced list of species allowed for bait fishing in Tongue River Reservoir and the Tongue River upstream of the reservoir.

### **Tongue River Reservoir Fishing Contest Restrictions**

Due to ongoing interest in fishing contests on Tongue River Reservoir, FWP requires the following stipulations for most fishing contests. Depending on the type of fishing contest and potential impacts from a contest, additional stipulations may also be implemented. Additional stipulations and considerations for fishing contests can be found in Appendix B.

Fishing contests are prohibited from May 1 to September 15 due to fish spawning periods, extreme warm water temperatures in August and congested public use.

Spawning induced mortality of adult crappie is common at Tongue River Reservoir due to cumulative stress associated with spawning and increasing water temperatures. Fish contests are prohibited during the crappie spawning period (May 1 to June 30) to prevent additional stress and associated crappie mortality.

Intense public use and associated social pressures occurs on the reservoir and state park facilities from May 15 to July 31. During this period the park's camping, day use area, and associated facilities approach or reach capacity. Inclusion of a fishing contest would increase user conflict.

Fish contests are prohibited in August and early September due to high water temperatures. Additional stress on fish from contest would dramatically increase the likelihood of delayed fish mortality.

Weigh-in type tournaments at a central location are discouraged at Tongue River Reservoir during the congested public use period (May 15 to July 31). This style of tournament increases congestion at boat ramps that currently suffer from social pressures.

# FISHERIES MANAGEMENT DIRECTION FOR TONGUE RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction		
Tongue River - Wyoming state line to Tongue	10 miles	Sauger (N)	Wild	Conservation	Reduced daily bag and possession limit implemented to protect remnant population.		
River Reservoir headwaters		Channel catfish (N)	Wild	General	Maintain fishery through regulations.		
		Smallmouth bass, Walleye	Wild	General	Maximize harvest and fishing opportunity to reduce competition with sauger.		
		Multi species	Wild	General/Conservation	Manage for recreational fishing opportunity where applicable. Monitor nongame fish species for native fish assemblage and overall ecosystem health.		
reservations at inle	Habitat needs and activities: Dewatering is a threat to the fishery, work with water commissioners and Water Compact Ruling to deliver state's instream reservations at inlet of Tongue River Reservoir: 160 cfs January to February; 200 cfs March to April; 700 cfs May 1 to 20; 1,200 cfs May 21 to 31; 1,350 cfs June; 360 cfs July; 100 cfs August to September; 200 cfs October to November; and 150 cfs in December.						
Tongue River Reservoir	3,700 acres	Black crappie, White crappie	Wild	General	Manage for recreational family fishing opportunity for crappie. Fishing tournaments are prohibited from May 1 to September 15 because of user congestion during summer.		
		Sauger (N)	Wild	Conservation	Reduced daily bag and possession limit to protect remnant population.		
		Walleye	Hatchery	Put-Grow-and-Take	Manage as recreational fishery with emphasis on harvest. Maintain population through annual stocking to provide additional fishing opportunity. Temporarily reduce annual walleye stocking rate for 3 to 4 years while annual walleye gillnet catch rates are at or above 6 to 8 fish/net; intended goal is decreasing predation		

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Smallmouth bass, Largemouth bass, Channel catfish (N), Northern pike, Yellow perch	Hatchery/ Wild	General/ Put-Grow-and-Take	on young-of-year and juvenile crappie to increase adult crappie abundances.  Maintain fishery through regulations and stocking.

Habitat needs and activities: Work with reservoir operators to regulate winter reservoir water levels with consideration for fishery benefits in years supported by environmental conditions. Monitor fish losses over the spillway during spill events to determine if slight alterations to reservoir water level operations can reduce impacts to the fish populations in the reservoir. For example, evaluate if reducing the winter reservoir water levels by 3 to 5 vertical feet [average winter elevation 3,413.1 ft (range 3,410 to 3,415), rather than the operation plan target of 3,417.5 ft (range of 3,417.5 to 3,419.5)] would reduce the overall number of days the spillway flows and fish losses occur.

Tongue River - Reservoir tailwater to	189 miles	Sauger(N), Channel catfish (N)	Wild	General	Maintain fishery through regulations and habitat projects (passage at diversion dams, increased flow conditions).
Yellowstone River		Rainbow trout	Hatchery	Put-and-Take	Put-and-take fishery to maximize fishing opportunity in a thermally altered stream reach.
		Brown trout	Wild	General	Maintain self-sustaining population to maximize fishing opportunity in a thermally altered stream reach.
		Shovelnose sturgeon (N)	Wild	General	Monitor use of Tongue River and potential for species to successfully use Muggli Bypass and reestablish population or seasonal occupancy of Tongue River upstream of T&Y Dam.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Blue sucker (N), Sturgeon chub (N)	Wild	Conservation	Montana Species of Concern, monitor use and potential for spawning activity in Tongue River. Continue to monitor passage of blue sucker through the Muggli Bypass and use of river upstream of T&Y Dam.
		Walleye, Smallmouth bass, Northern pike	Wild	General	Maximize harvest and fishing opportunity to reduce competition with sauger.
		Multi species	Wild	Conservation/General	Manage for recreational fishing opportunity where applicable. Monitor nongame fish species for native fish assemblage and overall ecosystem health.

Habitat needs and activities: Work with reservoir operator to manage water releases to mimic natural hydrograph and manage flow to avoid stranding fish. Work with irrigators and water commissioners to maintain state's instream reservations at Miles City of 75 cfs each month but stress need for following flows to facilitate fish spawning migrations and larval survival: 190 cfs September to February; 525 cfs March to April; 600 cfs May to July 15; 225 cfs July 16 to August. Reduce fish entrainment into irrigation intakes. Work with T&Y canal board to secure written agreement for long-term operation of Muggli Bypass and use of canal fish screens.

Intermittent		Multi species	Wild	General/Conservation	Maintain fishery through habitat protection and
streams:					restoration. Maintain or increase connectivity.
Pumpkin Creek,	171 miles				Opportunistically monitor to further understand
Otter Creek,	103 miles				system and population dynamics.
Hanging Women	48 miles				
Creek					
Ephemeral	Various				
streams:	Various				
9 with					
documented fish					
populations					

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
	activities: Impro	ove fish passage at current restrict	ions (culverts,	fords, dams) and ensure f	uture structures provide for adequate water flow
and fish passage.					
Small private ponds/reservoirs	Various	Trout	Hatchery	Put-and-Take	Public relations opportunity with landowners to provide local fishing opportunity for rural community. Maintain fishery through monitoring, regulations, and annual stocking.
		Bass, Walleye, Northern pike	Wild/ Hatchery	General/ Put-Grow-and-Take	Public relations opportunity with landowners to provide local fishing opportunity for rural community. Maintain fishery through monitoring, regulations, and stocking or wild
		Crappie, Yellow perch, Bluegill	Wild/ Transfer	General	Fish transfers when necessary.  Public relations opportunity with landowners to provide local fishing opportunity for rural community. Provide panfish angling opportunity, supplement population through wild fish transfers when necessary.
Habitat needs and	activities: Wate	r depth (ponds less than 12 feet de	eep) is a comm	on limitation that leads to	o frequent winterkills; limitation offset by
frequent sampling	and stocking or	wild fish transfers.			
Public trout ponds:		Trout	Hatchery	Put-and-Take	Annual stocking of trout for angler opportunity.
Mud Turtle,	2 acres				
Blacks Sawmill,	1 acre				
Dean	1 acre				
Habitat needs and stocking.	activities: water	depth (ponds less than 12 feet de	eep) is a comm	on limitation that leads to	o frequent winterkills; limitation offset by annual