

Upper Missouri River Drainage

Physical Description

The upper Missouri River drainage includes the Missouri River and tributaries from the confluence of the Jefferson, Madison, and Gallatin rivers (near Three Forks), downstream 110 river miles to Holter Dam. The upper river reach extends from the headwaters 43 river miles to the upper end of Canyon Ferry Reservoir. Toston Dam, located 23 miles upstream from Canyon Ferry, is a barrier to upstream fish movement. The dam creates a small, run-of-the-river irrigation storage reservoir that has been retrofitted for hydropower generation.

Riparian vegetation is limited to a narrow band along the river, except for the lower 10 miles above Canyon Ferry Reservoir where the river channel is braided, and the bottomland is extensively vegetated with willows and cottonwoods. Width of the channel varies from 300 to 1,200 feet, the average gradient is 5.6 feet per mile, and the sinuosity is 1.6. Bottom substrate varies from sand silt to cobble, but the majority is gravel cobble. Major tributaries of the Missouri River between Three Forks and Canyon Ferry Reservoir include Sixteenmile, Deep, Dry, Crow, Sixmile, Indian, Greyson, and Warm Springs creeks. Many of these tributaries are chronically dewatered during late summer for irrigation. Water to irrigate about 555,400 acres is diverted above this reach. Thus, flow can be severely depleted during the summer irrigation season. Flows in this reach are partially regulated by reservoirs on the Madison and Beaverhead rivers.

The remainder of the mainstem of this drainage is dominated by a reservoir complex that includes three reservoirs: Canyon Ferry, Hauser, and Holter. Canyon Ferry Reservoir is the first major storage impoundment on the Missouri River. Hauser and Holter reservoirs lie about 3 and 30 miles downstream from Canyon Ferry, respectively. Canyon Ferry Dam and Reservoir is operated by the Bureau of Reclamation (BOR) for power production, flood control, irrigation, recreation, and as a municipal water source. At full pool, Canyon Ferry has a surface area of 35,200 acres and a volume of nearly 2 million acre-feet and provides virtually all the storage available in the reservoir complex. Rapid filling of the reservoir begins in early May with peak storage occurring in late June to early July. Major tributaries to the reservoir include Duck Creek, Confederate Gulch, Hellgate Creek, Avalanche Creek, Magpie Creek, and Beaver Creek. Below Canyon Ferry, Hauser and Holter reservoirs are operated by NorthWestern Energy (NWE). They differ significantly from Canyon Ferry Reservoir in that they are "run-of-the-river" facilities with substantially less storage capacity. Hauser Reservoir has a surface area of about 3,800 acres and stores approximately 98,000 acre-feet of water at full pool. The reservoir is about 15.5 miles in length and is relatively narrow, ranging from about 0.1 to 1.1 miles in width. Important tributaries to Hauser Reservoir include Prickly Pear, Silver, Trout, Spokane, and McGuire creeks. A biologically important feature of Hauser is Lake Helena, which is a large (surface area of 2,100 acres), shallow water body connected to the Causeway Arm by a narrow channel which was created when Hauser Dam inundated the lower reach of Prickly Pear Creek.

A 4.6-mile reach of the Missouri River is located between Hauser Dam and Holter Reservoir. This unique segment of river flows through a narrow, high walled gorge for most of its length prior to entering upper Holter Reservoir. Productivity in this river segment is affected by the two upstream reservoirs, which creates tailrace conditions where water temperatures are moderated, and the water is enriched with nutrients.

Holter Reservoir has a surface area of about 4,800 acres, stores 243,000 acre-feet of water at full pool and is 25 miles long with widths ranging from 0.1 to 1.1 miles. The 4.6-mile segment of free flowing river located upstream of Holter Reservoir provides very important spawning habitat to migrant salmonids. Beaver Creek, a tributary to this river segment, is the principal spawning stream for reservoir fish, especially in the spring. Cottonwood and Willow creeks are also important tributaries that empty directly into Holter Reservoir.

Fisheries Management

The upper Missouri River drainage contains fish species common to southwestern Montana. The native species found here include westslope cutthroat trout, mountain whitefish, mountain sucker, longnose dace, longnose sucker, Rocky Mountain sculpin, stonecat, and white sucker. Non-native species are rainbow trout, brown trout, brook trout, northern pike, smallmouth bass, largemouth bass, yellow perch, walleye, and common carp. Hybrids of rainbow trout and westslope cutthroat trout are also found in the drainage.

Trout populations in the Missouri River upstream from Toston Dam have declined since the 1990's due to elevated water temperature and reduced streamflow. This reach of Missouri River is managed as a wild trout fishery, emphasizing natural reproduction. The Missouri River from Toston Dam to Canyon Ferry Reservoir is also managed as a wild trout fishery with migrating walleye and hatchery rainbow trout from Canyon Ferry supplementing the sport fishery. The basin is also suitable for westslope cutthroat trout recovery efforts, primarily in tributary streams. Up until the early 1990s, the fishery downstream from Toston Dam was seasonal and characterized by spawning runs of large rainbow and brown trout from Canyon Ferry Reservoir; however, resident brown trout fishing was also an attraction during this period. Then, a variety of factors began to modify the composition of the fish community, including the expansion of walleye in Canyon Ferry Reservoir, changes in temperatures and flow, hydroelectric retrofits of Toston Dam, expansion of pelicans and cormorants, whirling disease, and the introduction of northern pike in Canyon Ferry Reservoir. These factors caused a significant reduction of spawning trout in the Missouri River downstream from Toston Dam, and as a result, angling use for trout has declined substantially. Conversely, angling use for walleye has increased as a migratory proportion of the Canyon Ferry walleye population has become seasonally abundant in spring and fall between Toston and Canyon Ferry.

Over the past decade, angler use of the Missouri River reach downstream from Toston Dam has varied from 2,594 angler days in 2005 to 15,591 angler days in 2020. Upstream from Toston Dam to the confluence of the Madison and Jefferson rivers, angling pressure over the past decade has ranged from 1,564 angler days in 2007 to 4,698 angler days in 2020.

Common to many southwest Montana rivers, fish stocking records for the Missouri River were documented beginning in the 1920s and lasting through the early 1970s, when wild trout management philosophies were instituted. Beginning in the late 1920s, rainbow trout, brook trout, brown trout, kokanee salmon, Chinook salmon, coho salmon and Arctic grayling were stocked. Fish stocking for the purpose of augmenting fisheries ended in the 1950s and 1960s. New sportfish introductions (salmon species) occurred in early 1970s and stocking projects were initiated in the 1990s and early 2000s to reintroduce brown trout and Arctic grayling. Currently, there are no fish stocked directly into the river.

A waterbody specific management plan, The <u>Upper Missouri River Reservoir Fisheries Management Plan</u> guides management on the mainstem Missouri River and reservoir system from Toston Dam to Holter Dam.

Combined, the upper Missouri River reservoir system is responsible for approximately 10% of the fishing pressure in Montana from 2001-2021. These reservoirs traditionally are some of most heavily fished waters in Montana. Average number of angler days from 1989-2019 were 97,856 for Canyon Ferry, 54,276 for Hauser, and 65,667 for Holter. This level of pressure equates to an average 2.8 angler days per acre on Canyon Ferry, 14.2 angler days per acre on Hauser, and 13.7 days per acre on Holter. Canyon Ferry was the most heavily fished water in Montana in 1989, 1993, 1995, 1999, and 2009 and is consistently the top flatwater fishery in Montana. Hauser Reservoir was the most heavily fished body of water in the state in 1991, which was attributable to a booming kokanee salmon population that resulted in a record 141,000 kokanee harvested in 1991. Over the entire reservoir system, angler use generally trended downward from 1999-2007, and use generally trended upward from 2009-2019. Angler use in the system peaked at 315,558 angler days in 2009, accounting for 9.4% of all angler use in Montana that year.

A variety of important fish species are present within the reservoir system. Rainbow trout, kokanee salmon, yellow perch, brown trout, burbot (ling), and walleye are among the species of greatest interest to the public. Downstream movement of hatchery rainbow trout from Canyon Ferry to Hauser and Holter reservoirs has been documented during periods of high surface water releases and flushing of walleye out of Canyon Ferry has heavily influenced species composition in waterbodies downstream.

Habitat

Toston Dam, located 23 miles above Canyon Ferry Reservoir and 6 miles southeast of Toston, is owned and operated by Department of Natural Recourses and Conservation. It is a small, run-of-the-river irrigation storage reservoir that stores 3,000 acre-feet at full pool and was retrofitted with a 10-megawatt hydropower generating plant in the 1980s. It has relatively little influence on flows in the Missouri River downstream but does function as a barrier to upstream migrating fish. Fishery mitigation is implemented in coordination with Montana Department of Natural Resources and Conservation (DNRC) to address hydropower impacts, and most mitigation activity has been directed to Deep Creek, an important trout spawning tributary between Toston and Canyon Ferry.

Canyon Ferry Reservoir has a significant impact on the flows of the Missouri downstream to Fort Peck Reservoir. Its typical operation provides benefits to a tailwater trout fishery downstream of Holter Dam but presents challenges to development and stability of some reservoir fisheries due to fluctuating water levels. Rapid filling of the reservoir begins in early May, with peak storage occurring in late June to early July, followed by a steady decrease of about 2 feet per month during the summer period of high irrigation use (July-September). A decrease in reservoir volume continues throughout the fall and winter in preparation for storage of spring run-off. The retention time of water in the reservoir averages 135 days but ranges from 50-200 days depending on reservoir elevation and inflow-outflow regimes. The annual water level fluctuation (drawdown) averages about 12 feet. A reservoir operations steering committee comprised of FWP, NWE, BOR, irrigators, recreators, and sportsmen has developed operational guidelines for Canyon Ferry Reservoir to balance recreational values and minimize impacts to fish and wildlife. This committee meets annually to review operational issues.

Discharge from Canyon Ferry Dam occurs at various outlets: the radial gates near the top of the spillway (30 feet deep); power penstocks (94 feet); the irrigation outlet (110 feet); and the river outlet (147 feet). The power penstocks are usually the main release point, except in spring and summer when additional releases are made from the spillway, irrigation, and river outlets. Releases from the radial gates typically occur during June and July following peak river run-off. Radial gate spills occur in roughly two out of every three years, with an average duration of 30-45 days. Temperature and oxygen content of the release water can vary depending on what outlets are used and the time of year.

Hauser Dam is a straight concrete gravity structure, 700 feet long and 80 feet above the riverbed. The structure consists of an overflow spillway, a non-overflow section, a forebay intake section and two abutment sections. The spillway is 493 feet long with slide gates and removable flashboards for flow control. Hauser Dam has the lowest powerhouse capacity of the three dams (19 megawatts) in the reservoir complex and consequently, spills the most water. Turbine water enters a 32-foot-deep intake channel on the east side of the dam. The six-penstock intakes draw from this channel with the openings from 16 to 30 feet below full pool. Water is spilled from five hydraulic gates and 17 manually operated gates. Water that is spilled is drawn from 0-14 feet below full pool. In a dry year, water may spill as much as 4-5 months of the year, while in a wet water year, water is spilled every day of the year. Water elevations of the reservoir fluctuate within a 1-foot elevation, so flows from tributaries and discharge from Canyon Ferry are passed through the facility and it is operated as a run-of-the-river plant.

Holter Dam is also a straight concrete gravity structure, which is 1,364 feet long and 124 feet above the riverbed. The structure consists of an overflow spillway section, a powerhouse/intake section, a left nonoverflow section and a right non-overflow section. It has a usable storage of approximately 81,920 acrefeet. Penstocks are between 24-32 feet below full pool. In addition, an "exciter" unit is always operating, which has a penstock opening from 25-29 feet below full pool. Water is spilled from a depth of 6-16 feet. In very high-water conditions, a "cap" can be removed from the spill gates allowing the top six feet of water to be spilled. In a dry year, water may be spilled only one day, while in wet water years, spilling may occur throughout most of the year. Operation of Holter Dam has a significant impact on the fishery, wildlife and recreational resources of the reservoir and the Missouri River downstream. As part of the Federal Energy Regulatory Commission re-licensing process, operational guidelines were developed for Holter Reservoir to be operated as a run-of-the-river project with pool elevations maintained within one foot between 3,543 and 3,564 feet msl. Prior to the implementation of the operating guidelines, a steering committee composed of FWP, Montana Power Company, BOR, U.S. Forest Service, irrigators, and sportsmen formulated operational guidelines for Holter Dam to optimize recreational values and to minimize impacts to fish and wildlife. The steering committee recommendations for the operation of Holter Dam include: 1) provide a stable reservoir level, 2) have no large spills (10,000 cfs, total turbine and spill) in August or September; and 3) accomplish facility maintenance drawdowns in March or during September (after Labor Day) through October 15. Adherence to these recommendations and the operating guidelines still serve to protect fisheries habitat today in both the reservoir and the trout fishery immediately downstream.

Special Management Issues

Westlsope Cutthroat Trout Conservation

The Upper Missouri sub-basin currently contains 32 conservation populations of westslope cutthroat trout which exist in approximately 100 miles of historically occupied tributary habitat. 72% of these populations are at risk due to the presence of non-native salmonids, small population size or distribution, and/or habitat degradation. Barrier construction and fish removal using rotenone are the primary conservation tool for westslope cutthroat trout in the Upper Missouri River. Conservation priorities will be to secure or protect all remaining indigenous populations of westslope cutthroat trout. Once these populations are protected, FWP will seek public input on feasible locations to isolate larger tributaries and expand westslope cutthroat trout distribution to occupy 20% of historically inhabited tributary drainages within the sub-basin. See Westslope Cutthroat Trout Conservation Strategy for the Missouri River Headwaters of Southwest Montana.

Westslope cutthroat trout currently occupy 34 streams and a maximum of 113 miles of stream habitat (maximum miles indicate westslope cutthroat trout distribution between uppermost and lowest observations over several years of sampling). Most populations occupy very short reaches of isolated headwater tributaries and are considered high risk for extirpation. Dutchman and Sixteenmile creeks provide an example of a typical restoration approach in the drainage. Barrier construction at Dutchman Creek is planned for 2023, and removal of brook trout from about 3 miles of stream will follow. When habitat is confirmed to be fishless, progeny of westslope cutthroat trout moved from Dutchman Creek to South Fork Sixteenmile Creek will be returned to the stream above the barrier. Expected completion of project is 2025.

Toston Dam Mitigation

Fisheries mitigation at Toston Dam is summarized in a report to Montana Department of Natural Resources and Conservation (November 2022). Emphasis of the report is documentation of streamflow improvement at an important trout spawning stream (Deep Creek) below Toston Dam. A 2022-23 study of brown trout genetics and spawning movements related to Toston Dam is being conducted with Montana State University.

Kokanee Salmon Monitoring

Kokanee are planted annually in Helena Valley Regulating Reservoir and Hauser Reservoir and a wild population is present in Holter Reservoir. Kokanee are a popular target species when population levels are stable; however, predation by other fish species and unpredictable seasonal water conditions (e.g. high spring flushing flows, irrigation canal entrainment) make them difficult to manage. The Helena Valley Regulating Reservoir population has been stable over the past decade and wild spawning has been observed in both Hauser and Holter Reservoirs in recent years. Annual kokanee stocking has also resumed in Hauser Reservoir to attempt to rebuild a viable fishery there. Monitoring kokanee stocking and/or spawning success and identifying additional potential spawning locations to maintain and/or reestablish fishable populations in these reservoirs will continue.

Habitat Improvement

Continue to identify and pursue fisheries habitat improvement opportunities throughout the upper Missouri River drainage (e.g., Canyon Ferry Reservoir Pines for Perch Project, tributary stream restoration with an emphasis on providing spawning habitat for the Missouri River or maintaining healthy streamflow patterns in the Missouri River). Deep Creek streamflow restoration from 2013 to 2022 will be protected with a water lease and additional projects using Toston Dam Fisheries Mitigation Funds.

MANAGEMENT DIRECTION FOR UPPER MISSOURI RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Missouri River -	22 miles	Rainbow trout,	Wild	General	Maintain present numbers and sizes.
Confluence of		Brown trout,			Consider increasing angler harvest to reduce
the Madison and		Mountain whitefish (N)			numbers if necessary to maintain fish growth.
Jefferson Rivers					
to Toston Dam					Continue to allow unlimited harvest to
		Northern pike	Wild	Suppression	minimize impacts on other sport fishes.
Habitat needs and and methods.	activities: Contir	nue to improve instream flow by	looking for oppo	rtunities to lease water or	improve efficiency in irrigational infrastructure
Sixteenmile	69 miles	Rainbow trout,	Wild	General	Manage as a recreational fishery with larger
Creek		Brown trout			sized fish available to the angler.
		Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.
South Fork	7 miles	Westslope cutthroat trout	Wild	Conservation	Maintain or enhance population to reduce
Sixteenmile		(N)			extirpation risk. Reintroduction from
Creek					Dutchman Creek in 2022.
Habitat needs and	activities: Explor	re potential opportunities to rest	tore habitat on so	me reaches.	
Missouri River –	21 miles	Rainbow trout	Hatchery/	General	See <u>Upper Missouri River Reservoir Fisheries</u>
Toston Dam to			Wild		Management Plan for management goals and
Canyon Ferry					direction.
Reservoir		Brown trout	Wild	Quality	
		Mountain whitefish (N), Stonecat (N)	Wild	General	
		Northern pike	Wild	Suppression	
		Walleye	Wild	Liberal Regulations	

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction			
Habitat needs and activities: Maintain instream flows at 2,500 cfs to maintain side channel habitat. Look for opportunities to lease water or improve efficiency								
in irrigational infra	astructure and mo	ethods.						
Crow Creek	25.9 miles	Rainbow trout Brown trout, Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.			
		Mountain whitefish (N)	Wild	General	Manage to maintain population.			
Little Tizer Creek, Hall Creek, South Fork Crow Creek	2.2 miles 1.4 miles 2 miles	Westslope cutthroat trout (N)	Wild	Conservation	Little Tizer explore introduction of westslope cutthroat trout. Hall Creek continue ongoing genetic rescue study. SF Crow maintain or enhance population to reduce extirpation risk.			
Habitat needs and	activities: Maint	ain habitat and instream flows o	of 11 cfs. Explore	opportunities to improve o	chronic dewatering.			
Dry Creek	16.6 miles	Rainbow trout, Rb x WCT hybrids, Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.			
Habitat needs and	l activities: Maint	ain habitat and instream flows o	of 1.8 cfs. Explore	opportunities to improve	chronic dewatering.			
Deep Creek	30.3 miles	Rainbow trout, Brown trout	Wild	General	Manage as a recreational fishery and spawning stream for fluvial/adfluvial populations.			
		Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.			
Habitat needs and	activities: Water	savings generated by irrigation	efficiency projec	ts and a water lease protec	cted streamflow in 2022. The 10-year water			
lease will continue	e through 2031.							
Indian Road Pond – near Townsend	2 Acres	Westslope cutthroat trout	Hatchery	Family Fishing Water	Maintain as a Family Fishing Water			
Canyon Ferry Reservoir	35,200 acres	Rainbow trout	Hatchery	Put-Grow-and-Take	Manage principal game fish as a quality, multi-species fishery while recognizing the			
	<u> </u>	Brown trout	Wild	Quality	importance of other fish species. See <u>Upper</u>			

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Walleye	Wild	Liberal Regulations	Missouri River Reservoir Fisheries Management Plan for species goals and strategies.
		Yellow Perch	Wild	Restrictive Regulations	Strates.esi
		Burbot (N)	Wild	General	
		Northern Pike	Wild	Suppression	
Habitat needs and	activities: Contir	ue to explore opportunities for	enhancement of	forage fish spawning habita	at.
Confederate Gulch, Beaver Creek	13.6 miles 15.0 miles	Rainbow trout, Brown trout	Wild	General	Manage as a recreational fishery and spawning stream for fluvial/adfluvial populations.
		Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.
Habitat needs and	activities: Explor	e opportunities to secure, estab	lish or expand we	stslope cutthroat trout in t	ributaries and headwaters.
Ray Creek, North Fork Gurnett Creek,	9.2 miles 4.1 miles	Rainbow trout, Brook trout	Wild	General	Manage as a recreational fishery.
Magpie Creek, Duck Creek, Whites Creek, Avalanche Creek, Whitehorse Creek, Staubach Creek	4.5 miles 2.3 miles 3.9 miles 12 miles 2.5 miles 2 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
Habitat needs and	activities: Explor	e opportunities to secure, estab	lish or expand we	estslope cutthroat trout in t	ributaries and headwaters.
Hauser Lake/ Lake Helena	3,800 acres	Rainbow trout	Hatchery	Put-Grow-and-Take	Manage principal game fish as a quality, multi-species fishery while recognizing the
		Brown trout	Wild	Quality	importance of other fish species. See <u>Upper</u> <u>Missouri River Reservoir Fisheries</u>

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Walleye	Wild	Liberal Regulations	Management Plan for species goals and strategies.
		Yellow perch	Wild	Restrictive Regulations	
		Kokanee salmon	Hatchery	Put-Grow-and-Take	
		Burbot (N)	Wild	General	
		Northern pike	Wild	Suppression	
Spokane Creek	2.8 miles	Rainbow trout,	Wild	General	Manage as a recreational fishery and
		Brown trout,			spawning stream for fluvial/adfluvial
		Kokanee			populations.
			•	1-Nov 30 and 3 cfs from De	ec 1-April 30. Explore opportunities for habitat
restoration and to	establish an ann	ual kokanee salmon spawning ru	ın.		
Trout Creek	9.0 miles	Rainbow trout,	Wild	General	Manage as a recreational fishery and
		Brown trout, Kokanee			spawning stream for fluvial/adfluvial populations.
		Mountain whitefish (N)	Wild	General	Maintain population numbers.
			•	• •	ve or restore riparian habitat. Maintain access
			· · · · · · · · · · · · · · · · · · ·	•	arian impact from housing development.
		an annual kokanee salmon spawi			
Prickly Pear	43.6 miles	Rainbow trout,	Wild	General	Manage as a recreational fishery and
Creek and		Brown trout,			spawning stream for fluvial/adfluvial
tributaries		Kokanee salmon			populations.
		Brook trout	Wild	General	Manage as a recreational fishery with consumptive harvest.
McClellan Creek and tributaries	12.0 miles	Rainbow trout Brook trout	Wild	General	

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					Manage as a recreational fishery and recognize populations of westslope cutthroat
Crystal Creek,	3.0 miles	Westslope cutthroat trout	Wild	Conservation	trout are present in the drainage.
East Fork,	3.2 miles	(N)			
Teepee Creek	1.9 miles				Maintain or enhance existing populations to reduce extirpation risk.
Warm Springs Creek	5.6 miles	Rainbow trout, Brook trout	Wild	General	
					Manage as a recreational fishery and
					recognize conservation populations of
South Fork Warm Springs,	3.8 miles	Westslope cutthroat trout (N)	Wild	Conservation	westslope cutthroat trout in the drainage.
Hogan Creek	1.7 miles				Maintain or enhance existing populations to reduce extirpation risk.
Dutchman Creek	3.6 miles	Rainbow trout, Brook trout	Wild	General	·
North Fork	2.6 miles	Westslope cutthroat trout	Wild	Conservation	Manage as a recreational fishery and recognize conservation populations of westslope cutthroat trout in the drainage.
Dutchman,	2.6 miles	(N)	VVIId	Conservation	westsiope cuttificat trout in the drainage.
South Fork Dutchman	1.9 miles				Maintain or enhance population to reduce extirpation risk.
Lump Gulch	14.4	Rainbow trout, Brook trout,	Wild	General	
		Brown Trout			Manage as a recreational fishery.
Clancy Creek	11.5 miles	Rainbow trout,	Wild	General	
		Brown trout, Brook trout			Manage as a recreational fishery.
Kady Creek	2.3 miles		Wild	Conservation	

Water	Miles/acres	Species	Recruitment	Management Type	Management Direction
			Source		
		Westslope cutthroat trout			
		(N)			Maintain or enhance population to reduce
					extirpation risk.
				<u> </u>	

Habitat needs and activities: Maintain habitat and instream flows of 30 cfs below East Helena and 22 cfs above East Helena. Work to maintain agreements that have resulted in wetting chronically dewatered reaches. Maintain or enhance access to mainstem for migrations of adfluvial fish. Continue to cooperate in reducing pollution delivery and mining damage to the waterway above East Helena. Explore opportunities to increase public access and conserve riparian habitat. Explore fish passage/entrainment mitigation opportunities at existing instream barriers/structures (e.g irrigation diversions) throughout the drainage. Explore opportunities to establish an annual kokanee salmon spawning run in the mainstem and secure, establish or expand westslope cutthroat trout in tributaries and headwaters.

Park Lake	33 acres	Westslope cutthroat trout (N),	Hatchery/ Wild	General	Maintain recreational fishery, stock as needed to maintain angler opportunity.
		Arctic grayling	Wild	Conservation	Maintain unique angling opportunity for Arctic grayling. Collect eggs as part of statewide conservation efforts.
Silver Creek and tributaries	23.5 miles	Rainbow trout, Brown trout	Wild	General	Maintain spawning and rearing for adfluvial populations.
		Brook trout	Wild	General	Maintain a recreational fishery with little harvest. Monitor population and evaluate effects on westslope cutthroat trout population.
Sawmill Gulch	3.6 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
Threemile Creek and reservoir (aka Gehring Pond)	7.5 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk. Monitor above barrier for presence of brook trout.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Habitat needs and	activities: Maint	ain habitat and instream flows o	f 13 cfs from May	1 to Nov 30 and 5.4 cfs fro	om Dec 1 to April 30. Update genetic and
• .	•		l Reservoir westsl	ope cutthroat trout popula	ations. Threemile Creek and Reservoir - Explore
opportunities to re	educe chronic dev	watering.	.	.	
Tenmile Creek and tributaries	29.4 miles	Rainbow trout, Brown trout	Wild	General	Maintain a recreational fishery and spawning for fluvial/adfluvial populations.
		Kokanee Salmon	Wild	General	Manage spawning adfluvial population.
Sevenmile Creek	7.7 miles	Brook trout	Wild	General	Maintain a recreational fishery with some harvest.
		Rainbow trout, Brown trout	Wild	General	Maintain a recreational fishery and spawning for adfluvial populations.
Skelly Gulch	3.9 miles	Brook trout	Wild	General	Maintain a recreational fishery with some harvest.
		Westslope cutthroat trout (N)	Wild/Transfer	Conservation	Maintain population and expand densities to occupy all habitat above barrier.
Habitat needs and	activities: Maint	ain habitat and instream flow of	12 cfs in mainste	m. Explore opportunities to	o reduce chronic dewatering in the lower
•	• •	•	* *	·	ek and Beaver Creek. Explore fish
-		portunities at existing instream			
Missouri River –	4.6 miles	Rainbow trout	Hatchery/	Put-Grow-and-Take/	Manage principal game fish as a quality,
Hauser Dam to			Wild	General	multi-species fishery while recognizing the
Holter Reservoir		Busines tracks	NA CHAI	O. alita	importance of other fish species. See <u>Upper</u>
		Brown trout	Wild	Quality	Missouri River Reservoir Fisheries Management Plan for species goals and
		Kokanee salmon	Wild	General	strategies.
		NORUMEE SUMMON	VVIIG	General	Strategies.
		Walleye	Wild	Liberal or	
		,		Restrictive Regulations	

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Yellow perch	Wild	General	
		Burbot (N)	Wild	General	
		Northern pike	Wild	Suppression	
Beaver Creek	18.6 miles	Rainbow trout	Wild	General	Maintain a recreational fishery and spawning for fluvial/adfluvial fish.
		Brown trout, Brook trout	Wild	General	Maintain a recreational fishery with some harvest.
		Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
Habitat needs and westslope cutthro			f 10 cfs. Explore o	pportunities for habitat re	storation. Explore opportunities to establish
Holter Reservoir	4,800 acres	Rainbow trout	Hatchery/Wild	Put-Grow-and-Take	Manage principal game fish as a quality, multi-species fishery while recognizing the
		Kokanee salmon	Hatchery	Put-Grow-and-Take	importance of other fish species. See <u>Upper</u> Missouri River Reservoir Fisheries
		Walleye	Wild	Restrictive/Liberal	Management Plan for species goals and
				Regulations	strategies.
		Yellow perch	Wild	Restrictive Regulations	
		Burbot (N)	Wild	General	
		Northern Pike	Wild	Suppression	
Willow Creek and tributaries	1.9 miles (mouth to Elkhorn Cr.)	Rainbow trout, Brook trout	Wild	General	Maintain population numbers with consumptive harvest within historic levels for a recreational fishery.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Elkhorn Creek					
-Lower Reach	5.1 miles	Rainbow trout, Brook trout	Wild	General	Maintain population numbers within historic levels for a recreational fishery with consumptive harvest.
-Upper Reach	5.3 miles	Westslope cutthroat trout (N)	Wild/ Transfer	Conservation	Maintain population and expand distribution to occupy all habitat above barrier with genetically unaltered westslope cutthroat trout.
	• •	and Lower Elkhorn Creek - Main re genetic goals are met.	ntain habitat and	instream flow of 3.5 cfs. U	pper Elkhorn only - Monitor westslope
Cottonwood					
Creek					
-Lower Reach	3.5 miles	Rainbow trout, Brown Trout, Brook trout	Wild	General	Maintain population numbers within historic levels for a recreational fishery with consumptive harvest.
-Upper Reach	8.2 miles	Westslope cutthroat trout (N)	Wild/ Transfer	Conservation	Maintain population of >90% westslope cutthroat trout genetic contribution above barrier.
Habitat needs and habitat and instre			rea on private lan	d to improve riparian vege	tation condition. Upper Reach - Maintain
Upper Log Gulch Reservoir	1.0 acre	Westslope cutthroat trout (N)	Wild/Transfer	Conservation	Manage as wild brood source.
		Brown trout	Wild	General	Monitor population and evaluate effects on westslope cutthroat trout population.
Habitat needs and	l activities: Explor	e opportunities to improve spav	vning habitat in L	og Gulch above reservoir.	
Helena Valley Regulating Reservoir	553 acres	Kokanee salmon	Hatchery	Put-Grow-and-Take/ Liberal Regulations	Maintain recreational fishery for consumptive harvest by continued stocking.
		Yellow perch	Wild	General	Maintain recreational fishery for consumptive harvest.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Burbot (N)	Wild	General	Maintain population numbers with some consumptive harvest.
Fairgrounds Pond	2 acres	Rainbow trout	Hatchery	Family Fishing Water	Maintain as a Family Fishing Water.
Spring Meadow Lake	14 acres	Largemouth Bass	Wild	Restrictive Regulations	Maintain restrictive regulations to avoid overharvest.
		Rainbow trout, Westslope cutthroat trout	Hatchery	Put-Grow-and-Take	Maintain as an urban fishery.