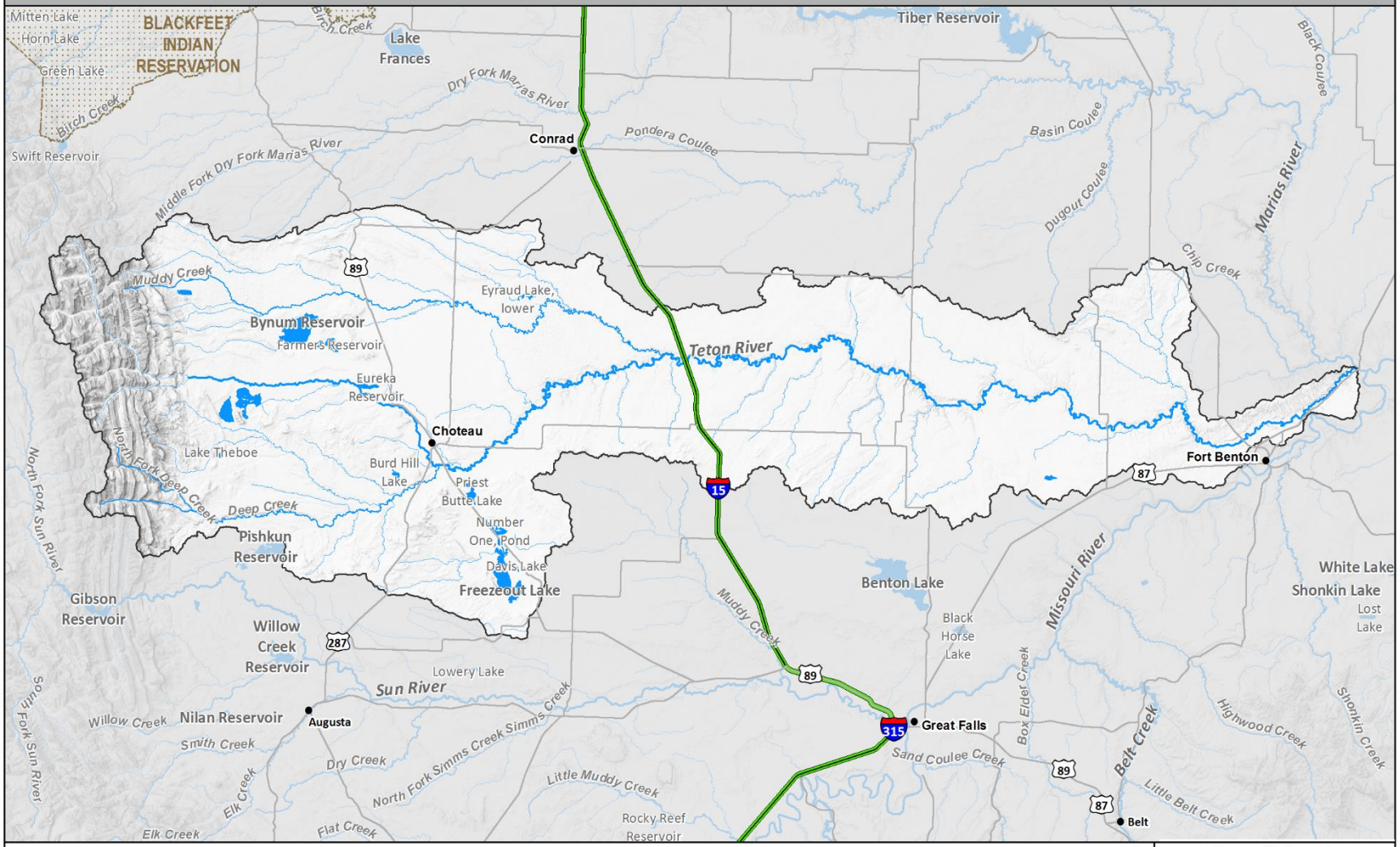
Teton River Drainage

MONTANA FWP



Tribal Lands

Drainage Boundary

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Area of Interest

Map Produced by:
ASP - Geographic Data Services
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Administrative boundaries and FWP Lands data from Montana Fish, Wildlife & Parks, Helena, MT. Background Imagery from ESRI

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Miles

Teton River Drainage

Physical Description

The Teton River Basin is in Teton and Chouteau counties of northcentral Montana. The headwaters originate along the east front of the Rocky Mountains, flow east approximately 175 miles and enter the Marias River at Loma. The drainage contains about 734 miles of perennial streams and approximately 68 named perennial streams. There are 14 lakes or reservoirs in the drainage for a total of 7,356 surface acres. Yearly precipitation averages 12 to 14-inches, with higher amounts occurring near and in the mountains. The mainstem Teton River originates with the junction of its North and South forks approximately 22 air miles northwest of Choteau. It flows generally eastward to Choteau along gently rolling hills and flat terrain. Principal tributaries include Deep Creek, McDonald Creek, Spring Creek, and Muddy Creek. Stream substrate is characterized by glacial materials with abundant gravel, cobble, and boulders. Due to the gravelly conditions, channel movement is quite active with channel braiding occurring in some areas. Stream gradient is about 35 feet/mile. Water clarity is good but becomes turbid with sudden increases in flow. The cold water reach is approximately 33 miles long, extending down to the discharge from Priest Butte Lake.

The riparian area consists of willows and cottonwoods throughout most of the reach, with limber pine and aspen near the headwaters. Floods in 1964 and 1975 destroyed most of the stream bank vegetation. Much of this vegetation has recovered in some areas.

Choteau is the largest town within the basin, having a population of about 1,700. Smaller communities include Dutton, Bynum, Pendroy, Agawam, Farmington, and Collins. The major land uses are for crops and livestock. Approximately 80,000 acres are irrigated in the basin by many private individuals and four local ditch companies. Off-stream storage is held in Bynum, Eureka, and Farmers reservoirs, and Arod (Eyraud) Lakes.

Approximately 15% of the basin is national forest. Considerable exploration for oil and gas has occurred, with several shallow wells presently producing oil in the northern part of the basin. Although coal deposits are present, no commercial mining has taken place. Oil and gas exploration and potential future development continues to be a possibility. In the 33-mile reach from the headwaters to the discharge from Priest Butte Lake near Choteau, land uses include grazing and hay land with some grain crops along the lower portions. Land ownership within this stream reach is approximately 80% private and 20% state. Stream access is controlled by private landowners but is usually granted upon request. The Teton River is crossed by two highway bridges near Choteau, seven county road bridges and several private bridges and fords.

Fisheries Management

The Teton River basin provides a trout fishery for people in the local area, with approximately 329 miles of stream in the Teton River drainage that support brook trout and 194 miles that support rainbow trout. Small populations of genetically unaltered westslope cutthroat trout are found in headwater streams, which occupy less than 2% of the historic range in the drainage. While rainbow trout, brook trout, brown trout, and mountain whitefish occur in the middle to upper reaches of the river and tributaries, sauger, burbot, channel catfish, shovelnose sturgeon, and northern pike are found in the

lower Teton River when water is present. Reservoir fisheries, which include Bynum, Eureka, and Arod, are composed of rainbow trout, brown trout, northern pike, yellow perch, and walleye fisheries.

Bynum Reservoir, Eureka, and Arod reservoirs are off-stream irrigation reservoirs filled by diversions from the Teton River. Bynum and Eureka reservoirs receive hatchery plants of rainbow trout annually to provide additional fishing opportunities. Wild recruitment provides a yellow perch and walleye fishery in Bynum, a brown trout fishery in Eureka, and a northern pike and yellow perch fishery in Arod. The quality of these fisheries can significantly fluctuate as reservoir elevations change in drought years. Fisheries management strategies for these reservoirs focus primarily on providing quality fishing opportunity and management strategies, like stocking adjustments or changes to fishing regulations, may occur to improve quality.

There are several diversions on the upper Teton River above Choteau that divert small amounts of water, three diversions that can divert about 200 cfs, and one large diversion capable of withdrawing 1,000 cfs during flood conditions. Portions of this stretch are subject to low flows or complete dewatering by irrigation diversions. The portion above Choteau has mostly small brook trout and fewer numbers of brown trout, rainbow trout and mountain whitefish. The lower portions below Choteau experience very low, but more stable flows due to groundwater recharge entering the stream. The fishery is composed of brown trout, mountain whitefish and rainbow trout. Fish present other than trout include blue sucker, longnose sucker, white sucker, mountain sucker, shorthead redhorse, longnose dace, Rocky Mountain sculpin, lake chub, carp, brook stickleback, and goldeye.

Chronic dewatering of the upper and lower Teton River has kept many of the lower warmwater species physically separated from the upper Teton River. However, with recent changes to water management, increased reports of channel catfish and northern pike near Choteau suggest that the Teton River has improved longitudinal connectivity.

Habitat

U.S. Geological Survey (USGS) flow records at the Teton River below the South Fork gage show mean monthly flows of 95 and 74 cfs for the critical months of August and September for the period of record (1998-2020). USGS discharge records for the lower end of the upper Teton River near Priest Butte Lake are available from June 1913 to June 1919. Maximum discharge was 4,500 cfs on June 22, 1916, and a minimum of 1 cfs occurred between August 9 and August 16, 1916. The low readings are influenced by the many diversions above the recording station. Further downstream at the USGS gage near Dutton, the mean monthly flows drop to of 28 and 25 cfs for the months of August and September (1998-2020). Near the mouth of the Teton River, the mean monthly flows for the period of record (1998-2021) drop to 15 and 12 cfs for August and September. In fact, at this lowest gage the mean monthly flows have been 0 cfs (dry riverbed) for 38% and 33% of the months of August and September during the period of record.

The dewatering of tributary streams and large reaches of the Teton River for irrigation is the greatest problem facing the maintenance of aquatic and fisheries resources in the Teton River basin. Adjudication of water rights in the basin implementing a final decree that recognizes downstream water rights and the work of a water commissioner to administer those rights, has the greatest potential to provide aquatic habitat now absent in the Teton drainage.

Notable outcomes of the Teton River adjudication process have resulted in improved instream flows in the Teton River below the Springhill Reach and in Spring Creek. The Teton River basin now has a Chief Water Commissioner and water commissioners assigned to the Lower Teton River, Upper Teton River, Spring Creek, Muddy Creek, and Deep Creek. Additionally, the Bateman Ditch was permanently abated in 2018.

Special Management Issues

Water Rights Adjudication

Water rights adjudication in the basin and enforcement of a decree will play a critical role in the future of large reaches of the mainstem and tributaries and whether they remain chronically dewatered or once again become perennial streams. Fish movements and water temperatures will continue to be monitored to identify improvements in habitat connectivity.

Westslope Cutthroat Trout Conservation

The Teton River Drainage is home to several conservation populations of westslope cutthroat trout, providing opportunities to conserve this native species in the drainage. The long-term goal of cutthroat trout conservation in the Teton River Drainage is to have approximately 20% of the historically occupied habitat restored to secure conservation populations of cutthroat trout (see Part 1, 1.6.8(1) Westslope Cutthroat Trout).

Warmwater Species Conservation

The lower Teton River provides tributary spawning habitat for several Species of Concern including blue sucker and shovelnose sturgeon. Tributary spawning habitat is only available in years with elevated spring discharge with a natural hydrograph. Current research is looking into minimal flow conditions that are conducive to native species spawning migrations into the Teton River.

Lower Teton Instream Water Leases

Irrigation water rights are leased for two instream flow changes to restore and maintain flow in the lower Teton River. One is located near Dutton with the other located near Fort Benton. Use of the leased water is coordinated to help prevent dewatering during the summer and into the early fall. Water distribution on the Teton River is administered by a court-appointed water commissioner.

The Dutton instream flow change protects up to 5.9 ft^3/s and 441.5 acre-feet per year at the historic point of diversion and up to 3.54 ft^3/s and 264.9 acre-feet at the downstream measuring point, USGS gage 06108000 Teton River near Dutton. The downstream measuring point does not include water historically diverted for irrigation but returned to the river as runoff or groundwater return flow. The Fort Benton instream flow change protects up to 4.47 cfs and 504.4 acre-feet at the historic point of diversion and up to 2.24 ft^3/s and 252.2 acre-feet at the downstream measuring point, USGS gage 06108800 Teton River at Dutton. The leases and the corresponding temporary changes to instream flow will expire after 2030, unless renewed.

Fish Movement Studies

FWP works with Bureau of Reclamation, NorthWestern Energy, Montana State University, Bureau of Land Management, and the U.S. Fish and Wildlife Service to conduct telemetry studies on the Marias River downstream of Tiber Dam. These efforts monitor habitat use, migration patterns, and reproductive timing of important species as they relate to environmental and biotic conditions in the mainstem Missouri River and larger tributaries such as the Marias, Teton, and Judith rivers. These efforts will continue into the foreseeable future with additional radio and PIT tags implanted into various fish species and additional stations installed along the river corridor. Radio and PIT telemetry will play a vital role in pallid sturgeon recovery efforts.

Habitat Improvements of North Fork and South Fork Teton River

Identify opportunities for habitat improvements including large woody debris structures in the upper reaches and improved fish passage and habitat in the lower reaches.

Spring Creek Culvert Replacement Project

Continue work with Montana Department of Transportation, Teton County Road Department, and the City of Choteau to replace undersized culverts on Spring Creek to improve fish passage and hydrologic stream function.

Choteau Community Pond

Continue work with City of Choteau to develop a community pond within its park system.

FISHERIES MANAGEMENT DIRECTION FOR THE TETON RIVER DRAINAGE

Water	Miles/Acres	Species	Recruitment Source	Management Type	Management Direction
North Fork Teton River and Important Tributaries	20 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain recreational fishery and enhance population levels compared to historic numbers.
		Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
Middle Fork Teton River, Waldron Creek, East Fork North Fork Teton River	5.4 miles 5.7 miles 1.3 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
		Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
Habitat needs and activities: Genetic analysis of Bruce Creek and West Fork North Fork Teton River westslope cutthroat trout needed.					
South Fork Teton River and Important Tributaries	10 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
		Brook trout	Wild	General	Monitor population and evaluate effects on westslope cutthroat trout population.
Rierdon Gulch	3.7 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
		Brook trout	Wild	General	Monitor population and evaluate effects on westslope cutthroat trout population.
Green Gulch, South Fork South Fork Teton River	2.6 miles 3.0 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.

Water	Miles/Acres	Species	Recruitment Source	Management Type	Management Direction
Habitat needs and activities: Genetic analysis of South Fork South Fork Teton River westslope cutthroat trout needed. Explore opportunities for wild fish transfer of nonhybridized westslope cutthroat trout from Green Gulch. Explore opportunities to establish westslope cutthroat trout in fishless 3.4-mile headwater reach of Rierdon Gulch.					
Teton River - Headwaters to the Discharge from Priest Butte Lake	33 miles	Brook trout, Brown trout, Rainbow trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
		Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
		Mountain whitefish (N)	Wild	General	Maintain populations within historic levels.
Habitat needs and activities: Maintain habitat and develop instream flows of 35 cfs. Explore strategies to prevent chronic dewatering of the mainstem of the Teton River upstream of Choteau. Explore increasing routine monitoring to track further upstream movement of previously disconnected lower Teton species.					
McDonald Creek	8 miles	Brook trout, Brown trout, Rainbow trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
Habitat needs and activities: Maintain habitat and instream flows of 10 cfs. Explore strategies to prevent chronic dewatering.					
Deep Creek and Important Tributaries	38 miles	Rainbow trout, Brown trout, Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
		Mountain whitefish (N)	Wild	General	Maintain populations within historic levels.
North Fork Deep Creek	11.5 miles	Rainbow trout, Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
South Fork Deep Creek	8.8 miles	Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.

Water	Miles/Acres	Species	Recruitment Source	Management Type	Management Direction
		Westslope cutthroat trout, rainbow trout hybrids	Wild	General	Maintain populations within historic levels below barriers providing for consumptive use.
		Westslope cutthroat trout (N)	Wild	Conservation	Maintain and protect populations to reduce extirpation risk.
		Mountain whitefish (N)	Wild	General	Maintain populations within historic levels.
Habitat needs and activities: Maintain habitat and instream flows of 18 cfs in Deep Creek. Explore strategies to prevent chronic dewatering. Maintain habitat and instream flows of 7.2 cfs in NF Deep Creek. Investigate for presence of waterfall barriers and evaluate potential for establishing westslope cutthroat trout conservation population in headwaters of NF Deep Creek. Maintain habitat and instream flows of 6.9 cfs in SF Deep Creek. Evaluate opportunities for genetic rescue of South Fork Deep Creek westslope cutthroat trout conservation population. Evaluate potential for greater access.					
North Fork Willow Creek and Important Waterbodies	2.5 miles	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
North Fork Willow Creek Pond	2.6 acres	Westslope cutthroat trout (N)	Wild	Conservation	Maintain or enhance population to reduce extirpation risk.
Habitat needs and activities: Evaluate opportunities to reduce white sucker biomass and increase rehab depth of pond to benefit westslope cutthroat trout.					
Spring Creek	13.1 miles	Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
		Rainbow trout	Hatchery/ Wild	General	Maintain populations within historic levels providing for consumptive use.
Habitat needs and activities: Maintain habitat and instream flows of 4.5 cfs. Evaluate strategies to prevent chronic dewatering. Explore improvement of restricted culverts throughout Choteau city limits.					
Muddy Creek	81 miles	Native nongame species (N)	Wild	General	Maintain populations within historic levels.
Habitat needs and activities: Identify opportunities to improve instream flow and connectivity to the Teton River.					

Water	Miles/Acres	Species	Recruitment Source	Management Type	Management Direction
Antelope Butte (Ostle Reservoir)	39 acres	Rainbow trout	Hatchery	Put, Grow and Take	Maintain recreational fishery for consumptive harvest by continued stocking.
		Tiger muskie	Hatchery	Put, Grow and Take/Quality	Manage population via stocking and limited harvest to suppress white sucker population and provide a unique trophy opportunity.
Habitat needs and activities: Maintain a fishery with whatever water levels irrigators maintain in the reservoir. Explore improving Rinker Creek spawning habitat.					
Bynum Reservoir	3,205 acres	Rainbow trout	Hatchery	Put, Grow and Take	Maintain opportunity for catching larger sized fish.
		Kokanee salmon	Hatchery	Put, Grow and Take	Evaluate reestablishing fishery.
		Yellow perch	Wild	General	Restrict fishing contests to encourage yellow perch fishing opportunity for youth and families.
		Walleye	Hatchery/ Wild	General	Evaluate reestablishing a self-sustaining walleye fishery.
Habitat needs and activities: Maintain a fishery with whatever water levels irrigators maintain in the reservoir.					
Eureka Reservoir	366 acres	Rainbow trout	Hatchery	Put, Grow and Take	Manage as a recreational fishery with consumptive harvest.
		Brown trout	Wild	General	Maintain recreational fishery with limited consumptive harvest.
Habitat needs and activities: Evaluate benefits to anglers of both fish plants and FAS lease under current water level management in the reservoir.					
Teton River - Discharge from Priest Butte Lake to Mouth	151 miles	Blue sucker (N)	Wild	Conservation	Maintain populations within historic levels.
		Channel catfish (N)	Wild	General	Manage as a consumptive fishery.
		Shovelnose sturgeon (N)	Wild	General	Maintain and enhance a seasonally available recreational fishery with consumptive harvest.

Water	Miles/Acres	Species	Recruitment Source	Management Type	Management Direction
		Sauger (N)	Wild	Conservation	Reestablish a native species fishery with some consumptive harvest.
		Northern pike	Wild	General	Manage as a consumptive fishery. Monitor potential expansion through routine monitoring.
Habitat needs and activities: Develop methods to prevent total dewatering of the lower Teton River. Maintain funding for current water leases and pursue additional leases for avoiding dewatering at the mouth. Expand routine monitoring to evaluate upstream migration and movement of species.					
Arod Lakes	223 acres	Northern pike, Yellow perch, Largemouth bass	Wild	General	Maintain populations within historic levels for a recreational fishery with consumptive harvest.
Private/Public Ponds with public access		Trout Warmwater species	Hatchery/ Wild	General	Maintain existing pond fisheries available to the public for harvest.
Habitat needs and activities: Enhance structure in ponds when possible and needed. Seek additional opportunities.					