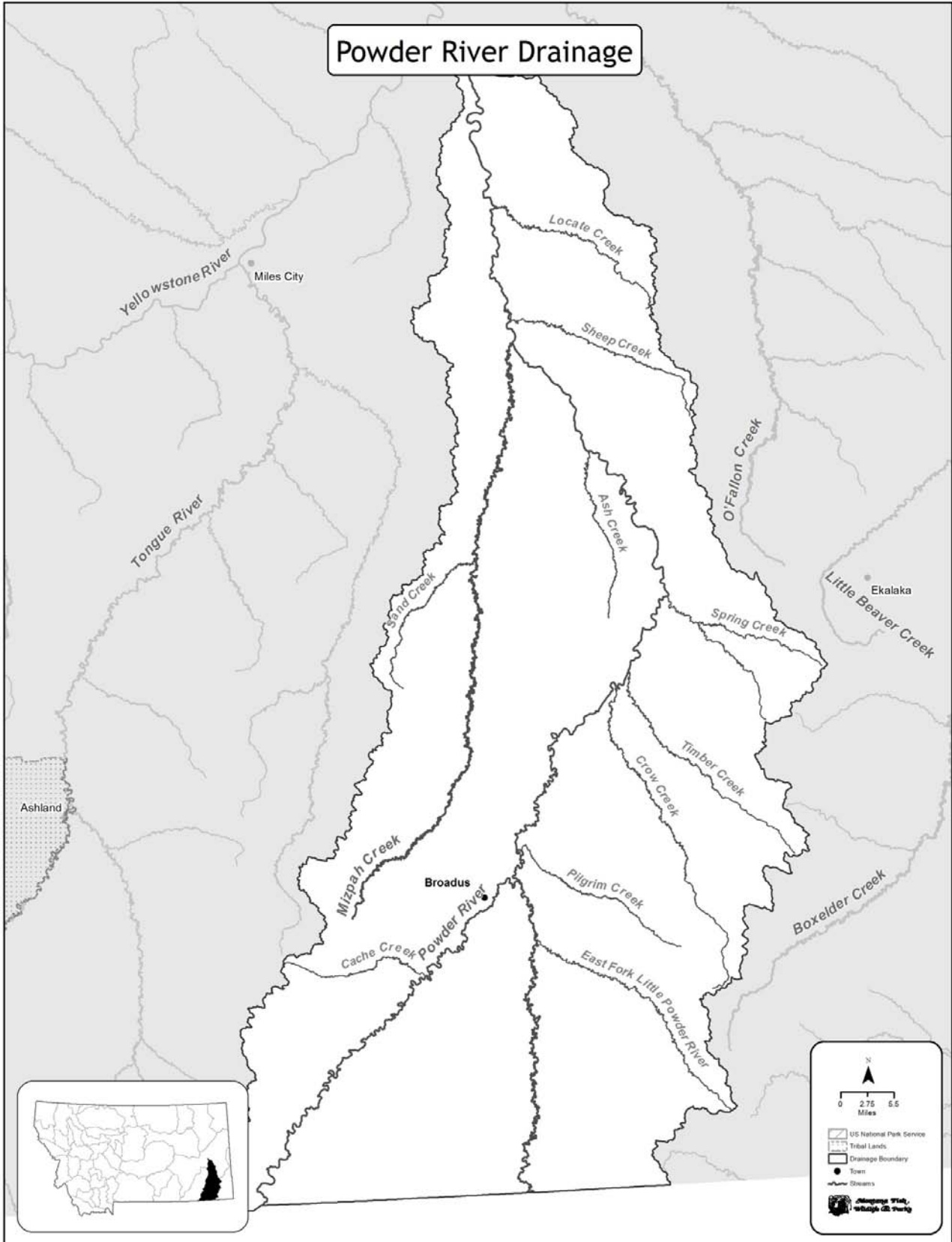


Powder River Drainage



POWDER RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Powder River drainage includes the Little Powder River and two intermittent tributaries (Mizpah Creek and Locate Creek) and drains portions of Carter, Powder River, Custer and Prairie Counties. The headwaters of the Powder River and Little Powder River are located in Wyoming. The Little Powder River flows approximately 72 miles from the Wyoming state line before converging with the Powder River. The confluence of the Powder River with the Yellowstone River is approximately 220 river miles downstream from the Wyoming border. Additionally, 550 miles of fish-bearing stream exist within 44 other streams or creeks within the drainage.

The drainage is rural and includes the small community of Broadus. The landscape is dominated by plains grassland complex but includes a large area of shrub grassland. Cottonwood bottoms dominate much of the riparian area. Land ownership includes state and federal lands but is dominated by private property. Agriculture, primarily ranching and secondarily dry land farming dominate the land use. Industrial exploration and development of the following natural resources is also occurring: coal and bentonite mining, natural gas and oil drilling, and wind turbines.

No natural lakes are found in the drainage, however, numerous stock ponds exist and many provide public access are managed as a fishery and stocked by FWP. In addition to the creeks mentioned above there are numerous warm water prairie streams throughout the drainage. Some the prairie streams hold game fish and many host a considerable number of native and introduced fisheries.

FISHERIES MANAGEMENT

The Powder River and tributaries are managed primarily as a general/conservation fishery. No species are being stocked in any of the rivers/creeks in the drainage. The primary management focus for the entire drainage is to improve fish passage where current restrictions exist (culverts, fords) and ensure future structures provide for adequate stream function and fish passage.

Fish sampling within the drainage has been limited and sporadic. The infrequent sampling that has occurred utilized electrofishing and seining gears. Much of the recent sampling has been associated with a larger scale prairie fish sampling effort and specific educational activities for school programs. Due to low fishing pressure in the drainage there are no specific management goals. .

Like other prairie stream systems the fish assemblage in the Powder River drainage is largely dominated by native species. The Powder River hosts three game fish, channel catfish, sauger, and shovelnose sturgeon. Saugers are classified as a Species of Concern in Montana. In addition to the game fish, 27 native fish species and nine introduced fish species are present in the Powder River. Channel catfish are the only game fish inhabiting the Little Powder River; however, 16 native fish species and four introduced fish species reside within its waters.

The Powder River drainage does not include any large lakes or reservoirs but does support seven private ponds and four public ponds that are managed as a fishery in the FWP Region 7 Pond Fishing Program. The program is offered to landowners as a public relations opportunity to provide a fishery for the surrounding community. As long as 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. The fisheries are sampled at least once every three years to examine population densities and size structures. Populations are established or supplemented when needed through stocking from a state hatchery or by wild fish transfers from another fishery within the region.

HABITAT

The Powder River is undammed and exhibits a relatively natural hydrograph. Fluctuations of the hydrograph often consist of rapid but short-duration elevated flows resulting from Wyoming mountain snowpack melt or from local rain events. The basin has a significant percentage of highly erodible soils consisting of gumbo, clay and silt. The landscape within the basin is dominated by rough breaks, badlands and buttes. The combination of highly erosive soils and steep/rough terrain often result in large amounts of suspended sediments within the water column and bed load material dominated by sand and silt. Sediment load of the Powder River has the potential to, and often does, alter water turbidity and substrate of the Yellowstone River downstream of the Powder River confluence.

Many native species in the Yellowstone River evolved with and rely upon increased turbidity as a spawning cue and some of these species concentrate downstream of the Powder/Yellowstone River confluence each spring. Sauger, channel catfish, paddlefish (during high flow years that accommodate passage at the Intake Diversion on the Yellowstone River), and shovelnose sturgeon are four native game fishes that rely upon increased turbidity and have been documented to aggregate below the Powder River confluence. The significance of elevated turbidity and bed load of the Powder River to the native fish species of the Yellowstone River is likely substantial and may be critical to their life history. Prior to construction of Tongue River Reservoir and Yellowtail Dam, the Tongue River and Big Horn River had similar sediment regimes to that of the Powder River. The Powder River is the last large tributary to the Yellowstone River that provides a natural hydrograph with a natural sediment/turbidity regime, thus its significance to the native species is imperative and deserves additional evaluation.

The Powder River drainage is predominately rural and recent major habitat changes are limited. Developments include the construction of railroads, as well as numerous roads to accommodate vehicle travel (county roads, state highways and a federal interstate highway). All of these developments have impacted the river and its ability to migrate laterally and interact with its historic floodplain. 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 rivers and streams in this drainage. The installation of culverts, fords and dams has similar impact on the function of the waterways and even a greater impact on the upstream migration of fish. Irrigation resulting in the dewatering of the rivers/streams is also a habitat concern within the drainage.

Many of the private and public ponds in the drainage are limited by water depth. Most ponds have a maximum depth of 10-11 feet which is marginal for overwintering fish during winters

with sustained snow accumulations. The severity and prevalence of winterkills may be reduced by installing windmill aerators. Some landowners and the BLM have installed aerators at their expense in attempt to reduce fish winterkill occurrences. The regional Fish, Wildlife and Parks fisheries program has refrained from installing aerators for multiple reasons but mainly because of the time and expenses required to service and maintain the structures.

FISHING ACCESS

There are currently two points of access to the Powder River and one point of access to the Little Powder River. The Powder River Depot provides angler access with undesignated camping and a hand-launch --only near the confluence with the Yellowstone River. The second point of fishing access is the Broadus Bridge FAS (river mile 152) and provides day use only and no boat ramp. The single point of access to the Little Powder River is near Broadus and provides day use only and no boat ramp. This access is located near the confluence with the Powder River. Considering the rural nature of the drainage and limited game species in the streams, fishing pressure is low. Access to fish streams is likely attained through private property access, county road crossings and public land.

SPECIAL MANAGEMENT ISSUES

There are currently no special management issues in the Powder River drainage because of low fishing pressure and limited game species available.

FISHERIES MANAGEMENT DIRECTION FOR POWDER RIVER DRAINAGE

Water	Miles/acres	Species	Origin	Management Type	Management Direction
Powder River	220 miles	Sauger, channel catfish	Wild	General	Maintain harvest level, relative abundance, and size structure through regulations.
		Shovelnose sturgeon	Wild	General	Manage as a recreational fishery with some harvest opportunity. Monitor health of this long lived native species.
		Blue sucker	Wild	Conservation	Monitor population and investigate life history and movements.
		Multi species	Wild	General/Conservation	Manage for recreational fishing opportunity where applicable. Monitor non-game fish species for native fish assemblage and overall ecosystem health.
Habitat needs and activities: Dewatering is a threat to game and non-game fish, work with Wyoming adjudication process to evaluate compact interpretation. Reduce fish entrainment into irrigation intakes.					
Little Powder River	72 miles	Channel catfish	Wild	General	Maintain harvest level, relative abundance, and size structure through regulations.
		Multi species	Wild	General/Conservation	Manage for recreational fishing opportunity where applicable. Monitor non-game fish species for native fish assemblage and overall ecosystem health.
Habitat needs and activities: Improve fish passage at current restrictions (culverts, fords, dams) and ensure future structures provide for adequate creek flow and fish passage.					
Intermittent Streams: Mizpah Creek, Locate Creek	150 miles 42 miles	Multi species	Wild	General/Conservation	Manage for recreational fishing opportunity where applicable. Monitor non-game fish species for native fish assemblage and overall ecosystem health.
Ephemeral Streams: 10 with documented fish populations	Various				
Habitat needs and activities: Improve fish passage at current restrictions (culverts, fords, dams) and ensure future structures provide for adequate creek flow and fish passage.					

Water	Miles/acres	Species	Origin	Management Type	Management Direction
Small Private Ponds/Reservoirs	Numerous	Trout Bass, Walleye, Northern pike Crappie, Yellow perch, Bluegill	Hatchery Wild/ Hatchery Wild/ Transfer	Put-Grow-Take General/Put-Grow-Take General	Public relations opportunity with landowners to provide local fishing opportunity for rural community. Maintain fishery through regulations and annual stocking. Public relations opportunity with landowners to provide local fishing opportunity for rural community. Maintain fishery through regulations and stocking 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: Water depths. (less than 12 feet deep) is a common limitation that leads to frequent winterkills; limitation offset by frequent sampling and stocking or wild fish transfers.					
Public Trout Ponds: Beardsley Rest Boulware	2 acres 1 acre 1 acre	Trout	Hatchery	Put-Grow-Take	Annual stocking of trout for angler opportunity.
Habitat needs and activities: Water depths. (less than 12 feet deep) is a common limitation that leads to frequent winterkills; limitation offset by frequent sampling and stocking.					

