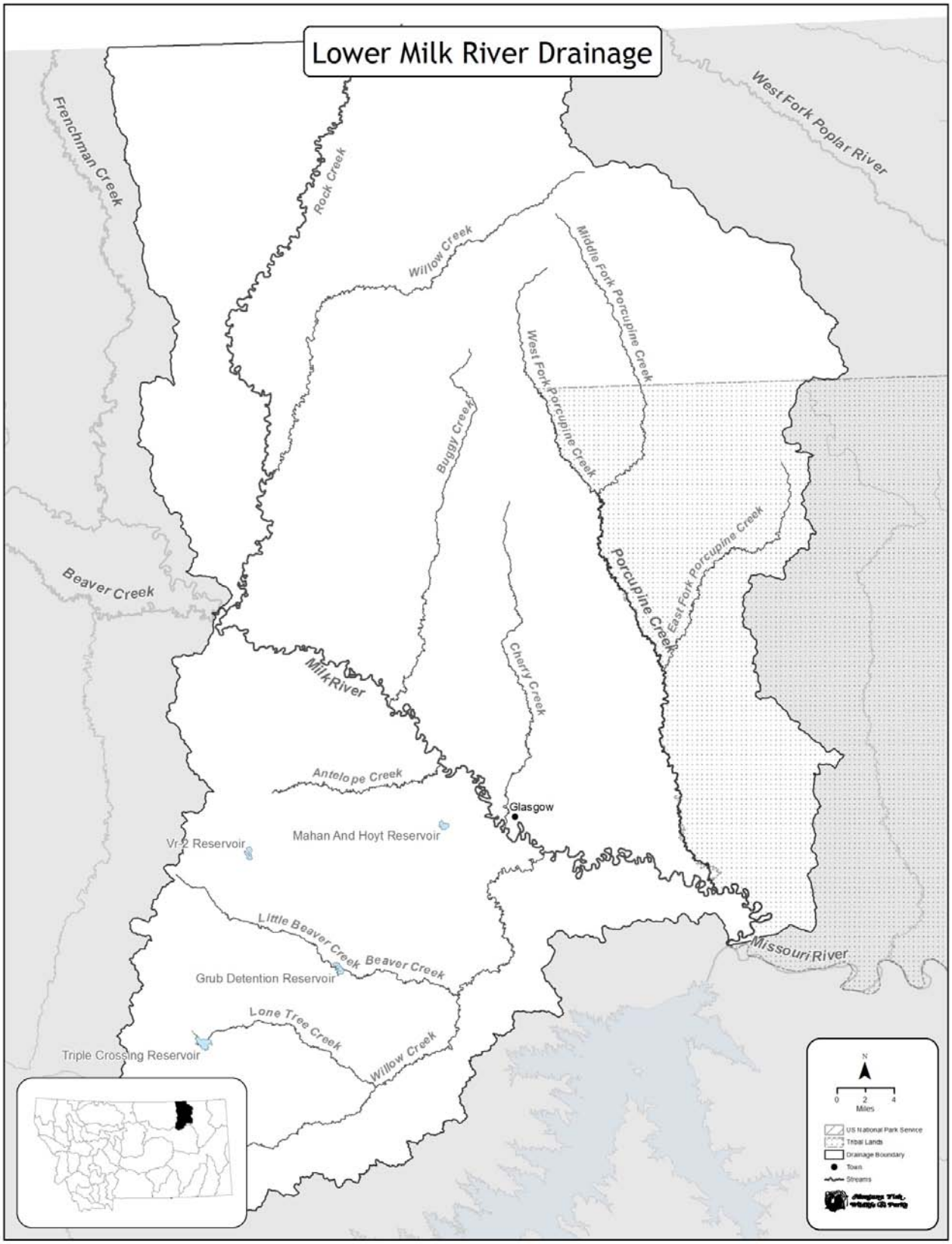
Lower Milk River Drainage
Frenchman Creek
Rock Creek
West Fork Poplar River
Willow Creek
Middle Fork Porcupine Creek
West Fork Porcupine Creek
Buggy Creek
East Fork Porcupine Creek
Porcupine Creek
Beaver Creek
Cherry Creek
Milk River
Antelope Creek
Glasgow
Mahan And Hoyt Reservoir
Vr-2 Reservoir
Little Beaver Creek
Beaver Creek
Missouri River
Grub Detention Reservoir
Lone Tree Creek
Willow Creek
Triple Crossing Reservoir
N
0 2 4
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

LOWER MILK RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Lower Milk River drainage covers approximately 2,644 square miles, including the Milk River from Hinsdale downstream to its confluence with the Missouri River. The vast majority of the district is situated within Valley County, with the exception of the northwest most portion which lies within Phillips County. Significant tributaries include Rock Creek from the north and Willow creek from the south. Although the Milk River bottoms are mostly in private ownership, areas to the north and south include large tracks of BLM land as well as private lands. Along the Milk River irrigated croplands dominate the landscape with intact cottonwood galleries intermixed throughout. The areas to the north are a mix of dry land grain farming and native grass communities. Areas to the south also have dry land grain farming and native sagebrush habitats.

FISHERIES MANAGEMENT

The Milk River from Hinsdale to Vandalia Dam is greatly influenced by the complete fish barrier that Vandalia Dam has created. The richness of native fishes is greatly reduced when compared to sections downstream of Vandalia (Missouri River influence). One native species (channel catfish) and two introduced species (walleye and northern pike) dominate the fishery in this section. Other introduced game fishes including yellow perch, black crappie, bluegill and smallmouth bass are also found in this section. Although not considered a lake or a reservoir, Vandalia Dam backs water up to Hinsdale and boat fishing and water-based recreation is popular.

The fish populations of the Milk River downstream of Vandalia Dam are interconnected to the Missouri River, with high native and nonnative species richness. The abundance of both native and introduced fish can greatly vary on a seasonal or yearly basis depending on the river's discharge and the number of fish migrating upstream from the Missouri River. Game fish that occur in this section include channel catfish, sauger, walleye, shovelnose sturgeon, northern pike, burbot, lake whitefish, smallmouth bass and paddlefish. Non-game fish include (but are likely not limited to) pallid sturgeon, bigmouth and smallmouth buffalo, river carpsucker, blue sucker, white and longnose sucker, shorthead redhorse, freshwater drum, goldeye, stonecat, black bullhead, flathead chub, sicklefin chub, sturgeon chub, sand shiner, emerald shiner, spottail shiner, fathead minnow, brassy minnow, western silvery minnow, plains minnow and common carp.

The lower Milk River is a very important tributary to the Missouri River for fish recruitment. Studies have found that when the Milk River is flowing during the spring and early summer, countless fish of several species are produced and drift into the Missouri River. Paddlefish production in the lower Milk River occurs in years that the Milk has spring and early summer flows. In addition, blue suckers are known to enter the Milk River when flows are near 1,000 cfs and spawn, while in years where relatively little flow occurs blue suckers don't even enter the river. Furthermore, higher flows are required to scour silt from the bottom of the river into suspension and expose the many gravel bars--allowing fish like sauger and paddlefish to attach

their eggs. The importance of the Milk River is just becoming known and with the recent migrations of pallid sturgeon into the river, further study is warranted.

Fishing regulations in the lower Milk River are similar to that of the rest of the Eastern District, with the exception of paddlefish. Although paddlefish use the lower Milk in the spring and early summer, no fishing is allowed. This is because the size of the population and the amount of fishing pressure it can withstand is not fully understood. Furthermore, there is very limited public access on this portion of the river and spawning is sporadic and dependent on river discharge. Limited access not only makes fishing difficult, but limits effective law enforcement.

Rock Creek is a relatively large tributary that enters the Milk River northwest of Saco. Although the majority of angling likely occurs at its confluence with the Milk River Rock Creek it has at least 14 species within the drainage, 12 of which are native species.

Several prairie ponds that provide public access are stocked with game fishes to provide fishing opportunities. The deeper ponds have been stocked with game fish that are meant to be self-sustaining, such as northern pike, yellow perch, white or black crappie, and largemouth bass. Shallower ponds that have a tendency to winter kill are often stocked with hatchery produced rainbow trout that are stocked either annually or biannually.

HABITAT

The upper section of the Milk River from Hinsdale to Vandalia Dam is shallower and has faster moving water, while the lower section consists of relatively deep slow moving water, because of the influence of Vandalia Dam. The upper section has intact cottonwood galleries with intermixed agricultural fields to the rivers banks.

The section downstream of Vandalia dam is very sinuous with a cottonwood gallery lining the majority of river with patches of agriculture adjacent to the river banks. Throughout most of the year the rivers bed is laden with silt substrate, but when the river flows increase in the spring, those sediments are put into suspension and gravel bars are exposed.

During the flooding of 2011 it was apparent how important an intact riparian zone is on the lower Milk River. Bank sloughing occurred at accelerated rates on lands butting up to agricultural field, with several areas witnessing severe erosion. Conversely, soils with intact riparian vegetation stayed relatively intact.

The largest single factor limiting the lower Milk River is the availability of water during the spring and early summer period. During years of drought, the lower Milk River is often stagnant, with flows approaching zero. From past research there is a good understanding of the relationship between spring and early summer flows and production of several species of native fishes, including game fishes like sauger and paddlefish. During wet years when the Milk River flows for extended periods, several species benefit by running up into the river from the Missouri River and spawning. The duration of flow is critical since once a fish has laid its eggs flows are needed to keep those eggs oxygenated. If flows cease when eggs are incubating, silt will fall back out of the water column and can suffocate the eggs.

FISHING ACCESS

The majority of the lower Milk River flows through privately owned lands. However, some public lands do occur, particularly in the town of Hinsdale and at Vandalia Dam. From Vandalia Dam to its mouth, public access is mostly limited to county bridges. Addressing the lack of public access to the lower Milk River is a priority for FWP.

The prairie ponds within the district occur on a mix of private and public land. Private ponds stocked by FWP are accessible to the public by gaining permission from landowners. A region-wide pond booklet was published in 2011 that provides recreationists with a guide to all ponds managed by FWP in Region 6. This booklet will be updated every two years.

SPECIAL MANAGEMENT ISSUES

During 2010 and 2011, both wild adult and hatchery-reared pallid sturgeon migrated into the lower Milk River from the Missouri River. Although the significance of this in terms of helping with pallid sturgeon recovery is unclear, it is apparent that future studies are warranted.

The Milk River greatly influences the temperature and suspended sediment load of the Missouri River during high flows, due to the fact that low volumes of cold, clear water are typically released out of the reservoir at these times. These physical changes in the Missouri River were observed during 2010 when the Milk River had flows of approximately 6,000 cfs for two extended periods during the spring into the early summer. These flows not only produced fish like paddlefish and sauger in the Milk River, but also contributed to the largest year class of shovelnose sturgeon produced in the Missouri River in recent history. Similarly, during the historic water year of 2011, at least five adult wild pallid sturgeon migrated up the Milk River. This was the second year in a row that adult pallid sturgeon were in the Milk River and during 2011 they were present in the spawning season. Although at this point, the Milk River is not believed to be a spawning river for pallid sturgeon, its effects on the physical nature of the Missouri River are believed to be very important. Therefore, water management in the Milk River could be a reasonable alternative for managing the restoration of pallid sturgeon in the Missouri River.

FISHERIES MANAGEMENT DIRECTION – LOWER MILK RIVER DRAINAGE

Water	Miles/acres	Species	Origin	Management Type	Management Direction
Milk River (Hinsdale to Vandalia Dam)	16 miles	Channel catfish Sauger, Walleye, Northern pike	Wild	General	Monitor populations for sport fishing. Continue to better understand channel catfish population dynamics.
		Native non-game fishes	Wild	Conservation	Monitor populations to detect changes in species composition and abundance.
Milk River (Vandalia Dam to Missouri River)	117 miles	Channel catfish Sauger, Paddlefish	Wild	Conservation/ Special Regulations	Monitor populations to be certain that over exploitation does not occur. Maintain habitat for all life stages. Study channel catfish population dynamics. Better understand spawning requirements of sauger and paddlefish.
		Northern Pike, Walleye, Smallmouth bass, Yellow perch, Black crappie	Wild	General	Low level effort to monitor populations through native game fish surveys. Allow sustainable harvest.
		Native non-game fishes	Wild	Conservation	Monitor populations to detect changes in species composition and abundance. Better understand the relative contribution of Milk River fishes to the Missouri River
Rock Creek	93 miles	Channel catfish Sauger	Wild	General	Maintain numbers. Inventory habitat issues, such as fish passage barriers and unscreened diversions.
		Native non-game fishes	Wild	Conservation	Protect habitat for native fishes. Provide fish passage at stream crossings.
Prairie Ponds	Various	Yellow perch, Largemouth bass, Northern pike	Wild/ Transport	General	Continue to monitor these populations and stock fish when necessary. Look for opportunities to increase the quality of habitat by increasing the depth of reservoirs, building new reservoirs, etc.
		Rainbow trout	Hatchery	Put-Grow-Take	Continue to stock prairie ponds with put and take fisheries. Evaluate angler use and which ponds should be stocked. Look for opportunities to improve habitat where applicable.