

Upper Yellowstone River (272 River Miles)

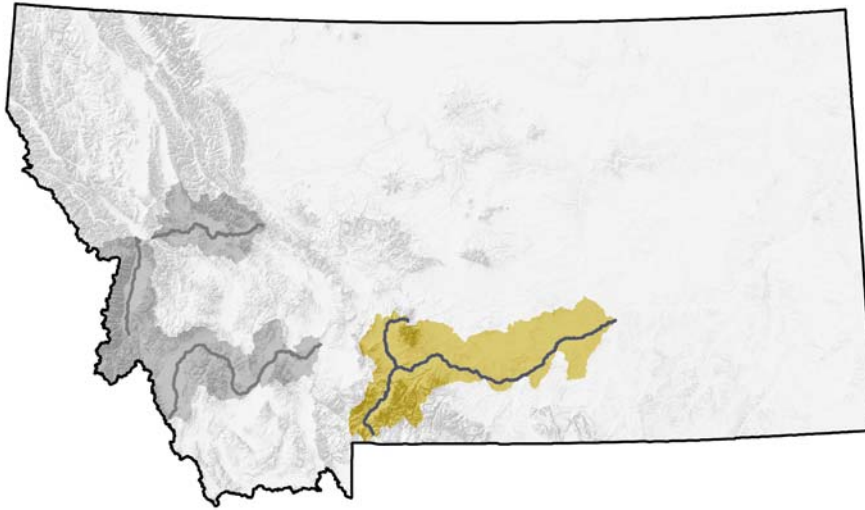


Figure 17. Upper Yellowstone River Focus Area

The Yellowstone River originates in Wyoming and flows through Yellowstone National Park before entering Montana near Gardiner. From the park boundary to Livingston, the river flows north through the Gardiner Basin and eventually enters the Paradise Valley, flanked by the Absarokee Mountains on the east and the Gallatin Range on the west. The river continues in a northeasterly direction from Livingston and meets up with the Missouri River just across the North Dakota border. The Yellowstone has survived as one of the last, large, free-flowing rivers in the continental United States. Lack of impoundments allows spring peak flows and fall and winter low flows that support a naturally unique and dynamic community. The Upper Yellowstone River supports clear, coldwater cutthroat trout fisheries in Yellowstone National Park to the warmwater habitats on the plains. The adjacent environments include cottonwood-willow bottomlands and broad low cover grasslands.

Associated Habitats

Habitat Type	Habitat Tier	Acres	Miles
Lowland Lakes	III	10,838	
Lowland Reservoirs	III	580	
Mixed Source Rivers (Intermountain and Prairie Flow)	II		259
Prairie Streams	I		5,378
Intermountain Valley Rivers	II		131
Intermountain Valley Streams	II		1,068
Mountain Lakes	III	1,893	

Associated Species of Greatest Conservation Need (Tier I Species)

There are a total of 46 aquatic species that are found within the Upper Yellowstone River Focus Area. Tier I species are listed below. All associations can be found in Table 23.

Fish: Yellowstone Cutthroat Trout, Burbot, and Sauger

Conservation Concerns & Strategies

Conservation Concerns	Conservation Strategies
Dewatering as a result of water diversion	Work with public and private land owners to improve efficiency of water use in order to maximize water return
Water chemistry problems due to irrigation return water and the discharge of wastewater from coal bed methane operations, and other sources	Support cooperative efforts to minimize impacts of return water due to sedimentation, increased salinity and temperature alteration
Riprap and other streambank stabilization work	Work with new stabilization projects to reduce impacts and support efforts to restore existing rip-rap areas to natural condition
	Develop statewide riparian best management principles
Invasive non-native fish species	Programs to control exotic species and promote natural habitats that support native species but not exotic species
Entrainment of juvenile and adult fishes by irrigation diversions or other water intakes	Screening or modification of irrigation diversions or other water intakes in a manner that prevents entrainment of fishes
Riparian vegetation effected by range and forest management practices and streamside residential development (such activities destabilize streambanks, increase sediment inputs, reduced shading, and remove woody debris)	Support government and private conservation activities that encourage and support sustainable land management practices in riparian areas
Modification and degradation of stream channels caused by various construction or land management practices	Restoration of stream channels or streambanks to a condition that simulates their natural form and function

	Modification of riparian management practices such that riparian vegetation is allowed to recover
	Develop statewide riparian best management principles
Alterations of the quantity or timing of stream flows, causing dewatering or unnatural flow fluctuations that diminish the quantity or quality of essential habitats	Implementation of various water conservation or flow management practices that restore essential habitats, simulate the natural hydrograph and also protect instream flows
Culverts, dams, irrigation diversions, and other instream barriers that fully or partially impede fish movement and reduce connectivity of habitat	Removal or modification of barriers in a manner that restores fish passage

References

Hansen, A., J. Rotella, L. Klass, and D. Gyskiewicz. 2003. Riparian Habitat Dynamics and Wildlife Along the Upper Yellowstone River. Technical Report #1. Landscape Biodiversity Lab, Montana State University, Bozeman, MT. In cooperation with the Governor's Upper Yellowstone River Task Force.

U.S. Fish and Wildlife Service. 2004. Conservation Focus Areas of the Great Divide: a vast region encompassing the Upper Missouri, Yellowstone and upper Columbia watersheds. Publisher: USFWS, Benton Lake Wildlife Refuge, Great Falls, MT. 77 pp.