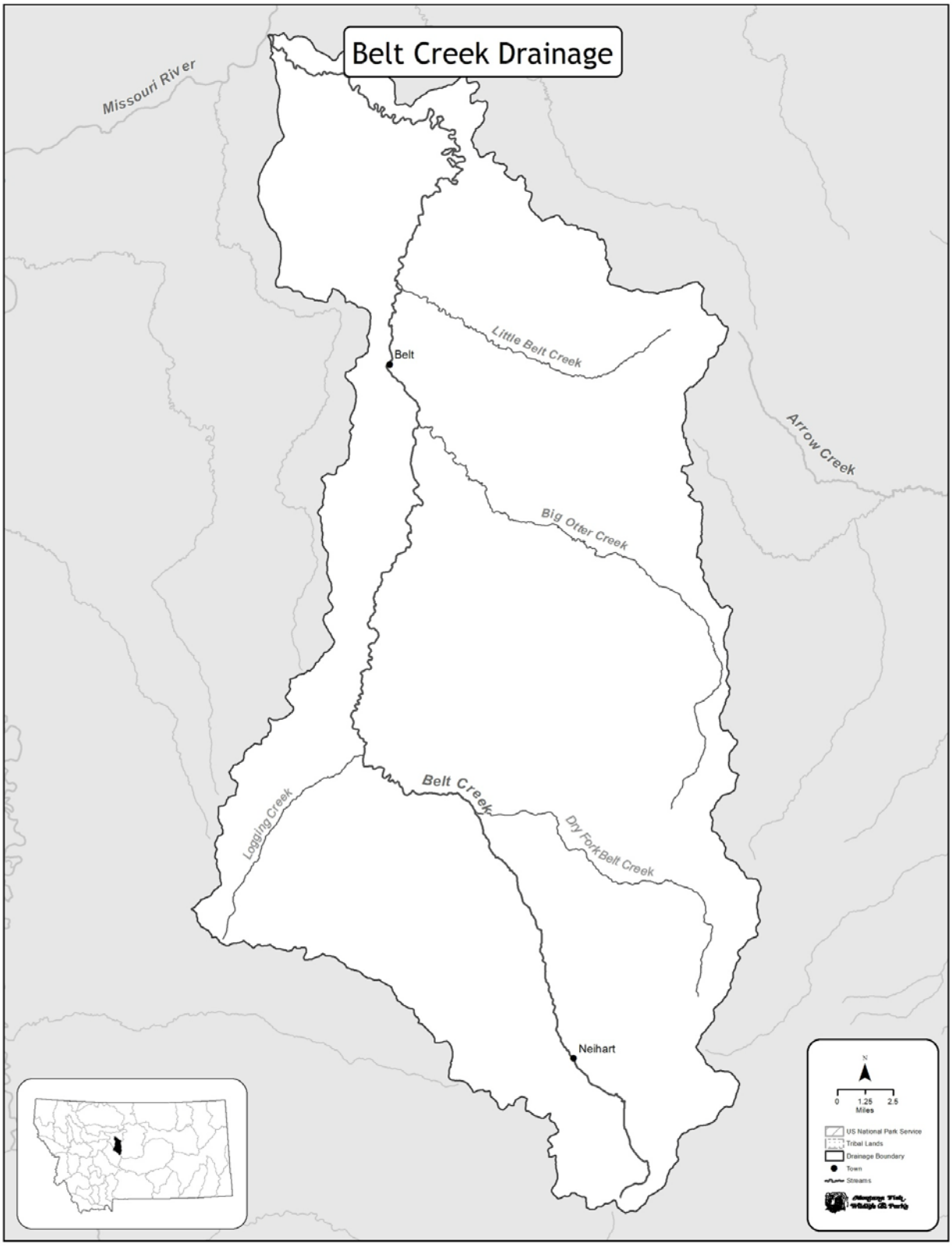
Belt Creek Drainage
Missouri River
Little Belt Creek
Belt
Arrow Creek
Big Otter Creek
Belt Creek
Logging Creek
Dry Fork Belt Creek
Neihart
N
0
1.25
2.5
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

BELT CREEK DRAINAGE

PHYSICAL DESCRIPTION

Belt Creek is a major tributary of the Missouri River. It originates on the northwest side of the Little Belt Mountains and flows in a northerly direction for about 88 miles to its confluence with the Missouri, 14 miles downstream of Great Falls in Cascade County. Belt Creek drains approximately 800 square miles of the Little Belt and Highwood mountains. The basin contains approximately 186 named perennial streams, comprising a total length of about 442 miles of perennial stream habitat. Major tributaries to Belt Creek include Jefferson, Dry Fork, Tillinghast, Pilgrim, Logging, Big Otter, Little Belt and Big Willow creeks.

The upper basin of Belt Creek is situated in the mountainous area of the Lewis and Clark National Forest with its headwaters at an elevation of about 8,000 feet. The landscape of the headwaters is comprised of plateau-like mountains with V-shaped valleys carved through the sedimentary Belt formation of the parent rock. The basin supports subalpine and montane forests consisting mostly of lodgepole pine, Douglas fir, ponderosa pine, and subalpine fir. Within these forest zones, the upper 33 miles of Belt Creek flows through a steep, narrow valley before entering the Sluice Boxes, a limestone gorge about 14 miles in length. The riparian vegetation of the floodplain is variable with respect to elevation, consisting of an overstory of spruce and lodgepole pine in the cool, higher areas and lodgepole pine, Douglas fir, ponderosa pine and cottonwood in the lower temperate zone. Willows, water birch, rose, and red osier dogwood are shrub species which dominate the undergrowth of the riparian. There are very few meadow areas along Belt Creek.

The gradient for this size of stream is unusually steep, averaging about 90 feet/mile near its headwaters at Neihart, to 40 feet/mile at the lower end near Monarch. Channel substrates reflect the cascading nature of Belt Creek with boulders, large cobbles, and several outcroppings of bedrock typifying the stream bottom.

Belt Creek at the lower elevations flows through prairie foothills and benchlands joining the Missouri River at an elevation of 2,800 feet. This lower section begins at the confluence with Big Otter Creek and flows for 39 miles through gently dipping sandstone and shale formations while remaining entrenched within a narrow valley. The upper 13 miles of this reach typically are intermittent during dry periods, probably losing water to cavernous limestone. Downstream of this point, the stream typically becomes effluent again and remains perennial throughout its remaining course. The riparian vegetation consists of a diverse woodland environment dominated by a cottonwood overstory with an undergrowth of willows, chokecherry, rose and snowberry. Although the stream gradient lessens from that of upper Belt Creek, the average gradient of 28 feet/mile is unusually steep for a large prairie stream. Channel substrate is comprised primarily of cobbles, although scattered boulders are still present throughout its length. Cobbles and gravel in the lower end show increased silt deposits due to heavy sediment loads entering from lowland tributaries.

Land use in the Belt Creek drainage includes most types found east of the Divide. Timber harvest has been extensive in the past; however, harvest has been substantially reduced.

Mountain pine beetle infestations and spruce budworm has had significant impacts on the forest health in recent years. Nearly all of the land within the lower basin is managed for cattle ranching or farming. A substantial amount of livestock grazing occurs in this area. Only minor grazing occurs in the forested upper basin. Hay and some crop land exist along the stream, but little of it is irrigated. There has been extensive silver, lead, zinc and gold mining in the Little Belt Mountains in both the Carpenter-Snow Creek and Barker-Hughesville Mining districts. Along with the mining of various ore deposits, serious heavy metals pollution has occurred from several abandoned mining tailings. The water quality of streams in the Belt Creek drainage has been impaired as a result of runoff and groundwater. Both mining district sites are Federal Superfund sites and are in the early stages of remediation work.

A USGS stream flow gage on Belt Creek near Monarch (river mile 52.0) recorded an average annual flow of 192 cfs for the 31-year period of record from 1951-82. A relationship was also developed to predict flows on Belt Creek at the Riceville Bridge at the lower end of Sluice Boxes State Park based on flows at the USGS Smith River below Eagle Creek Gage.

FISHERIES MANAGEMENT

From the headwaters to the mouth of Big Otter Creek, a reach of approximately 51 miles, rainbow trout are the predominant sport fish found throughout the lower elevation, higher order stream reaches followed by mountain whitefish and brown trout. Westslope cutthroat (WCT) and brook trout are uncommon in the lower mainstem, but good populations are present in some tributary streams and the headwaters area. Brook trout tend to dominate the smaller, higher elevation streams. There are approximately 211 miles of stream that support rainbow trout and 197 miles of stream that support brook trout in the Belt Creek Drainage. Approximately 37 miles of stream in the Belt Creek Drainage support pure WCT. Due to this relatively large number of headwater streams that hold conservation populations of WCT, the upper portion of the mainstem Belt Creek has good numbers WCT of varying purity. This abundance of WCT populations is primarily an artifact of the presence of naturally formed waterfalls and fragmented habitat in the Belt Drainage. Non-game species in the upper reaches of the drainage include mountain, white and longnose suckers, longnose dace, and Rocky Mountain sculpin.

The statewide fishing pressure and harvest survey for the period 1982-2009 reported an average of about 7,500 angler-days of use annually and ranged from 3,437 in 2001 to 13,424 angler-days in 1997. The most recent data estimated that 10,330 angler-days occurred on Belt Creek in 2009.

Because of substantial fishing pressure and problems with dewatering in the lower portion of this reach, the lower 13 miles does not maintain an adequate self-sustaining trout population. Approximately 3,000 catchable rainbow trout were historically stocked in this section annually from the early 1960’s to 1996. Tributaries to Belt Creek were also stocked with large numbers of non native trout for many years prior to 1996.

This lower reach of Belt Creek between the mouth of Big Otter Creek and the confluence with the Missouri River (39 miles), supports both coldwater and warmwater fisheries. A marginal resident trout fishery exists in this reach and is limited because of low stream flows, high water temperatures, excessive siltation, and in some areas from acid mine drainage effluent from old coal mines. Rainbow trout are the most common trout species found. Brown trout occur throughout the reach, but in far fewer numbers. To some extent both rainbow and brown trout

from the Missouri River migrate up Belt Creek during their spawning season. Mountain whitefish have also been observed to migrate in large numbers into the lower mile of Belt Creek from the Missouri River to spawn. Historically, sauger migrated up Belt Creek (as high as Arrington) during the late spring and resided in the stream until fall as long as flow conditions were adequate. No sauger have been observed in recent years in Belt Creek. However, credible reports of shovelnose sturgeon at Salem Bridge have been reported in recent years. In 1997 high flows in the Missouri River resulted in confirmed reports of northern pike in the sluice boxes section. Non-game fish found in lower Belt Creek include goldeye, longnose, mountain and white suckers, shorthead redhorse, carp and Rocky Mountain sculpin.

FISHING ACCESS

The Belt Creek drainage has a high scenic value. It is a popular recreation area for fishing, hunting, picnicking, camping, hiking, mountain biking, motorized trail riding, and for the adventurous, floating. U.S. Highway 89 parallels Belt Creek throughout the upper section and provides access to most portions of the stream. Much of upper Belt Creek and its tributaries receive a substantial amount of fishing pressure due to its proximaity to Great Falls, the convenient access provided by Highway 89 and the availability of numerous developed and dispersed camping sites. A winter sports area is locate in the upper basin, providing additional easy access to the stream. The only FWP land on Belt Creek that provides angler access is Sluice Boxes State Park. Routes 331 and 228 parallel the stream for about 25 miles of the lower section. Public access to private lands bordering lower Belt Creek has usually been allowed with permission. The remaining 14 miles of this lower portion flows through remote and rugged lands and access is difficult except at the Salem Bridge, about a mile upstream from the mouth.

SPECIAL MANAGEMENT ISSUES

Nineteen populations of genetically pure WCT currently occupy less than 15% (33 miles) of the total historic range in the drainage. Four of the populations are at a moderate risk of extinction over the short term. These represent priorities where short and long term actions are required to reduce extinction risk and provide increased protection or expansion of the populations.

FISHERIES MANAGEMENT DIRECTION FOR BELT CREEK DRAINAGE

Water	Miles/acres	Species	Origin	Management Type	Management Direction
Belt Creek (Headwaters to the Mouth of Big Otter Creek)	51 miles	Rainbow trout, Brown trout, Brook trout	Wild	General	Maintain populations within historic levels providing for consumptive use.
		Mountain whitefish	Wild	General	Maintain numbers within historic range.
		Westslope cutthroat trout	Wild	Conservation	Maintain or enhance populations. Expansion downstream of existing occupied area would require a large barrier project on the mainstem Belt Creek. Survey tributaries and upper reaches of mainstem to determine upstream limit of WCT. When biologically feasible, provide for limited consumptive use.
Habitat needs and activities: Maintain habitat and instream flows of 90 cfs.					
Big Otter Creek	26.5 miles	Brown trout	Wild	General	Manage as a recreational fishery with the opportunity to catch large brown trout.
		Brook trout, Rainbow trout	Wild	General	Manage as a recreational fishery with some consumptive harvest.
Habitat needs and activities: Maintain spring creek type habitat and instream flows of 5 cfs.					
Logging Creek	11 miles	Brook trout, Rainbow trout, Brown trout	Wild	General	Manage as recreational fishery with consumptive harvest.
		Westslope cutthroat trout	Wild	Conservation	Monitor the conservation population in the headwaters.
Pilgrim Creek	7.5 miles	Westslope cutthroat trout	Wild	Conservation	Collect additional genetic samples and determine if headwater populations remain non-hybridized. Enhance existing barrier near the mouth and remove non-native fish from barrier to pure population in headwaters.
Habitat needs and activities: Modify/enhance existing barrier near the mouth.					
Dry Fork Belt Creek	11 miles	Rainbow trout, Brook trout	Wild	General	Manage as recreational fishery with consumptive harvest.
		Westslope cutthroat trout	Wild	Conservation	Evaluate opportunities to expand population throughout the Dry Fork drainage if remediation of heavy metals pollution occurs
Habitat needs and activities: Maintain habitat and instream flows of 7 cfs. Identify potential barrier sites to develop a conservation population of westslope cutthroat trout.					

Water	Miles/acres	Species	Origin	Management Type	Management Direction
Oti Park Creek	4.2 miles	Brook trout	Wild	Suppression	Manage to minimize expansion of brook trout population.
		Westslope cutthroat trout	Wild	Conservation	Maintain or enhance population.
Habitat needs and activities:. Pursue construction of a barrier at a remote site to protect a good population of nearly pure WCT from an expanding brook trout population if a barrier is not installed on Dry Fork Belt Creek. The site would likely require a helicopter concrete pour.					
Carpenter Creek	3 miles	Westslope cutthroat trout	Wild	Conservation	Evaluate opportunities to expand population and provide secure habitat throughout the Carpenter Creek drainage in anticipation of mine remediation and metals pollution in the Carpenter-Snow Creek drainage.
Habitat needs and activities: Identify potential barrier sites near mouth to develop a conservation population of Westslope cutthroat trout.					
Jefferson Creek	5.4 miles	Brook trout	Wild	General	Manage to minimize increases in population densities.
		Rainbow trout	Wild	Suppression	Manage to minimize presence in the stream.
		Westslope cutthroat trout	Wild	Conservation	Maintain or enhance population to eventually allow limited harvest.
Habitat needs and activities: Explore potential barrier sites on Belt Creek to prevent non-native fish migration into Jefferson Creek.					
Chamberlain Creek	5.4 miles	Westslope cutthroat trout	Wild	Conservation	Monitor Chamberlain Creek above barrier for presence of brook trout.
Habitat needs and activities: The existing barrier is suspect at high flows because of screen clogging and erosion under the splash pad. Future work should be conducted to modify the screen to pass debris and the splash pad should be extended downstream to prevent passage of non-native fish during significant flow events.					
Belt Creek (Big Otter Creek to Confluence with Missouri River)	37 miles	Rainbow trout, Brown trout	Wild	General	Maintain populations with historic levels providing for consumptive use.
		Mountain whitefish	Wild	General	Maintain numbers within historic range.
		Sauger	Wild	Conservation	Evaluate potential to restore populations.
Habitat needs and activities: Maintain habitat and instream flows of 35 cfs.					
Little Belt Ceek	15.8 miles	Rainbow trout, Brown trout	Wild	General	Maintain a recreational fishery with consumption in majority of stream below barriers.
		Brook trout	Wild	Suppression	Pursue removal of brook trout above a barrier on private land to benefit WCT in Little Belt Creek population and provide an additional layer of security for the North Fork and Middle Fork Little Belt Creek WCT populations.

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Water	Miles/acres	Species	Origin	Management Type	Management Direction
		Westslope cutthroat trout	Wild	Conservation	Pursue opportunities to expand existing Little Belt Creek population downstream to barrier on private land.
Middle Fork Little Belt Creek	2.6 miles	Brook Trout Westslope cutthroat trout	Wild Wild	Suppression Conservation	Suppress brook trout population above barrier to protect WCT population. Monitor the WCT population annually. Expand population downstream if private landowners are amenable.
Habitat needs and activities: Eradication of brook trout above a waterfall barrier on private land would create a WCT population resistant to long-term extinction threats and would include the North Fork and Middle Fork Little Belt drainages.					
North Fork Little Belt Creek	2.4 miles	Brook Trout Westslope cutthroat trout	Wild Wild	Suppression Conservation	Suppress brook trout population above barrier to protect WCT population. Monitor the WCT population annually. Expand population downstream if private landowners are amenable.
Habitat needs and activities: Eradication of brook trout above a waterfall barrier on private land would create a WCT population resistant to long-term extinction threats and would include the North Fork and Middle Fork Little Belt drainages.					
Westslope Cutthroat Trout Genetically Unaltered Conservation Population Streams (Isolated Single Species Populations)	33 miles	Westslope cutthroat trout	Wild	Conservation	Maintain or enhance populations to reduce extinction risk. Allow harvest in robust populations.
Habitat needs and activities: Maintain or improve habitat and explore suitable sites for barriers or reducing fragmentation of WCT occupied habitat.					
Westslope Cutthroat Trout Genetically Altered Conservation Population Streams	59 Miles	Westslope cutthroat trout, Hybrids (mixed populations)	Wild	Conservation	Maintain or enhance populations. Allow harvest in robust populations.
Brook Trout Streams	197 Miles	Brook trout	Wild	General	Manage for a consumptive harvest.