



SMITH RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Smith River drainage lies in west-central Montana in Meagher and Cascade counties, almost due south of Great Falls between the Big Belt Mountains on the west and the Little Belt and Castle mountains on the east. The drainage is approximately 75 miles in length and the width varies from 3 to 45 miles. The total area is slightly over 2,000 square miles. The elevation of the floor of the drainage varies from 3,350 to 5,400 feet. The highest mountain peaks range from 8,500 to 9,500 feet.

The Smith River is formed by the junction of the North and South forks about 4 miles southwest of the town of White Sulphur Springs. The North Fork drains part of the southwest slopes of the Little Belt Mountains and the northwest slopes of the Castle Mountains. The South Fork originates along the southwest flank of the Castle Mountains and from the bench lands between the Castle and Big Belt mountains. Hot water springs occur in the confluence area between the North and South forks, as well as at the headwaters of the South Fork and serve to elevate water temperatures in reaches of the upper drainage. The mainstem of the Smith River then meanders northwesterly about 41 miles through a broad upper valley before entering a deep mountain canyon near the confluence of Sheep Creek. The river twists north for approximately 45 miles between high limestone cliffs and conifer and grass-covered mountains before flowing another 12 miles through foothill grasslands. After Hound Creek enters the Smith, the river meanders another 24 miles through a relatively narrow, agriculturally developed valley flanked by rolling grasslands until it joins the Missouri River near the town of Ulm about 11 miles west of Great Falls.

In the early 1860s, the discovery of gold in the surrounding mountains stimulated a heavy influx of miners. As gold was depleted and mining operations abandoned, farming and ranching began to take over as the predominant land use in the basin, and they remain so today. Logging and recreation are other important land uses in the drainage.

Approximately 125 tributaries originate in the Big Belt and Little Belt mountains to join the Smith River. Some of the major tributaries originating in the Big Belt Mountains are Birch, Camas, Beaver, Rock, and Hound creeks. Those from the Little Belt Mountains are Newlan, Sheep, Eagle, Tenderfoot and Deep creeks.

Major reservoirs in the Smith River drainage include Newlan Creek and Smith River (Sutherlin) reservoirs. Both are in the Little Belt Mountains. High mountain lakes in the drainage are located in the Big Belt Mountains and include Edith, Grace, Hidden, and Upper Baldy Lakes. Other lakes with fisheries management/recreational importance include Crater and Gipsy lakes. In total there are 15 lakes or reservoirs and 801 surface acres in the drainage.

FISHERIES MANAGEMENT

The Smith River drainage holds about 1,220 miles of perennial streams, including approximately 100 named streams. There are approximately 741 miles of habitat capable of supporting salmonid fishes in the Smith River drainage.

Between 1928 and 1973, approximately 3.5 million introduced trout were stocked in the mainstem Smith River. Tributaries to the river were also stocked with large numbers of introduced trout for many years prior to 1973. The Smith River is a nationally known trout fishery and has been managed as a wild trout fishery since 1974, when the stocking of trout was discontinued.

Brook trout tend to dominate smaller, higher elevation streams, while rainbow trout and brown trout dominate the higher order, lower elevation streams. The majority of extant populations of westslope cutthroat trout in the Smith River drainage reside in high elevation streams on national forest land; six populations of pure westslope cutthroat trout occupy less than 2% of the historic range in the drainage.

Much of the life history of fish and habitat use in the Smith is not well known. Recent telemetry work has shown a high rate use of the Smith River basin by rainbow and brown trout tagged in the Missouri and Sun rivers between Ulm and Great Falls. A basic biological survey defining life history strategies in the mainstem and tributaries along with an inventory of potential habitat problems would provide critical information to enhance and protect the existing fisheries.

In fall 2011, densities of both rainbow and brown trout in the Eagle Creek section of the Smith River were estimated at 250 per mile for each species. The mean for this section, several miles downstream from Camp Baker, based on 33 years of data (1969 to 2011) is 506 rainbow trout and 312 brown trout per mile. The Deep Creek section, also located near the bottom of the canyon reach, has not been sampled in recent years. Trout populations tend to be lower there compared to those upstream in the Eagle Creek section. The mean number of rainbow and brown trout per mile are 168 and 270, respectively, based on 20 years of data gathered from 1970-2006.

The fisheries resource is classified as high value by FWP for the floating section between Camp Baker and the mouth of Hound Creek, where most fishing pressure occurs. An average of 14,129 angler days was expended from the top of the float section to the mouth for the period of record (1982-2009).

Although fish populations appear to be regulated by environmental factors such as winter habitat and low summer streamflows, special regulations were implemented in the float section from Rock Creek to Eden Bridge in 1986. In 2004, the special regulations were extended upstream to include the entire float reach. Harvest through the float section does not appear to be a factor impacting the fishery at the population level. Water-temperature-induced fishing restrictions/closures are a recurring management strategy in drought years. High water temperatures in 2006, 2007 and 2012 caused FWP to implement mandatory time-of-day angling restrictions in mid to late summer and a complete 24 hour per day closure occurred in 2000. The Smith River is also one of 10 streams in Montana where FWP holds a "Murphy"

Water Right implemented by the Montana Legislature and periodically calls on this priority water right to maintain instream flows and the aquatic community.

HABITAT

Habitat conditions are variable between the different sections. Stream and riparian habitat have great potential in the upper reaches from the headwaters of the mainstem to the upper end of the canyon (Spring Creek area) where the river meanders mostly through a broad, wide valley in a sinuous pattern. This section of stream almost resembles a large spring creek as it meanders through sedge and hay meadows. Its riparian zone would be dominated by willows and shrubs in a climax condition, and in reaches it contains good instream cover consisting of rooted aquatic vegetation and undercut banks. Other reaches are over-widened with little bank cover, which contributes to algal blooms and high water temperatures. Substrate in this section is primarily sand and gravel. FWP desires to work with willing landowners to improve riparian areas while maintaining existing land uses.

In the canyon section just downstream of Spring Creek to Rattlesnake Boat Camp, the river is incised, and the riparian zone becomes confined between steep limestone walls with limited floodplain development. Riparian vegetation consists primarily of grasses, pine and fir trees, and substrate is gravel and cobble. In some areas, the shrub component has been slowly increasing in recent years.

In the grassland reach below the canyon, the river enters a broad valley of glacial silt, and trout habitat is generally poor. Much of this section is heavily grazed, and riparian vegetation is very limited. Instream habitat is poor due to annual dewatering. Downstream from Eden Bridge, a number of steep erosive banks occur along the stream. Substrate ranges from gravel in the upper end to sand and silt in the lower end, where the gradient decreases and the stream characteristics become more warmwater in nature.

The mean discharge at the USGS gage near Fort Logan (river mile 83.7) was 173 cfs for the period of record (1977-87). The mean annual discharge of the Smith River for a 15-year period that encompass a substantial period of drought at the USGS gage below Eagle Creek (River Mile 79.3) was 244 cfs and ranged from 105-518 cfs. Peak flows ranged from 472 cfs in 2001 to 4,030 cfs in 2011. The mean discharge of the Smith River for a 19-year period of record at the USGS gage near Eden (river mile 27) was 358 cfs. Annual mean flows ranged from 3.1 to 12,300 cfs. Peak flows, based on 27 years of data collection for the Eden gage, varied from 12,300 cfs in 1953 to the lowest of 719 cfs in 1961.

Waters in the Smith River drainage have been appropriated for irrigation, livestock and domestic uses. As in other areas of the state, appropriations are often several times the amount of water actually present. The dewatering and warm irrigation return flows affect the trout fishery of the Smith River. Temperatures above 70° F, which are considered undesirable for trout growth and survival, occur in the river in mid-summer; water temperatures as high as 83°F have been recorded. The low water levels and elevated water temperatures are probably the greatest factor limiting present game fish populations. Enhancing in-stream flows is the key to benefitting the aquatic resources in the Smith River basin. At least two fish kills involving trout and mountain whitefish have been documented in the South Fork Smith and the mainstem near Eden Bridge; both occurred during periods of elevated water temperatures

combined with dewatering of the river. Recurring fish kills involving stonecat have been reported in isolated lower sections of the floating reach over the past decade, generally occurring in late July. Investigations have not determined the cause, but disease or parasites and combined with stress are thought to be likely factors.

FISHING ACCESS

Land ownership in the drainage is about 70% private and 30% public (Forest Service and State). Public access to the river is restricted throughout the drainage on larger streams and rivers. Access across private land is often difficult to obtain, especially in the canyon section. FWP manages four FASs in the in the drainage, including a leased site at Newlan Creek Reservoir, the Fort Logan (aka Smith River) FAS, approximately 19 miles northwest of White Sulphur Springs on the upper river, and Truly Bridge and Lower Smith River on the lower river, 8 and 3 miles south of Ulm. FWP's Parks Division manages two additional fishing access sites as part of the Smith River State Park at Camp Baker (put-in) and Eden Bridge (take-out) to accommodate floaters. As a result of the limited access, a large part of the recreational use of the river involves float fishing and boating on the 61-mile-long section of river from Camp Baker to Eden Bridge. FWP and the USFS maintain numerous boat camps along the floating stretch. The floating season usually begins about mid-May and continues until sometime in July in most years when water levels become too low for floating. FWP manages this popular section of river through a lottery-issued permit system. **SPECIAL**

MANAGEMENT ISSUES

The Smith River Management Act, passed by the Legislature in 1989, delegates to FWP the primary recreational management responsibility for the Smith River waterway between Camp Baker Fishing Access Site and the mouth of the Smith River at the Missouri River. . The FWP Commission has rulemaking authority to regulate recreational and commercial floating and camping use on the Smith River waterway. The Act included a section that provided for part of registration fees to be deposited into the Smith River Corridor Enhancement Account to lease or acquire property in the corridor; develop projects that protect enhance and restore fisheries habitat, streambank stabilization, erosion control, and recreational values; and to maintain and enhance instream flows for recreational and aquatic values in the corridor. The FWP Parks Division administers both the recreation program and the Corridor Enhancement Account.

FISHERIES MANAGEMENT DIRECTION FOR SMITH RIVER DRAINAGE

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|---|-------------|---|----------|-----------------|---|
| North Fork Smith River | 42.7 miles | Rainbow trout, Brown trout, Brook trout | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| Habitat needs and activities: Improve instream flows and irrigation water conveyance management. : Maintain habitat and instream flows of 9 cfs | | | | | |
| Smith River (Sutherlin) Reservoir | 377 acres | Rainbow trout | Hatchery | Put-Grow-Take | Maintain recreational fishery for consumptive harvest by continued stocking. |
| | | Brook trout | Hatchery | General | Maintain populations and recreational fishery for consumptive harvest by continued stocking if plants exhibit good growth and survival. |
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels. |
| | | Burbot | Wild | General | Maintain populations and recreational fishery for consumptive harvest. |
| Habitat needs and activities: Work to maintain water levels in reservoir with water users. | | | | | |
| South Fork Smith River | 42 miles | Brown trout, Brook trout | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| Habitat needs and activities: Maintain habitat and instream flows of 7 cfs | | | | | |
| Smith River (Confluence of the North & South forks to the Confluence of Sheep Creek) | 41 miles | Rainbow trout, Brown trout | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels. |
| | | Burbot | Wild | General | Maintain populations within historic levels providing for consumptive use. |
| Habitat needs and activities: Maintain habitat and instream flows of 90 cfs. Protect Murphy Rights. | | | | | |

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|--|-------------|---|----------|-----------------|---|
| Newlan Creek Continued on next page | 21.7 miles | Brook trout, Rainbow trout | Wild | General | Maintain a recreational fishery with harvest within historic population levels. Evaluate importance of reach below Reservoir to Smith River fish populations. |
| Habitat needs and activities: Maintain habitat and instream flows of 3.8 cfs. Consider potential for conveyance of stored water to enhance instream flows in the Smith River. Evaluate potential solutions to reduce impacts from sediment transport from trans-basin diversion ditch. | | | | | |
| Newlan Creek Reservoir | 265 acres | Rainbow trout | Hatchery | Put-Grow-Take | Maintain populations and recreational fishery for consumptive harvest by continued stocking. Work to prevent stunting. |
| | | Westslope cutthroat trout | Hatchery | Put-Grow-Take | Maintain populations and recreational fishery for consumptive harvest by continued stocking. |
| | | Brown trout | Hatchery | Put-Grow-Take | Maintain populations and recreational fishery for consumptive harvest by continued stocking if effective |
| | | Brook trout | Hatchery | Put-Grow-Take | Maintain populations and recreational fishery for consumptive harvest by continued stocking if effective |
| | | Burbot | Wild | General | Maintain populations and recreational fishery for consumptive harvest |
| Habitat needs and activities: Work to maintain water levels in reservoir with water district. | | | | | |
| Big Birch Creek | 14.4 miles | Rainbow trout, Brook trout, Brown trout | Wild | General | Maintain populations within historic levels in all reaches which have limited public access potential. Evaluate importance of stream to Smith River fish. |
| Habitat needs and activities: Maintain habitat and instream flows of 11 cfs. | | | | | |
| Sheep Creek Continued on next page | 36.6 miles | Rainbow trout | Wild | General | Maintain populations within historic levels providing for recreational use. Evaluate importance of stream to Smith and Missouri River fish. |
| | | Brook trout | Wild | General | Maintain populations within historic levels providing for consumptive use |

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|---|-------------|---|--------|----------------------------|---|
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels providing for consumptive use. Evaluate importance of stream to Smith River fish. |
| Habitat needs and activities: Maintain habitat and instream flows of 35 cfs. Maintain water quality and habitat if mining development proceeds in drainage on private land. | | | | | |
| Smith River (confluence of Sheep Creek to the Confluence of Hound Creek) | 73.6 miles | Rainbow trout, Brown trout | Wild | Social/Special regulations | Maintain a recreational fishery with minimal harvest within historic population levels. |
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels. |
| | | Burbot | Wild | General | Maintain populations within historic levels. |
| Habitat needs and activities: Maintain habitat and instream flows of 150 cfs. Protect Murphy Rights. | | | | | |
| Rock Creek | 22.8 miles | Rainbow trout, Brown trout | Wild | General | Maintain populations within historic levels providing for recreational use. Evaluate importance of stream to Smith and Missouri River fish. |
| | | Brook trout | Wild | General | Maintain populations within historic levels providing for consumptive use. |
| Habitat needs and activities: Maintain habitat and instream flows of 11 cfs. | | | | | |
| Tenderfoot Creek | 25.9 miles | Rainbow Trout | Wild | General | Maintain populations within historic levels providing for a recreational fishery with some consumptive use. Evaluate importance of stream to Smith and Missouri River fish. |
| | | Westslope cutthroat x Rainbow trout Hybrids | Wild | General | Maintain populations providing for a recreational fishery. Evaluate the potential to provide harvest of hybrids above and below falls. |
| | | Brown trout | Wild | General | Maintain populations within historic levels providing for a recreational fishery with some consumptive use. Evaluate importance of stream to Smith River fish. |
| Continued on next page | | | | | |

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|---|-------------|-------------------------------|--------|-----------------|---|
| | | Brook trout | Wild | General | Maintain populations within historic levels providing for consumptive use. |
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels. Determine origin of fish accessing lower reaches of the stream. Identify potential importance or lower reach to Smith River populations. |
| Habitat needs and activities: Maintain habitat and instream flows of 15 cfs. Support efforts for USFS to purchase Bair Ranch Foundation properties in the drainage. | | | | | |
| Hound Creek | 25.2 miles | Rainbow trout | Wild | General | Maintain populations within historic levels providing for a recreational fishery with consumptive use. Evaluate importance of stream to Smith and Missouri River fish. |
| | | Brown trout | Wild | General | Maintain populations within historic levels providing for a recreational fishery with some consumptive use. Evaluate importance of stream to Missouri River fish. |
| | | Brook trout | Wild | General | Maintain populations within historic levels providing for consumptive use. |
| | | Mountain whitefish | Wild | General | Maintain populations within historic levels. |
| Habitat needs and activities: Maintain habitat and instream flows of 35 cfs. | | | | | |
| Smith River (Confluence of Hound Creek to the Mouth) | 24 miles | Rainbow trout, Brown trout | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| | | Mountain whitefish | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| | | Burbot, Walleye | Wild | General | Maintain a recreational fishery with harvest within historic population levels. |
| Habitat needs and activities: Maintain habitat and instream flows of 80 cfs. | | | | | |

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|---|--------------------|--|----------------|--------------------------------------|---|
| Westslope Cutthroat Trout Genetically Unaltered Conservation Population Streams(Isolated Single Species Populations) | 18.4 miles | Westslope cutthroat trout | Wild | Conservation | Maintain and protect populations to reduce extinction risk. When biologically feasible provide for limited consumptive use. |
| Habitat needs and activities: Seek opportunities to survey for the presence of WCT and possible restoration projects on private land. Evaluate project(s) to restore WCT populations to Camas Lake and Big Camas Creek. | | | | | |
| Westslope Cutthroat Trout Genetically Altered Conservation Population Streams (Mixed Populations) | 28 miles | Westslope cutthroat trout & hybrids | Wild | Conservation | Maintain and protect populations. Allow harvest in robust populations. |
| High Mountain Lakes in Big Belt Mtns | 59 acres (6 lakes) | Westslope cutthroat trout, Rainbow trout | Hatchery/ Wild | Put-Grow-Take/ Quality/ Conservation | Maintain populations for recreational fishery where natural reproduction is limited. Explore opportunities to convert naturally reproducing populations to westslope cutthroat trout populations. |
| Habitat needs and activities: Explore opportunities to improve spawning potential in some lakes. | | | | | |

