

## **Evaluation of Outstanding Remarkable Values for Fifteenmile Creek December 2010**

The 11.1-mile segment of Fifteenmile Creek from its source at Senecal Spring to the southern edge of the northwest quarter of the northwest quarter of Section 20, Township 2 South, Range 12 East, is to be administered by the Secretary of Agriculture in the following classes:

- (i) The 2.6-mile segment from its source at Senecal Spring to the Badger Creek Wilderness boundary, as a wild river.
- (ii) The 0.4-mile segment from the Badger Creek Wilderness boundary to the point 0.4 miles downstream, as a scenic river.
- (iii) The 7.9-mile segment from the point 0.4 miles downstream of the Badger Creek Wilderness boundary to the western edge of section 20, township 2 south, range 12 east as a wild river.
- (iv) The 0.2-mile segment from the western edge of section 20, township 2 south, range 12 east, to the southern edge of the northwest quarter of the northwest quarter of section 20, township 2 south, range 12 east as a scenic river.

The lateral boundaries of both the wild river area and the scenic river area along Fifteenmile Creek shall include an average of not more than 640 acres per mile measured from the ordinary high water mark on both sides of the river. These segments were designated under the 2008 Omnibus Public Land Management Act of 2009 (H.R. 146, page 22).

**Mileage:** 11.1 miles

**Free flowing:** Yes

### **Scenic: 3, Substantial**

The river flows through and along the edge of a complex series of glacially- and fluvially-derived deposits before entering into a narrower steep-sided canyon containing a number of cliffs. Debris flow features are visible along the trail, including boulder /cobble deposits. The area falls in a transition zone between the High Cascades and the Columbia Plateau with a diversity of vegetative types including oak ponderosa pine woodlands, a relatively rare habitat type confined to the vicinity of the eastern slope of the Columbia Gorge. Visitors experience a variety of scenery along the river, from an alpine fir forest along the upper segment to a ponderosa pine and Oregon white oak forest while moving east along the trail. Prominent exposures of columnar basalt along the Fifteenmile corridor add to its scenic natural qualities. There are some rapids in the lower portion of the corridor and small waterfall features, elsewhere the stream gradient is relatively low.

There are places where long distance views of Eastern Oregon Blue Mountains, Columbia River Corridor, and Deschutes River Corridor can be seen adding to the scenic quality of the corridor.

**Recreational: 4, Outstandingly Remarkable**

The area within the corridor offers outstanding opportunities for sightseeing, rugged hiking, hunting, fishing, backpacking, mountain biking, rock climbing and equestrian use. The upper reach of the Fifteenmile drainage sits within the Badger Creek Wilderness and has outstanding opportunities for solitude or a primitive recreational experience. A popular hiking trail crosses the headwaters of the Fifteenmile drainage.

In the lower portion of the Fifteenmile drainage, outside of the Badger Creek Wilderness area, sits the Fifteenmile Campground and Trailhead. This campground and trailhead is readily accessible by a well structured roadway. (FS2730) The campground and camp-sites, three total, border Fifteenmile Creek and receive moderate use. The Fifteenmile Trail segment from this point follows along Fifteenmile Creek and often crosses the creek. The river can be heard or seen while walking along this trail. The trail length is 10.3 miles and connects with two popular trail systems that lead back to the Fifteenmile trailhead. Both of these trail systems offer views and sounds of Fifteenmile Creek and connect with a popular back-country camping spot along the banks of Fifteenmile Creek. The rugged terrain of the river canyon provides high quality primitive and semi-primitive recreational opportunities and attract visitors from within and outside of the region.

Numerous outfitter guides hold permits for the Fifteenmile Trail segment. They draw national and international attention and visitors. Other special use events occur along this trail that attracts local and regional attention.

During the winter months both traditional nordic and snow machine recreation occurs within this drainage and at one designated area (FS2730).

**Geologic/Hydrologic: 2, Moderate***Geologic*

Fifteenmile Creek has carved its valley into an older, generally flat erosion surface that slopes gently to the east. The result is a series of steep-walled canyons separated by flat-topped ridges, all oriented in an east-west direction. The western headwater areas of the larger drainages are gently to moderately-sloped uplands, with the exception of the steep, northeast facing slopes of Lookout Mountain. This area on Lookout Mountain is the only part of the watershed to have been recently glaciated.

This watershed has some of the most stable land within the Mt. Hood National Forest. However, some isolated areas contain weak enough material and steep enough slopes to have a moderate to high potential for mass wasting. The lack of much recent evidence for landsliding is due to the low precipitation. The landform has the appearance of being developed in the geologic past through landslide processes (gullyng that undercuts tributary stream banks, resulting in debris slides and debris flows). South-facing slopes, in particular, have this appearance. An unusual very intense storm is likely to produce some small landslides that will deliver sediment to channels.

### *Hydrologic*

Precipitation varies across the Fifteenmile watershed from high elevations to low, and from west to east. Average annual precipitation varies between 50 and 80 inches per year on Lookout Mountain, to as low as 10 inches in the eastern part of the watershed. The majority of the precipitation in the Fifteenmile Watershed falls during the winter. Winter snowpack is mostly confined to elevations above approximately 4,000 feet. Streams with headwaters in this region tend to exhibit an extended period of high flow lasting from April to June due to spring snowmelt (Wasco County Soil and Water Conservation District, 2004).

The hydrologic regime of the Fifteenmile Watershed is influenced by many factors, with no single factor adequately explaining the streamflow patterns. Factors include precipitation and snow levels, soil characteristics, land management, and interbasin water transfers (Wasco County Soil and Water Conservation District, 2004).

### *Water Quality*

Beneficial uses for all the 303d listed streams for sediment and temperature include:

- salmonid fish rearing
- resident fish and aquatic life
- salmonid fish spawning

### *Stream Temperature*

Fifteenmile Creek is listed on the 2004/2006 State of Oregon 303(d) list of impaired water bodies for salmon and steelhead spawning and core cold-water habitat water temperatures that exceed a 7-day average maximum of 13.0°C and 16.0°C respectively.

### *Sedimentation and Stream Channels*

Fifteenmile Creek has a high channel gradient headwaters and moderate gradient, confined middle sections. It is an “A” Rosgen channel types in the extreme upper portions of the stream and grades into “B” channel type through the wild and scenic river section (Barlow stream surveys 1996, 1997, 1999 and 2004). “A” channel types are high energy, steep gradient (4 to 10+%) channels that rapidly move water and sediment through the system while “B” channels are lower gradient (2 to 4%) that are still “transport” type reaches that move water and sediment through but have lower stream energy. These channels are generally stable and Rosgen (1996) identified this channel type as having “low to moderate” sensitivity to human disturbance. He also identified riparian vegetation as having a “negligible to moderate” controlling influence on the stability of “A” and “B” channels. Rosgen “B” type channels have an excellent recovery potential once the cause of instability is corrected. These channel types are very common throughout the physiographic region.

Fifteenmile Creek is listed on the 2004/2006 State of Oregon 303(d) list of impaired water bodies for sedimentation. The listed segments extend from mouth to headwaters. The original 303(d) listing for these segments is based on information contained in the 1994 Miles Creek Watershed Analysis (USDA Forest Service, 1994). The watershed analysis utilized sediment data collected during stream surveys and other monitoring efforts to conclude that fine sediment generated on National Forest System land exceeded a desired amount for salmonid embryo survival (1994, page F-21). All of the 13 sample sites cited in the analysis had fine sediment comprising more than 20% (the threshold from literature) of the total surface particle sizes.

According to the watershed analysis, the source of this fine sediment included a variety of activities including “system and non-system roads, ditch lines, culverts, tractor harvest units, recreational trails, campgrounds, dispersed campsites, bank erosion, highly erosive soils, and low resiliency soils” (1994, page F22). The Miles Creek Watershed Analysis identified local stream channel morphology problems such as bank erosion and lateral widening in the vicinity of Fifteenmile, Pebbleford, Underhill, Eightmile and Lower Eightmile Campgrounds as well as dispersed recreation sites and stream fords in the Fifteenmile and Ramsey Creek subwatersheds. These erosion sites tend to destabilize the channel, ultimately producing in-stream sediment and increased water temperature due to channel widening.

The geologic and hydrologic features are fairly common throughout the physiographic region, so this section of wild and scenic river is rated as Moderate = 2.

#### **Fisheries: 4, Outstandingly Remarkable**

Fish species found in the designated segments of Fifteenmile Creek include summer steelhead (*Oncorhynchus mykiss*), resident “rainbow-type” trout that may be (pending a basin-wide genetics analysis) redband trout (*O. mykiss gairdneri*), spring Chinook salmon (*Oncorhynchus tshawytscha*), and possibly Pacific lamprey (*Lampetra tridentata*).

##### *Summer Steelhead*

Summer steelhead in the Fifteenmile Creek basin are listed as Threatened under the ESA and considered unique because they are one of the few remaining wild runs; there has never been a hatchery stocking program for steelhead in the Fifteenmile Creek basin.

The summer steelhead population in Fifteenmile Creek is recognized as both a “core” and “genetic legacy” population by the Middle Columbia Technical Recovery Team charged with developing technical guidance and analysis to aid in recovery planning efforts (Rod French, ODFW, pers. comm., 2007). A *core population* is defined as one that either represented substantial portions of the ESU’s/DPS’s historical abundance or contained life-history strategies specific to the ESU/DPS. Core populations are considered to be important for maintaining the evolutionary legacy of the ESU/DPS, and managers are encouraged to give priority to these populations in recovery planning. A *genetic legacy population* is defined as one that either had minimal influence from non-endemic fish through artificial propagation practices or exhibits important life-history traits no longer found throughout the majority of the ESU’s/DPS’S historical range. Managers are encouraged to give recovery planning priority to genetic legacy populations since they retain the most intact representatives of the genetic composition of the ESU/DPS.

##### *Rainbow-Type Trout*

There has been considerable discussion on whether or not redband trout (*O. mykiss gairdneri*) are present in the Fifteenmile Creek basin. Schreck et al. (1986) grouped steelhead that are found in Fifteenmile Creek with the redband, but Behnke (1992) states, “these fish resemble coastal rainbow trout in their full suite of taxonomic characters more than they do other redband steelhead from east of the Cascades.” Currens, (1987) conducted a genetic study on differences between resident and anadromous rainbow trout in the Deschutes River basin. Currens found evidence that the trout in the White River basin (the southern boarding basin to Fifteenmile Creek basin) above White River Falls may be remnants of an ancestral redband trout population,

which are morphologically more similar to redband trout from the Oregon desert basins. Unlike White River above the White River Falls, Fifteenmile Creek rainbow-type trout are not isolated from outside genetic flow, potentially from steelhead. Since the study was not replicated or conducted on a basin-wide systematic sampling framework in Fifteenmile Creek basin, fisheries professionals refer to the resident form of *O. mykiss* simply as “rainbow-type” trout.

#### *Spring Chinook Salmon*

Spring Chinook salmon have been sighted in recent years in Fifteenmile Creek. One carcass and one adult were seen in above the Dufur City Intake in 1998 (Steve Springston and Rod French, ODFW, pers. comm., 2003). Prior to 1998, Chinook have not been documented in the Fifteenmile Watershed. The origin of these fish is uncertain. StreamNet shows spring Chinook salmon distribution in the designated area, but use of the area is unknown. They are listed as Threatened under the ESA.

#### *Pacific Lamprey*

Pacific lamprey distribution is relatively unknown in Fifteenmile Creek, but larval lamprey and redds have been found above the Dufur City Intake. The historic range of Pacific lamprey has shown to coincide with other anadromous species.

Fifteenmile Creek provides quality spawning and rearing habitat for Endangered Species Act (ESA) listed steelhead, and may provide habitat for ESA-listed spring Chinook salmon and Oregon state sensitive Pacific lamprey. It is also designated critical habitat for steelhead. The summer steelhead in Fifteenmile Creek are part of a unique wild stock nationally recognized as both a “core” and “genetic legacy” population. Because of its unique steelhead stock and unknown subspecies of “rainbow-type” trout, Fifteenmile Creek provides national and regional opportunities for scientific study and interpretation. Although steelhead productivity in Fifteenmile Creek has declined in recent years, it has the potential to contribute considerably to the Middle Columbia River steelhead population. Based on this information, the fisheries resources in the designated segments of Fifteenmile Creek meet the criteria for a rating of 4, Outstandingly Remarkable.

#### **Wildlife: 3, Substantial**

The area within the river corridor provides prime quality habitat for wildlife species and provides an important link in habitat conditions for Region 6 Sensitive and Federally Threatened species. The area within the corridor, especially in the western portion, provides important habitat of high quality which meets the needs of big and small game, providing critical elk calving and deer fawning habitat and is part of a seasonal migration route for big game. The eastern 4.5 miles of the corridor provides important winter range for deer and elk. The eastern 7.6 miles of the corridor consist of suitable nesting habitat for the northern spotted owl, a federally listed threatened species, and includes portions of 8 historic home ranges and 5 one hundred-acre late successional reserves. Past timber harvest has fragmented suitable habitat in portions of the corridor for this species. Harvest units do provide good habitat diversity for big game species. Contiguous habitat is of a size to meet most of the biological needs of these species. The importance of the habitat provided within the corridor warrants a rating of 3 for wildlife values.

**Ecological/Botanical: 2, Moderate**

The upper part of Fifteenmile Creek, above Forest Service road 2730, and within the Badger Wilderness provides high quality riparian habitat. The area has not been well-explored botanically or ecologically, but it does not seem remarkably different than adjoining drainages. Two Region 6 sensitive plants were found here. *Rhizomnium nudum*, naked rhizomnium moss, and *Schistostega pennata*, schistostega moss, were found along the edge of Fifteenmile Creek. Both are likely present in the adjacent Dog River Drainage. The schistostega moss was also found just outside the boundary of the Fifteenmile Creek Wild and Scenic River corridor in a wetland associated with Fret Creek. Both species are found around Mt. Hood at higher elevations, typically in westside drainages. It is unusual to find either of these species in eastside drainages of the Cascade Range.

The naked rhizomnium moss is a Forest Service, Region 6 sensitive plant and also a survey and manage species. It has been dropped as a listed species by the Oregon Natural Heritage program because it is too common. It is found in moist to wet areas on rocks or soil in the splash zone along the river. Schistostega moss is a Forest Service, Region 6 sensitive plant and also a survey and manage species. It is an Oregon Natural Heritage program list 2 species, threatened endangered in Oregon but stable and more common elsewhere. It is globally secure but in Oregon is listed as S2, imperiled because of rarity. It is found on mineral soil almost exclusively, in our area, on upturned root wads in moist to wet areas, usually near water and often in low light circumstances. Both species can be found in upland habitats where the moisture regime is wetter but in this drier environment they are more associated with standing or running water.

Below the 2730 road the riparian habitat is also high quality. Naked rhizomnium was found along Fifteenmile Creek just below the road but has not been found any further downstream.

The upper part of the corridor is either subalpine or borders on subalpine and is not very incised. The lower part of the corridor is much more incised and runs due east. The north facing slopes are timbered all the way to the end of the corridor while the south facing slopes become dramatically different, grading to a much drier open, pine, oak and bitter brush savannah on the east end. This is typical of drainages in this area.

**Historic/Cultural: 3, Substantial**

While the entire corridor has not been surveyed completely for archaeological resources, known archaeology sites within the drainage include a 1910 homestead, portable sawmill sets, bridge remains, a ditch, and Native American peeled cedar trees. While other sites are situated within the Fifteenmile Creek Wild and Scenic Corridor, only those sites determined to be directly related to the stream were considered.

The 1910 homestead probably consisted of early settlers employed at local sawmills, with augmented income from some small-scale subsistence farming, with cultivation of the small river terrace within Fifteenmile Creek. The homesite was probably situated to take advantage of the rich streamside sediments and a relatively reliable water source. Although only scattered artifacts remain at the site, the site is located near the 456 trailhead and may offer interpretive opportunities for early settlement patterns within the drainage.

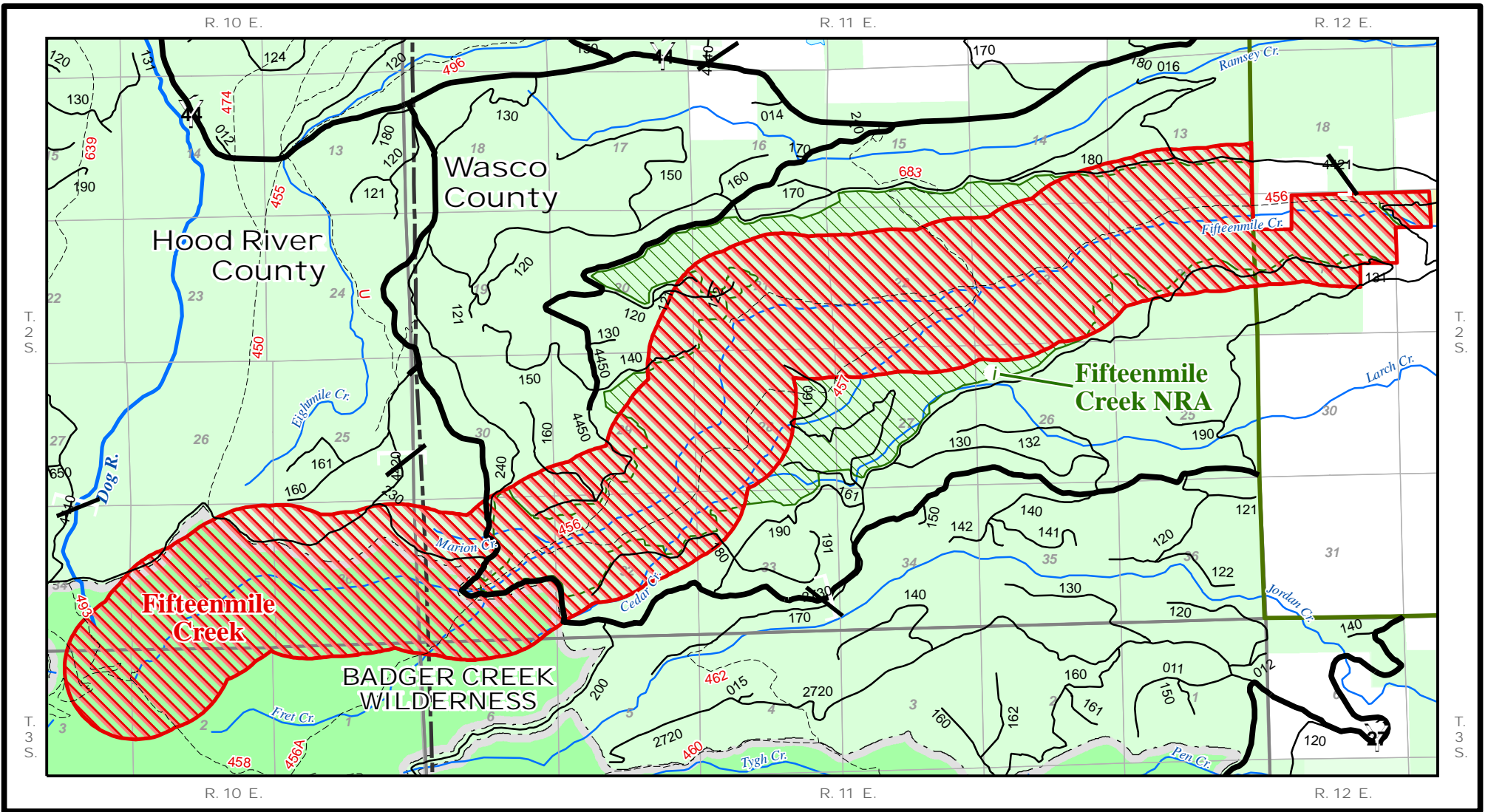
The portable sawmill sets consist of scattered artifacts, telephone wire, and telephone insulators in three meadows along Fifteenmile Creek. The sawmill was probably situated to provide optimal access to timber resources, with Fifteenmile Creek playing a secondary role in its location. A road once traveled all the way up Fifteenmile Creek from Dufur to the sawmill locations; the road has since been converted to the 456 trail. The site is situated along the 456 trail and may offer interpretive opportunities for historic timber exploitation within the drainage.

The bridge remains consist of log and stone abutments on both sides of Fifteenmile Creek. The abutments probably supported a log stringer bridge from a previous alignment of Forest Development Road 2730. Although the bridge remains are directly related to Fifteenmile Creek, their historical significance is low.

The Springer Ditch was constructed in the 1940s to divert water from Fret Creek to Cedar Creek. The site consists of a headgate, concrete blocks, and milled lumber. The ditch is situated just upstream from the confluence of Fret Creek with Fifteenmile Creek. Although the site is not directly related to Fifteenmile Creek, the site is attached to a perennial tributary, Fret Creek. The ditch provided water to farms to the east of the forest for irrigation and livestock until it was abandoned in the 1970s. The ditch and its associated features are situated near the Fifteenmile Campground and also near the 456A trailhead, and may offer interpretive opportunities for irrigation strategies within the drainage.

The Native American peeled cedar trees within Fifteenmile Creek indicate that the stream was used as a trail by aboriginal groups to travel from the lower valleys to the higher elevations for resource exploitation. Cedar bark was used for cordage, shelter construction, and basketry. The peeled trees are situated near the 456 trail and may offer interpretive opportunities for Native American uses of the drainage.

The archaeological sites directly related to Fifteenmile Creek are situated near existing trails and may offer interpretive opportunities about historic settlement, logging, and irrigation, and also about Native American resource exploitation. Based on the above, the historic/cultural values for Fifteenmile Creek were rated a 3.



### Wild and Scenic Rivers - Fifteenmile Creek

Prepared at the request of U. S. Senator Wyden - February, 2007

#### Additions

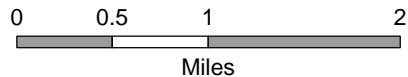
- Fifteenmile Creek
- Fifteenmile Creek NRA

#### Existing US Forest Service

- Mt. Hood NF
- Wilderness
- Lakes
- River
- Creeks
- Trails **Trails: 456**
- FS Paved Roads
- All Other FS Roads **Locals: 023 Collectors: 230 Arterials: 44**

#### Base Data

- County Lines
- Private Lands
- BLM Lands



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