

**Forest Service Creek Group –
Mill Creek** **Columbia County**

Reach Description: Mill Creek runs from the headwaters at T6N_R39E_S06 to the County Border, then into Oregon.

Shoreline Jurisdiction: 58 acres, 1.1 miles



Source: USDA

Subreaches (SR); see Map D-1

There are no subreaches located in Forest Service Creek Group – Mill Creek.

CHARACTERISTICS

Ownership:

The majority of ownership is public U.S. Forest Service (USFS) with possibly a small amount (< 1%) of private ownership.

Land Use/Current Shoreline Master Program (SMP):

Current land use designation:

- Land uses have not been designated.

Current zoning designation:

- This area is zoned as W-1 Watershed.

Current SMP environment designation:

- The current designation is Rural.

Forest Service Creek Group – Mill Creek Columbia County
<p>Existing Land Cover/Development:</p> <p>Mill Creek is a remote and heavily forested area with little to no development. The area is only accessed by unpaved USFS roads.</p>
<p>Geomorphic Character:</p> <p>Description: Mill Creek is a single-thread channel that flows within a narrow, confined bedrock valley that consists of Grande Ronde Basalt. The overall valley width narrows and steepens in the upstream direction.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along Mill Creek.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: Federal Emergency Management Agency (FEMA) floodplains have not been established in this area of Mill Creek.</p> <p>Geological Hazards: No erosion hazard soils can be found in Mill Creek. Due to the bed rock, Mill Creek is not susceptible to liquefaction. No landslide hazard areas have been identified.</p>
<p>Existing Public Access:</p> <p>Shoreline and public access is managed by USFS. There is extremely limited access because there are no roads near this reach.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness.</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on Mill Creek, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. Mill Creek is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt and low flows are during the late summer.</p> <p>Minimal information was found about sediment conditions in Mill Creek, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>

Forest Service Creek Group – Mill Creek Columbia County
<p>Water Quality:</p> <p>Mill Creek is not listed as a water of concern in Washington State Department of Ecology’s (Ecology’s) 305b rating.</p>
<p>Habitat Characteristics and Priority Habitat Species (PHS) Presence:</p> <p>This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for Endangered Species Act (ESA)-listed fish species identified in Table 28 of the Inventory, Analysis, and Characterization (IAC) Report.</p> <p>This reach is entirely within USFS land, and the surrounding area is densely forested with deciduous and coniferous trees, which form a closed canopy over the creek. There is no development apparent along Mill Creek.</p>
ECOLOGICAL FUNCTIONS ANALYSIS
<p>Level of Existing Function: Functioning</p> <p>Stressors: None identified.</p> <p>Potential Restoration Opportunities: None identified.</p> <p>Potential Protection Opportunities: Continue to protect existing riparian buffers within the shoreline jurisdiction.</p>

**Forest Service Creek Group – Columbia County
North Fork Wenaha River**

Reach Description: The North Fork Wenaha River runs from Latitude: 46 degrees 20' 45" N; Longitude: 117 degrees 50' 12.23 W to the Oregon Border.

Shoreline Jurisdiction: 42 acres, 1.1 miles



Source: USDA

Subreaches (SR); see Map App D-2

There are no subreaches located in Forest Service Creek Group – North Fork Wenaha River.

CHARACTERISTICS

Ownership:

The majority is public (USFS)-owned, with possibly a small amount (< 1%) of private ownership.

Land Use/Current SMP:

Current land use designation:

Land uses have not been designated.

Current zoning designation:

- The current zoning designation is W-1 Watershed.

Current SMP environment designation:

- The current designation is Rural.

Forest Service Creek Group – Columbia County North Fork Wenaha River
<p>Existing Land Cover/Development:</p> <p>The North Fork Wenaha River is extremely remote, forested land with little to no development. The area is only accessed by unpaved USFS roads.</p>
<p>Geomorphic Character:</p> <p>Description: The North Fork Wenaha River is a single-thread channel that flows within a uniform bedrock channel and valley that consists of Grande Ronde Basalt. The overall valley width is narrow and steepens in the upstream direction.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along North Fork Wenaha River.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: FEMA floodplains have not been established in this portion of the North Fork Wenaha River.</p> <p>Geological Hazards: No erosion hazard soils can be found in North Fork Wenaha River. Due to the bed rock, North Fork Wenaha River is not susceptible to liquefaction. No landslide hazard areas have been identified.</p>
<p>Existing Public Access:</p> <p>Shoreline and public access is managed by USFS. There is extremely limited access because there are no roads near this reach.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness.</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on North Fork Wenaha River, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. North Fork Wenaha River is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt, and low flows are in the late summer.</p> <p>Minimal information was found about sediment conditions in North Fork Wenaha River, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>

Forest Service Creek Group – Columbia County North Fork Wenaha River
<p>Water Quality:</p> <p>North Fork Wenaha River is not listed as a water of concern in Ecology’s 305b rating.</p>
<p>Habitat Characteristics and PHS Presence:</p> <p>This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for ESA-listed fish species identified in Table 28 of the IAC Report.</p> <p>This reach is entirely within USFS land, and habitat conditions are good. The riparian zone consists of small shrubs and scattered trees, with deciduous and coniferous trees forming forested areas in the uplands. There is no development apparent along North Fork Wenaha River.</p>
ECOLOGICAL FUNCTIONS ANALYSIS
<p>Level of Existing Function: Functioning</p> <p>Stressors: None identified.</p> <p>Potential Restoration Opportunities: None identified.</p> <p>Potential Protection Opportunities: Continue to protect existing riparian buffers within shoreline jurisdiction.</p>

**Forest Service Creek Group – Columbia County
Butte Creek**

Reach Description: Butte Creek runs from Latitude: 46 degrees 03' 09.21" N; Longitude: 117 degrees 43' 17.78" W to the Oregon Border.

Shoreline Jurisdiction: 267 acres, 5.2 miles



Source: USDA

Subreaches (SR); see Map D-3

There are no subreaches located in Forest Service Creek Group – Butte Creek.

CHARACTERISTICS

Ownership:

The majority is public (USFS)-owned, with possibly a small amount (< 1%) of private ownership.

Land Use/Current SMP:

Current land use designation:

Land uses have not been designated.

Current zoning designation:

- This area is not zoned.

Current SMP environment designation:

- The current designation is Rural.

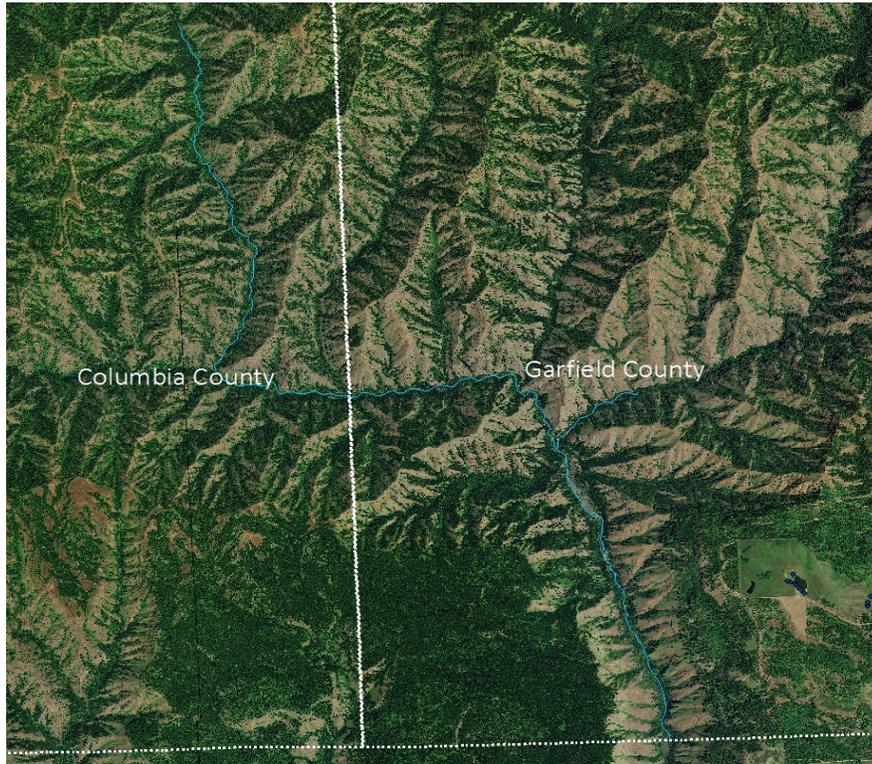
Forest Service Creek Group – Columbia County Butte Creek
<p>Existing Land Cover/Development:</p> <p>Butte Creek is a remote, forested area with little to no development. The area is only accessed by unpaved USFS roads.</p>
<p>Geomorphic Character:</p> <p>Description: The Butte River is a single-thread channel that flows within a mostly confined bedrock channel and valley that consists of Grande Ronde Basalt. Localized segments of alluvium are found throughout the channel and floodplain. Along one segment, the creek flows within a narrow box canyon that consists of Grand Ronde Basalt. The overall valley width is generally narrow and steepens in the upstream direction.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along the Butte Creek.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: FEMA floodplains have not been established in this area of Butte Creek.</p> <p>Geological Hazards: No erosion hazard soils can be found in Butte Creek. There are a few sections of the creek that have moderate to high liquefaction susceptibility. Landslide hazard areas exist where slopes are steeper than 15% over underlying alluvial deposits.</p>
<p>Existing Public Access:</p> <p>Shoreline and public access is managed by USFS. There is extremely limited access because there are no roads near this reach and within the Wenaha Tucannon Wilderness Area.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness.</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on Butte Creek, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. Butte Creek is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt, and low flows are in the late summer.</p> <p>Minimal information was found about sediment conditions in Butte Creek, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>

Forest Service Creek Group – Butte Creek Columbia County
Water Quality: Butte Creek is not listed as a water of concern in Ecology’s 305b rating.
Habitat Characteristics and PHS Presence: This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for ESA-listed fish species identified in Table 28 of the IAC Report. This reach is entirely within USFS land, and habitat conditions are good. The riparian zone consists of small shrubs and scattered trees, with deciduous and coniferous trees forming forested areas in the uplands. There is no development apparent along Butte Creek.
ECOLOGICAL FUNCTIONS ANALYSIS
Level of Existing Function: Functioning Stressors: None identified. Potential Restoration Opportunities: None identified. Potential Protection Opportunities: Continue to protect existing riparian buffers within shoreline jurisdiction.

Forest Service Creek Group – Third Creek **Columbia and Garfield Counties**

Reach Description: Third Creek runs from Latitude: 46 degrees 02' 29.77" N; Longitude: 117 degrees 33' 32.74" W to Crooked Creek in Columbia County.

Shoreline Jurisdiction: 175 acres, 3.4 miles



Source: USDA

Subreaches (SR); see Map D-4

There are no subreaches located in Forest Service Creek Group – Third Creek.

CHARACTERISTICS

Ownership:

The majority is public (USFS)-owned, with possibly a small amount (< 1%) of private ownership.

Land Use/Current SMP:

Current land use designation:

Land uses have not been designated.

Current zoning designation:

- This area is not zoned.

Current SMP environment designation:

- The current designation is Rural.

Forest Service Creek Group – Third Creek Columbia and Garfield Counties
<p>Existing Land Cover/Development:</p> <p>Third Creek is undeveloped due to its remoteness. It is entirely forested land.</p>
<p>Geomorphic Character:</p> <p>Description: Third Creek is a single-thread channel that flows within a narrow, confined bedrock valley that consists of Grande Ronde Basalt. The overall valley width narrows and steepens in the upstream direction.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along Third Creek.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: FEMA floodplains have not been established in this area of Third Creek.</p> <p>Geological Hazards: No erosion hazard soils can be found in Third Creek. Due to the bed rock, the creek is not susceptible to liquefaction. No landslide hazard areas have been identified in Third Creek.</p>
<p>Existing Public Access:</p> <p>USFS provides some rudimentary trail heads to access the area and shorelines.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness.</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on Third Creek, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. Third Creek is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt, and low flows are in the late summer.</p> <p>Minimal information was found about sediment conditions in Third Creek, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>
<p>Water Quality:</p> <p>Third Creek is not listed as a water of concern in Ecology’s 305b rating.</p>
<p>Habitat Characteristics and PHS Presence:</p> <p>This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for ESA-listed fish species identified in Table 28 of the IAC Report.</p> <p>This reach is entirely within USFS land, and habitat conditions are good. The riparian zone consists of small</p>

Forest Service Creek Group – Third Creek Columbia and Garfield Counties
shrubs and scattered trees, with deciduous and coniferous trees forming forested areas in the uplands. There is no development apparent along Third Creek.
ECOLOGICAL FUNCTIONS ANALYSIS
Level of Existing Function: Functioning Stressors: None identified. Potential Restoration Opportunities: None identified. Potential Protection Opportunities: Continue to protect existing riparian buffers within shoreline jurisdiction.

Forest Service Creek Group – Crooked Creek Columbia and Garfield Counties

Reach Description: Crooked Creek runs from the top center of T7N_R41E_S30/Third Cree, to the Oregon State Border.

Shoreline Jurisdiction: 319 acres, 6.3 miles



Source: USDA

Subreaches (SR); see Map D-4

There are no subreaches located in Forest Service Creek Group – Crooked Creek.

CHARACTERISTICS

Ownership:

The majority is public USFS-owned, with a small amount (< 1%) of private ownership.

Land Use/Current SMP:

Current land use designation:

- Land uses have not been designated. .

Current zoning designation:

- This area is not zoned.

Current SMP environment designation:

- The current designation is Rural.

Forest Service Creek Group – Crooked Creek Columbia and Garfield Counties
<p>Existing Land Cover/Development:</p> <p>Due to its remoteness, Crooked Creek is almost entirely undeveloped forest land.</p>
<p>Geomorphic Character:</p> <p>Description: Crooked Creek is a mostly single-thread channel that flows within a bedrock channel and valley that consists of Grande Ronde Basalt. Localized areas of alluvium are found throughout the channel and floodplain in the downstream segments. The overall valley width steepens and narrows in the upstream direction.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along Crooked Creek.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: FEMA floodplains have not been established in this area of Crooked Creek.</p> <p>Geological Hazards: Severely erodible soils can be found around a 1-mile section near the Oregon State Boundary. The area downstream and past the creek bend has moderate to high liquefaction susceptibility. Within the same section, landslide hazard areas exist where slopes are steeper than 15% over underlying Columbia River Basalts and alluvial deposits.</p>
<p>Existing Public Access:</p> <p>Shoreline and public access is managed by the USFS. There is extremely limited access because there are no roads near this reach and within the Wenaha Tucannon Wilderness Area.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness.</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on Crooked Creek, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. Crooked Creek is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt, and low flows are in the late summer.</p> <p>Little information was found about sediment conditions in Crooked Creek, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>

Forest Service Creek Group – Crooked Creek Columbia and Garfield Counties
<p>Water Quality:</p> <p>Crooked Creek is not listed as a water of concern in Ecology’s 305b rating.</p>
<p>Habitat Characteristics and PHS Presence:</p> <p>This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for ESA-listed fish species identified in Table 28 of the IAC Report.</p> <p>This reach is entirely within USFS land, and habitat conditions are good. The riparian zone consists of small shrubs and scattered trees, with deciduous and coniferous trees forming patches of forested areas in the uplands, becoming less dense as the creek turns south toward the Oregon State Boundary, and the climate within this valley changes. The slopes on either side of the creek are steep, forming a narrow valley. The valley and slopes are less vegetated, and where vegetation exists, there are grasses and shrubs in the uplands. In the upper end of this reach, the valley widens. There is a floodplain here, which is sparsely vegetated. Similar habitat exists near the end of the reach at the Oregon Border. There is no development apparent along Crooked Creek.</p>
ECOLOGICAL FUNCTIONS ANALYSIS
<p>Level of Existing Function: Functioning</p> <p>Stressors: None identified.</p> <p>Potential Restoration Opportunities: None identified.</p> <p>Potential Protection Opportunities: Continue to protect existing riparian buffers within shoreline jurisdiction.</p>

**Forest Service Creek Group – Columbia and Garfield Counties
First Creek**

Reach Description: First Creek runs from Latitude: 46 degrees 02' 45" N, Longitude: 117 degrees 50' 12.23W to Crooked Creek in Garfield County.

Shoreline Jurisdiction: 43 acres, 0.9 mile



Source: USDA

Subreaches (SR); see Map D-4

There are no subreaches located in Forest Service Creek Group – First Creek.

CHARACTERISTICS

Ownership:

This reach is entirely under USFS ownership.

Land Use/Current SMP:

Current land use designation:

- Land uses have not been designated. .

Current zoning designation:

- This area is not zoned.

Current SMP environment designation:

- The current designation is Rural.

Forest Service Creek Group – Columbia and Garfield Counties First Creek
<p>Existing Land Cover/Development: There is little to no development in First Creek. The majority of the reach is undeveloped forest land.</p>
<p>Geomorphic Character:</p> <p>Description: First Creek is a single-thread channel that flows within a narrow, confined bedrock valley that consists of Grande Ronde Basalt. The valley bottom and channel consist of alluvium throughout the reach and upstream of its confluence with Crooked Creek. Upstream, the overall valley width narrows and steepens.</p> <p>Channel Migration Zone Characterization: Channel migration is limited by the presence of bedrock throughout the channel and valley.</p> <p>Hardened Banks: No artificial hardened banks appear to exist along First Creek.</p>
<p>Flooding and Geological Hazards:</p> <p>Flooding: FEMA floodplains have not been established in this area of First Creek.</p> <p>Geological Hazards: No erosion hazard soils can be found in the First Creek. The section near the confluence with Crooked Creek has moderate to high liquefaction susceptibility. Within that same section, landslide hazard areas exist where slopes are steeper than 15% over underlying alluvial deposits.</p>
<p>Existing Public Access:</p> <p>Shoreline and public access is managed by the USFS. There is extremely limited access because there are no roads near this reach and within the Wenaha Tucannon Wilderness Area.</p> <p>Identified Public Access Improvements: None identified.</p> <p>Public Access Opportunities: Opportunities are limited in some areas due to remoteness</p>
ECOLOGICAL CONDITIONS
<p>Water Quantity and Sediment:</p> <p>There are no known gages located on First Creek, so water quantity is estimated by regression equations based on precipitation and the drainage basin area. First Creek is expected to follow a typical snow-dominated basin in which peak flows are in the spring during snowmelt, and low flows are in the late summer.</p> <p>Minimal information was found about sediment conditions in First Creek, but sediment is expected to be supply-limited, and transport is expected to be efficient based on natural conditions and steep slopes within the basin.</p>

Forest Service Creek Group – Columbia and Garfield Counties First Creek
<p>Water Quality:</p> <p>First Creek is not listed as a water of concern in Ecology’s 305b rating.</p>
<p>Habitat Characteristics and PHS Presence:</p> <p>This reach provides habitat for elk, mule deer, and big horn sheep and may provide habitat for ESA-listed fish species identified in Table 28 of the IAC Report.</p> <p>This reach is entirely within USFS land, and habitat conditions are good. The riparian zone consists of small shrubs and scattered trees, with deciduous and coniferous trees forming forested areas in the uplands. There is no development apparent along First Creek.</p>
ECOLOGICAL FUNCTIONS ANALYSIS
<p>Level of Existing Function: Functioning</p> <p>Stressors: None identified.</p> <p>Potential Restoration Opportunities: None identified.</p> <p>Potential Protection Opportunities: Continue to protect existing riparian buffers within shoreline jurisdiction.</p>