



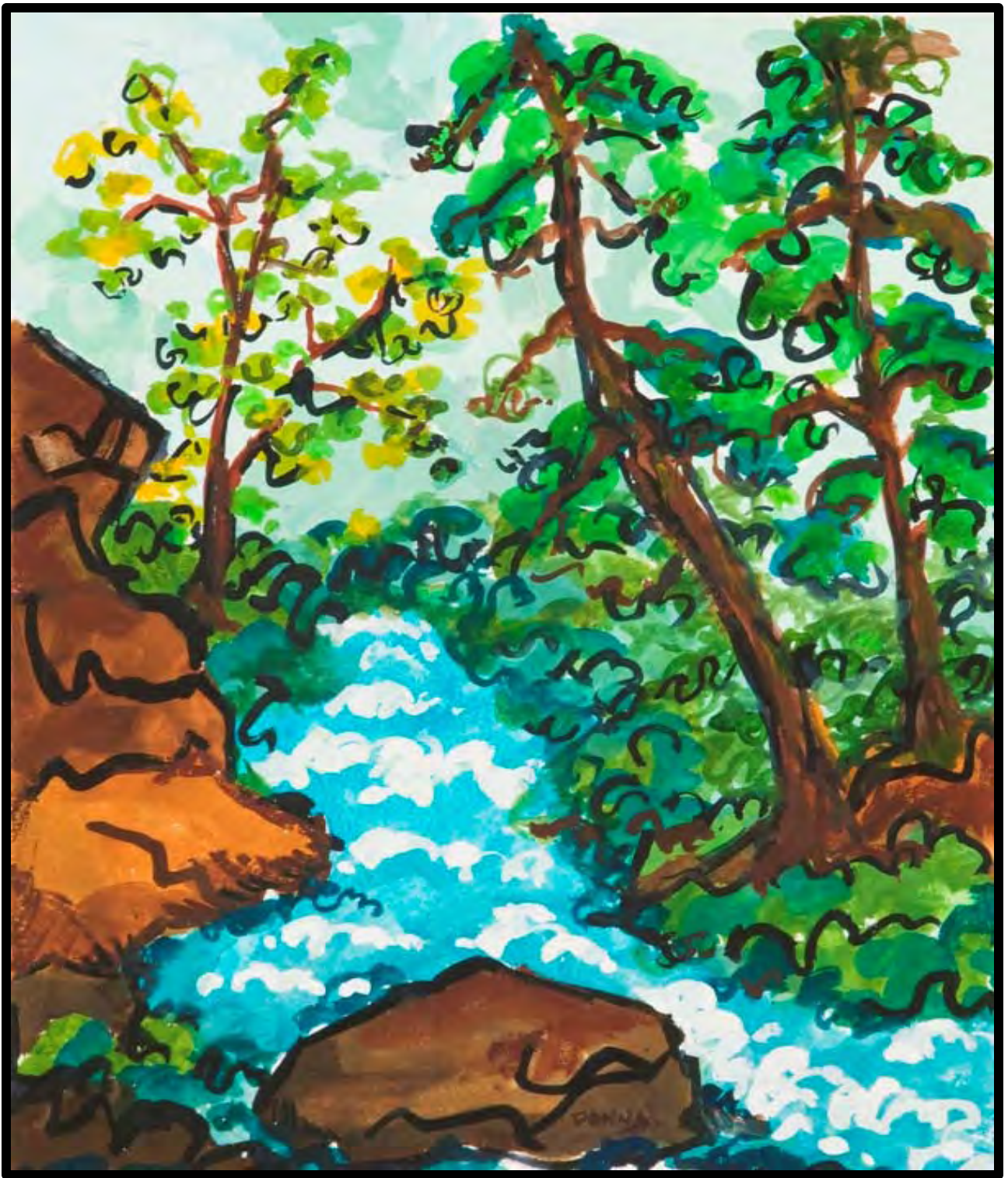
United States  
Department of  
Agriculture

US Forest  
Service

Deschutes  
National Forest

Sisters Ranger  
District

April 2010



# Whychus Creek Wild and Scenic River Management Plan



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## **A Vision for Whychus Creek Wild and Scenic River**

Whychus Creek will keep its secrets and remain a river with a wild feeling.

In the secluded high reaches of melting glaciers on the mountain slopes the water's conversation with the land will remain a whisper that few hear.

As the rivulets gather and form a creek rushing out of the wilderness the voice of snowmelt rushing over stream cobble will tell a story to those who stop to hear it. Volcanoes and glaciers, waterfalls, steelhead, endless forests, wildlife, wildflowers, and ancient tribal journeys are this story's chapters.

As the creek approaches the mountain town that shaped its past and is restoring its future, the story will be easier to hear and the creek easier to find. The story's happy ending is full of redemption as the length of the Whychus Watershed comes back to life and reclaims its role between the mountains and sea-going fish and the community rediscovers a river they had forgotten.

## **The Purpose of This Plan**

The goal of the Whychus Creek Wild and Scenic River Management Plan is to protect and enhance the Outstandingly Remarkable Values for which Whychus Creek was designated into the Wild and Scenic Rivers System. These Outstandingly Remarkable Values were determined by the Resource Assessment (USFS 2007) as: Geology, Hydrology, Fish, Scenic Resources, Cultural- Prehistory, and Cultural- Traditional Use. Other Significant river- related values include: Wildlife, Vegetation/Ecology, Cultural History and Recreation. The plan focuses on maintaining the creek's current character with an emphasis on identifying and rehabilitating degraded resources.

The following sections summarize other applicable management direction and define the desired future condition in broad terms, presenting a vision of the desired state of particular resources in the river corridor. Existing conditions are briefly summarized explaining why additional direction is needed. Examples of consistent and inconsistent uses are given.

New Standards and Guidelines are provided where management needs were identified by the Whychus Creek Wild and Scenic River Management Plan Environmental Assessment Decision Notice (USFS 2010).

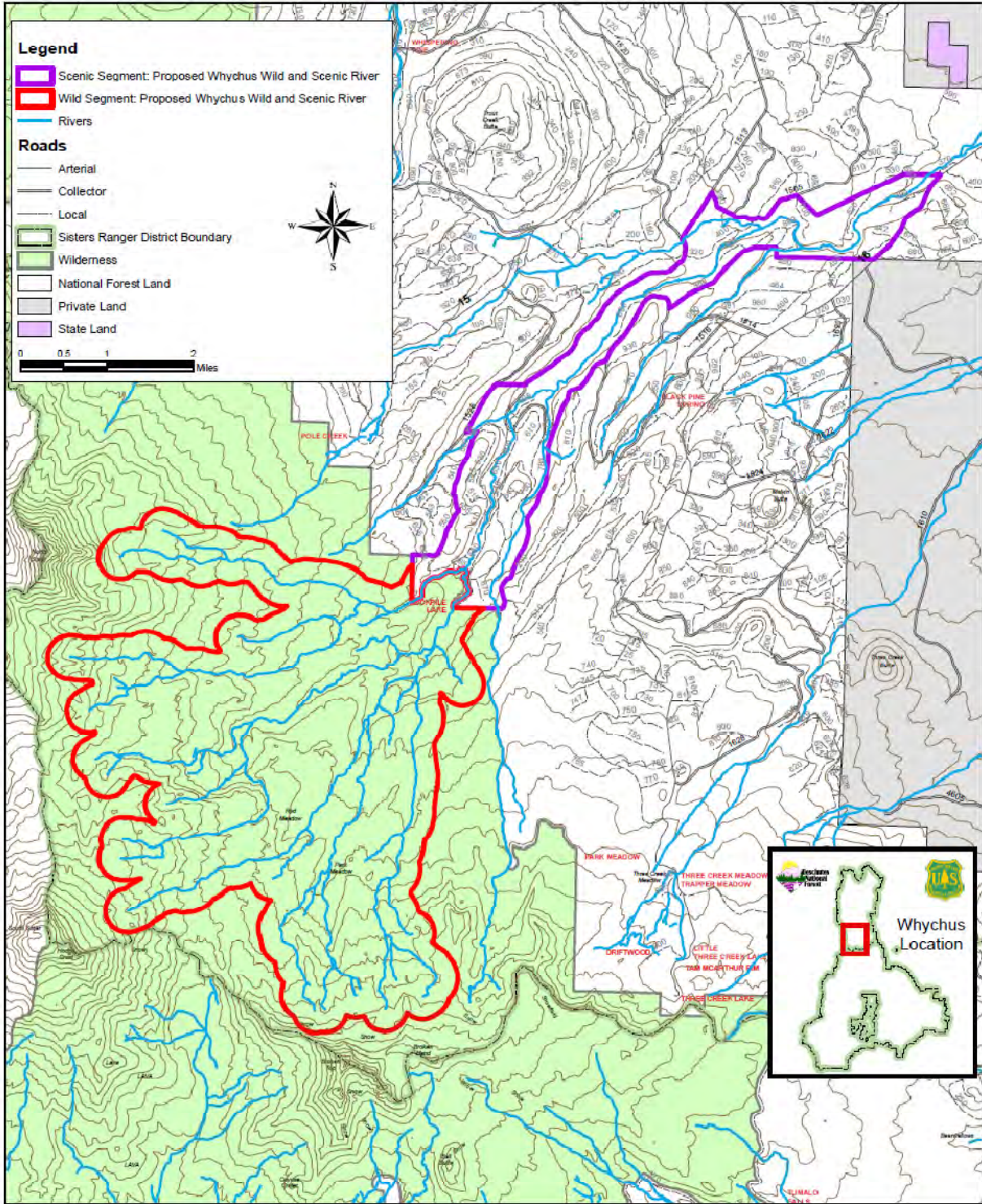
This discussion and the examples serve as a basis for determining how to interpret standards and guidelines when conflicts arise or when clarity is needed. Actions that lead toward the desired conditions over the long term are consistent with this plan. Actions that lead the corridor away from desired conditions or Limits of Acceptable Change over the long term are not consistent with this plan. A Monitoring Plan to detect Limits of Acceptable Change is found in Appendix 1.

## **How This Plan Will Be Implemented or Changed**

This plan will be implemented through three primary mechanisms, including intergovernmental coordination, individual agency action, and partnerships with non-governmental organizations and the public. Ultimately its success will depend on community involvement and stewardship.

This plan amends the Deschutes National Forest Land and Resource Management Plan (USFS 1990). Future actions or projects would require appropriate National Environmental Policy Act (NEPA) documentation. The Deschutes National Forest Land and Resource Management Plan, including the direction in this plan, may be changed either by amendment or a revision.





**Figure 1- Final Whychus Creek Wild and Scenic River Boundary**



## Background on the Whychus Creek Wild and Scenic River Designation

In 1968, Congress passed the Wild and Scenic Rivers Act (P.L. 90-542) and established a nationwide system of outstanding free-flowing rivers. For a river segment to be considered eligible for Wild and Scenic River status it must be “free-flowing” and possess “outstandingly remarkable values” within its immediate environment. These rivers are protected for the benefit and enjoyment of present and future generations.

Whychus Creek (formerly Squaw Creek) is located in Central Oregon on the eastern slopes of the Cascade Mountains. It is a perennial stream that is a tributary of the Deschutes River. It is approximately 41 miles long from its headwaters in the Three Sisters Wilderness to its confluence with the Deschutes River. A portion of Whychus Creek was designated by Congress as a Wild and Scenic River as part of the Omnibus Oregon Wild and Scenic Rivers Act of 1988 (Public Law 100-557 - Oct. 28, 1988) – an amendment to Section 3(a) of the Wild and Scenic Rivers Act (P.L. 90-542); USC 1274(a).

The designated area includes 15.4 miles, beginning at its source on the glaciers of the Three Sisters mountains and ending at the hydrological Gauging Station that is approximately 4 miles southwest of the City of Sisters in Central Oregon. Acres within the Final Whychus Wild and Scenic River Boundary are shown below in Table 1.

The designation reads as follows:

(102) **SQUAW CREEK, OREGON.** -- The 15.4-mile segment from its source to the hydrologic Gauging Station 800 feet upstream from the intake of the McAllister Ditch, including the Soap Fork Squaw Creek, the North Fork, the South Fork, the East and West Forks of Park Creek, and Park Creek Fork; to be administered by the Secretary of Agriculture as follows: (A) The 6.6-mile segment and its tributaries from the source to the Three Sisters Wilderness boundary as a wild river; and (B) the 8.8-mile segment from the boundary of the Three Sisters Wilderness Area to the hydrologic Gauging Station 800 feet upstream from the intake of the McAllister Ditch as a scenic river: *Provided*, That nothing in this Act shall prohibit the construction of facilities necessary for emergency protection for the town of Sisters relative to a rapid discharge of Carver Lake if no other reasonable flood warning or control alternative exists.

### Wild Section

The 6.6 mile segment of the creek from its source on the Three Sisters mountains to the Three Sisters Wilderness boundary is classified as “Wild”. The source of Whychus Creek begins on the glaciers of the Three Sisters mountains and includes Soap Creek, the South and North Forks of Whychus Creek, and Park Creek, including the East and West Forks of Park Creek. Wild rivers are defined in the Wild and Scenic Rivers Act as: *“Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.”*

## Scenic Section

The 8.8 mile segment from the Three Sisters Wilderness boundary to the USGS hydrological gauging station is classified as “Scenic.” Scenic Rivers are defined in the Wild and Scenic Rivers Act as: *“Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.”*



**Carver Lake September 2008**

## Carver Lake

Special consideration of Carver Lake, a high-elevation moraine lake on South Sister, is included in the designation. In the mid-1980’s Carver Lake was identified as a potential flood risk for Sisters and homes along Whychus Creek by the U.S. Geological Survey. Risk reports have since been downgraded, but the risks still exist.

The Wild and Scenic River designation states: *“Nothing in this Act shall prohibit the construction of facilities necessary for emergency protection for the town of Sisters relative to a rapid discharge of Carver Lake if no reasonable flood warning or control alternative exists.”*

**Table 1 - Acres within the Whychus Creek Wild and Scenic River Boundary**

<b>River segment- River Miles</b>	<b>Acres/per mile</b>	<b>Total Acres</b>
Wild- 45 miles (includes all designated tributaries)		11,500
Scenic- 9 miles		3,107
	271	14,607



**Overlook above Whychus Creek with Rock Penstemon**

## **Resource Assessment- Outstandingly Remarkable Values**

The following Outstandingly Remarkable Values and Significant Values were identified for Whychus Creek Wild and Scenic River:

### **Outstandingly Remarkable Values:**

- \*\*Geology**
- \*\*Hydrology**
- \*\*Fish**
- \*\*Scenic Resources**
- \*\*Cultural- Prehistory**
- \*\*Cultural- Traditional Use**

### **Significant Values:**

- \*Wildlife**
- \*Ecology/Botany**
- \*Cultural- History**
- \*Recreation**

## Name Changes

*Historic names for the creek include:* Whychus, Sesequa, Benton Creek, Clark’s River, and Squaw Creek.

In 2001, Oregon became the sixth state to ban the term “Squaw” from public place names under Senate Bill 488. This was because many Native Americans consider the word to be a derogatory term. Deschutes and Ochoco National Forest officials proposed name changes to comply with the state law and federal directives. Forest Service regulations prohibit derogatory names from being used in documents or on maps.

On December 8, 2005 the U.S. Board on Geographic Names gave final approval to sixteen name changes and one new name for Central Oregon landscape features that use the word “Squaw”. The name “Wychus” was chosen for the creek because it had the strongest historical and legal usage of any alternate name. It was recorded on government maps (1863- Surveyor Generals Office map). It had been used in government documents and was mentioned in the geographical reference book, *Oregon Geographic Names* (McArthur 2003) as the historic name for Squaw Creek.

Five names within the designated Wild and Scenic River area were included in the name changes and are displayed in Table 2 below.

**Table 2- Place Name Changes in the Whychus Creek Wild and Scenic River Area**

Old Name	New Name	Meaning
1) Squaw Creek	Wychus Creek  <i>Pronounced</i>  “Why choose”	<i>Historic- Earliest recorded name from 1855 Pacific Railroad Reports. Derived from Sahaptin language. Meaning: “The place we cross the water”</i>
2) North Fork of Squaw Creek	North Fork of Whychus Creek	<i>Historic- see above</i>
3) South Fork of Squaw Creek	South Fork of Whychus Creek	<i>Historic- see above</i>
4) Lower unnamed waterfall, commonly called Squaw Creek Falls	Chush Falls	<i>Native American-Sahaptin word for water</i>
5) Squaw Creek Falls	Upper Chush Falls	<i>Native American-Sahaptin word for water</i>



## Other Applicable Management Direction

All federal land management activities in the Whychus Wild and Scenic River corridor must follow standards and guidelines listed in the following plans and are guided by the Whychus Watershed Analysis and Update (USFS 1998, USFS 2009) and the Whychus Late Successional Reserve Assessment (USFS 2001).

### Deschutes National Forest Land and Resource Management Plan

The Wild and Scenic River corridor encompasses lands managed under the Deschutes National Forest Land and Resource Management Plan (USDA 1990) as amended.

Two Management Areas apply specifically to the river area:

**1) Wilderness (MA- 6):** The portion of Whychus Wild and Scenic River designated as “Wild” is within the Three Sisters Wilderness. The goal for this management area is to feature naturalness, opportunities for solitude, challenge, and inspiration, and within these objectives to provide for recreational, scenic, scientific, educational, conservation, and historical uses. Permitted but nonconforming uses specified in the Wilderness Act of 1964, are carried out under restrictions designed to minimize their impact to the Wilderness. The decisive criteria in all conflicts preserves and protects the Wilderness character of the resource. Specific standards and guidelines define social settings, permitted uses, capacity, and management of vegetation, recreation, natural and cultural resources, and other needs.

Natural processes are emphasized including the natural role of fire, insects and disease, the role of native species, and preferred methods for revegetation of impacted areas.

Visitor management limits group sizes, encourages “no trace” camping, does not permit contests, races, promotions or fundraisers. Commercial uses such as summer outfitter guides are assessed to be at adequate and maximum levels although winter outfitter guides may have some potential for expansion. Allowable use of regulations and site restoration actions are outlined and allowable trail construction for safety or to prevent resource damage is defined. Mineral pits and geothermal leasing are not permitted.

**2) Wild and Scenic Rivers (MA- 17):** Both the “Wild” and “Scenic” sections of Whychus Creek are included in this management area although the “Wild” section is within the Three Sisters Wilderness, and Wilderness standards also apply (see above). The goal for this management area is to protect and enhance those Outstandingly Remarkable Values that qualified segments of Whychus (and other rivers) for inclusion in the National Wild and Scenic Rivers System. This direction was meant to serve as interim management direction until a formal river corridor plan



“Above Whychus Creek” by Kay Baker

is completed with a Forest Plan amendment. **Much of the existing direction in MA-17, Wild and Scenic Rivers, in the Deschutes National Forest Land and Resource Management Plan was found to be appropriate in protecting the Outstandingly Remarkable Values of Whychus Creek and applies, as amended by this plan.**

Specific standards and guidelines are described related to vegetation management, water supply, hydroelectric power, flood control, mining, geothermal, roads, recreation development, scenic quality, structures, utilities, commercial uses, and motorized travel. Standards for the “Wild” River are generally identical to Wilderness. Standards for the “Scenic” section emphasize the natural appearance of vegetation and protection of riparian plant communities, and consideration of the river’s outstandingly remarkable values in determining whether uses such as geothermal leasing, recreational developments, structures, utilities or motorized travel are allowed.

***Forest Wide Standards and Guidelines:*** Many other Forest-wide standards and guidelines apply to the river area including specific guidelines for recreation, forest health, wildlife, riparian areas, fisheries, minerals, law enforcement, best management practices for water and soils, fire and fuels management, special uses, and geothermal. Refer to the Deschutes National Forest Resource Management Plan.

***Cultural Resource Management Direction:*** Management direction for cultural resources is found in the Deschutes National Forest Resource Management Plan, in the Forest Service Manual Section 2360, in federal regulations 36 CFR 64 and 36 CFR 800, and in various federal laws including the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act, and the National Forest Management Act. In general, the existing management direction asks the Forest to consider the effects on cultural resources when considering projects that fall within the Forest’s jurisdiction. Further direction indicates that the Forest would determine what cultural resources are present on the Forest, evaluate each resource for eligibility to the National Register of Historic Places (Register) and protect or mitigate effects to resources that are eligible.

## **The Northwest Forest Plan**

The upper 4.6 miles of the Scenic river section and the entire Wild River section are managed under direction commonly called the “Northwest Forest Plan” or more accurately the “Record of Decision for Management of Habitat for Late-Successional and Old Growth Forest Related Species within the Range of the Northern Spotted Owl” (USFS and BLM 1994).

The plan is a series of federal policies and guidelines governing land use on federal lands in the Pacific Northwest region of the United States. The plan was developed with the intent of protecting habitat for the northern spotted owl, but came to include much broader habitat protection goals. It creates a network of Riparian Reserves and Late Successional Reserves to conserve and protect habitat and amends the Deschutes National Forest Land and Resource Management Plan (USDA 1990).

A portion of the Scenic River section outside the Wilderness is managed under the Northwest Forest Plan as Late Successional Reserve and Congressionally Reserved. Late Successional Reserves are meant to maintain old growth forest ecosystems and serve as habitat for species which need older forests. Congressionally Reserved lands are reserved by Congress for specific land allocations such as Wild and Scenic Rivers. Riparian Reserves are areas along all permanent and intermittent water bodies and wetlands where the main purpose is to protect the health of the aquatic ecosystem and its dependent species. The Wild River section is managed as Congressionally Reserved.

## **Aquatic Conservation Strategy**

The Northwest Forest Plan relies on an Aquatic Conservation Strategy which was implemented to protect and improve the health of the region's aquatic ecosystems. Riparian Reserves are one component of the strategy. Key watersheds are another component of the strategy and are divided into two tiers. Tier 1 Key Watersheds are those that contribute directly to the conservation of anadromous salmonids, bull trout, and other resident fish species. Tier 2 Key Watersheds are sources of high quality water, though they may not contain at-risk fish species. Whychus Creek (O-442) was identified as a Tier 2 Key Watershed.

Watershed Analysis, a systematic procedure to characterize the aquatic, riparian and terrestrial features within a watershed, is required in all key watersheds to prescribe management activities and develop monitoring programs. A Watershed Analysis for the Whychus watershed was completed and has been updated (USFS 1998 and 2009) and refined Riparian Reserve widths based on average maximum tree height, 100 year floodplain, extent of riparian vegetation, and unstable and potentially unstable lands. See Table 4 in this Chapter.

## **Northwest Forest Plan Standards and Guidelines**

Northwest Forest Plan Standards and Guidelines provide substantial protection to Late Successional Reserves and Riparian Reserves. Standards require silvicultural activities in Late Successional Reserves, including prescribed burning, be focused on reducing risk in younger stands with the objective of accelerating development of late successional conditions. The detailed triggers for management in Whychus Wild and Scenic River Late-Successional Reserves are guided by and discussed below under the Whychus Late-Successional Reserve Assessment (USFS 2001).

Standards prohibit timber harvest, including firewood cutting in Riparian Reserves, however they allow the application of silvicultural practices to acquire desired vegetation characteristics where needed to attain Aquatic Conservation Strategy Objectives or to mitigate damaging effects from catastrophic events such as fire, flooding, volcanic, wind, or insect damage. Any proposed salvage of trees would have to meet this standard. Practices must be applied in a manner that does not retard attainment of Aquatic Conservation Strategy Objectives. Danger (or hazard) trees in Riparian Reserves may be felled but can only be removed if they are not needed to meet woody debris objectives.

Northwest Forest Plan standards for developments state that developments including recreational sites, powerlines, etc., that may adversely affect Late Successional Reserves should not be permitted. Where these projects address public needs or provide significant public benefits they are reviewed on a case by case basis and may be approved if adverse effects can be minimized and mitigated. Management of dispersed recreation use can be adjusted if activities are affecting Late Successional Reserve objectives.

Recreation facilities including trails and dispersed sites should be operated and designed in a manner that does not retard or prevent attainment of the Aquatic Conservation Strategy Objectives. Existing recreational facilities must be relocated or closed if they cause adverse effects. Dispersed recreation practices that have adverse effects must be adjusted by such measures as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, specific site closures, or eliminating the practice or occupancy.

**Table 3- Acres that have changed Management Allocation**

<i>Deschutes NF Land and Resource Management Plan</i> Old Management Allocation	<i>Deschutes NF Land and Resource Management Plan</i> New Management Allocation	Acres
Deer Habitat	Wild and Scenic River	1
Front Country Seen/Unseen	Wild and Scenic River	511
General Forest	Wild and Scenic River	93
Scenic Views	Wild and Scenic River	97
<b><i>Total Change</i></b>		<b>702</b>
<i>Northwest Forest Plan</i> Old Management Allocation	<i>Northwest Forest Plan</i> New Management Allocation	Acres
Late Successional Reserves	Late Successional Reserves with overlay of Wild and Scenic River	1614
Matrix	Congressionally Reserved with overlay of Wild and Scenic River	336
Congressionally Reserved in the Three Sisters Wilderness	Congressionally Reserved with overlay of Wild and Scenic River	11,778
<b><i>Total Change</i></b>		<b>13,728</b>



## Regional Forester Amendment #2–Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales (Eastside Screens)



**Old growth Ponderosa Pine  
along Whychus Creek**

The lower 4.2 miles of the “Scenic” river corridor are managed under direction commonly called the “Eastside Screens.” In August 1993, the Regional Forester issued a letter providing direction to National Forests on the eastside of the Cascade Mountains on retaining old-growth attributes at the local scale and moving toward the historic range of variability (the range of forest conditions likely to have occurred before European settlement) across the landscape. This direction was called “Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales, Regional Forester’s Forest Plan Amendment”, and became known as the “Eastside Screens”.

The Eastside Screens limit certain types of activities in watersheds where old growth forests are now less common than the historic range of variability and are intended to maintain management options for the future. The screens also provided direction on buffers and other protections for streams and wetlands. The Whychus

Watershed Analysis found that old growth forests in the area are limited and highly altered from past logging and fire suppression (USFS 1998, 2009).

A decision notice issued in May 1994 amended all eastside Forest Plans to include this direction. The May 1994 decision notice was revised in 1995 and was called “Revised: Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales, Regional Forester’s Forest Plan Amendment #2”, and has continued to be known as the “Eastside Screens”. Since the 1995 revision, there have been several letters of clarification from the Regional Office regarding the Eastside Screens. In 1995 Inland Native Fish Strategy standards replaced direction on riparian area management in the Eastside Screens (see below).

### **Inland Native Fish Strategy - INFISH (1995)**

The lower 4.2 miles of the “Scenic” river corridor are also managed under direction from the Inland Native Fish Strategy or INFISH (USFS 1995).

The Deschutes National Forest Management Plan was amended in 1995 by the Decision Notice and Finding of No Significant Impact for the Inland Native Fish Strategy (INFISH). INFISH provides interim direction to protect habitat and populations of resident native fish. These standards replace the direction on riparian area management in the Eastside Screens.

Priority watersheds were identified to help prioritize restoration, monitoring and watershed analysis for areas managed by INFISH. The Whychus Wild and Scenic River is within the Headwaters of Whychus Creek subwatershed and the Upper Whychus Creek subwatershed. Neither are considered “priority watersheds” under INFISH.

Another essential piece of INFISH is the delineation of Riparian Habitat Conservation Areas (RHCAs). These are portions of the watershed where riparian dependent resources receive primary emphasis and management activities in these areas are subject to specific standards and guidelines. Riparian Habitat Conservation Areas include traditional riparian corridors, wetlands, intermittent headwater streams, and other areas where proper ecological functioning is crucial to help maintain the integrity of the aquatic ecosystems by: 1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, 2) providing root strength for channel stability, 3) shading the stream, and 4) protecting water quality” (USFS 1995).

The Sisters/Whychus Watershed Analysis (USFS 1998) refined Riparian Reserve widths under the Northwest Forest Plan based on average maximum tree height, 100 year floodplain, extent of riparian vegetation, and unstable and potentially unstable lands. These same adjustments to Riparian Reserves in the Northwest Forest Plan area are applied to Riparian Habitat Conservation Areas for subwatersheds in the Sisters/Whychus analysis area that follow under the guidance of INFISH (See Table 4 below).

### **INFISH Standards and Guidelines**

INFISH Standards and Guidelines provide substantial protection to Riparian Habitat Conservation Areas and hydrologically connected uplands. Standards prohibit timber harvest, including firewood cutting in Riparian Habitat Conservation Areas, however they allow the application of silvicultural practices in Riparian Habitat Conservation Areas to acquire desired vegetation characteristics where needed to attain Riparian Habitat Management Objectives or to mitigate damaging effects from catastrophic events such as fire, flooding, volcanic, wind, or insect damage. Any proposed salvage of trees would have to meet this standard. Practices must be applied in a manner that does not retard attainment of Riparian Habitat Management Objectives and that avoids adverse effects on inland native fish (TM-1).

Danger (or hazard) trees in Riparian Habitat Conservation Areas may be felled but must be kept on site when needed to meet woody debris objectives.

INFISH standards also require fuel treatment strategies, practices, and actions including prescribed burning be designed so as to not prevent the attainment of Riparian Habitat Management Objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions are needed (FM-1 and FM-4).

INFISH standards for recreation management require that recreational facilities including trails and dispersed sites be operated and designed in a manner that does not retard or prevent attainment of the Riparian Management Objectives and avoids adverse impacts on inland native

fish. Existing recreational facilities must be relocated or closed if they cause adverse effects. Dispersed recreation practices that have adverse effects must be adjusted by such measures as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, specific site closures, or eliminating the practice or occupancy.

## Riparian Reserve and Riparian Habitat Conservation Area Widths For Whychus Wild and Scenic River

The following Riparian Habitat Conservation Area widths (INFISH) and Riparian Reserve widths (Northwest Forest Plan) apply to the length of Whychus Wild and Scenic River. Widths were verified by the Whychus Watershed Analysis Update (2009).

**Table 4. Riparian Reserve (RR) and Riparian Habitat Conservation Area (RHCA) widths in the Whychus Wild and Scenic River Corridor.**

Category	Stream Class	Description	RR width (slope distance (ft) from edge of channel)	RHCA width (slope distance (ft) from edge of channel)
1	1 & 2	Fish-bearing streams	300 ft	300 ft
2	3	Permanently flowing non-fish-bearing streams	150 ft	150 ft
3	NA	Ponds, lakes, reservoirs, and wetlands > 1 ac	150 ft	150 ft
4	4	Seasonally flowing or intermittent streams, wetlands < 1 ac, unstable or potentially unstable areas	150 ft	70 ft

## Clean Water Act (1977, as amended in 1982)

The State of Oregon, as directed by the Clean Water Act and the Environmental Protection Agency, is responsible for the protection of rivers and other bodies of water in the public interest.

Whychus Creek, throughout its length, is listed on the Oregon 2004/2006, 303(d) list for water quality exceeding the State standard established in 2004. This is because lower portions of Whychus Creek outside the Wild and Scenic River Corridor have exceeded the 7-day average maximum water temperature standard for salmon and trout rearing and migration which is 18° C (ODEQ 2007). Although stream temperatures in the Wild and Scenic River area are not above the State standard, Whychus Creek is listed as impaired for its entire length because the listing criteria is based on the reach downstream. but includes waters that drain into the impaired reach from the Wild and Scenic River Section.

Beneficial uses as defined by the State of Oregon for the Whychus Creek watershed are listed in the Hydrology analysis. To show that water quality is being protected, states are required by the Clean Water Act to adopt water quality standards which must be approved by the Environmental

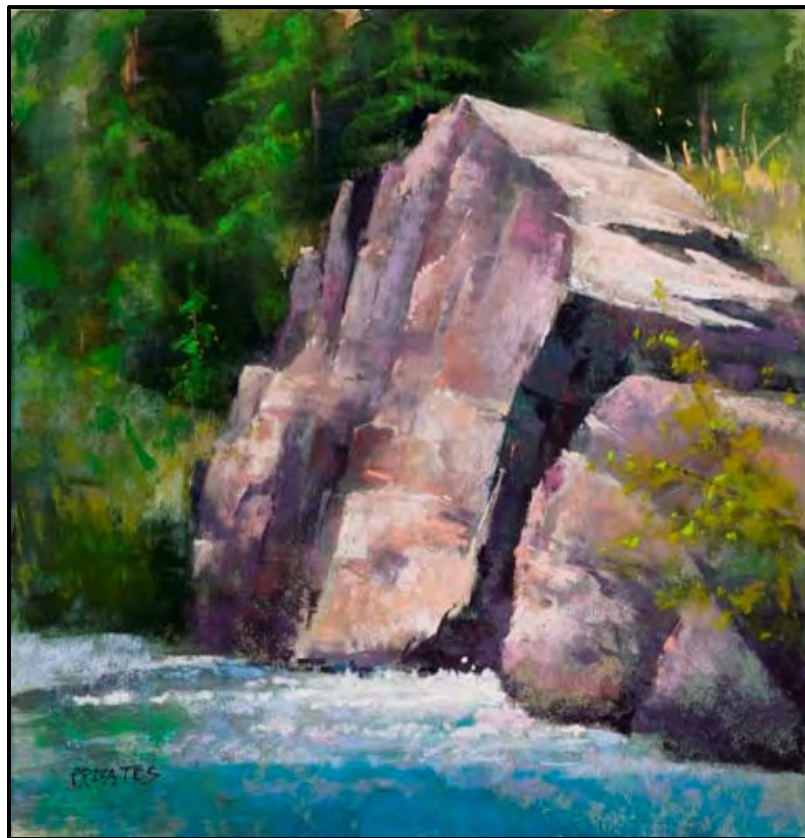
Protection Agency. Best Management Practices (BMP) and state-wide management plans are a requirement of the Clean Water Act and are used to meet water quality standards.

## **Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program (USDA, 2005)**

This environmental assessment is tiered to a broader scale analysis, the Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program. The associated Record of Decision amended the Deschutes National Forest Plan by adding management direction relative to prevention and treatment of invasive plants (formerly called noxious weeds). Forest Service Manual direction also requires that Noxious Weed Risk Assessments be prepared for all projects involving ground-disturbing activities. For projects that have a moderate to high risk of introducing or spreading noxious weeds, Forest Service policy requires that decision documents must identify noxious weed control measures that will be undertaken during project implementation

### **Inventoried Roadless Areas**

There are no Inventoried Roadless Areas within the Wild and Scenic River corridor.



**"Paint-out on the Whychus" by Phil Bates**



# Desired Future Condition Consistent and Inconsistent Uses and Standards and Guidelines



*"Whychus Creek" by Janet Guiley*



# Geology



**Polished rock channel bed with potholes**

## Geology (Outstandingly Remarkable Value)

### *Desired Future Condition*

Landscapes within and near the channel of Whychus Creek possess a concentration of complex, diverse, and highly scenic geologic features created by glacial and volcanic events. Steep and narrow canyons, deep bedrock canyons, numerous waterfalls, a variety of channel shapes, broad alluvial valleys, channel-filling giant boulders, water carved caves, and channel beds of polished rock with potholes, broad channels, beds of platy andesites, and rock spires will inspire those that find them. The diverse and varied geological features of Whychus Creek are protected and provide opportunities for learning about the unique volcanic and glacial forces which formed this mountain landscape.

### **Consistent Uses: The following are examples of uses that are consistent with protection of the Geology Outstandingly Remarkable Resource Value:**

- Low impact rock climbing and recreation that does not damage geological features.
- Installation of scientific monitoring equipment with negligible impacts.

### **Conflicting Uses: The Geology Outstandingly Remarkable Resource Value could be adversely affected by:**

- Future mining claims or mineral material sources.
- Rock climbing; if the rock is chiseled, drilled, or hammered.
- Climbing chalk; which leaves visible “trails” on the rock.

### **Existing Condition and Management Needs**

Activities such as mining and geothermal development are addressed in other applicable direction. However, rock climbing has increased in the corridor and it could affect geologic features by techniques which chisel or drill rock or install permanent climbing hardware. White chalk trails can affect both integrity and appearance of rocks, rock walls, and spires.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990) including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Minerals and Energy Resources.

### **Standards and Guidelines**

**WWSR- G-1:** Rock climbing activities shall “Leave No Trace”. Specifically:

- A. No permanent installations of metal climbing hardware such as pitons or anchors are allowed.
- B. No removal of vegetation, including lichens or moss, from rock walls is allowed.
- C. Visible climbing chalk shall not be left on climbing routes. Remove chalk trails, or use non-visible chalk, or no chalk.

**See Related Standard under Prehistoric and Traditional Use: WWSR- C-3.** No rock climbing is allowed at Whychus House Cave.



Chush Falls

# Hydrology



## Hydrology (Outstandingly Remarkable Value)

### *Desired Future Condition*

The cold waters of Whychus Creek originating on glaciers of the Three Sisters Mountains are the cornerstone of the area's ecology, providing habitat for thriving populations of plants, animals, and fish.

Water quality throughout the corridor is managed for the highest quality possible. Degradation, such as a reduction in shade or increase in sedimentation from riparian trails, roads, or campsites, is addressed through management actions. Natural fluctuations in flow from snow melt and rain-on-snow are expected. Complex channel morphology created by glacial erosion through diverse geological features maintains a variety of water-carved features and waterfalls. Instream wood, which is important for channel stability and function, is recruited and maintained. Wetlands within the Wild and Scenic River boundary are maintained and restored for both their unique habitat and contribution to the river's late-season stream flows.

Pristine high elevation moraine-dam lakes such as Carver Lake are remnants of the Little Ice Age and are part of the headwaters of the creek, providing late-season cool water flows. The Forest Service, scientists, and the community will continue to work together to better understand the threat posed by a future glacial moraine dam failure at Carver Lake and work to find solutions which best protect the community, the values associated with the Three Sisters Wilderness, and the Whychus Wild and Scenic River.

### **Consistent Uses: The following are examples of uses that are consistent with protection of the Hydrology Outstandingly Remarkable Resource Value:**

- Relocating the Hydrological Gauging Station (#14075000).
- The Congressional Wild and Scenic River designation states: *“Nothing in this Act shall prohibit the construction of facilities necessary for emergency protection for the town of Sisters relative to a rapid discharge of Carver Lake if no reasonable flood warning or control alternative exists.”*
- Continued use of signs to warn visitors that the Carver Lake flood hazard exists.
- Consolidation, removal, relocation or maintenance of trails, roads, and campsites to protect riparian areas.
- Vegetation management which meets all other direction and protects stream shade, streambanks, and provides for long term wood input.
- Low impact recreation which protects the Outstandingly Remarkable Hydrology.
- Installation of scientific monitoring equipment with negligible impacts.

### **Conflicting Uses: The Hydrology Outstandingly Remarkable Resource Value could be adversely affected by:**

- Activities which alter channel morphology.
  - Removing or cutting instream wood.
  - Driving vehicles through the channel or the stream bank.
  - Bridge or culvert installations which destabilize stream banks.
  - Adding riprap along stream banks or other forms of channel manipulation.
- Vegetation management which removes future instream wood, causes erosion, or removes streamside shade.
- Wildfire suppression techniques which cause more damage to the creek's water quality and riparian areas than direct and indirect wildfire effects. Examples are: safety zones, fire camps, or drop points in riparian areas or hydrologically connected areas, or dozer

lines or fire lines in riparian areas or hydrologically connected areas that lead to excessive erosion.

- Activities which could pollute the river.
  - Fire retardant or a retardant mixing plant that could contaminate the creek.
  - Herbicides or other chemicals which are not safe for aquatic use.

### ***Existing Condition and Management Needs***

Standards and guidelines in other applicable direction generally protect the area's hydrology. Congressional direction regarding the Carver Lake hazard is clear.

Instream wood is integral for channel function and stability in Whychus Creek. Currently, creek boating occurs on the creek and its popularity may increase. Creek boating is a subset of whitewater kayaking where paddlers seek narrow streams, fast currents and waterfall drops. If wood is removed or manipulated for passage it can affect streambank stability. Also see discussion under Fisheries.

Road densities exceed the Deschutes National Forest Land and Resource Management Plan guidelines according to the Whychus Watershed Assessment Update (USFS 2009). Hydrologically connected roads can increase sediment inputs to the creek.

Although the applicable direction in other plans, including the Aquatic Conservation Strategy and the Riparian Management Objectives, protect the hydrology resource, interpretation and clarity on how to protect the resource is minimal. Due to the undeveloped nature of the Whychus Wild and Scenic corridor, users are creating their own roads, trails, and campsites. Some of these areas are eroding streambanks, trampling fragile riparian vegetation, and/or causing sedimentation.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Riparian Areas, Water and Soils Best Practices, and Northwest Forest Plan, INFISH, and Clean Water Act.

## **Standards and Guidelines**

### **Instream Wood Manipulation**

**WWSR- H-1:** Wood manipulation to allow boating passage is not allowed.

### **Roads in Riparian Areas and Associated Uplands**

**WWSR- H-2:** Reduce roads in the Whychus Wild and Scenic River Corridor by closing, decommissioning, and/or rehabilitating roads to restore vegetation and infiltration, as informed by the Roads Analysis process.

Priorities are:

- A. Hydrologically connected roads which are channeling water or sediment.
- B. Roads which affect riparian habitats including Riparian Reserves or Riparian Habitat Conservation Areas.
- C. Roads which allow access into areas where resource damage is occurring to the Outstanding Remarkable Values associated with riparian areas and Whychus Creek. Consider appropriate management options including increased enforcement, rest, temporary or permanent closures, or full restoration as needed.

### **Trails in Riparian Areas and Associated Uplands**

**WWSR- H-3:** Trails will be designed to avoid sensitive riparian areas to the extent possible while providing access to the creek at designated locations.

Considerations for trails in riparian areas:

- A. Locate trails in upland areas as much as possible and consolidate and remove user trails in riparian areas.
- B. Any trail construction is for the primary purpose of relocating public use to reduce resource damage and retains as much vegetation as possible, fits with the topography, and is consistent with riparian function.
- C. Trails are defined, hardened, replanted, rested, relocated, or closed where unacceptable impacts to riparian vegetation, stream banks, or water quality occurs. Unacceptable impacts are identified by devegetation beyond normal tread width, loss of bank stability, exposed tree roots, loss of overhanging bank structure, lack of trail definition or multiple parallel trails, or point source erosion and siltation.
- D. Only foot traffic is allowed on streamside trails except for the allowed bike and horse use on the Metolius Windigo Trail and Three Creeks- Metolius Windigo Connector.

### **Dispersed Camping in Riparian Areas and Associated Uplands**

**WWSR- H-4:** The quantity and location of dispersed camping sites is regulated to protect river resources, particularly riparian vegetation and water quality.

Considerations for dispersed camping sites:

- A. Dispersed camping sites are defined, hardened, replanted, rested, relocated, or closed where unacceptable impacts to riparian vegetation, stream banks, or water quality occurs. Unacceptable impacts are identified by devegetation or increased bare soil exposure created by site expansion or site proliferation, loss of bank stability, exposed tree roots, loss of overhanging bank structure, or point source erosion and siltation.
- B. Fires are allowed only in existing fire rings.



# Fisheries

## Fisheries (Outstandingly Remarkable Value)

### *Desired Future Condition*

Wild steelhead and redband trout migrate freely along Whychus Creek, resuming their journeys after an interruption of over 40 years. The creek provides high quality fish habitat for native redband trout, and regains its stature as a key area for anadromous steelhead survival. The genetic integrity of the native strain of Interior Columbia Basin redband trout remains intact.

Natural processes keep the river well supplied with wood for pool formation, overhead cover and organic matter for invertebrate production. Riparian vegetation of the floodplain provide streambank stability and shade. Natural inputs of groundwater from springs and tributaries are allowed to contribute to the high water quality and cool water temperatures. The naturally high level of fine sand supplied by the glacial headwaters is moderated by floodplains in the middle reaches that allow fine sediments to be deposited off-channel during floods. Middle elevations of the watershed do not significantly contribute additional loads of fine sediment to the streambed. Active floodplains in the middle reaches of Whychus Creek provide diverse off-channel habitats for rearing steelhead trout, redband trout and potentially chinook salmon and bull trout. Fish travel freely along the length of the creek to the Deschutes River and the sea.

### ***Consistent Uses: The following are examples of uses that are consistent with protection of the Fisheries Outstandingly Remarkable Resource Value:***

- Relocating the Hydrological Gauging Station (#14075000).
- Stream restoration.
- Consolidation, removal, relocation, or maintenance of trails, roads, and campsites to protect riparian areas.
- Vegetation management which meets all other direction and protects stream shade, streambanks, and provides for long term wood input.
- Low impact recreation which does not increase sediment.
- Installation of scientific monitoring equipment with negligible impacts.

### ***Conflicting Uses: The Fisheries Outstandingly Remarkable Resource Value could be adversely affected by:***

- Introduction of fish which affect native population genetics or introduce disease.
- Activities which alter channel morphology.
  - Removing or cutting instream wood.
  - Driving vehicles through the channel.
  - Bridge or culvert installations which destabilize streambanks.
  - Adding riprap along streambanks.
- Activities which consistently contribute sediment beyond natural inputs.
- Vegetation management which removes future instream wood, causes erosion, or reduces streamside shade.
- Wildfire suppression techniques which cause more damage to the creek's water quality and riparian areas than direct and indirect wildfire effects. Examples are: safety zones, fire camps, or drop points in riparian areas or hydrologically connected areas, or dozer



lines or fire lines in riparian areas or hydrologically connected areas that lead to excessive erosion.

- Activities which could pollute the river.
  - Fire retardant or a retardant mixing plant that could contaminate the creek.
  - Herbicides or other chemicals which are not safe for aquatic use.

### ***Existing Condition and Management Needs***

Standards and guidelines in other applicable direction generally protect the area's fisheries and habitat.

Creek boating, a subset of whitewater kayaking where paddlers seek narrow streams, fast currents and waterfall drops, has increased in the upper reaches of the creek during high flows. A small number of people currently enjoy this challenging sport, however removal of wood to allow boat passage could remove valuable habitat that stabilizes stream banks and creates fish habitat.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Riparian Areas, Water and Soils Best Practices, Fisheries, and Northwest Forest Plan, INFISH, and Clean Water Act.

### **Standards and Guidelines**

**See Related Standards and Guidelines under Hydrology for:**

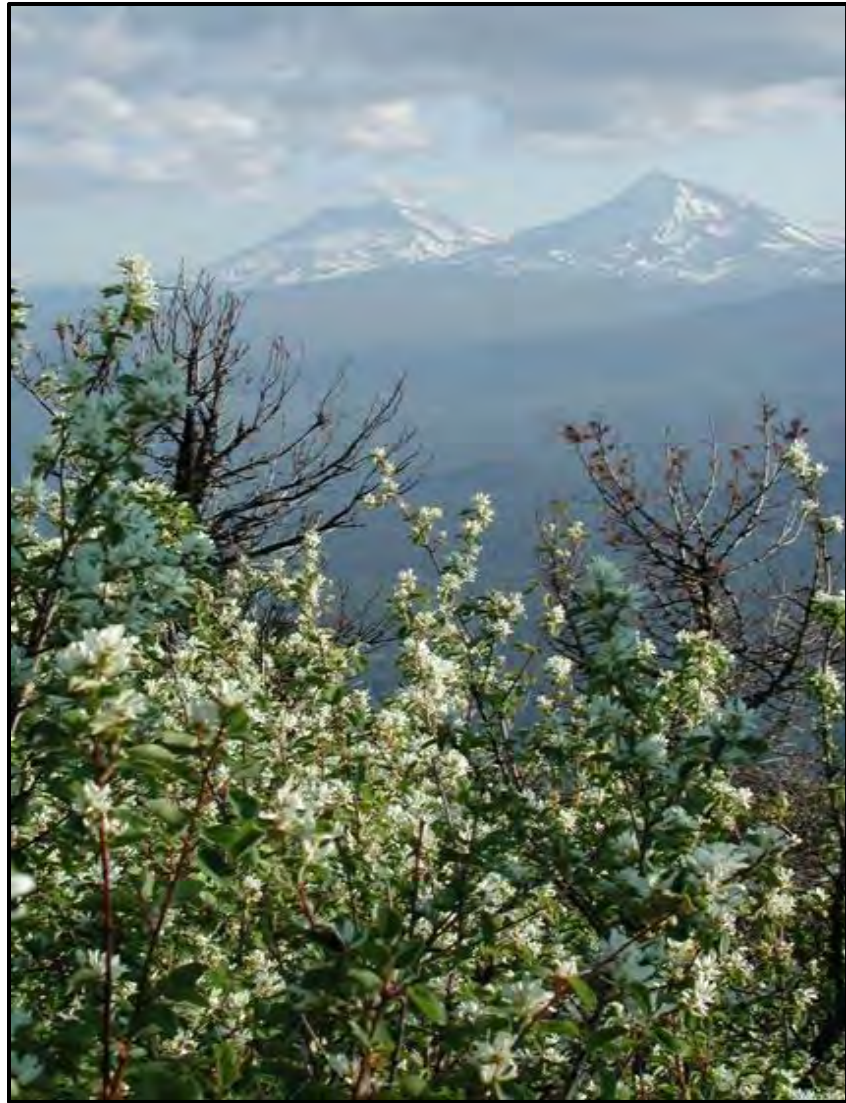
**Instream Wood Manipulation WWSR- H-1**

**Roads in Riparian Areas and Associated Uplands WWSR- H-2:**

**Trails in Riparian Areas and Associated Uplands WWSR- H-3:**

**Dispersed Camping in Riparian Areas and Associated Uplands WWSR- H-4**





# Scenery

## Scenery (Outstandingly Remarkable Value)

### *Desired Future Condition*



The wild, unmodified scenery of the corridor is recognized as a unique and valuable attribute. The creek provides a rich variety of scenic experiences. The headwaters of Whychus Creek and the glaciers on the Three Sisters mountains, remain an iconic symbol of Central Oregon. The natural appearing landscape has little evidence of past human activities. The canyon walls provide a sense of seclusion.

Close views are dominated by the interaction of rock, water, vegetation, including large old growth trees, down wood, riparian hardwoods and other native vegetation.

The natural fire ecology of the area forests is a part of the scene. More distant views include burned and fire maintained forests and mountain vistas. Facilities for the purpose of protecting river values are rustic in character and blend with the natural surroundings.

### ***Consistent Uses:* The following are examples of uses that are consistent with protection of the Scenery Outstandingly Remarkable Resource Value:**

- Vegetation management, as allowed by other plans and standards. This may include prescribed fire or managed wildfires which move forests, meadows, riparian areas, and stream sides toward conditions within the historic range of variability (see Whychus Late Successional Reserve Assessment, 2001 and Whychus Watershed Analysis 1998 & 2009). Appropriate mitigations are required.
- Parking areas along Road 16 road using native materials, plantings, and design features consistent with the semi-primitive motorized designation.
- Installation of educational or directional signs.
- Installation of scientific monitoring equipment with negligible impacts as allowed.

### ***Conflicting Uses:* The Scenery Outstandingly Remarkable Resource Value could be adversely affected by:**

- Unmanaged recreational use causing devegetation or multiple trails or roads.
- Uninformed, unskilled, or careless practices while camping (in camp location, excessive size and number of campfire rings, improper sanitation, illegal firewood cutting, leaving trash, excessive noise, and vandalism).
- Uninformed, unskilled, or careless practices while hiking or parking (parking in vegetation, improper sanitation, leaving trash, creating user trails, and vandalism).
- Illegal or undesirable behaviors such as shooting trees, graffiti, leaving trash, cutting live or dead standing trees outside firewood cutting areas, or vandalism.
- Too many signs, which detract from the scenic quality and the near natural or natural setting.

### ***Existing Condition and Management Needs***

Scenic quality can be negatively affected by unmanaged use which can create multiple user roads and trails, vandalism, erosion, and devegetation. Forest management can also impact scenery with cut trees, stumps, ground disturbance, and prescribed fire. Disturbance events such as insects and disease or wildfire have a distinctive character that will not meet some people's expectations for scenic quality, however these are natural processes occurring across the Forest landscape.

Standards and guidelines from other applicable direction adequately protect the area's scenery but as the Forest management direction of the 1974 Visual Management System transitions to the newer 1996 Scenery Management System there is a need to provide a transition between the plans. The cross-walk of standards is based on the cross-walk displayed on the 1<sup>st</sup> page of Appendix H of the *USDA Forest Service, December 1995. Landscape Aesthetics- A Handbook for Scenery Management. Agriculture Handbook Number 701*. Current standards are described below.

**WILD River Segment: The Visual Quality Objective (VQO) direction for rivers classified as wild is "Preservation"**. This visual quality objective allows ecological changes only. Management activities,, except for very low visual impact recreation facilities, are prohibited. This objective applies to Wilderness areas, primitive areas, other special classified areas, areas awaiting classification and some unique management units which do not justify special classification. *USDA Forest Service, Agriculture Handbook 462, National Forest Landscape Management, Volume 2, Chapter 1- The Visual Management System, April 1974, pg. 29*.

**SCENIC River Segment: The Visual Quality Objective (VQO) direction for rivers classified as scenic is "Retention"**. This visual quality objective provides for management activities which are not visually evident. Under retention activities may only repeat from, line, color, and texture which are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc., should not be evident. Immediate reduction in form, line, color and texture contrast in order to meet Retention should be accomplished either during operation or immediately after. *USDA Forest Service, Agriculture Handbook 462, National Forest Landscape Management, Volume 2, Chapter 1- The Visual Management System, April 1974, pg. 30*

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for and Forest wide standards for scenery as applicable.

## **Standards and Guidelines**

### **Scenery Management**

**WWSR-S-1 Wild River Section-** Under the Visual Scenery Management System terminology the Scenic Integrity Objective (SIO) is "Very High".

**WWSR-S-2 Scenic River Section-** Under the Visual Scenery Management System terminology the Scenic Integrity Objective (SIO) is "High".





# Cultural Prehistory and Traditional Use



## Cultural Prehistory and Traditional Use (Outstandingly Remarkable Values)

### *Desired Future Condition*

As an ancient travel route to the mountains, the area around Whychus Creek continues to protect an important record of how people in the past used resources and the landscape. The non-renewable and generally fragile nature of prehistoric resources is recognized and they are managed accordingly for the greatest scientific and public good in consultation with the Confederated Tribes of the Warm Springs Reservation of Oregon.

The relationship between the Tribes, the Forest Service, the community, and visitors is recognized and nurtured as an opportunity for cross cultural learning, respect, and understanding. The treaty protected resources of the corridor are protected and enhanced.

The location and extent of cultural resources is known and all have been evaluated for eligibility to the National Register of Historic Places. Outstanding heritage resources within the Wild and Scenic River area are nominated for listing on the National Register. A management plan for the heritage resources of the area identifies opportunities for education, research, and recreation access as well as priority sites for protection measures and monitoring. Locations with tribal interest and concern are identified and appropriate access, interpretation, and use is determined in consultation with tribal governments and groups.

### ***Consistent Uses: The following are examples of uses that are consistent with protection of the Cultural History and Traditional Use Outstandingly Remarkable Resource Values:***

- Low impact recreation (see Recreation section for more information).
- Education and interpretation of cultural and traditional history guided by the Confederated Tribes of the Warm Springs Reservation of Oregon.
- Monitoring, surveys, and approved research.
- Installation of scientific monitoring equipment with negligible impacts.

### ***Conflicting Uses: The Cultural History and Traditional Use Outstandingly Remarkable Resource Value could be adversely affected by:***

- Activities which cause damage, looting, or erosion to cultural sites, including prehistoric sites, culturally significant sites such as Whychus House Cave, or areas important for culturally significant foods such as wet meadows.

### ***Existing Condition and Management Needs***

Heritage resources are protected by other applicable direction. However, prehistoric sites and culturally significant areas are being affected by lack of management as dispersed recreation use creates more user trails, off road vehicle damage, user roads, and devegetation which increases erosion to sites.

Of special concern are damaging activities occurring at Whychus House Cave, a culturally significant site for the Tribes. Campfires in the cave cover it with soot. Despite road closures, there has been persistent vandalism at the cave, including: illegal road pioneering, graffiti, tree shooting, and leaving trash. Graffiti in the cave was removed in 2009 through agency and community efforts. The situation has required extra monitoring and continual clean-up. Rock

climbing at the cave introduces use at the site that has marked the cave with climber chalk and devegetates certain areas. Increased protection of the cave is needed.

The Confederated Tribes of the Warm Springs Reservation of Oregon have a long history of use in the area and have declared their interest in treaty protected resources of the river corridor. The need for coordination and consultation continues and may increase as use in the area grows.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990) including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards including Caves, Cultural Resources, and Law Enforcement.

## **Standards and Guidelines**

### **Prehistoric Resources**

**WWSR- C-1:** Heritage resources are identified, evaluated for eligibility to the National Register of Historic Places, and for appropriate use (research, interp./ed., preserve for future, no protection, etc..) prior to decisions about developments that may affect the resource; and consideration of these evaluations are incorporated into the development being planned.

### **Traditional Use**

**WWSR- C-2:** Any proposed actions or discovered disturbance of prehistoric sites, traditional use resources, or potential sacred sites or sites of interest to the Confederated Tribes of the Warm Springs Reservation of Oregon will include notification, discussion, and consultation of tribal officials and relevant tribal committees or specialists prior to decision about implementing actions or dealing with disturbances. This will include notification through the National Environmental Policy Act (NEPA) planning process but will also consider additional contact and discussion with or without a NEPA process taking place.

### **Whychus House Cave**

**WWSR- C-3:** No rock climbing, camping, or campfires shall be allowed at Whychus House Cave.



**Whychus House Cave**







# Wildlife

## Wildlife (Significant Value)

### *Desired Future Condition*

The diversity of wildlife in the Whychus corridor is recognized and managed as part of a healthy riverine ecosystem. The need for habitat and security for common species is recognized and refugia are maintained and protected allowing wildlife to disperse through the corridor.

The undeveloped characteristics of the area are maintained by managing dispersed camping and user created roads and trails to minimize disturbance to wildlife species in the corridor. The upper reaches of the corridor will provide even more remoteness and solitude for those species requiring such an environment. The creek and its environs attract this variety of life because of the clean, abundant water, diversity of vegetation, and relatively low amount of disturbance by roads and other human activities.

Designated late successional (old growth) forest habitats and remnant old growth trees are managed for their unique habitat value and as part of an important habitat network. Snags are an important habitat component and appear in rich abundance in the corridor due to natural processes. Danger (or hazard) tree operations provide opportunities for retention or creation of fish or wildlife habitat or adding to riparian zone complexity. Aspen, cottonwood, and other hardwoods habitats increase and provide important habitat diversity for wildlife.

***Consistent Uses:* The following are examples of uses that are consistent with protection of the Significant Wildlife Resource Value:**

- Low impact recreation (see Recreation section for more information).
- Vegetation management which complies with current direction and plans.
- Hunting game with appropriate permits and licenses.
- Road closures, conversions of roads to trails, and restoration of unneeded roads.
- Installation of scientific monitoring equipment with negligible impacts.

***Conflicting Uses:* The Significant Wildlife Resource Value could be adversely affected by:**

- Actions which fragment forest or riparian habitat.
- Development of trails or roads in sensitive areas.
- Human disturbance including trails in undeveloped areas which currently function as wildlife refugia.
- Vegetation management which affects current or future habitat for species of concern or management indicator species.
- Illegal shooting of wildlife.
- Wildfire suppression techniques which cause more damage to the creek's water quality and riparian areas than direct and indirect wildfire effects. Examples are: safety zones, fire camps, or drop points in riparian areas or hydrologically connected areas, or dozer lines or fire lines in riparian areas or hydrologically connected areas that lead to excessive erosion.
- Activities which could pollute the river.
  - Fire retardant or a retardant mixing plant that could contaminate the creek.
  - Herbicides or other chemicals which are not safe for aquatic use.

### ***Existing Condition and Management Needs***

Wildlife resources are generally protected by other applicable direction. However, clarification on several issues could be improved. These are discussed below.

*Refugia for common wildlife species* Many wildlife species currently find refuge in the corridor because of low levels of human use and relatively few roads and trails. However, user roads and system road densities exceed recommended densities. Roads can reduce habitat, increase habitat fragmentation, increase disturbance, facilitate recreational access (motorized and non-motorized) into core habitats, and reduce connectivity for dispersal among other effects.

The desire for designated river trails could result in trail development that introduces many more people into remote areas which now provide security, water, food and shelter for many common wildlife species. Multiple users trails and unneeded roads provide opportunities to consolidate use into one area or convert roads into trails, close roads, and rehabilitate and restore impacted areas.

Currently no motorized boat use is believed to occur however as recreational vehicle technology advances it may become possible and would create disturbance in secluded wildlife areas.

*Biological Deer Winter Range and Transition Range* - The lower mile of the Wild and Scenic River corridor (the terminus close to the City of Sisters) is adjacent to MA 7 - Deer Habitat and is functionally biological winter and transition range for mule deer. It needs special management for deer forage and cover.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Wildlife, Riparian Areas, Law Enforcement, and Northwest Forest Plan, Eastside Screens, INFISH.

## **Standards and Guidelines**

### **Wildlife Habitat, Trails, and Roads**

**WWSR-W-1** Maximize undisturbed areas that provide or enhance wildlife refugia and minimize impacts to Riparian Habitat Conservation Areas and Riparian Reserves. Avoid trail development in areas which receive little use and function as refugia. Considerations for protecting and improving wildlife habitat include:

- A. If trail development or consolidation is needed for resource protection, limit trails to one side of the river corridor. An exception is on the lower terminus of the river corridor where a consolidation of user trails may be considered across the river corridor from the Three Creeks/ Metolius Windigo Connector, which is on an existing road on the ridge.
- B. Road closures shall be prioritized in proximity to trails to maximize effectiveness of wildlife refugia.
- C. Trail development or consolidation within Riparian Habitat Conservation Areas and Riparian Reserves is for the primary purpose of relocating public use to reduce resource damage.
- D. Revegetate areas such as closed roads or other excessively large dispersed recreation sites to expedite the development of new habitat.

See Related Standards and Guidelines under Hydrology for:

**Instream Wood Manipulation WWSR- H-1**

**Roads in Riparian Areas and Associated Uplands WWSR- H-2:**

**Trails in Riparian Areas and Associated Uplands WWSR- H-3:**

**Dispersed Camping in Riparian Areas and Associated Uplands WWSR- H-4**

**WWSR-W-2** Reduce road densities in the Wild and Scenic River corridor by closure, decommissioning, and rehabilitating closed roads to restore vegetation and wildlife habitat.

**Deer Habitat Management**

**WWSR-W-3** Manage the lower portion of the Scenic river corridor, from the gauging station to Pole Creek Swamp as deer winter range/transition range because it is biological winter range and transition range for mule deer. (T.15 S. R. 9 E. Sections 35, 36 and T.15 S., R.10 E., Sections 31, 32)

Considerations in managing for deer winter range/transition range:

- A. Crown cover greater than 40 percent with trees 30 feet tall is recommended for thermal cover.
- B. Forage conditions will be maintained or improved with emphasis on increasing the variety of native plants available for forage and a mixture of age classes of shrubs. Variety in areas which are dominated by poor vigor shrubs will be created. Species will be established so that a variety of shrubs, grasses, and forbs are available.
- C. Where fuels reduction activities such as mowing or prescribed burning are planned, the size of the treatment units normally will be 300 to 500 acres including unmanipulated islands. If more than one unit is treated in a single year, treatment units should be 600 to 1,200 feet apart. The untreated portion of the area involved can be mowed or burned after the treated areas provide a good quality of forage.
- D. If foraging areas are created through forest thinning, units will be designed to be irregularly shaped. Thermal cover will be maintained immediately adjacent to the foraging site. The stands providing cover can be in different age classes. The desired condition is an irregular mosaic of openings intermingled within tree stands. As an opening is reestablished with trees and qualifies as cover, adjacent areas may be thinned to maintain forage-producing areas where forage is deficient.

**Motorized Travel or Uses on Water**

**WWSR- W- 4-** Motorized travel or other motorized uses on water are not allowed.



# Vegetation and Ecology

## Vegetation and Ecology (Significant Value)

### Desired Future Condition

Forest types follow a steep elevation and moisture gradient ranging from sparse high elevation subalpine stands to dense mixed conifer stands along deep canyons to open dry ponderosa pines on broad flats. An accompanying range of natural disturbances continue to play their role in forest renewal.

Near the mountains, hemlock and lodgepole forests cycle through periodic disturbances from fire, wind, insects, and disease. Fuel loading is at levels where periodic wildland fires may occur and replace stands at the end of their lifespan. Small to moderate size wildfires burn at moderate to high intensities to break up the continuity of fuels and create diversity.

Downstream along the slopes of the river canyon, the vegetation is dominated by wet mixed conifer forests where wildfires may be variable and burn at variable intensities to create a variety of patch sizes. These forests are healthy and resilient to periodic disturbances from fire, insects, or disease. Fuel loading is at levels where periodic wildland fires may occur, but would burn at moderate to high intensities and create diversity.

Dry mixed conifer and ponderosa pine forests are maintained by frequent low intensity fires to help restore large pine and Douglas fir. These forests are healthy and resilient to periodic disturbances from fire, insects, or disease. Fuel loading is at levels where low intensity periodic wildland fires may occur, but would cause little damage. Large old growth trees are more prevalent than today. Careful forest management practices help restore desired conditions but maintain a high level of scenic integrity and natural appearance.

Riparian vegetation along stream edges and meadows exhibits high native species diversity, from grasses, to sedges, to willows, to flowering shrubs and has little conifer encroachment. Abundant dead trees and down wood provide habitat in and adjacent to the creek. Riparian areas will be functioning effectively.

Aspen and cottonwood stands are recognized as significant habitats and managed for sustainability. Rare plants such as Peck's penstemon or special habitats such as wet meadows and swamps are managed for sustainability and protected from non-native plants and recreational impacts. Noxious weeds and other undesired non-native species are rarely found. If detected, they are removed by approved methods.

***Consistent Uses:* The following are examples of uses that are consistent with protection of the significant Vegetation and Ecological values:**

- Low impact recreation (see Recreation section for more information).
- Vegetation management, as allowed by other plans and standards. This may include thinning, prescribed fire or managed wildfires which move area forests, meadows, riparian areas, and stream sides toward conditions within the historic range of variability (see Whychus Late Successional Reserve Assessment (USFS 2001) and Whychus Watershed Analysis (USFS 1998 & 2009). Appropriate mitigations are required.
- Commercial or noncommercial vegetation management and utilization activities where allowed by other plans and standards which accomplish desired management (i.e. thinning, managed firewood cutting, biomass removal). See Whychus Late Successional Reserve Assessment (USFS 2001) and Whychus Watershed Analysis (USFS 1998 & 2009). Appropriate mitigations are required.



- Control of invasive plants.
- Restoration of impacted areas with native plant species.
- Installation of scientific monitoring equipment with negligible impacts.

***Conflicting Uses: The significant Vegetation and Ecological values could be adversely affected by:***

- Activities which move forests, meadows, and streamsides away from the natural range of variability (see Whychus Late Successional Reserve Assessment and Whychus Watershed Analysis).
- Wildfire suppression techniques which cause more damage to the creek’s water quality and riparian areas than direct and indirect wildfire effects. Examples are: safety zones, fire camps, or drop points in riparian areas or hydrologically connected areas, or dozer lines or fire lines in riparian areas or hydrologically connected areas that lead to excessive erosion.

***Existing Condition and Management Needs***

Standards and guidelines from other applicable direction generally protect the area’s vegetation and ecology. Two exceptions follow:

*1) Refinement of Guidance for Wildfire Suppression and Wildfire for Resource Benefit.*

The existing direction for fire management found in the Whychus Late-Successional Reserve Fire Management Plan for the Whychus Creek Management Strategy Area calls for “Aggressive control of all high severity wildfires that threaten the survival of large overstory ponderosa pine or areas managed for climatic climax” (USFS 2001). It allows for consideration of the use of confine and contain strategies for low intensity wildfires. Although aggressive control may be needed, the Outstandingly Remarkable Values of Whychus Creek Wild and Scenic River require special consideration and protection during suppression activities. Special habitats such steep riparian canyons and wet meadows need careful consideration during suppression actions. Forest, meadow, and other special habitats may benefit from wildfire and managers should consider managing fires for the benefit of resources where possible and desirable.

*2) Emphasis on maintenance and enhance of hardwood plant communities*

Aspen and other hardwoods such as cottonwoods support many wildlife species and are in decline due to fire suppression. They are important habitats to maintain.

**Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Forest Health, Timber Management, Riparian Areas, Fuelwood, Fire and Fuels Management, Law Enforcement, and the Northwest Forest Plan, Eastside Screens, INFISH, and the Regional Weed EIS.

## **Standards and Guidelines**

### **Wildfire Management**

**WWSR-V-1** Use appropriate suppression response to allow wildfires to burn for resource benefit where risks to firefighter and public safety, community, and private lands are acceptable.

**WWSR-V-2** Give consideration to minimum impact suppression techniques in the river corridor. Examples include avoiding such actions as: the use of heavy equipment in the river canyon, hand lines or dozer lines that drain directly into the creek, locating fire camps, spike camps, drop points, and heli-bases in wet meadows or riparian areas, and retardant mixing plants in the river corridor.

**WWSR-V-3** Utilize resource advisors on wildfires after initial attack.

### **Aspen and Hardwoods Management**

**WWSR-V-4** Protect and enhance hardwoods such as cottonwoods and aspen.

**Also See Related Standards and Guidelines under Hydrology for:**

**Roads in Riparian Areas and Associated Uplands WWSR- H-2:**

**Trails in Riparian Areas and Associated Uplands WWSR- H-3:**

**Dispersed Camping in Riparian Areas and Associated Uplands WWSR- H-4**



**"Whychus Waterfall" by Paul Alan Bennett**



**Sisters Rodeo Association 1946**

# Cultural History

## Cultural History (Significant Value)



Historic wood fence

### *Desired Future Condition*

The role of Whychus Creek in the Sisters area's history is recognized and studied. From railroad engineers exploring the area in 1855 to the establishment of Sisters in the early 1900's, the story of settlement and resource use along the creek is the story of the exploration of the west. It is shared in educational and interpretive materials. The non-renewable and generally fragile nature of historic resources is recognized and they are managed accordingly for the greatest scientific and public good.

***Consistent Uses:*** The following are examples of uses that are consistent with protection of the significant Cultural History Resource Value:

- Low impact recreation (see Recreation section for more information).
- Protection/Restoration of the area's landscape character.
- Interpretation of the area's history.
- Installation of scientific monitoring equipment with negligible impacts.

***Conflicting Uses:*** The significant Cultural History Resource Value could be adversely affected by:

- Activities which change the area's landscape character.
- Prescribed or wild fires which burn historic wood fences or other vulnerable structures.
- Vandalism or careless destruction of fragile historic sites.

### ***Existing Condition and Management Needs***

Standards and guidelines from other applicable direction protect the area's cultural history. However, wildfire and vandalism can destroy fragile historic sites. Monitoring is required. No new standards are proposed.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Cultural Resources and Law Enforcement





Sandy Melchiori at the Whychus Creek "Paint Out"

# Recreation

## Recreation (Significant Value)

### Desired Future Condition

Whychus Creek's wild and remote character is valued, considered, and actively protected as a theme in future planning. It will remain a place where people can explore and experience the excitement of discovery and self reliance. Opportunities for primitive and semi-primitive recreation experiences associated with enjoying the water, forests and mountain views emphasize hiking, wildlife watching, dispersed camping, hunting, and



A solitary moment at a waterfall on Whychus Creek

fishing. Trails for equestrians, mountain bikers, and snowmobiles will enter and cross the corridor in certain areas. It will be easier for responsible users to enjoy the area and harder for people who have abused the area in the past to continue destructive behaviors.

There would be a gradient of management controls so areas closer to the City of Sisters would provide more facilities to manage use and higher reaches closer to the wilderness would provide fewer facilities. The plan would allow development of limited improvements (parking areas, system trails, restrooms) close to the City of Sisters to manage use to protect river values and provide interpretive and stewardship information.

*Recreational Opportunity Spectrum (ROS)* The Wild section of the river is within the Three Sisters Wilderness and is managed as Wilderness with the Recreation Opportunity Spectrum (ROS) characterization of a "Primitive River". The Scenic section of the river is managed within the Recreation Opportunity Spectrum (ROS) characterization of a "Semi-Primitive Motorized River".

*Carrying Capacity and Use Limits* Recreational capacity is established by defining desired future resource conditions and recreational experiences and by defining consistent and inconsistent uses. The Recreation Opportunity Spectrum (ROS) characterization for each river segment defines appropriate levels of access, remoteness, naturalness, facilities and site management, social encounters, and visitor management. Monitoring indicates the need for management actions necessary to maintain desired conditions.

*Low Impact Recreation* Low impact recreational practices protect Outstandingly Remarkable Values. Low impact dispersed camping avoids tree damage or vegetation loss, and low impact trail users protect trails from excessive erosion. Low impact recreation protects recreational experiences and environmental quality by respecting others, limiting group sizes, and using proper sanitation and litter disposal. Motorized travel is kept to designated routes. The concepts of low impact recreational practices are discussed in Cole (1989).

*River Trails* A managed river trail will lay lightly on the landscape to provide a high quality hiking experience that is protective of riparian values, wildlife refugia, and scenery. Networks of braided user trails are rehabilitated. Mountain bikers, equestrians, and snowmobile users will be



able to pass through the corridor to connect to trails systems such as the Metolius Windigo Trail, the Peterson Ridge Mountain Bike Trail, or the Cross District Snowmobile Trail. Trail design will consider community connections and logical links to other existing trails to make it easier for people to enter or pass through the corridor from town by foot, bicycle, horse, snowmobile, as well as by car on open roads. Primitive roads provide access points to the river. The most logical trail corridors in some places may exist on canyon rims above the creek where views can be enjoyed, or on existing unneeded roads that could be converted to trails.

Vehicles, including off-highway vehicles will remain on designated routes and enforcement of travel management rules are effective. People limit the noise from vehicles in dispersed camping areas shared by others by traveling at slow speeds.

*Boating* The use of non-motorized boats by those that enjoy the challenging seasonal boating available on the creek continues with a focus on low impacts, self-reliance, and operating on a wild and natural river where instream wood is not managed for boater passage or safety.

*Dispersed Camping* People continue to enjoy dispersed camping and camps are clean, soil erosion and runoff to the creek is minimized, and proper sanitation practices are followed. Low impact “Leave No Trace” camping techniques are communicated and followed.

*Winter Recreation* Opportunities for winter use such as cross-country skiing and over-snow machine travel are available but are protective of the outstanding and remarkable river values. The use levels and characteristics are consistent with “Primitive” and “Semi-Primitive Motorized” Recreation Opportunity Spectrum zones.



**Tay Robertson and Chuck Newport enjoy a wilderness pack trip**

*Recreational Development* A few strategically placed recreational developments such as parking areas, restrooms, educational displays, and maintained trails will allow people to enjoy the Wild and Scenic River but will defer to and protect or enhance the river’s Outstandingly Remarkable Resource Values. Parking areas may be visible from Road 16 for security, but be constructed with natural materials and native plantings.

learn about the creek’s Outstandingly Remarkable Values and take a walk or connect to a longer hike.

A modest, fully accessible portal area close to the City of Sisters could provide a place to view the corridor, enjoy the mountain scenery, and stewardship philosophy, and take

*Stewardship and Volunteerism* People’s experiences on Whychus Creek will be part of a sustainable public stewardship program. Volunteerism, stewardship and service to public lands will be a part of the community culture. People of all ages will help take care of the river and value the unique experience Whychus Creek provides. The community will be known for its creative approaches to public lands stewardship.

*Roads* The road system provides access to some portions of Whychus Creek corridor for recreation opportunities, driving for pleasure, forest management, and effective fire-fighting capability; yet most of the corridor remains unroaded or has a very low road density in order to reduce the risk of water quality degradation occurring from roads, provide primitive and semi-primitive self discovery experiences, and provide the highest possible wildlife habitat effectiveness. The roads that remain open for access in the corridor are maintained to provide managed public access and prevent resource damage.

*Trail Bridges* People cross the creek on the Road 1514 bridge or wade across if needed. By not providing bridges, the desired conditions of low use levels and natural setting is maintained. In rare instances a bridge may be considered if needed to protect the Outstandingly Remarkable Values.

*Permitted Recreation and Social Events* Sustainable river management recognizes the important economic and social aspects of Whychus Creek. The area's primitive character and desired social setting is maintained by allowing events or activities which protect river values, promote stewardship, restoration or education and do not lastingly increase or displace general public use.

*Fixed improvements* Fixed improvements protect the health and safety of public, protect or enhance river values, fulfill an agency management and administrative role, or involve the study or research of values unique to Whychus Creek.

*Sustainable Recreation Program* Proposed new activities or developments consider the environmental, social, and economic factors that influence the creek's outstandingly remarkable and significant resource values. By working with the community, visitors, and partners the area will be able to continue to provide the mental and physical benefits of outdoor recreation while protecting and enhancing the creek's resource values for future generations.

Whychus Creek will provide a much needed sanctuary for people; a place for rejuvenation, reflection, education, and opportunities to give back in the form of public lands stewardship. Community engagement will help conserve the natural setting. The fiscal viability of decisions and investments consider the economic contribution to the community and tourism as well as the creek's social and ecological capacity and sustainability.

***Consistent Uses:* The following are examples of uses that are consistent with protection of the Significant Recreation Resource Value and the Outstandingly Remarkable Resource Values:**

- Opportunities for primitive or semi-primitive experiences which involve low impact recreation as discussed above.
- Horseback riding and mountain biking on system trails that cross the corridor, including the Metolius Windigo Trail or Three Creeks Road- Metolius Windigo Connector.
- Management regulations or modest recreational facilities (such as parking areas or trails) which protect Outstandingly Remarkable Resource Values and wildlife refugia.
- Dispersed camping in allowed sites. Campsites are designated, rested, or decommissioned as needed.
- Road closures or obliterations for resource protection or to reduce vandalism.
- Converting roads to trails in some areas.
- Motorized access on designated routes.

- Non-motorized boating which does not require wood management.
- Winter recreation such as cross country skiing or over the snow machine travel in permitted areas.
- Replacement of the Road 1514 bridge, if needed.
- Bridges needed to protect the Outstandingly Remarkable Values.
- Small events or classes (under 75 people) with a primary purpose of restoration, stewardship, or resource education in Scenic river section.
- Events, including those types not generally allowed inside the river corridor may cross the Wild and Scenic River Corridor on the Rd 1514 bridge and on the Three Creeks Metolius Windigo connector.
- Protection of the river values, recreation experience and availability of recreation space for general public use are primary considerations in managing permitted uses.
- Low key signing, off site interpretation, on-site interpretation that is consistent with the area's desired character.

***Conflicting Uses: The following uses could adversely affect the significant Recreation Resource value and the Outstanding Remarkable Resource Values:***

- Recreational developments which cause use to increase beyond desired social setting and ecological capacity throughout the corridor.
- Unmanaged use which causes resource damage to Outstandingly Remarkable or Significant Resource Values.
- Installing new trails that adversely impact riparian areas, cultural sites, unstable areas or erosive soils, or wildlife refugia.
- Dispersed camping or campfires that adversely impact sensitive sites or Outstandingly Remarkable or Significant Resource Values.
- Developing campgrounds in the corridor until the hazard from seasonal flood events or a breach of the Carver Lake moraine is better understood.
- Uninformed, unskilled, or careless practices while camping (in camp location, excessive size and number of campfire rings, improper sanitation, illegal firewood cutting, leaving trash, excessive noise, and vandalism).
- Uninformed, unskilled, or careless practices while hiking or parking (parking in vegetation, improper sanitation, leaving trash, creating user trails, and vandalism).
- Illegal or undesirable behaviors such as building unauthorized roads or trails, shooting trees, graffiti, leaving trash, driving vehicles into the creek, cutting live or dead standing trees outside firewood cutting areas, or vandalism.
- Commercial Special Uses, including sporting or charity events which cannot meet the criteria of demonstrated need or negligible impact (described below)
- Non-commercial Special Uses which cannot meet the criteria of negligible impact (described below)
- Over promoting or advertising the area causing increasing use beyond desired social settings or ecological capacity.
- Too many signs, or lack of consistency and quality in signing which detracts from the visual quality and the near natural or natural setting.

***Existing Condition and Management Needs***

Other applicable direction does not fully protect the significant Recreation Resource and unmanaged recreation is affecting the creek's Outstandingly Remarkable Values. As recreational use increases in the future, maintaining Whychus Creek's unique wild and remote character will require careful planning choices. Managers face challenges in adequately

managing existing trails but there are more requests every year for even more trails and specialized trails for various user groups.

Users have created trails on the stream banks by repeated entries. Some of these trails are poorly located and unstable and causing erosion and loss of vegetation on stream banks. Some recreationists are taking matters into their own hands and building illegal trails. The desire for trails could push development and people into currently undeveloped areas which serve as refuges for wildlife, provide important riparian habitats, and are wild places that once lost, are very difficult to reclaim.

Illegal activities such as vandalism, dumping garbage, graffiti, damaging or cutting trees outside firewood areas, and residing on the creek also occur.

Currently dispersed camping occurs throughout the area and in some places causes damage to streamside areas. Standards and guidelines from existing plans adequately address road access. On and Off Road Vehicle access will be governed by the Travel Management Rule and EIS.

Several sporting and social events authorized by special use permits have occurred in the corridor, partly on non-system user created trails, and brought hundreds of people at a time through the area. Events can affect the desired character of the corridor.

A sustainable thoughtfully located river trail could protect river values, avoid wildlife refuges, and provide community connections. It can be designed with logical links to other existing trails and make it easier for people to enter or pass through the corridor from town by foot, bicycle, horse, as well as by car on existing roads.

### **Other Applicable Direction:**

Deschutes National Forest Land and Resource Management (1990)- including Wild and Scenic Rivers (MA-17) and Wilderness (MA-6) and Forest wide standards for Recreation, Transportation System, Special Uses, Riparian Areas, Law Enforcement, and Northwest Forest Plan, Eastside Screens, and INFISH.

### **Standards and Guidelines**

#### **Recreation Opportunity Spectrum (ROS)**

**WWSR-R-1** The following Recreation Opportunity Spectrum(ROS) classification will guide the characterization of the desired visitor experience as follows:

Scenic River- Semi-Primitive Motorized  
Wild River – Primitive

#### **Roads, Trails and Dispersed Camping in Riparian Areas and Associated Uplands**

See Related Standards and Guidelines under Hydrology for:

**Roads in Riparian Areas and Associated Uplands WWSR- H-2:**

**Trails in Riparian Areas and Associated Uplands WWSR- H-3:**

**Dispersed Camping in Riparian Areas and Associated Uplands WWSR- H-4**

## **Mountain Bike and Equestrian Trails**

**WWSR- R-2** New opportunities for mountain bike or equestrian uses to pass through the corridor are provided on closed roads or off -river trails as appropriate.

## **Rock Climbing**

See Standards and Guidelines for **rock climbing under Geology: WWSR- G-1.**

See Standards and Guidelines **which close Whychus House Cave to rock climbing in Cultural Prehistory and Traditional Use: WWSR- C-3.**

## **Boating:**

See Related Standards and Guidelines under Hydrology for: **Instream Wood Manipulation WWSR- H-1**

## **Bridges**

**WWSR- R-3** Replacement of the Road 1514 bridge is allowed if needed.

**WWSR- R-4** Adding new bridges is generally not consistent with the desired primitive or semi-primitive setting and theme of self discovery. Any new bridge construction must meet the criteria that is needed to protect the Outstandingly Remarkable Values.

## **Special Uses including Events:**

**WWSR-R- 5** Protection of the rivers primitive or semi-primitive character, Outstandingly Remarkable Values, and the availability of recreation space for the general public are a primary consideration in managing special uses.

**WWSR-R- 6** Uses that would establish an expectation for dependency on using the corridor on a regular basis (annual) are avoided.

**WWSR-R-7** The distinction between commercial and non-commercial is made based on whether a fee is charged, regardless of intent to make a profit. Donations or pooling money to cover the direct costs of the use are not considered a fee.

Commercial special uses, and special uses which involve development (placement of fixed improvements) may be permitted if they respond to both of the following criteria.

*Demonstrated Need:* 1) The use is necessary for the health and safety of public, or 2) protects or enhances river values, or 3) fulfills an agency management and administrative role, or 4) involves the study or research of values unique to Whychus Creek.

*Negligible Impact:* 1) The use can be contained within existing facilities, and 2) is not of such size or duration that would displace a majority of public users, and 3) does not advertise or promote in a manner that is likely to draw visitors to Whychus Creek who

are not managed under the special use permit, and 4) does not recur on a regular basis (annual).

**WWSR-R-8** Educational classes that have a *Negligible Impact* and a long term benefit in creating understanding and stewardship of Whychus Creek may occur under appropriate permits and advertising the class in a class schedule is permitted.

**WWSR-R-9** Non-commercial special uses that don't involve development may be permitted if they have a *Negligible Impact*, as defined by the following criteria: 1) The use can be contained within existing facilities, and 2) is not of such size or duration that would displace a majority of public users, and 3) does not advertise or promote in a manner that is likely to draw visitors to Whychus Creek who are not managed under the special use permit, and 4) does not recur on a regular basis (annual).

**WWSR-R-10** Events, including the type not generally allowed in the corridor, are allowed to pass through the corridor at 2 locations 1) the Rd 1514 bridge and 2) on the Three Creeks Metolius/Windigo connector (Sisters Community Trails system).

### **Interpretation and Education**

**WWSR-R-11** Interpretation and education are integral in the resource management and community stewardship of the corridor. Interpretive themes stress resource protection, stewardship, low impact recreational practices, and visitor responsibility.

**WWSR-R-12** Interpretive mediums which are off site or do not require permanent facilities are emphasized.

**WWSR-R-13** Signs and permanent structures are used primarily in developed sites or where continuous information is important for visitor safety or resource protection.



# Implementation and Monitoring



# Implementation Priorities

The rate of implementation of this plan will be determined by the amount of funding available and the capacity of our organization, our volunteers, and our partners. The following guidelines should be used to help set priorities for allocation of funding and staff time:

**1) Public safety**

**2) Protection of the Outstandingly Remarkable Values to maintain conditions consistent with those at the time of designation. Ranked in order of emphasis based on potential risk to the resource, these include: water quality, cultural resources, fisheries, scenery, and geology.**

**3) Enhancement of the Outstandingly Remarkable Values to exceed conditions at the time of designation.**

**4) Activities that implement the decisions of this plan which receive outside or cooperative funding, have partners, or advance public stewardship would likely be given a higher priority.**

*The following section displays a priority schedule for management actions.*

## IMMEDIATE ACTIONS

Close user trails and user roads and control use in the lower Scenic river terminus (near the Gauging Station and Peterson Ridge). Create a well designed and maintained system trail in the area, define parking.

Implement a closure order for Whychus House Cave to prohibit rock climbing, campfires, and camping (No additional NEPA required).

Identify unneeded roads and decommission or close.

Conduct Limits of Acceptable Change Survey to establish key indicators.

Collect baseline data on water quality, riparian roads and trails, riparian wetland inventory, invasive plants, and cultural resource sites.

## HIGH PRIORITY ACTIONS

Develop a volunteer river stewards program to assist with monitoring and restoration.

Work with law enforcement to identify priority patrol areas where resource damage is occurring from off road vehicles, residents, or vandalism.

Engage youth in restoration activities and teach low impact recreation techniques.

Begin education on low impact recreation technique with general public.

Consider management options to reduce user created impacts to Chush Falls.

Evaluate next steps for management off the Snow Creek Ditch.

## MODERATE PRIORITY ACTIONS

Begin collaboration with rock climbing community to implement “Leave No trace “ rock climbing standards.

Begin collaboration with kayaking/creek boating community on low impact boating including prohibition on instream wood manipulation.

## ONGOING ACTIONS

Invasive plant control, inventory, and prevention

Stream surveys

Road maintenance

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# Appendix 1- Whychus Creek Wild and Scenic River

## MONITORING PLAN

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This section identifies activities that will be conducted to assess the progress and results of implementing the Whychus Wild and Scenic River Plan. This monitoring program ensures that effects of projects and activities on river values remain within acceptable levels. This monitoring plan will be a part of the Comprehensive River Management Plan that will be developed after public review and the final decision.

The monitoring and evaluation in this plan are based upon the Limits of Acceptable Change concept (LAC) whenever possible. LAC is based on the premise that change to the ecological and social conditions of an area will occur as a result of natural and human factors. The goal of management is to keep the character and rate of change due to human factors within acceptable levels that are consistent with plan objectives. These limits tie closely with protection and enhancement of the each river's outstandingly remarkable values.

The LAC system places its primary emphasis on the desired resource condition, rather than on how much use an area can tolerate (i.e., carrying capacity). The management challenge with this approach is one of deciding what changes should occur, how much change will be allowed, what management actions are needed to guide and control it, and how managers will know when the established limits are being reached. Therefore this emphasis does not aim to prevent all human-caused change in the corridors, but rather it focuses concern on specific indicators that reflect the carrying capacity in more practical terms.

For each river value to be monitored, one or more key indicators are selected that will allow managers to keep attuned to changes in the ecosystem or social setting. For each key indicator, a threshold is set. This is the value that determines the amount of change that is either desired or that will be accepted before river management objectives are no longer being met. In this manner, indicators and thresholds provide managers with information to determine if the resource values and opportunities they are managing are actually being provided. The standards serve as 'triggers' that cause management actions to be implemented when the limit is being approached.

For each indicator and standard, a "Actions if Not Met" column lists the likely action that would be triggered if a particular threshold is reached. Other options for action may be considered as well. Sampling methods provide an example of how the indicator might be measured, but these sample methods can and should be changed as better means become available.

Additional monitoring is identified in this section that provides resource inventories or baseline data that is necessary to establish thresholds. River Plan implementation must include the final development of these thresholds where none exist yet.

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Water Quality</b>	Temperature	Temperature levels meet or exceed state water quality standards.	Correct management practices that may be contributing to increase in water temperature.	Continue monitoring stream temperature with continuous recording device at multiple locations in Whychus Creek.
	Sediment Delivery	No net increase in number of instream crossings.  No increase in riparian area road densities.  No sediment contribution from trails, roads, or campsites.	Identify source of sediment delivery and repair drainage or change the alignment if physically and economically feasible. Otherwise, close and restore the road, trail, or campsite to eliminate the sediment source.	Annual surveys of riparian trails and roads in the Whychus Wild and Scenic River corridor.



VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Scenic Resources</b>	Projects, activities or modifications which alter landform, vegetation, water, or character within the viewshed as seen from the river and high use areas.	Activities within river corridor and viewshed would be evaluated on how well they meet visual quality standards for river corridor and viewshed. Short-term impacts such as those created by trail building or prescribed fire would be allowed.  Outstandingly Remarkable Scenic Values are protected or enhanced.	Management actions or developments (or proposed developments) not consistent with Wild and Scenic River classifications or scenic resource management objectives will be modified (i.e. screened) or proposals rejected.	Individual projects will be analyzed on a case by case basis to ensure protection of Outstandingly Remarkable Values.

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Vegetation/Ecology</b>	<p>Amount of riparian habitat and wetlands.</p> <p>Proper functioning ecological condition as indicated by vegetative cover and streambank condition.</p> <p>Conifer encroachment.</p> <p>Species diversity.</p>	<p>Riparian vegetation would be managed to maintain or enhance vegetative diversity, biomass, and percent cover at desired level. Specific thresholds will be determined during baseline monitoring to comply with Forest Plan direction.</p>	<p>Remove or eliminate source of impacts (i.e. close campsites, roads, trails, etc.) if inventory assesses extent of impact is unacceptable.</p>	<p>Conduct baseline riparian/wetland resource inventory and photo inventory, starting in 2010. Continue to reassess at 5-year intervals. If funding is limited, at a minimum identify areas of resource damage. Visually monitor recreation and other sites annually for resource damage. If funding allows, establish formal monitoring plots in high use areas.</p>
	<p>Upland Vegetation: Progression towards desired conditions.</p>	<p>Within Whychus LSR, follow criteria for developing appropriate treatments as described in Whychus Late Successional Reserve Assessment.</p> <p>See Whychus Watershed Analysis for vegetation objectives.</p>	<p>Implement activities to restore natural condition or biodiversity.</p>	<p>During project planning, survey vegetation noting species present and condition and soil conditions at project locations. Stand density, snag counts, size and decay classes will be recorded.</p>

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
	Populations of noxious weeds and undesirable species.	Prevention, reduction, and eradication of noxious weeds.	Control, restrict, or mitigate human caused activities as necessary.	Survey high risk areas on a annual basis to determine presence of unwanted vegetation. Heavily used recreation sites should be surveyed yearly. Where possible, enlist private landowners to survey their property for these conditions.

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Fish Habitat</b>	Large wood frequency	Large wood pieces per mile meet or exceed INFISH or watershed analysis standards.	Correct management practices that may be limiting recruitment of large wood.	Continue monitoring large wood frequency in Whychus Creek though periodic surveys.
	Sediment Delivery (Same monitoring standard as in Hydrology section)	No net increase in number of instream crossings.  No increase in riparian area road densities.  No sediment contribution from trails, roads, or campsites.	Identify source of sediment delivery and add drainage or change the alignment if physically and economically feasible. Otherwise, close and restore the road, trail, or campsite to eliminate the sediment source.	Regular survey of riparian trails and roads in the Whychus Wild and Scenic River corridor.

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Wildlife</b>	<p>Populations of major species</p> <p>Amount and combination of habitat type</p> <p>Evidence of intrusions on key nest sites</p> <p>Evidence of loss of winter habitat security</p>	<p>Negative change in river corridor use by selected species (i.e. neotropical birds, big game, listed species)</p> <p>No substantial human-caused change in mix of habitat types within the corridor.</p> <p>No substantial evidence of human entry during seasons of concern.</p>	<p>Identify cause of change. If human-caused, correct practices or activities.</p> <p>Closure of area to eliminate the conflict.</p>	<p>Conduct wildlife surveys on five year basis to correspond with habitat surveys, starting in 2010. Count and record all nests, raptors, and waterfowl sightings on regularly scheduled surveys.</p> <p>GIS mapping of habitat type and extent using aerial photography interpretation. Establish baseline year and replicate survey every five years.</p> <p>Identify key areas of concern and then make at least annual walk through surveys of these areas to determine if encroachment occurred.</p> <p>Samples in winter use areas would be expected more often in order to determine any changes to habitat use by specific species, such as wolverine, American marten, etc.</p>

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Cultural Resources</b>	Cultural Resource Site Integrity	No significant cultural resource is being irreparably damaged by human use or eroded by natural forces to the point that it is in danger of being lost.	Conduct damage assessment and develop treatment or mitigation plan to eliminate sources of loss. Execute plans made.	Visit sensitive sites at least annually.
<b>Recreation Experience</b>	Key indicators and standards to be established with implementation of Limits of Acceptable Change (LAC) inventory, survey and analysis.	Established by Recreational Opportunity Spectrum (ROS) standards for desired experience.	A combination of indirect (information, education, signing, site design, etc.) and direct (enforcement patrols, site closures, seasonal restrictions, permits, etc.) management actions and controls would be utilized emphasizing in-direct methods first.	Conduct LAC survey and develop monitoring program, repeat every ten years. First survey should be in 2010/11.
	Quality of Experience Potential items most likely to be included are conditions of congestion, use levels, safety hazards, reported incidents of conflict such as site competition, vandalism, and trespass	Numbers of encounters with other recreationists (groups) per day. Numbers of reported conflicts, trespass/vandalism reports or safety incidents recorded annually. Recreation visitor counts, trail user counts, vehicle counts. Number of days, campsite and parking area capacity exceeded. No unacceptable resource damage.	If above methods are not effective, use may need to be limited through use of permits or other more direct methods of visitor control, especially within the wilderness.	

VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<b>Dispersed Recreation Sites</b>	Soil Stability Vegetative loss Tree damage Human waste Litter New sites Distance between sites Vandalism	<p>Impacts to dispersed use areas (camping, trailheads, etc.) will be based on subjective judgment regarding erosion, vegetative change, facility damage, and accumulation of litter as follows:</p> <p>Light: Previous ground vegetation intact allowing natural erosion to occur. Facility damage and litter is not evident. The site has experienced only minimal physical changes.</p> <p>Moderate: Vegetative growth is somewhat retarded allowing minor abnormal erosion to occur. Traces of litter can be found within and adjacent to the site. Minor vandalism, repairable by maintenance, is occurring on facilities such as tables. Physical changes to the site could include: minor tree limbing, movement of rocks and semi-stationary facilities.</p> <p>Heavy: Use area vegetation is gone but adjacent vegetation still intact. Abnormal erosion within the site is correctable through maintenance. Major littering is evident within and adjacent to the site and can be corrected through maintenance. Major vandalism, repairable by maintenance, is occurring on facilities and physical features such as tables, rocks, trees and other site protection facilities. Physical changes to the site could include: moderate tree limbing, beginning tree root exposure, trails radiate from site, human caused changes to the layout of the use area. All impacts to camp and dispersed use areas could be resolved through routine maintenance.</p>	<p>Use basic site protection measures, harden sites to maintain important sites if necessary between moderate and heavy standards. Campsites or day use areas which have received extreme impacts will be rehabilitated and closed until levels of impacts have been mitigated to at least moderate levels. Other actions could include: increased user education efforts, seasonal closures, site or access restrictions, etc.</p> <p>Management actions and controls would be utilized emphasizing both indirect and direct methods, as appropriate. For example:</p> <ol style="list-style-type: none"> <li>1. Increased user education in “minimum impact” camping techniques (signs, brochures, increased management patrol presence, etc.).</li> <li>2. Campsite rehabilitation.</li> <li>3. Use barriers to control traffic.</li> <li>3. Campfire ban.</li> <li>4. Designated campsites.</li> <li>5. Close areas to overnight camping.</li> </ol>	<p>Inventory and assess all existing and proposed sites within the river corridors upon approval of this plan.</p> <p>Remeasure and assess all sites once every three years, or when conditions indicate need.</p> <p>Utilize feedback from routine patrols and biological/wildlife monitoring programs.</p>



VALUE	KEY INDICATOR	STANDARD TO MEET	LIKELY ACTION IF NOT MET	SAMPLE METHODS
<p><b>Roads and Trails</b></p>	<p>Road erosion and damage related to roadside vegetation and facilities.</p> <p>Occurrence of accidents on roads to indicate safety problems.</p> <p>Trail erosion and damage related to trailside vegetation and bare ground.</p> <p>Conflicts between trail users (i.e. hikers, horses, bikes).</p> <p>Creation of user created routes.</p>	<p>Confine motorized use to designated roads. Maintain roads to established federal or Forest standards.</p> <p>Maintain trails to Forest standards.</p> <p>Prevent multiple trail or trail networking using direct and indirect methods. Trail use and design will be in keeping with Recreation Opportunity Spectrum (ROS) experience level and visual management standards.</p> <p>Evaluate user made trails for damage to resources, especially for trails potentially being used by ORVs.</p>	<p>Increase road maintenance frequency. Reconstruct/relocate roads, improve bridges, parking areas, trails, and related facilities to resolve unlawful access, resource damage, and road safety problems. Closure of unauthorized roads and trails where resource damage is taking place.</p> <p>Develop, maintain, and replace signing as needed.</p> <p>Increase trail maintenance frequency. Reconstruct/relocate/or close trails to reduce trail networking and encourage appropriate use. Keep trail maps and information current.</p> <p>Actively close trails where unauthorized OHV use is taking place.</p>	<p>Monitor routine road maintenance needs annually. Utilize feedback from visitor contact. Monitor any accident reports on forest roads to identify safety problems.</p> <p>Monitor routine trail maintenance needs annually. Establish monitoring points along high use trails to measure trail depth, width, and drainage. Remeasure points and map inventory trails every five years.</p>