

Upper South Fork Salmon River Resource Management Project Proposed Action

February 9, 2011

Project Area Description

The Upper South Fork Salmon River (SFSR) Resource Management Project is located in the South Fork Salmon River Subbasin, approximately 30 miles northeast of Cascade, Idaho (Figure 1). The legal locations for proposed activities are Township 19N, Range 8E; Township 18N, Range 8E; Township 17N, Range 7/8/9E; Township 16N, Range 7/8/9E; Township 15N, Range 7/8/9E; Township 14N, Range 7/8/9E; Boise Meridian. It is composed of the upper SFSR drainage from Goat Creek (Boise and Payette National Forest boundaries) south to the headwaters. The project area is composed of 103,804 acres, includes in entirety seven subwatersheds (Table 1). Access to the project area from Cascade, Idaho, is by Forest Highway 22.

Figure 1. Project Vicinity

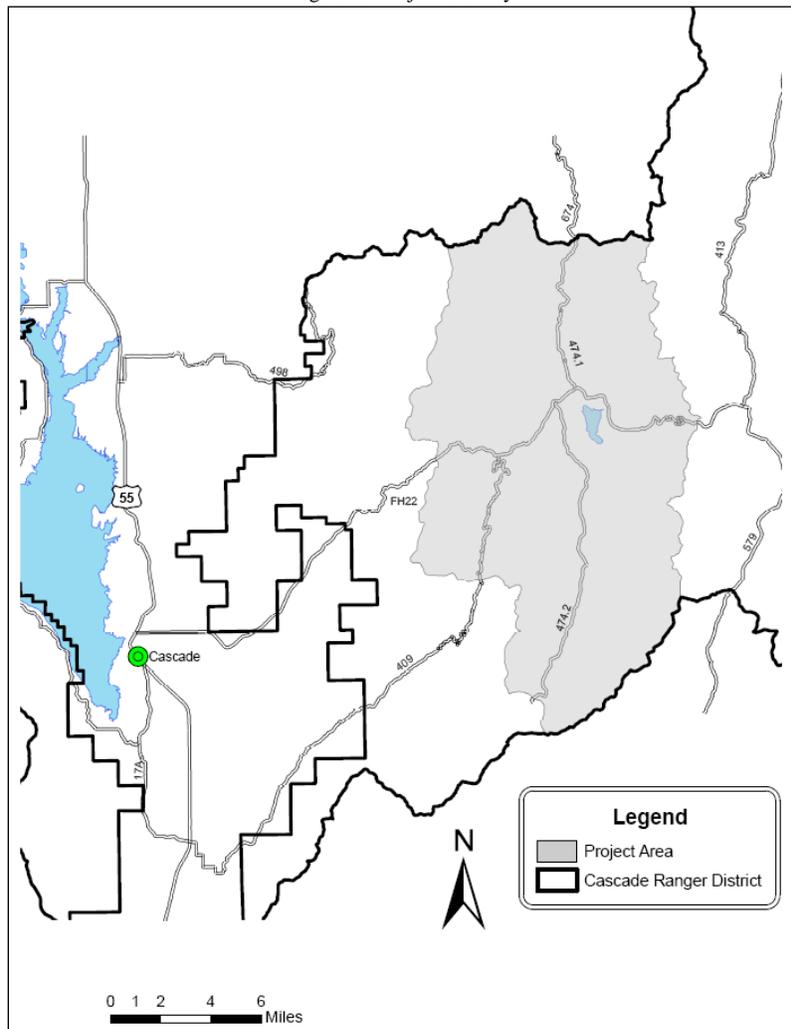


Table 1. Project Area Subwatersheds

Subwatershed Name	Subwatershed Number
Two-Bit Roaring	170602080601
Dollar Creek	170602081004
Six-Bit Creek	170602081003
Curtis Creek	170602081103
Warm Lake Creek	170602081002
Tyndall-Stolle	170602081101
Upper SF Salmon River	170602081102

Background

The Upper South Fork Salmon River is water quality impaired and is occupied critical habitat for threatened bull trout, threatened Chinook salmon, and threatened steelhead trout. There are 79 miles of critical habitat for steelhead trout, 43 miles of high priority habitat for Chinook salmon (all streams within the watershed are designated critical habitat), and 110 miles of critical habitat for bull trout. Historically, the SFSR Subbasin produced upwards of 60% of the Chinook salmon and steelhead trout in the entire Snake River Basin. Chinook salmon and steelhead returns are currently 10% of historic numbers. Although numerous improvements have been made to enhance water quality and fish habitat conditions over the past ten years, aquatic habitat is functioning at risk due to limiting factors, primarily elevated fine sediment levels.

Historic land use activities consist of timber harvest, mining, grazing, and recreation while prior to 1831, the area was used by the Nez Perce and Shoshone Bannock tribes for hunting, gathering, fishing, and spiritual activities. In the 1960s concerns over sedimentation and fish habitat resulted in the Forest Service reducing land disturbing activities in the upper SFSR drainage. Although large scale ground disturbing activities are non-existent, the roads built during that time continue to be the dominant source of sediment in the subbasin (IDEQ 2002). In 1991 the Environmental Protection Agency approved a total maximum daily load (TMDL) with two surrogate targets, percent depth fines and cobble embeddedness.

In 2000, the Boise and Payette National Forests completed the South Fork Salmon River Subbasin Review. The purpose of the document was to identify key watershed issues, characterize the ecological and social conditions and trends, and to provide information to be used to prioritize future management opportunities and/or ecosystem analysis at the watershed level within the SFSR Subbasin. The analysis summarized that future efforts should improve water quality and limit erosion by reducing roads within Riparian Habitat Conservation Areas (now known as Riparian Conservation Areas), reducing road density, reducing the amount of 303(d) listed streams, and reducing Equivalent Clearcut Areas. Appendix B of the Subbasin Review is a list of opportunities developed to address issues, such as water quality. While many of those opportunities have been implemented, many of the activities identified in this Proposed Action reflect opportunities not previously implemented.

In 2002, the Idaho Department of Environmental Quality completed the South Fork Salmon River Subbasin Assessment. The assessment was to validate streams within the subbasin on the 1998 303(d) list. The data used for the analysis suggested that the watershed has attained the target and has an improving trend for cobble embeddedness, but has not attained the target for percent fines. At that time, all waterbodies (tributary streams to the South Fork Salmon River, Johnson Creek, and East Fork South Fork Salmon River) except the South Fork Salmon River were removed from the 303(d) list for sediment. However, due to remaining uncertainty, combined with highly valued threatened and endangered species, and beneficial uses, the 1991 TMDL would continue to be implemented. The Idaho Department of Environmental Quality completed a draft five year review of the South Fork Salmon River sediment TMDL in March, 2010. This document identifies improvements in substrate fines, but recommends continued implementation of the sediment TMDL (IDEQ 2010).

Additionally, the 2007 Cascade Complex Wildfire burned 73,126 acres (70%) of the analysis area (USDA FS 2007). Fire severities (low, moderate, or high), were used to describe fire effects on soil and vegetation, potential successional trajectories, and rates of ecosystem recovery. The general assumptions used for vegetation recovery based on fire severities are; low – within one year, moderate – one to five years, and high – five to 10 years (NRCS Wildfire Burn Severity Classification). These vegetation recovery timeframes relate respectively, risk of sediment delivery and erosion with no sediment delivery, some sediment delivery, and sediment delivery likely (NRCS Wildfire Burn Severity Classification). Within the project area, 18% burned with high severity, 30% burned with moderate severity, and 16% burned with low severity wildfire from the 2007 Cascade Complex Wildfire (USDA FS 2007 unpublished data). Due to the natural erosive nature of the Idaho Batholith and the effects from the 2007 Cascade Complex Wildfire, the risk of erosion and sediment delivery have been greatly increased for the next 10 to 30 years.

The project area is a very popular developed and dispersed recreation destination with two commercial lodges, two organized youth camps, one outfitter and guide, 62 recreation residences, two developed campgrounds and day use areas, and multiple undeveloped areas. Several recreation events occur in the area with additional events expected in the future. A salmon fishery has been held in the South Fork Salmon River since 1999 with 10,000-15,000 visitors in a three week period, a motorcycle rally occurs at Warm Lake, and a road bike race occurs along the Warm

Lake Highway. In addition to the developed recreation opportunities and unique events to the area, the upper SFSR is a popular summer destination with visitor numbers peaking during hunting seasons. The high demand for the area places heavy use to the infrastructure that can cause unintended impacts to the environment.

Purpose and Need

The purpose of this project is to reduce road and trail related impacts to water quality and fisheries resources while retaining a safe and efficient transportation system to meet current and future management, public access, and recreational needs.

In relation to the Boise National Forest Land and Resource Management Plan (Forest Plan), the analysis area falls entirely within Management Area 19 – Warm Lake. The primary management prescription categories (MPCs) in the analysis area are Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources (MPC 3.2), and Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources (MPC 3.1). Table 2 identifies all MPCs in the analysis area.

Table 2. Management Prescription Categories within the Analysis Area

Management Prescription Category (MPC)	Percent of Project Area
1.2 – Recommended Wilderness	Trace
2.2 – Research Natural Areas	1
3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial, & Hydrologic Resources	16
3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial, & Hydrologic Resources	76
4.2 – Roaded Recreation Emphasis	7

The objectives for the three MPCs with proposed activities within the project area in simplest terms are as follows:

MPC 3.1 – This prescription is designed to minimize temporary-term risks and avoid short- and long-term risks from management actions to soil/hydrologic conditions and aquatic and terrestrial habitats. The objective is to keep management-related impacts from degrading existing conditions for TEPCS fish, wildlife, and botanical species, or 303(d) impaired water bodies. Low levels of management activities occur, and these activities are expected to have minimal and temporary degrading effects to soils, water quality, riparian areas, and aquatic and terrestrial habitats. Other uses and activities, such as salvage harvest or Wildland Fire Use, may occur and may have some temporary effects, provided they do not retard attainment of short- and long-term objectives for aquatic and terrestrial habitat, or soil/hydrologic resources. Tools associated with this prescription—such as special order restrictions, operating plan adjustments, and prescribed fire—are typically of low intensity and designed to maintain existing conditions, primarily through ecological processes.

MPC 3.2 – This prescription is designed to minimize temporary and short-term risks and avoid long-term risks from management actions to soil/hydrologic conditions and aquatic and terrestrial habitats. The objective of this prescription is to actively restore or maintain conditions for TEPCS fish, wildlife, and botanical species, or 303(d) impaired water bodies through a combination of management activities and natural processes. Management activities used to achieve this objective include watershed restoration, noxious weed treatments, and vegetative treatments that include prescribed fire, wildland fire use, and mechanical. Restoration is focused on those components of the ecosystem that are not functioning properly, or are outside the range of desired conditions, while maintenance helps to preserve those components that are functioning properly.

MPC 4.2 – This prescription applies to lands where dispersed and developed recreation uses are the primary emphasis. A wide range of recreational activities and developments occurs. Facilities are maintained, and both motorized and non-motorized recreation opportunities may be provided. Multiple uses such as timber harvest and grazing are allowed to the extent that they do not compromise recreation resource objectives. Human use and presence are generally obvious. The area has a predominantly natural-appearing environment, with moderate evidence of the sights and sounds of people. Generally, a mix of mechanical and fire activities are used to treat vegetation to achieve desired conditions for recreation settings and developments, and to reduce the risk of uncharacteristic vegetative damage or loss from insects, diseases, and fire.

Activities associated with the Proposed Action would further the achievement of the following general Forest Plan goals and objectives:

Objective TEOB03 – Identify and reduce road-related effects on TEPC species and their habitats using the Watershed and Aquatic Recovery Strategy and other appropriate methodologies (Forest Plan, p. III-8).

Objective REOB05 – Identify and develop motorized use opportunities in locations appropriate for motorized uses through road to trail conversion, development of new trails, and other methods (Forest Plan, p. III-62).

Objective FROB06 – Identify roads and facilities that are not needed for land and resource management, and evaluate for disposal or decommissioning (Forest Plan, p. III-59).

Goal REGO03 – Address current and emerging recreation conflicts, while maintaining recreation opportunities when possible (Forest Plan, p. III-62).

Goal REGO04 – Manage recreation uses and facilities to mitigate degrading effects from recreation to other resources (Forest Plan, p. III-62).

Goal REGO05 – Manage motorized and non-motorized travel and travel-related facilities to:

- a) Provide for public safety,
- b) Meet resource objectives and access needs,
- c) Mitigate road and trail damage, and
- d) Minimize maintenance costs and user conflicts (Forest Plan, p. III-62).

Goal SWGO11 – Manage human-caused disturbances to avoid or reduce degrading effects to aquatic populations, particularly during critical life stages (Forest Plan, p. III-19).

In addition to the general goals and objectives, the Warm Lake Management Area has specific direction on activities that would improve the watershed functions and processes in the South Fork Salmon River.

Objective 1929 – Improve water quality by reducing road- and trail-related accelerated sediment delivery to the South Fork Salmon River and its tributaries. (Forest Plan, p. III-326).

Objective 1930 – Assist in de-listing the South Fork of Salmon River drainage from the State of Idaho's impaired water-bodies list by applying appropriate and active watershed restoration to reduce sediment, the identified pollutant source. (Forest Plan, p. III-326).

Objective 1932 – Restore aquatic and riparian habitats in the South Fork Salmon River and its tributaries by reducing streambank instability or accelerated sediment resulting from existing roads and other disturbances. (Forest Plan, p. III-326).

Objective 1933 – Restore habitat for salmon, steelhead, bull trout, and native salmonids in Sixbit and Curtis Creek subwatersheds by reducing the road-related sediment delivery to streams and potential fish migration barriers. (Forest Plan, p. III-326).

Objective 1979 – Evaluate passenger vehicle access needs to consider converting roads no longer needed for passenger vehicles to ORV trails. (Forest Plan, p. III-330).

The entire project area is identified with a high restoration priority from the Forest Plan Aquatic Conservation Strategy (ACS) with the Six-Bit Creek and Curtis Creek Subwatersheds as overall ACS priorities. The strategy of the ACS is to provide direction to maintain and restore characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats.

Three specific objectives identified for this project are:

- 1) Reduce road-related impacts to water quality and fisheries resources while retaining a safe and efficient transportation system to meet current and future management, public access, and recreational needs.
- 2) Reduce recreation impacts by improving the trail system to provide public access and recreation opportunities in the future while reducing unintended impacts to the environment.
- 3) Enhance recreational experience by providing educational and interpretive exhibits describing unique natural features in the upper South Fork Salmon River.

To identify opportunities for this project, several inventories were completed that identified where and what could be included. A travel analysis as directed in Forest Service Handbook was completed identifying what existing National Forest System Roads (NFSRs) not needed for public access, recreation access, or future land management activities. Road WEPP data was collected on all maintenance level (ML) one roads and Geomorphic Roads Analysis Inventory Process (GRAIP) data on all ML two through five roads to determine erosion and sediment delivery from roads in the analysis area. Additionally a fish passage inventory was previously completed identifying human-caused fish barriers. Through these analyses opportunities were identified to reduce human induced impacts to the watershed. Additionally user-created routes were inventoried that are currently being used but are not part of the NFS road or trail system.

The need for this project is to reduce impacts, sediment specifically, from the NFS infrastructure by; 1) modifying the NFSR system to reflect a road system needed for current and future land management, public access, and recreational needs; 2) modifying the NFST system to improve or provide new recreation opportunities to reduce user-created routes. The emphasis is to provide an infrastructure to support current and future use, address roads not required for future land management, provide motorized and non-motorized trail opportunities, and to identify an infrastructure compatible with meeting or moving toward riparian and aquatic desired conditions in the watershed.

The travel analysis completed for the project area included all NFSRs, National Forest System Trails (NFSTs), established but unauthorized routes, and several new opportunities that currently do not exist. The analysis recommended the minimum road system (MRS) for the project area, identified road and trail infrastructure changes, and a variety of miscellaneous recommendations. From that analysis, the recommendations that reduce the risk of negative impacts to the watershed resources and fisheries are included in the proposed action.

Roads – The travel analysis identified roads needed (recommended designation), not needed (recommended decommission), and recommendations to those recommended for the MRS to minimize sediment risks. This identified opportunities where actions could be taken to reduce resource impacts to watershed conditions and fish habitat while providing for access. Those actions are described in the Proposed Action section activity #1, #2, and #3. Those activities would allow specific user-created routes to be designated and maintained as part of the NFSR system (reducing erosion/sediment delivery), decommission roads not needed (reducing erosion/sedimentation), and replacing identified fish passage barriers at road/stream crossings (re-connecting quality fish habitat).

Trails – The travel analysis recommended several existing user-created trails, road to trail conversion, and new construction trails to provide needed trail opportunities within the project area. These routes would provide additional motorized and non-motorized opportunities reducing the unauthorized use in the project area. Providing adequate trail opportunities would benefit the watershed by allowing maintenance to occur on specific unauthorized routes (reducing erosion/sediment delivery) and establishing a trail network which would reduce user-created route development (reducing erosion/sediment delivery). Those actions are described in the Proposed Action section activity #4.

Educational Structures and Interpretive Exhibits – Several opportunities exist to develop and expand existing exhibits to enhance the recreational experience to the watershed and fisheries resources in the project area. Although these would not provide immediate improvements to watershed conditions they

would communicate the importance of watershed and fish habitat health. Those actions are described in the Proposed Action section activity #5.

Proposed Action

See Proposed Action Map, for activities locations.

1. Road Designation and Improvements

This activity includes designating six established but not currently designated routes as NFSRs. These roads would be incorporated into the NFSR system and were identified through the travel analysis. Inclusion into the NFSR system would allow for annual maintenance and improvements such as adding road surface drainage and surfacing.

Table 1. Road Designation

Map Label	Miles	Proposal	Description
1.a.	0.2	Maintenance Level 2, Spur off NFSR 474	Route exists and is used for dispersed recreation and access to a rock source. Typically has 10 plus camps during salmon fishing season. Is also used as a material storage and source for projects.
1.b.	0.5	Maintenance Level 2, Spur off FH22	Route exists and is used for dispersed recreation in the Warm Lake area.
1.c.	0.2	Maintenance Level 2, Spur off NFSR 427	Route exists and is used for dispersed recreation in the Warm Lake area.
1.d.	0.1	Maintenance Level 2, Spur off NFSR 427	Route exists, access to Tule Lake, and is used for dispersed recreation in the Warm Lake area.
1.e.	0.2	Maintenance Level 2 (Single Use). Spur off NFSR 474	Route access Juniper Mountain Outfitters base camp. Road would be open to JMO and clients.
1.f.	0.1	Maintenance Level 1, Spur off NFSR 472	Access material source pit.

2. Road Decommissioning Activities

The roads proposed for decommissioning are not needed for public access, recreation, or future land management needs therefore are not recommended as part of the MRS for the project are. **All roads have been and are currently closed to motorized access except for 0.2 miles of NFSR 471A (open to high clearance vehicles).** Sections of NFSR 471A, 471A2, and 401 would be converted into a motorized trail open to motor vehicles less than 50 inches in width (see Activity #4). Decommissioning activities could include ripping, re-vegetating, restoring stream crossings, and contouring to reshape the existing prism to pre-road conditions to the extent possible. See Table 2 for the roads proposed for decommissioning.

Table 2. Road Decommissioning

Road # Map Label	Maintenance Level	Length (mi)	Comment	Road # Map Label	Maintenance Level	Length (mi)	Comment
401	ML-1	1.7	See 4.a.	474I2	ML-1	0.5	
401A	ML-1	0.7		474J	ML-1	0.4	
401A1	ML-1	1.5		478A	ML-1	2.5	
401L	ML-1	0.3		479	ML-1	1.2	
409H	ML-1	0.4		479A	ML-1	0.8	
409J	ML-1	1.0		483B	ML-1	1.6	
420	ML-1	0.9		483B1	ML-1	0.5	
471A	ML-2	0.2	See 4.b.	483B2	ML-1	0.2	
471A	ML-1	2.2		483C	ML-1	2.2	
471A1	ML-1	0.2		483D	ML-1	2.3	
471A2	ML-1	1.4	See 4.b.	483E	ML-1	1.5	
471B	ML-1	2.9		483Y	ML-1	0.2	
471B1	ML-1	0.1		493A2	ML-1	0.9	
471B2	ML-1	0.2		493B	ML-1	0.9	
471B3	ML-1	0.2		493C	ML-1	1.1	
471B4	ML-1	0.1		483C1	ML-1	0.5	
471C	ML-1	1.9		493D	ML-1	1.0	
473A	ML-1	2.7		493H	ML-1	0.4	
473A1	ML-1	1.3		493K	ML-1	0.6	
473A2	ML-1	1.1		493M	ML-1	0.5	

473B	ML-1	3.1		493N	ML-1	0.2	
473C	ML-1	1.7		494	ML-1	3.0	
474H	ML-1	1.5		494F	ML-1	0.4	
474I	ML-1	2.0			Total	52.7	

3. Road Stream Crossing Improvements (Fish Passage Restoration)

Five stream crossings have been inventoried and modeled using the Region 1 and Region 4 guidance for Aquatic Species Passage Design, and was designed using Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings and have been modeled as barriers to upstream migrating fish or are causing elevated sediment delivery to streams. In the upper SFSR these five crossings are the last remaining inventoried human-caused barriers.

- a. Six-Bit Creek/NFSR 493 stream crossing. This stream crossing blocks five miles of high quality bull trout spawning/rearing habitat. The new structure would be a minimum 30 feet-wide natural substrate bottom structure (multi-plate arch or bridge). Map Label 3.a.
- b. Rice Creek unnamed tributary/NFSR 478 stream crossing. This stream crossing blocks one mile of high quality bull trout and steelhead trout spawning/rearing habitat. The new structure would be a minimum six feet-wide natural substrate bottom structure (multi-plate arch or bridge). Map Label 3.b.
- c. Rice Creek/NFSR 478 stream crossing #1. This stream crossing blocks two miles of high quality bull trout and steelhead trout spawning/rearing habitat. The new structure would be a minimum 14 feet-wide natural substrate bottom structure (multi-plate arch or bridge). Map Label 3.c.
- d. Rice Creek/NFSR 478 stream crossing #2. This stream crossing blocks one mile of high quality bull trout and steelhead trout spawning/rearing habitat. The new structure would be a minimum 12 feet-wide natural substrate bottom structure (multi-plate arch or bridge). Map Label 3.d.
- e. Cabin Creek/NFSR 488 stream crossing. This stream crossing is a natural substrate ford and delivers sediment to Cabin Creek which is occupied by bull trout, Chinook salmon, and steelhead trout. The new structure would be a minimum 34 feet-wide natural substrate bottom structure (multi-plate arch or bridge). Map Label 3.e.

4. Motorized and Non-Motorized Trail Designations or Improvements

During the Travel Analysis Process several opportunities were identified that would designate popular non-system routes, improve existing trails, or provide new trail opportunities.

- a. Designate a 3.6 mile trail open to motor vehicles less than 50 inches in width between NFSR 401 (Penny Spring Campground) and NFSR 474E (Goat Creek area). This trail would utilize 1.9 miles legacy road (route not currently a NFSR) and convert 1.7 miles of NFSR 401 (road currently closed to motor vehicles). This new trail would include one improved stream crossing, either a hardened ford or trail bridge. Map Label 4.a.
- b. Designate a 1.5 mile trail open to motor vehicles less than 50 inches in width between NFSR 470 and NFSR 471. This trail would convert ¼ mile NFS trail 252 (currently non-motorized), convert one mile of NFSR 471A2 (currently closed to motor vehicles), and convert ¼ mile NFSR 471A (currently open to full size vehicles). This new motorized trail would provide the opportunity for ATVs and motorcycles to travel from NFSR 470, up the eastside of Stolle Meadows, to NFSR 478, to Telephone Ridge Trail (NFS trail 112), back to NFSR 474/478 intersection with minimal travel on roads open to full size vehicles. Map Label 4.b.
- c. Designate a 4.5 mile trail open to non-motorized vehicles. This trail would utilize the old South Fork Road (re-routed and decommissioned) and was included in the South Fork Road Paving Project in the 1990s. The north end of the trail would intersect NFSR 474 (South Fork Road) near Nickel Creek and the south end of the trail would intersect NFSR 474 near Knox Ranch. This trail currently exists except for a quarter mile that would be new construction from the old South Fork Road to NFSR 474

near Knox Ranch. This route is popular during salmon fishing season, but is not a designated trail. Map Label 4.c.

- d. Designate a 0.3 mile trail open to non-motorized vehicles that would connect a designated salmon fishing parking area and the new trail identified in activity 4.c above. This trail currently exists and is popular during salmon fishing season, but is not a designated trail. Map Label 4.d.
- e. Designate a 0.2 mile trail open to non-motorized vehicles that would connect NFSR 474M and the new trail identified in activity 4.c above. This trail currently exists and is popular during salmon fishing season, but is not a designated trail. Map Label 4.e.
- f. Designate a 4.0 mile trail open to non-motorized vehicles around and to the top of Kline Mountain (adjacent and west of Warm Lake). The trail would intersect NFS trail 251 between NFSR 427 and 474. The trail would utilize 3.0 miles of existing unauthorized routes and construct one mile of single track trail. This new trail would provide a new non-motorized trail opportunity that could be accessed from the Warm Lake area. Map Label 4.f.
- g. Improve the 0.3 mile non-motorized trail between Summit Lake Campground and Summit Lake, at the top of Warm Lake Summit, to allow for disabled person access to a high mountain lake. Improvements would include widening the trail and placing a hardened trail surface to meet American with Disabilities Act standards. This improvement would provide an opportunity of disabled persons that does not currently exist on the Cascade Ranger District or Warm Lake area. Map Label 4.g.

5. Educational/Interpretive Structures and Signage

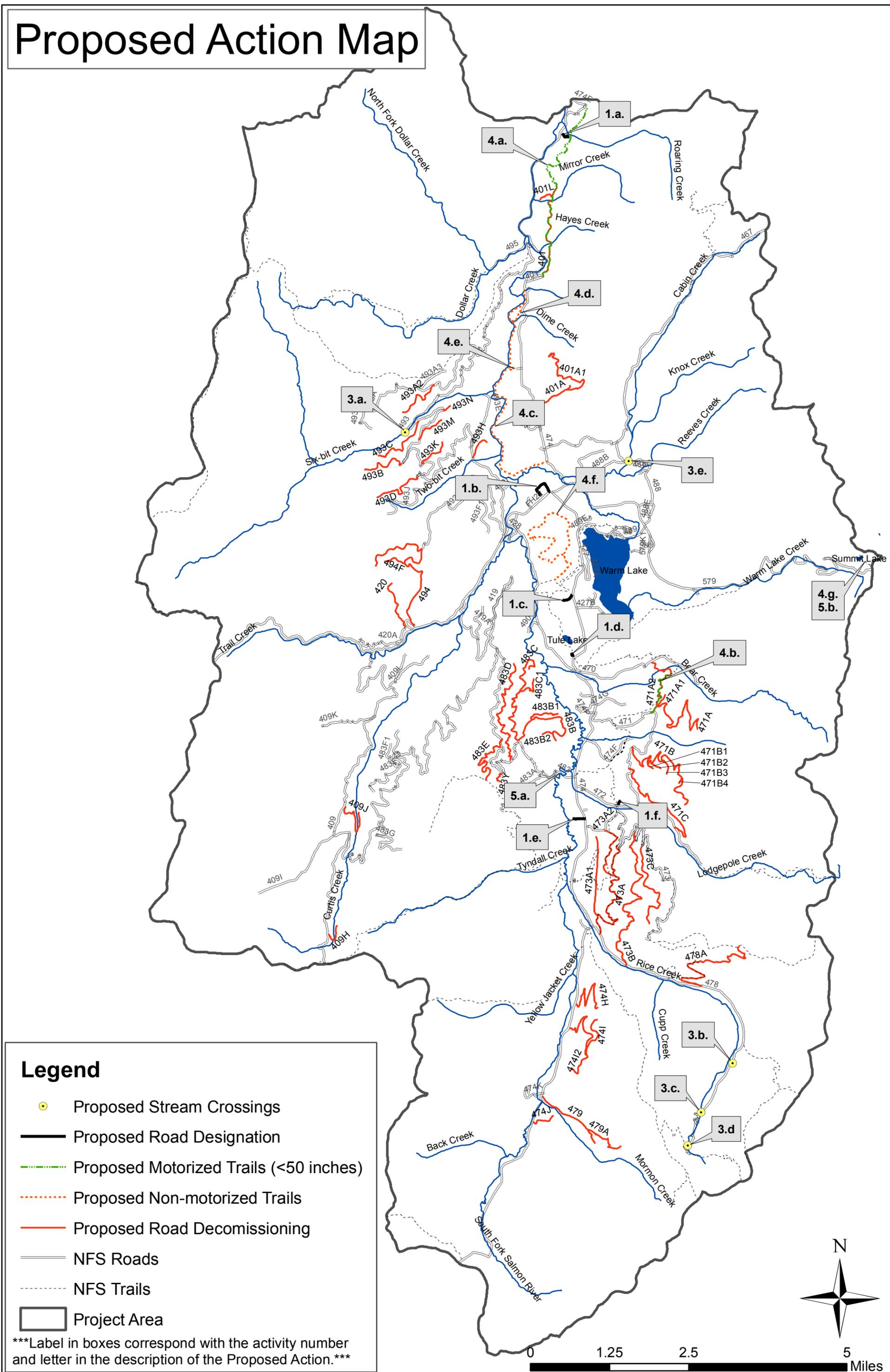
This activity includes adding interpretive signing or new structures in the Warm Lake area.

- a. Construct a 300-foot long boardwalk along the SFSR on the south side of NFSR 483 and the existing fish viewing site. The current site is extremely popular during salmon spawning and is located on only the south side of NFSR 483. As popularity of this location has grown streambank damage is occurring on the north side. This activity would construct an additional boardwalk to provide for current and expected future use. Interpretive signs would be included describing the Chinook salmon lifecycle and spawning activities. Material used would be durable to a harsh environment. Map Label 5.a.
- b. Construct a fishing platform at Summit Lake to provide for disabled person fishing access. The platform would allow easy access to the edge of Summit Lake and would include interpretive signs. Map Label 5.b.

6. Update the Motor Vehicle Use Map and other Recreation Based Maps

Implementation is expected to take three to seven years. Maps are updated as activities are implemented.

Proposed Action Map



Legend

- Proposed Stream Crossings
- Proposed Road Designation
- Proposed Motorized Trails (<50 inches)
- Proposed Non-motorized Trails
- Proposed Road Decommissioning
- NFS Roads
- NFS Trails
- Project Area

Label in boxes correspond with the activity number and letter in the description of the Proposed Action.

