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Wild and Scenic Rivers Resource Report

Westside Fire Recovery

Happy Camp/Oak Knoll and Salmon/Scott River Ranger Districts
Klamath National Forest
Siskiyou County, California

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Wild and Scenic Rivers Resource Report

A Wild and Scenic Rivers evaluation was conducted for three designated and three recommended rivers as part of the Westside Fire Recovery Project. The evaluation used Wild and Scenic Rivers Act (P.L. 90-542, as amended) protection requirements in conjunction with existing Forest Plan direction.

Project activities were evaluated using field review, GIS analysis, and professional judgment for their potential effects to: 1) free flowing conditions; 2) water quality; 3) identified outstandingly remarkable value(s); and 4) Visual Quality Objectives (VQOs).

Analysis determined that all action alternatives would protect these values and would be fully compliant with all Wild and Scenic Rivers Act protection requirements and Forest Plan Standards and Guidelines. Select information on resource effects for outstandingly remarkable values is reiterated in this report as taken from the Aquatic Resources, Hydrology, Wildlife, and Scenery reports. For complete details see those reports.

Methodology

Project activities were evaluated for all three project areas using field review, GIS analysis, and professional judgment for their potential effects to: 1) free flowing conditions; 2) water quality; 3) identified outstandingly remarkable value(s); and 4) Visual Quality Objectives. Select information on resource effects for water quality, fisheries, geology, wildlife, scenery, and vegetation is reiterated in this report as taken from the Aquatic Resources, Hydrology, Wildlife, and Scenery reports. For complete details see those reports.

Analysis Indicators

Analysis indicators are identified for each of the values listed below to be protected or maintained:

- 1. Free Flowing Conditions:** As applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.
Indicator: Potential resource effects were evaluated to determine if project activities would be located within the bed and banks of the river and create an obstruction or modification of the free-flowing river characteristics.
- 2. Water Quality:** Water quantity and quality must be sufficient to protect river values.
Indicators: Resource effects to beneficial uses, stream temperature and shading, and Cumulative Watershed Effects.
- 3. Outstandingly Remarkable Value(s):** Each river shall be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values.
Indicators:
Fisheries: sediment, stream temperatures, and large wood;
Vegetation: treatments in either old growth or Engleman Spruce stands;
Wildlife: Bald Eagle –level of disturbance to nest/roost sites and risk to future potential nest areas; Siskiyou Mountain Salamander – risk of disturbance;
Geology: presence of treatments on Malone landslide;
Water Quality: risk to sediment and temperature regime alteration.
- 4. Visual Quality Objectives (VQOs):**

Scenic Rivers - From the Forest Plan, Standard and Guideline # MA12-7: Design management activities to meet the Retention VQO within the Wild and Scenic Rivers Corridor. Meet the Partial Retention VQO in the foreground and the middleground beyond the Corridor.

Recreational Rivers - From the Forest Plan, Standard and Guideline # MA13-6: Design management activities to meet a Partial Retention VQO within the Wild and Scenic Rivers corridor, in the foreground beyond the Corridor and in the middleground beyond the corridor.

Indicators: Potential effects were evaluated to determine if project activities would meet either a Retention or Partial Retention VQO as seen from the river corridor.

Spatial and Temporal Context

The spatial analysis boundary for free flowing, water quality and outstandingly remarkable value is the river area or designated corridor. This corridor is approximately ¼ mile on each side of the river. For Retention and Partial Retention VQOs the analysis boundary is the river viewshed out to four miles. Temporal bounding is three years for short term effects, at which time projects are required to meet the assigned VQOs of Retention or Partial Retention. This timeframe is required by Forest Plan Standards and Guidelines. Long term effects would be ten years or longer.

Affected Environment

In 1968 the Wild and Scenic Rivers Act was established to protect American rivers, including free-flowing conditions, water quality and their many values “for the benefit and enjoyment of present and future generations”. As of 2012, 203 rivers encompassing 12,598 miles had been included in the National Wild and Scenic River (Wild and Scenic Rivers) System. Rivers or sections of rivers must be free-flowing and possess at least one “outstandingly remarkable” value, such as fish, wildlife, recreation, scenery, geology, history, cultural features, or other values including ecology. WSRs displaying varying degrees of existing human alteration are assigned corresponding classification levels of Recreational, Scenic or Wild. There are six designated or recommended WSRs in the three project areas which are potentially affected by the Westside Fire Recovery Project. These are identified and described below:

Designation

The Klamath, Scott, and North Fork Salmon Rivers, which were designated by the Secretary of Interior in 1981 for their outstandingly remarkable anadromous fisheries values, are components of the National Wild and Scenic River System.

Elk, Grider, and South Russian Creeks are recommended for inclusion in the National Wild and Scenic Rivers system in the 1995 Forest Plan. This preliminary administrative recommendation to the Secretary of Agriculture is retained until such time as Congress takes action. These recommended rivers are managed under the same guidance as designated rivers.

Outstandingly Remarkable Values (ORVs)

These may include: fish, wildlife, recreation, scenery, geology, history, cultural features, or other values including ecology. Values for potentially affected Wild and Scenic Rivers are listed in Table 1 below.

Classification

Wild and Scenic Rivers displaying varying degrees of existing human alteration are assigned corresponding classification levels of Recreational, Scenic or Wild. The Klamath, Scott, and North Fork Salmon Rivers have segments designated with a “recreational” classification. Rivers classified as “Recreational” Wild and Scenic Rivers segments display the most level of development, and may include roads, bridges, buildings, and agricultural or forest clearings.

The Scott River and Grider Creek have segments identified with a “Scenic” classification. The Scenic classification applies to those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but may be accessible in places by roads. River classifications are listed in Table 1 below.

Table 1: Summary of Potentially Affected Wild and Scenic Rivers by Segment Number, Classification, and Outstandingly Remarkable Value(s)

River	Segment Number	Segment Description	Classification	Outstandingly Remarkable Value	Description Of Outstandingly Remarkable Value
Klamath River	KI01	Forest Boundary Near Ash Creek Confluence To Forest Boundary With Six Rivers National Forest	Recreational	Anadromous Fisheries	Anadromous Fisheries
Scott River	Sc01	Shackleford Creek To Mccarthy Creek	Recreational	Anadromous Fisheries	Anadromous Fisheries
Scott River	Sc02	Mccarthy Creek To Scott Bar	Scenic	Anadromous Fisheries	Anadromous Fisheries
Scott River	Sc03	Scott Bar To Klamath River	Recreational	Anadromous Fisheries	Anadromous Fisheries
North Fork Salmon River	Nf03	Mule Bridge Campground To Forks Of Salmon	Recreational	Anadromous Fisheries	Anadromous Fisheries
Elk Creek	EI03	Bridge In Sec 19 To Bridge In Sec 25	Recreational	Fisheries	Fish And Game Rearing Pond For Chinook, Large Bedrock Holding Ponds Present.
Elk Creek	EI03			Geologic	The Malone Landslide Offers The Opportunity To Observe The Effects Of A Large Slump/Debris Slide On A Major Stream.
Elk Creek	EI04	Bridge In Sec 25 To Klamath River	Recreational	Fisheries	Very Good Spawning Habitat For Salmonids.
Elk Creek	EI04			Wildlife	Siskiyou Mountain Salamander Has Been Located Along This Segment.
Grider Creek	Gr03	Rancheria Creek To Forest Road 46n24x	Scenic	Fisheries	High Water Quality Supporting Coho, Chinook, And Steelhead.
Grider Creek	Gr03			Vegetation	Undisturbed "Old Growth" Mixed Conifer Forest Type.

River	Segment Number	Segment Description	Classification	Outstandingly Remarkable Value	Description Of Outstandingly Remarkable Value
Grider Creek	Gr03			Wildlife	Bald Eagle (T And E) And Peregrine Falcon Known To Frequent This Segment.
South Russian Creek	Ru02	Wilderness Boundary To Forest Road 40n54	Recreational	Vegetation	Magnificent Stand Of "Old Growth" Engleman Spruce Along This Segment.
South Russian Creek	Ru02			Water Quality	Watershed Is Largely Pristine.

Source: 1995 Forest Plan

Boundaries

Boundaries for Designated Wild and Scenic River corridors were established in the Forest Plan, with legal descriptions listed in Appendix J of the Forest Plan EIS. The corridor boundaries vary in width to include key river features, generally averaging about ½ mile wide (including both sides of the river) for the length of the river.

Boundaries for Recommended Wild and Scenic River corridors were identified in the Forest Plan. The corridor boundaries are a uniform ½ mile width - ¼ mile wide on each side of the river for the length of the river.

Management

Wild and Scenic Rivers are managed under the Forest Plan as Management Areas 12 Designated and Recommended Recreational Rivers and 13 Designated and Recommended Scenic Rivers with appropriate Standards and Guidelines listed for management of the river areas.

Environmental Consequences

Alternative 1

Under alternative 1, no salvage harvest, fuels treatments, or vegetation management would occur. Existing management direction would continue to guide management of the project area. A detailed description of the alternatives can be found in chapter 2 of the Westside Fire Recovery draft EIS.

Direct Effects and Indirect Effects

Because there would be no management actions under alternative 1, free flowing conditions and identified Outstandingly Remarkable Value(s) listed in table 1 above would be maintained in this alternative.

The risk posed to water quality (sediment) from 950 identified legacy sediment sites is moderate to high over a ten-year period. Should a significant storm such as a 10-year event occur, there is a high risk of failure. Impacts would be similar to the channel scour, loss of stream shade, increased stream temperatures, and sedimentation that occurred in the 1997 flood as described by De La Fuente and Elder (1998). These impacts would adversely affect beneficial uses.

The risk to water quality and beneficial uses from increased stream temperature related to burnt Riparian Reserve areas is low. Additionally Elk Creek has a high risk for landsliding and perhaps a moderate risk for resulting debris flows that remove vegetation and thus negatively affect stream shade and temperature.

Visual Quality Objectives define acceptable levels of visual disturbance or contrast from management activities. Because there would be no management actions under the alternative 1, there would be no effect to scenery.

Cumulative Effects

In considering current and reasonably foreseeable future projects, both the Johnny O’Neil and Thom-Seider projects propose activities in the Klamath Wild and Scenic Rivers corridor. Their analyses determined no effect to Wild and Scenic Rivers values. The additive effect from this project’s lack of action in this alternative is not anticipated to have any cumulative effects to the Wild and Scenic Rivers Act’s “protect and enhance” standards.

Alternatives 2, 3, 4, and 5

Because of minute differences between alternatives, the analysis for all four alternatives has been combined into one section. The four action alternatives would authorize salvage harvest, fuels treatments, roadside hazard treatments, and site prep/planting within the river corridors for Elk, Grider, and South Russian Creeks, and the Klamath, Scott, and North Fork Salmon Rivers (see table 2. For a detailed description of the alternatives, see chapter 2 of the draft EIS.

Table 2: Acres of Proposed Treatments for Alternatives 2, 3, 4, and 5 located within Wild and Scenic River corridors by River Classification and Segment

River/Segment Number (Classification)	Treatment Type	Alt 2 Acres	Alt 3 Acres	Alt 4 Acres	Alt 5 Acres
Klamath River/ KI01 (Recreational)	Fuels Treatments	371	371	371	371
	Harvest	425	409	425	422
	Roadside Hazard	379	379	379	379
Scott River/ Sc01 (Recreational)	Fuels Treatments	252	252	252	252
	Harvest	17	17	17	17
	Roadside Hazard	364	364	364	364
Scott River/ Sc02 (Scenic)	Fuels Treatments	62	62	62	62
	Harvest	0	0	0	0
	Roadside Hazard	127	127	109	127
North Fork Salmon River/Nf03 (Recreational)	Fuels Treatments	1149	1149	1149	1149
	Harvest	83	83	83	64
	Roadside Hazard	250	250	250	250
	Vegetation Management	8	8	8	8
Elk Creek/EI03 (Recreational)	Fuels Treatments	516	516	516	516
	Roadside Hazard	438	438	438	438
	Vegetation Management	4	4	4	4

River/Segment Number (Classification)	Treatment Type	Alt 2 Acres	Alt 3 Acres	Alt 4 Acres	Alt 5 Acres
Elk Creek/EI04 (Recreational)	Fuels Treatments	206	206	206	206
	Roadside Hazard	161	161	161	161
	Vegetation Management	11	11	11	11
Grider Creek/Gr03 (Scenic)	Harvest	41	41	41	41
	Roadside Hazard	7	7	7	7
South Russian Creek/Ru02 (Recreational)	Fuels Treatments	84	84	84	84
	Harvest	1	1	1	0
	Roadside Hazard	122	122	122	122
	Vegetation Management	29	29	29	29

Source: GIS data sort, dated 02/03/15, 02/04/15

Direct Effects and Indirect Effects

The full scope of the Wild and Scenic Rivers Act’s protections can be summarized as requiring Westside Fire Recovery project activities to protect:

1. free-flowing conditions,
2. water quality, and
3. identified “outstandingly remarkable” river value(s).

Free Flowing Conditions

As applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. Although there are portions of harvest units proposed within the river corridor boundaries of the Klamath, Scott, and North Fork Salmon Rivers and Grider Creek, they are located several hundred feet upslope from the river and not proposed within the bed and banks of these WSRs. Therefore the Westside Fire Recovery project proposal would have *no effect* on the free flowing conditions of the Wild and Scenic Rivers, since no activities are proposed within the Wild and Scenic Rivers’s bed or banks.

Note: Section 7 of the Wild and Scenic Rivers Act does not apply to this project, because it is only pertinent to a “water resource project” such as a dam, water conduit, reservoir, hydropower project, powerhouse or transmission line, and does not directly affect the bed and bank of a Wild and Scenic Rivers. In 1984 the “water resource project” definition was evaluated for its use within the Wild and Scenic Rivers Act, and the Forest Service clarified that timber harvesting or similar activities would not be subject to Section 7 review unless it resulted in an obstruction or modification of the free-flowing river characteristics (Federal Register Vol. 49, No. 10, 1/16/84, page 1901). Therefore all four alternatives will have *no effect* to free flowing conditions.

Water Quality

All four alternatives are not expected to have direct effect on beneficial uses but should help protect water quality for Elk Creek by fixing existing legacy sites. The alternatives are not expected to increase sediment or stream temperature regimes over alternative 1. A beneficial effect would be legacy site repair. (See Hydrology Report)

Outstandingly Remarkable Value(s)

Each river shall be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values. Alternatives 2, 3, 4, and 5 will have no direct effects to vegetation, geologic, or wildlife, values.

Fisheries (Klamath, Scott, North Fork, Elk, Grider)

Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.

Geologic (Elk)

There are no project activities proposed on the Malone landslide, hence no effect to geologic ORV.

Wildlife (Elk)

There are no harvest treatments within the river corridor. Hence the risk to Siskiyou Mountain Salamander habitat is low.

Vegetation (Grider)

A GIS data sort using (BARC data) identified one small stand of old growth (OS tree diameter Class 1 – large to giant 30 inches + QMD) within the roadside hazard treatment area. This stand, which is located east of Grider Creek (across from the campground) is shown with 0 percent basal area mortality loss. It is likely only a few if any trees would be felled and left in place. Therefore, this will be a negligible effect to the old growth stands.

Wildlife (Grider)

As there are no known Bald Eagle or Peregrine nesting sites within the Grider Creek drainage, there are no direct effects to Wildlife ORV.

Vegetation (South Russian)

There are no project treatments proposed in the Engleman Spruce stands. Hence there will be no direct effects to the Vegetation ORV.

Water Quality (South Russian)

The alternatives have a low risk to increase stream sedimentation and water temperature and are not expected to increase sediment or stream temperature regimes over alternative 1.

Forest Wild and Scenic Rivers Standards and Guidelines

The project treatments associated with the project must meet the Retention and Partial Retention Visual Quality Objectives (VQOs) from within the river corridor, in the foreground beyond the corridor, and in middle ground areas visible from the river corridor. For management activities to meet the Retention VQO, the management activity must not be noticeable (see Scenery report). For management activities to meet the Partial Retention VQO, the management activity must remain visually subordinate to the characteristic landscape (see Scenery report).

The noticeable visual disturbances within the Klamath and Scott Rivers, and Grider Creek corridors would likely not meet the assigned Retention Visual Quality Objectives (VQO) in the short term (3-5 years) when visible from the river corridors. Re-sprouting and growth of vegetation will green up disturbed areas to meet the Retention VQO in the long term.

Not meeting a VQO in the three year timeframe inconsistent with Forest Plan Standards and Guidelines numbers MA12-7 and MA13-6. However an exception is allowed under Forest Plan Standards and Guidelines number 11-7 which states "In the case of recovery activities after extreme catastrophic events such as intense wildland fires, time periods to achieve the VQOs stated in Forest-wide and Management Area Standards and Guidelines may be extended. This would be necessary where previously unnoticed scenery alterations are exposed to view due to loss of vegetative screening, or during timber salvage activities where recovery of forest vegetation is determined to be of greater importance than achievement of VQOs within the time periods established."

Cumulative Effects

As there are no direct effects, there are no cumulative effects.

Comparison of Effects

Wild and scenic river effects are displayed by alternative in table 3 below:

Table 3: Wild and Scenic River Comparison of Effects of Alternatives

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
KLAMATH RIVER (KL01)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Retention VQO (river corridor)	No Effect	Y	VQO would likely not be met in short term (3-5 years)	Y (long term)
	Partial Retention VQO (middle ground)	No Effect	Y	VQO would likely be met	Y
SCOTT RIVER (SC01)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
	Partial Retention VQO (middle ground)	No Effect	Y	VQO would likely be met	Y
SCOTT RIVER (SC02)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Retention VQO (river corridor)	No Effect	Y	VQO would likely not be met in short term (3-5 years)	Y (long term)
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y
SCOTT RIVER (SC03)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y
NORTH FORK SALMON RIVER (NF03)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y
ELK CREEK (EL03)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Moderate risk to water quality from debris flows that affect shade and temperature.	Y	High risk for sedimentation may be reduced by legacy site repairs. Moderate risk to water quality from debris flows that affect shade and temperature.	Y

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Geologic ORV	No Effect	Y	No Effect	Y
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y
ELK CREEK (EL04)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Moderate risk to water quality from debris flows that affect shade and temperature.	Y	High risk for sedimentation may be reduced by legacy site repairs. Moderate risk to water quality from debris flows that affect shade and temperature.	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Wildlife ORV	Low risk of habitat disturbance	Y	Low risk of habitat disturbance	Y

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y
GRIDER CREEK (GR03)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Fisheries ORV	No direct effects. Should a severe wildfire occur, could result in cumulative impacts to fish associated with increases in sediment supply, localized increases in water temperature, and reduced long-term large woody debris recruitment. Impacts are expected to minor to moderate depending on the spatial pattern of a high intensity wildfire.	Y	Minor and insignificant direct effects from water drafting. Over-all effects to sediment, stream shade, and temperature from project treatments are expected to be discountable and effects to aquatic species are expected to be minor under all action alternatives.	Y
	Vegetation ORV	No Effect	Y	Negligible Effect – a small patch of old growth is within roadside hazard treatment area.	Y
	Wildlife ORV	No Effect - No known nesting sites	Y	No Effect - No known nesting sites	Y
	Retention VQO (river corridor)	No Effect	Y	VQO would likely not be met in short term (3-5 years)	Y (long term)
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y

River (Segment #)	River Value	Alternative 1 Description Of Effects	Protected Or Maintained (Y/N)	Alternatives 2, 3, 4, and 5 Description Of Effects	Protected Or Maintained (Y/N)
SOUTH RUSSIAN CREEK (RU02)	Water Quality	Moderate to high risk to water quality (sediment) if legacy sites failed. Low risk to water quality (temperature).	Y	Low risk to stream sedimentation and water temperature	Y
	Vegetation ORV	No Effect. Stands will regenerate naturally.	Y	No Effect. No project treatments proposed within Engleman Spruce stands.	Y
	Water Quality ORV	No direct effects to water quality (sediment and temperature regimes)	Y	Low risk to stream sedimentation and water temperature	Y
	Partial Retention VQO (river corridor)	No Effect	Y	VQO would likely be met	Y
	Partial Retention VQO (foreground and middle ground beyond river corridor)	No Effect	Y	VQO would likely be met	Y

Compliance with law, regulation, policy, and the Forest Plan

All Wild and Scenic Rivers Act protection requirements will be met for this project. Free flowing conditions, water quality, and identified outstandingly remarkable value(s) will be protected. River classifications will be maintained.

The desired future conditions for both scenic and recreational rivers will be met; scenic river areas and shorelines will remain largely primitive and undeveloped, and recreational river waterways will remain generally natural and riverine in appearance.

Literature Cited

De la Fuente, J., and D. Elder. 1998. The flood of 1997, Klamath National Forest Phase I Final Report, Klamath National Forest, 76 pages.

USDA, Forest Service. 1995. Land and resource management plan: Klamath National Forest. Yreka, CA.

Wild and Scenic Rivers Act (P.L. 90-542, as amended). 16U.S.C. 1271-1287.