

DECISION MEMO

Horse Creek Legacy Site Treatment Plan
U.S. Forest Service
Happy Camp Oak Knoll Ranger District
Klamath National Forest
Siskiyou County, California

BACKGROUND

The purpose and need for the project is to treat anthropogenic sediment sources within the project area to improve watershed condition, as well as to receive a Water Board Waiver for the Horse Creek Community Protection Project. Currently the Klamath River and its tributaries are 303D listed for sediment. The impairment is partially due to anthropogenic sediment sources. The North Coast Regional Water Quality Control Board, NCRWQCB, requires the Klamath National Forest to treat sediment sources in order to receive waivers for other projects.

DECISION

I have decided to treat 106 legacy sediment sites within the Horse Creek Community Protection Project boundary, as part of the Horse Creek Legacy Site Treatment Plan.

This action is categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in agency procedures – Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures – 36 CFR 220.6(e)(18). This category of action(s) is applicable because the project includes culvert upgrade and removal, earthen dam removal, and road fill removal. Most of the actions in the project are removing or upgrading water control structures. The purpose of the project is to reduce sediment and to restore natural flow regimes.

I find that there are no extraordinary circumstances that would warrant further analysis and documentation in an EA or EIS. I took into account resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

- No federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species will be adversely impacted by this action. While federally listed threatened or endangered individuals may be impacted, the species as a whole will not likely be impacted. (*CE Checklist- Wildlife: Hagemann & Meza (10/13/2017), Fisheries: Grunbaum (10/3/2017), and Botany: Bowden (10/18/2017).*) No extraordinary circumstances exist for these resources and resource conditions.
- Flood plains and wetlands exist within the project. The project is intended to improve the function of floodplains and wetlands and will not have an adverse affect. There are no municipal watersheds present. No extraordinary circumstances exist for these resource

conditions. (*CE Checklist-Hydrology: Ford (10/5/2017)*)

- Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas – The project is not within any congressionally designated areas.
- Inventoried roadless areas or potential wilderness areas – The project is not within any inventoried roadless areas or potential wilderness areas.
- Research natural areas – The project is not within any research natural areas.
- American Indians and Alaska Native religious or cultural sites – The project is not within any American Indians and or Alaska Native religious or cultural sites.
- Archaeological sites, or historic properties or areas – Survey and reporting for this project was completed on 10/20/2017. Two archaeological sites were identified within the Area of Potential Effects. Treatments within site boundaries will be mitigated by applying Standard Resource Protection Measures (SRPMs). The Region 5 PA allow for erosion controls, ditches, and other treatments within in site boundaries if the HPM determines that the activities will not diminish the integrity of the historic property. Proposed legacy site treatments within site boundaries for this project will not affect any archaeological deposits or features within the two archaeological sites; treatments will have a beneficial effect of site stabilization and preservation. See Appendix E, Stipulation 2.1 (f). Monitoring during implementation will be required. (*CE Checklist-Archeology: Rodriguez (10/20/2017)*).

PUBLIC INVOLVEMENT

This action was originally listed as a proposal on the Klamath National Forest Schedule of Proposed Actions and updated periodically during the analysis. A legal notice for Scoping was published in the Siskiyou Daily News on 9/14/2017. Scoping letters were sent to the Karuk Tribe, the Shasta Tribe, The Siletz Tribe, the Quartz Valley Indian Reservation, George Sexton (KS Wild), Kimberly Baker (EPIC), and the North Coast Regional Water Quality Control Board. One comment letter was received by George Sexton (KS Wild), in which no relevant issues arose.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

This decision is consistent with the Klamath National Forest Land Management Plan. The project was designed in conformance with Aquatic Conservation Strategy Objectives.

The project is also consistent with the Clean Water Act, and the California State Water Board. The project is part compliance protocol with the North Coast Regional Water Quality Control Board.

IMPLEMENTATION DATE

Pursuant to 36 CFR 218.1, implementation may occur immediately following decision. Expected implementation begins in 2019 and expected completion is 2024. Table 1 has treatment breakdowns by year.

Table 1: Treatment with estimated implementation.

Road Sections	Number of Sites	Treatment Description	Section by milepost	Length of Road (miles)	Treatment Year
12 Spur	1	Old roadbed running through channel just off of the 12 road. Needs to be removed and re-contoured. Estimated 1,000 cubic yards of fill	11.88		2019
46N29Y.1	4	Pull one culvert and remove fill at remaining crossings. Totaling 500 cubic yards of fill.	0 to 0.65	0.65	2019
46N60 A	8	Remove undersized culverts and pull fill on three sites, and just pull fill on remaining five sites. On the ML 1 portion of road fill may be stored in a stable location for future use. Estimated 6900 cubic yards of fill in total.	0 to 0.88	0.88	2019
47N65.3	4	Pull culverts at all four sites and remove fill. Estimated fill removal amount is 1250 cubic yards.	0 to 0.95	0.95	2019
47N77.3	7	Remove remaining fill of old roadbed. Roughly 1900 cubic yards of fill total.	0 to 0.81	0.74	2019
46N60	2	Remove earthen dams above milepost 2.60 and 3.22 with estimated fill of 3,000 cubic yards of sediment total.	2.60 to 3.22		2019
47N87.1	2	Culverts have been removed but crossings were not recontoured. More fill (about 1200 cubic yards) needs to be removed.	0 to 0.71	0.71	2019
12	7	Upgrade three culverts, upgrade culvert and add dips at three locations, and fix a drafting site with improper drainage.	18.75 to 18.99 and 11.83 to 12.55	0.96	2020
47N04	1	Upgrade undersized and damaged pipe.	0.25		2020
47N60	3	Upgrade 3 culverts and or add vented fords.	2.85 to 3.53	0.68	2020
47N62	1	Stormproof entire section of road. Needs water bars and outsloping in some locations.	0 to 0.87	0.87	2020
47N64	1	Old ditch blew out and is flowing over the hill onto the road. Ditch needs to be repaired or rerouted, also needs a larger culvert.	0.01		2020
47N65	10	Upgrade 10 pipes and add 8 critical dips.	0.94 to 2.27 and 6.97 to 7.32	1.68	2020
47N98	4	Upgrade culverts at all four locations, and add dips.	0 to 0.29	0.29	2020
46N29Y	5	Stormproof section of road, upgrade four culverts, and add four dips.	0 to 2.83	2.83	2021
47N69	12	Stormproof section of road, upgrade or replace eight pipes, and add nine dips.	0.9 to 3.65	2.75	2022
46N32	7	Stormproof section of road, add rocked fords or pipes at six locations, add three dips and outslope a section.	0.55 to 1.39	0.84	2023
46N55	1	Upgrade undersized and damaged pipe.	0.58		2023

46N60	14	Stormproof section of road, upgrade or replace 10 pipes, and add 13 dips.	0.11 to 10.35	10.24	2023
47N77	5	Upgrade five undersized pipes.	10.02 to 11.04	1.02	2024
47N87	7	Add six drainage features (rocked fords or pipes) and outslope a small section of road.	0.77 to 3.71	2.94	2024

CONTACT

For additional information concerning this decision, contact: Jennifer Ford, District Hydrologist, Happy Camp Ranger District, 63822 State Highway 96 Happy Camp CA 96039, 530-493-1724

for Jeff Marszal

10/25/17
Date

Happy Camp/Oak Knoll Ranger District Ranger

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Literature Cited

USDA, 1995. Klamath National Forest Land and Resources Management Plan and Environmental Impact Statement, Pacific Southwest Region, Klamath National Forest, Yreka, California.

USDA, 2011. Soil and Water Conservation Handbook, Pacific Southwest Region, Vallejo, California

USDA, 2013. Fiscal Year 2012 Best Management Practices Report, Pacific Southwest Region, Klamath National Forest Yreka, California

Appendix A: Project Design Features

The Klamath National Forest developed the following project design features to minimize environmental impacts of the proposed actions to forest resources. These project design features were designed to address overall project objectives, to minimize resource impacts, and ensure Forest Plan compliance. The project design features in the Table below apply to all sites where applicable or deemed necessary by contracting personnel.

Design Feature	Description
Aquatics 1	All road and trail maintenance work and watershed restoration activities outside the roadbed in Riparian Reserves will be implemented between April 15 and October 15, unless the work is related to the spawning channels, or a work extension is reviewed and recommended by a fish biologist or earth scientist. That is, there will be no operation between October 16 and April 14, unless confirmed by a fish biologist or earth scientist that a change still meets BMPs and wet weather operations standards (WWOS). All activities will be conducted during appropriate periods of weather and soil moisture to avoid adverse effects to listed species
Aquatics 2	Rocking, straw mulch, hay bales, or waddles will be used as necessary, where the possibility of water spill or overflow would otherwise result in sediment being moved toward the creek
Aquatics 3	Dispose of unsuitable slide and waste material in stable, non-floodplain sites. Suitable slide, fill and waste material may be used to restore natural or near-natural contours, as approved by geotechnical engineer or other qualified personnel
Aquatics 4	No fueling/refueling of mechanical equipment such as chainsaws will occur within 100 feet of any flowing watercourse or intermittent drainage. Fueling and servicing of vehicles used for proposed activities will be done outside of Riparian Reserves
Aquatics 5	Any hazardous spills will be immediately cleaned up and reported to the USFS. In the occurrence of a spill, NOAA Fisheries will be notified for emergency consultation. Report any chemical spills to the District Ranger and Fisheries biologist immediately and re-initiate Endangered Species Act consultation if warranted
Aquatics 6	Clean equipment to remove noxious weeds and petroleum residues prior to working within a channel
Aquatics 7	Minimize disturbance of existing vegetation within the road clearing limits, at stream crossings, and approved disposal sites
Aquatics 8	During culvert cleaning, if equipment leaves the roadbed, the site will be recontoured to avoid creating or concentrating erosion.
Aquatics 9	Replacement of stream crossings will be designed to accommodate at least a 100-year flood, including associated bedload and debris
Aquatics 10	Replacement of stream crossings will be designed to provide and maintain fish passage on all existing and potential fish bearing streams
Aquatics 11	Isolate construction sites from stream flow before removing a culvert and performing work inside the stream channel. The work site may be completely dewatered or in some circumstances, the stream may be rerouted within the channel

Design Feature	Description
Aquatics 12	When activities are proposed within a stream channel that may cause significant disturbance Coho salmon, a biologist will snorkel the work area to look for individuals prior to dewatering to encourage them to move out of the area and to estimate the number of individual Coho potentially affected
Aquatics 13	Activities using heavy equipment (such as culvert replacement, drainage ditch maintenance with a backhoe, water-drafting site maintenance, spawning channel maintenance) that occur in the active stream channel within 300 feet of habitat potentially occupied by Coho salmon are limited to two in the same 7 th field watershed in any one year.
Aquatics 14	Spawning channel operation and maintenance: If the either spawning channel is accidentally dewatered or otherwise operated in a manner that results in significant negative effects to individual Coho salmon, NOAA-Fisheries staff will be contacted immediately to estimate Incidental Take
Botany 1	Any sensitive plant populations located within the proposed project area will be flagged and excluded from the project with the intention of preventing all effects. Yellow and black striped flagging will be used to delineate population boundaries. However, if it is not possible to exclude a population, then it is the responsibility of the Project Lead to work with the District Botanist to develop mitigations that will minimize impacts and prevent the species from trending toward listing as a threatened or endangered species.
NNIS 1	Sites in which the proposed repairs would denude or leave bare an area outside of the road prism will be seeded and/or planted with native plants. Generally a bare area greater than 50 square feet, outside the road prism, would meet this criteria. Higher emphasis for this treatment would be given to sites near invasive plants, or known to occur on roads which contain invasive plant populations.
NNIS 2	Equipment and vehicles that leave the established road surface will be cleaned of soil, seeds, vegetative matter, and other debris that could contain noxious weed seeds prior to entering and before leaving the project. Additionally, the District Botanist will identify points at which equipment must be washed prior to moving to a new part of the project area. Areas appropriate for cleaning equipment prior to leaving the project area will be designated as appropriate.
NNIS 3	Equipment, vehicles, and personnel will avoid working within flagged noxious weed sites. Orange/black flagging labeled with INVASIVE SPECIES will be used to delineate population boundaries.
NNIS 4	Any straw or seed placed within the project area must be documented as California certified weed free. Other materials where State inspection protocol does not exist (gravel, wood chips) used as mulch in the project area, should be inspected by a Forest Service representative to determine the potential for spread of noxious weeds.
NNIS 5	Any facility that provides material such as rock, gravel, or boulders to be used in the project area should be inspected and determined to have limited potential for the spread of noxious weeds from stored material. Material stockpiles must be noxious weed free.
NNIS 6	Any soil or other material such as rock or gravel that is removed from a location known to be occupied by invasive plants will be deposited in an approved location. The District Botanist will work with the Klamath National Forest Roads Engineers to determine a suitable location for disposal.

Appendix B: Best Management Practices

The Klamath National Forest (Forest) monitors the implementation and effectiveness of best management practices on randomly selected projects each year. From 2000 to 2012, best management practice implementation requirements were met on 78 to 100 percent (91 percent average) of sites samples, and best management practice effectiveness requirements were met on 88 to 100 percent (94 percent average) of the sites sampled. The critical best management practice evaluation is *effectiveness* which is a field evaluation and determines how well the best management practice worked to prevent sedimentation. Best management practice implementation is an office evaluation and is not critical to the best management practices field performance. The success rate for effectiveness has been in the high eighties and nineties each year since 1993. Results of this monitoring can be found on the Forest (Fiscal Year 2012 Best Management Practices Report [USFS 2013]).

Best management practices utilized by the Forest are listed in Appendix D of the Forest Plan (USFS 1995). These basic best management practices are similar to those listed in the 2011 Region 5 Best Management update in Chapter 10 of the Soil and Water Conservation Handbook, which additionally includes a narrative and objective of each (USFS 2011); where there are differences, direction is to employ the newer best management practice list.

All actions implemented for the Horse Creek Legacy Site project would be in conformance with the Best Management Practices below. A description of the objective of each best management practice is included, as well as how each practice would be specifically implemented within the Project in regards to watershed-associated resources of fisheries, geology, hydrology, and/or soils. All other provisions of the best management practices would also be followed. For additional information on the best management practices and their objectives, see the Region 5 Soil and Water Conservation Handbook (USFS 2011).

2.2 – Erosion Control Plan:

Objective: To limit and mitigate erosion and sedimentation through effective planning prior to initiation of construction activities and through effective contract administration during construction.

The plan is part of the contract and is the responsibility of the contractor with the Forest Service reviewing and approving.

2.3 – Timing of construction Activities.

Objective: To minimize erosion by conducting operations during minimal runoff periods.

The aquatic period of operation (APOO) will be implemented from April 15 thru October 15. No ground disturbing activities will occur between October 16 and April 14. No new road work will begin after October 15. Work may proceed after October 15 with the fisheries biologist and/or hydrologist approval. This will only occur if the weather pattern predicts dry weather. This situation is typically approved when a project is not complete and more damage may occur by leaving it unfinished.

2.4 – Stabilization of Road Slopes and Spoil Disposal Areas.

Objective: To minimize erosion from exposed cut slopes, fill slopes, and spoil disposal areas.

All ground disturbed will be seeded and mulched.

2.5 – Road Slope Stabilization Construction Practices.

Objective: To reduce sedimentation by minimizing erosion from road slopes and slope failure along roads.

Forest earth scientist will evaluate soils and geology of the site and make recommendations for mitigations. In general, work will be completed before the first winter rains from April 15 to October 15 (APOO).

2.6 – Dispersion of Subsurface Drainage from Cut and Fill Slopes.

Objective: To minimize the possibilities of cut or fill slope failure and the subsequent production of sediment.

Construction of rolling dips where springs cross the roads, french drains, stabilization trenches.

2.7 – Control of Road Drainage. Roads and drainages will be outsloped.

Objective: To minimize the erosive effects of water concentrated drainage features; to disperse runoff from disturbances within the road clearing limits; to lessen the sediment yield from roaded areas; to minimize erosion of the road prism by runoff from road surfaces and from uphill areas.

Roads will be outsloped and have rolling dips.

2.9– Timely Erosion Control Measures on Incomplete Roads and Stream Crossing Projects.

Objective: To minimize erosion and sedimentation from disturbed ground on incomplete projects.

APOO of April 15 – October 15 for actions in RRs.

Erosion measures will be implemented on or before October 15. If there is approval by a fisheries or earth scientist to work beyond October 14, erosion measures will be in place at the end of each workday.

Planting vegetation, mulching, and/or covering exposed surfaces with jute mats or other protective material (relates to meeting Land and Resource Management Plan (LRMP) soil cover guidelines to prevent erosion and maintain soil productivity, LRMP page 4-21).

2.10. – Construction of Stable Embankments.

Objective: To construct embankments with materials and methods, which minimize the possibility of failure and subsequent water quality degradation.

Implementation includes methods 1-6 of BMP handbook to prevent failure of road embankments and the subsequent deposition of material into waterways. Techniques include layer placement and/or controlled compaction, sidecasting and end dumping, using retaining walls, confinement systems, planting or combination of techniques.

2.11 – Control of Sidecast Material.

Objective: To minimize sediment production originating from sidecast material during road construction or maintenance.

There will be no sidecasting. All material will be either hauled off site or placed on roadways as part of the stormproofing process.

2.12 – Servicing and Refueling of Equipment.

Objective: To prevent pollutants such as fuels, lubricants, bitumens and other harmful materials from being discharged in or near river, streams and impoundments, or into man-made channels.

Servicing and refueling of equipment will not occur where spilled material can flow downslope into a waterway/drainage feature.

Hazmat spill material will be within close proximity to the proposed work sites. Refueling and servicing of heavy equipment will take place a minimum of 100 feet away from stream channels.

2.13 – Control of Construction in Streamside Management Zones.

Objective: To protect water quality by controlling construction and maintenance actions within and adjacent to any streamside management zone

An APOO (April 15 to October 15) will be implemented if a stream is flowing during the work period it will be dewatered; all ground-disturbed sites will be seeded and mulched. Where appropriate, silt fencing, hay bales, etc. will be installed.

2.14 – Controlling In-channel Excavation.

Objective: To minimize stream channel disturbances and related sediment production.

Same as 2.13.

2.15 – Diversion of Flows Around Construction Sites.

Objective: To ensure that all stream diversions are carefully planned, to minimize downstream sedimentation, and to restore stream channels to their natural grade, condition, and alignment as soon as possible.

Streams will be dewatered if necessary, all loose sediment will be hand removed with shovel prior to re-watering/fall rains.

2.17 – Bridge and Culvert Installation

Objective: To minimize sedimentation and turbidity resulting from excavation for in channel structures.

Same as 2.13 and 2.15.

2.19 – Disposal of Right-of-Way and Roadside Debris.

Objective: 1. To ensure that organic debris generated during road construction is kept out of streams so that channels and downstream facilities are not obstructed. 2. To ensure debris dams are not formed which obstruct fish passage, or which could result in downstream damage from high water flow surges after dam failure.

Right-of-way and roadside debris will be disposed outside of stream floodplains.

2.20 – Specify Riprap Composition.

Objective: To minimize sediment production associated with the installation and utilization of riprap material.

If riprap is deemed necessary, it will be appropriately sized. For these sites, it will most likely be no smaller than 8 inch and no larger than 2 feet in diameter.

2.21 – Water Source Development Consistent with Water Quality Protection.

Objective: To supply water for roads and fire protection while maintaining existing water quality.

Forest fisheries biologist will help engineers identify potential sites and applicable mitigations to protect water quality. Approaches to water drafting sites will be graded and rocked to disperse water off the travel way as much as possible.

2.22 – Maintenance of Roads.

Objective: To maintain roads in a manner which provides for water quality protection by minimizing rutting, failures, sidecasting, and blockage of drainage facilities all of which can cause erosion and sedimentation, and deteriorating watershed conditions.

Some of the stormproofing, particularly outsloping and resurfacing, is considered heavy maintenance. Most maintenance will be done within the APOO, same as BMPs 2.7, 2.9, 2.11, and 2.12.

2.23 – Road Surface Treatment to Prevent Loss of Materials.

Objective: To minimize the erosion of road surface materials and consequently reduce the likelihood of sediment production from those areas.

The road surface where scarified will be seeded and mulched, and where outsloped the shoulder will also be seeded and mulched. Where stormproofed by outsloping, an aggregate surface will be laid down.

2.24 – Traffic Control During Wet Periods.

Objective: To reduce road surface disturbances and rutting of roads, to minimize sediment washing from disturbed road surfaces.

An APOO will be implemented as discussed above. In addition, the wet weather operating schedule (WWOS) will be followed/implemented.

2.26 – Obliteration or Decommissioning of Roads.

Objective: To reduce sediment generated from temporary roads, unneeded system (classified) and non-system (unclassified) roads by obliterating or decommissioning them at the completion of the intended use.

Roads will be obliterated or decommissioned through a combination of the following: re-contouring, outsloping, blocked to vehicle access, restoration of stream crossings and natural drainage, stabilized (through tillage, ripping, fertilization and or revegetation), reshaping of fillslopes, restoration of natural topography.

2.27 – Restoration of Borrow Pits and Quarries

Objective: To minimize sediment production from borrow pits and quarry sites.

No borrow pit that is contaminated with a noxious weed will be used unless authorized by a botanist (it is possible to remove the contaminated material prior to use). If rock pits are located in an RR, an earth scientist or fish biologist will verify through a site review that the use of the rock pit will not cause sediment delivery to anadromous fish bearing streams. If existing borrow pits within Riparian Reserves are used, they will be outsloped where appropriate and silt fences/hay bales will be used where appropriate.

1.6 Soil Moisture Limitation for Mechanical Equipment Operations:

Objective: The objective is to prevent soil compaction, rutting, and gulling that may result in increased sedimentation and turbidity.

- This is accomplished during the operations phase of the Project by ongoing monitoring.
- Mechanical operations on roadways will only be permitted when soil moisture is dry within the top 10 inches of soil on the skid trail. (Does not apply to in-channel work).
- When stormy weather is predicted, the project representative will ensure erosion control procedures are implemented in a timely fashion and to initiate shutdown or resume operations. Operations will not resume until suitable weather, soil and forecast conditions exist.
- The WWOS will be used to guide operations during periods of wet weather. Earth scientists will examine field conditions to determine when the soil and/or road have dried out enough to enable operations to resume without risk of adverse watershed effects. The earth scientist will make recommendations to the project representative who will provide direction as to when operations may resume to ensure that BMPs will be met and adverse effects will be avoided.

7.1 – Watershed Restoration

Objective: To repair degraded watershed conditions and improve water quality and soil stability.

This management practice is implemented through the development of a Watershed Improvement Needs (WIN) inventory, identification of projects, preparation and approval of restoration plans and related environmental documentation and the funding and implementation of the restoration actions.

The actual work will be done by force account or through contract. Project proponents will monitor effectiveness of the restoration measures used (BMPEP effectiveness report). Physical, hydrologic, biological or aquatic indicators of deteriorated conditions will be the focus of the monitoring effort.

7.2 – Conduct Floodplain Hazard Analysis and Evaluation

Objective: To avoid, where possible, the long- and short-term adverse impacts to water quality associated with the occupancy and modification of floodplains.

Environmental quality, ecological effects, and individual safety and health must be considered as well as flood frequencies, watershed conditions, climatic and environmental factors associated with past flood events, flood flow quantities and specific flood boundaries.

7.3 - Protection of Wetlands

Objective: To avoid adverse water quality impacts associated with destruction, disturbance, or modification of wetlands.

The Forest Service will not permit the implementation of activities and new construction in wetlands whenever there is a practical alternative. Factors relevant to the effect of the proposal on the survival and quality of the wetlands will be considered when evaluating proposed actions in wetlands. Factors to be evaluated include, but are not limited to water supply, water quality, recharge areas, functioning of the wetland during flood and storm events, flora and fauna, habitat diversity and stability, and hydrologic function of the riparian areas.

7.4 - Forest and Hazardous Substance Spill Prevention Control and Countermeasure (SPCC) Plan

Objective: To prevent contamination of waters from accidental spills.

All Forests will maintain a SPCC plan, which meets the criteria of the referenced directives in Section 13 (p. 163, *Water Quality Management for Forest System Lands in California: Best Management Practices*, September 2000), and require appropriate special use permittees, timber sale operators, other contractors, and Forest users to develop companion SPCC Plans before operating within the National Forest boundary. Forest SPCC Plans and Forest users SPCC Plans must be approved by the Forest Supervisor.

7.7 – Management by Closure to Use (Seasonal, Temporary, and Permanent)

Objective: To exclude activities that could result in damages to either resources or improvements, such as roads and trails, resulting in impaired water quality.

The decision will be made to close an area after an evaluation of alternative methods of protection dictates that closure is a required action. This is usually a last step protective measure.

7.8 – Cumulative Off-Site Watershed Effects (CWE, Practice Needs Improvement)

Objective: To protect identified beneficial uses of water from the combined effects of multiple management activities which individually may not create unacceptable effects but collectively may result in degraded water quality conditions.

Professional judgment is used to evaluate cumulative watershed effects (CWE) susceptibility, on a watershed basis, as part of the decision-making process. These assessments are made utilizing known information about beneficial uses, climate, watershed characteristics, land use history, and present and reasonably foreseeable future land use activities.