

## Relationship of USFS WQMP to NPS Program and NPS Policy

### Introduction

The NPS Program Plan and the NPS Policy set forth certain criteria that the USFS WQMP and the Waiver are designed to satisfy. This document summarizes the relationship between these criteria and the USFS WQMP and the Waiver.

### NPS Program

The NPS Program Plan was collaboratively developed by the State Water Board and the California Coastal Commission in accordance with USEPA regulations implementing CZARA. (Although CZARA applies only to the Coastal Zone, the State agencies decided to extend its application beyond the Coastal Zone, so that the State would have only one set of statewide NPS requirements.)

Pursuant to the USEPA requirements, the NPS Program identifies a number of measures for managing NPS pollution. These “management measures” (MMs) are primarily performance standards, stating what is to be achieved, but not prescribing exactly how it is to be achieved. USEPA regulations require that each affected State determine what modifications of the general MMs and what more prescriptive “management practices” (MPs) would be most appropriate for its situations, as well as providing guidance regarding what such MPs might be. The companion volume *California* sets forth the management measures adopted by the State and the corresponding management practices applicable to non-federal lands. These have been approved by USEPA, which holds the State accountable for implementing them. More recent USEPA guidance will require that the management practices applicable to federal lands also be included in the NPS Program documents and conform to the MMs. The NPS Program Plan can be found at: ----

The relevant MMs can be found at: ----

Table 1 sets forth the MMs that the State Water Board and USFS have agreed are relevant to NPS activities on NFS lands. It shows which USFS BMPs are related to each MM and its components and/or elements. There is not a one-to-one correspondence between the two sources. Please note the following:

- Neither USEPA nor the State have MMs for mining or recreation, so there is nothing to which the USFS BMPs for those activities can be compared.
- Many MMs for silviculture address matters that USFS has placed into other BMP categories, i.e., roads, vegetation manipulation, and fire suppression and fuels management.
- Among USFS timber management BMPs, there are several that address matters for which there is no corresponding silvicultural MM.

## **NPS Policy**

The State Water Boards NPS Policy was promulgated in response to State legislation requiring it to specify how NPS pollution was to be regulated. The NPS Policy recognizes that third parties (e.g., other agencies and some voluntary associations) have programs, expertise and resources that are valuable supplements to the authorities and capabilities of the Water Boards. It therefore encourages development and implementation of third party NPS control programs, while also establishing five “key elements” necessary to ensure that such a program will be implemented and be effective in controlling NPS pollution. The NPS Policy can be found at: [-----](#)

The following paragraphs summarize the key elements and the ways that the USFS WQMP and Waiver comply with them.

***Key Element 1. An NPS pollution control program’s ultimate purpose shall be explicitly stated. Implementation programs must, at a minimum, address NPS pollution control in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements.***

The updated USFS WQMP sets forth the following program objectives:

1. To ensure that the quality and beneficial uses of water are maintained where they are in good condition, consistent with the Federal and State anti-degradation/non-degradation policies, and the principles of conservation biology.
2. To protect the quality and beneficial uses of water from further degradation in water bodies that are trending toward impairment as defined by Clean Water Act Section 303 (d).
3. To make substantial contribution toward eventual delisting of water body segments that have been listed pursuant to Clean Water Act Section 303(d).
4. To ensure compliance with Federal and State water-quality objectives and legal requirements in the most efficient manner.
5. To remediate legacy sources of pollution.
6. To provide a monitoring framework to evaluate the effectiveness of the WQMP in protecting and improving water quality.
7. To provide a process for improving or adding BMPs as necessary for protection of water quality.
8. To enhance USFS performance as a water quality management agency, and increase and improve its responsibility, transparency and accountability in its relationships with the Water Boards and the public.

***Key Element 2. An NPS pollution control program shall include a description of the management practices and other program elements***

***expected to be implemented, the process to be used to select or develop MPs, and the process to ensure and verify proper implementation.***

The updated USFS WQMP sets forth suites of BMPs to be used to address discharges from the following NPS activities:

- Timber management
- Roads
- Range management
- Non-motorized recreation
- Motorized recreation
- Vegetation manipulation
- Fire suppression and recovery

Each suite of BMPs (more than 90 in total) has its own objective(s); an explanation of the practice, including criteria and standards; a description of how it is to be implemented, and the pertinent USFS references. The statewide BMPs are somewhat general to allow flexibility to deal with the State's many differing forest environments.

The WQMP also describes the following:

- The nested hierarchy of national laws, regulations, programs, manuals and handbooks, multi-regional and multi-forest guidance, individual Forest Land and Resource Management Plans that are the context within which the statewide BMPs are interpreted and applied.
- The administrative processes by which site- and project-specific prescriptions are developed to implement the statewide BMPs.
- The administrative processes to ensure that these are incorporated into the contracts and other documents that provide the immediate direction to those actually carrying out the project.
- The administrative processes to verify proper implementation.
- The several types of monitoring to be used to determine effectiveness in meeting water quality objectives, both short term and long term and at different geographic scales.

In addition, the WQMP set forth the approaches to be used to remediate legacy sources of pollution and to contribute to restoration of 303(d)-listed waters.

***Key Element 3. Where a Water Board determines it is necessary to allow time to achieve water quality requirements, the NPS control implementation program shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements.***

The ---- sets forth priorities and short-term schedules for:

- Completing watershed assessment and watershed management plans on NFS lands.
- Completing projects to remediate legacy problem sites or to contribute to restoration of impaired beneficial uses of water.

- Completing certain monitoring projects.
  - Completing further amendment or creation of BMPs.
- Longer term schedules may be subject to budget and staffing constraints that neither the Water Board nor USFS can anticipate.

***Key Element 4. NPS control programs shall include sufficient feedback mechanisms so that the affected Water Board(s), dischargers, and the public can determine whether the program is achieving its stated purpose(s), or whether additional or different MPs or other actions are required.***

The updated USFS WQMP sets forth a stakeholder-responsive adaptive management strategy that addresses both: 1) short-term project-specific feedback (i.e., project site inspections) to facilitate more timely corrective actions and 2) longer-term feedback (i.e., monitoring and research results and other information) to inform iterative refinement of the WQMP and its BMPs.

In addition, the Waiver requires regular reporting from USFS on both an annual and longer-period basis. The reporting includes status reports, monitoring results, new findings, problems and recommendations.

***Key Element 5. Each Water Board shall make clear, in advance, the potential consequences for failure to achieve a NPS control implementation program's stated purposes.***

The WQMP sets forth several self-imposed internal USFS consequences for failure to achieve stated purposes. In addition, the Waiver sets forth the regulatory consequences that the Water Boards may impose for such failure.

Table 1. – California’s NPS Program Management Measures and the USFS BMPs that Implement Them.

**Silvicultural Management Measures**

Management Measure 2A Preharvest Planning				
Component I. Perform advance planning for forest harvesting that includes the following elements where appropriate:				
Agency	Authority	Programs	Implementation Location	Notes
Element (1): Identify (a) the area to be harvested including location of waterbodies and sensitive areas such as wetlands, threatened or endangered aquatic species habitat areas, or high-erosion-hazard areas (landslide-prone areas) within the harvest unit, and (b) the hydrologic unit where the project is located and name the waterbodies the project is tributary to.				
U.S. Dept. of Agriculture Forest Service (USFS)	WQMP BMP 1-1: Timber Sale Planning Process	Timber	Statewide—National Forest System lands (NFS)	
	WQMP BMP 1-2: Timber Harvest Unit Design	Same as above	Same as above	
	WQMP BMP 1-3: Determination of Surface Erosion Hazard for Timber Harvest Unit Design	Same as above	Same as above	
	WQMP BMP 1-4 Use of Sale Area Maps and/or Project Area Maps for Designating Water Quality Protection Needs	Same as above	Same as above	
	WQMP BMP 1-6: Protection of Unstable Lands	Timber, Fuels	Same as above	
	WQMP BMP 1-7 Prescribing the Size and Shape of Regeneration Harvest Units	Same as above	Same as above	
	WQMP BMP 1-8: Streamside Management Zone Designation	All programs	Same as above	
	WQMP BMP 1-9: Determining Tractor Loggable Ground	Timber, Fuels	Same as above	
Element (2): Time the activity for the season or moisture conditions to avoid degradation of water quality and prevent impacts to beneficial uses. Avoid any activities that cause soil disturbance or discharge from road surfaces during wet weather except for emergency maintenance work.				
USFS	WQMP BMP 1-5: Limiting the Operating Period of Timber Sales Activities	Timber, Fuels	Same as above	
Element (3): Consider potential water quality impacts and erosion and sedimentation control in the selection of silviculture and regeneration systems, especially for harvesting and site preparation.				
USFS	Same as Element (1) above, plus	Same as above	Same as above	
	WQMP BMP 1-15: Erosion Prevention and Control Measures During Timber Sale Operations	Timber, Fuels	Same as above	
	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
	WQMP BMP 1-22: Slash Treatment in Sensitive Areas	Timber, Fuels	Same as above	
Element (4): Reduce the risk of occurrence of landslides and severe erosion by identifying high-erosion-hazard areas and avoiding timber operations where they may exacerbate risk.				
USFS	WQMP BMP 1-3: Determination of Surface Erosion Hazard for Timber Harvest Unit Design	Same as above	Same as above	
	WQMP BMP 1-6: Protection of Unstable Lands	Same as above	Same as above	
Element (5): Consider cumulative effects from timber operations or roads to any known existing water quality impairments or problems in watersheds.				
USFS	WQMP BMP 7-8: Cumulative Off-site Watershed Effects	Same as above	Same as above	

**Management Measure 2A Preharvest Planning**

**Component 2. Perform advance planning for forest road systems that includes the following elements where appropriate:**

Agency	Authority	Program	Implementation Location	Notes
Element (1): Locate and design road systems to minimize potential sediment generation and delivery to surface waters. Key components are: (a) locate roads, landings, and skid trails to avoid steep grades and steep or unstable hillslope areas, and to decrease the number of stream crossings; (b) avoid to the extent practicable locating new roads and landings in SMAs; and (c) determine road usage and select the appropriate road standard.				
USFS	WQMP BMP 1-8: Streamside Management Zone Designation	All programs	Statewide - NFS	
	WQMP BMP 1-12: Log Landing Location	Timber	Same as above	
	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Engineering	Same as above	
	WQMP BMP 2-13: Control of Construction and Maintenance Activities Adjacent to SMZs	Same as above	Same as above	
Element (2): Locate and design temporary and permanent stream crossings to prevent failure and control impacts from the road system. Key components are: (a) size, design and site crossing structures to prevent failure and minimize diversion potential; (b) for fish-bearing streams, design crossings to facilitate fish passage.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Same as above	Same as above	
	WQMP BMP 2-16: Stream Crossings on Temporary Roads	Same as above	Same as above	
	WQMP BMP 2-14: Controlling In-Channel Excavation	Same as above	Same as above	
	WQMP BMP 2-17: Bridge and Culvert Installation	Same as above	Same as above	
Element (3): Ensure that the design of road prism and the road surface drainage is appropriate to the terrain and that road surface design is consistent with the road drainage structures.				
USFS	WQMP BMP 2-5: Road Slope Stabilization Construction Practices	Same as above	Same as above	
	WQMP BMP 2-7: Control of Road Drainage	Same as above	Same as above	
	WQMP BMP 2-10: Construction of Stable Embankments (Fill)	Same as above	Same as above	
Element (4): Use suitable materials for surface roads planned for all-weather use to support truck traffic.				
USFS	WQMP BMP 2-5: Road Slope Stabilization Construction Practices	Same as above	Same as above	
	WQMP BMP 2-23: Road Surface Treatment to Prevent Loss of Materials	Same as above	Same as above	
Element (5): Design road systems to avoid high erosion or landslide hazard areas. Identify these areas and consult a qualified specialist for design of any roads that must be constructed through these areas.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Same as above	Same as above	
	WQMP BMP 2-2: Erosion Control Plan	Engineering, Recreation	Same as above	

**Management Measure 2B Streamside Management Areas (SMAs)**

**Component 1. Establish and maintain a streamside management area along surface waters that is sufficiently wide and which includes a sufficient number of canopy species to buffer against detrimental changes in the temperature regime of the waterbody, to provide bank stability, and to withstand wind damage.**

USFS	WQMP BMP 1-8: Streamside Management Zone Designation	All programs	Statewide- NFS	
	WQMP BMP 1-19: Streamcourse and Aquatic Protection	Same as above	Same as above	

**Component 2. Manage the SMA including flood-prone areas in such a way as to protect against soil disturbance in the SMA and delivery to the stream of sediments and nutrients generated by forestry activities, including harvesting.**

USFS	Same as above, plus	Same as above	Same as above	
	WQMP BMP 2-13: Control of Construction and Maintenance Activities Adjacent to SMZs	Engineering	Same as above	

**Component 3. Manage the SMA canopy species to provide a sustainable source of large woody debris needed for instream channel structure and aquatic species habitat.**

Management Measure 2C: Road Construction/Reconstruction				
Agency	Authority	Programs	Implementation Location	Notes
Component (1): Follow preharvest planning (as described under Management Measure A) when constructing or reconstructing the roadway.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Engineering	Statewide -NFS	
	WQMP BMP 2-8: Constraints Related to Pioneer Road Construction	Same as above	Same as above	
	WQMP BMP 2-10: Construction of Stable Embankments (Fills)	Same as above	Same as above	
	WQMP BMP 2-11: Control of Sidecast Material During Construction and Maintenance	Same as above	Same as above	
Component (2): Follow designs planned under Management Measure A for road surfacing and shaping..				
USFS	WQMP BMP 2-5: Road Slope Stabilization Construction Practices	Same as above	Same as above	
	WQMP BMP 2-23: Road Surface Treatment to Prevent Loss of Materials	Same as above	Same as above	
Component (3): Install road drainage structures according to designs planned under Management Measure A and regional storm return period and installation specifications. Match these drainage structures with terrain features and with road surface and prism designs.				
USFS	WQMP BMP 2-7: Control of Road Drainage	Same as above	Same as above	
Component (4): Guard against the production of sediment when installing stream crossings.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Same as above	Same as above	
	WQMP BMP 2-16: Stream Crossings on Temporary Roads	Same as above	Same as above	
	WQMP BMP 2-14: Controlling In-Channel Excavation	Same as above	Same as above	
	WQMP BMP 2-17: Bridge and Culvert Installation	Same as above	Same as above	
Component (5): Protect surface waters from slash and debris material from roadway clearing.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Same as above	Same as above	
	WQMP BMP 2-11: Control of Sidecast Material During Construction and Maintenance	Same as above	Same as above	
	WQMP BMP 2-4: Stabilization of Road Slope Surfaces and Spoil Disposal Areas	Same as above	Same as above	
	WQMP BMP 2-19: Disposal of Right-of-Way and Roadside Debris	Same as above	Same as above	
Component (6): Use straw bales, silt fences, mulching, or other favorable practices on disturbed soils on cuts, fill, etc.				
USFS	WQMP BMP 2-2: Erosion Control Plan	Engineering, Recreation	Same as above	
	WQMP BMP 2-4: Stabilization of Road Slope Surfaces and Spoil Disposal Areas	Engineering	Same as above	
	WQMP BMP 2-5: Road Slope Stabilization Practices	Same as above	Same as above	
	WQMP BMP 2-9: Timely Erosion Control Measures on Incomplete Roads and Stream Crossing Projects	Same as above	Same as above	
Component (7): Avoid constructing new roads in SMAs to the extent practicable.				
USFS	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Same as above	Same as above	
	WQMP BMP 2-13: Construction and Maintenance Activities Adjacent to SMZs	Same as above		
Management Measure 2D Road Management				
Component (1): Avoid using roads for timber hauling or heavy traffic during wet or thaw periods on roads not designed and constructed for these conditions.				
USFS	WQMP BMP 2-24: Traffic Control During Wet Periods	Engineering	Statewide -NFS lands	
Component (2): Evaluate the future needs for a road and close roads that will not be needed. Leave closed roads and drainage channels in a stable condition to withstand storms.				
USFS	WQMP BMP 2-22: Maintenance of Roads	Same as above	Same as above	

	WQMP BMP 2-26: Obliteration or Decommissioning of Roads	Engineering, Watershed	Same as above	
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Agency	Authority	Programs	Implementation Location	Notes
Component (3): Remove drainage crossings and culverts if there is a reasonable risk of plugging or failure from lack of maintenance.				
USFS	WQMP BMP 2-9: Timely Erosion Control Measures on Incomplete Roads and Stream Crossings	Engineering	Statewide- NFS	
	WQMP BMP 2-16: Stream Crossings on Temporary Roads	Same as above	Same as above	
Component (4): Following completion of harvesting, close and stabilize temporary spur roads and seasonal roads to control and direct water away from the roadway. Remove all temporary stream crossings.				
USFS	WQMP BMP 2-16: Stream Crossings on Temporary Roads	Same as above	Same as above	
Component (5): Inspect roads to determine the need for structural maintenance. Conduct maintenance practices, when conditions warrant, including cleaning and replacement of deteriorated structures and erosion controls, grading or seeding of road surfaces, and, in extreme cases, slope stabilization or removal of road fills where necessary to maintain structural integrity.				
USFS	WQMP BMP 2-11: Control of Sidecast Material During Construction and Maintenance	Same as above	Same as above	
	WQMP BMP 2-13: Control of Construction and Maintenance Activities Adjacent to SMZs	Same as above	Same as above	
	WQMP BMP 2-22: Maintenance of Roads	Same as above	Same as above	
Component (6): Conduct maintenance activities, such as dust abatement, so that contaminants or pollutants are not introduced into surface waters.				
USFS	Same as Component (5) above	Same as above	Same as above	
Component (7): Properly maintain permanent stream crossings and associated fills and approaches to reduce the likelihood (a) that stream overflow will divert onto roads, and (b) that fill erosion will occur if the drainage structures become obstructed.				
USFS	WQMP BMP 2-22: Maintenance of Roads	Same as above	Same as above	
<b>Management Measure 2E Timber Harvesting</b>				
The timber harvesting management measure consists of implementing the following:				
<b>Component 1. General</b>				
Element (1): Timber harvesting operations with skid trails or cable yarding follow layouts determined under Management Measure 2A.				
USFS	WQMP BMP 1-10: Skid Trail Design	Timber	Same as above	
	WQMP BMP 1-11: Suspended Log Yarding in Timber Harvesting	Same as above	Same as above	
Element (2): Install landing drainage structures to minimize erosion and prevent sedimentation.				
USFS	WQMP BMP 1-16: Log Landing Erosion	Same as above	Same as above	
Element (3): Construct landings away from steep slopes and reduce the likelihood of fill slope failures. Protect landing surfaces used during wet periods. Locate landings outside SMAs.				
USFS	WQMP BMP 1-5: Limited Operating Period of Timber Sales Activities	Timber, Fuels	Same as above	
	WQMP BMP 1-12: Log Landing Location	Timber	Same as above	
Element (4): Protect stream channels and significant ephemeral drainages from logging debris and slash material.				
USFS	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
	WQMP BMP 1-22: Slash Treatment in Sensitive Areas	Same as above	Same as above	
Element (5): Use appropriate areas for petroleum storage, equipment maintenance and service. Establish procedures to contain and treat spills. Recycle or properly dispose of all waste materials.				
USFS	WQMP BMP 2-12: Servicing and Refueling Equipment	Same as above	Same as above	
<b>Component 2. For cable yarding:</b>				
Element (1): Limit yarding corridor gouge or soil plowing by properly locating cable yarding landings.				
USFS	WQMP BMP 1-11 Suspended Log Yarding in Timber Harvesting	Timber	Same as above	
	WQMP BMP 1-14: Special Erosion Prevention Measures on Disturbed Land	Same as above	Same as above	

Agency	Authority	Programs	Implementation Location	Notes
Element (2): Locate corridors for SMAs following Management Measure 2B.				
USFS	WQMP BMP 1-11 Suspended Log Yarding in Timber Harvesting	Same as above	Statewide- NFS	
	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
Component 3. For groundskidding:				
Element (1): Within SMAs, operate groundskidding equipment <b>only at stream crossings</b> . In SMAs, fell and endline trees to avoid sedimentation and damage to residual vegetation.				
USFS	WQMP BMP 1-8: Streamside Management Zone Designation	Same as above	Same as above	
	WQMP BMP 1-10: Tractor Skidding Design	Timber, Fuels	Same as above	
Element (2): <b>Use improved stream crossings for skid trails which cross flowing drainages</b> . Construct skid trails to disperse runoff and with adequate drainage structures.				
USFS	WQMP BMP 1-13: Erosion Prevention and Control Measures During Timber Sales Ops	Same as above	Same as above	
	WQMP BMP 1-17: Erosion Control on Skid Trails	Same as above	Same as above	
Element (3): On steep slopes, use cable systems rather than groundskidding where groundskidding may cause excessive erosion.				
USFS	WQMP BMP 1-9: Determining Tractor Loggable Ground	Same as above	Same as above	
Management Measure 2F Site Preparation and Forest Regeneration				
Confine on-site potential NPS pollution and erosion resulting from site preparation and the regeneration of forest stands. The components of the management measure for site preparation and regeneration are:				
Component (1): Select a method of site preparation and regeneration suitable for the site conditions.				
USFS	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
	WQMP BMP 1-22: Slash Treatment in Sensitive Areas	Same as above	Same as above	
Component (2): Conduct mechanical tree planting and ground-disturbing site preparation activities on the contour of sloping terrain.				
USFS	WQMP BMP 5-1: Soil Disturbing Treatments on the Contour	Timber	Same as above	
Component (3): Do not conduct mechanical site preparation and mechanical tree planting on streamside management areas.				
USFS	WQMP BMP 1-19: Streamcourse and Aquatic Protection	All programs	Same as above	
Component (4): Protect surface waters from logging debris and slash material.				
USFS	Same as Component (1) above	Timber, Fuels	Same as above	
Component (5): Suspend operations during wet periods.				
USFS	WQMP BMP 1-5: Limited Operating Period of Timber Sales Activities	Same as above	Same as above	
Component (6): Locate windrows at a safe distance from drainages and SMAs to control movement of the material during high runoff conditions.				
USFS	Same as Component (1) above	Same as above	Same as above	
Component (7): Conduct bedding operations in high-water-table areas during dry periods of the year. Conduct bedding in sloping areas on the contour.				
	Not Applicable: No bedding operations on NFS lands	Same as above	Same as above	
Component (8): Protect small ephemeral drainages when conducting mechanical tree planting.				
	Not Applicable: No mechanical tree planting on NFS lands	n/a	Same as above	

**Management Measure 2G Fire Management**

Prescribe fire for site preparation and control or suppress wildfire in a manner which reduces potential nonpoint source pollution of surface waters.

Component (1): Intense prescribed fire should not cause excessive erosion due to the combined effect of removal of canopy species and the loss of soil-binding ability of subcanopy and herbaceous vegetation roots, especially in SMAs, in streamside vegetation for small ephemeral drainages, or on very steep slopes.

Agency	Authority	Programs	Implementation Location	Notes
USFS	WQMP BMP 6-1: Fire and Fire Management Activities	Fire	Statewide- NFS	
	WQMP BMP 6-2: Consideration of Water Quality in Formulating Fire Prescriptions	Same as above	Same as above	
	WQMP BMP 6-3: Protection of Water Quality from Prescribed Burning Effects	Same as above	Same as above	

Component (2): Prescriptions for prescribed fire should protect against excessive erosion or prevent sedimentation.

USFS	Same as Component (1) above	Same as above	Same as above	
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Component (3): All bladed firelines, for prescribed fire and wildfire, should be plowed on contour or stabilized with water bars and/or other appropriate techniques if needed to control excessive sedimentation or erosion of the fireline.

USFS	WQMP BMP 5-1: Soil Disturbing Treatments on the Contour	Same as above	Same as above	
	WQMP BMP 6-3: Protection of Water Quality from Prescribed Burning Effects	Same as above	Same as above	
	WQMP BMP 6-5: Repair of Stabilization of Fire Suppression Related Watershed Damage	Same as above	Same as above	

Component (4): Rehabilitation and salvage logging areas burned by wildfires should be managed to minimize erosion and prevent sedimentation.

USFS	WQMP BMP 6-6: Emergency Rehabilitation of Watersheds Following Wildfires	Same as above	Same as above	
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**Management Measure 2H Revegetation of Disturbed Areas**

Reduce erosion and prevent sedimentation by rapid revegetation of areas disturbed by timber operations.

Component (1): Revegetate disturbed areas (using seeding or planting) promptly after completion of earth-disturbing activity. Local growing conditions will dictate the timing for establishment of vegetative cover.

USFS	WQMP BMP 1-13: Erosion Prevention and Control Measures During Timber Sales Operations	Timber	Same as above	
	WQMP BMP 1-15: Revegetation of Areas Disturbed by Harvest Activities	Same as above	Same as above	

Component (2): Use mixes of species and treatments developed and tailored for successful vegetation establishment for the region or area.

USFS	Same as above	Same as above	Same as above	
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Component (3): Concentrate revegetation efforts initially on priority areas such as disturbed areas in SMAs or the steepest areas of disturbance near drainages.

USFS	Same as above	Same as above	Same as above	
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**Management Measure 2I Forest Chemical Management**

Use chemicals when necessary for forest management in accordance with the following to reduce nonpoint source pollution impacts due to the movement of forest chemicals off-site during and after application:

Component (1): Conduct applications by skilled and licensed applicators according to the registered use, with special consideration given to impacts to nearby surface waters.

USFS	WQMP BMP 5-8: Pesticide Application According to Label Directions and Applicable Legal Requirements	Range, Fuels, Timber	Same as above	
	WQMP BMP 5-12: Streamside Wet Area Protection During Pesticide Spraying	Same as above	Same as above	
	WQMP BMP 5-13: Controlling Pesticide Drift During Spray Application	Same as above	Same as above	

Component (2): Carefully prescribe the type and amount of pesticides appropriate for the insect, fungus, or herbaceous species.

USFS	WQMP BMP 5-7: Pesticide Use Planning Process	Same as above	Same as above	
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Agency	Authority	Programs	Implementation Location	Notes
Component (3): Prior applications of pesticides and fertilizers, inspect the mixing and loading process and the calibration of equipment, and identify the appropriate weather conditions, the spray area, and buffer areas for surface waters and mixing and loading areas.				
USFS	WQMP BMP 5-7: Pesticide Use Planning Process	Same as above	Statewide- NFS	
	WQMP BMP 5-12: Streamside Wet Area Protection During Pesticide Spraying	Same as above	Same as above	
Component (4): Establish and identify buffer areas for surface waters to protect beneficial uses. (This is especially important for aerial applications.)				
USFS	Same as Component (3) above, plus:	Same as above	Same as above	
	WQMP BMP 5-13: Controlling Pesticide Drift During Spray Application	Same as above	Same as above	
Component (5): Immediately report accidental spills of pesticides or fertilizers into surface waters to the California Office of Emergency Services (Cal/OES). Develop an effective spill contingency plan to contain spills.				
USFS	WQMP BMP 5-10: Pesticide Spill Contingency Planning	Same as above	Same as above	
	WQMP BMP 7-4: Forest Hazardous Substance Spill Prevention Control and Countermeasures (SPCC) Plan	Same as above	Same as above	
<b>Management Measure 2J Wetlands Forest</b>				
Plan, operate, and manage normal, ongoing forestry activities (including harvesting, road design and construction, site preparation and regeneration, and chemical management) to adequately protect the aquatic functions of forested wetlands.				
USFS	WQMP BMP 1-4: Use of Sale Area Maps and/or Project Maps for Designating Water Quality Protection Needs	Timber	Same as above	
	WQMP BMP 1-8: Streamside Management Zone Designation	All programs	Same as above	
	WQMP BMP1-18: Meadow Protection During Timber Harvesting	All programs		
	WQMP BMP 1-22: Slash Treatment in Sensitive Areas	Timber, Fuels	Same as above	
	WQMP BMP 2-1: General Guidelines for the Location and Design of Roads	Engineering	Same as above	
	WQMP BMP 5-3: Tractor Operation Limitation in Wetlands and Meadows	Timber, Engineering	Same as above	
	WQMP BMP 5-12: Streamside Wet Area Protection During Pesticide Spraying	Timber, Range, Fuels	Same as above	
	WQMP BMP 7-3: Protection of Wetlands	All programs		
<b>Management Measure 2K Postharvest Evaluation</b>				
Conduct post-operation evaluation of the effectiveness of the State's forest practices requirements as implemented. The components of this are: a) implementation monitoring to determine if the operation was conducted according to specifications, and b) effectiveness monitoring after at least one winter period to determine if the specified operation prevented or minimized discharges.				
USFS	BMP Evaluation Program	BMPEP	Same as above	
<b>Management Measure 2L Education/Outreach</b>				
Implement educational programs to provide greater understanding of watersheds, and to raise awareness and increase the use of applicable forestry management measures and practices where needed to control and prevent adverse impacts to surface and ground water. Public education, outreach, and training programs should involve applicable user groups and the community.				
[Refer to the Forestry Management Measures 2A – 2K listed in this document.]				

## Grazing Management Measures

### Management Measure 1E Grazing Management Measure

Protect range, pasture and other grazing lands:

MM Component (1): By implementing one or more of the following to protect sensitive areas (such as streambanks, wetlands, estuaries, ponds, lake shores, and riparian zones): (a) exclude livestock, (b) provide stream crossings or hardened watering access for drinking, (c) provide alternative drinking water locations away from surface waters, (d) locate salt and additional shade, if needed, away from sensitive areas, or (e) use improved grazing management (e.g., herding) to reduce the physical disturbance and reduce direct loading of animal waste and sediment caused by livestock; and

Agency	Authority	Programs	Implementation Location	Notes
USFS	WQMP BMP 8-1: Range Analysis and Planning	Range Mgmt	Statewide- NFS	
	WQMP BMP 8-2: Grazing Permit System	Same as above	Same as above	
	WQMP BMP 8-3: Rangeland Improvements	Same as above	Same as above	
MM Component (2): By achieving either of the following on all range, pasture, and other grazing lands not addressed under (1) above: (a) implement the range and pasture components of a CMS as defined in the Field Office Technical Guide of the USDA-NRCS by applying the progressive planning approach of the USDA-NRCS to reduce erosion, or (b) maintain range, pasture, and other grazing lands in accordance with activity plans established by either the Bureau of Land Management of the U.S. Department of the Interior or the Forest Service of USDA or the California Rangeland Water Quality Management Plan.				
USFS	Same as Component (1) above	Same as above	Same as above	