CHAPTER X—LEGACY PROBLEM REMEDIATION

INTRODUCTION

The USFS Watershed Improvement Program (WIP) is a nationwide USFS program of assessment and restoration on a watershed scale. In accordance with the WIP, each National Forest identifies the priority watersheds for restoration, and the essential projects that will bring about improvement in watershed condition. The intent of the program is to focus watershed restoration activities in priority watersheds and progress through the priority watersheds in a stepwise manner, eventually providing assessment and restoration for all watersheds. As described in more detail below, priority watersheds receive heightened water quality protection under the USFS Guidance and are integral for maintaining sanctuary habitats for threatened and endangered species and unique plant and animal communities. Watershed restoration projects are not limited to priority watersheds, and are used to address watershed issues and water quality problems in lower priority watersheds also.

The primary components of the WIP are:

1. Priority Watershed Selection
2. Watershed Condition Assessments
3. Watershed Improvement Needs Inventories
4. Essential Project Identification
5. Watershed Restoration Plans
6. Annual Watershed Improvement Accomplishments Reporting

1. Priority Watershed Selection

The USFS has adopted a "priority watershed" approach in its watershed restoration program. As of 2001, each Forest in the Pacific Southwest Region identified priority watersheds where watershed improvement work would be focused. In 2001, priority watersheds were defined at the 5th field HUC scale (40,000 to 250,000 acres). According to the new draft Implementation Guide, priority watersheds will be redefined at the 6th field HUC scale (10,000 to 40,000 acres).

In 2001, priorities were defined based on (1) existing watershed conditions, (2) values, and (3) opportunities. *Existing watershed conditions* at the 5th field scale served as the primary criterion in priority setting.   *Values* were typically tangible assets of importance to people and included: sources of domestic water, rare ecosystems, unique recreation areas, TES Species, rural communities, and soil productivity. *Opportunity* was defined by factors that enhance the likelihood that the desired outcome is achievable and could include: available infrastructure, ownership patterns, policy direction, partnerships, and sufficient financial and political support. In other words, Condition + Values + Opportunity = Priority.

Based on the draft 2009 "Implementation Guide", National Forests will identify an appropriate number of watersheds for improvement that correspond to a reasonable and achievable program of work over the next 5 years (the "planning cycle") within current budget levels. These watersheds will be the new "priority watersheds." The number of priority watersheds will vary by National Forest but is expected to range from 1 to 5 given current funding levels.

Forest will identify priority watersheds using an interdisciplinary process that includes representatives from soil, water, range, wildlife/fish, roads/trails, vegetation, planning, fuels and others as appropriate. In cases, where one or more Forests share watersheds, the affected Forests/Regions will need to work together to assure that the selection of priority watersheds is coordinated.

The State and Regional Boards and other partners (local, state, Tribal, other federal agencies or interest groups) may be included in the priority watershed identification process. The public will be given opportunities to provide suggestions for the selection of priority watersheds during the development of Forest Plans.

While the task of identifying priority watersheds is largely left to the discretion of National Forests, three factors along with local issues, needs, and opportunities must be considered:
1. A rapid assessment of resource value,
2. A rapid assessment of the estimated costs, and
3. National and Regional watershed condition policy, direction, and guidance.

2. Watershed Condition Assessment

The USFS conducted watershed condition assessments in 2000 at the 5th field Hydrologic Unit Code (HUC) scale. This is equivalent to a 40,000 to 250,000 acre watershed. These watershed condition assessments are expected to be revised or replaced in the immediate future at a finer scale and with revised indicators or factors.

The Forest Service is in the process of developing a new watershed condition assessment tool. A draft "Implementation Guide for Assessing and Tracking Changes to Watershed Condition" was completed in 2009 and is currently under review. The assessment strategy includes the following twelve indicators:

- Water Quality Condition
- Water Quantity Condition
- Stream and Habitat Condition
- Aquatic Biota Condition
- Riparian Vegetation Condition
- Road and Trail Condition
- Soil Condition
- Fire Effects and Regime Condition
- Forest Cover Condition
- Rangeland, Grasslands, and Open Area Condition
- Terrestrial Non-native Invasive Species Condition
- Forest Health Condition

When the assessment tool is completed, approved, and adopted on a national basis, it will be implemented at the 6th field Hydrologic Unit Code (HUC) scale. This scale is equivalent to 10,000 – 40,000 acre subwatersheds. It is expected that this revised watershed condition assessment will be conducted in FY2011.

3. Watershed Improvement Needs Inventories

The USFS Watershed Improvement Program includes as a component a Forest-level inventory of watershed improvement needs (WIN). This is an ongoing process that is integrated with the Forest program of work and subject to available funding. The degree of progress in these inventories varies considerably by Forests depending on available resources and capabilities. Significant progress is being made in inventories of road-related watershed improvement needs.

The existing WIN inventories are in a combination of forms including hardcopy files of field inventory forms, local spreadsheet and/or GIS data, and in a national database (Watershed Improvement Tracking database or WIT). Few Forests in the Region have yet transitioned to the WIT database, but national training in the database is currently being provided.

4. Essential Project Identification

Identification of "Essential Projects" is introduced as a new component of the Watershed Improvement Program in the draft Implementation Guide. Essential Projects are being defined as projects that "prevent or remedy a problem that impairs the physical, chemical or biologic function of the watershed and, when implemented, sustain or move a watershed to a better condition class".

Essential projects may be individual projects or a group of projects which cumulatively require work or action to maintain or improve watershed condition class. A watershed may have only one essential project (e.g., head cut stabilization) or a suite of essential projects (for example, decommission five roads, upgrade 15 culverts, change a grazing system, remove three check dams, remove hazardous fuels from 30 acres of riparian area, and restore native riparian vegetation). In most cases, integrated suites of projects would need to be implemented.

Essential projects will address all resources and may be funded from many budget accounts. While emphasis is on on-the-ground work, essential projects can also include planning aspects. Essential projects are identified by National Forest personnel in the context of an interdisciplinary team and are agreed to by the appropriate line officer as needed to sustain or improve watershed condition.

Work or actions that are not necessary to improve physical, chemical, or biologic conditions at a watershed scale are considered "non-essential". The determination of whether a project or group of projects is considered essential vs. non-essential will be made at a local level. Examples of non-essential projects include eradication of non-native fish, vegetation manipulation that does not improve or reduce risk to watershed condition, or replacement of an undersized culvert in a stream where the crossing is stable and aquatic passage is not a concern.

PROPOSED USFS WQMP OUTLINE AND INITIATING AUTHORS

CHAPTER	Section
Introduction	Historical Background
	Legal Authorities
	Related USFS Programs
NPS Overview	Relative Importance of Various NPSs
	NPSs To Be Addressed On A Statewide Basis
Purposes	Comply with WQ Goals and Legal Requirements
	Protect, Maintain, and Help Restore WQ & BUs
	Other
Statewide Administration Process for NPS Management Practices – Verifying Implementation	Planning
	Contract/Lease Provisions
	Administrator Inspections
Statewide NPS Management Practices[1] (and practice-specific implementation processes)	Timber Harvesting
	Road Design, Construction, Use, Maintenance, and Abandonment
	Off-Highway Vehicles
	Grazing
	Other

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[1] Will be consistent with USFS National BMPs (in development)

Verifying Management Practice Effectiveness – Monitoring	Statewide Programmatic Monitoring
	Watershed-specific Monitoring
	Project-specific Monitoring
Legacy Problem Remediation	Planning and Statewide Prioritization[2]
	Management Practices and Administration
	Verifying Effectiveness - Monitoring
Impaired Water Body Segments	Statewide Prioritization of Recovery/Restoration Needs[2]
	Alternatives to TMDL Development (Category 4B)[2]
	Alternatives to TMDL Implementation Plans[2]
	Implementing Recovery – Enhanced Management Practices & Administration
	Verifying Effectiveness – Enhanced Monitoring
Adaptive Management	
Needed Future Actions	Goals, Schedules and Milestones
Reporting	

Initiating authors

WQMP Framework – Core interagency staff group	Inserted Subject Area Modules – USFS experts with core interagency staff group review

Watershed Improvement Program

INTRODUCTION

The USFS Watershed Improvement Program (WIP) is a nationwide USFS program that includes watershed condition assessment, inventory of watershed improvement needs, identification of priority watersheds, and implementation of restoration activities. Implementation of the WIP results in assessment and restoration on a watershed scale.

Watershed Condition Assessment

The Forest Service Region 5 conducted a watershed condition assessments in 2000 at the 5th field Hydrologic Unit Code (HUC) scale. This is equivalent to a 40,000 to 250,000 acre watershed. These watershed condition

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[2] May require sidebar MOU to memorialize Water Board commitments, including, for example, fee

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Priority Watersheds

The Forest Service has adopted a "priority watershed" approach in its watershed restoration program. As of 2001, each Forest in the Pacific Southwest Region identified priority watersheds where watershed improvement work would be focused. In 2001, priority watersheds were defined at the 5th field HUC scale (40,000 to 250,000 acres). In According to the new draft Implementation Guide, priority watersheds will be redefined at the 6th field HUC scale (10,000 to 40,000 acres).

In (2001, 1 letter) Ppriorities are were defined by based on (1) existing watershed conditions, (2) values, and (3) opportunities. *Existing watershed conditions* at the 5th field scale should serveserved as the primary criterion in priority setting. Condition categories for all NFS watersheds have been identified by Forest ID Teams as part of the Reconnaissance Level Assessment for Region 5 (see attachment B). Other watershed scale assessments (i.e., Hydrologic Condition Assessment) may also provide good sources of information for setting priorities. *Values* are were typically tangible assets of importance to people and may included: sources of domestic water, rare ecosystems, unique recreation areas, TES Species, rural communities, and soil productivity. *Opportunity* is was defined by factors that enhance the likelihood that the desired outcome is achievable and can could include: available infrastructure, ownership patterns, policy direction, partnerships, and sufficient financial and political support. In other words, Condition + Values + Opportunity = Priority.

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Partners (local, state, Tribal, other federal agencies or interest groups) may be included in the priority watershed identification process at Forest discretion. In the future, the public will be given an opportunity to

provide input into the selection of priority watersheds because Forest Plans, which will in the future reflect watershed priorities, require the consideration of public comment.

While the task of identifying priority watersheds is largely left to the discretion of National Forests, three factors along with local issues, needs, and opportunities must be considered:
1. A rapid assessment of resource value,
2. A rapid assessment of the estimated costs, and
3. National and Regional watershed condition policy, direction, and guidance.

Watershed Improvement Needs Inventories

5. Watershed Restoration Plans

For each of the priority watersheds, National Forests will identify the specific projects necessary to improve watershed condition class and develop a Watershed Action Plan. The action plans will be based on a detailed assessment of each priority watershed. The assessment should document specific problems affecting ecological conditions; identify appropriate projects that address these problems; propose an implementation schedule, project sequencing, potential partners, and funding sources.

Acceptable watershed assessment methods must be used to analyze watershed condition and make general recommendations for any needed improvement. Examples of accepted methods include: Ecosystem Analysis at the Watershed Scale (EWAS), Hydrologic Condition Analysis (HCA), Total Maximum Daily Load assessments (TMDLs), Watershed Improvement Needs (WIN) inventories and large-scale NEPA. National ForestRegions may use other accepted methods provided their assessment method has sufficient information about watershed function and processes to determine specific problems, current and desired watershed condition, and provides information which can be used to identify restoration objectives.

The watershed condition assessment should result in development of a Watershed Action Plan (also known as a restoration plan or strategy) that synthesizes problems, actions and timelines. These plans would provide details on maintenance and restoration objectives for the watershed. Potential partners and funding sources may also be listed. The goal of these assessments is to identify Essential Projects.

6. Annual Watershed Improvements Accomplishments Reporting

Each National Forest annually reports its accomplishments for watershed improvements to the Regional Office. Accomplishments are reported in acres improved or linear feet of channel restored. Accomplishments are compared to annual targets assigned by the Regional Office to the National Forests to assess performance and allocate funding. The USFS is shifting nationally to targets based on improvements in overall watershed condition. This change is likely to be implemented in Fiscal Year 2011.

PROJECT LEVEL RESTORATION

The USFS has current authority and direction to assess restoration needs and conduct restoration of legacy problems within the boundaries of timber sales (FSH 2409.19, FSM 2522.22), although restoration is limited by available funds generated by the sale of forest products. Ecological restoration has recently been identified as a responsibility for all USFS resource management programs (FSM 2020.3).

The North Coast Regional Water Quality Control Board waiver (Order No. R1-2010-0029) approved in June 2010 provides for an incentive-based approach to restoration of legacy problems on National Forest System lands. Under this waiver, projects conducted in watersheds with established watershed restoration plans do not have project-level legacy restoration requirements. Projects conducted in watersheds without watershed restoration plans are required to restore legacy problems within project boundaries. This approach is currently under consideration by the USFS for this WQMP.

DIRECTIVES

Watershed Improvement Needs Inventories

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(not in current direction, but in draft Implementation Guide)

Watershed Restoration Plans

Accomplishment Reporting

USFS documents that provide guidance for watershed-scale planning, restoration, and assessment include:

USFS Region 5 Forest Service Handbook (FSH) 2509.22 Soil and Water Conservation Handbook Chapter 20 (July 1988) that provides direction for assessing cumulative watershed effects.

USFS Manual (FSM) Chapter 2020 (March, 2010), Ecological Restoration and Resilience

USFS FSM Chapter 2520 (May 2004), Watershed Protection and Management